Off-peak Delivery Pilot in Region of Peel

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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
Pilot Description

Participants:

Duration of Off-peak Delivery Pilot:

February 25, 2019 to August 30, 2019
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
  - Participants have been informed that the zoning by-law is back in effect as of September 1, 2019

- Complete data from 3 companies has been received as of Oct 29
  - Analyses of the 3 companies are complete
  - Planning “lessons learned” interviews with drivers, logistics staff
  - Working toward the final project report (Target: End of November, 2019)
Preliminary Results

Participation

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

Travel Times

15.3 percent lower travel times during off-peak hours
Preliminary 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

• Interviews with drivers/logistics staff may help explain this observation
Preliminary Results

GHG emissions

10.5 percent decrease in GHG emission factors (grams/km) during off-peak hours
Preliminary Results

Air quality pollutants

- CO: 11 percent decrease
- NOx: 12 percent decrease
- PM 10: 14 percent decrease
- PM 2.5: 13 percent decrease
Preliminary 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
Potential 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