



# Urban Mobility Measurement At Transport Canada





# HERE — LINK-LEVEL SPEED DATA

- Transport Canada receives segment-level traffic speed data for Canada's entire road network (by TMC) from HERE Technologies
- The Provinces and Territories have access to this data
- Historical data available as far back as September 2017
- Congestion analytics based on Texas A&M methodologies and TAC guidelines

# TRAVEL TIME INDEX

- TTI = travel time index
- Indicator that tells us how much longer a given trip takes during peak hours, compared to the same trip during off-peak hours

$$TTI = \frac{\textit{observed travel time}}{\textit{free - flow travel time}} = \frac{\textit{average free - flow travel speed}}{\textit{average observed travel speed}}$$

- Example: if a trip that usually takes 10 minutes during off-peak hours takes 20 minutes, TTI = 2.0

# TIME OF DAY

- 5 time windows (bins) are defined:

**AM Peak : 7am – 9 am**

**Mid-day : 10 am – 3 pm**

**PM Peak : 4 pm – 7 pm**

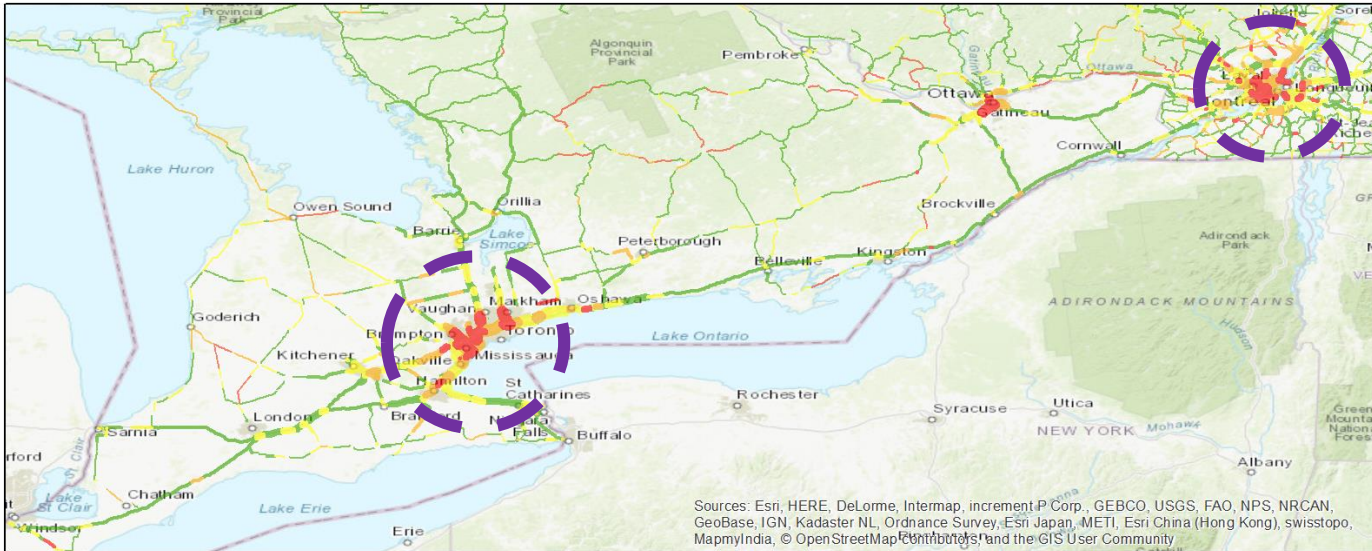
