CanTRAC Survey Report Briefing

Charlottetown Survey Report

Purpose Of The Note

This briefing note provides an overview of the Charlottetown Canada Travel Activity (CanTRAC) survey, developed by the Dalhousie Transportation Collaboratory (DalTRAC). It outlines the survey's objectives, methodology, and key findings related to travel behaviour in Charlottetown, P.E.I.

Specifically, this briefing note:

- Summarizes the survey's purpose and development;
- Describes the methodology used to collect and analyze data on residents' travel patterns, lifestyle choices and transportation preferences; and,
- Highlights insights into residents' willingness to adopt electric vehicles (EVs) in the future.

This briefing note is intended to support transportation engineers, planners, and policy makers in making informed decisions regarding infrastructure planning and transportation initiatives in the City of Charlottetown.

Key Observations

- The Charlottetown CanTRAC survey collected responses from 136 households between November 14th, 2023, and June 20th, 2024.
- With certain demographics overrepresented compared to the 2021 Canadian Census, the sample may not be representative of the population.
- The data reveals auto-centric travel patterns among residents, particularly during peak commuting hours. Respondents made an average of 3.21 trips per day, with 64.1% of those trips made by personal vehicles. Of these, 74.3% involved a single occupant.
- The average trip distance being 7.24 km, with 42.2% of trips being short distances (under 2km).
- Households reported an average vehicle ownership rate of 1.47 cars, while 50.5% of households did not own a bicycle.

Project Description

The 2023-2024 Canada Travel Activity (CanTRAC) Survey was conducted to examine how Charlottetown residents travel, live, and view emerging transportation options such as electric vehicles. The survey builds on the Nova Scotia Travel Activity (NovaTRAC) Halifax Survey, previously implemented in Halifax by the Dalhousie Transportation Collaboratory (DalTRAC), in partnership with the Halifax Regional Municipality.

The resulting data is intended to support evidence-based transportation planning and infrastructure development in the City of Charlottetown.

Context

The survey examined Charlottetown residents' travel choices and behaviours following the COVID-19 pandemic to identify emerging trends. During the pandemic, daily commuter numbers in Canada dropped by 2.8 million people between 2016 and 2021 (Statistics Canada, 2022), reflecting widespread culture shifts such as increased teleworking and changes in shopping habits. The survey findings provide the City of Charlottetown with critical data to support evidence-based planning and investment in transportation infrastructure and services.

Methodology

DalTRAC developed the survey using a computer-assisted web interviewing (CAWI) instrument. The questionnaire collected socio-demographic information, travel choices and preferences, and weekday travel behaviour. The survey included lifestyle and policy preference questions, offering a greater understanding of electric vehicle interest and adoption.

The survey was conducted over one phase:

- **Social media sampling:** Meta Ads were utilized to target individuals within a 15-mile radius of Charlottetown. This sampling method reached 4 403 Charlottetown residents. Sampling was conducted between November 2023 and June 2024.

Radio promotion of the survey was conducted in April 2024 by the DalTRAC principal investigator, Dr. Ahsan Habib. The City of Charlottetown promoted the survey on their social media platforms and website.

DalTRAC obtained ethics approval for this nationwide survey from Dalhousie University, ensuring responses remained anonymous. DalTRAC provided incentives for completing the survey by giving respondents a chance to win one of eleven VISA gift cards.

Survey Statistics

A total of 136 households responded to the survey during the social media sampling phase. This included responses from 180 individuals, who recorded 536 trips. Compared to the 2021 Canadian census, the sample included a higher proportion of respondents earning $100,000 per year, and respondents with a university degree.

Survey Results

Key survey findings to inform future infrastructure investments include:

Travel Patterns: Residents' travel patterns remain heavily autocentric, with 64.1% of trips made using a personal vehicle. The highest volume of trips occurred during midday (9:00AM to 3:00PM, 29.9%), with evening peak hours (3:00PM to 6:00PM, 28.2%) and morning peak hours (6:00AM to 9:00AM, 22.7%) following close behind. Walking is also popular throughout the day, with a high at 34.0% of midday trips, as seen in figure 1.

Transport Mode Use: Travel mode preference varied by gender. Men made more trips by car (68.0% vs. 64.2%) and cycling (8.8% vs. 1.4%). Women took more trips by transit (6.3% vs. 2.4%) and walking (23.8% vs. 17.2%). Additional findings include preference for walking over driving (52.9%), comfort using public transit (49.2%), and discomfort surrounding carpooling (51.6%). Travel mode preference varied from the 2021 Canadian census, which reported 84.4% of trips were made by car, while the survey found only 64.1%.

