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# CONTEXT PAPER ON THE REGIONAL ECONOMY, DEMOGRAPHIC OUTLOOK AND LAND USE FULL REPORT

Technical Paper 2 to support the ***Discussion Paper*** for the  
*Next Regional Transportation Plan*



**HEMSON**



**METROLINX**

An agency of the Government of Ontario

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Final Report

# Context Paper on the Regional Economy, Demographic Outlook and Land Use

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**HEMSON**  
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Prepared for Metrolinx  
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July 15, 2016

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# Executive Summary

This *Context Paper on the Regional Economy, Demographic Outlook and Land Use* provides an overview of major population and land use drivers affecting growth and transportation in the Greater Toronto and Hamilton Area (GTHA) and the Greater Golden Horseshoe (GGH). These factors are important for population and employment forecasts which, in preparation of the 10-year legislated review of *The Big Move*, will provide the evidence-based justification for future transit investment in the region.

## The GTHA has grown significantly since 2001

- For many years the GGH, and GTHA in particular, has been one of the fastest growing urban regions in North America. This growth is strongly influenced by migration patterns.
- However, over the last 10 years, the GTHA has experienced lower than the historical average net migration rates largely due to the pull of Western Canada and the oil boom. Migration to the GTHA is expected to return to historical average rates as a result of an improving Ontario economy driven by a lower Canadian Dollar and the growth in the U.S. economy.
- Although the *Growth Plan for the Greater Golden Horseshoe* (the *Growth Plan*) forecasts assumed higher rates of migration to the region than have occurred over the last decade, recent demographic trends indicate the GGH is on track to meet the 2031 *Growth Plan* forecast.
- Recent growth has included a high share of younger adults (20-34 years old). A large share of this cohort has located in the City of Toronto. Contrary to popular belief, this is in line with traditional demographic patterns.
- Older adults and families with children continue to locate outside of the City of Toronto, mainly due to the availability of affordable family-oriented housing<sup>1</sup>.
- Given the capacity of family-oriented housing in the regional municipalities, most of the population growth in the GTHA has gravitated outside of Toronto, notwithstanding the recent condo boom in downtown Toronto.

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<sup>1</sup> Family-oriented housing refers to larger residential units which have historically been the housing type of choice for families. These units tend to be ground-oriented (i.e. having front door, proximate outdoor space and parking), such as single-detached, semi-detached and row housing types.

### **Increasing demand and rising prices have affected housing choice**

- High demand relative to supply, together with low interest rates, have been driving housing prices up across the region since 2010. In part, this has led to an increase in the market share for apartment housing as some buyers turn to more affordable options.
- Although condominium development has been most visible in downtown Toronto, apartments have also been gaining popularity in the rest of the GTHA and Outer Ring municipalities.
- Since almost all the new land for family-oriented housing is located outside of the City of Toronto, and despite the boom of apartments in Toronto, the regional municipalities of the GTHA will continue to accommodate the majority of population growth.

### **Economic shifts following the 2009 recession are reflected in employment trends**

- The rate of employment growth since the 2009 recession has been muted compared to previous periods. During this period there has been a significant transition away from manufacturing.
- Concurrently, since 2009, the share of employment in professional, technical and consumer services has increased. Because of the locational preferences of these sectors, the growth is driving the recent concentration of office construction in downtown Toronto.
- Offices are being used more intensely because of new technology, flexible layouts and shared workplace trends (open concept, telecommuting, hoteling, etc.).
- In contrast, industrial lands have seen employment densities drop as labour-intensive manufacturing activities decline and companies automate their operations.

### **The distribution of growth within the GGH is changing**

- Since 2011, Toronto has attracted a greater share of new population and employment than had been forecast in 2006 for the *Growth Plan*. At the same time, growth in the rest of the GTHA and the GGH has generally been lower than forecast.
- The continued growth trend of office-based employment in central Toronto is expected to foster more high-density residential growth in the city.
- Much of the new housing in the rest of the region will continue to be of lower and mid-density form.

- Higher density residential development continues to be highly focussed in downtown Toronto. Many of the Urban Growth Centres (UGCs) have also attracted some of this development, but not in amounts that make it likely that the planned *Growth Plan* targets of person and jobs will be reached by 2031. Planning expectations for employment development in many of the UGCs have also lagged behind as the market for new office development continues to focus on downtown Toronto and the small number of suburban employment areas that have accommodated much of the new office development over the past 20 years. Established geographic demand patterns for higher density residential and employment development continue to be highly entrenched.

**Regional Express Rail is likely to reinforce current residential and employment patterns given current market trends**

- In most areas, residential development in the vicinity of the Regional Express Rail (RER) network is occurring according to planning expectations, though at a slower pace in most of the areas planned for the highest densities, such as the UGCs. Improved service levels associated with the RER investment will stimulate higher density residential growth at a number of RER station locations.
- Office employment in the GTHA is concentrated in a limited number of locations, few of which have strong linkages to the GO Network. By far the most accessible office node is downtown Toronto around Union Station. Its importance as an employment node will only increase with the implementation of the RER.
- With a few exceptions, attracting high density employment uses large enough to encourage reverse commuting by the RER or other transit will be challenging. Most GO Station areas are low-scale and often industrial in nature, reflecting the historical relationship of rail to industrial uses and often do not have other attributes, such as highway access, that are key to attracting suburban office development

# 1 Introduction

In preparation for the 10-year legislated review of *The Big Move*, the guiding framework for transportation planning across the Greater Toronto and Hamilton Area (GTHA), Metrolinx has retained IBI Group and Hemson Consulting Ltd. to develop traffic zone-level population and employment forecasts to test various growth scenarios to 2041. The forecasts are part of a series of technical analyses relating to potential transportation infrastructure decisions, and will provide an evidence-based justification for future investment decisions. The *Growth Plan for the Greater Golden Horseshoe* (the *Growth Plan*) is part of the provincial *Places to Grow* legislation and provides the overall direction on the form and location of growth to occur over the next 25 years. Transportation planning decisions underpinning *The Big Move* are made within the policy context of the *Growth Plan*, reflecting the growth forecasts to 2041 in Amendment 2.

This *Context Paper on the Regional Economy, Demographic Outlook and Land Use* presents an overview of the major land use drivers affecting transportation in the GTHA and the Greater Golden Horseshoe (GGH). The paper begins with a short overview of the Canadian economic environment, then focuses on Ontario, the GGH and the GTHA. Although the geographic scope of the forecasts is dictated by the GO service area, the analysis considers global economic conditions and Ontario's demographic and labour force dynamics.

Following the discussion of global economic and demographic context, the demographic context of the GTHA is examined. This is based on an assessment of the region's population and employment growth and distribution in the past and to date. Due to the importance that the economy plays as a driving role in population, housing and employment growth, the state of economic change in the GTHA is discussed in a separate chapter. This discussion focuses on the shift from a predominantly manufacturing base to a more knowledge and service based economy, which is driven by the information, communication and technology (ICT) sector. In particular, it considers what this shift means for the distribution of employment and its built form.

Following the review of broader socio-economic trends, the increased centralisation of growth is discussed in the context of regional transportation planning. This discussion specifically looks at the high density growth in central Toronto and how it relates to growth in other municipalities of the GTHA. The report concludes with an outlook for employment in the region, its relationship to the distribution of population growth and its implications for *The Big Move* and the *Growth Plan*.

## 2 Background and Context

Understanding the market context for the GTHA requires consideration of how the economy has evolved regionally, nationally and globally. Although the long-term effects of the economic restructuring that the 2009 recession caused have not yet been fully determined, broadly speaking, the economy has recovered and in the coming decade the GTHA is expected to experience significant population and employment growth. How new residents and employees will be distributed across the region will, however, depend on how the marketplace responds to global, national and provincial economic trends. This chapter discusses broad socio-economic trends, including the global economic conditions and how these conditions affect overall demographics and the labour force in Ontario and, more specifically, the GTHA.

### 2.1 Global Trends

The global economy has changed significantly in the past few decades. Expansion of global trade and rapidly emerging technologies have reshaped the structure of international markets. The tail end of the 20<sup>th</sup> century saw the spread of globalization increasingly intertwining the economies of countries around the world, opening new markets for commodities, labour and manufacturing. Around the same time, the emergence of the internet enabled sharing of information and the spread of commerce at a level not previously possible. These phenomena resulted in new market efficiencies, new economic partnerships, and broad new opportunities and interdependencies which have affected Canada and, by extension, Ontario and the GTHA.

Along with these changes have come shifts in economic power as emerging markets have rapidly risen to prominence. Whereas the United States and other western markets once dominated the world's economy, the economies of Brazil, Russia, India, China and South Africa (collectively referred to as BRICS) and other nations have begun to exert greater global influence (RICS, 2015). Competitive advantages, stemming from factors such as lower input and labour costs, have enabled these emerging markets to claim a greater share of the economic functions traditionally performed by the west, such as manufacturing. China, which now acts as the world's largest manufacturing market, saw years of substantial economic growth in the past few decades. As of 2014 it surpassed the United States, becoming the largest economy in terms of real global GDP (IMF, 2014).

Canada, being an export-oriented economy, is strongly influenced by trends in the global market. Commodities such as lumber, metals and minerals, and energy products have historically played an important role in Canada's economic output. Over three-quarters of Canada's total exports (76.7%) are traded with the USA.

As a result, Canada's economic performance is strongly tied to that of our neighbour to the south. Other major trading partners by share of total exports include China (3.9%), United Kingdom (3.1%), Japan (1.9%), and Mexico (1.3%) (Industry Canada, 2015). The demand from these markets affects the economic outlook of many of Canada's export oriented industries. With the GTHA serving an important position in the global supply chain, changes in demand in global and regional markets directly impact the GTHA both economically and demographically.

These changing economic dynamics have also resulted in greater market interdependence, as the impact of economic cycles have become global in their effect. Economies across the globe are still experiencing slow and unsteady recovery from the major recession of the late 2000s. Volatility in the commodity markets and changes to monetary policy are resulting in diverging prospects amongst the world's leading economies. The USA has steadily recovered from the downturn in recent years, expanding at a steady pace. Meanwhile, China is beginning to transition to a more stable pace and composition of economic growth, resulting in some uncertainty amongst those markets that have benefited from China's high demand for commodities. These factors, along with the recent decline in oil prices, have led to major economic adjustments, resulting in short-term shocks which have significantly impacted oil exporting countries, among others. In the longer term, however, the low cost of commodities and oil is anticipated to boost global growth as markets adjust (Bank of Canada, 2016).

Long-term outlooks on the global market are difficult to forecast. However, as the world continues to urbanize, unique economic and social pressures and implications are emerging. A recent report describing global social and economic trends to 2030 (RICS, 2015) identified that changing economic conditions, including age demographics and the global distribution of the middle class have significant implications for economic growth. Growth in older and younger populations will increase demand for infrastructure and, in turn, employment opportunities. By 2030 the majority of the world's middle class population will be located within the Asia-Pacific regions while in Europe, Japan, and North America it is expected to decline. As the global population increases and urbanization continues, long-term demand for commodities will grow. This will, in turn, place demand on resources such as land, energy and water. It is estimated that by 2030, the world will need 50% more food, 45% more energy and 30% more water than it did in 2012 (RICS, 2015).

## 2.2 Canadian Trends

Rates of population and employment change across Canada tend to vary based on a number of interrelated factors. These include regional economic opportunity, and global commodity and currency rates, all of which influence inter-provincial and international migration patterns. With migration comprising the largest

contributor to population growth in the GTHA and Ontario, changes to these factors can have a significant impact on future growth patterns and forecasts.

Throughout the past few decades Canada has remained a prominent destination of choice for international migrants. Even during periods of slow economic growth, a high standard of living and an accommodating immigration policy have resulted in Canada ranking as one of the top ten countries of destination for international migrants reaching back to the 1960s (MPI, 2013). However, the settlement patterns of new immigrants to the country have shifted in recent years.

In previous decades, recent immigrants tended to settle into one of the country's three largest Census Metropolitan Areas (CMAs): Vancouver, Montreal, and Toronto (King, 2009). In the year 2000, almost half of all new immigrants to Canada planned to settle in the Toronto area. By 2012, that proportion had fallen to less than one in three, with an increased share of new arrivals opting for other destinations, particularly in the Prairie provinces. The possible reasons for this shift include changes to immigration programs, changes in source countries from which migrants arrive, and changes in relative regional economic performance (Statistics Canada, 2015).

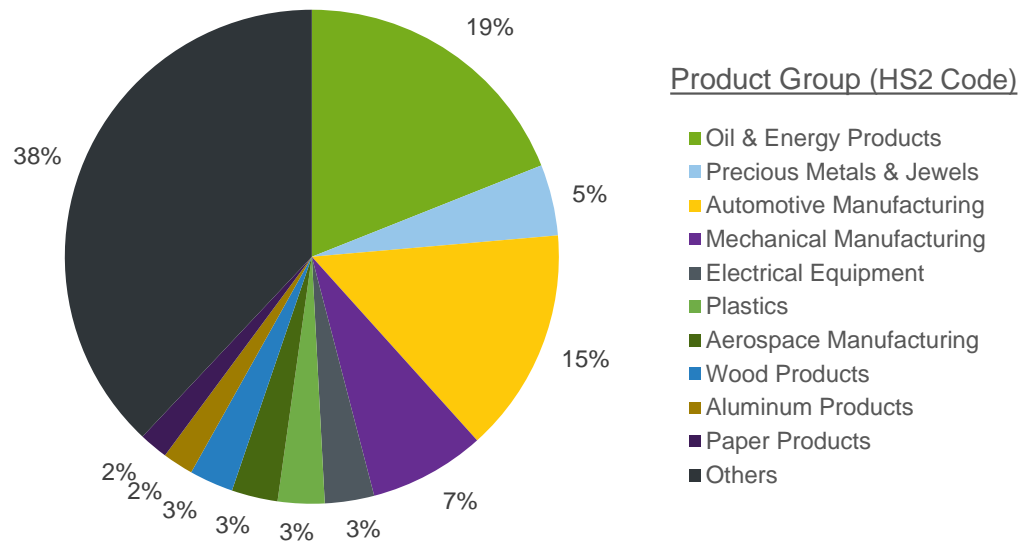
Socio-economic opportunities vary across Canada, playing an important role in migration patterns not only for new arrivals, but also current residents. While larger population centres tend to offer diverse employment opportunities across a range of industries, the broader economic outlooks for many regions of the country are often tied to the performance of specific industries. The performance of these industries, in turn, is often dependent on global commodity prices for export.

For example, strong oil prices and heavy investment into the Alberta oil sands in the early 2000s resulted in significant migration to Western Canada between 2006 and the past year. The recent collapse in oil prices stemming from global oversupply, however, have resulted in a significant economic downturn in Alberta, lowering employment outlooks in the region. Without the pull factor created by these opportunities, it is anticipated that migration rates to the west will slow in the coming years (and potentially slow the out-migration rates to the western provinces from the GTHA and GGH).

Fluctuations in global commodity prices also have a nation-wide effect on Canada's economy. Given that commodity exports comprise a large part of the country's economic activity, the Canada's economy is particularly vulnerable to falling prices for oil, coal and metals (OECD, 2015). As shown in **Exhibit 2.1**, these products combined accounted for nearly a quarter of the total value of all exports by Canada in 2015.

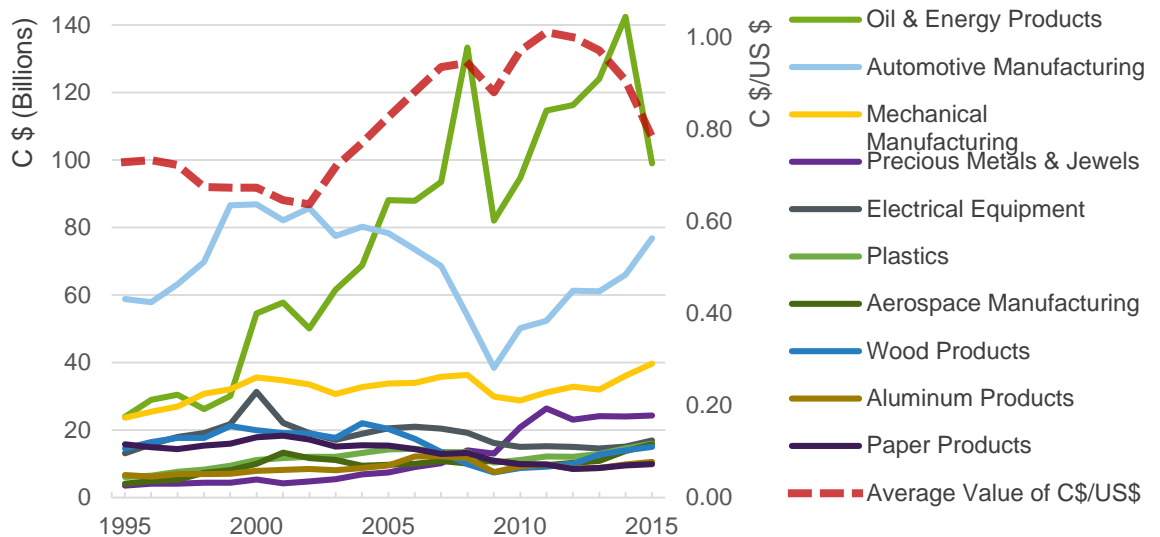
Change in the export value of these commodities correlate with the value of the Canadian dollar. The value of oil exports in particular has tracked very closely to the strength of the Canadian dollar over the past decade, as demonstrated in **Exhibit 2.2**.

**Exhibit 2.1: Share of Total Value of Canadian Exports, Top 10 Product Groups, 2015**



Source: Hemson Consulting with data from Industry Canada.

**Exhibit 2.2: Value of Top 10 Canadian Exported Product Groups and Average Value of the Canadian Dollar, 1995-2015**



Source: Hemson Consulting with data from Industry Canada and Canforex.



While the decline in commodity prices has a negative effect on some market sectors, other sectors benefit including, for example, the hospitality and tourism sectors, goods exporters, and certain manufacturing industries. A low Canadian dollar makes these industries more attractive for investment (BoC, 2016), creating a demand which can, if sustained, create a pull for migration.

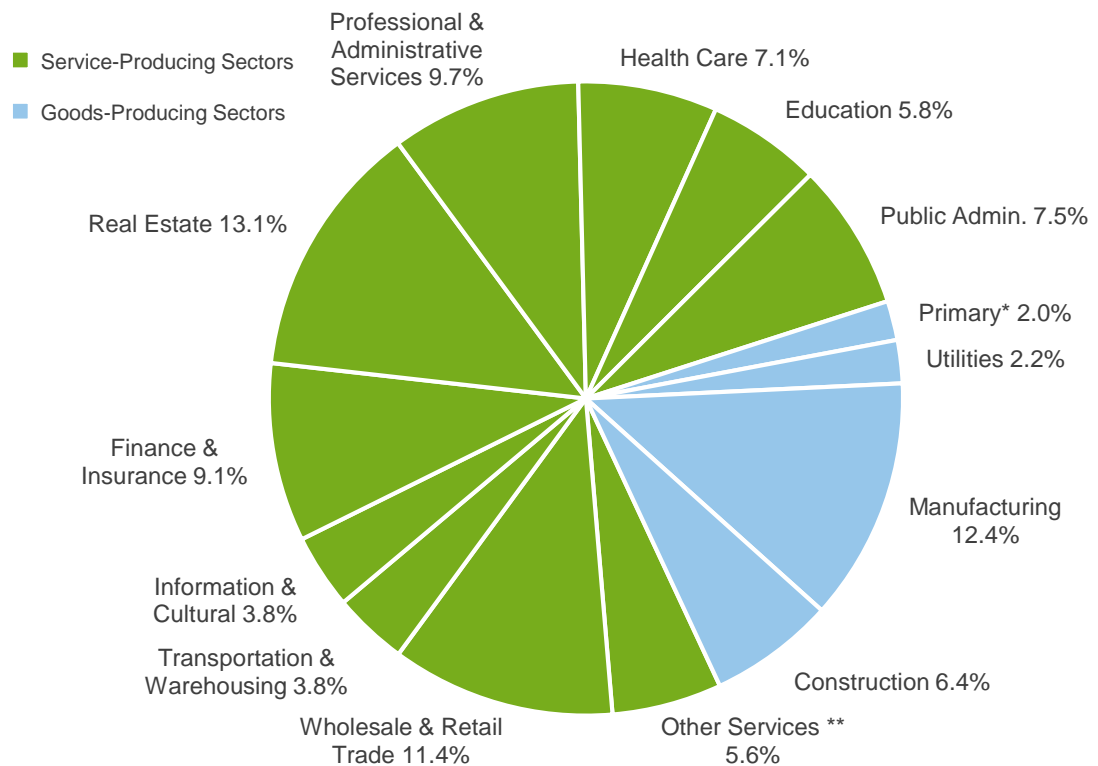
It is important to bear in mind that the current situation is likely to change within the next decade as the demand and price of commodities, especially oil, is inherently cyclical in nature. While we cannot know for certain in the long-term, for the purposes of the forecast, we assume that the effect of fluctuations in commodity prices and resulting inter-provincial migration patterns will result in a net-zero balance over time.

## 2.3 Ontario Trends

The Ontario economy is also shaped by global and Canada-wide economic trends as well as by drivers specific to the province, such as productivity, capital and labour supply. Ontario's economy, and more specifically the manufacturing sector, is strongly affected by the U.S. economy. However, due to greater competition from emerging markets, Ontario's reliance on the U.S. market has been declining. While detrimental to the Ontario export sector, this decline has spurred companies to adapt and begin exporting to other global markets such as Europe, China and India. Going forward the U.S. will remain a critical trading partner but to a lesser degree than before.

It is important to note that Ontario has a diverse economy. While manufacturing represented the largest individual employment sector in Ontario as of 2014, the services-producing sector (which includes wholesale and retail trade; transportation and warehousing; information and cultural industries; finance and insurance; real estate and renting and leasing; etc.) accounted for over three quarters of Ontario's GDP (OMAFRA, 2015). The structure of Ontario's economy between goods-producing and service-based sectors is demonstrated in **Exhibit 2.3**. This trend is expected to persist in the near-term as major economic restructuring continues in Ontario manufacturing and other goods producing sectors (Ministry of Finance, 2014).

**Exhibit 2.3: Structure of Ontario Economy by Share of Nominal GDP, Service-Producing and Goods-Producing Sectors, 2014**



Source: Hemson Consulting with data from Statistics Canada. \*Primary includes: Agriculture, forestry, fishing, and hunting; and Mining and oil and gas extraction. \*\* Other Services includes: Management of companies and enterprises; arts, entertainment and recreation; accommodation and food services; and other services (not including public administration).

In 2012, the Jobs and Prosperity Council of Ontario undertook a review of how Ontario could benefit from, and take advantage of, future economic shifts. The report noted that given the province’s strong economic base and low barriers to new business investments and growth, it is well positioned to meet changing global needs (Jobs and Prosperity Council, 2012). In particular, competition with emerging economies will provide opportunities for Ontario to diversify and utilize its existing economic strengths through exports in agri-food, infrastructure, life sciences, information and communications technology, education, advanced manufacturing and financial services (Ministry of Finance, 2014).

A key component of Ontario’s ability to remain competitive through these economic shifts relies on the efficient movement of goods and people. Investment in infrastructure will be required in order to attract business and support new development. Expansion of public transit and highway improvements are among the more important long-term expenditures that will help achieve greater economic prosperity (Jobs and Prosperity Council, 2012).

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This chapter summarized the broader trends beyond the GTHA and their effect on demographic and employment outlooks within. Issues such as changing global market dynamics and the impact of volatility in commodity prices affect the economic well-being of areas across the country, which in turn affect migration patterns and the labour force outlook. The Ontario economy is diverse, with the GTHA playing a leading role for many sectors of the provincial economy. The next chapter discusses the population and employment trends specific to the GTHA and how these factors feed into the outlook for the region.

