CanTRAC Survey Report Briefing

Lethbridge Survey Report

Purpose Of The Note

This briefing note provides an overview of the Lethbridge 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 Lethbridge, Alberta.

Specifically, the 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 Lethbridge.

Key Observations

- The Lethbridge CanTRAC survey collected responses from 336 households between November 2023 and June 2024.
- Despite minor differences, the survey sample is considered representative of the population due to its demographic similarity to the 2021 Canadian Census.
- The data reveals auto-centric travel patterns among residents, particularly during peak commuting hours. Respondents made an average of 2.8 trips per day, with 79.2% of those trips made by personal vehicle. Of these, 62.6% involved a single occupant.
- The average trip length was 10.1km, with 23.4% of trips being short distances (under 2km). 88.8% of reported trips were less than 30 minutes in duration.
- Households reported an average vehicle ownership rate of 1.81 cars, followed by 1.00 bicycles per household.

Project Description

The 2023-2024 Canada Travel Activity (CanTRAC) Survey was conducted to examine how Lethbridge 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 Lethbridge.

Context

The survey examined Lethbridge 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 shifts such as increased teleworking and changes in shopping habits. The findings provide the City of Lethbridge 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 in three different phases:

- **Social media sampling:** Meta Ads were utilized to target individuals within a 14-mile radius around central Lethbridge. This sampling method was conducted between November 2023 and February 2024, reaching 8 694 individuals.
- **Civic address sampling:** 12 000 postcard invitations were sent in three waves to randomly selected Lethbridge addresses. This sampling method was conducted between December 2023 and April 2024.
- **Cellphone sampling:** 5 000 cellphone numbers with 403-area codes were generated from random digit dialing (RDD) to invite households to participate in the survey. Numbers which did not complete the survey within a week of the text invitation were phoned by a third-party vendor to conduct telephone interviews. Sampling occurred during May 2024.

DalTRAC obtained ethics approval for this nationwide survey from Dalhousie University, ensuring responses remained anonymous. A total of 22 072 individuals were invited to participate. 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 336 households responded to the survey across the four sampling methods: 152 from social media sampling, 163 from civic address sampling, and 21 from cellphone sampling. Overall, 95% of responses were collected through web-based sampling, with the remaining 5% gathered through cellphone interviews.

Survey Results

Key survey findings to inform future infrastructure investments include:

- **Travel Patterns:** Residents' had auto-centric travel patterns, with 79.2% of trips made using a personal vehicle. Trips occurred primarily during the morning (6:00AM to 9:00AM, 22.3%) and evening (3:00PM to 6:00PM, 27.6%) peak periods, while 35.8% of trips occurred during midday (9:00 AM to 3:00 PM), illustrated in table 1.

Survey Results Continued

- **Transport Mode Use:** Cars were used for 75.9% of morning peak, 85.2% of evening peak, and 76.2% of midday trips. Active transportation was second, making up 18.3% of midday trips (12.8% walking trips and 5.5% biking trips). Travel preferences varied by gender. Women made more trips by car (81.2% vs. 76.8%), while men used active transportation more (18.4% vs. 13.6%). Additional findings include preference for walking over driving (46.5%), discomfort using carpooling/rideshare services (48.8%), and comfort using public transit (42.1%) indicating the importance of implementing the City's Transportation Master Plan.
- **Pandemic Travel Response**: The COVID-19 pandemic influenced travel behaviours, with 69.2% favouring flexible work arrangements, 66.7% preferring in-person activities, and 41.8% opting for in-person shopping.
- **Electric Vehicle Interest:** 72.4% of respondents indicated they would not purchase an EV in the next five years, citing purchase price (32.2%) and driving range (20.3%) as barriers. Incentives to purchase an EV include purchase time rebates (22.4%), discounted charging (19.1%), and discounted home charger installation (18.2%).

	AM Peak	Midday	PM Peak	Evening	Overnight
	6 AM - 9 AM	9 AM - 3PM	3 PM - 6 PM	6 PM - 12 AM	12 AM - 6 AM
All individuals	22.3%	35.8%	27.6%	11.9%	2.4%
Male	25.6%	36.6%	24.3%	10.8%	2.8%
Female	20.0%	36.6%	29.5%	11.6%	2.3%

Table 1: Distribution of Trips by Time of Day.

Conclusion

The COVID-19 pandemic significantly altered travel behaviours in cities, accelerating trends such as online shopping, teleworking, and hybrid work arrangements. In Lethbridge, Alberta, these shifts have changed how residents move through the city and use its transportation systems. As a small sized city shaped by large boulevards and highways, Lethbridge's current design is conducive to personal vehicle use. This is reflected in Lethbridge's CanTRAC survey, showing an auto-centric travel culture. While the interest for improved transportation alternatives such as walking, cycling, and transit is there, investment in Lethbridge's Transportation Master Plan is needed, to fill out the city's cycling network and give residents a comfortable alternative to driving.

DalTRAC's Lethbridge 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 Lethbridge alight 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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