

Off-peak Delivery Pilot in Region of Peel

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Introduction

What is Off-Peak Delivery?

Off-peak delivery (OPD) refers to
the delivery of goods
during the evening and overnight hours

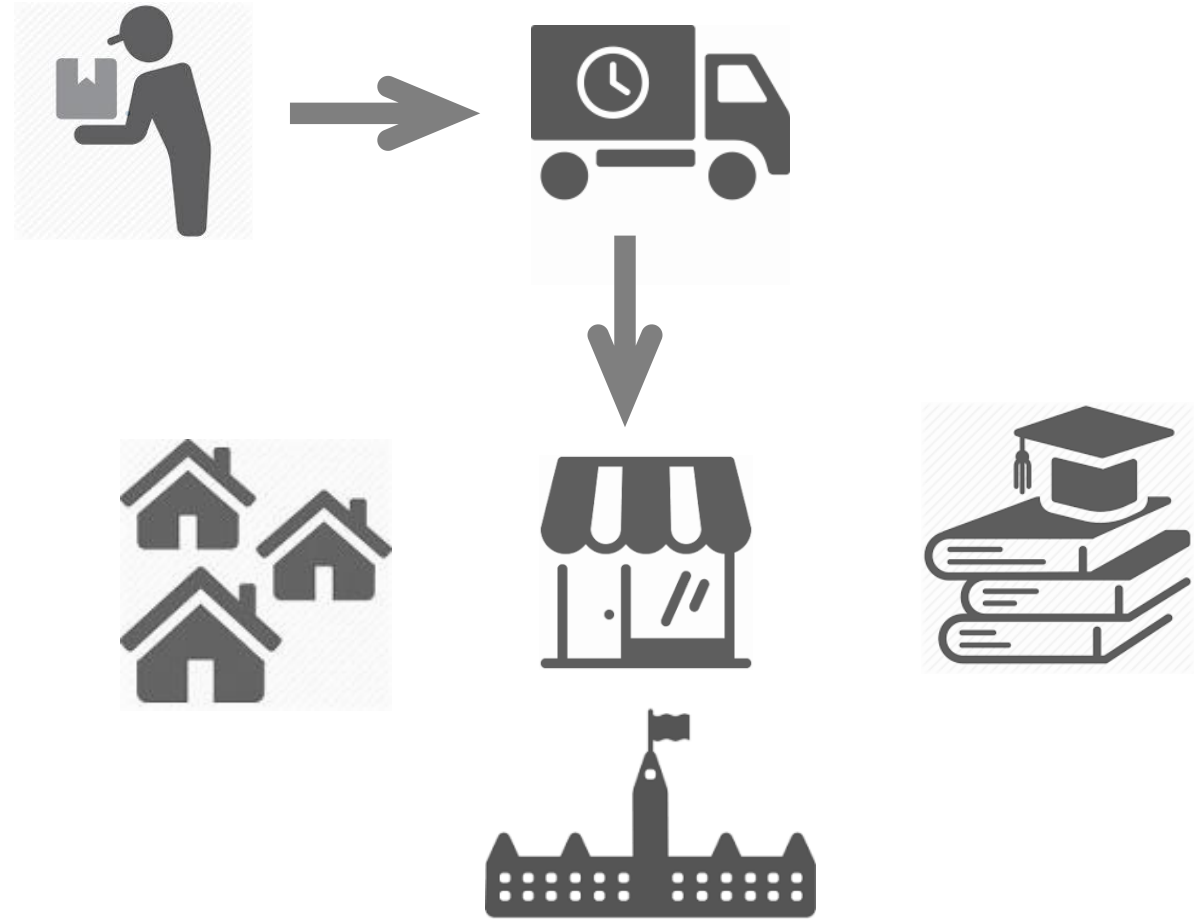
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Introduction

Key Stakeholders:

- Shippers
- Carriers
- Receivers (businesses)
- Residents (public)
- Government (by-laws)
- University (analysis)



Introduction

Previous OPD programs:

- New York
- London
- Chicago
- Toronto– Pan Am games



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Pilot Description

Participants:



Duration of Off-peak Delivery Pilot:

February 25, 2019 to August 30, 2019



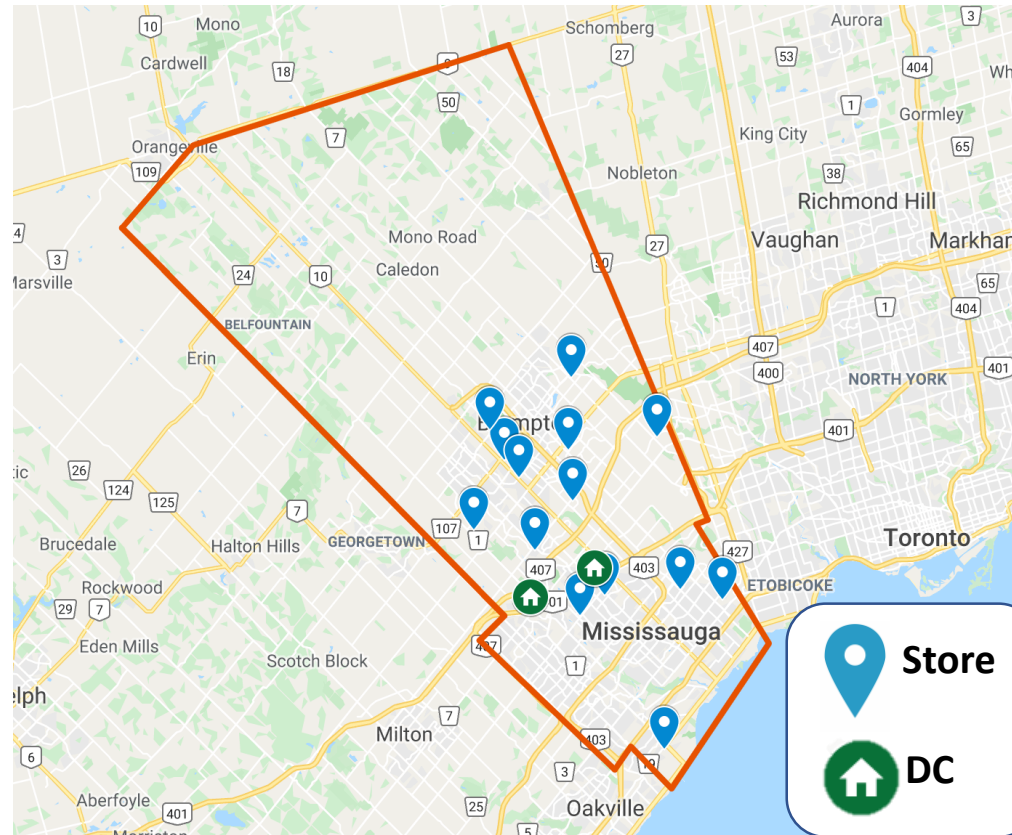
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Pilot Description

Participating stores:

14 Stores

- 2 distribution centers in Region of Peel
- One distribution center in Cambridge, ON
- One distribution center in London, ON



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Role of Smart Freight Centre

Evaluate (quantify) benefits and drawbacks of the pilot

- Travel times
- Service time at the stores
- GHG emissions
- Noise complaints
- Qualitative lessons learned



Analysis steps

- Regular contact with each company to monitor participation
- Obtain truck tracking data from each company, approximately every month
- Interpret and clean datasets from each company
- Develop methods for estimating travel times, service times, travel distance
- Use US EPA method (MOVES) for GHG emissions analysis
- Validate results (identify, understand, and correct for data outliers)



Current Status

- The pilot is complete
 - Zoning by-law has been back in effect as of September 1, 2019
- Final project report
www.smartfreightcentre.ca under “Publications”