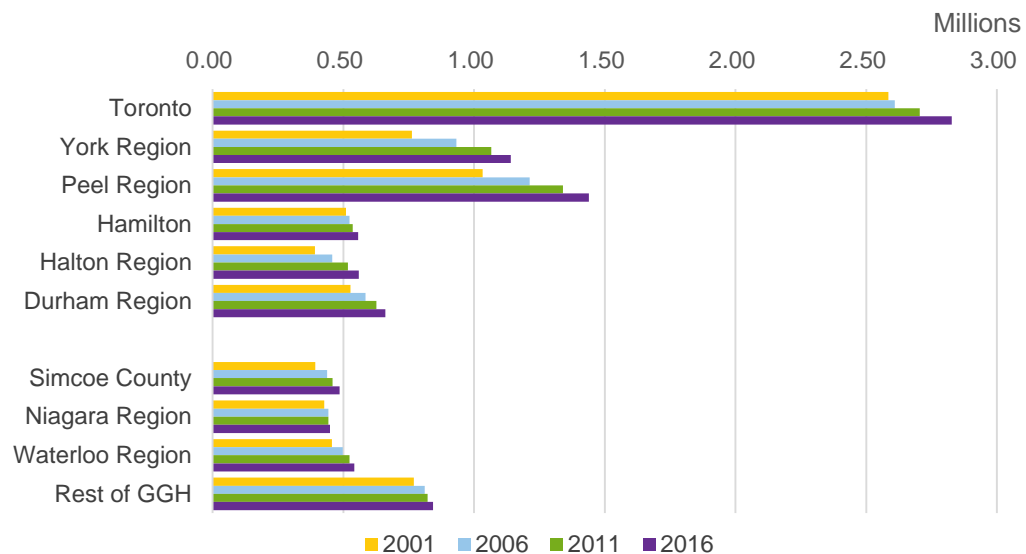
## 3 GTHA Context

This chapter examines population, housing and employment trends specific to the GTHA, analyzing the manner and scope by which the region has changed in the past decade. Understanding these trends and the underlying factors which resulted in their outcome informs the regional outlook.

### 3.1 Population Trends

The GGH, in particular the GTHA, is one of the fastest growing urban regions in North America. **Exhibit 3.1** shows the population in the major urban areas that make up the GGH during Census years 2001, 2006 and 2011, along with demographic estimates to 2016. Over this period, nearly all the new growth was absorbed in the GTHA (as shown in **Exhibit 3.2**). In the Outer Ring, Simcoe County, Waterloo Region and, to a lesser extent, Niagara Region saw most of the population growth. Although the rest of the GGH saw an overall increase in population, a few lower-tier municipalities in the Outer Ring saw a small decline in population, largely as a result of the out-migration of younger adults leaving for educational or work opportunities in larger urban centers (such as the GTHA).

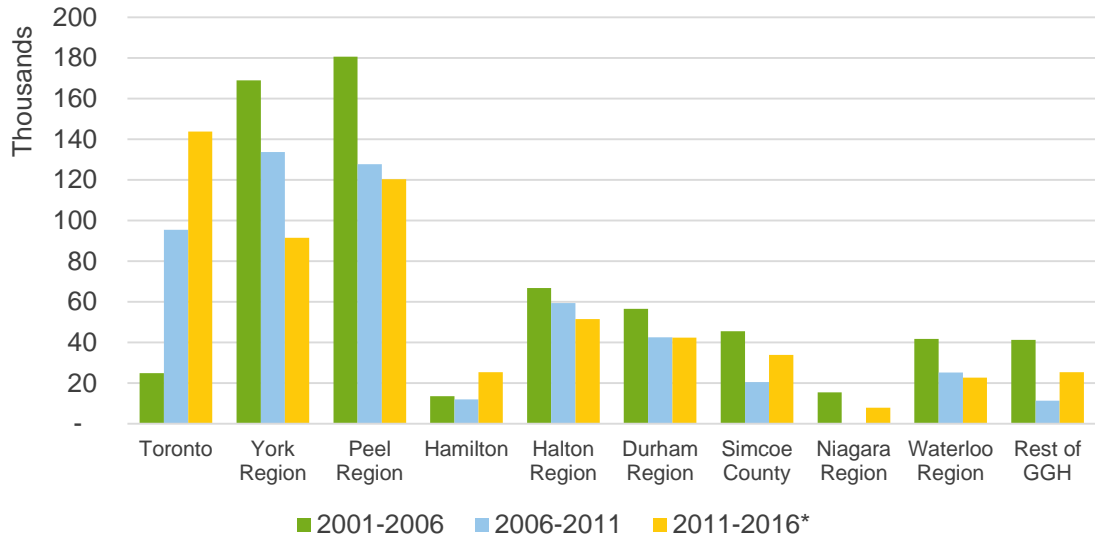
**Exhibit 3.1:** Total Population in the GGH, 2001-2016<sup>2</sup>



Source: Hemson Consulting Ltd. based on Statistics Canada Annual Demographic Estimates.

<sup>2</sup> 2011-2016 population figures are estimates from Statistics Canada Annual Demographic Estimates to 2015 with Hemson Consulting preparing the further 1-year estimate to 2016.

**Exhibit 3.2: Population Growth by Census Period, GGH, 2001-2016<sup>3</sup>**



Source: Hemson Consulting Ltd. based on Statistics Canada Annual Demographic Estimates.

The GTHA saw population growth in every upper- and single-tier municipality. The major driver of new growth to the GTHA has been migration. With fertility rates remaining below replacement levels across Canada, new population growth in the GTHA, has mainly come from net migration to the region, most significantly immigration, as shown in **Exhibit 3.3**.

**Categories of Migration**

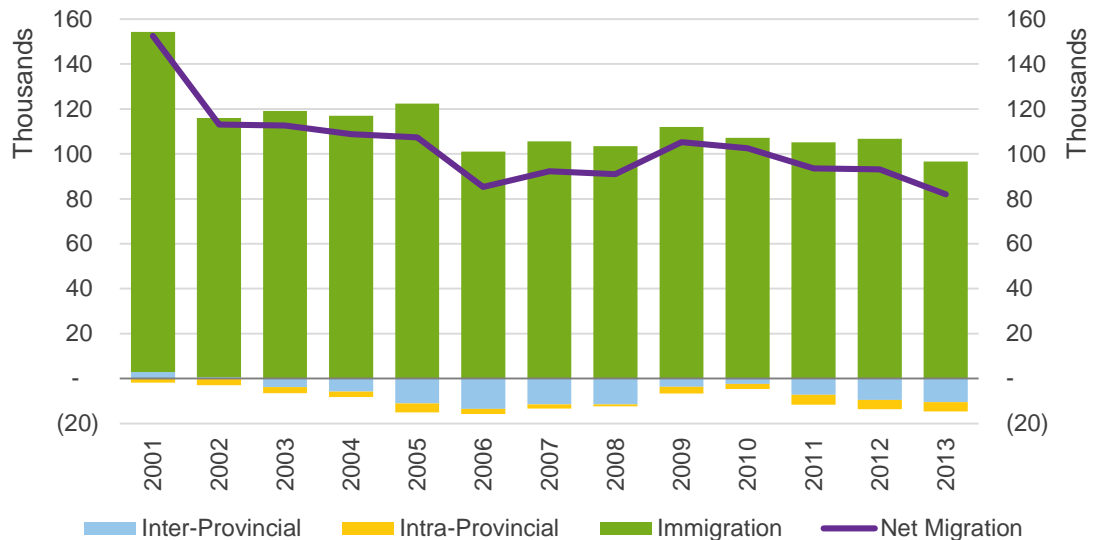
Net migration is comprised of three components:

- **Net Immigration** describes the movement of people between countries and includes immigrants moving to settle in Canada permanently, emigrants leaving the country, returning emigrants, and non-permanent and temporary residents.
- **Inter-provincial migration** describes the movement of people between provinces.
- **Intra-provincial migration** describes the movement of people between Census Divisions (Regions, Counties, Northern Districts and some Single-Tier Cities within the province).

Each of these components is affected by various social, economic and political factors, which can in turn have a significant impact on overall population change.

<sup>3</sup> 2011-2016 population figures are estimates from Statistics Canada Annual Demographic Estimates to 2015 with Hemson Consulting preparing the further 1-year estimate to 2016.

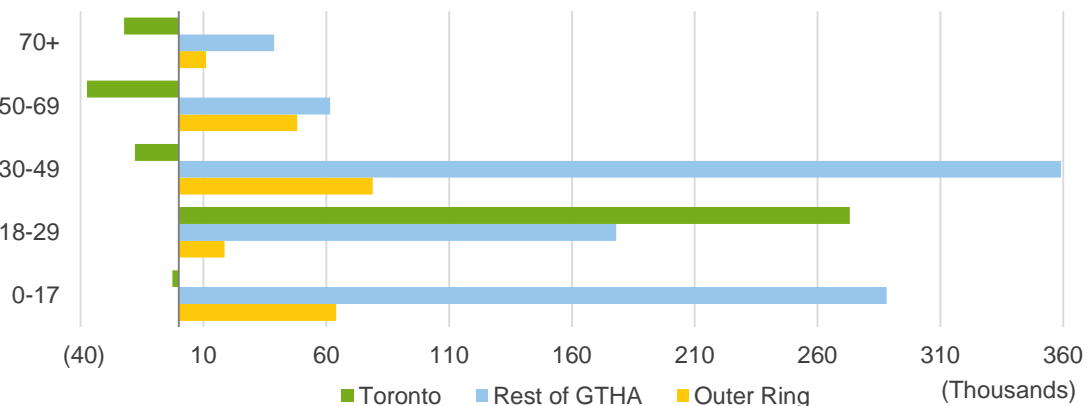
**Exhibit 3.3: Net Migration by Component of Migration, Greater Golden Horseshoe, 2001-2013**



Source: Hemson Consulting Ltd. based on Statistics Canada Annual Demographic Estimates.

Within the GGH, migration patterns have followed a trend of younger people from the Outer Ring of the GGH moving to Toronto while middle- to older-age adults, along with their children, moving from Toronto to the 905<sup>4</sup>. This trend is shown in **Exhibit 3.4**.

**Exhibit 3.4: Age Structure of Net Migration, Greater Golden Horseshoe, 2001-2014<sup>5</sup>**



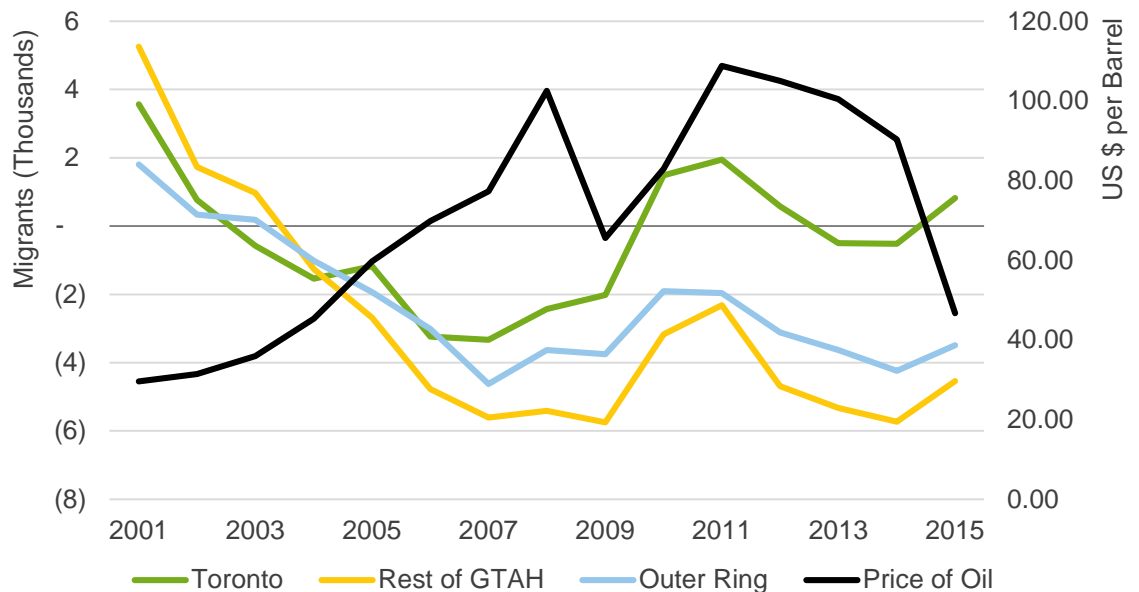
Source: Hemson Consulting Ltd. based on Statistics Canada Annual Demographic Estimates.

<sup>4</sup> The “905” in this context is used to describe municipalities in the GTHA excluding the City of Toronto.

<sup>5</sup> 2011-2014 migration numbers are estimates from Statistics Canada Annual Demographic Estimates.

Net in-migration into Toronto is exclusively concentrated in the 18-29 age cohorts, while other age cohorts show a net outflow, reflecting the trend of younger students and early-stage professionals to gravitate towards larger urban centers and older adults and families with children moving to other parts of the GTHA and GGH, mainly to find affordable family-oriented housing. The same time period also saw a net outward flow in inter-provincial migration. With high commodities prices and a booming oil sector to in western Canada, many residents left Ontario to take advantage of employment opportunities. **Exhibit 3.5** displays the net inter-provincial migration by year along with the price of oil from 2001-2015.

**Exhibit 3.5:** Net Inter-Provincial Migration and Price of Oil, Greater Golden Horseshoe, 2001-2015<sup>6</sup>



Note: Oil prices represent the annual average cost of imported crude oil in U.S. dollars per barrel, adjusted for inflation.

Source: Hemson Consulting using data from Statistics Canada and the U.S. Energy Information Administration.

Past trends indicate a relationship between the price of oil and inter-provincial migration. That is, the higher the price of oil, the more opportunity in Alberta and Saskatchewan and the greater the net outflow from the GGH.

<sup>6</sup> 2011-2015 migration numbers are estimates from Statistics Canada Annual Demographic Estimates.

## 3.2 Housing Market Trends

In the last decade housing prices in the GTHA increased at historically high levels. There are many factors that have led to the price increases and there is no clear consensus as to the specific contributions of each factor. Among the key factors are record low borrowing rates allowing people to borrow more and foreign investment in the local housing markets has been increasing. Prices are also pushed higher where there is a high demand and a constrained supply of land, at least for ground-related housing. In Canada's two most expensive markets, the Vancouver and Toronto areas, the land supply is constrained by physical limits, policies to limit new greenfield development and the inability of municipal infrastructure to keep pace with demands<sup>7</sup>. The combination of all of these factors has led to an increase in housing prices, thereby stimulating demand for higher-density housing that tends to be more affordable than ground-related units.

### 3.2.1 High demand and low interest rates driving housing prices in the GTHA

Over the 20-year period from 1990 to 2010, the real median household income in the Toronto CMA<sup>8</sup> grew by 7%, while declining overall in the Hamilton and Kitchener CMAs. The increase in the median household income in Toronto occurred at the same time as interest rates declined to historic lows. Low interest rates facilitated larger loans thus giving a greater number of people access to the market. This has led to higher prices and to a record high price to income ratio in the Toronto CMA.

As of 2015, the price-to-income ratio in the GTA was approximately 8.2, in comparison to a ratio of 5.4 for Canada as a whole (Carrick, 2015). This means that the average purchaser in Toronto must pay more than 8 times his or her household income to purchase a home. Although this ratio has largely been enabled and sustained by the low interest rates on mortgages (mortgage lending rates have dropped from nearly 15% in 1990 to just under 5% in 2015 (Ratehub, 2015)), according to the Canadian Mortgage and Housing Corporation (CMHC), the income required to purchase the average home in the GTA has surpassed the actual median household income as of 2012 (see **Exhibit 3.6**). The cost of housing by type has seen price increases across the board, with single-detached houses climbing highest (**Exhibit 3.7**).

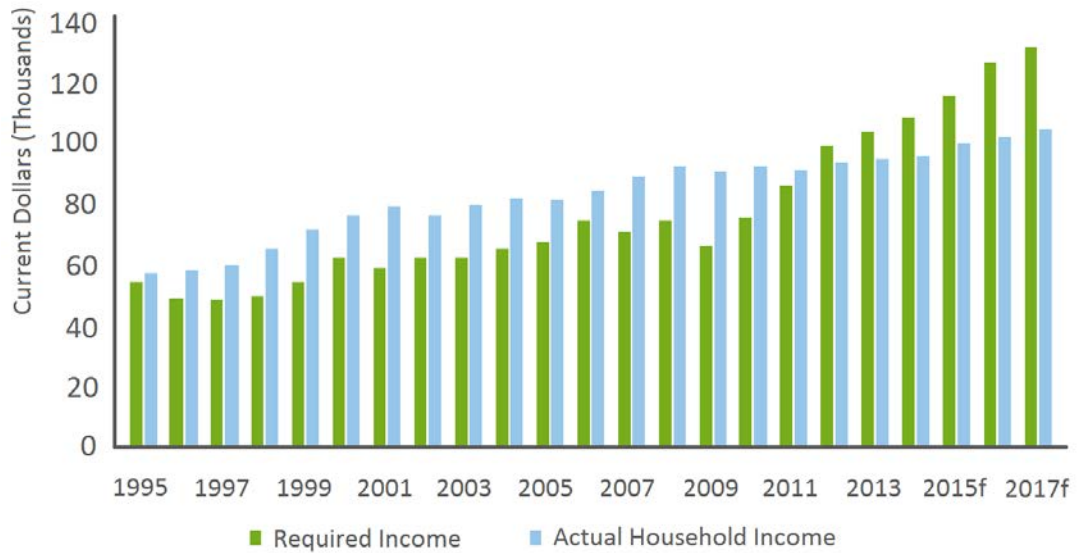
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<sup>7</sup> With the exception of the Agricultural Land Reserve, Vancouver's land constraints are primarily physical in nature. Toronto's limits are largely policy based.

<sup>8</sup> The Toronto CMA includes a majority of GTHA municipalities, with the exception of Hamilton, Burlington, Whitby, Oshawa, Clarington, Scugog and Brock. The CMA also includes some Outer Ring municipalities including Orangeville, Mono, Bradford West Gwillimbury and Beeton and Tottenham Townships.

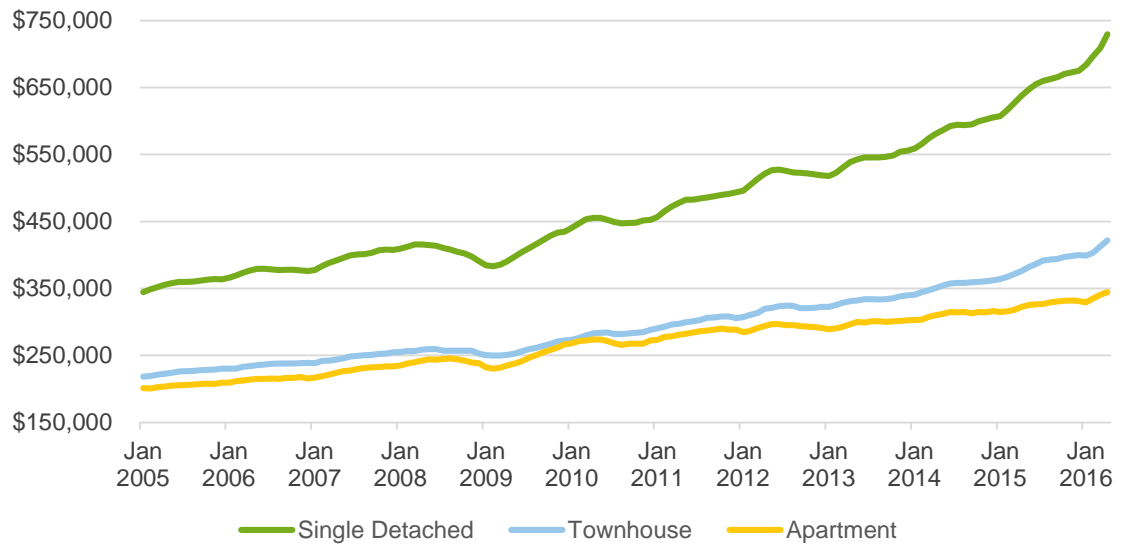


**Exhibit 3.6:** Required vs. Actual Household Income to Purchase an Average Priced Home - GTA



Source: CMHC Housing Market Outlook – Greater Toronto Area, Fall 2015.

**Exhibit 3.7:** Average Housing Price Comparison by Type – GTHA, 2005-2016



Source: The Canadian Real Estate Association.

An additional factor that is often supposed as contributing to the increase in house prices in Canadian markets is foreign ownership of housing as investment properties. It has been argued that foreign ownership of housing for investment purposes increases demand while at the same time restricting the supply of housing available to local residents who are looking to purchase, raising the overall cost of housing in the process. On the other hand, any of the units that are occupied by local residents related to the foreign owner or by renters are part of the local housing market. The extent to which foreign ownership of housing affects the demand and supply of housing in the GTHA as well as housing prices is currently unknown. Although the CMHC undertook a study of foreign-owned condominium units (CMHC, 2015), the results have been contested. As it stands, no verifiable data exists on foreign ownership of housing in the GTHA<sup>9</sup>.

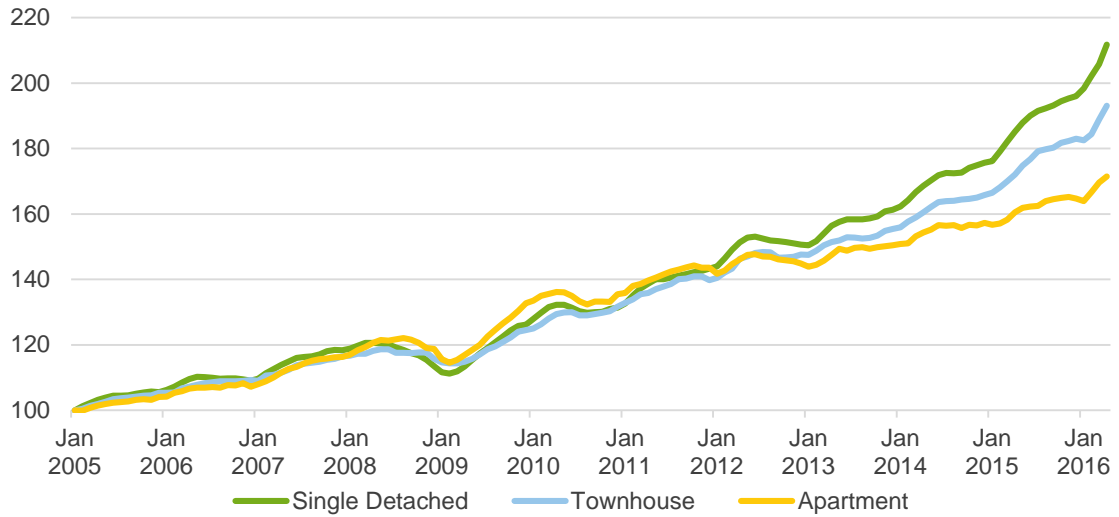
The combination of continued demand from a growing population, increasing buying power and foreign ownership has increased the demand for housing in the GTHA. Where this demand affects housing prices, however, is whether the local market has the ability to supply the new housing necessary to meet demand. In the GTHA specifically, a shortage of available serviced land in greenfield locations has been identified as a supply constraint for ground-related residential housing (Clayton, 2015). The *Growth Plan* is specifically intended, over the long-term, to reduce the land area of new greenfield land developed and reduce the number of ground-related housing units accommodated on greenfield land in the GGH. The intended housing market shift is toward more growth accommodated through intensification, the vast majority of which is medium and higher density units. The *Growth Plan* related supply constraints and associated market shifts are long-term and will affect the market and pricing over time, but approvals and municipal servicing constraints on the planned greenfield lands are likely the larger short-term challenge to supply. Higher density housing can also have some constraints to short-term supply; while an apartment site can always be found somewhere, the approvals process and multi-year construction timing can limit the speed of short-term delivery of new units.

Whatever the exact source of the constraints on greenfield supply, its effect can be seen in the widening divergence in housing price increases between ground-oriented housing and apartment units. Prior to 2012, any changes in the average price for a given housing type was closely reflected in other types, as shown in Exhibit 3.7, above, and more clearly as an index in **Exhibit 3.8**. Since 2012, the average prices for single-detached and townhouse units have risen at a higher rate than higher-density apartment units. While overall increases arising from low interest rates would likely affect all housing equally, the differential between types is more likely associated with supply constraints on the lower density units.

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<sup>9</sup> The CMHC study identified a figure of 5.8% of all units in Toronto's downtown core were owned by foreign investors, with 3.8% for the City of Toronto as a whole, and 1.6% for the remainder of the GTA.

