



Minding the (research) gaps

DRIVING CHANGE IN TRANSPORTATION PLANNING ACROSS CANADA

A gaps and opportunities analysis report from Leading
Mobility Consulting on behalf of the David Suzuki Foundation

APRIL 2024



© 2024 David Suzuki Foundation

ISBN Print: 978-1-988424-95-8

ISBN Digital: 978-1-988424-96-5

Canadian Cataloguing in Publication Data for this report is available through Library and Archives Canada. Minding the (research) gaps: Driving change in transportation planning across Canada

By David Cooper, Chris French, Leading Mobility Consulting and Julianna Charchun

ACKNOWLEDGEMENTS

The David Suzuki Foundation and Leading Mobility Consulting would like to thank staff from the following municipalities who contributed their expertise and insights into the report:

City of Surrey

City of Calgary

City of Edmonton

City of Regina

City of Toronto / Toronto Transit Commission

City of Montreal / Société de transport de Montréal

Halifax Regional Municipality

DAVID SUZUKI FOUNDATION STAFF TEAM

Project lead: Theresa Beer, tbeer@davidsuzuki.org

Research collaborations: Julius Lindsay, jlindsay@davidsuzuki.org

Sustainable Communities: Nicole Doray, ndoray@davidsuzuki.org

Copy-edit: Ian Hanington, ihanington@davidsuzuki.org

Design: Linny Malin, lmalin@davidsuzuki.org

CONSULTANT TEAM

This report was developed as a part of Leading Mobility Consulting's Mobility in the Future City program.

Project lead: David Cooper, Principal, Leading Mobility Consulting, david@leadingmobility.com

Technical team:

Chris French, Leading Mobility Consulting

Julianna Charchun



Contents

EXECUTIVE SUMMARY	4
INTRODUCTION	5
THE CURRENT STATE WITHIN MUNICIPALITIES TO ADVANCE CLIMATE ACTION	6
APPROACH AND METHODOLOGY	7
PHASE ONE: DISCOVERY AND LANDSCAPE ANALYSIS	8
PHASE TWO: ENGAGEMENT WITH MUNICIPAL STAFF	8
PHASE THREE: ANALYSIS AND DEVELOPMENT OF RECOMMENDATIONS	8
SUMMARY OF FINDINGS: WHAT DID THE CITIES TELL US?	9
CITY OF SURREY, BRITISH COLUMBIA	10
CITY OF CALGARY, ALBERTA	14
CITY OF EDMONTON, ALBERTA	18
CITY OF REGINA, SASKATCHEWAN	22
CITY OF TORONTO, ONTARIO	25
CITY OF MONTREAL, QUÉBEC	29
HALIFAX REGIONAL MUNICIPALITY, NOVA SCOTIA	33
KEY THEMES ACROSS CITIES (STAFF-REPORTED NEEDS, RESEARCH INTERESTS)	37
KEY RECOMMENDATIONS AND POSSIBLE RESEARCH QUESTIONS	38
CONCLUSION	40
FOOTNOTES	41

EXECUTIVE SUMMARY

Municipalities in Canada have influence over approximately 50 per cent of the country's greenhouse gas emissions. Considering this, municipal governments throughout Canada are increasingly placing a climate action and equity lens on their policies and programs. Even so, municipalities do not always have the data or resources (budgetary and/or staff) required to operationalize their aspirations when it comes to reducing emissions.

In this vein, the David Suzuki Foundation engaged Leading Mobility Consulting to explore where there are gaps in knowledge and data in the progression of policies that advance climate action, equity and transportation finance in seven large Canadian municipalities: Surrey, Edmonton, Calgary, Regina, Toronto, Montreal and Halifax.

Beginning with a deep-dive into the relevant policies and reports of each municipality, Leading Mobility Consulting engaged with municipal staff in all seven municipalities in turn, using a mix of online and in-person engagements, to explore the nature of the gaps in knowledge that municipal staff were facing and where they felt additional research would be useful.

Based on qualitative analysis, 10 themes emerged across the seven municipalities. While several themes crossed many of the municipalities, none were reported consistently by all, reflecting the diversity of political, climatic, regional and cultural contexts across these municipalities.

Our report concludes with five key recommendations and related research questions, including:

1. **Shift the perception that personal vehicle ownership is a necessity for good quality of life** (battle “car culture”) especially in Canada’s “winter cities” and create political will to take more action to address climate and equity challenges.
2. Advocate for (and join others in advocating for) **new fiscal tools and funding (capital, maintenance and operating) for transit and active transportation**, particularly from provincial governments that are related to:
 - a. Keeping up with growth/immigration and
 - b. Transit services for programs that are in the mandate of the provincial and federal governments (e.g., health-care trips).
3. Support capacity-building and best practices for **collecting and utilizing data to develop plans for meeting climate and equity outcomes together** that help inform decision-making for capital and operational investments.
4. Support capacity-building and best practices for **developing carbon budgets**.
5. **Create mode shift (carbon-intensive to less intensive/more equitable) by understanding the thresholds/factors that create change**, particularly when it comes to:
 - a. Transit service levels;
 - b. Role of active transportation;
 - c. Transit-oriented development mode shift (in Canada);
 - d. Regional commuter mode share.

Staff at each of the participating municipalities were candid and willing participants in this study. The project team is immensely grateful for their frank engagement. The resulting recommendations and opportunities for future research are a direct result of this openness and earnest engagement.



Introduction

Municipalities in Canada have influence over approximately 50 per cent of the country's greenhouse gas emissions¹.

As noted by Alberta Senator Karen Sorenson in the previous year:



If all municipalities focused on reducing emissions by the same 40-45% target as the federal government, we'd be more than halfway to our national target, which would be a massive accomplishment.”²

As a sector, local governments are in many cases doing what they can to address complex challenges like climate change and equity. Despite a lack of fiscal or policy tools or capacity,³ Canadian cities continue to find innovative ways to drive change such as electrifying municipal fleets⁵. However, fundamental governance and fiscal inequities of municipal governments, relative to other orders of government in Canada, are significantly inhibiting these efforts⁶.

With no governance amendments in sight, municipal advocates are calling for more local policy levers and better fiscal tools⁷. Most notably, this year, on the heels of a mayoral byelection, newly elected Toronto Mayor Olivia Chow is leading a call for provincial and federal reforms needed to keep up with critical municipal services that directly address climate and equity concerns such as maintaining efficient levels of transit service⁸.

At the same time, advocates for climate action are also increasingly calling for inclusive and equitable climate approaches, including in the municipal context⁹. By including an equity lens on the work of tackling climate change and mitigating its effects, proponents of this work seek to protect those who are most vulnerable to the effects of climate change, and to ensure that mitigation efforts are available to those who need them most¹⁰.

1 <https://fcm.ca/en/programs/municipalities-climate-innovation-program>

2 <https://sencanada.ca/en/sencaplus/opinion/municipalities-can-play-a-lead-role-in-reducing-emissions-senator-sorensen/#:~:text=In%20Canada%2C%20municipalities%20have%20influence,would%20be%20a%20massive%20accomplishment.>

3 <https://www.toronto.ca/news/city-of-toronto-staff-report-says-toronto-faces-an-unprecedented-financial-crisis-and-the-time-is-now-for-all-orders-of-government-to-step-up-to-fulfil-their-roles/>

4 <https://www.sfu.ca/act/reports/MCIPmobilizingclimateaction1.html>

5 <https://greenmunicipalfund.ca/resources/kingston-overcomes-fleet-electrification-barriers-adopting-leasing-model>

6 <https://imfg.munkschool.utoronto.ca/report/climate-policy/>

7 <https://fcm.ca/en/focus-areas/municipal-growth-framework8> <https://www.toronto.ca/news/city-of-toronto-staff-report-says-toronto-faces-an-unprecedented-financial-crisis-and-the-time-is-now-for-all-orders-of-government-to-step-up-to-fulfil-their-roles/>

9 https://www.c40knowledgehub.org/s/topic/0T01Q00000011RAWAY/inclusive-and-equitable-climate-action?language=en_US

10 <https://retooling.ca/climate-change/climate-equity/>

THE CURRENT STATE WITHIN MUNICIPALITIES TO ADVANCE CLIMATE ACTION

The David Suzuki Foundation is seeking to support municipalities throughout Canada to take climate action and improve equity outcomes.

The David Suzuki Foundation is a national, not-for-profit organization built on the work and advocacy of David Suzuki, one of Canada's leading environmental-protection advocates¹¹. In recent years, the Foundation has been engaging Canadian municipalities through its Sustainable Communities program, in order to support municipalities in their on-the-ground efforts to reduce greenhouse gas emissions and provide more equitable outcomes for all Canadians in the face of climate change.

As part of this ongoing effort to engage municipalities, the Foundation wanted to understand — from the perspective of municipal staff themselves — where they were lacking in data and research needed to address specific policy in four distinct but overlapping policy areas: transportation planning, climate action, equity and municipal finance.

As a result, Leading Mobility Consulting, with support from Julianna Charchun Consulting, was retained to provide recommendations about how municipal transportation planning and policy intersect with broader goals and initiatives related to climate action, equity and finance in Canada.

It is worth noting that the approach of inviting municipal staff to openly share their success stories — as well as their fears and frustrations — is unique in terms of engagement with local governments in Canada. This approach was broadly welcomed by the municipal staff who were engaged, although many were not accustomed to such earnest engagement with an external party. The Foundation and the consulting team are exceptionally grateful for the willingness of municipal staff to trust us with their heartfelt input. Without it, this project would not have been possible.

