

# Sufficiency of Transportation Infrastructure in the GGH

---

Paul Smetanin, President, CANCEA

December 9<sup>th</sup>, 2022

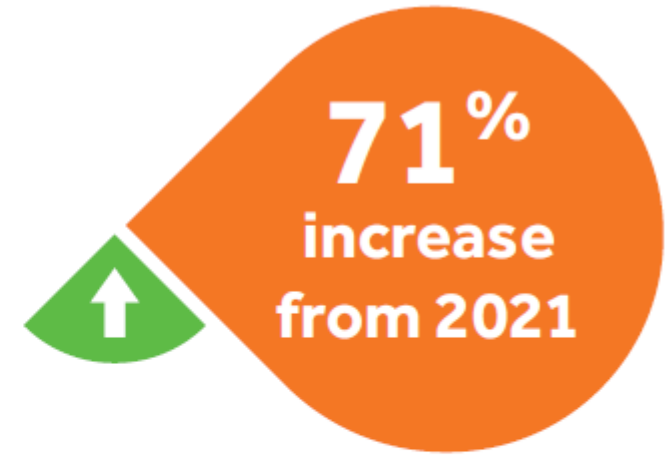
**CANCEA**

- TRREB asked CANCEA to research the following two questions:
  - Are ongoing and approved transit and transportation infrastructure projects for the GGH enough to account for population growth and the geography of home sales and new home development over the long term?
  - Does the answer change if the hybrid work-from-home model is sustained versus a more permanent return to a traditional bricks-and-mortar place of work?
- These questions relate to:
  - **Growth in the capacity** of the GGH's transportation network, being the number of daily stops and frequency of service
  - **Growth in demand**, being the number of commuter trips arising in a region.
- CANCEA has the largest, geospatial socio-economic platform in Canada that supports over 400 clients.
- The platform was used to perform a digital twinning simulation of the GGH out to 2051 under different immigration and work-from-home scenarios

- Since 2001, the population has increased by over 30% with employment increasing by 25%
- Under the new immigration targets, immigration into the GGH is expected to more than double from an average of 112,000 new immigrants per year from 2009 to 2019, to almost 200,000 per year.

## Fast Fact: Increasing Population

Source: CANCEA



The population of the GGH could grow to 16.9 million residents by 2051.

- > The number of transit commuters in the GGH could **more than double over the next 30 years**
- > Car commuting would increase by 30%
- > Rapid population growth poses a significant risk to maintaining the sufficiency of the network
- > The number of daily stops and frequency of service would have to more than double to compensate
- > Large uptake of remote working can help mitigate the challenges
- > The risk to transportation capacity is most pertinent for younger people and low-income families

## Fast Fact: Travel Patterns In the GGH (2019 vs 2051)

Source: CANCEA

### Number of Daily Transit Commuters



	2019*	2051**
<b>Total Daily Transit Commuters</b>	1.07 million	2.19 million
<b>Age less than 45 years</b>	710,000	1.38 million
<b>Older than 45 years</b>	360,000	810,000

### Number of Daily Car Commuters



	2019*	2051**
<b>Total Daily Car Commuters</b>	3.58 million	4.61 million
<b>Age less than 45 years</b>	1.87 million	2.28 million
<b>Older than 45 years</b>	1.71 million	2.33 million