Results

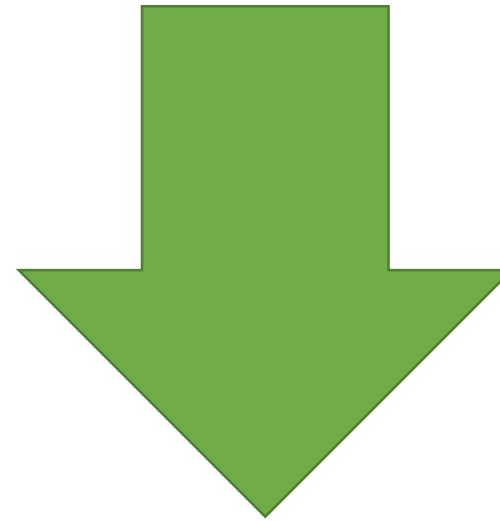
Participation

**30 percent of trips to participating
retail stores made in off-peak hours**



Results

Travel Times



**15.3 percent lower
travel times during
off-peak hours**



Results

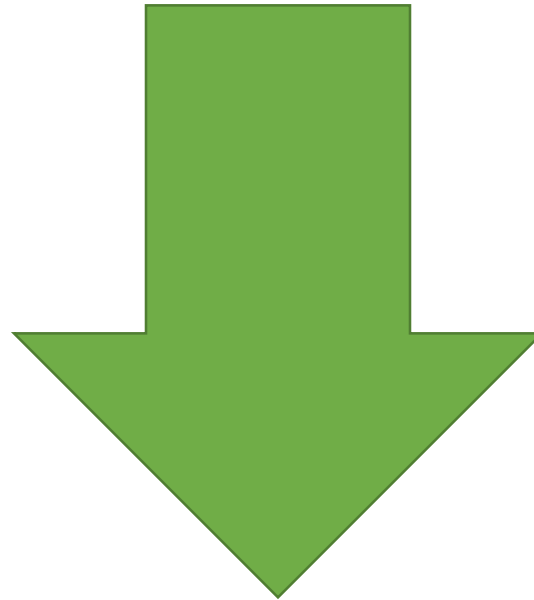
Service Times

- No clear conclusion regarding change in service times during off-peak hours.
- Some companies experienced decrease in service times while others experienced increase in their service times



Results

GHG emissions

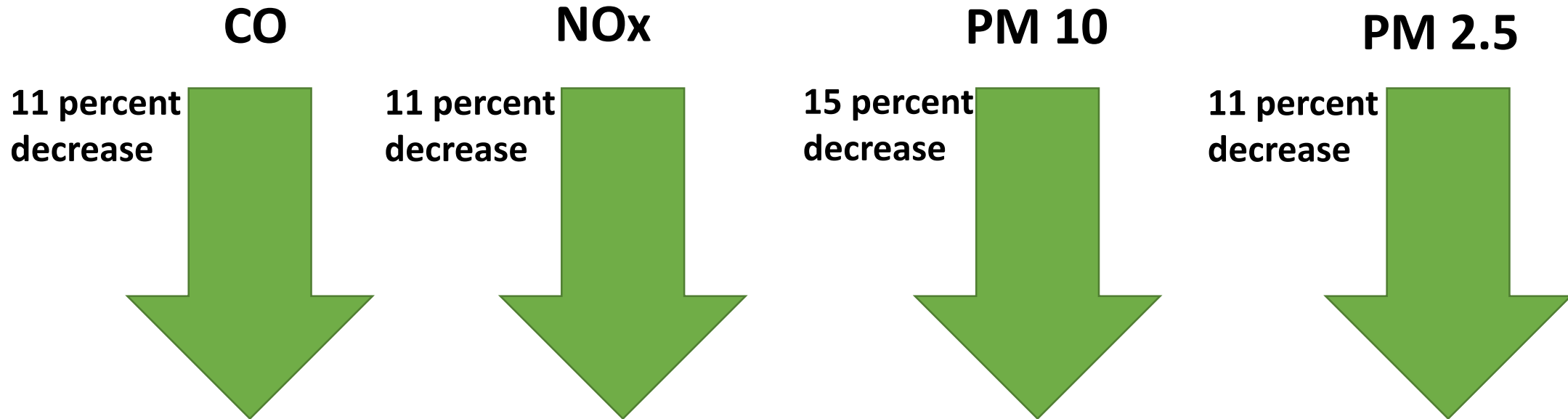


**10.6 percent decrease
in GHG emission
factors (grams/km)
during off-peak hours**



Results

Air quality pollutants



Results

Number of Complaints

0



Conclusions of Pilot

Off peak delivery pilot has demonstrated:

- **Significant reductions in travel time**
- **Mixed results for service time**
- **Significant reductions in GHG emissions**
- **No noise complaints**



Next Steps

Investigating possibility for expansion of Off-Peak Deliveries

- Beyond the Region of Peel
- Greater number and diversity of companies
- Permanent noise bylaw exemptions
- Model of GHG emissions, traffic, operational impacts of larger uptake scenarios



Thank-you

Funding and in-kind partners:



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