What follows is a description of the methodology and approach used in this project, a summary of the findings from each of the seven municipalities included in turn and a summary of key themes across all municipalities. Finally, we present recommendations based on our findings, as well as some additional considerations for future exploration.

¹¹ <https://david Suzuki.org/about/our-story/>

Approach and methodology

The David Suzuki Foundation enjoys meaningful connections with many municipalities in Canada. However, seven municipalities were identified as partners that the Foundation wished to deepen relationship with and offer a better understanding of the organization's policy work: Surrey, Edmonton, Calgary, Regina, Toronto, Montreal and the Regional Municipality of Halifax.

The approach to this project consisted of three distinct phases: discovery and landscape analysis, engagement with municipal staff and analysis with the development of recommendations.

PHASE ONE: DISCOVERY AND LANDSCAPE ANALYSIS

For each of the seven municipalities identified, plans, policies and reports were collected and placed in an inventory. This inventory was used to identify strengths in transportation policy as they relate to climate action, equity and municipal finance, along with less-defined, emerging areas.

PHASE TWO: ENGAGEMENT WITH MUNICIPAL STAFF

Engagement sessions were held with city staff in all seven municipalities — online, in-person (whenever possible) and hybrid, in some cases. In addition to municipal staff, members of the consulting team and key staff at the David Suzuki Foundation were present at each session.

Each engagement session began with a review of the landscape analysis by the project team to confirm whether policy and program strengths and research and reporting gaps were correct.

Next, a facilitated session was used to identify:

- Anticipated needs,
- Future policy interventions and research collaborations and
- Potential hurdles or threats to implementing transportation policies and plans related to climate action, equity and finance.

Of note, the engagement session in Montreal was offered in both official languages and translation was provided during the in-person session.

PHASE THREE: ANALYSIS AND DEVELOPMENT OF RECOMMENDATIONS

Following each engagement session, the project team analyzed key findings from each municipality and made note of any emerging themes across municipalities. Emerging themes focused on policy and program strengths and research and reporting gaps.

A webinar was hosted for the participating municipalities on December 6, 2023, in which the project team detailed the findings of this report.

A summary of what we heard at each engagement session, initial analysis and key themes across municipalities are summarized in the next section.



SUMMARY OF FINDINGS:

What did the cities tell us?

The following section provides an overview of the findings from the policy inventory and engagement with staff members from each municipality. Context for each municipality is provided, along with policy and program strengths, research and reporting gaps, upcoming needs, potential opportunities for policy interventions and research collaborations, and threats. Key themes across municipalities are highlighted.

City of Surrey, British Columbia

CONTEXT

The City of Surrey, on British Columbia's west coast, is home to more than 568,000 residents and is one of the fastest-growing municipalities in the Metro Vancouver region. Surrey has a diverse population, with more than 44 per cent identifying as immigrants and more than 50 per cent as South Asian, Chinese and Filipino. Walking and cycling infrastructure along with local roads are managed by the city, while TransLink — Metro Vancouver's Transportation Agency — manages the major road network and provides public transit service throughout the municipality.

Most commute trips in Surrey are taken by automobile, with driving making up over 82 per cent of the mode share in the 2021 census. Meanwhile, 13.1 per cent, 2.7 per cent and 0.3 per cent of commute trips are taken by transit, walking and cycling, respectively¹². However, the new Surrey Transportation Plan will include a mode share target of having over 50 per cent of all trips taken by public transit, walking and cycling by 2050.

POLICY AND PROGRAM STRENGTHS

1. Safe mobility

The City of Surrey has long upheld safety for all road users as a value in its decision-making for transportation network improvements, with its walking and cycling plans from 2011 and 2012 respectively highlighting the need for safe, visible and maintained active transportation infrastructure. Surrey also became one of the first municipalities in

Metro Vancouver to adopt Vision Zero in 2019. This safe mobility plan also drew connections between lower-income populations and vulnerability to being injured or killed in a vehicle collision. As such, the plan states that equity will be a key consideration in all future road improvements. **The adoption of Vision Zero also helped to set a new agenda for an upcoming update to the city's transportation plan that categorizes actions into four bold moves, with one specifying that safety will be prioritized over vehicles.**



PHOTO: CITY OF SURREY

2. Climate mitigation

Historically, Surrey has incorporated climate mitigation into several transportation plans and initiatives. The Official Community Plan includes direction to prioritize sustainable modes above automobiles and encourage development patterns that support transit services and promote walking and cycling. The Sustainability Charter articulates a vision for a thriving, green, inclusive municipality organized around the following themes: built environment and neighbourhoods, public safety, economic prosperity and livelihoods, ecosystems, education and culture, health and wellness, and infrastructure. Meanwhile, the updated transportation plan will specifically prioritize sustainable modes over the automobile.

¹² Statistics Canada. (2022). 2021 Census of Population.

RESEARCH AND REPORTING GAPS

1. Transit service and network expansion

Transit service and network expansion was originally included as a defined area, with many of TransLink's planned service expansions either located in or running through Surrey. However, staff highlighted that **improving transit service is one of the biggest challenges for the City of Surrey. Although only one in four residents has access to the frequent transit network, Surrey is notably one of the few sub-regions of Metro Vancouver that has fully recovered ridership since the beginning of the COVID-19 pandemic.**

While TransLink's 10-year priorities include several projects and service expansions in Surrey, city staff noted that these improvements remain unfunded and that achieving appropriate transit service levels within their jurisdiction remains a challenge. This has affected the city's neighbourhood planning exercises, especially those that require new bus routing and transit network integration with the Surrey-Langley SkyTrain extension. Staff also highlighted that the transit network in Surrey needs to be revisited to connect neighbourhoods within the city to reflect emerging travel patterns and lifestyles since the pandemic.

2. Funding for walking and cycling projects

The City of Surrey prioritizes pedestrian improvements around schools, grocery stores and transit stops, while cycling upgrades are mostly focused on town centres and North Surrey, though staff have been encouraging council to endorse connections between town centres. Multiple plans and policies give direction to acquire funding and invest in walking and cycling infrastructure but are vague and limited to seeking partnerships and do not discuss possible revenue alternatives that could meet or enhance organizational objectives. Most funding for walking and cycling improvements is derived from property taxes and grants, but staff highlighted that funding schemes for transportation in general need to be revisited by both the city and the province. For example, development cost charges may be used to increase vehicle capacity through road widening but not to fund active transportation

improvements. Staff also highlighted that it is difficult to acquire grant funding from higher levels of government with no clear means to quantify greenhouse gas reductions from new walking and cycling infrastructure.



PHOTO: LEADING MOBILITY

3. Equity in long-term transportation planning

Like many of the other cities included in this study, equity is a growing area of focus for transportation planning in the City of Surrey. Staff highlighted that the city has a history of addressing the needs of the loudest voices, which is not leading to measurable improvements to road safety and transportation in general. For instance, **Vision Zero highlights that more road fatalities are occurring on streets in low-income areas of Surrey and lower-income populations are more likely to be injured or killed in a vehicle collision. As such, the city is beginning to revisit its traffic-calming policies to reprioritize improvements to lower-income communities.**

Equity is also included as a lens in the city's new long-term transportation plan, specifically to support efforts to build 15-minute communities alongside land-use measures identified in a forthcoming update to the Official Community Plan in late 2023. However, staff cited a need for more resources and tools to shape where growth in Surrey is occurring and build the appropriate land uses and transportation infrastructure. Significantly, staff highlighted that there are currently 10 different neighbourhood plans being created all at once and find it difficult to proactively manage development.

4. Climate resiliency

The City of Surrey has one policy focused on resilience and adaptation, the Climate Adaptation Strategy, but limited actions are included for climate-proofing the transportation system. Funding for improvements to transportation infrastructure to make them more resilient to adverse weather conditions is expected to come from transportation levies, utility fees, development cost charges and tax revenue. Staff highlighted a disconnect between climate resiliency planning and equity in Surrey along with a need to better prioritize projects and services. More staff resources are required to focus specifically on climate change planning for transportation and other areas such as flood protection.

In addition, and knowing that improving transit, cycling and pedestrian networks alone will not achieve mode share targets, staff highlighted a need to identify and implement policies and strategies to reduce driving. However, as in other Metro Vancouver municipalities, this is difficult to implement and can be contentious among political decision-makers.

UPCOMING NEEDS

Transit network redesign

Staff highlighted that a transit network redesign will be required in the short term as the city prepares for the construction and opening of the Surrey-Langley SkyTrain extension.

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

During engagement with City of Surrey staff, multiple potential policy interventions and research collaborations were identified and are summarized below.

Public education on induced demand

Staff highlighted that much of the regional population believes that resolving congestion depends on building more roads. One possible opportunity that could aid not just the city but potentially others across Canada is a video explaining the concept of induced demand and how other strategies — such as building safe cycling infrastructure or improved transit service — may be better suited.

Quantifying climate / social benefits

The City of Surrey is interested in identifying ways to build a sustainable fiscal framework that could also help reduce greenhouse gas emissions. However, when discussing multiple exploration areas, **staff highlighted the need for a way to quantify climate and societal benefits gained from transportation projects. Suggestions ranged from deriving unique ways to measure cost-benefit analysis to the establishment of a societal investment bank at different levels of government to capture these benefits.**

Justification of new cycling facilities

Staff cited difficulties in justifying new cycling improvements to council when no people are visibly riding bicycles along a corridor. A potential research opportunity could focus on uptake of cycling before and after improvements are constructed, while also identifying how far residents are willing to cycle to reach different destinations. Other municipalities such as the City of Toronto often compile data on cycling utilization on a specific street segment before and after installation of dedicated cycling infrastructure. Further opportunities for pre and post data collection could be explored.