**Exhibit 3.8: Change in Monthly Housing Price Index by Type – GTHA, 2005-2016**



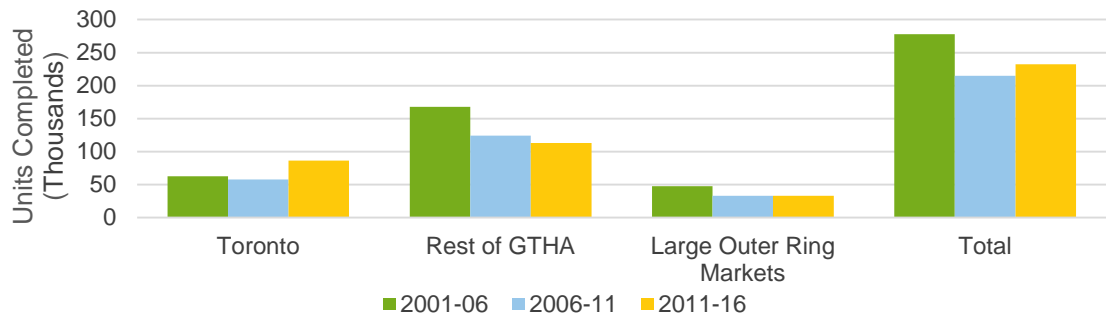
Note: Housing prices are indexed to January 2005 (Jan 2005=100).

Source: The Canadian Real Estate Association.

### 3.2.2 Housing completions have declined in most areas beyond Toronto in the most recent period

Over the past three census periods, the supply of recent housing completions shifted towards the City of Toronto, while the rest of the GTHA and Outer Ring municipalities saw notably fewer units in recent years. This trend is shown in **Exhibit 3.9**.

**Exhibit 3.9: Housing Completions by Census Period, Toronto, Rest of GTHA & Large Outer Ring Markets<sup>10</sup>, 2001-2016<sup>11</sup>**



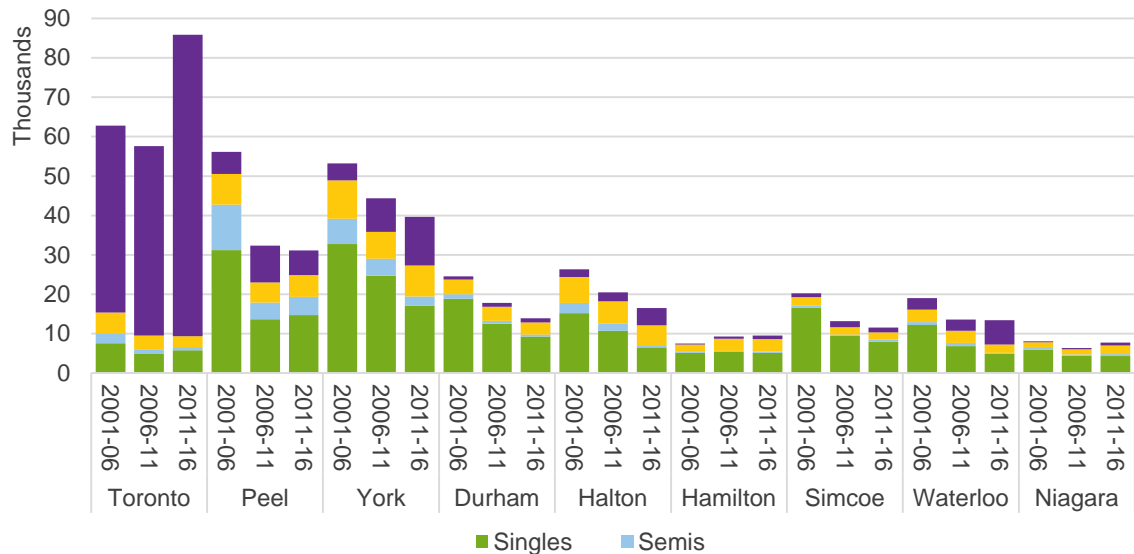
Source: Hemson Consulting Ltd. with data from CMHC Monthly Housing Market Tables.

<sup>10</sup> “Rest of GTHA” includes the regions of Peel, York, Durham and Halton and City of Hamilton. The three “Large Outer Ring Markets” are Simcoe County (including Barrie and Orillia) and Waterloo and Niagara Regions.

<sup>11</sup> Census periods begin June of the first year of the period and end May of the final year.

The jump in Toronto’s housing completion numbers can be attributed to the recent boom in downtown condominium development. In terms of total growth, this makes Toronto an exception in the GGH, with most other upper-tier municipalities experiencing significant declines in total completion numbers over the past two census periods, as shown in **Exhibit 3.10**. Based on recent trends, Hamilton will be the only other GTHA region to add more units by the end of the 2011-2016 census period, compared to the previous period. Peel, York, Durham, and Halton are unlikely to achieve as much growth as they did in 2006-2011. This also marks a significant reduction in completions compared to the earlier 2001-2006 census period. However, because of the high amount of development in Toronto, it is anticipated that by May 2016 the GTHA will see a slightly higher number of housing completions as compared to the previous census period.

**Exhibit 3.10: Housing Completions by Census Period, Select Upper- and Single-Tier Municipalities in the Greater Golden Horseshoe, 2001-2016<sup>12, 13</sup>**



Source: Hemson Consulting Ltd. with data from CMHC Monthly Housing Market Tables.

Completion rates for municipalities in the Outer Ring have also failed to match those experienced in the 2001-2006 census period. If trends persist, the Simcoe area will fall short of the total number of completions as in the 2006-2011 period<sup>14</sup> as well, while Waterloo and Niagara should see slightly more than previously. While the total number of housing completions is approaching the same amount

<sup>12</sup> Census periods begin June of the first year of the period and end May of the final year.

<sup>13</sup> Data for the 2011 to 2016. The census period includes historic CMHC data on housing unit completions to December 2015. The remaining completions through to May 2016 are estimated based on units under construction as of the end of December 2015.

<sup>14</sup> Growth in the Simcoe County area is constrained by the limited supply of greenfield development lands in the City of Barrie until new urban areas in south Barrie come on stream in the next few years.

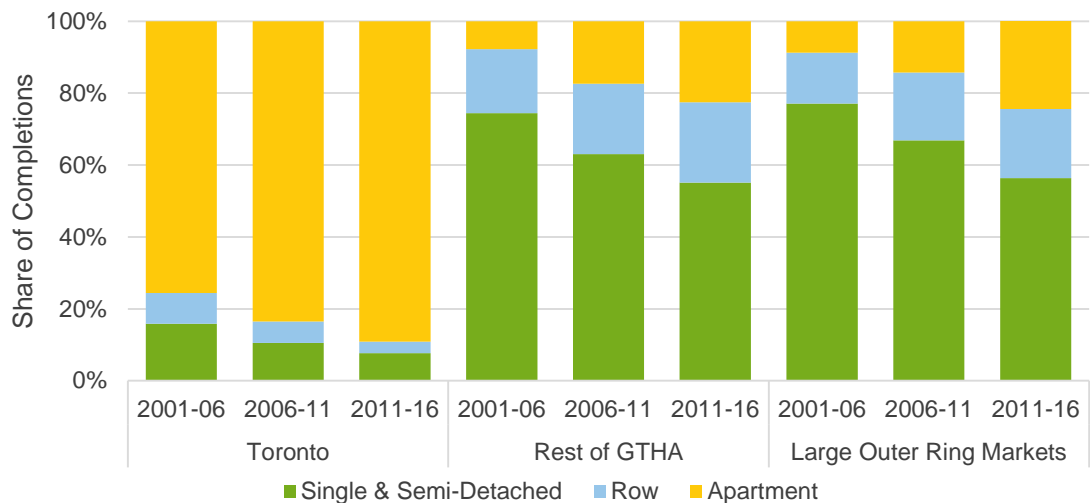
experienced in the 2006-2011 census period, the form of these units has shifted towards higher density units.

At a macro-economic level, the impact of the 2009 recession and its subsequent sluggish recovery is a likely reason for the decrease in total housing completions, most visible in the drop between the 2001-2006 and 2006-2011 census periods. Outside of the City of Toronto, another noteworthy factor is the sharp decline in single and semi-detached housing completions which comprised the lion's share of completions in these areas prior to 2006. Increases in apartment completions in a select few municipalities have helped to soften the drop in ground-oriented supply in places like York and Waterloo, though cumulative net completion numbers remain lower than previous periods. The sources for these kinds of market changes are always complex, but the lack of readily serviced land is a contributing factor.

### 3.2.3 Trends in Housing Types in the GGH

Across the GGH there has been a steady shift in the form of housing being built. Single-detached homes represent a declining share of housing completions as market and policy directions favour higher density alternatives. This change is demonstrated in **Exhibit 3.11**.

**Exhibit 3.11:** Share of Housing Completions by Census Period, Toronto, the Rest of the GTHA, and Large Outer Ring Markets<sup>15</sup>, 2001-06, 2006-11, & 2011-16



Source: Hemson Consulting Ltd. with data from CMHC Monthly Housing Market Tables.

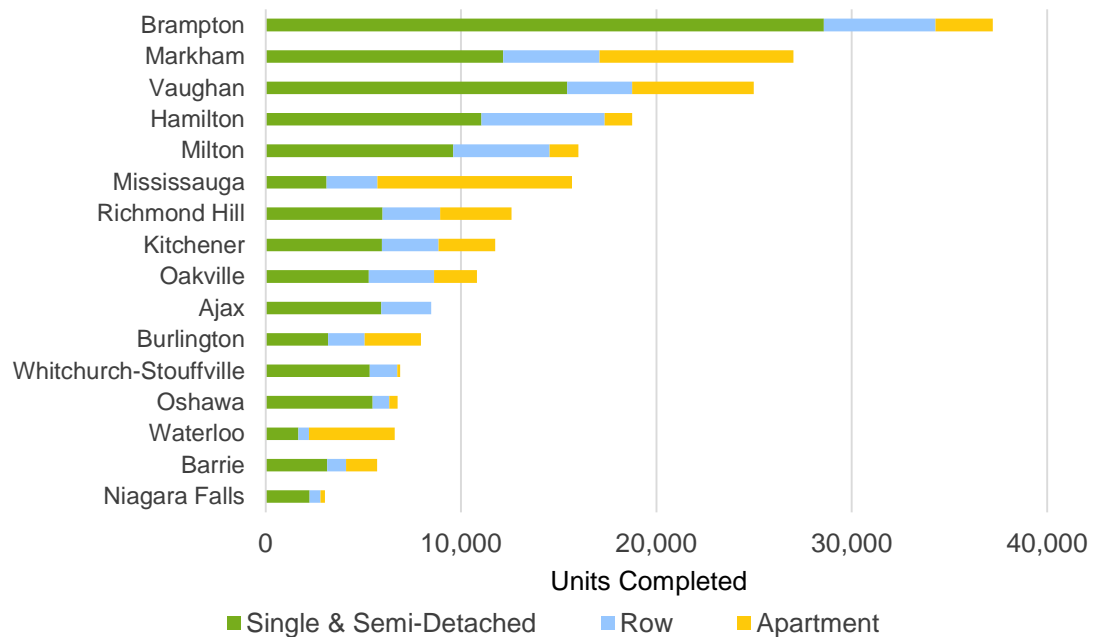
<sup>15</sup> “Rest of GHTA” includes the regions of Peel, York, Durham and Halton and City of Hamilton. The “Large Outer Ring Markets” are Simcoe County (including Barrie and Orillia) and the Regions of Waterloo and Niagara.

While apartments have comprised the majority of Toronto’s housing completions, largely due to the lack of land available for ground-related development, single and semi-detached units accounted for the bulk of new residential growth in the rest of the GTHA and the Outer Ring. However, the share of completions represented by these units has declined steadily in both of these areas over the past two census periods, being replaced by row houses and apartments. These changes align with an increased policy focus on density and intensification as directed by the *Growth Plan*, but may also be indicative of changing consumer preferences in the face of rising home ownership costs.

While living in a single-detached house is commonly listed as the most desirable type of housing, a recent study of housing choices in the GTHA (Pembina Institute, 2014) found that both cost and location are the leading considerations when actually making a purchase. According to the respondents, affordability and location-efficient living, that is communities which are walkable, well serviced and well connected to transit infrastructure, are becoming increasingly important factors which make higher density communities a draw, even in suburban municipalities.

Outside of Toronto, the development patterns of individual communities are quite distinct and the makeup of housing completions varies by location. This is demonstrated in **Exhibit 3.12**.

**Exhibit 3.12: Municipal Housing Completions by Type, Highest Growth GGH Municipalities (excluding Toronto), 2006-16**



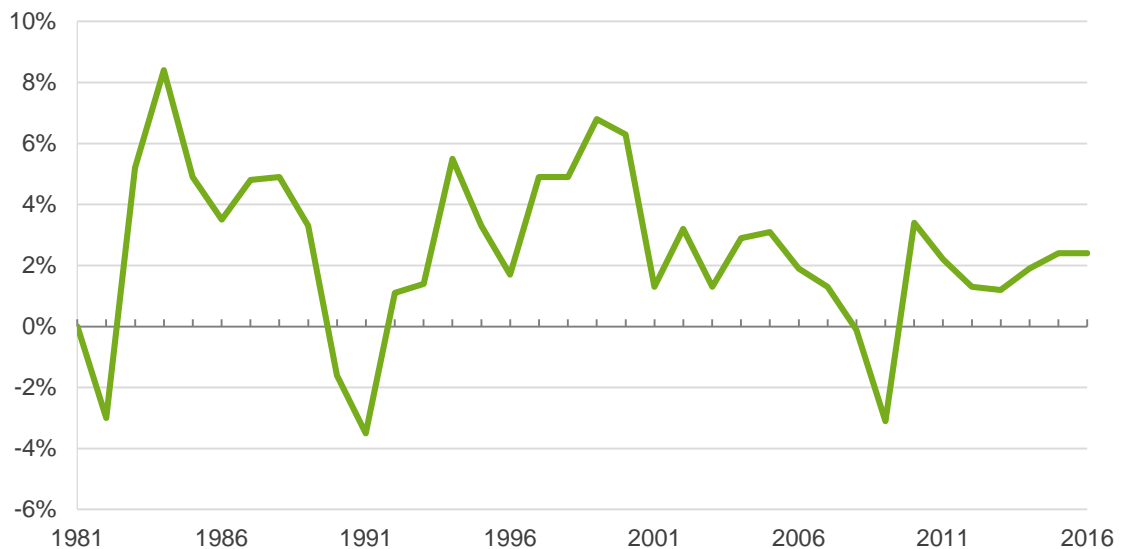
Source: Hemson Consulting Ltd. with data from CMHC Monthly Housing Market Tables.

While apartment construction comprises a sizeable portion of total completions for a handful of the municipalities on this list, single-detached and other ground-oriented housing types remain the dominant form of development for most communities outside of Toronto. The exceptions are Mississauga and Waterloo. Mississauga is nearly fully built out of greenfield land and, as a result, has seen the focus of new development shift to intensification. The City of Waterloo’s large share of new apartment completions is likely due to the large number of students and young professionals in the technology sector.

### 3.3 Employment Has Been Recovering

Although Ontario has recovered from the 2009 recession, annual real GDP growth has lagged behind expectations. According to *Ontario’s Long-Term Report on the Economy* published in 2014 by the Ministry of Finance, the province experienced an average real GDP growth of 2.6 percent between 1982 and 2013. The report also projects annual real GDP growth to average 2.5 percent between 2014 and 2017, though recent data indicates that actual growth is currently below this forecast. (**Exhibit 3.13**).

**Exhibit 3.13:** Estimated Annual Percent Change in Real GDP, Ontario, 1982-2016

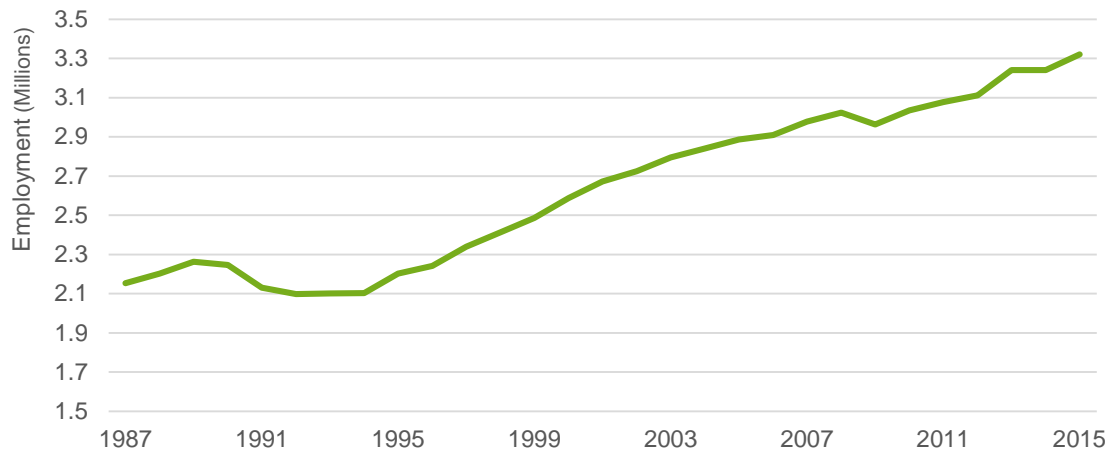


Note: Years 2015 and 2016 are estimates provided by the Conference Board of Canada.

Source: Statistics Canada, OECD & the Conference Board of Canada.

In terms of total employment, the effect of the recession in 2009 was not as dramatic locally as the early 1990s recession (**Exhibit 3.14**). Nevertheless, the effects varied by type of employment, where some sectors saw a significant decline and others were not affected as strongly.

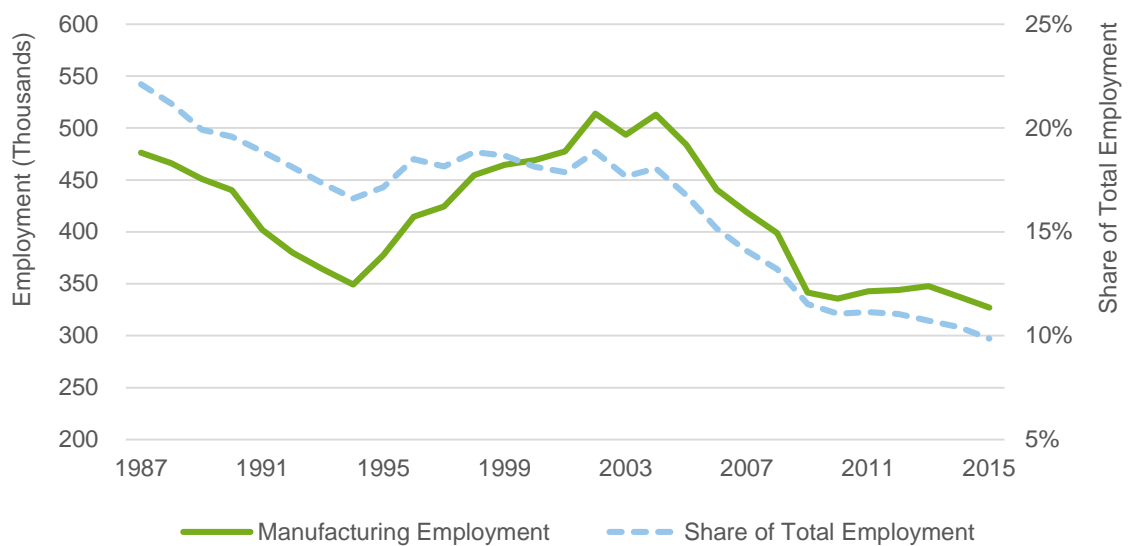
**Exhibit 3.14: Total Employment in the Toronto Economic Region, 1986-2015**



Source: Statistics Canada Monthly Labour Force Survey.

The overall employment picture of the GTHA is largely characterized by a declining manufacturing sector. Total manufacturing employment in the region dropped from almost 500,000 in the mid-1980s to only 330,000 in 2015, representing a drop in the fraction of total regional employment from 22% to 10% over that period, as shown in **Exhibit 3.15**. The focus of the region’s economy is increasingly shifting to professional services (which forms much of the workforce in what are often called knowledge-based industries) and other population serving functions such as retail, healthcare and institutional services.

**Exhibit 3.15: Manufacturing Employment in the Toronto Economic Region, 1986-2015**



Source: Statistics Canada Monthly Labour Force Survey.



### **Employment in the GTHA falls into three broad land use categories**

Because of the variety of uses, in both the goods producing and services based sectors, that now locates on lands traditionally intended for manufacturing and industrial activities, it is important to consider employment in the GTHA in the context of terms used in the formulation of land use policy. In planning for employment, four broad land-use categories are used: Major Office Employment, Population-Related Employment, Employment Land Employment and Other Rural Employment

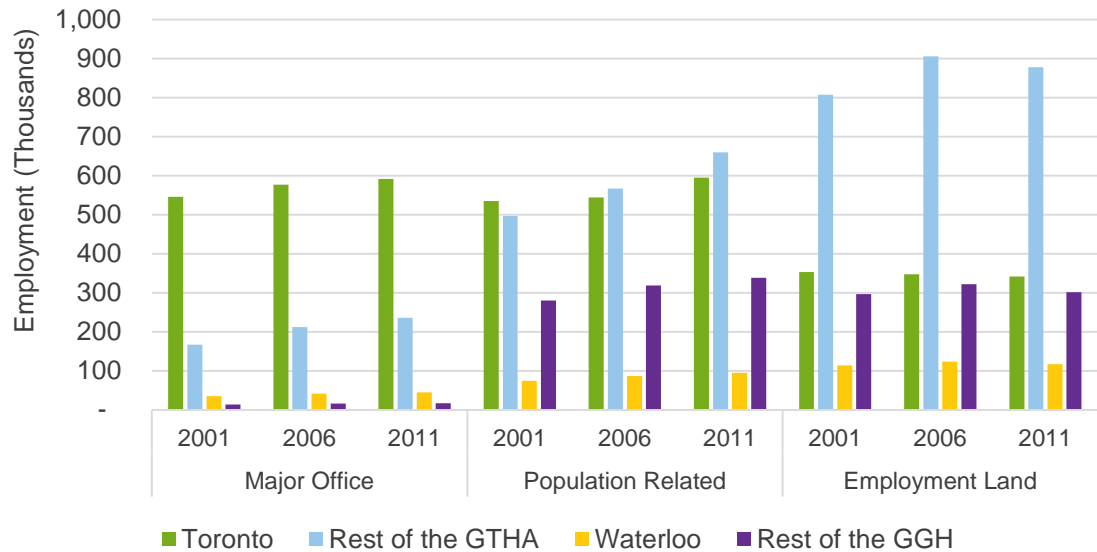
- **Major Office Employment** refers to office-type employment contained within free-standing buildings with greater than 20,000 net rentable square feet (1,858 m<sup>2</sup>) of space. Major Office Employment is distributed across a few major agglomerations within the GTHA, the largest being downtown Toronto. \*
- **Population-Related Employment** is employment that primarily serves the local residential population (as opposed to other businesses and broader economic markets). This category includes retail, education, health care, local government and work-at-home employment.
- **Employment Land Employment** refers to employment accommodated primarily in low-rise industrial-type buildings, the vast majority of which are located within business parks and industrial areas.
- A fourth category, **Other Rural Employment**, which includes agricultural, forestry and mining employment, is a very small source of employment in the GTHA. For most of the analysis presented in this report the Other Rural employment is combined with Employment Land Employment.

From a transportation demand perspective, Major Office and Population-Related are the most significant. Major Office buildings are very high drivers of transportation demand. Population-Related Employment reflects patterns of residential growth. Areas with high residential growth will drive demand for both local and regional services. In contrast, Employment Land Employment tends to be land intensive and gravitates towards dispersed, low density areas with good highway access.

\*This definition of the term "Major Office" is used here for analytical purposes and is consistent with the usage in the background work to the *Growth Plan* forecasts in Schedule 3. The term Major Office is also used in the *Growth Plan* for a different policy purpose related to locating employment near transit services. Major Office for that purpose is buildings of 10,000 m<sup>2</sup> (107,600 sq.ft.) or more.

Using the same land use categorization to describe employment as in forecast work supporting the *Growth Plan*, **Exhibit 3.16** shows the growth in Major Office, Population-Related and Employment Land Employment.