Survey Results Continued

Pandemic Travel Response: The COVID-19 pandemic influenced travel behaviors, with 70.0% of respondents preferring flexible working arrangements, and 69.0% preferring in-person activities. A more even split was seen between online and in-person shopping preference (34.5% to 38.3% respectively).

Electric Vehicle Interest: 40.1% of respondents indicated a desire to purchase an EV in the next five years. Key barriers to adoption included purchase price (65.7%) and insufficient driving range (13.1%). Respondents indicated purchase rebates to be the preferred policy option to support EV ownership.

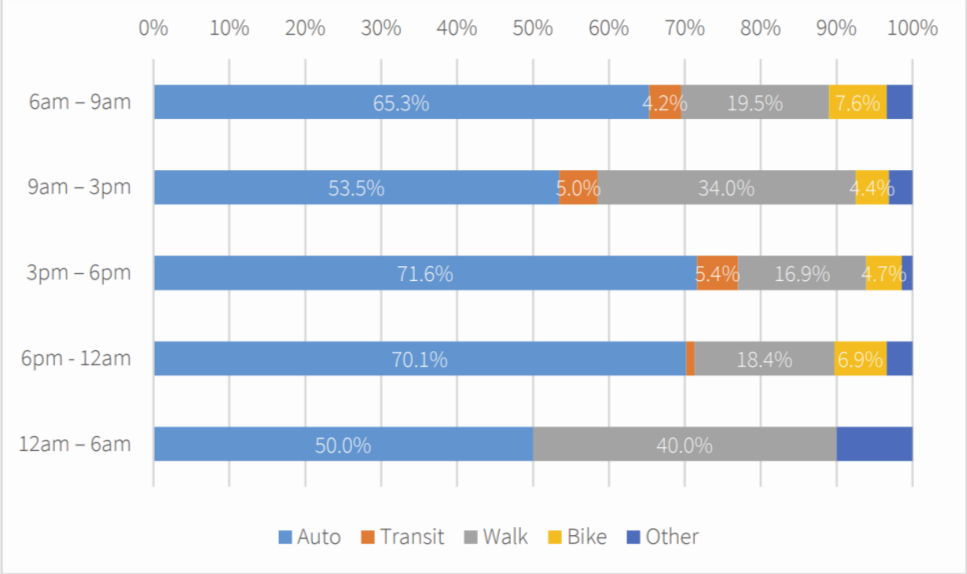

Figure 1: Distribution of travel modes by time of day.

Conclusion

The COVID-19 pandemic significantly altered travel behaviour in cities, accelerating trends such as online shopping, teleworking, and hybrid work arrangements. In Charlottetown, P.E.I., these shifts have changed how residents move through the city and use transportation systems. The CanTRAC survey has revealed a unique opportuinity for diversifying mode share regarding walkability. With a high mode share and interest in walking from respondents, Charlottetown has a very strong base support to expand its active transportation infrastructure, helping the city acheive its climate action and sustainability goals.

DalTRAC's Charlottetown CanTRAC study provides valuable insights into current travel habits and residents' willingness to use an electric vehicle in the future. These findings can help the City of Charlottetown align future transportation infrastructure investments with evolving mobility patterns and support climate action objectives.

References

Statistics Canada. (2022, November 30). Has the COVID-19 pandemic changed commuting patterns for good? https://www150.statcan.gc.ca/n1/daily-quotidien/221130/dq221130c-eng.htm.

About DalTRAC and CART Network

Dalhousie Transportation Collaboratory (DalTRAC) is a multi-disciplinary research facility dedicated to the advancement of transportation engineering and planning research and practice at Dalhousie University in Halifax, Nova Scotia. The research unit aims to contribute to transportation studies, planning, and analysis at local, regional and national levels.

The Climate Action Research for Transportation (CART) Network is a multi-university, multidisciplinary team of researchers and academics working to advance climate action in the transportation sector. The network focuses on the quantification of greenhouse gas (GHG) emissions at the municipal level and is supported by Environment and Climate Change Canada.

CART was initiated by DalTRAC to support cross-institutional research on transportation and climate action. It brings together expertise from civil and resource engineering, urban planning, computer and data science, and risk management to inform evidence-based transportation planning and climate policy across Canada.

Further Reading

For additional technical reports and research conducted by DalTRAC, please visit the DalTRAC research webpage at https://www.dal.ca/sites/daltrac/research.html.

Contact

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