PHOTO: CITY OF SURREY

Municipal climate resources

Staff mentioned that the number of employees focused on climate mitigation and adaptation planning is low in Surrey compared to other municipalities. Another potential research opportunity could be to identify the resources being put toward climate action and sustained program development and delivery in cities across Canada. This could include staff, program development and sustainment and infrastructure improvements, among other metrics.

THREATS

Staff cited political will as a key hurdle to implementing many of the actions and strategies identified in policies and plans that could advance climate action, equity and sustainable funding as they pertain to transportation planning. In particular, there is a policy disconnect between inducing mode shift to walking, cycling and transit through revenue tools in suburban communities around Metro Vancouver such as Surrey. However, staff said that further collaboration between all municipalities — staff and elected officials — at the regional level could lead to the implementation of new revenue tools for transit, walking and cycling, such as mobility pricing, that may support mode share targets.

Acknowledgments

The David Suzuki Foundation and Leading Mobility would like to thank the following City of Surrey staff members for their contributions to this study:

- **Don Buchanan**, Planner, Community Planning
- **Brian Haney**, Transportation Planner
- **Paul Hillsdon**, Transportation Planner
- **Peter Klitz**, Team Lead, Transportation Policy and Planning
- **Jason Owen**, Manager, Sustainability and Energy Services
- **Lise Townsend**, Climate Program Lead
- **Rafael Villareal**, Division Manager, Transportation



PHOTO: LEADING MOBILITY

City of Calgary, Alberta

PHOTO: LEADING MOBILITY

CONTEXT

The City of Calgary is Alberta's largest city and is located in the foothills of the Rocky Mountains. The city is home to more than 1.3 million residents, and its population has steadily increased over the past decade. Most commute trips in Calgary are taken by the automobile, with driving making up over 83 per cent of the mode share in the 2021 census. Meanwhile, 8.8 per cent, 4.2 per cent and 0.9 per cent of commute trips are taken by transit, walking and cycling respectively¹³. Despite having a relatively low sustainable mode share, the city has set aggressive mobility targets in its climate strategy by 2050, including 60 per cent of all trips being taken by transit, walking and cycling. In addition, the city aims to have a 25 per cent decrease in vehicle kilometres travelled per capita, and have 95 per cent of the population living within two kilometres of a dedicated transit facility.

POLICY AND PROGRAM STRENGTHS

1. Transit finance needs

Transit funding requirements are well defined in "RouteAhead," Calgary's strategic transit plan. The plan was originally approved in 2012, with an update passed by city council in summer 2023. Capital costs for infrastructure improvements to the transit network are primarily funded by federal and provincial grants, while some funding comes from the city and developer contributions. Meanwhile, the majority of operating costs are borne out of property taxes and fare revenues, with a small portion from advertising.

In 2012, Calgary Transit had a goal of increasing transit provision to 3.7 service hours per capita, and the target ratio of operating costs between property taxes and fare revenues was approximately 50/50. However, according to the "2022 Monitoring Report," transit service provision and accessibility to the primary transit network are declining. Significantly, the 2023 update to "RouteAhead" shows that the share of operating costs borne out of property taxes has grown to 68 per cent while fare revenues now make up 32 per cent and the 50/50 revenue cost ratio target has been removed. In part, this is due to lingering effects of the COVID-19 pandemic, but the updated "RouteAhead" defines the need to create a sustainable operating funding stream to achieve service expansions even as ridership recovers and outlines some potential revenue sources. Similarly, Calgary's Transportation Plan highlights the need to diversify transportation revenue sources and provides direction to reinvest parking fees into transit, walking and cycling where feasible.



PHOTO: LEADING MOBILITY

¹³ Statistics Canada. (2022). 2021 Census of Population.

2. Land use and sustainable transportation

Land-use planning that complements and encourages sustainable mobility is included as a focus in Calgary's Municipal Development Plan and Climate Strategy. In particular, the Climate Strategy includes a program pathway to create zero carbon neighbourhoods. This pathway includes actions such as accelerating the transition to zero-emission vehicles, shifting mode share to zero- or low-emission modes and transforming land-use planning to prioritize low-carbon city design. It includes calls for updated community design and alignment of the build-out of communities along the 5A active transportation and primary transit networks. In addition, "RouteAhead" includes actions to encourage sustainable, transit-oriented development to reduce personal reliance on private vehicles. One success highlighted by City of Calgary staff during engagement was the development of the C3 building in East Village with no parking spaces for vehicles, but two bicycle parking spaces for each residential unit.

Despite having some strong examples and clearer definitions of how land use and transportation can collectively influence sustainable mobility in Calgary, staff did highlight some challenges. Notably, **staff mentioned that transit service and other sustainable transportation infrastructure is often incorporated after communities are built and expressed a need to identify ways to integrate them into the community planning process.**



PHOTO: LEADING MOBILITY

3. Climate mitigation

Climate mitigation is well defined and included under a series of strategies and actions across most of Calgary's policies. The Environment Strategy includes goals and outcomes such as reducing the release of harmful emissions from the transportation system, prioritizing high-frequency transit, walking and cycling networks and protecting natural areas and features through improved design. Calgary's Transportation Plan includes policies focused on water quality in and around transportation corridors, fleet conversions, preserving biodiversity around corridors and direction to integrate potential reductions in greenhouse gas emissions into growth-management decisions. Meanwhile, "RouteAhead" includes directions to prioritize service and facilities that encourage access to light rail transit by bus, walking and cycling.

RESEARCH AND REPORTING GAPS

1. How to fund transit investments

As highlighted previously, transit service provision and access to the primary transit network in Calgary have been declining, and new revenue tools are required to fund service expansions and improvements. City council did recently approve an expansion of service hours in the 2024 operating budget to help to develop the primary transit network as identified in the updated "RouteAhead" plan. **A key barrier to acquiring capital funding and achieving sustainable operating revenue from a diverse number of sources is permission and enabling legislation from the provincial government.**

Currently, the City of Calgary is limited to approaching the federal government for capital funding for transit infrastructure improvements unless the province is aligned with the projects. Staff expressed that the city is committed to funding necessary transit investments that could provide Calgarians with an alternative, sustainable mobility option but limitations in the provincial legislative framework pertaining to fiscal tools are preventing service expansion.

2. Equity in long-term transportation planning

Equity is an emerging goal of transportation planning in Calgary, with inclusion in policies and plans mostly limited to affordability. Staff underscored

that Calgary is beginning to have this discussion in a meaningful way with the recent adoption of the City's Anti-Racism Strategy. A key hurdle identified in engagement with staff is a lack of meaningful data that would allow the city to prioritize improvements to transit, walking and cycling to equity-deserving communities. Collecting significant data that could help address equity concerns in planning has become particularly challenging since the city no longer conducts a municipal census. The city is prioritizing investments in equitable access in Northeast Calgary with some 5A active transportation network expansions, but it is unclear if they will benefit equity-deserving communities. Nonetheless, **city staff emphasized that the need to incorporate equity in transportation planning is increasing as the region grows, especially as Calgary welcomes more newcomers who could drive less than more established individuals and families.**

3. Climate adaptation

Calgary's Climate Strategy speaks to the effects that climate change will have on different community members, but it remains unclear as to how the city will prepare the transportation network to withstand adverse weather conditions. Staff highlighted that there is no clear view or understanding of how the network could be impacted, apart from bridges that could flood. There is also no clear indication to what extent climate change could affect life-cycle costs and surfacing of transportation infrastructure.



PHOTO: LEADING MOBILITY



PHOTO: LEADING MOBILITY

UPCOMING NEEDS

The City of Calgary adopted an update to the "RouteAhead" plan in summer 2023. Realizing the goals, objectives and service expansions in the plan will require an overhaul to funding and revenue sources currently used for operating the transit network, city staff reported on the required levels of investment in a September 2023 report to council. In addition, as the city begins to apply equity as a decision-making lens in the build-out of the 5A active transportation and public transit network, new sources of data are required to determine priorities.

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

During engagement with City of Calgary staff, multiple policy interventions and research opportunities were identified and are summarized as follows:

Transit-oriented development

Staff referenced a study from the United Kingdom that found that transit-oriented development did little to disincentivize car ownership and led to vehicle storage. It was highlighted that no similar study has been completed in Canada but it would help to determine if transit-oriented development has been effective in reducing car use and ownership in Canadian cities and help define land-use parameters in Calgary. Current work on Calgary's city building program aims to combine the Municipal Development Plan and the Calgary Transportation Plan to emphasize integrating land-use and transportation planning.

Comparison of travel trends in “winter cities”

Staff highlighted that the narrative of Calgary as a winter city can lead to a general disregard for sustainable transportation. Research that benchmarks Calgary and other Canadian municipalities mode share to international cities of similar climates may be useful in overcoming this narrative.

Transit revenue tools

As previously indicated, the approved “RouteAhead” update resulting in a policy direction to significantly invest in the citywide primary transit network (e.g., service every 10 minutes or better, seven days a week) will require a diversified funding portfolio and new revenue tools. More broadly, research into how transit operations are directly included in budgeting and investment plans could benefit the city in realizing service expansions as part of the approved plan.