**Exhibit 3.16: Employment by Land Use Category, 2001-2011**

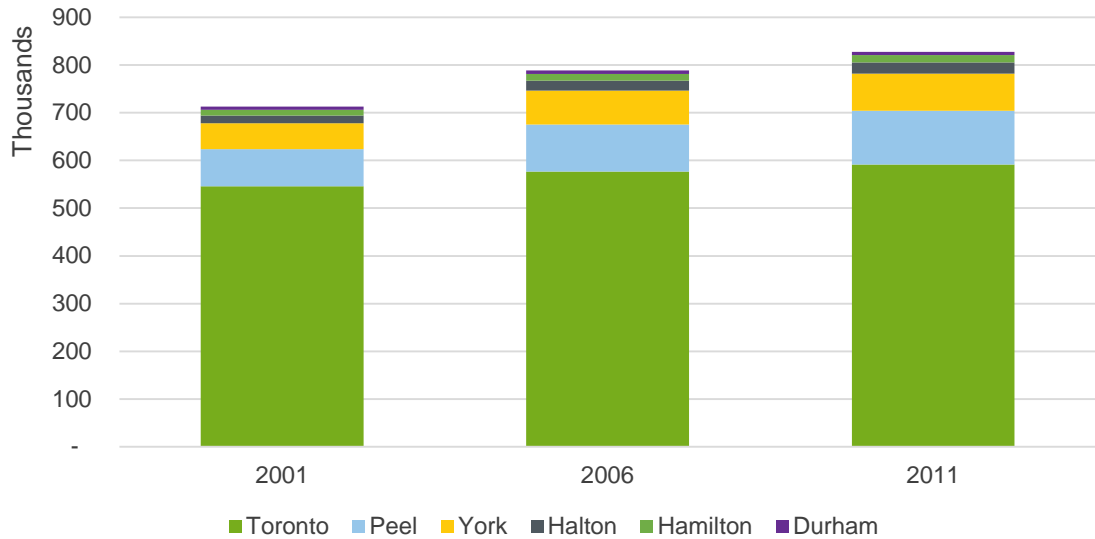


Source: Hemson Consulting Ltd. using data from Statistics Canada 2011 National Household Survey.

The difference between these employment categories is related to the nature of the work performed and the general land use requirements for their operation. As such, changing trends amongst these categories provide a strong indication as to the type of land and development patterns to be expected in the coming years. As has generally been observed, a large majority of total Major Office employment has been located in Toronto, with approximately 61% located within the downtown area. Waterloo is also distinguished here on account of the concentration of knowledge industries and their respective offices making Waterloo’s employment profile closer to that of the GTHA, rather than the Outer Ring of the GGH. Most of the growth in Population-Related employment has been in the regional municipalities outside of Toronto (since Population-Related employment follows patterns of population growth) and most of the Employment Land employment also remains outside of Toronto.

The Major Office category is highly sensitive to agglomeration economics, with both historical and near-term outlooks for development centred around existing clusters. Major Office contains functions related to the knowledge industries. These tend to locate in higher density structures and employ people with higher levels of educational qualifications. **Exhibit 3.17** displays the shares of Major Office employment by municipality. The majority of the Major Office employment is located in the office clusters in Toronto, Peel and York. In terms of growth, Toronto, Peel and York, in that order, added nearly all the new Major Office space to the GTHA between 2001-2011.

**Exhibit 3.17: Shares of Major Office Employment in the GTHA, 2001-2011**



Source: Hemson Consulting Ltd. using data from Statistics Canada 2011 National Household Survey.

Employment growth appears to be trailing the forecasts originally prepared for the GGH as part of Amendment 2 of the *Growth Plan*. The employment forecasts which form the background work to Amendment 2 were based on 2006 Census data, before the publication of the 2011 National Household Survey (NHS) data. Upon its release, place of work data from the 2011 NHS revealed that employment in the GTHA was about 4% lower than what had originally been estimated in the Schedule 3 forecasts for 2011. The estimates of 2011 may have underestimated the effects on the job market of the 2008–2009 recession. However, it should also be noted that this shortfall from earlier expectations may be a statistical discontinuity resulting from the shift from the mandatory long-form Census to the voluntary NHS. Since 2011, the job market appears to be catching up, since the monthly Labour Force Survey for the Toronto Region indicates that job growth since 2011 has been higher than forecast in the Schedule 3 background work.

It is also worth noting that the distribution of this job growth has also diverged from the original Schedule 3 forecasts. Toronto has experienced far more growth than expected. It appears that Toronto may already have exceeded its 2031 employment forecast. This is offset by the employment growth in the rest of the GTHA and Outer Ring municipalities which have experienced far lower rates of growth than expected. This has primarily occurred as the result of the changing employment characteristics throughout the region.

A large part of the slow job growth through the recession period can be attributed to the significant declines in the manufacturing sector over the past decade, though these shortfalls have now been more than made up for by the growth in other emerging sectors. The loss of 104,000 manufacturing jobs across the GTHA

represents a decline of 23.5 percent between 2006 and 2011, though gains of over 119,000 jobs in the public sector offset this loss, including:

- Public Administration (37 percent growth);
- Health Care & Social Assistance (15 percent growth); and
- Education (17 percent growth).

Significant gains were also recognized in other sectors, including Finance and Insurance; and Professional, Scientific and Technical Services.

Despite the struggles of the manufacturing sector and the lower than anticipated overall employment growth numbers from the 2011 NHS, employment growth is continuing across the region. Changes in historic employment suggest that the loss of manufacturing jobs are being met by growth in emerging industries, particularly transportation and wholesale trade. As transitions in the economy shift to new forms of employment, the province is expected to continue to experience steady employment growth for the foreseeable future. The economic transition and its implications for growth are discussed in greater detail in Chapter 5.

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This chapter discussed the population, housing and employment trends affecting the GTHA, and by extension, the growth forecasts for the region. Population growth continues at a fast pace, while increasing housing prices and policy initiatives have resulted in a steady increase of higher density housing supply. Economic recovery from the 2009 recession has proceeded slowly as the GTHA continues to transition away from the traditional manufacturing sector towards emerging industries. The next chapter discusses the impacts of changes in the GTHA's demographic and labour force composition, and how these factors affect the outlook.

## 4 GTHA Demographic Outlook

Future transportation demand is largely a function of changes in demographics, the economy and the distribution of population and economic growth. As such, it is crucial to understand the demographic and economic outlook for the region to guide transportation investment decisions. The following two chapters discuss the impact of the trends covered in previous chapters, and analyzes their implications for future growth. This chapter reviews how demographic changes, specifically age groups and migration patterns, are lining up with forecasts for the region<sup>16</sup> and the potential implications these changes are likely to have on land-use and transportation decisions moving forward.

### 4.1 Demographic and Labour Force Outlook

Ontario is the province with the largest population in Canada and has grown an average of 1.3% annually since the early 1970's. The majority of this growth has occurred within the GTHA and central regions. The growth is a function of two factors: natural increase and net migration.

Recently the rate of natural increase (the resulting population of births minus deaths) has been low as baby boomers have aged beyond their reproductive years and as a smaller cohort of women are in their peak fertility years. While increased life expectancy for both men and women has lowered the mortality rate in Ontario, the fertility rate among women in the province averaged a modest 1.55 children per woman in 2012 (Statistics Canada, 2016). The result is an increasing portion of the population living later into life, with fewer children to replace them as they leave the labour force. In this respect, net migration, specifically immigration, has become a significant source of population growth and demographic change in the region, accounting for over 65% of total growth over the 2006-2011 census period.

#### 4.1.1 Demographic change is driven by migration

Significant population growth in the GTHA is anticipated to continue to 2041. As the population grows in Ontario, the GTHA region will continue to be the fastest growing area and is expected to increase from 7.2 million in 2015 to 10.1 million

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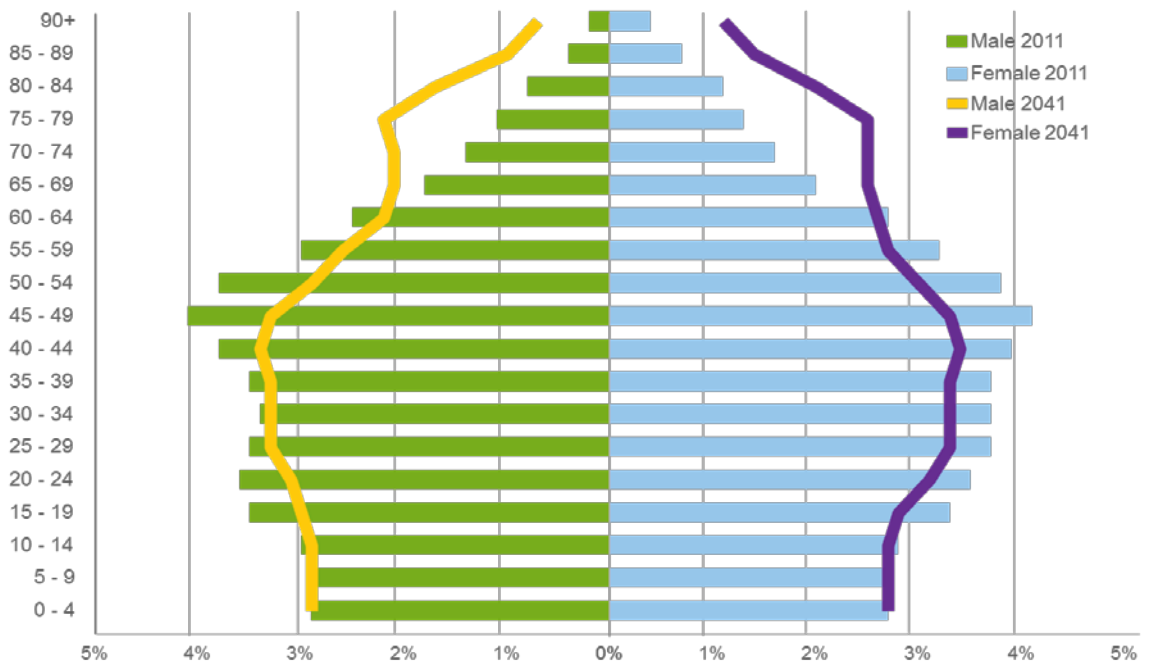
<sup>16</sup> The forecasts referenced in this chapter were prepared to allow municipalities in the GGH to conform with Provincial planning policy. These include Amendment 2 to the *Growth Plan for the Greater Golden Horseshoe, 2006 (the Growth Plan)* as amended in 2013 and the Ontario Population Projections for 2013-2041 prepared by the Ontario Ministry of Finance. Both of these reports are based on the 2011 Canadian Census and National Household Survey (NHS), and are informed by other sources including the Statistics Canada Annual Demographic Estimates and Labour Force Survey.

in 2041 with the region's share of Ontario's population surpassing 50% by 2025 (Hemson Consulting Ltd., 2013).

At the Provincial level, the population is estimated to continue to grow moderately at an annual rate of 1.0% over the 2013-2041 period. The number of seniors in Ontario as of 2013 will double by 2035, and will account for almost 24% of Ontario's total population. Ontario's working-age cohort (aged 15 to 64) will naturally decline as a share of the total population as the work force continues to age and the bulk of the baby boomers begin to reach retirement. Consequently, the growth in the core working-age group will depend on net migration into the province (Ministry of Finance, 2014).

The GTHA is expected to also experience this demographic shift as residents aged 65 and over account for a growing share of the population. These seniors accounted for less than 13% of the GTHA's population in 2011. By 2041, this share is expected to increase to just short of 22%. The age structure for both the most recent census and the forecast of the 2041 horizon are shown in **Exhibit 4.1**. Differences between the age structure of the GTHA and province-wide average are expected as education and employment opportunities continue to attract younger working aged migrants to the region. In line with historical migration patterns, a majority of this in-migration will continue to come from immigration.

**Exhibit 4.1:** Age Structure of the GTHA, Current and Forecast, 2011 & 2041



Source: Hemson Consulting Ltd. using data from Statistics Canada.

### Immigration and the GTHA Forecasts

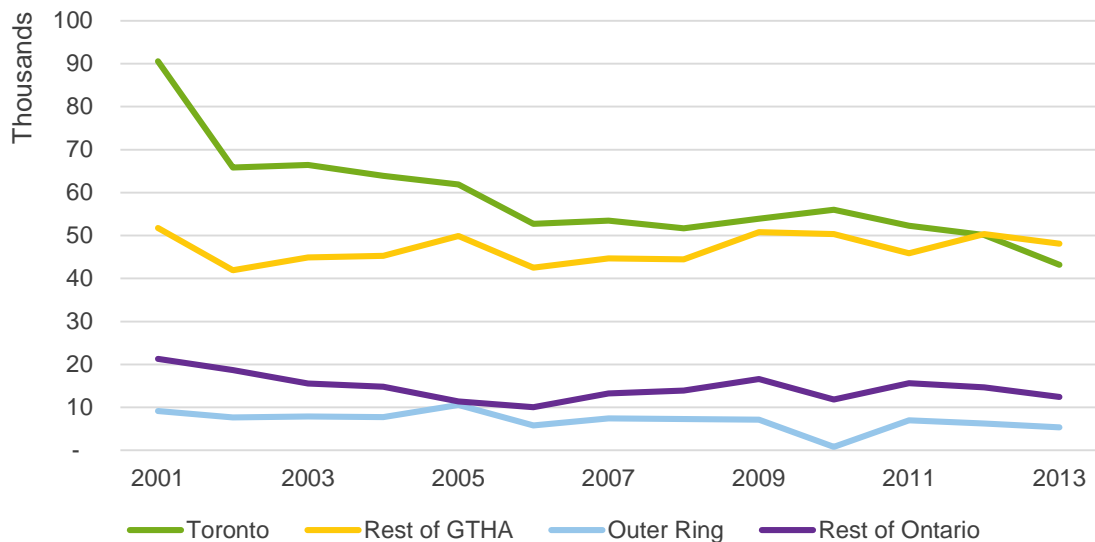
Because the GTHA accounts for such a high share of Canada's total immigration, federal immigration policy directly affects immigration and, by extension, population growth in the GTHA.

Ontario's share of the country's total immigration, after peaking at nearly 60% in 2002, has since declined to a low of about 37% by 2015. The decline can be attributed to economic and policy based factors:

- A rapidly expanding resource-based economy in western Canada, which has attracted immigrants to areas where labour shortages exist;
- Provincial nominee programs, starting with Manitoba's in 1998, which fast-track immigrants and their families for permanent resident status generally based on a pre-approved job offer. The programs aim to distribute immigration more evenly throughout Canada, and now accounts for a large proportion of total new immigration to certain provinces including: Manitoba (91%); Saskatchewan (80%); Alberta (22%); and British Columbia (14%); and
- The accumulative effect of immigrant community development in non-traditional immigrant destinations, which itself becomes a pull factor for immigrants.

The share of immigrants coming to Ontario has declined in recent years with western Canada becoming increasingly attractive in terms of employment prospects prior to 2014. Over 90% of immigrants coming to Ontario settle in Toronto and the surrounding area, with a net average of over 73,000 international migrants settling in the GTHA on an annual basis since 2006 (see **Exhibit 4.2**). This average is significantly lower than the preceding census period, which saw an annual net immigration of over 96,000 residents in the GTHA.

**Exhibit 4.2: Net Immigration to Ontario, 2001-2013**



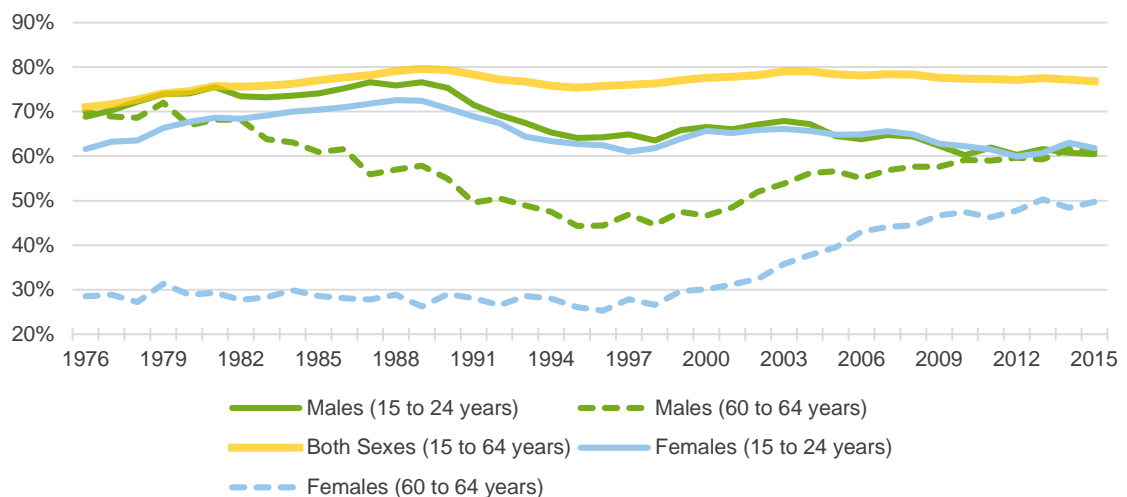
Source: Hemson Consulting Ltd. based on Statistics Canada Annual Demographic Estimates.

### 4.1.2 Much of the labour force change will be driven by demographics

Key drivers such as declining labour force participation rates, delayed retirement age and the attraction of new skilled immigrants are causing shifts in Ontario’s labour force. Overall, Ontario’s labour force participation is expected to decline as the population ages and growth in the working-age population cohort slows. Since the 1970s, women’s participation in the workforce has gradually increased and is now approaching similar participation rates to those of men (Ministry of Finance, 2014).

Another notable driver affecting the labour force is the significant decline in participation rates amongst younger people aged 15 to 24. Participation rates amongst this age group have declined since the 1990s as young adults have increasingly chosen to attend post-secondary education before entering the labour force. Meanwhile, Ontario has seen a noteworthy increase in labour force participation among those aged 60-64 as a result of delayed retirement. Taken together, these shifts in labour force participation have resulted in an overall decline in labour force participation. The historic change in participation rates amongst these demographic groups are shown in **Exhibit 4.3**.

**Exhibit 4.3:** Labour Force Participation Rates by Age Group, Province of Ontario, 1976-2015



Source: Hemson Consulting Ltd. with data from Statistics Canada Labour Force Survey.

While a larger portion of Ontario residents are continuing to work later in life buoying the overall participation rate, a large portion of the baby-boom generation is approaching retirement age. This will potentially result in future labour shortages; as natural growth rates alone will not be sufficient to maintain the current labour force. The immigration of highly skilled workers will play a key role in supporting Ontario’s labour force through this transition.



### 4.1.3 Long-term employment growth is tied to the population outlook

Both the population outlook and long-term employment growth will follow a similar path. While population and employment can follow different short-term patterns owing to shifts in the economic cycles and migration, the long-term outlook between the two must be synchronized. A state of very high or very low unemployment in any given area is unlikely to persist relative to the national average. Migration will compensate for very high or very low ratios of population and employment as people will move to where there are opportunities.

The dynamic and diverse economy of the GTHA should help to alleviate any major employment shocks pertaining to a specific industry, as already observed with the gradual transition and transformation of the Ontario manufacturing industry into new areas of growth.

## 4.2 GTHA Population Growth Is on Track to Meet Forecasts

Schedule 3 of the *Growth Plan* contains forecasts of population and employment for GGH. These forecasts provide the baseline for planning policy and growth management for all municipalities within in the GGH. The *Growth Plan* requires a review of these forecasts every five years. The most recent was published in June 2013. A review of pertinent indicators released since the 2013 *Growth Plan* update indicate that the forecasts for population and employment growth in the GTHA remain on track for the 2031 and 2041 forecast totals for the GTHA, with differences in distribution variation as shown in **Exhibit 4.4** for 2016.

**Exhibit 4.4:** Comparison of *Growth Plan* Schedule 3 Forecasts and Best Estimates for Current Population in 000s, GGH, 2016

	Schedule 3, 2016	Current Estimate for 2016	Difference	%
City of Toronto	2,844	2,897	52	1.8%
Region of Durham	686	661	(25)	-3.7%
Region of York	1,191	1,176	(15)	-1.3%
Region of Peel	1,444	1,432	(12)	-0.8%
Region of Halton	572	556	(16)	-2.8%
City of Hamilton	564	557	(7)	-1.3%
<b>GTHA Total</b>	<b>7,303</b>	<b>7,280</b>	<b>(23)</b>	<b>-0.3%</b>

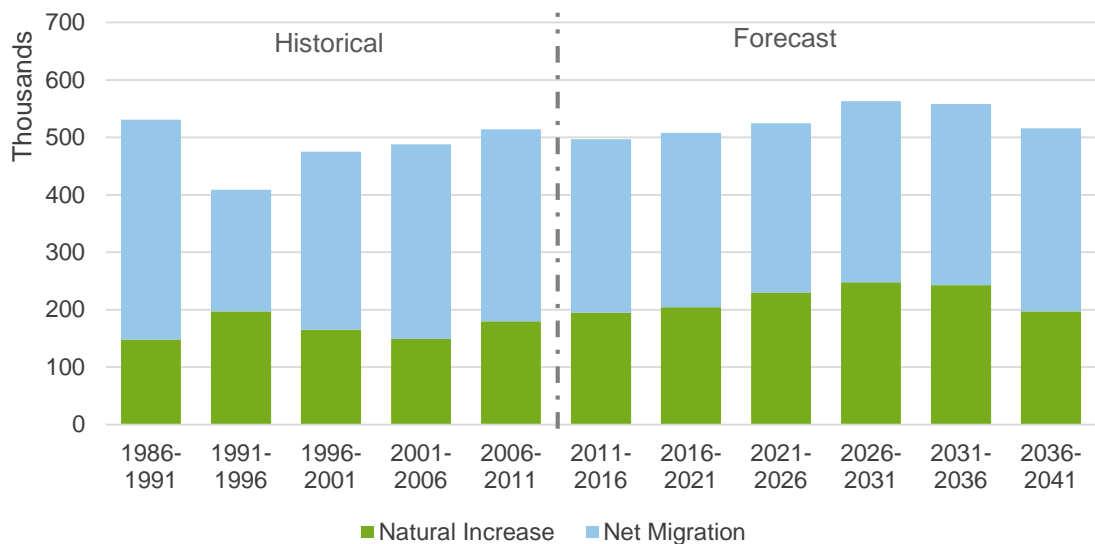
Note: Schedule 3 2016 figures refer to those in the background work to Amendment 2 in the Growth Outlook for the Greater Golden Horseshoe. Schedule 3 itself only contains forecasts for 2031, 2036 and 2041.

Source: Hemson Consulting Ltd. using data from Statistics Canada and the Growth Outlook for the Greater Golden Horseshoe and Annual Demographic Estimates.

The City of Toronto experienced more growth in period to 2016 than forecast in Amendment 2 background work. Most of this additional growth has been concentrated in apartment development in and around the downtown area. Based on projects now under construction, this trend is set to continue for at least a few years yet. All other municipalities within the GTHA experienced slightly less growth than forecast. In total, the GTHA is estimated to be approximately 0.3% below the forecast growth target<sup>17</sup>, which is a negligible amount at this scale.

In terms of employment, the City of Toronto is estimated at 2016 to be about 100,000 higher than had been forecast in the Amendment 2 background work. This is based on employment growth rates recorded by the City of Toronto employment survey. Balancing this high growth in Toronto, it would appear that all of the surrounding areas in the GTHA will come in below forecast for 2016. Specific estimates for each of these areas has not been prepared for this report as there is some conflicting data between various sources that will be settled by receiving the 2016 Census results. Overall net growth in the GTHA has varied between approximately 90,000 and 110,000 new residents per year over the past three census periods. Population growth figures and forecasts from the *Growth Plan* update are provided in **Exhibit 4.5** for reference.

**Exhibit 4.5:** Population Growth and Net Migration, GTHA, 1986-2041



Source: Hemson Consulting Ltd. using data from Statistics Canada and the Growth Outlook for the Greater Golden Horseshoe.