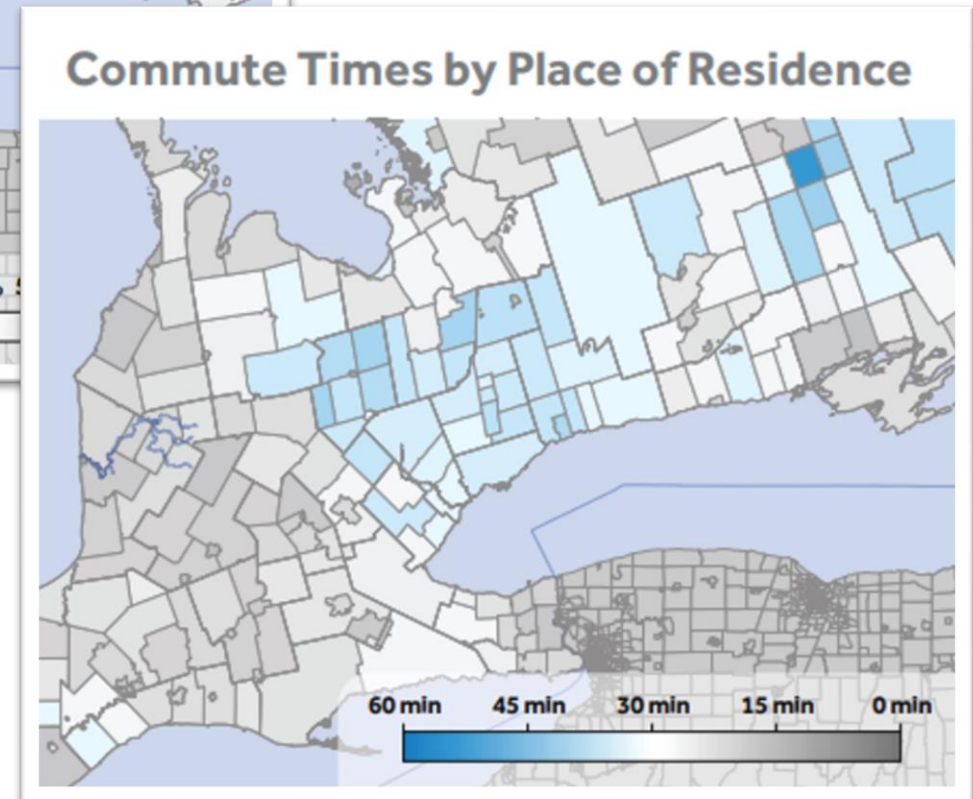
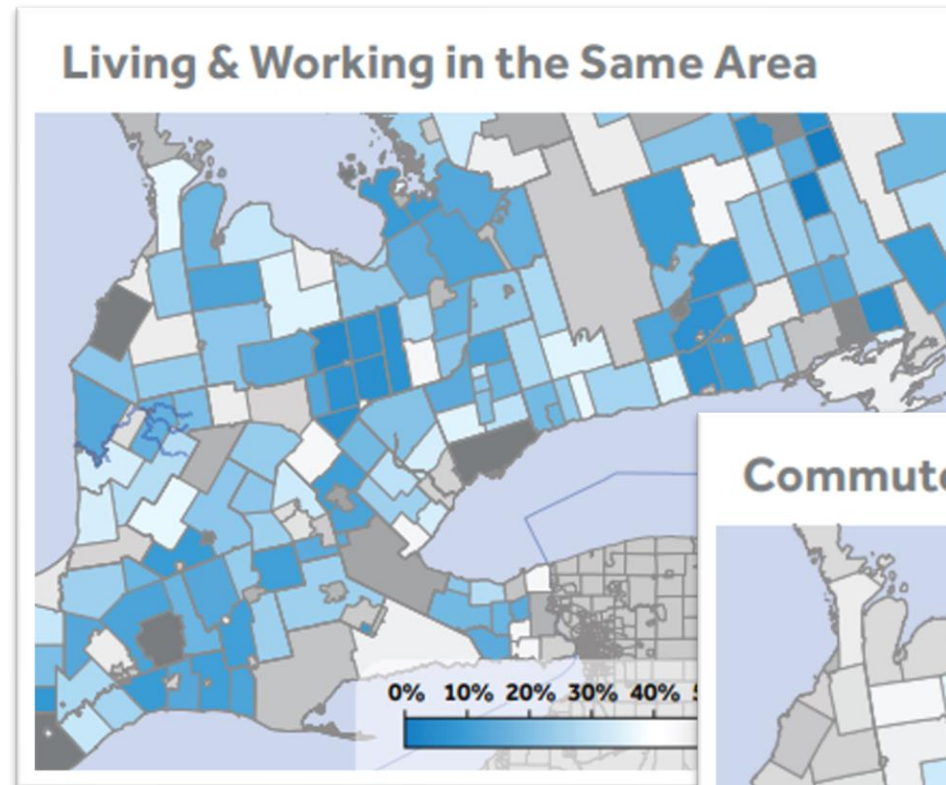
\* Prior to the Pandemic    \*\* Post-Pandemic WFH