THREATS

One of the biggest hurdles disclosed by city staff was data. To achieve climate and fiscal sustainability

goals — and especially equity objectives — the city requires additional data sources to understand if transportation investments will make an impact on local communities. In addition, staff highlighted that it is challenging to overcome the narrative of Calgary as a car-centric city with the need to disincentivize driving. As such, another hurdle will be the political will to implement changes that could incentivize mode shift to sustainable modes of transportation including public transit, walking and cycling.

ACKNOWLEDGMENTS

The David Suzuki Foundation and Leading Mobility would like to thank the following City of Calgary staff members for their contributions to this study:

- **Jonathan Chapman**, Leader, Public Space and Mobility Policy
- **Dick Ebersohn**, Manager, Climate Mitigation
- **Robb Whyte**, Coordinator of Business and Technology Development
- **Jordan Zukowski**, Executive Advisor, Transit



PHOTO: LEADING MOBILITY

City of Edmonton, Alberta

CONTEXT

The City of Edmonton is home to more than one million people and is the capital city of Alberta. Most commute trips in Edmonton are taken by the automobile, with driving making up over 85 per cent of the mode share in the 2021 census. Meanwhile, 8.1 per cent of commuters use the local transit system operated by Edmonton Transit Service, and the remaining 6.8 per cent of commuters walk, cycle or use other modes¹⁴. However, the recently approved City Plan includes ambitious targets to have 50 per cent of all trips in Edmonton made by transit and active transportation and to achieve a community-wide carbon budget of 125 megatonnes.

POLICY AND PROGRAM STRENGTHS

1. Equity in transportation planning

Edmonton is a city of newcomers, where 30 per cent of the population is first- or second-generation immigrants and, as such, has some of the most innovative plans and policies focused on equity in transportation planning. The City Plan includes direction to establish a network of corridors and nodes to focus population, business and employment growth to provide a necessary urban structure to direct future investment and manage ongoing change in support of greater community equity, opportunity and connectedness. In addition, the Edmonton Bike Plan stresses the importance of planning cycling facilities that capture the needs of everyone, including equity-deserving populations such as women, seniors, people with low-incomes and racialized people. Further, the Energy Transition

Strategy includes an action for the city to apply a gender-based analysis plus when developing energy-transition policies and programs to demonstrate how different identities might experience these differently.

Despite having strong policy, some hurdles to integrating equity into transportation planning continue. Chief among these is the need to fund investments in equitable mobility. Staff are aware of where to make investments in transportation infrastructure or increase transit service hours in equity-deserving communities but highlighted that the city does not have the financial means to fund them. Edmonton Transit Service is particularly limited by the number of revenue tools available for operational improvements to the local transit system. Staff highlighted that all three levels of government have some interest in transit funding, but governments disagree with the extent to which they should be subsidizing transit and the tools that should be made available to municipalities to fund transit. However, one recent success for the city was the creation of a transit fare structure based on financial need through the Ride Transit Program. This program provides greater access to transit by reducing financial barriers for equity-deserving individuals and families.



PHOTO: CITY OF EDMONTON

¹⁴ Statistics Canada. (2022). 2021 Census of Population.

2. Climate mitigation

The City of Edmonton has many plans and policies that focus on climate mitigation. The City Plan has a goal of supporting a low-carbon mobility system with active transportation at the forefront. The Energy Transition Strategy includes direction for complete build-out of the active transportation network by 2030 and for 50 per cent of all trips to be taken by walking, cycling and transit by 2040. These targets are bold and ambitious in comparison to other major Canadian urban regions. The Energy Transition Strategy also highlights that 28 per cent of all necessary emissions reductions in the city could be achieved through build-out of the zero-emission and active-transportation networks, and promoting development to create 15-minute communities through a nodes-and-corridor approach.

Staff highlighted that the latter of these actions in the Energy Transition Strategy has been problematic. The 15-minute city concept is also a part of the City Plan and was a high-profile subject of a number of media stories in Edmonton in early 2023, with some residents and businesses unaware of what it truly meant. Staff mentioned that educational resources and involvement are required to help get the message of the policy benefits associated with the City Plan across to Edmontonians.

3. Climate adaptation and resilience

The City of Edmonton has several policies that identify the need for climate-proof transportation infrastructure to minimize disruptions to mobility and goods movement in local communities. "Climate Resilient Edmonton" directs the city to conduct climate change impact assessments on existing assets, ongoing maintenance programs, planned retrofits and new infrastructure developments. In addition, Guiding Principle 5.1 of the Edmonton Transit Strategy is to develop an energy and climate adaptation strategy for transit operations and facilities to reduce energy consumption and greenhouse gas emissions, and to prepare for future climate disturbances.



PHOTO: CITY OF EDMONTON

RESEARCH AND REPORTING GAPS

1. Lessons from carbon budget process

Edmonton was the first city in Canada to adopt a carbon budget in step with the regular annual operating and capital budget process in 2023. **While staff support the overall approach of creating a carbon budget, they relayed that the city has not monetized the efforts of carbon-emissions reductions, and that breaking down the budget for smaller infrastructure pieces is difficult. Capacity-building around carbon budgeting, specifically how to incorporate smaller infrastructure projects, is an area that could benefit from better knowledge.** Staff also identified the need for more awareness of carbon budgeting, internally and externally.

2. Incorporating gender-based analysis plus into transportation planning

As stated in the previous section, the City of Edmonton is a leader in terms of incorporating equity into transportation planning. However, Leading Mobility and the David Suzuki Foundation sought to learn more about how a gender-based analysis plus is incorporated into the planning process to enable equitable results in service and infrastructure. A GBA plus is an analytical process used to assess how different people experience the same policy, program, plan or initiative.

Staff affirmed that the GBA plus has mostly been used in transit-planning exercises and less for other modes of mobility. One example recalled in the engagement session was transit service improvements provided in off-peak hours. Previous literature has found that women take transit more often in off-peak hours, and applying a GBA plus to service planning could result in bolstering the rationale for additional transit service hours in off-peak periods to serve the needs of women. Building from this discussion, staff recommended a further area for study focused on trends in utilization of off-peak transit service in several cities.



PHOTO: CITY OF EDMONTON

UPCOMING NEEDS

Transit operating funding

Like many other Canadian transit agencies, Edmonton Transit Service faces significant operating funding shortfalls because of numerous cost drivers, including inflation (fuel and operator wages), population growth and ongoing recovery from the COVID-19 pandemic. Staff highlighted that a review of operating funding options — including support from other orders of government — in other jurisdictions, would be beneficial in building the case for senior government involvement in transit operating funding and/or for additional tools to create a sustainable transit system. A significant barrier to achieving strategic goals and objectives for transit services in relation to climate mitigation and equity is a rethinking of how the city can fund its increasing operating costs.

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

Impacts of urban form on mobility for equity-deserving communities

Staff highlighted that one area of interest that could advance strategic goals and objectives related to climate action and equity in transportation is the impact of urban form and accessibility to other modes of transportation on low-income communities. This could also consider the impact of car dependency on barriers and constraints to using other modes.

Electrification of urban mobility

Staff mentioned concern over the preparedness of Alberta's electrical grid to embrace electrification of urban transportation systems. A study of the electricity resources required to realize the full electrification of urban mobility, perhaps in other jurisdictions as well, would allow the city to plan for the energy transition in transportation and request additional support from higher levels of government if needed. In addition, **staff mentioned that a study of climate effects on batteries, particularly from extreme cold or heat, would be valuable in helping the city prepare for electrification in step with forecasted effects of climate change.**

Role of hydrogen in urban mobility

The prospect of using hydrogen as a transportation fuel has been studied extensively and is gaining traction in Alberta. City staff mentioned that studies of hydrogen as a transportation fuel in comparison to electricity would be of value, as well as research on the role of hydrogen in the urban freight segment.

Education on climate initiatives for newcomers

At the time of engagement, the city's waste-management department was in the process of hiring an early childhood educator to work with racialized communities on educational programs. Staff mentioned that broader guidance on how to deliver educational programs on climate initiatives would help advance the city's climate goals and objectives.

THREATS

Political sensitivities for sustainable mobility

City staff highlighted political sensitivities associated with the use of public funds for public transit and active transportation, particularly when it is seen to be at the expense of traditional investment in road-building and maintenance (the “war on cars”). Due to limited congestion in the city, it is very easy to drive around communities, and attempts to direct transportation funds to other expenditures aside from roads is politically contentious. City staff believe that most Edmontonians are not at a point where they have fully realized the benefits of investing in other forms of transportation and how it can provide advantages to drivers as well.

ACKNOWLEDGMENTS

The David Suzuki Foundation and Leading Mobility would like to thank the following City of Edmonton staff members for their contributions to this study:

- **Carrie Hotton-MacDonald**, Branch Manager, Edmonton Transit Service
- **Latif Jina, Senior Executive Advisor**, Anti-Racism and Intersectionality
- **Rhonda Toohey, Director**, Urban Strategies



PHOTO: CITY OF EDMONTON



City of Regina, Saskatchewan

CONTEXT

Regina is the capital city of Saskatchewan and is home to more than 225,000 residents. The city's population grew by 5.3 per cent from 2016 to 2021, and over 20 per cent of residents are immigrants. More than 90 per cent of commuters travel using a car either as a driver or passenger, while 7.8 per cent commute by public transit, walking or cycling. Despite having a lower sustainable mode share, "Design Regina," the city's official community plan, envisions an integrated multi-modal transportation system that offers sustainable mobility options to all residents regardless of location, income level or ability. The importance of developing a multi-modal transportation network is also highlighted in the city's Transportation Master Plan, Transit Master Plan and Energy and Sustainability Framework.