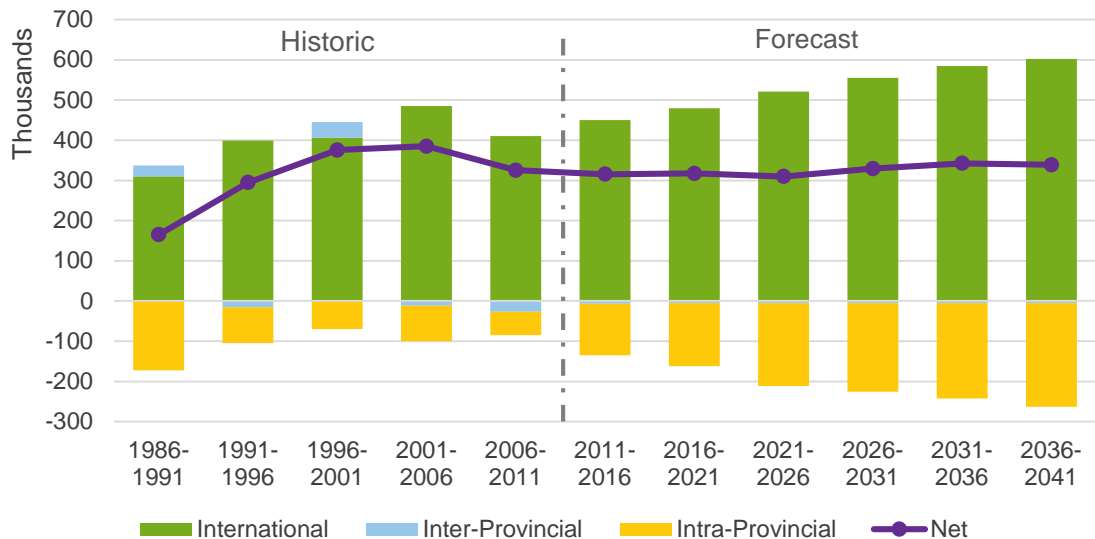
<sup>17</sup> The Amendment 2 background work 2016 figures have been adjusted to reflect the 2011 Census net undercoverage rate, which was not yet available at the time the Amendment 2 forecasts were prepared. This small adjustment provides for a common basis of comparison in the table.

Variations in population growth are largely a function of fluctuations in immigration and inter-provincial migration, as intra-provincial migration has remained comparatively static while natural increases continue to echo the baby boom in a relatively predictable demographic pattern. The extent of the effects these variations have on the forecast are discussed further in the following subsections.

#### 4.2.1 Immigration rates likely to be on the rise once more

Across the province, migration remains a key component of growth. Net migration has consistently been the largest factor of population growth over the past decades, a pattern that is expected to continue to 2041. The forecast migration rates from the 2013 *Growth Plan* update are provided in **Exhibit 4.6** for reference.

**Exhibit 4.6:** Components of Migration, GTHA, 2006-2041



Source: Hemson Consulting Ltd. using data from Statistics Canada and the Growth Outlook for the Greater Golden Horseshoe.

In the GTHA, this growth is primarily achieved through immigration. The Ministry of Finance’s *Fall 2014 Ontario Population Projections Update* assumes that long-term immigration rates will remain steady at 0.8 percent of population, with a high-growth scenario of 1.0 percent and a low-growth scenario of 0.6 percent. Over 85 percent of immigrants coming to Ontario are expected to be aged 44 years or younger (Ministry of Finance, 2014). The forecasts in the *Growth Plan* are consistent with the Ministry of Finance forecasts.

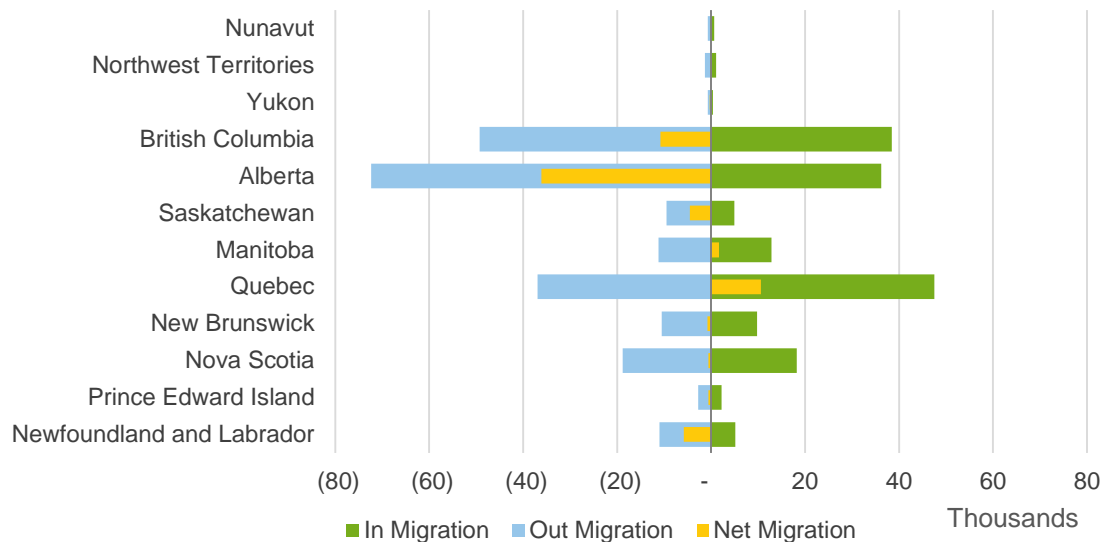
The GTHA remains the predominant settlement location for new immigrants arriving in Ontario. Approximately 83% of all immigrants arriving in the province over the past twenty years have settled within the GTHA. This trend is expected to continue.

### 4.2.2 Inter-provincial migratory patterns currently resulting in annual net outflow are expected balance out over the long-term

Inter-provincial migration tends to fluctuate significantly from year to year, largely dependant on relative economic opportunity between different parts of the country, as touched on earlier in Chapter 2. Ontario's net inter-provincial migration has been negative since 2003, largely due to net outflows west towards Alberta and the rest of Western Canada, along with some net outflow towards the Atlantic provinces. However recent downturns in the Alberta oil industry, combined with a sustained low Canadian dollar, have indicated signs of this trend slowing.

While a key source of inter-provincial migration to Western Canada, Ontario continues to attract migrants from other parts of the country. Some of these in-migrants move to Ontario from the west. Most come from Quebec and Manitoba. The pattern of these migration dynamics shown in **Exhibit 4.7**.

**Exhibit 4.7:** Annual Average Inter-provincial Migration Patterns Between Ontario and the Rest of Canada, By Province or Territory of Origin and Destination, 2001-2011

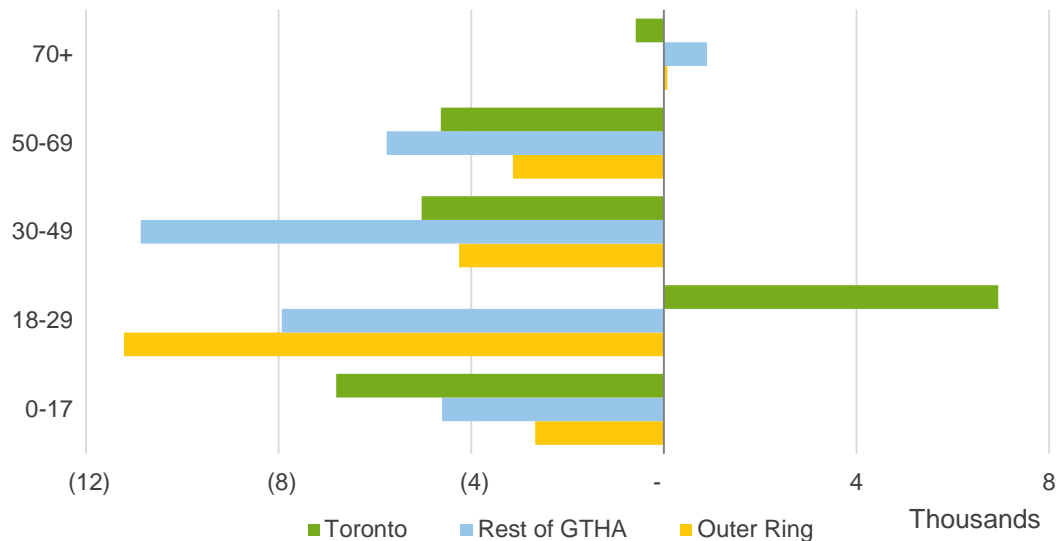


Source: Statistics Canada 2011 National Household Survey.

Due in large part to the net out-migration westward in recent years, the GGH is short in terms of overall population from the *Growth Plan* forecasts. The general trend between 2001 and 2011 was that people from all age groups and all parts of the region have been leaving the province for other locations in Canada. Other than a slight influx of seniors over the age of 65 in the rest of the GTHA, the only exception to this trend is a net inflow of people aged 18 to 29, as shown in **Exhibit 4.8**. This group of students and working-age persons is largely drawn to the

concentration of education and employment opportunities located primarily in the City of Toronto. In the context of the GGH as a whole, however, the net inflow of inter-provincial migrants in this age group is more than offset by the tens of thousands of residents leaving from the rest of the GTHA and Outer Ring for other parts of the country, predominantly towards opportunities in the west.

**Exhibit 4.8:** Net Inter-provincial Migration Patterns by Age Group, GGH, 2001-2011



Source: Hemson Consulting Ltd. using data from Statistics Canada Annual Demographic Estimates.

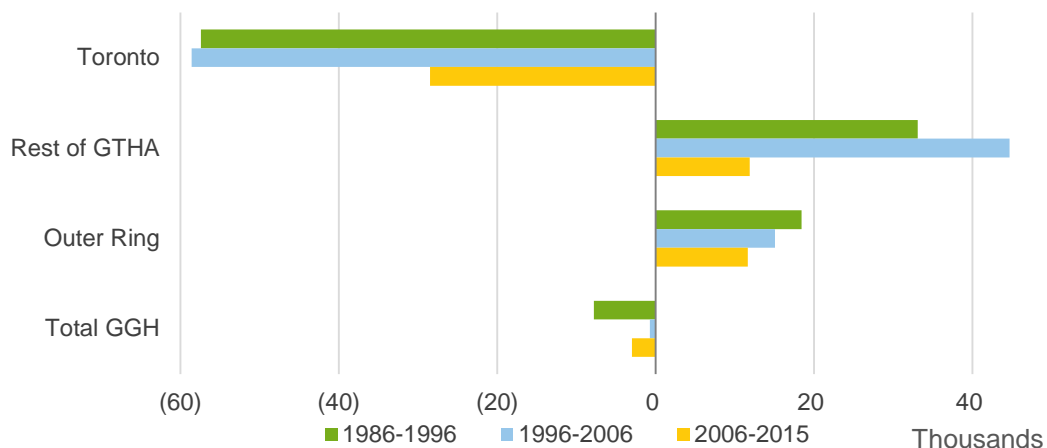
Overall, the long-term expectation for the GGH is one of net balance between the outward movements, generally to the west, and the inbound movements from other parts of the country. As the effects of rapidly decreasing oil prices reverberate through the west and Ontario continues its steady recovery from the recession, it is likely that the GGH will see these net outflows balance out, and potentially even reverse, in the coming years. This is consistent with the Ministry of Finance’s *Fall 2014 Ontario Population Projections Update* and should account for the cyclical nature of economic variation over the long-term.

### 4.2.3 Intra-provincial migration is a significant source of growth for surrounding municipalities

While the City of Toronto serves as the entry point for the majority of new migrants and young professionals into the region, intra-provincial migration patterns shown in **Exhibit 4.9** reveal that Toronto experienced a net outflow of existing residents to surrounding municipalities. This is a continuation of a decades-long pattern of people (mainly families) moving from a fully-developed centre to the surrounding

regions to occupy the new mostly-ground-related housing, though recent years have seen this outflow decline compared to earlier periods. Most of the population growth in the 905 regions since the 1970s is from this source. A similar movement also occurs to the Outer Ring from the GTHA. The most prominent example of that migration is the growth in Barrie and southern Simcoe County in recent decades. These data also show a small net out-migration from the GGH to the rest of the Province during this period, consistent with the longer-term trend of something near a net-zero migration. Interestingly, Hamilton's role in these migration patterns is showing a shift from a suburban role to more of an urban centre again.

**Exhibit 4.9:** Average Annual Net Intra-provincial Migration, GGH, 1986-96, 1996-2006, & 2006-2015<sup>18</sup>



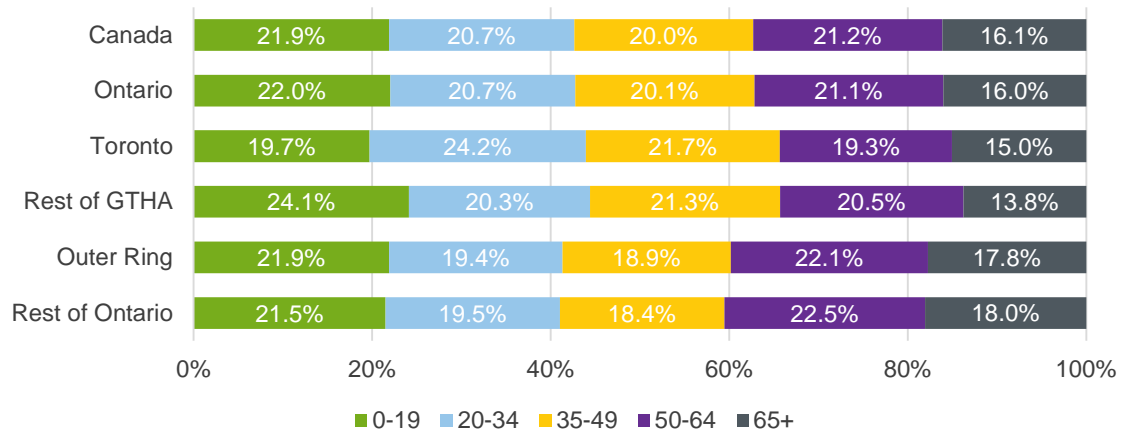
Note: Figures for 2011-2015 are estimates as of July 1, 2015.  
 Source: Hemson Consulting Ltd. using data from Statistics Canada Annual Demographic Estimates.

#### 4.2.4 Migration patterns taken together result in distinct demographic growth patterns across the GTHA

Although the age structure of Ontario is very similar to the national average, the migration patterns of different age groups into the GTHA (shown in **Exhibit 3.4**) has resulted in a different age structure profile across the region. As displayed in **Exhibit 4.10**, data from Statistics Canada indicate that the Toronto and the rest of GTHA had a much smaller proportion of persons aged 65 and over (15.0% and 13.8%, respectively). The City of Toronto features a much higher proportion of people between the ages of 20 and 34 (24.2%) than the Ontario- and Canada-wide average, while the rest of the GTHA featured a much higher proportion of people between the ages of 0 and 19 (24.1%).

<sup>18</sup> 2006-2015 migration numbers are estimates from Statistics Canada Annual Demographic Estimates

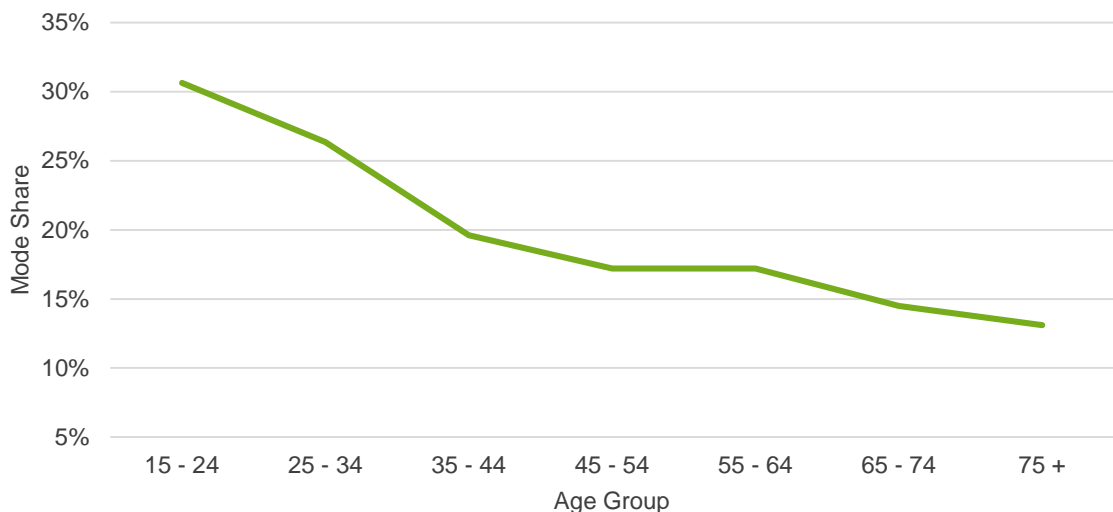
**Exhibit 4.10: Distribution of Population by Area, Ontario, 2015**



Source: Hemson Consulting Ltd. using data from Statistics Canada Annual Demographic Estimates.

This trend is even more pronounced in the Toronto’s downtown area according to a report by TD Economics (2013), which identified that in 2011, 47% of the population in downtown Toronto<sup>19</sup> was between the ages of 20 and 39. This cohort is a key consideration for transit investment planning as they tend to use transit at a higher rate than older adults (see **Exhibit 4.11** for the public transit mode share by age group across the GTHA).

**Exhibit 4.11: Public Transit Mode Share in the GTHA, 2011**



Source: Statistics Canada 2011 National Household Survey.

<sup>19</sup> The TD report identifies Downtown Toronto as the combined Trinity-Spadina and Toronto Centre federal electoral districts as per Statistics Canada’s 2003 delineations.

Concurrent with the rapid growth of this segment of the population has been the boom in condominium and apartment construction in Toronto's downtown area and along transit corridors. It is unclear at this point, however, if this is a lasting change or just a reflection of age and income related preferences. As this resident group ages and starts families, they may opt for the space and affordability offered by ground-related housing outside of downtown Toronto and other urban centres as previous generations have done.

These settlement trends mirror historic patterns, with younger adults moving to the urban core for education and employment opportunities, while many of those in the next older age groups move to the suburbs as young families. Growth in Toronto and the surrounding areas will likely continue to be influenced by these well-established migration patterns. However, with the growing share of seniors anticipated for the future (as shown in **Exhibit 4.1**) these migration patterns could shift as affordable housing options become increasingly constrained, either forcing potential movers to remain in their current area for longer or to look at other areas to settle.

#### **Hamilton on the Rise**

It is well known that Hamilton has faced some economic struggles in recent decades as the steel industry and some other major historic manufacturers have continued to downsize. Notwithstanding these challenges, Hamilton has continued to experience moderate population growth throughout as it has become increasingly integrated with the GTA. Indeed, the notion of the GTA as an area existed for about 20 years before becoming the GTHA as the relevant planning area in the early 2000s.

In all the regional municipalities of the GTHA, the 2001-2006 period saw the highest amount of population growth. The Cities of Toronto and Hamilton, on the other hand, saw their highest level of population growth during the current 5-year period from 2011-2016 (**Exhibit 3.2**). Interestingly, one of the main sources of this recent growth are people in the 20 to 34 age group, like the young adults driving much of the growth in Toronto. In this age group Hamilton has shifted from an annual average out-migration of 960 in 2001-06 and 170 in 2006-11 to a net in-migration of 880 annually since 2011. Another indicator of accelerating interest in Hamilton is that it has had among the most rapid house price increases in Canada in the past year. While not easily proven, there is much anecdotal evidence that young adults are attracted to Hamilton's still-affordable stock of older housing. Again anecdotally, these new arrivals are also understood to be one of major sources of burgeoning arts and culture industries in Hamilton. All of these factors point to continued growth and renewal in Hamilton, especially in the older central communities "below the mountain."

### **4.3 Housing Preferences Across Age Groups Influence Where Growth Occurs**

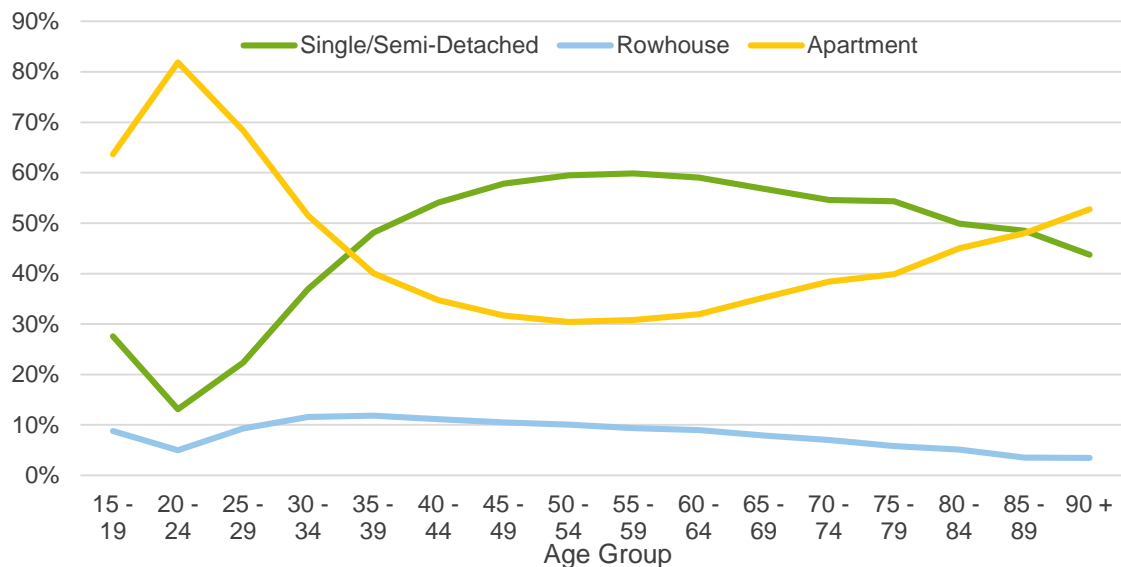
Settlement patterns and the preferences of different age groups when it comes to housing types are a prominent component of growth forecasting. While long-term patterns are affected by family status and associated housing needs, shorter term migration patterns often are driven by the availability of affordable housing options. These short and long-term preferences influence how forecasted



population growth is distributed across the region, considering anticipated demand and subject to land supply and available infrastructure.

Anticipating future demand is premised on the underlying housing preferences by age, and an understanding that the choices of younger adults today are similar to the historical precedent of choices made by older adults at similar life stages. These age-related housing choices are demonstrated in **Exhibit 4.12**.

**Exhibit 4.12: Share of Household Types by Age Group in the GTHA, 2011**



Source: Hemson Consulting Ltd. using data from StatsCan 2011 National Household Survey.

As shown here, the housing choices of different age groups are closely tied to lifecycle patterns. Younger adults, when they first form a household, typically occupy apartment housing, often rental. On family formation, preferences shift to ground-related housing which typically have more space and more of the amenities desired by families. The pattern begins to shift back towards apartment housing much later in life as some empty-nesters downsize and as more single-person households are created through divorce and widowhood.

These demographic trends are not static, however, as the switch from mostly apartment to ground-related housing has slowly been shifting to later in life for some decades, but then just recently began to shift back. Amongst the younger adults, however, the decision to remain in apartments longer than in the past is due to a combination of socio-economic factors including the delay in family formation, the increase in women delaying child-birth until later in life, and guided, more recently, by the reduced affordability of ground-related housing (as discussed in Chapter 3.2). Since many of these factors are largely lifecycle related, there may be small changes in preferences, but it is not anticipated that these housing choice trends will shift dramatically over the forecast period.

These housing choices made by young adults (whether voluntary or forced by price) have a significant effect on where growth is concentrated in the near term. With more people staying in apartments for longer, the demand for apartments needs to be met by new development which is highly focused in the City of Toronto. This increased growth has been balanced by slower than anticipated development in the rest of the GTHA, as fewer young families are able to purchase new starter housing and fewer people in older age groups can purchase “move up” housing, thus freeing their starter homes for the younger generation.

#### **4.3.1 Recent growth in central Toronto has been large, but is only one part of the market**

According to Statistics Canada’s Annual Demographic Estimates, the share of GTHA population growth occurring in Toronto has more than doubled from 2006 to 2013 (12% to 31%). This has primarily been accommodated through the commensurate boom in condominium development over the past ten years, with demand largely driven by the growth in the young adult population in the City.