**Evening : 8 pm – 11 pm**

**Weekend: 7 am – 7 pm**







# URBAN MOBILITY SCORECARD

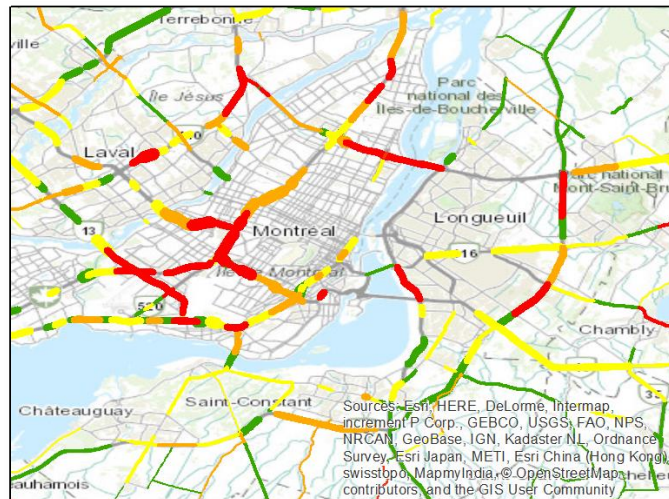
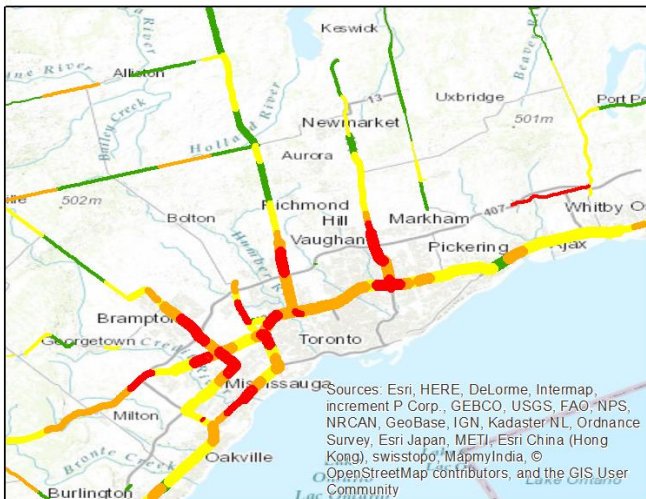
## Regional: Toronto – Montreal







**Legend**

Annual Average Daily Traffic

-  >100,000
-  50,000 - 100,000
-  10,000 – 50,000
-  < 10,000



**Peak Period TTI**

-  < 1.25
-  1.26 - 1.75
-  1.76 - 2.50
-  2.51 - 5.44



# TORONTO BEFORE AND AFTER THE PANDEMIC

Toronto, ON

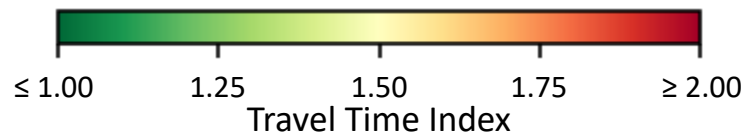
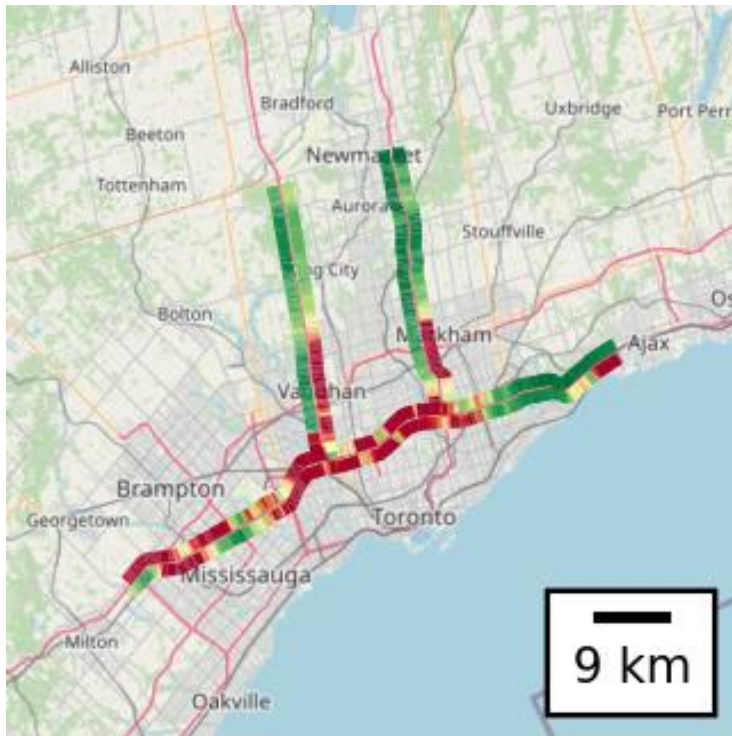
October 6 – October 12, 2019

PM peak period (3 PM – 6:59 PM)

Toronto, ON

October 3 – October 9, 2021

PM peak period (3 PM – 6:59 PM)



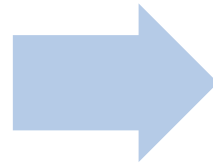


# SERVICE AREA ANALYTICS



## Network Accessibility

- **Accessibility of any given point of interest based on Travel Time to/from the facility**



## Monitoring Congestion Behavior

- **Change in accessibility throughout the day due to traffic behavior**



Thank you/Merci