POLICY AND PROGRAM STRENGTHS

1. Cost-benefit analysis for transportation projects

Regina's Transportation Master Plan includes direction to develop cost-benefit criteria to assess transportation, environmental and equity benefits for all major transportation investments. One well-understood cost-benefit analysis example provided by city staff was the electrification of public transit, where long-term savings on fuel costs have been identified. However, staff highlighted that most cost-benefit analysis is undertaken in the preparation of annual budgets and there are still no set criteria for cost-benefit analysis of transportation projects. Further, the linkages between benefits for climate action, social equity and fiscal responsibility are often unclear.

2. Equity in transit planning

Equity is a central theme in the City of Regina's Transit Master Plan and is defined as the general accessibility of service to all populations and the right to feel safe while navigating the system. There are five associated equity objectives in the policy, including to encourage transit use by newcomers; ensure a competitive, consistent and equitable fare structure; ensure communication meets accessibility best practices; be accessible; and integrate and provide equity between conventional and paratransit services. One identified action for the latter includes offering paratransit service at all hours of conventional transit to ensure equity between riders across all services. A remaining challenge highlighted by staff was access to data that could help identify and prioritize transit investments that could advance equity objectives.

3. Climate mitigation

The City of Regina is committed to becoming a renewable, net-zero community by 2050. To achieve this, the city's Energy & Sustainability Framework envisions 50 per cent of all short trips being completed by active modes of transportation by 2050 and aims for a 25 per cent transit mode share by 2025 through improvements to transit services. The city is now working to achieve the ambitions set out within this strategy, but staff highlighted that specific actions are difficult to implement due to fiscal constraints such as inflation and lingering effects from the COVID-19 pandemic. Moreover, staff highlighted that this gap between understanding best practices and using them are affecting how communities are developed. For instance, many greenfield developments are completed and occupied, and transit service is not immediately in place, and so the community begins to grow without a viable, sustainable alternative to driving.



PHOTO: CITY OF REGINA

RESEARCH AND REPORTING GAPS

1. Transportation funding tools

The City of Regina's transportation-related policies and plans examined for this study contained limited direction for financing and funding transportation projects. In engagement with city staff, it was highlighted that implementing projects and initiatives remains challenging due to the limited financial tools and mechanisms available. In particular, staff mentioned a strong reliance on funding from senior levels of government for implementing transportation projects, such as converting the transit fleet to electric buses. This reliance could render the city vulnerable in trying to achieve its climate action and equity objectives as they relate to transportation.

2. Equity in walking/cycling planning

The City of Regina's Transportation Master Plan incorporates social equity as a guiding principle but it is not referenced in the document. Rather, affordability related to transportation is discussed in the plan with specific attention given to providing affordable mobility options such as walking and cycling, and direction to provide more access to these modes. Similarly, "Design Regina" includes directions to develop an integrated multi-modal transportation system that offers choices to all residents regardless

of location, income level or ability. "Renewable Regina" also highlights the close benefits to climate action and equity from improving transit service and improving equity as a co-benefit. However, staff remain unclear on how to adequately show the equity benefits of investing in active transportation projects, and limited directions have been established in all three of these plans.

3. Climate adaptation and resilience

Climate adaptation and resilience were identified as a research and reporting gap ahead of engagement with City of Regina staff. However, this topic was not discussed.

UPCOMING NEEDS

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

Cost-benefit analysis

The Foundation could conduct a best practice review of how multiple objectives are weighed against each other in cost-benefit analyses. City of Regina staff expressed interest in learning different methods to approach cost-benefit analysis with many variables. This may benefit the city in implementing projects despite limited fiscal tools and financial constraints that often render it difficult to do so. In particular, staff highlighted that they are unsure how to weigh financial benefits against those of other city goals and objectives such as action on climate change and social equity.

Retrofitting existing communities

City staff indicated that there are a series of best practices for designing and developing new communities, but that they struggle in finding ways to improve established neighbourhoods to enhance Regina's goals and objectives related to climate action and sustainability. In particular, staff highlighted that they could benefit from best practices for infill in established neighbourhoods as a means to create dense, complete communities.

Funding tools for transportation projects

During engagement, staff highlighted that new funding tools would be critical to advance

transportation projects. One particular interest expressed in relation to this opportunity was identifying external funding programs that the city could apply to for capital projects.

THREATS

Financial challenges

Staff frequently referenced challenges in implementing projects due to financial constraints and limited fiscal tools. In addition, staff highlighted that extensive evidence is often required for both them and council to feel confident in making transportation investments.

Infill versus greenfield development

Staff highlighted challenges in implementing transportation infrastructure projects and regulations that address climate action in established communities due to public and political tensions. For example, staff highlighted that they recently had a discussion with council about parking minimums and there was a request to expand them into communities around downtown.

ACKNOWLEDGMENTS

The David Suzuki Foundation and Leading Mobility would like to thank the following City of Regina staff members for their contributions to this study:

- **Autumn Dawson**, Director, Planning and Development Services
- **Alaina Harrison**, Planning and Performance Consultant
- **Robbi Humble**, Performance and Strategy Consultant, Energy and Sustainability Solutions
- **Greg Kuntz**, Director, Sustainable Energy and Adaptation
- **Louise Usick**, Strategic Initiatives Lead



City of Toronto, Ontario

CONTEXT

Toronto is Canada's largest city by population and is home to over three million people, while the Greater Toronto Area, including the city and regional municipalities of Durham, Halton, Peel and York, has a collective population of over six million people. The City of Toronto has one of the highest commute mode shares for sustainable modes of transportation in all of Canada. Almost 36 per cent of commuters travel to their daily place of work by public transit, walking or cycling, while 61 per cent drive, and 3.2 per cent use other modes¹⁵. Toronto's Official Plan outlines numerous objectives for city development that depend on a fast, convenient and high-quality transit system connecting growth areas. "TransformTO," the city's climate strategy, aims for a 65 per cent reduction in greenhouse gas emissions from 1990 levels by 2030, and an overall 45 per cent reduction by 2025. This strategy also has a goal for 75 per cent of commute trips to school or work under five kilometres to be taken by public transit, walking or cycling by 2030¹⁶. Significantly, over 95 per cent of the city's population lives within a five-minute walking distance of public transit service during peak hours¹⁷.

POLICY AND PROGRAM STRENGTHS

1. Climate mitigation

The City of Toronto has many plans and policies that focus on climate mitigation and initiatives related to transportation. The Official Plan provides directions to prioritize walking, cycling and public transit as the main modes of transportation. Meanwhile, "TransformTO" is the city's climate action policy and has a target of 75 per cent of all school and work trips under five kilometres to be made by walking, cycling and public transit by 2030. In addition, the policy includes directions to expand bike and pedestrian infrastructure, increase existing bus and streetcar service levels and update and accelerate implementation of a citywide transportation-demand management strategy.

To work toward some of these targets, the city has started to build and incorporate carbon budgets into its annual financial and business planning. The carbon budgets outline all actions that will be taken to achieve a determined set of goals. However, staff highlighted that there are challenges in implementing some of the broader policies and plans focused on climate mitigation, including "TransformTO." In particular, staff mentioned that it would be helpful if the emissions impacts of transportation investments were modelled.



PHOTO: LEADING MOBILITY

15 Statistics Canada, 2022 - Census of Population

16 City of Toronto, 2021

17 TTC, 2020 - 5 Year Service Plan & 10 Year Outlook

2. Capital funding for transit expansion

Metrolinx is leading a major expansion of transit in Toronto and the Greater Toronto and Hamilton Area, including improvements to GO Transit and the \$12-billion investment into the provincial rapid transit program. These major transit expansion projects will respond to latent demand for transit and might not necessarily induce a significant mode shift away from private vehicles. Investment in TTC state of good repair and further system expansion projects will be required to encourage a greater mode shift to transit.

3. Equity in transportation planning

The City of Toronto has a series of policies that provide direction to incorporate equity considerations into transportation planning and projects. “TransformTO” acknowledges that different areas of the city have various needs to reach net-zero transportation and includes the importance of Indigenous world views and circular economy strategies to achieve equitable climate resiliency. Meanwhile, the Resilience Strategy highlights that there is inequitable access to active transportation and reliable transit service in numerous communities outside of the city’s core. Yet, many of the city’s equity-deserving populations are concentrated in these communities and face longer commutes to jobs and services. As such, this strategy includes numerous actions that can provide affordable mobility options to these communities, such as improving safety and reliability on the Toronto Transit Commission system.

Staff mentioned that converting equity policies into action is still difficult, and it is often unclear how to proceed. Some indices have been developed with the academic sector, but no single metric has been incorporated for broader modelling. One notable success highlighted by the TTC was a recent action in the five-year service plan that has made it difficult to reduce service in areas with high concentrations of equity-deserving populations, known as “neighbourhood improvement areas.”

The TTC has lowered the boardings per service hour threshold within defined neighbourhood improvement areas so that a lower number of customers on those routes is required to meet a determined service standard.



PHOTO: LEADING MOBILITY

RESEARCH AND REPORTING GAPS

1. Transportation governance

Staff mentioned that the absence of a citywide transportation master plan focused on all modes has limited the city’s ability to effectively plan and operate a multi-modal network. Such a plan would help staff bring individual conversations about cycling, walking, goods movement, transit and driving together. Work on the city’s first multi-modal transportation master plan is in the early stages.