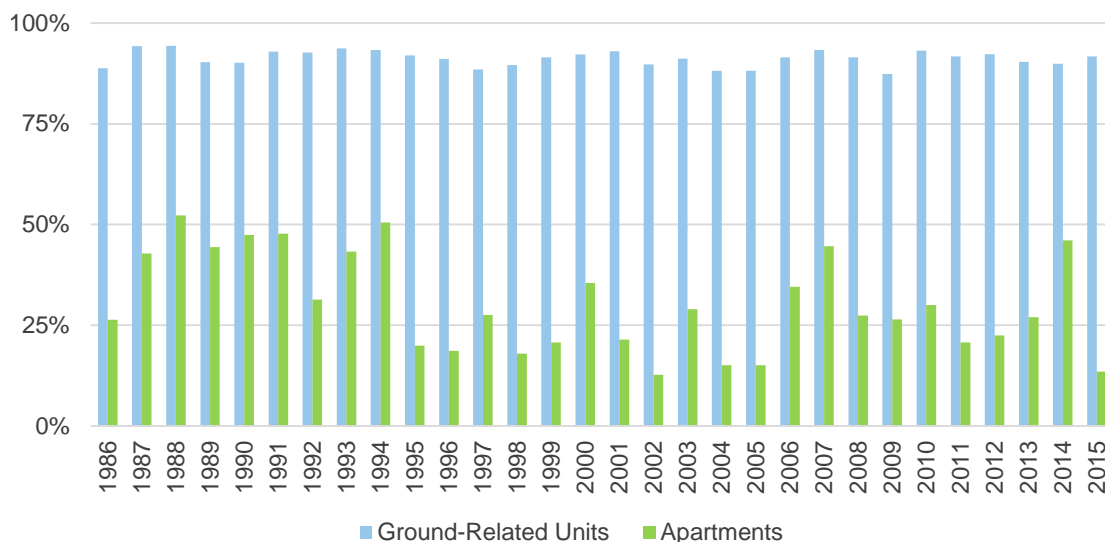
The burgeoning growth in central Toronto is the result of a convergence of economic and demographic factors. The GTHA’s economic transition to more knowledge- and service-based services have resulted in a number of Major Office-based employers locating in downtown Toronto (shown in **Exhibit 3.16**). Emerging ICT sectors are especially strong and employ a large share of young professionals. Workers in these fields typically cite increasing congestion and the preference for cosmopolitan lifestyle as key factors when considering where to work and live (Oxford Properties, 2013). This tends to attract employers to the area in order to be closer to their prospective work force, which in turn creates more demand for apartment housing as additional young adults are drawn to the urban area in search of employment and cultural opportunity. Further, as described in the previous section, this demand for units is leading to much more development because existing residents in Toronto’s higher density housing options are tending to stay in the area longer, due to delayed family formation and because of a lack of affordable housing in the GTHA, creating further demand for development.

Although total growth has been consistent with the *Growth Plan* forecasts, its distribution has varied. The *Growth Plan* anticipated a greater share of apartments being spread throughout the GTHA. In reality, and in keeping with historical trends, the high density housing market continues to be centered in downtown Toronto. **Exhibit 4.13** builds on **Exhibit 3.11** and shows the shares of total GTHA ground-related and apartment unit completions occurring outside of Toronto since 1986<sup>20</sup>. On average, about a quarter of total GTHA apartment completions have been outside the City of Toronto.

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<sup>20</sup> The higher rates of apartment construction outside Toronto during the 1990s is more related to the large number of assisted units built during that period rather than shifts in purchasing patterns of private buyers.

**Exhibit 4.13:** Share of GTHA Housing Unit Completions Occurring Outside of Toronto by Type, 1986-2015



Source: Hemson Consulting Ltd. using data from the CMHC Housing Market Tables.

Some higher density housing is being built in other GTHA municipalities. The share of apartments being built outside of Toronto has fluctuated, from a historical low of 13% in 2002 to a high of 46% in 2014. An average of approximately 3,700 units (or about 10 average-sized buildings) have been added each year in the combined area of Durham, York, Peel, Halton and Hamilton. Outside of Toronto, the GTHA’s high density housing tends to be located in more urban areas; in the vicinity of shopping centres (e.g. Mississauga), in older commercial areas (e.g. Oakville) and on sites on major arterial roads. These areas tend to offer some of the factors which tend to attract younger residents (including access to employment, shopping and local amenities), though they do not yet offer the same breadth of opportunity and complete community which attracts so many to downtown Toronto.

The slow but steady construction of condos across the GTHA appears to indicate a lasting shift towards higher density housing forms in the market. Due to healthy population growth, declining household sizes, decreasing land supply and low interest rates, the demand for high density housing is expected to continue in the coming years.

**4.3.2 New ground-related family-oriented housing is growing fastest in the GTHA regional municipalities, while apartment development will continue in Toronto**

Even though Toronto has accounted for over 40% of new GTHA units in the in recent years, it has accommodated less than one-third of population growth due,

in part, to the small household size in new apartment units. Smaller units are generally occupied either by the young or the very old. Hence the condos built in central Toronto are largely occupied by young singles, couples with at most one child and empty nesters, as well as older single person households.

The correlation between housing type and age-group or life stage is reinforced by a survey of the residents of Toronto's urban centres undertaken by the City of Toronto (2012). The largest age groups comprising residents of the downtown and centres were those between the ages of 20-35. The survey investigated residents' reasons for moving to urban centres (with access to transit at the top, followed by affordability of location and amenities) and reasons for why they may move somewhere else. The top five reasons for leaving an urban centre to move to another location included desire for more space, owning a home, affordability of space, raising a family and moving closer to work or school following in that order.

Notwithstanding the condo boom in Toronto, the largest share of new units and by far the largest share of population growth is located in the regional municipalities outside of Toronto. In part, this is because the City of Toronto has no greenfield land and no longer has the necessary supply of land to accommodate the demand for ground-related housing. As a result, there is a net out-migration from the city of households with children (**Exhibit 3.4**). These households comprise the larger share of the population. With all the available greenfield land in the GTHA located outside Toronto, the regional municipalities of the GTHA will continue to provide the ground-related units to meet the bulk of the region's population growth. Apartment growth will continue in Toronto over the next 25 years, though likely not at today's rapid pace. Since most new ground-related housing demand is still generated by family households, as the current young adult population generating the demand for new apartments in Toronto begin to form families, many will likely seek larger family-oriented units outside the City of Toronto. This will in turn free up some of the existing apartment supply in the downtown area for newcomers to the area.

Population growth in the municipalities outside of Toronto is the primary source of in-bound commuting on GO-Transit. Growth in housing in the 905 coupled with increasing numbers of jobs in downtown Toronto will mean a significant number of people will continue to commute to Union Station via the GO service. Around GO stations the prospects for higher density residential development appear to be better than for other forms of development, especially office development. Residential development in the vicinity of GO stations would build on the inbound commuter rail function of the system. However, the potential for reverse commuting is primarily tied to the establishment of employment opportunities near the stations; a matter addressed later in this report.

This chapter addressed the components of demographic and employment trends driving housing demand in the GTHA. Increasing net migration to the GTHA shows a higher percentage of young adults in the region as compared to the rest of Ontario, which bodes well for transit demand. In conjunction, immigration is the driving force behind demographic growth in the GTHA, which in turn drives labour force growth. The two together comprise the population and employment factors upon which transportation demand is determined. The following chapter will discuss the relationship with the economic factors of growth and how they relate to land use and development patterns in the GTHA.

## 5 GTHA Economic Outlook

This chapter focusses on the continued shift in the GTHA economy away from the labour-intensive manufacturing sector towards knowledge-based and service activities. To ensure relevance for infrastructure planning purposes, this economic restructuring is considered in terms of its implications on built forms and transportation demand. The key location drivers for emerging firms and sectors are introduced to help further understand the factors that will determine the distribution of employment in the region. Finally, although the economic restructuring implies a wholesale shift across the economy, it is important to recognize that some major sectors, such as retail, are seeing a very different outlook than other sectors.

The discussion on employment trends in previous chapters has used land use categories as per the *Growth Outlook for the Greater Golden Horseshoe*. These categories are useful in understanding the relationship between employment and land use. For this chapter, the discussion also includes specific economic sectors that are undergoing major shifts in employment.

### 5.1 Shift Away from Manufacturing Has Been Very Significant

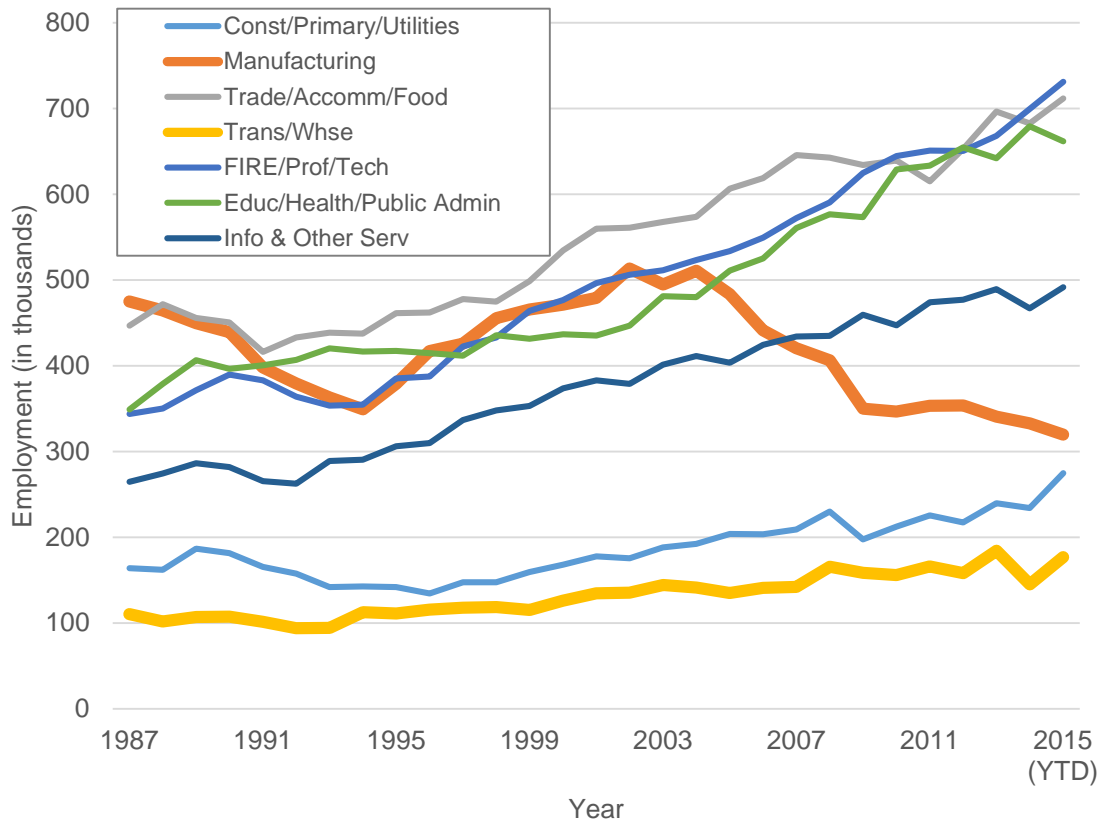
The long-term transition in Ontario and the GTHA to a more knowledge-intensive economy from one based largely on goods production stems from a number of factors. As in other developed Western economies, Ontario's manufacturing sector has been pressured by China and other emerging global manufacturing centres. Decline was further hastened by the 2008–2009 recession and the slow recovery. Finally, although Canada as whole benefitted from high commodity prices over the past decade, Ontario's exporters had difficulty competing because of the strength of the Canadian dollar. Nevertheless, there remains a strong manufacturing focus to the regional economy. In part this is due to a well educated, highly skilled labour force and to the automation of industrial processes (referred to as advanced manufacturing) which have enabled manufacturers to overcome a high cost base.

As this transition has been occurring there have been increases in jobs in many other sectors, from financial services to information technology, business services and the broader public sector.

### 5.1.1 GTHA economy continues to shift towards professional, technical and consumer services

The GTHA continues to be a true mixed economy even as it shifts focus from goods production towards professional, technical and consumer services. How employment in the economy is changing from goods producing to service sectors is illustrated for the Toronto Economic Region (roughly the Greater Toronto Area<sup>21</sup>) in **Exhibit 5.1**. The most noticeable trend, apart from robust employment growth overall, has been the rapid growth of the information, communication and technology (ICT) sectors, whereas employment in manufacturing is still recovering<sup>22</sup>.

**Exhibit 5.1:** Historical Employment, Toronto Economic Region, 1987-2015 (YTD)



Source: Hemson Consulting Ltd. based on Statistics Canada Labour Force Survey.

<sup>21</sup> This small change in geographic area from the discussion of the GTHA is necessary in order to use annual and up-to-date data to the end of 2015 from the Monthly Labour Force Survey

<sup>22</sup> According to Statistics Canada measures of GDP by sector, the national GDP for transportation equipment manufacturing (which includes automotive parts) is nearly back to pre-recession levels.

The strongest growth has been in professional and technical services categories. Broadly speaking, organizations in this category represent two overlapping sectors; “knowledge based” organizations and businesses in the “creative sector”. The “knowledge based” sector is comprised of organizations that have a disproportionately large share of highly educated employees. For current purposes, it is comprised of firms and industries such as:

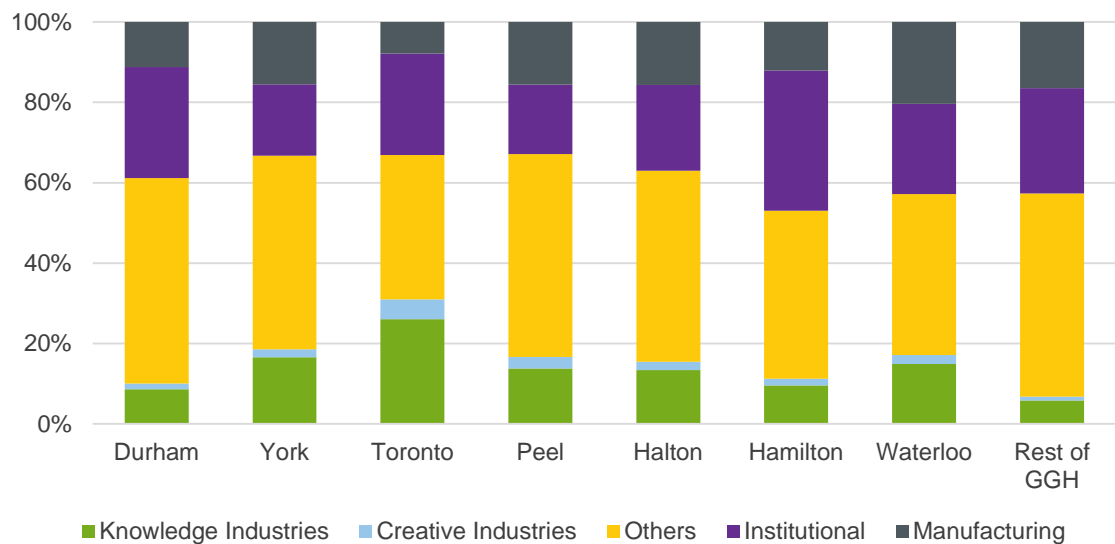
- Architecture and engineering
- Finance, insurance and real estate
- Software and technology services

The creative sector, which also employs highly educated staff, encompasses such industries as:

- Advertising and design
- Film, music and television production
- Publishing and other fields related to the arts

The shares of total employment within these two categories are described in **Exhibit 5.2**.

**Exhibit 5.2:** Share of Employment in the GGH by Select Industry Sectors, 2011



Source: Hemson Consulting Ltd. using data from the Statistics Canada 2011 National Household Survey.

Another important sector in the GTHA that has seen strong growth is in the institutional category, especially in the health-care related fields. Institutional employment is a Population-Related category, which means it is strongly affected

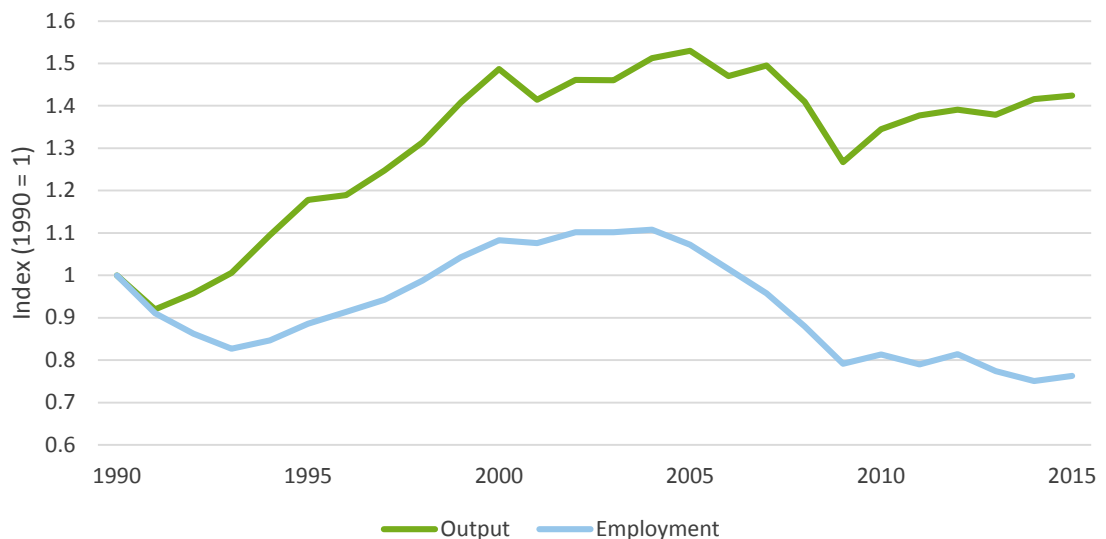


by demographic growth. Institutional employment has continued to grow across the GGH in line with population growth and distribution.

### 5.1.2 Reduced manufacturing employment does not necessarily mean less land and fewer buildings

Manufacturing employment has been in steady decline since 2004. However, notwithstanding the economic restructuring and the particular effects of the recession, industrial employment sectors such as manufacturing, goods movement, and associated service sector employment continue to play an important role in the GTHA economy. Statistics Canada’s Monthly Labour Force Survey records that almost 1 in 8 people employed in the GGH still worked directly in manufacturing in 2011. As well, many jobs in other sectors are directly and indirectly supported by the manufacturing sector. While employment is a key measure of a sector’s importance, the economic contribution in terms of output is also very important. By this measure the performance of the manufacturing sector has been much better. As shown in **Exhibit 5.3**, Ontario’s manufacturing output grew at a consistently faster rate than employment, suggesting that manufacturing as an economic activity has become more efficient and technologically advanced, notwithstanding the cyclical changes in both output and employment. With the amount of goods produced, the change in employment does not translate directly to reduced building space or land needs.

**Exhibit 5.3:** Manufacturing Output and Employment in Ontario, 1990-2015



Note: Output defined as manufacturing GDP in 2002 dollars.

Source: Hemson Consulting Ltd. based on data from the Statistics Canada Labour Force Survey and Ontario Ministry of Finance.

The gradual restructuring of the Ontario economy will also not reduce the need for employment land in the GTHA as only about one-third of the required amount is related to manufacturing. Many fast growing industries, whether in the goods producing sectors (e.g. construction), the services sector (e.g. wholesale trade, transportation, warehousing, logistics) or in support services (such as professional, scientific, technical, and administrative services), locate in single storey facilities on large, segregated industrial or business park sites. Such sites generally offer easy trucking access to major transportation routes, and the capacity to accommodate large buildings for storing goods and equipment.

## 5.2 Economic Change Has Meant Changes in Employment Densities

As discussed in Chapter 3, the shift in the office market is related to a major demographic trend which has seen a large increase in the number of young adults. Partly the result of the “echo baby boom” generation now in their mid-20s, it also reflects a sustained migration of young adults to major urban centres both from within Canada and from abroad. This migration to downtown Toronto has been behind central Toronto’s residential condominium boom of the past decade. In combination with the economic transition to professional and technical services, a consequence of this shift is the resurgence of central Toronto as a focus for new office development.

The GTHA is the largest office centre in Canada containing approximately 185 million sq. ft. of office space inventory, of which approximately 73% (or 118 million sq. ft.) is located in the core area of the City of Toronto. On average, approximately 5 million sq.ft. is added to the GTHA each year, although actual construction from year to year varies dramatically. While the large historic base has kept Toronto’s share of the total very high, its share of growth was far lower during the 1990s and 2000s, accommodating only about one-quarter of the growth in new space during much of that period. Since the late 2000s, the resurgence in the market in Toronto’s financial core has led Toronto back up to a share of about three-quarters of the new office space in the GTHA. This high share appears set to persist for a few years at least, based on currently under construction and proposed projects.

Suburban office-oriented agglomerations are spread throughout urban areas of the GTHA, especially Peel, York and Halton Regions, particularly on or close to major highways and Pearson Airport. The most recent office market report published by Avison-Young (2016) shows that the vacancy rate, or the percentage of built space that is unoccupied or available for rent at a given time, across the Greater Toronto Area (not including Hamilton) was, on average, 9.7% at the end of 2015 and 5.6% in downtown Toronto, which saw the lowest vacancy rate of all the submarkets. This indicates a much stronger performance in downtown Toronto in comparison to other submarkets in the GTA.

Some larger institutional uses also tend towards concentrated built forms. These institutional uses consist of large facilities, such as municipal and regional city halls, hospitals and universities, and fall within the Population-Related employment category as their growth largely follows regional population patterns. The exception is the few large, high-profile facilities concentrated in central Toronto, including three universities and the University Avenue hospital cluster, which serves the entire GTHA and beyond, and will likely remain in these locations.

Because of Canada's aging population, increased pressure will be put on the healthcare industry with the likelihood of strong employment growth in the coming decades. As it stands, the Province is generally focussing on expanding operations in existing facilities rather than building new major hospitals, with a few exceptions. These new facilities, however, have often been built on greenfield land in highway-accessible areas, since such locations traditionally balance both cost and accessibility.

The outlook for employment in the coming years is underpinned by two major themes that will be discussed in further detail in this section. One is the decreasing amount of floor space per worker (FSW) in new office developments across the GTHA, driving much of the new office development in downtown Toronto. Second is the steadily increasing amount of floor space per worker on employment lands throughout the region.

### **5.2.1 Increasing office densities means more people in the standing stock of office space but less new space built**

The Major Office market in the GTHA is exhibiting a trend of decreasing floor space per worker. This is the consequence of a combination of changing workplace practices and more space-efficient building design. These changes are most evident in newly constructed buildings but are also being implemented in some older space when major tenancies are involved and where space lends itself to being retrofitted. By decreasing the space per employee, companies that want to upgrade the quality of their space and locate in a more central, transit-oriented location can do so without major increases in space cost budgets. This trend is driven by employers, in response to the preference of employees to reduce commuting time and costs for some and having easy access to an attractive live/work environment for others. Particularly in the knowledge and creative sectors, this has become increasingly important to employers as they seek to attract and retain talent.

An important implication of this behavioural shift is that the amount and distribution of demand for space will change. In addition, because of the availability of large amounts of existing space left vacant following the recession, a greater share of new office employment can be accommodated in existing GTHA office building

concentrations. Consequently, besides Vaughan Metropolitan Centre, the probability of a new major office node developing in the foreseeable future is low.

Overall, increasing the number of employees in the existing stock of office space (especially downtown) will lead to a lower floor space per worker (FSW). When considering location and leasing decisions, businesses typically have two concerns: cost containment or reduction and, increasingly, as attraction or retention of employees. Employers are recognizing that as their workforce shifts (with millennials replacing baby boomers) new approaches to work, careers, work-life balance and preferences in workplace design will emerge. The basis for these assumptions is largely anecdotal. With the exception of the consolidation of different regional branches into one located downtown, how new approaches to work have affected the demand for office space remains somewhat unclear. Notwithstanding the anecdotal nature of these observations, these views are widely held and the prevailing opinion amongst real estate brokers, developers and investment advisors in Toronto is that the attraction and retention of employees is driving the shift downtown. Attracting and retaining employees is generally assumed to include considerations of commute times, location relative to amenities and cost of living.

A recent CoreNet Global study of corporate real estate executives (Kadzis, 2011) suggested that FSW metrics are likely to decline significantly in the coming years. Average FSW, which has already dropped from 225 sq. ft. in 2010 to 176 sq. ft. in 2012, may fall to 100 sq. ft. or less within five years in some industries. The Urban Land Institute and PwC publication “Emerging Trends in Real Estate 2016” highlights that increased costs of real estate in primary markets is a driver of “densification”. In order for companies to afford to relocate from less costly suburban locations, increasing the number of employees on a given area is a way of keeping costs down.