- > Key Transit Infrastructure Plans (planned or in progress):
  - GO Expansion to provide two-way, all-day service every 15 minutes across the GO Transit rail network.
  - Ontario Line Subway
  - Eglinton Crosstown West Extension
  - Yonge North Subway Extension
  - Scarborough Subway Extension
  - Finch West Light Rail Transit
  - Hurontario Light Rail Transit (Mississauga)
  - Hamilton Light Rail Transit
  - Bus rapid Transit Corridors (Durham –Scarborough, Dunda)
- > Key Highway Infrastructure Plans (planned or in progress):
  - Highway 413, Bradford Bypass, Morrision Bypass (Guelph/Hamilton)
  - Garden City Skyway (Niagara)
  - Expansion of 412 through Toronto
  - Widening at key points on 400, 401, 403, QEW
  - Highway 404 extension





- Residential and job growth weren't occurring in the same geographical areas
- In many cities, less than half the people who work there live there
- Had resulted in longer and longer commutes
- Over 50% of commuters spend 30+ minutes commuting in one direction
- On public transit, more people commute an hour or more each way than 30 minutes or less



## Will GGH Transportation Capacity be enough by 2051?

- Capacity: Number of daily stops and frequency of service within the region
- Demand: Number of commuter trips arising in a region

Transit/Transportation  
Capacity Ratio

**If less than 1: Not enough capacity**

Transportation  
Capacity

---

**If equal to 1: Capacity experience is about the same**

Commuter  
Demand

**If greater than 1: Capacity is getting better**

**GGH = 0.84**

20% worst than 2019

Increased change in immigration with WFH back to pre-pandemic levels (7%)