2. Transit operating funding

The TTC is facing significant operating cost drivers, including inflation, population growth and pandemic recovery. Significantly, pandemic-related cost pressures resulted in an operating shortfall of \$366.4 million in 2023. Staff from the city and TTC mentioned that it will be impossible to operate new transit projects and meet the pandemic funding shortfall without new revenue tools. In addition, **staff highlighted that there is a disconnect with senior levels of government for funding transit operations. One notable example discussed was the federal government’s declaration of a climate emergency with little support given to municipalities to support national efforts to reduce emissions from transportation.** Transit agencies such as the TTC are struggling to plan for system expansion while a long term solution to address current operating funding shortfalls remains unresolved.

3. Access to sustainable transportation

Access to different modes of sustainable transportation is measured in a variety of ways through different policies and was expressed as an issue in trying to plan the city's multi-modal transportation network. The indices used by the City of Toronto to measure equity in and access to different modes of transportation are typically developed in collaboration with academic institutions. Staff highlighted that a lot of the equity and climate action work undertaken is done through good will and is not required by any provincial legislation. New legislation and/or funding requirements that require an equity lens to be incorporated into transportation planning could help to establish common metrics and indices used to track access to sustainable modes for people who need it most.



PHOTO: LEADING MOBILITY

UPCOMING NEEDS

Transportation master plans

The city is currently preparing to undertake the first ever citywide Transportation Master Plan. One potential short-term research opportunity for the David Suzuki Foundation could be undertaking a

jurisdictional scan of how different cities across Canada and beyond develop their transportation plans, including mode shift targets and plan time horizons.

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

Advocacy for transit funding

Staff highlighted the emerging roles for senior levels of government to provide more transit funding to expand and operate the system. The Foundation could assist the city in advocacy work to help acquire necessary funding and legislative permissions for new revenue tools for transit.

How to implement equity and climate action policies

The city and TTC expressed an interest in how to implement equity and climate action policies and incorporate them into their operations. The Foundation could conduct a jurisdictional scan of how cities have operationalized equity and climate action in transportation planning projects and initiatives. This could help the City of Toronto identify and follow best practices in doing this work.

Longitudinal studies

City staff highlighted that longitudinal studies and indices of how different jurisdictions perform in climate action and equity over time could be valuable. This is work that is never undertaken by individual municipalities but could be useful in benchmarking where the City of Toronto sits in comparison to other North American jurisdictions.

Carbon budgeting

City staff mentioned that the City of Toronto has incorporated carbon budgeting but stated that best practices are still in development for this form of budgeting. A report that compares different strategies and identifies best practices would be valuable, along with programs to build capacity within municipal organizations to create carbon budgets.

ACKNOWLEDGMENTS

The David Suzuki Foundation and Leading Mobility would like to thank the following City of Toronto and Toronto Transit Commission staff members for their contributions to this study:

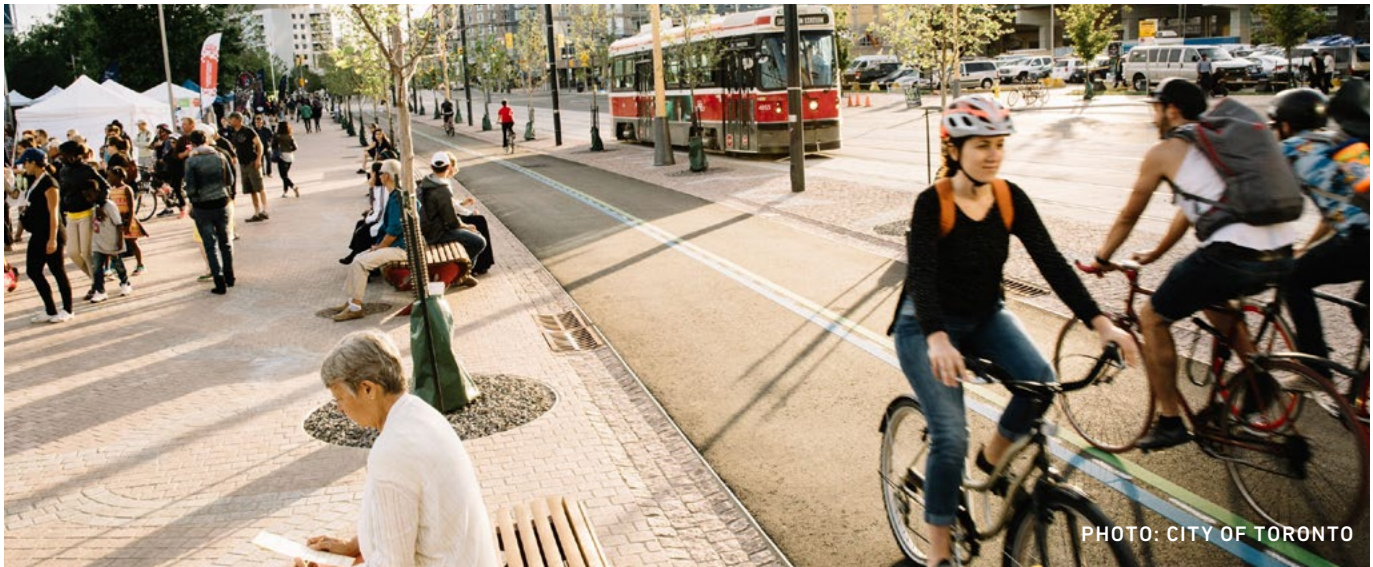
City of Toronto

- **Brendan Agnew-Iler**, Director of Policy, Mayor's Office
- **Michelle Berquist**, Manager, Area Transportation Planning
- **Matthew Davis**, Manager, Capital Projects and Programs
- **Michael Hain**, Program Manager, Transportation Policy and Analysis

- **Becky Katz**, Manager of Cycling and Pedestrian Projects
- **James Nowlan**, Executive Director, Environment and Climate
- **James Perttula**, Director, Transit and Transportation Planning

Toronto Transit Commission

- **Mark Mis**, Head, Service Planning and Scheduling
- **Lauren Muccin**, Sustainability Research Analyst
- **Mina Papic**, Senior Analyst, Climate Change and Resilience
- **Karen Thorburn**, Head, Corporate Initiatives



City of Montreal, Québec

CONTEXT

The City of Montreal is the second largest city in Canada by population and is home to more than 1.7 million people. It is located on an island in the St. Lawrence River with multiple other cities on either side forming a Greater Montreal metropolitan area that, collectively, is home to over 4.2 million people. In the city, just over half of commuters use a car to travel to work or school while over 40 per cent use public transit, walk or cycle. In Greater Montreal, just over 75 per cent use a vehicle, and 25 per cent travel by public transit, walking, cycling and other modes.

The main transit operator within the City of Montreal is the Société de transport de Montréal (STM), while regional rail service and outer suburban bus services are provided by EXO. Other bus operations to and on the north and south shores of the St. Lawrence River are provided by the Société de transport de Laval (STL) and Réseau de transport de Longueuil (RTL) respectively. Long-range planning and financing for all transit service in Greater Montreal is undertaken, overseen and provided by the Autorité régionale de transport métropolitain (ARTM), with approval from elected officials in the Communauté métropolitaine de Montréal (CMM). This governance model between the ARTM and CMM was created by the Government of Quebec in 2017 to integrate regional land-use and transportation planning in the region. Meanwhile, road projects, including walking and cycling improvements, are the responsibility of each municipality including the Ville de Montréal.

POLICY AND PROGRAM STRENGTHS

1. Active transportation infrastructure

The City of Montreal has adopted notable policies related to active transportation and the safety of vulnerable road users. The city adopted Vision Zero in 2016 and subsequently developed an action plan by 2019. From 2019 to 2021, the city made great strides to implement active transportation infrastructure in communities around Montreal, such as changing signal timings to incorporate the needs of people walking and cycling, and constructing the first phases of a dedicated bicycle network. An updated action plan for 2022-24 has been adopted and includes initiatives such as implementing safety programs for older pedestrians, expanding the sustainable street-design guide and continuing a Safe Streets Around Schools program.

Meanwhile, "Montreal – 2050 City Vision" was the subject of a public consultation that served as an input to preparation of the Urban and Mobility Master Plan, which will include plans for soft mobility (walking and cycling) as an easier choice for travel around neighbourhoods. One action from Vision Zero that will help the city achieve this goal is defining guidelines for road-sharing between these road users and vehicles that will enable safe mobility for all.



PHOTO: CITY OF MONTREAL

2. Climate mitigation

“Montreal – 2050 City Vision” will recognize the role transportation plays in reducing greenhouse gas emissions. Beyond introducing active transportation infrastructure, it will incorporate strategies such as electrification, deploying recharging stations and implementing zero-emissions zones. The Urban Plan also includes “a healthy environment” as a key planning goal and lists implementation actions including reducing the supply of parking spaces and developing new bikeways to serve major activity areas. Meanwhile, STM’s Sustainable Development Plan aims to decarbonize public transit to contribute to air quality and the fight against climate change, and lists actions including fleet conversion to low- or zero-emission buses and maximizing the use of second-generation biodiesel in buses.