The densification of professional, managerial and financial service firms has led to a surge in major office development around Union Station, since it serves as a multi-modal hub that is accessible to employees from across Toronto and the GTHA. However, because of this trend towards intensified use of space in the Toronto core, less new office space is being developed elsewhere in the region. This, in turn, reduces the shift in established development patterns and associated commuting habits (such as more reverse commuting to offices).

## **5.2.2 Densities on employment lands are dropping throughout the GTHA**

Although manufacturing jobs have not rebounded and the recovery of jobs overall from the recession has been slow, new industrial buildings continue to be built in the GTHA. Growth in logistics activities (which includes transportation and warehousing) have been a dominant feature of the industrial land development pattern across the region. Two particular trends will determine the density of

employment and the shape of built forms on employment lands in the coming years. One is the increasing share of logistics jobs that are classified under “no fixed place of work”. The second related trend is the automation of operations.

The increasing share of jobs in the “no fixed place of work” category reflects structural changes within the manufacturing sector. Rather than goods being produced in the region today, as they have been in the past, they are manufactured elsewhere and have supply chains stretching across the continents. This has led to a dramatic rise in the logistics of just-in-time delivery of supplies, parts and finished goods. In this category of activity, a significant proportion of the workers work for external contracting firms and are not counted as being in jobs located within a specific geographic area. Instead, they are counted as “no fixed place of work.”

A second important trend is industrial automation, which has led to an increasing share of work now being performed by machines. As a result, overall manufacturing activity has not declined at the same rate as manufacturing employment. In fact, output continued to increase up until the recession in 2009 (as was illustrated in **Exhibit 5.3**). Since then, the economy has seen a slow but steady recovery. This is expected to lead to an increase in demand for existing industrial space, albeit less for the traditional manufacturing activities. Broad market outlooks published by CBRE, Avison Young and Colliers note that demand for industrial properties in employment areas continues to increase and that vacancy rates are falling.

Unlike other services based sectors, where land requirements tend to increase and are directly tied to the number of employees, the manufacturing and the logistics sectors have seen demand for space continue to occur with little clear relationship to overall changes in employment. As a result, most employment areas, especially newly developing areas, are seeing increased floor space per worker and a resulting decline in employment density. There is no good source of consistent metropolitan-wide data on floor space per worker in industrial-type buildings. However, development charge background studies typically need to apply an assumption about floor space per worker as part of the calculation. In the 1990s and well into the 2000s typical floor space per worker assumptions for new industrial type buildings were in the range of 80 to 100 m<sup>2</sup> and, on occasion as low as 60 m<sup>2</sup> per employee for “prestige industrial”. Today, rates in these ranges remain suitable in areas such as Toronto and York Region due to the make-up of the economy. However, in the western GTA, where recent development has been dominated by logistics industries, figures well over 100 m<sup>2</sup> are in use, including facilities in Brampton at an average 130 m<sup>2</sup>. Individual highly-automated facilities are being reported at 200 m<sup>2</sup> and more. In the GTHA the largest concentrations of employment lands (areas which generally house these activities) are increasingly characterized by large industrial structures and low employment densities. These areas have always been difficult to serve by transit in the past and will become increasingly so in the future.

## 5.3 Key Location Factors for Emerging Firms and Sectors Include Access and Amenities

Location decisions for knowledge and creative industries, are today being driven by new factors. Two major driving forces are behind the resurgence of the downtown office market; competition for talent and access to amenities. These factors are interconnected. The competition for talent is driving companies to locate in areas well served by transit and with access to a variety of amenities, qualities that today's young professionals seek in a work environment.

Access to a suitable labour force has always been an important criterion. Especially for businesses in Information, Communications and Technology (ICT) sector, the emphasis on attracting and retaining talent has never been greater. The younger demographic is of particular importance in these industries. A greater proportion of the 20-35-year-old population segment is attracted to central urban areas than in the past. (Canadian Urban Institute, 2013), This trend has underpinned the boom in the downtown Toronto apartment market where the residents are attracted to organisations that are located within walking or biking distance of home or have good transit access, firms that depend on these employees are increasingly moving to offices in the GTHA that satisfy these locational preferences. While some new downtown residents do reverse commute to jobs in the suburbs, overall these preferences and resulting change in demand preferences have been one of the reasons for the jump in new office construction in Toronto's financial district and south core.

The location of an office affects its users. The decision to locate is not only about cost; many tenants are looking to locate around transit or with good road access to allow the most convenient commutes for their workers from the widest range of locations. A survey of office workers conducted by Oxford Properties (2013) revealed that "reasonable" commutes were a very important factor. Although no exact definition exists of what constitutes a reasonable commute – total time in transit or door to door – the report finds people prefer to keep their commutes under 30 minutes (the City of Toronto average is 30.4 minutes). Furthermore, people seem to care more about the "how long" than the "how to" of commutes.

This shift in employment and sectoral preferences for transit-accessible downtown locations has increased the pressure to locate offices downtown in order to attract talent. Downtown maximizes access to the talent pool over the widest geography including downtown residents, Toronto residents via TTC and the much of the metropolitan region via GO. While of interest to many firms especially in the growing sectors looking for younger talent, these are not the priorities of every company. Organizations that are entrenched in suburban locations and that are able to attract and retain employees are unlikely to relocate. Increasing congestion over time has reduced the effective geographic area of the potential labour pool: at one time an office in Meadowvale might have been able to easily

attract workers from across the metropolitan region, but today might be more limited to those living more locally in Halton and Peel.

In addition to commute times, access to amenities is becoming an important factor in the attraction and retention of employees. The types of amenities that appeal to a significant component of businesses in ICT include more urban environments, access to transit or within cycling/walking distance and environmentally sensitive spaces. Given that many employees in the 25-35 age demographic are choosing centrally located condominium apartments, providing a working environment that meets their needs has a compelling logic. Nevertheless, organizations must account for the fact that not all employees will live nearby and therefore its office location must also be accessible to other parts of the GTHA. Downtown Toronto's attraction as the hub of Major Office in the region is correlated with the multi-modal opportunities provided by its access to the Gardiner Expressway and Union Station, and its ability to meet the needs of a wide range of workers within walking distance, those that use the TTC, and those from more distant locations in the GTHA that use the GO network.

The factors discussed in this section relate primarily to major office development happening in downtown Toronto, which has seen a very significant share of overall office development across the region. Across the GGH, the office market is still subject to the more traditional economic forces such as agglomeration, accessibility and cost. Many of the office concentrations outside of downtown Toronto still maintain a reasonable supply of existing vacant space and land for additional growth. With the exception of Vaughan Metropolitan Center, there is little indication of a new office cluster in the market.

## 5.4 Major Office Employment Will Continue to be Focused in Downtown Toronto

Since 2006, downtown Toronto has seen as much Major Office development as the rest of the GTA combined. In sum, over forty years of development has shown that, with the exception of the nodes along Yonge Street, it is very difficult to develop transit-oriented office space outside of Toronto's core. Downtown Toronto remains the single largest concentration of class A office space and will likely continue just as the 905 market component – low-rise, low-density campuses – will continue to target auto-oriented suburban employment lands and greenfield lands. **Exhibit 5.4** shows a sample of buildings in downtown Toronto currently under construction and scheduled for delivery from 2009 to 2017, with anchor tenant preleasing levels. These buildings represent a significant addition of new space to the region's office market, on top of downtown Toronto absorbing nearly half of the entire GTHA's office growth since 2006. The 4th quarter of 2015 GTA office market report by Avison-Young (2016) stated that the demand for new office space in suburban office markets has remained low and that, outside of downtown Toronto, so has the absorption of new office space.

**Exhibit 5.4: Major Office Developments in Downtown Toronto 2009-2017<sup>23</sup>**



Note: Percentages indicate the share of office space which was pre-leased at time of construction.

Source: CBRE.

The relatively concentrated growth spurt in office development in downtown Toronto which started in roughly 2006 followed a 20-year period of low downtown development activity. A first wave of 5 million sq. ft. of new office space was absorbed very quickly and much of the coming 5 million sq. ft. has already been pre-leased<sup>24</sup>. Although there are concerns that the market may be oversupplied in the short-term, most developers are confident that development is aligned with market demand. The outlook for Major Office employment is that this trend will continue well into the coming years due to the lifestyle preferences amongst young adults entering the workforce and competition for talent amongst employers. The only dampening influence on the demand stems from the trend towards smaller floor-space-per-worker ratios in office type settings.

While the office market is cyclical in nature, the current push in downtown Toronto development does not seem to be the result of market cycles. As discussed in earlier sections, a great proportion of the development is linked to the location preferences of young professionals. While in the short-term, many young professionals are choosing to live in apartments and condos downtown, they will eventually choose to move to a larger house later as they age and form families. They in turn will be replaced by the next generation of young professionals moving

<sup>23</sup> Buildings in this exhibit represent all Major Office developments (above 200,000 square feet) as of 2013 as catalogued by CBRE.

<sup>24</sup> Figures consolidated from multiple sources including real estate brokerage services (CBRE, Avison-Young, Colliers, etc.) and planning reports throughout the region.



into the condos left behind. The migration to downtown Toronto and major consolidations of office space amongst some of the largest Major Office employers in the region is a signal that downtown Toronto is likely to continue to be the focus of future office development for some time.

## 5.5 Retail Location Trends Are Not Expected to Shift Significantly

The discussion of the employment sectors that will drive future demand for transit services have largely centered around those sectors that favor Major Office buildings and on major regional institutional offices and facilities that are large employment generators. The retail sector, although it is a component of Population-Related Employment, will see a very unique shift owing to the rise of e-commerce and a move away from mid-scale power centres. However, though it is important to consider the shifts that are occurring within the retailing industry, it is also important to understand that the location decisions of retailers are unlikely to change fundamentally. Retail will continue to follow patterns of population growth: the store size, brand and product range may shift but for most urban residents there will nearly always be a grocery store within a few kilometers of home and most residents will use a nearby store. The largest change from a planning and urban development perspective is a reduced need for new retail space as e-commerce becomes a greater proportion of sales. As well, the number of retail employees may well decline as more automation takes hold.

### 5.5.1 E-Commerce driving big changes in retailing but with less new retail space likely to develop

The retail space market is not anticipated to experience a wholesale shift in the near future. The reality is that many retail developments have already been built to meet future demand and that developers will likely intensify and expand existing offerings rather than build new ones. At the local level, convenience and neighborhood retail space will continue to be built in response to the needs of local residential development. Mid-scale developments, such as community shopping centres and power centres, will likely decline in importance due to increased competition from intensified super-regional malls and from e-commerce.

Shifts in consumer shopping behavior are opening up opportunities for new forms of retailing, such as e-commerce and omni-channel<sup>25</sup>. Both of these formats are less space intensive and they have not yet had a significant impact on the retail real estate market. However, this is expected to change in the future. E-commerce

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<sup>25</sup> Omni-channel retailing is the coordinated use of multiple formats (e.g., physical store as a showroom for a web and mobile store) to support customer-centric shopping and sales.

has been the most revolutionary new development in retail in the past 10 years. While Canadian retailers have been slow to develop and expand this channel, retailers in both the U.S. and U.K. have been aggressive in growing this part of their businesses. E-commerce sales have grown at a much faster pace than store-oriented retail sales. Omni-channel is seen as the future for physical stores as a way of competing with e-commerce websites. It has been estimated by Forrester Research that 45% of all U.S. retail sales were either e-commerce or web-influenced in 2013. However, in a more recent trend, retailers that have been exclusively web-based are now opening bricks-and-mortar stores to create either showrooms or store faces for their online businesses. Amazon opened up a physical bookstore in Seattle in 2015, illustrating that experimentation with and adoption of the omni-channel format is likely to continue in the coming years.

The overall effect of the changes in retailing is a general expectation that there will be less construction of new space required to serve the growing population. The degree is uncertain, but it does have important development implications for planning and development as retail is often a key structural element in communities. As well, there may be fewer employees associated with space in the future. The British Retail Consortium recently suggested that one-third of retail jobs could disappear within 10 years, largely due to e-commerce and increased automation within retail outlets (British Retail Consortium, 2016). Similar suggestions do not appear to have been made in the North American context, but it does suggest that the scale of change in retail could be large as more automation occurs.

These changes in retailing will result in changes elsewhere as more distribution centres and fulfillment centres will be required in employment areas which will also generate some employment. The additional space and, especially the additional employment, will almost certainly be far less than what might have occurred without e-commerce replacing some of the retail bricks and mortar.

### **5.5.2 Retail development is likely to intensify around existing concentrations**

The retail sector is changing in response to a number of highly dynamic factors (related to changing demographics, changing population concentrations, changing shopping patterns and emergence of new shopping channels such as the internet), but major shifts in either the form or location of retail are not immediately evident. There will be a change in some of the existing forms of development, but significant changes will be needed to catalyze a large-scale shift.

The largest and the smallest types of retail developments will most likely continue as they are. Local strip malls will continue to follow population growth and residential development; grocery and convenience stores, which are part of this category, will follow their customers and will not be affected by new channels,

such as the internet. At the opposite side of the spectrum, while existing super-regional shopping centres will probably add space and intensify, because of the challenge of finding suitable sites it is very unlikely that any new super-regional malls will be built. Despite the rise in internet-based retailing, there is still strong demand from retailers and tenants looking for space in super-regional shopping centres because of the ongoing appeal of shopping in person.

The retail typologies that are in between the very local and the super-regional will be affected by changes in the market. Power centres in particular are especially vulnerable. Those located along major highways will be less affected, but outlying power centres are likely to have difficulties as anchor tenants move more of their business online. These include major sellers of books, electronics, and office supplies. As a result, a major decline in the growth of new power centres is anticipated. Traditional regional malls will also have a hard time competing with the super-regional malls.

In terms of smaller scale neighbourhood and convenience retail (as well as other similar types of population-related employment), planning policy, particularly the *Growth Plan*, is also seeking to change retail environments to be more walkable and closer to where people live. With access to local retailing needs dependent on active forms of transportation, intensification will drive development to already existing areas. As a result, the intensification of retail will mean that those that are auto-oriented will remain so and those that are already walkable will become more walkable, but in neither case are they likely to become more transit-oriented than they already are.

Among smaller retailers there are specialty segments that are often not attracted to either shopping centres or new neighbourhood retail locations. These are “boutique” retailers that draw from a wide area for specialty products. In the GTHA these are predominantly food and other retailers focussed on specific cultural communities. While there are examples of these in every retail type, the dominant locations are the main streets in the older centres and the older strip retail, particularly areas built from the 1960s to 1980s.

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This chapter discussed how economic change in the GTHA relates to land use and development patterns. It described how the recent shift to a knowledge and services-based economy has been both significant and consistent with global trends affecting North America. For land use patterns in the GTHA, this shift has generally meant more jobs are locating in concentrated built forms, arising from an increasing importance among emerging firms and sectors of access to labour force and amenities. However, changes in employment densities are not uniform; densities are increasing for new Major Office spaces but decreasing on

Employment Lands. The retail market is also undergoing some major shifts, but how they will affect land use patterns remains to be seen.

The following chapter describes how the distribution of housing and employment in the GTHA affects transit demand.

## 6 Implications for Regional Transit Planning

This chapter focusses on the implications of anticipated growth patterns and their effect on regional transportation planning. These growth trends are crucial for future transportation investment decisions in the GTHA and beyond, informing where the most effective investments are likely to be located based on anticipated demand. The trends discussed in previous chapters suggest that while overall growth in the GTHA remains on track with *Growth Plan* forecasts, the distribution of growth has deviated geographically. *The Big Move* was informed by the forecasts in Schedule 3 to the *Growth Plan*<sup>26</sup>. The observed variances in growth patterns from those forecasts (as shown in **Exhibit 4.4**) must be taken into account when reviewing the transportation plan and future investment decisions. These variances will be accounted for in revised *Growth Plan* forecasts, which are scheduled for review in two year's time.

Forecasts for the GTHA undertaken in 2006 in connection with the *Growth Plan* estimated a total regional population of 6.86 million in 2011. Actual growth in the GTHA has largely been consistent with the forecast (6.79 million as of the 2011 Census). The more recent forecasts that served as the basis for Amendment 2 indicated a 2016 population of 7.35 million (compared to a 2016 best-estimate based on data to mid-2015 or 7.28 million). While consistent overall, the distribution of growth, between intensification and new greenfield areas, has differed.

Building on the discussion of current and anticipated development trends in prior chapters, this chapter will discuss some of these key travel patterns and how they specifically relate to regional transportation. Of particular importance to regional transit is the role of downtown Toronto in both the residential and office markets, the growth in the other regional UGCs and prospects for increased two-way commuting to the UGCs and nodes outside of downtown Toronto.

One of the most significant investments currently being made in the regional rapid transit system is GO Regional Express Rail (RER). The RER program represents a fundamental transformation of the GO Rail system from commuter rail to an electrified all-day regional transit service and includes increased peak period service on existing GO rail routes, the addition of two-way, all-day and weekend service on most routes, and partial electrification of the GO rail network. Most of the electrified portion of the network is planned to operate with 15-minute headways, all day. In many ways this is the backbone of the inter-regional system,

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<sup>26</sup> The *Growth Plan* requires a ministerial review of population and employment forecasts at least every five years in consultation with municipalities. The most recent review resulted in Amendment 2 in 2013. The next review of the forecasts in the Schedule 3 forecasts will occur in 2018.

with other parts of the *Big Move* services to be operating within individual cities and regions, often in support of the RER system. Because of the long-distance, wide area of operation and scale of the investment much of the discussion in this chapter directly addresses the affects of RER in addition to other rapid transit services.

## 6.1 What Do These Trends Mean for the *Growth Plan* and the next RTP?

A number of demographic and economic trends have converged over the past decade to cause a slow shift away from the dominant development patterns of the 1980s through 2000s. Taken together, the recent trends in population, housing and employment discussed in Chapters 4 and 5 suggest that the overall distribution of growth will likely become more centralized than anticipated in the updated forecasts in Amendment 2 to the *Growth Plan*. This centralization results from a relatively greater share of growth in the GTHA within the GGH and to Toronto within the GTHA. The centralization is largely the result of the concentration of higher density growth forms (apartments and offices) in central Toronto. A consequence of this concentration is that most of the designated Urban Growth Centres of municipalities beyond central Toronto are unlikely to generate the target density and mix of uses that were originally anticipated for 2031.

### 6.1.1 Overall distribution of population growth will likely be more centralized than shown in forecasted in the *Growth Plan*

The forecast population growth in Schedule 3 of Amendment 2 to the *Growth Plan* was based on assumptions and resulting population figures for the entire GGH that were consistent with the demographic forecasts prepared by the Ontario Ministry of Finance at that time. Looking at it from a 2016 perspective, both of these forecasts overstated near-term growth in the GGH largely by anticipating a faster return to historic shares of Provincial migration than appears to be occurring. Going forward, Ontario's lower-than-expected share of Canada's immigration will be partly balanced by the increase in the total national immigration level to above the level anticipated in the forecasts (Canada, 2016). As a result of these trends, the total growth forecast may be somewhat high over the longer-term. Put another way, the 2041 forecast in total may not be achieved for a few years beyond 2041. However, such differences in the GGH total are not likely to have a significant effect on the current transportation system planning work being undertaken by Metrolinx.

What is much more important to the regional transportation system and to Metrolinx planning than the GGH total is the emerging pattern of where the growth is occurring. Virtually all of the "shortfall" in GGH population growth compared to the forecasts for the 2011 to 2016 period appears to be in the Outer Ring, while

the GTHA forecast population growth appears to be on track. The primary source of population growth in the Outer Ring is net migration from the GTHA to the Outer Ring. The forecast underlying Amendment 2 was premised on an escalating net out-migration from the GTHA to the Outer Ring, however net out-migration rates appear to be remaining closer to historic levels in the period since 2011.

The degree to which this is a fundamental shift in patterns or the shorter-term effects of the current economic cycle or development delays is not entirely clear<sup>27</sup>. What is clearer is that population and employment in the Outer Ring is likely to be less at 2031 and 2041 than currently forecast at least because of the growth “missed” in the 2011-2021 period. While perhaps at a reduced scale, the growth that is occurring and is expected to continue in south Simcoe County, Waterloo Region and Brantford is still rapid growth by most measures.

A premise of the *Growth Plan* population and housing growth distribution is that the higher density residential development was to occur throughout the GTHA. Instead, the market has become more concentrated in Toronto, which accommodated 75% of new apartment completions in the 2011 to 2016 period, up from 67% on average over the previous 25 years. Within Toronto, the new residential development is now more concentrated in the downtown area than it has been in recent decades. Even assuming the pattern of apartment development becomes more widespread in the region in the 2020s and 2030s, in accordance with the *Growth Plan*, the result of these changes is that Toronto’s population could be as much as 100,000 higher by 2041 than currently forecast. The compensating shortfall is most likely to be seen at the edges of the urban area in Durham, Halton and Hamilton (**Exhibit 4.4**).

To put this difference in the distribution of growth in context, 100,000 people over this period represents only 3% of the total growth in the GTHA. This is not an enormous shift in the overall regional patterns. At the same time, if most of this additional population were accommodated in the central Toronto, it would make a significant difference within the local area. The much higher densities of development than in the past combined with new development areas in the waterfront mean that additional development can be accommodated without testing the capacity limits of the area.

Within the GTHA, the centralization of growth in recent years is of much greater importance to Metrolinx transportation planning. Achieving *Growth Plan* goals of accommodating more growth through intensification and reduced consumption of land for urban residential uses requires a significant shift in the types of housing occupied by GTHA residents. The shift in new construction towards rowhouses and apartments from single and semi-detached housing in recent years has been significant: in the 2011 to 2016 period, 52% of all new housing construction in the

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<sup>27</sup> The City of Barrie has long been one of the fastest growing communities in the Outer Ring, but is experiencing a development pause over the past 8 years as its available greenfield land supply was exhausted and the lands annexed from Innisfil will not be available as south Barrie greenfield lands until later in this decade.

GTHA were in apartments, compared to 29% during the previous 25 years. While it may be arguable as to how much *Growth Plan* policy is responsible for the change, it is nonetheless one of the changes in growth patterns necessary to achieve the *Growth Plan's* goals.

For Metrolinx and transportation planning in general, the effects of the shifts in growth patterns are:

- Reduced population growth at the eastern and western edges of the GTHA may have a small effect on ridership for longer distance commuting;
- At the same time, reduced employment growth in the Regions relative to downtown Toronto may result in higher proportions of longer-distance commuters than might otherwise been expected from the urban form envisioned in the *Growth Plan*; and
- Increased growth in downtown Toronto likely means reduced overall auto and transit usage in the GTHA, as the predominant modes of travel among downtown residents are walking and cycling.

### **6.1.2 Office employment growth is also likely to be more centralized than anticipated, other employment is generally locating as expected**

As described earlier in this report, a significant portion of employment are those jobs that provide various services to the residential population. The pattern of this job growth will broadly follow that of population growth. Changes in the distribution of Population-Related employment arising from shifts in population growth patterns described above are unlikely to have a significant impact on employment forecasts and related transportation demand.

Similarly, the employment in industrial-type employment areas appears to be following anticipated patterns of growth where new development is occurring in greenfield areas with good highway access. While critical for planning goods movement, journey to work trips from these areas are among the least amenable to transit due to the low overall employment densities. There are no emerging trends to suggest any change to these patterns of development or transportation access that would favour increased non-auto transportation.

Office employment is by far the densest of all of the major employment types and, as has been well documented, is the most amenable to transit use for the journey to work. Downtown Toronto office employees are the core of the GO Rail system's ridership base. The "return" of the office market to the downtown after a long period of a suburban focus is likely the most significant trend for GO Rail ridership and transit demand.



The amount of office development that has been developed in downtown Toronto since 2011 as well as the space now under construction indicates that downtown will have dominated office employment growth in the GTHA during the current decade. Assuming the market shifts back to a more balanced relationship between downtown Toronto and surrounding municipalities in the 2020s and 2030s, Toronto will still almost certainly well exceed its overall employment forecast in the *Growth Plan* to 2041. The pattern also indicates a greater share of the employment growth within Toronto to be in the downtown. Like residential development, increased densities of office development indicate that higher levels of growth can be accommodated. Areas such as lower Manhattan and the City of London indicate that office growth, when there is demand, can be accommodated in surprisingly constrained environments.

