Smart Freight Centre 2020 – 2021 Projects

Action Item 3: Expansion of Off-Peak Delivery Program in the Greater Toronto Area (Ongoing)

- This project is an expansion of the Peel six-month pilot completed in 2019;
- The City of Toronto and York Region will also be participating with the Region in the two-year pilot study;
- For the Peel pilot, off-peak hours were designated as any time from 7 p.m. to 7 a.m.;
- A household noise survey will be conducted at selected locations within all three participating municipalities.

Action Item 4: E-commerce trends and impact on communities (Complete)
- This project will survey households in Peel Region to identify e-commerce purchasing trends for households with different demographic and socioeconomic characteristics;

Action Item 5: Expand and Encourage the Use of Long Combination Vehicles

Infrastructure to enable Freight Platooning Operations on a Freeway Ramp in Peel Region (Complete)

- The purpose of this study was to analyze the impact of freight platooning technology operations at a freeway entrance ramp within Peel Region;
- Platooning technology represents many of the same benefits of Long Combination Vehicles as it improves efficiency in goods movement by employing Connected and Automated Vehicle technology.

A Swept Path Analysis of Interchanges and Intersections for Long Combination Vehicles (Ongoing)

- Large trucks, such as long-combination vehicles (LCV) enable larger volume of goods to be shipped on a single vehicle and lead to improved overall economic and environmental benefits;
- The purpose of this research is to assess the conditions that impede safe maneuvering of LCVs on designated highway interchanges, as well as signalized and non-signalized intersections for arterial roadways.

Action Item 7: Mainstream Goods Movement Through Education and Outreach – Establishment of the Freight Data Warehouse (Ongoing)

- The University of Toronto is developing a Smart Freight Centre Freight Data Warehouse to provide secure freight data storage, data management and visualization services to SFC participants to enable the research of all project participants;
- Developed Freight Data policy and improved Freight Data access portal beta version with visualization;
- Obtained mapping and location data from various technology firms through Transport Canada.

Action Item 9: Assess Region of Peel's National Role and Importance in Freight Fluidity (Ongoing)

- This study will study total logistics cost and evaluation of cross-border freight transportation operations with a microeconomic lens focusing on regional perspectives;
- Region of Peel is the regional area of study for cross-border goods movement across the Canada-U.S. border and Nestle Canada is the case study firm;
- The objective is to provide insight for regional and federal policy makers to ad in strategic planning for cross-border supply chain economics between Canada and the U.S.
- The study will also identify the national importance of freight activities in Peel and the impact of these activities on attracting businesses in Canada

COVID-19 specific analysis

COVID-19 Data Science Application on Traffic Monitoring in Peel (Complete)

- This project examines the changes in traffic congestion with the roll-out of various restrictions on various segments of the economy due to the COVID-19 pandemic;
- Draft of COVID-19 analysis based on traffic data provided by Transport Canada have been completed.