PHOTO: STM

RESEARCH AND REPORTING GAPS

1. Integrated land use and transportation planning

The City of Montreal is currently undertaking planning for “Montreal – 2050 City Vision” that will integrate transportation and land-use planning. **Initial goals being considered for this plan include improving accessibility throughout the city and implementing active transportation infrastructure in all neighbourhoods to allow sustainable mobility and creating zero-emission zones to reduce emissions. Meanwhile, the ARTM’s Plan stratégique de développement du transport collectif (Strategic Plan for the Development of Public Transport) aims to support transit-oriented development by directing 60 per cent of growth to areas around access points to the regional transit network as documented in the CMM’s Metropolitan Planning and Development Plan.**

Staff mentioned that ongoing preparation for the new Urban Plan for Montreal will assess the intersection between transportation and land use. The plan analyzes areas with potential for urban intensification to combat urban sprawl. The city is now working to align the Urban and Mobility Master Plan with the Public Transit Plan to ensure that transit-oriented development takes place in areas with high-quality transit service. Despite some close collaboration with regional transit providers such as STM, staff highlighted that a participatory conversation with smaller communities, towns and suburbs is required to align densification with public transit. Outstanding questions about how this should be implemented include which elements of the plans come first — public transit or new development — as well as how service will be funded.

2. Fiscal policies related to public transit

As highlighted above, the ARTM manages long-range planning and annual financing of the regional public transit network. The ARTM’s annual operating budget is funded by transit fares, property taxes provided by member municipalities, operating grants from the Province of Quebec, vehicle levies and gas taxes. However, staff from all organizations highlighted that a comprehensive review of fiscal policies and systems for public transit is required.

Currently, the ARTM is facing a structural operating deficit that will add up to \$3.5 billion over the next five years. Staff from local government organizations highlighted that some work is underway to examine new fiscal tools that could be used to fund public transit. Land-value capture tools were identified as one mechanism being explored and advocated for, but legislative changes at the provincial level are required. However, one staff member noted that despite clear budgetary deficits, the government has been reluctant to enable transit agencies to use alternative tools and agencies are now trying to find better arguments to increase investments and support for public transit. In addition, STM highlighted that they need to undertake a comprehensive study that outlines fiscal needs related to maintaining their system in a state of good repair.

3. Equity in transportation planning

Multiple plans from across the region highlight efforts to improve accessibility and employment diversity. The ARTM's Public Transportation Strategic Development Plan includes a focus on an aging regional population and how this will lead to higher demand for off-peak service and in lower-density areas. In addition, the plan highlights that the number of people using paratransit has risen considerably and is expected to continue to grow. Meanwhile, the Urban Plan will include a goal to improve accessibility throughout the city so that people with mobility limitations can easily reach their destinations after reaching their transit stops.

Staff from the City of Montreal recently began using a Residential Area Equity Index, which is intended to identify equity-deserving areas and prioritize municipal investments based on access to services and other metrics such as household income, which is now available for public use online. Yet, social acceptability and the implementation of equity-based initiatives remain a challenge for staff despite having such a tool that can inform plans and projects. One challenge identified was how to implement zero-emission taxes in the context of municipal climate change strategies while maintaining social equity.



PHOTO: STM

UPCOMING NEEDS

Support for new revenue tools

During engagement, staff highlighted that the province understands the fiscal challenges facing transit agencies. However, the province has been reluctant to provide enabling legislation for agencies to use new funding tools. The province recently committed to absorbing 70 per cent of public transit agency deficits across Quebec. While this is welcome news, alternative revenue tools and a restructuring of transit funding are required to avoid further financial deficits. The Foundation could assist local agencies with advocacy to the province to provide vital enabling legislation to ensure that systems can continue to operate and to expand essential transit service throughout the region.

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

Transit integration in new development

When reflecting on the Urban Plan, city staff highlighted that they are working to align it with public transit plans to ensure that growth happens in close proximity to transit service. However, it remains unclear how to do this at a regional scale in other, lower-density communities, specifically as to when transit service should be introduced. The city and local transit agencies may benefit from research focused on development along transit corridors before and after occupancy, and relative impacts on mode share and how service is funded.

New revenue tools

Staff highlighted that a review of alternative revenue tools that could be used to fund public transit service, especially real estate-based tools, would help inform ongoing discussions between transit agencies and governments. In particular, staff were interested in tools that could promote sustainable mobility while ensuring equity. The Foundation could undertake a review of alternative revenue tools and assess their capacity to induce modal shares to walking, cycling and transit and their impacts on equity.

ACKNOWLEDGMENTS

The David Suzuki Foundation and Leading Mobility would like to thank the following staff members from their respective organizations in Greater Montreal for their contributions to this study:

- **Aurelie Arnaud**, Chargé de mission, Ville de Montréal
- **Robert Bessette**, Conseiller en aménagement, Ville de Montréal
- **Jonathan Brown**, Directeur, Innovation urbaine et amélioration continue
- **Simon Carreau**, Conseiller corporatif en Affaires gouvernementales, STM
- **Janos Courville**, Chef de Division – Gestion immobilière et exploitation a contrats chez Ville de Montréal
- **Manon Pawlas**, Cheffe d'équipe – conseillère en aménagement, Ville de Montréal



PHOTO: STM



Halifax Regional Municipality, Nova Scotia

CONTEXT

Halifax Regional Municipality is the capital of Nova Scotia and home to almost 440,000 people. The municipality's population grew by a staggering 9.1 per cent from 2016 to 2021 and has the fastest-growing downtown population in all of Canada. Just over 80 per cent of commuters in Halifax travel by automobile while 8.1 per cent use the public transit system operated by Halifax Transit. The remaining 10.4 per cent of commuters travel by walking, cycling and other modes.

POLICY AND PROGRAM STRENGTHS

1. Funding tools for public transit

Halifax Transit is a department of the Halifax Regional Municipality and operates 72 bus routes and two ferry routes and provides over one million hours of service each year to Haligonians. Revenue tools available to Halifax Regional Municipality to generate funding for public transit are governed by the Halifax Regional Municipality Charter. **Halifax Transit is the only transit system in Canada that uses a Benefit Area Tax, which is a local tax levied on property within a defined area near transit infrastructure such as a bus line or station. This tax creates a direct link between the value of transit access and properties within one kilometre of each transit stop, and is a small surtax in addition to conventional, wealth-based property taxes.** HRM also administers a Rural Transit Funding Program, a grant program through which rural transit operators can apply for funding to subsidize the cost of operating their services in Halifax. Grants are disbursed through either an annual lump sum

payment or a flat rate of \$0.50 per kilometre travelled while providing transit service.

Despite administering a grant program for rural transit service and using an alternative revenue tool to fund transit, staff expressed that the municipality is struggling to keep up with the operating demands placed on the system. In particular, **staff highlighted that a national conversation on how transit operating funding is an immediate need as they seek to complete projects in their Rapid Transit Strategy.** Support for establishing new revenue tools and raising additional funds for transit may also be tangible as the Integrated Mobility Plan specifies that 56 per cent of taxpayers support increased transit funding.

2. Climate mitigation

Many HRM policies reflect goals to reduce emissions and promote sustainable transportation modes. Sustainability is one of the key pillars of the Integrated Mobility Plan and frequently references the need to reprioritize streets for sustainable modes while highlighting the importance of parking, specifically an action to establish parking maximums, shared parking in mixed-use developments and reductions near transit service. In addition, the Active Transportation Priorities Plan has a lengthy implementation plan that includes adding 44 kilometres of bicycle infrastructure improvements, 15 kilometres of new greenways and five new pedestrian and bicycle bridges to create sustainable communities. Finally, sustainability is a key feature of the Rapid Transit Strategy through expected modal shift from vehicles to rapid transit, and enabling of transit-oriented communities with a high degree of walkability.

HRM staff highlighted that they find it difficult to make the connection between transit, active

transportation and climate action despite the importance of sustainability being frequently referenced in plans and policies. One staff member highlighted that a previous engagement with local library users identified active transportation and transit, but that it remains unclear as to what needs to happen to allow people to shift toward these modes. In addition, staff mentioned that HRM residents often feel that they need a personal vehicle to go to regional and provincial destinations and expressed interest in identifying ways to build in destination-based infrastructure to reduce car dependency.

3. Health equity and transportation

HRM's Integrated Mobility Plan is one of the few transportation plans in Canada with human health as a pillar of integrated mobility. Specifically, the plan seeks to ensure that the transportation system supports comfortable, convenient and safe opportunities for active living, acknowledging that active and sustainable modes can encourage physical activity and reduce social isolation.

With respect to public transit, one staff member highlighted significant interest at HRM in how to transport people on conventional transit, but less for paratransit. As such, staff expressed some interest in identifying ways to improve paratransit, acknowledging that it plays a key role in advancing health equity and accessibility.



PHOTO: HALIFAX TRANSIT



PHOTO: HALIFAX TRANSIT

RESEARCH AND REPORTING GAPS

1. Communicating the benefits of sustainable transportation projects

Since adoption of the Integrated Mobility Plan five years ago, numerous transformative projects have been making an impact. However, staff expressed that there are sensitivities among residents and businesses around sustainable transportation improvements such as bike lanes and transit priority measures, with many believing that they are contributing to traffic congestion. In particular, **it was mentioned that there is inconsistency between how municipalities are explaining the benefits of projects. Staff stated that clearer messaging about the benefits may help turn public opinion on sustainable transportation projects, especially outside of the downtown core.**

2. Transit accessibility

HRM has a broader municipal accessibility plan, but not one that is specific to transportation. In addition, staff expressed that a lot of attention is given to moving people on conventional transit but less on paratransit. In particular, staff highlighted that there has been an impetus to make transit vehicles more accessible to get more people onto conventional service. However, it remains unknown how many paratransit users are now using conventional transit services.

UPCOMING NEEDS

Reconstructing transit operating funding

Staff highlighted that there is an urgent need for a national effort to rethink how transit operating costs are funded. The Foundation may be able to support efforts at the national level through opportunities such as participating in events related to this topic and/or submitting letters of support.