Office employment growth being more concentrated in downtown Toronto has several key implications for regional transportation planning:

- Increased employment growth in downtown Toronto will directly result in increased GO Rail ridership into Union Station, potentially reinforcing the current morning-inbound-afternoon-outbound commuting pattern.
- Similarly, the TTC is also likely to see increases in peak direction travel on its subway and surface routes.
- An increased share of GTHA office space downtown means a reduced market share to the rest of the GTHA, at least during this decade. Among the best prospects for increasing the non-peak direction ridership on the GO system facilitated by the RER investments would be suburban office developments in the vicinity of stations or with good access to stations. As the prospective ridership for other transit investments in the regions are best supported by concentrated office employment locations. Reduced or delayed suburban office employment growth means a reduced potential to attract some of that growth to locations served by the regional transit system.

### **6.1.3 Most Urban Growth Centres will not generate the density and mix of uses as soon as planned**

The *Growth Plan* requires municipalities to plan for a minimum of 40% of residential development to be constructed inside built-up areas. Among other reasons, this is in order to develop transit-supportive densities. Much of this residential growth through intensification is intended to occur in the *Growth Plan's* designated UGCs. The UGCs are also intended to accommodate a significant amount of employment, though a ratio of jobs to residents is not set in the *Growth Plan*. The built form and minimum density expectations for the UGCs means that most of the housing would need to be in apartment form and most of the employment would need to be in office buildings.

The recent concentration of both apartment construction and office development in central Toronto means that the regional UGCs are now expected to absorb less population and employment growth potential than originally anticipated for the 2031 horizon. UGCs that lack a significant established office market will be especially challenged to attract employment growth.

The *Growth Plan* calls for the UGCs to achieve minimum density targets by 2031. Now only 15 years away, it is clear that many of the UGCs will not attract the planned level of development by 2031 or even by 2041. At the same time, many of the UGCs are attracting significant building activity and development interest and are adding the anticipated high-density mixed-use development, even if it is not sufficient to meet *Growth Plan* targets. More market-based expectations for development within GTHA UGCs include:

- Downtown Toronto is the largest UGC and, as has been described already at length, attracting significant amounts of high density residential and non-residential development. Growth is anticipated to continue, though perhaps at less than the blistering pace of current development.
- The other four UGCs in Toronto — Yonge–Eglinton, Scarborough, North York and Etobicoke Centres — all continue to attract significant amounts of residential development, though none have attracted significant new office development (the TransAmerica building in North York has been the only large office building added in these areas in the past 25 years). While the prospects for residential development remain solid in all of these areas, the market for new office development is likely to remain quite limited.
- In Durham, the Pickering UGC is well served by two-way, all-day GO Rail and can be expected to continue to experience the moderate levels of both residential and non-residential development of recent years. The Downtown Oshawa UGC has no direct access to higher order transit and has seen little new development. Oshawa is not only challenged by market demand for higher density development in eastern Durham, but it is also a developed historic downtown which requires the difficult and time consuming process of assembling properties to allow for development.
- In York Region, the Markham Centre UGC has been successful in attracting both residential and office development and will likely continue to do so. While starting later, the Vaughan Metropolitan Centre has similar attractive prospects for development, with the TTC subway extension opening soon. For office development, both of these centres have the dual advantage of being transit oriented and having superior access to a 400 series highway.

The Langstaff UGC is a much longer-term prospect than Vaughan and Markham in large part due to the significant infrastructure investments that must occur before substantial development can occur. The Newmarket UGC is also likely to be a longer-term proposition partly due to its distance

from the urban core and because most of the lands are occupied by relatively new low density development.

- In Peel Region, the Mississauga Centre has experienced and will continue to experience almost entirely residential development. Over the past 25 years, Mississauga's office development has been focussed in the Airport Corporate Centre, Gateway and Meadowvale. The Downtown Brampton UGC has seen some higher density residential development in recent years, but the pace of development is limited both by the market demand and the need to assemble development properties within a historic downtown area. The prospects for significant new office development in the near-term are limited in both Brampton and Mississauga UGCs.
- Halton Region has three UGCs. Downtown Burlington has experienced significant residential development, which is likely to continue in the future. Employment growth prospects are more limited with the exception of the Joseph Brant Hospital. Midtown Oakville has the advantageous attributes of both two-way, all-day GO Rail and Highway access, but, according to the Town of Oakville, there are a number of infrastructure needs that will keep the pace of development slow for some time to come. The Downtown Milton UGC, anchored by historic downtown and the Milton GO station, has good prospects for residential development in the long-term. However, Milton's role in the market today is primarily the provision of ground-related housing to people moving from Mississauga and Toronto. Further there are no current plans to introduce all-day service on the Milton GO line, and will likely continue to serve a peak-period commuter function for some time.
- Downtown Hamilton UGC is seeing a rising level of interest in development in recent years as interest and reinvestment in the City has expanded. Expanded GO services, including plans for future all-day service, and the proposed LRT will add to the attractiveness of Downtown Hamilton for long-term redevelopment.

Overall, all of the UGCs can be expected to be attractive for some higher density residential development over the long-term. Far fewer are likely to be attractive for significant amounts of office development. Planned transportation services, including the GO RER investments, will support development within many of the UGCs, the overall pace and timing of development will not immediately experience large scale change in response to transportation investments. Rather transportation is one among many factors influencing growth in the UGCs.

## 6.2 Attracting Concentrated Employment Forms Suitable for Reverse Commuting Is a Major Challenge

A recent analysis of the Toronto office market and of the impact of proximity to rapid transit stations show that office buildings within 500 metres of a transit station had lower vacancy rates and substantially higher asking rents (Jones Lang LaSalle Canada, 2013). Given the limited number of locations with both office and rapid transit (most are downtown), there may also be other factors at play, but it is clear that rapid transit access is of value to some parts of the office market.

In most suburban office markets, however, rents are still too low to support new office development, even with a transit-proximate premium in the locations where it exists. The analysis focussed on TTC subway stations located in well-established mixed-use communities (e.g. Downtown, North Yonge, Scarborough and Kipling-Islington) rather than GO stations. There are so few GO stations with any proximate office space (except for Union Station), that there would be no reasonable method to test price differentials, though the lack of development itself would indicate a relative lack of market interest to date.

The primary reasons why office tenants would choose to leave the downtown core area are: lower occupancy costs, free parking and the avoidance of long commutes (by finding locations accessible to their employees). However, as they still require proximity to a skilled labour force, they must be in a sector that does not need quick access to other services. Overall, there is no clear pattern in terms of specific types of tenant or sectors that favour suburban locations. However, research does confirm that organizations or business units that require face-to-face interaction tend to locate downtown while non-client facing operations are more commonly located in suburban environments.

The currently relatively small suburban share of overall GTHA office demand (1-2 million sq. ft. annually) is spread across a very large geographic area – Oshawa to Hamilton, north to Newmarket. Within this large area there is a huge inventory of pre-zoned office sites. Since the potential supply is considerably larger than the demand, suburban developers (both adjacent to transit nodes and in other areas) compete fiercely for anchor tenants that are needed to support the feasibility of a new development. Potential sites on GO station lands may actually be at a disadvantage compared to nearby properties, if there is a need to incorporate replacement GO commuter parking within the development. Even if Metrolinx absorbed the direct parking cost, there would at least be a complexity and inconvenience factor in such cases. As a result, it is anticipated that growth in the more established office employment nodes outside the City of Toronto will continue in the coming years (these are locations such as 404/7, Airport Corporate Centre and Meadowvale).

To date, based on existing patterns of development, the potential for GO stations is almost exclusively as a focal point for residential development. Suburban stations are seldom in themselves employment destinations. The exceptions are usually where stations are within or adjacent to a larger draw, such as a commercial or administrative centre. The Pickering station is an example of this. It has a bridge link across Highway 401 to an office building located within the Pickering Town Centre. In other instances, the adjacent commercial uses tend to be commuter-oriented (fast food outlets and supermarkets). In the GTHA context, the best opportunities are where GO stations are in locations with existing market appeal such as Meadowvale, Oakville and, perhaps, Unionville, Langstaff and Pickering. In the long-term, potential for new office nodes also exists in a number of the UGCs described in Section 6.1.

To illustrate the nature of development that occurs in the vicinity of transit stations, a series of four maps have been prepared and are shown in **Exhibits 6.1 to 6.4**. The first shows the residential development concentrations in the vicinity of TTC subway stations. While many stations clearly have transit-oriented development, a very large number do not. For example, even 50 years after the Bloor-Danforth subway was built, the subway, while attractive, is not in a sufficient condition for redevelopment. Other conditions, especially the ability to assemble land, need to be in place to generate development. Non-residential development has occurred in far fewer subway stations as a number of other locational attributes need to be met to create attractive office development locations. A similar analysis of the GO Rail system demonstrates fewer locations with transit-oriented development than the subway system. In many cases, this is simply the result of the GO system relying on the historic railway lines, whose adjacent land uses were traditionally industrial in nature.

Consultations with stakeholders across the GTHA revealed that although many developers are marketing GO-adjacent properties with the prospect of future service increases, they have simultaneously been pressuring authorities to downzone around GO station areas. The reasoning has been that planned densities around GO stations are too high and developers are having difficulty marketing and, therefore, developing them.

The outlook for GO Train in-commuting can be evaluated at a high level by looking comparatively at development along the TTC subway system. The distribution of growth along the TTC subway has mostly followed its radial design, with residential development dispersed across the system, whereas non-residential development has largely remained in central areas and established nodes. This is due to the system-wide accessibility of the stations in central areas, which are reachable from any location along the system within consistent time frames. This is unsurprising as moving residents from outlying parts of the system to employment in the central areas was intended by design.

Like development along the TTC network, development along the GO with the implementation of GO RER may follow roughly similar patterns, with residential

dispersed on the network and employment heavily concentrated around Union Station. The combination of the two provide a reasonable expectation of how development may unfold along a higher frequency two-way service on the GO system.

First and foremost, from a development perspective, the GO RER system will represent a significant change compared to its current function as an inbound-to-Union-Station focussed service. This is a support to employment development in Downtown Toronto and an attractor to residential development within station catchment areas (which may include those who drive in from some distance).

In terms of two-way usage, the radial nature of the system means that the greatest improvement in accessibility is to the centre, rather than to points along the individual lines. Put simply, RER means that nearly the whole region has better access to Union Station, but accessibility to jobs at, say, Bramalea station is only really improved for those living near the Kitchener GO Line. While not an inconsequential improvement by any measure, it is still lesser than at Union Station. The result is less transportation effect on development that would rely on reverse commuting.

### Concentrated Residential Development in the Vicinity of Exiting GO Stations

**Exhibit 6.1** shows GO stations on the existing system which have attracted concentrated residential development. For this purpose, the development has been distinguished between larger scale concentrations, moderate concentrations and stations with some high-density residential development in the vicinity. This is not intended as an in-depth analysis, but rather to demonstrate a number of characteristics:

- GO Rail lines follow the historic railway network in the GTHA. Much of the development that surrounded the historic network had been industrial development. As a result, most stations on the GO Rail are either not in urban areas or are contained in larger employment areas and are simply not suited to residential development.
- Areas where residential development has occurred have been locations where the land use is appropriate and other conditions are in place, such as available vacant or developable properties and supporting urban infrastructure.
- Station areas where development has occurred have only developed at a moderate level, as the GO system at this time is largely a commuter rail system with large suburban catchment areas and an end point at Union Station.
- High density residential development at and near Union Station has occurred largely for reasons other than their proximity to the GO Rail system.
- Residential growth can be expected to continue to occur at the station areas where other factors allowing for residential development are in place.

**Exhibit 6.1: Residential Development Along the GO System**



Source: Hemson Consulting Ltd. and IBI Group.

## Union Station is the Only Major Concentration of GO Rail Related Non-Residential Development in the GTHA

**Exhibit 6.2** shows GO Stations on the existing system where concentrated non-residential development, mainly offices, has developed. Like the residential development map, development has been distinguished between large scale concentrations, moderate concentrations and little to no development in the vicinity of station areas. The map demonstrates the following characteristics:

- Downtown Toronto office development is by far the largest concentration on the network and is the primary destination for GO Rail riders.
- As described elsewhere in the report, there is a very limited number of office concentrations elsewhere in the GTHA. The GO system intersects with only a few of them. Downtown Hamilton and Downtown Brampton, for example, are office clusters that are not closely oriented towards GO service.
- Some recent office buildings in Meadowvale, Oakville and Pickering are likely related to the availability of GO service. In particular, the direct connection from GO to the MPAC building in Pickering City Centre suggests a relationship. Overall, however, these remain a very small part of the office market.
- Accordingly, stations located in areas with existing market appeal, such as Meadowvale, Oakville and, perhaps, Unionville, Langstaff and Pickering are where the best opportunities for GO related office development exist.

### Exhibit 6.2: Non-Residential Development Along the GO System



Source: Hemson Consulting Ltd. and IBI Group.

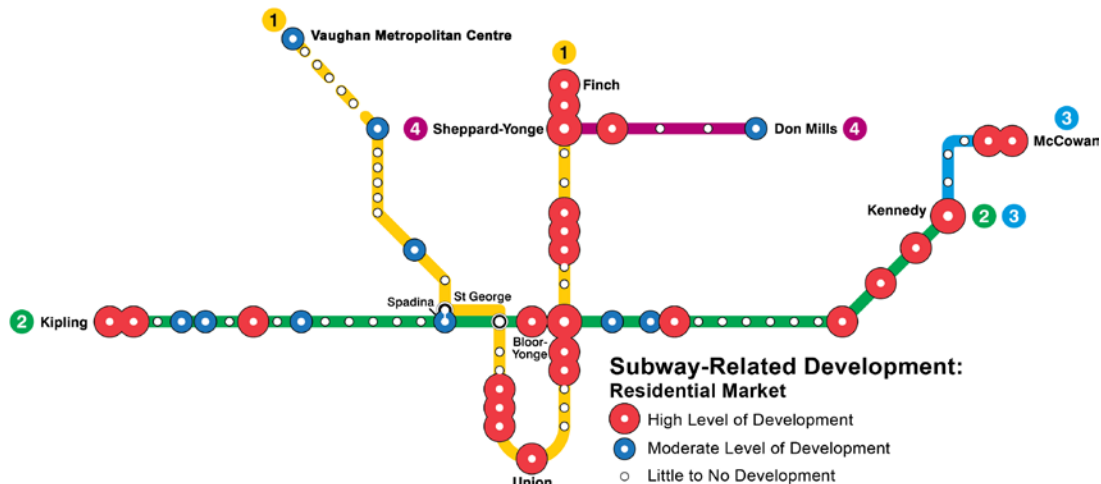


### Concentrated Residential Development has Occurred in the Vicinity of Some TTC Subway Stations, but by no Means at all Stations

In considering the potential changes in ridership and development patterns related to the future GO RER improvements, it is instructive to consider development that has occurred in the vicinity of TTC stations. While not an identical system, the TTC represents a frequent rail connection and provides some direction in the possibilities for development along high-frequency transit:

- Moderate and large concentrations of residential development have occurred at many points in the system where conditions suitable to accommodate residential development are in place. In particular, the availability of adequately sized sites through changes in use permissions or through property assembly is a key factor within Toronto. For example, near many of the stations in Scarborough and at Islington and Kipling, many large sites were available for development at the time the subway was built. Certainly, the North York, Scarborough and Etobicoke Centres were planned specifically along rapid transit and on large residential sites.
- Historically, development at High Park, Broadview and the Yonge corridor at St. Clair, Davisville and Eglinton were based on large land assemblies and redevelopment at a time when both planning and the market allowed for assemblies and redevelopment. More recently, this could be seen at Bayview on the Sheppard Subway, though the land assemblies on the southeast quadrant were assembled decades ago. Other locations where little development has occurred are primarily related to stations in lower scale residential areas that were less amenable to assembly and development by both market and policy.
- In the downtown area, a high level of development has occurred in the vicinity of the subway as supportive density, land values and amenable redevelopment policies have encouraged the degree of change there.

**Exhibit 6.3: Residential Development Along the TTC Subway**



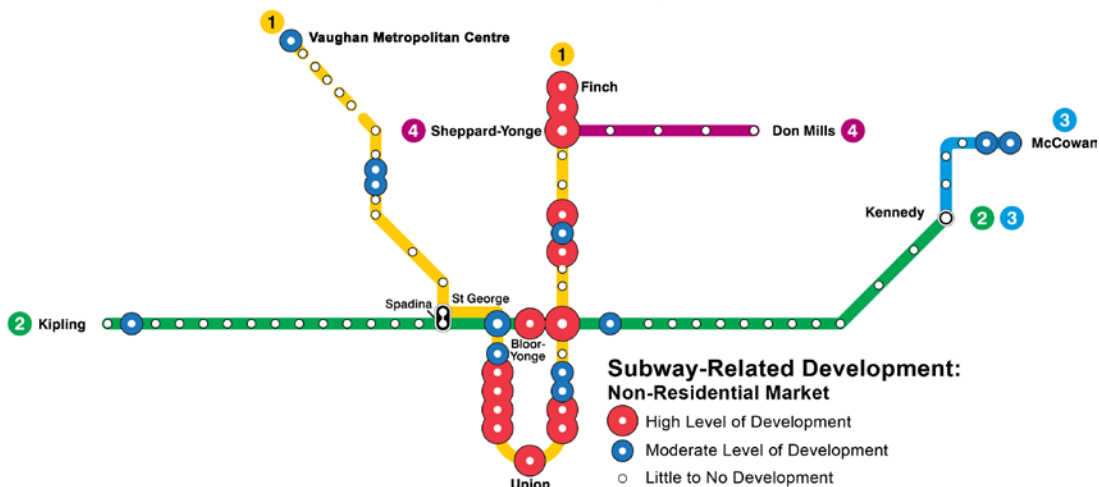
Source: Hemson Consulting Ltd. and IBI Group.

### Concentrated Non-Residential Development has Occurred in the Vicinity of Fewer TTC Subway Stations

In considering the potential changes in ridership and development patterns related to the GO RER improvements, it is also instructive to consider non-residential development in the vicinity of TTC stations:

- Large concentrations of non-residential development around TTC stations have only occurred downtown and on the Yonge corridor. In these cases, the high capacity transit was built in areas that were otherwise attractive to the market, but encouraged far more development to occur than would have occurred in the absence of the system.
- The other smaller concentrations at Scarborough and Etobicoke have occurred through planning in the centres and due to the availability of large developable sites, though in both cases far less office development has occurred than had been anticipated in plans.
- Interestingly, there appears to be significant interest in non-residential development in the Vaughan Metropolitan Centre with the arrival of the subway extension.

**Exhibit 6.4: Non-Residential Development Along the TTC Subway**



Source: Hemson Consulting Ltd. and IBI Group.

## 6.3 Other Metropolitan Areas May Be of Interest in Comparing Effects of Transit on Development

Comparing the effects of transit on development in other cities and metropolitan areas must be done very carefully because every place is conditioned by its history, geography, economic base and culture. Recognizing these limitations, it is of interest to look at metropolitan areas that have a regional system in place that is similar to GO RER system, but which also feature local rapid transit systems within the area. The purpose of the comparison is to help understand some of the possible effects on development of an RER-type system and, in particular, try to discern any significant effects on job concentrations near outlying stations that would be the attractor for increased two-way commuting.

The New York, Washington, San Francisco and Melbourne transportation systems all have comparable elements to the GTHA planned system:

- The New York area has a central city subway system serving about 40% of the metropolitan area and a two-way all-day service on various commuter rail lines operated by Metro North, Long Island Railroad and New Jersey Transit.
- San Francisco's BART system has the appearance of a subway train, but it is really more comparable to an RER system outside of the urban core with wide station spacing and commuter parking facilities. Within San Francisco, Muni operates an extensive LRT system, the central portions of which are underground.
- The Washington Metro operates an extensive subway system within Washington. Outside of the core, the Washington Metro is similar to BART, with the subways trains operating more as a commuter rail system in nearby counties of Maryland and Virginia. More distant locations are served by true commuter rail lines operated by the states of Maryland and Virginia.
- Melbourne, Australia has an extensive electrified commuter rail system, with a suburban station spacing and service level much like that proposed for the GO RER. Close station spacing in the central city provides a more of a subway-like service, though it remains above grade except in the very centre of downtown. This system is supported by an expansive streetcar system.

With these relatively similar systems located primarily in modern cities, the development patterns are quite similar to the GTHA. That is, concentrated residential development at many locations and concentrated non-residential at fewer but still numerous locations in the central cities. Outside of the central cities there are commuter-rail-related residential concentrations, but fewer non-residential concentrations.

Major employment concentrations which generate significant outbound work trips occur primarily at locations that feature many other factors beyond the transit system that have attracted development. For example, the concentration at New Brunswick, New Jersey is supported by NJ Transit, but is founded on the presence of Rutgers University and the related concentration of publishing houses and health services. Berkeley is similar on the BART system as home to the University of California. A stand-alone office concentration in Stamford, Connecticut is more singularly rail-transit related, featuring a number of back offices of New York-based financial services companies. Built in the 1980s and 1990s, it is understood to be facing a number of challenges in retaining tenants in recent years. Importantly, none of these markets have more than a few such locations.

Washington is more of an exception where there are more modern employment nodes developing around regional commuter rail than elsewhere in North America. The sheer scale of office development in the Washington area that allow there to be concentrations like Tyson's Corners or the Pentagon make it quite unlike other cities. By comparison, Metro Washington has about 1 million fewer residents than the GTHA, but more than double the amount of office space. Unfortunately, its unique features as the US capital limit Washington's comparability to the GTHA for development patterns.

Overall, these comparative cities with RER-like experience, suggest the patterns of development anticipated in support of two-way ridership are similar to expectations of the GTHA.

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This chapter described the influence of housing and employment distribution patterns on transit demand in the GTHA. While recent growth in central Toronto has been large, population growth in new ground-related family-oriented housing in the other GTHA municipalities far surpasses it. On the employment side, trends show that Major Office Employment will continue to be focused in downtown Toronto, as attracting concentrated employment forms to suburban transit station areas has been a major challenge. Regional land-use and transportation policy will need to consider more regionally centralized growth and slower development in most Urban Growth Centres than anticipated.

The next chapter concludes this Context Paper with a summary of the key points from this report.

## 7 Conclusion

This report provided the overall socio-economic context to growth in the GTHA over the next 25 years in preparation of the 10-year legislated review of *The Big Move*, the guiding framework for transit planning across the Greater Toronto and Hamilton Area. This *Context Paper on the Regional Economy, Demographic Outlook and Land Use* presented an overview of the major land use drivers impacting transportation in the GTHA and the GGH, in order to inform the development of traffic zone-level forecasts.

Globally, the consequences of the recent shocks to the economy have largely affected growth on a short-term basis while the long-term economic outlook remains stable and positive. Although the economic recovery has been slow, the continued in-migration of young adults means the GTHA has a higher share of the population in the labour force than other parts of Ontario. In the GTHA, immigration drives demographic growth which drives labour force growth. These two factors, immigration and labour force, influence the population and employment components of transportation demand forecasting. Anticipated migration to the GTHA will continue to result in a higher percentage of young adults in the region as compared to the rest of Ontario, which bodes well for transit demand.

The recent shift from a mainly manufacturing based to a knowledge and services-based economy has been very significant. Overall, it has meant an increase in Major Office employment, with more jobs locating in concentrated built forms such as large office buildings. For firms in the knowledge and creative services sectors, access to the labour force and amenities is increasingly important and has driven the demand for downtown Toronto's office market. On Employment Lands, however, declining employment in manufacturing and related sectors, together with steady output, has meant a decrease in employment density, meaning these areas will be even more difficult to serve by transit. Retail is moving towards either more walkable or more auto-oriented built forms and is unlikely to become more transit-oriented.

The recent growth in housing in central Toronto has been large, but is characterized by small household sizes. Overall, population growth is primarily driven by new ground-related family-oriented housing, which remains focused in the municipalities outside of Toronto. Likewise, Major Office Employment continues to be focused in downtown Toronto, as attracting concentrated employment forms to suburban transit station areas is a major challenge. This difference in distribution based on housing and employment type have important implications for regional land-use and transportation policy, which will need to consider more centralized growth and slower development in most Urban Growth Centres than anticipated.

The findings of this background trends analysis will be used to develop the traffic zone-level forecasts to build a transportation and land use model for Metrolinx in its update to the Regional Transportation Plan.

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