Future GGH experience somewhere between

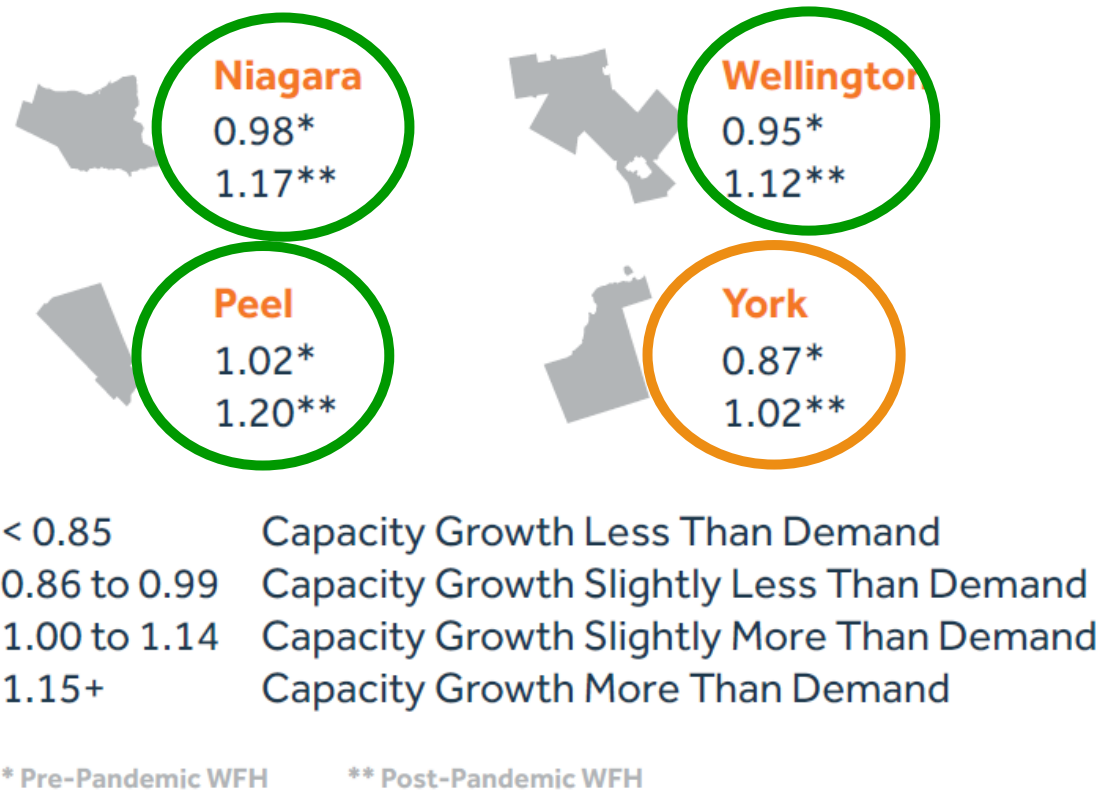
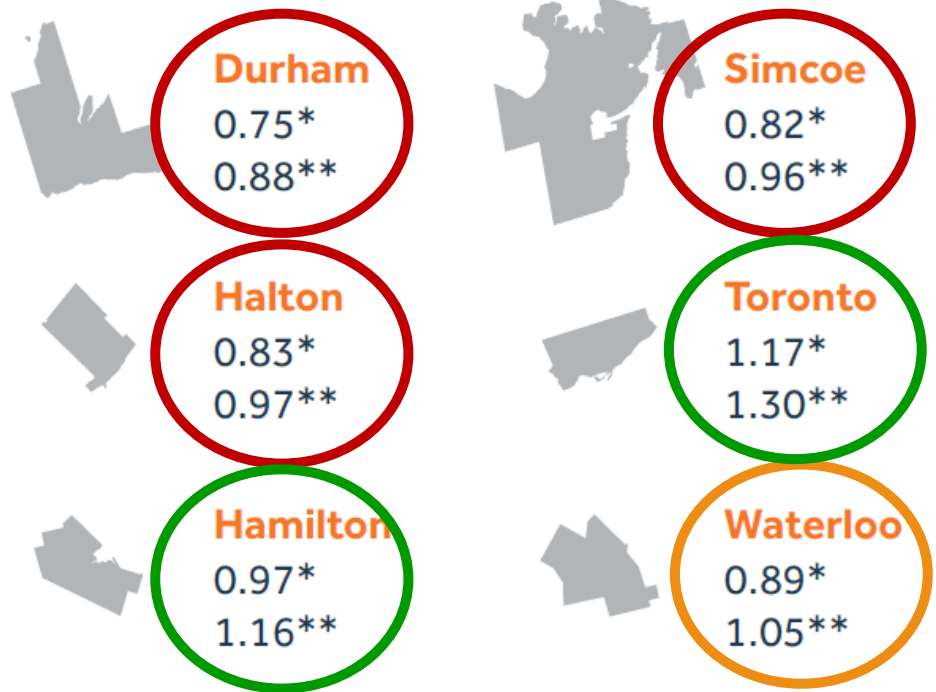
**GGH = 0.98**

Feels the same as 2019

Increased change in immigration with WFH at 20%

## Fast Fact: Capacity Growth vs Demand Growth

Source: CANCEA





- If the planned increase in transportation network capacity occurs, the GGH's overall experience with transit and transportation should largely be maintained as the population and economy grow. This conclusion is however dependent upon two conditions being met simultaneously:
  - Government will execute its infrastructure plans on time
  - Remote work, work-from-home, remains at 20% of the workforce, which is three times more than pre-pandemic levels.
- If neither of these conditions is met, then the capacity of the transportation and transit network is not expected to meet future demand.
- GGH regions will experience transportation demand and capacity differently as they vary in terms of demographics, residents that work outside the area, resident occupations, and public transportation investment plans
- The risk to transportation capacity is most pertinent for younger people and low-income families as:
  - Higher users of transit
  - Less opportunity to work-from-home given their occupation types
  - Transportation is a large cost for them when compared against their incomes