OPPORTUNITIES FOR POLICY INTERVENTIONS AND RESEARCH COLLABORATIONS

Post-pandemic role of transit

During engagement, staff highlighted that it still remains unclear as to what extent changing travel habits lingering from the pandemic are affecting ridership and schedules, making it relatively unclear as to where and how they should add service. In addition, it was mentioned that there are tensions between growing ridership and serving equity-deserving communities coming out of the pandemic. Staff expressed interest in learning more about where public transit is going in a post-pandemic world and its specific role in the day-to-day life of Canadians. The Foundation could conduct a study of emerging roles for public transit service.

Culture change around transit

Staff mentioned that there are class-based biases around public transit and that there is not as much investment and commitment to using transit service from different geographic areas. Staff highlighted

that additional research about how campaigns with respect to accessibility and education about climate change may induce higher levels of transit ridership. Specifically, staff identified a closer examination of the impact of eliminating fares for children under 12 on ridership in other jurisdictions.

THREATS

Impacts on vehicle traffic

It was highlighted through engagement with staff that there are sensitivities within the public about bus lanes causing congestion. Induced demand associated with road improvements for vehicles is not well understood by the public and other stakeholders either.

ACKNOWLEDGMENTS

The David Suzuki Foundation and Leading Mobility would like to thank the following Halifax Regional Municipality staff members for their contributions to this study:

- **Amy Brierley**, Public Safety Advisor
- **Mike Connors**, Manager, Transportation Planning
- **Hannah Dunn**, Workplace Assistant to the Accessibility Advisor
- **Kim Fry**, Climate Change Specialist
- **Patricia Hughes**, Director, Planning and Customer Engagement, Halifax Transit
- **Melissa Myers**, Accessibility Advisor



PHOTO: HALIFAX TRANSIT



**Key themes and
recommendations**

Key themes across cities

(STAFF-REPORTED NEEDS, RESEARCH INTERESTS)

Using qualitative analysis, the project team identified the following key themes across the municipalities included in the project. Note, many of the reported themes crossed most municipalities (with a minimum of three municipalities reporting), but none were reported by all. This may be due in part to the diversity of political, climatic, regional and cultural contexts across these municipalities.

At a high level, the gaps and needs identified included:

- **Battling “car culture” to justify short-term investments** in transit and active transportation;
- **Gaps in transit operating funding** as well as how to plan and/or budget for operating with transit expansion and the need for more fiscal tools to support day-to-day operations;
- **The need for capital funding with transit/provincial-municipal alignment** including state of good repair/maintenance costs;
- **Creating political will to take action on climate**/invest in sustainable transportation and normalizing transit use;
- **Keeping up with growth/immigration given existing lack of resources**/tools for infrastructure and service delivery;
- **A lack of data to demonstrate priority-setting to improve walking, cycling and transit infrastructure for equity-deserving communities** or examine the need for off-peak transit to better serve equity-deserving commuters;

- **Carbon budgeting/quantifying greenhouse gas reductions** for walking and cycling (active transportation) (in the case of Edmonton and Toronto — best practices to refine the carbon budget methodology)
- **The need for climate resilience/mitigation and equity in transit/transportation** planning together;
- **Quantifying the value of greenhouse gas reductions** planning and investments or other societal/equity benefits and
- **Achieving mode shift.**

Other issues mentioned, with less frequency, included:

- Post-pandemic travel patterns as they relate to transit planning;
- Regional collaboration as well as regional finance and revenue tools;
- Best practices for planning and service allocation to/in new greenfield communities;
- Energy/fuel studies related to transit fleet, including:
 - Electrification of transit, impacts on the electrical grid as well as battery range; and
 - Hydrogen as a fuel source for municipal operations such as transit.

Key recommendations and possible research questions

The following key recommendations emerge from the issues that surfaced from the landscape analyses and/or engagements with participating municipal staff:

- 1. Shift the perception that personal vehicle ownership is a necessity for good quality of life** (battle “car culture”) especially in Canada’s “winter cities” and create political will to take more action to address climate and equity challenges.
 - a.** Sustained activism to shift public perception/ educate the public about the climate and equity benefits of investing in public transit and active transportation (and/ or the challenges/inequities with building communities that require personal vehicles to get around in day-to-day life).

Possible research questions:

- What are the factors required to change public perception of the need for personal vehicle ownership, particularly in the context of “winter cities” in Canada?
 - Based on learnings from other activism or campaigns, how can the David Suzuki Foundation help to shift the narrative from a “car-centred culture” (where the starting point/expectation created is that personal vehicle ownership is necessary/must be enabled by government/ public funding) instead of one where all forms of transportation are equally valued and enabled and true choice exists for Canadians living in major urban centres?
- 2. Advocate for (and join other voices in advocating for) new fiscal tools and funding (capital, maintenance and operating) for transit and active transportation, particularly from**

provincial governments that are related to:

- a.** Keeping up with growth/immigration and
- b.** Transit services for programs that are under the mandate of the provincial and federal governments (e.g., health-care trips)

Possible research questions:

- 3. Support capacity-building and best practices for collecting and utilizing data to develop plans for meeting climate and equity outcomes together** to help inform decision-making for capital and operational investments.
 - What is the level of investment needed in public transit in Canada (capital, maintenance and operating) to meet Canada’s immigration and climate targets? (Such a study could build on recent research by the Federation of Canadian Municipalities’ infrastructure costing study released November 23, 2023)¹⁸
 - What sort of fiscal capacity could be made available to municipalities if personal vehicle ownership were no longer publicly subsidized (or subsidized to a lesser degree)?
- 4. Support capacity-building and best practices for collecting and utilizing data to develop plans for meeting climate and equity outcomes together** to help inform decision-making for capital and operational investments.

Possible research questions:

- Using a jurisdictional scan across Canada (and other relevant countries), what are the best practices of how to build equity into prioritization exercises for transportation planning along with capital and operational investment planning?
- 5.** Support capacity-building and best practices for developing carbon budgets.

¹⁸ <https://fcm.ca/en/news-media/news-release/new-research-canadas-housing-challenge-also-infrastructure-challenge/backgrounder>

Possible research questions:

- Using a jurisdictional scan across Canada (and other relevant countries), what are the best practices of how to build and maintain accurate carbon budgets alongside capital and operating budgets?
- What measures and methods can municipalities use to incorporate and prioritize equity in carbon budgeting processes?
- 6. **Create mode shift** (carbon-intensive to less intensive/more equitable) by understanding the thresholds/factors that actually influence change, particularly when it comes to:
 - Transit service levels;
 - Role of active transportation;
 - Transit-oriented development mode shift (in Canada);
 - Regional commuter mode share.

Possible research questions:

- What level of transit service is required to move commuters from their vehicles to public transit and/or active transportation?
- What conditions are required to move commuters to active modes of transportation the majority of the time?
- What conditions are required to shift all commutes within a five-kilometre radius to either transit or active transportation?
- What factors are required to eliminate personal vehicle use for those living at transit-oriented development sites in Canada?



PHOTO: CITY OF CALGARY

Conclusion

Engaging with municipal staff directly provides a unique opportunity to understand the realities of what it takes to drive good public policy decisions while incorporating (sometimes uninformed) public feedback and making recommendations to elected officials (who are also channelling public opinion and their own political agendas).

At the same time, **municipal staff must seek creative ways to address increasingly complex policy challenges** — such as climate action and better outcomes for equity-deserving groups — all without the matching tools or resources to adequately tackle these issues. At a broad level, municipal staff interviewed repeatedly noted that the public is both invested in action on climate and better equity outcomes and vocally opposed to the actual measures needed to address those outcomes. This contradiction presents a great opportunity for informative and educational public engagement — an approach that goes beyond the resources of most municipalities.

Altogether, the work of this project has demonstrated the labyrinth of competing interests that municipal staff in some of Canada's largest cities are managing, and managing well, despite a range of political, public interest and resource challenges.

The willingness of municipal staff to engage in the topic at hand and to offer candid suggestions of where they could benefit from support or additional information reinforces that these public servants want to advance climate action and equity goals. However, they simply cannot do it alone. For example, some of the key themes emerging in this needs assessment suggest a shift in the way that municipal staff — particularly city planners and social development experts — are willing and able to openly discuss the need for fundamental changes to approaches to city-building, such as moving away from planning around the assumption of personal vehicle ownership. This observation is reflected in comments

where municipal staff described “tinkering around the edges” of climate action with “bike lane here, a bus lane there.” It is noted that meaningful greenhouse gas reduction will not be achieved without bold changes, and that bold and more expensive investments cannot be achieved without greater political courage and will.

The recommendations in this report can be categorized as twofold: First, city staff told us that to advance better climate and equity outcomes in transportation and transit, the broader narratives around car (first) culture, and the fiscal reality for municipalities in Canada, needs to change. This means that other voices, like the David Suzuki Foundation, can play an important role in helping to shift these narratives in a way that could benefit municipalities already invested in advancing climate action and equity outcomes.

Second, city staff told us they frequently lack data, resources and capacity to drive these policy outcomes. In some cases, this means that organizations like David Suzuki Foundation can support municipalities by engaging in research that will produce the required data or identify best and better practices, particularly in a Canadian context.

In summary, in spite of the broad range of themes that emerged from this report, we trust that the municipal staff who participated in this study will see their comments reflected in the key recommendations and proposed research questions.

We look forward to what comes next.