PUBLIC MEETING AGENDA

Version: May 26, 2023

June 1, 9:00AM to 10:30AM

Metro Vancouver Boardroom, 28th Floor, Metrotower III, 4515 Central Boulevard, Burnaby, BC

Chair: Mayor Brad West **Vice-Chair:** Mayor Mike Hurley

Note that times for each agenda item are estimates only. This meeting will be livestreamed and available afterwards at the Mayors' Council's YouTube Channel.

MEETING OF THE MAYORS' COUNCIL ON REGIONAL TRANSPORTATION
DRAFT PUBLIC MEETING MINUTES

Minutes of the Public Meeting of the Mayors' Council on Regional Transportation (Mayors' Council) held Thursday, March 24, 2023, at 9:00 a.m. in Rooms 427/428, TransLink Head Office, 400 – 287 Nelson's Court, New Westminster, BC.

PRESENT:
Mayor Brad West, Port Coquitlam, Chair
Mayor Mike Hurley, Burnaby, Vice-Chair
Councillor Brent Asmundson, Coquitlam (alternate)
Mayor Malcolm Brodie, Richmond
Councillor Michael Broughton, Lions Bay (alternate)
Councillor Tracy Elke, Pitt Meadows (alternate)
Councillor George Harvie, Delta
Councillor Sarah Kirby-Yung, Vancouver (alternate) (arrived at 9:19 a.m.)
Mayor Patrick Johnstone, New Westminster
Mayor Megan Knight, White Rock
Mayor Meghan Lahti, Port Moody
Councillor Alison Morse, Bowen Island (alternate)
Mayor Mike Little, North Vancouver District
Mayor Brenda Locke, Surrey
Mayor John McEwen, Anmore
Mayor Nathan Pachal, Langley City
Mayor Jamie Ross, Belcarra
Mayor Mark Sager, West Vancouver
Mayor Eric Woodward, Langley Township

REGRETS:
Mayor Linda Buchanan, North Vancouver City
Chief Laura Cassidy, Tsawwassen First Nation
Director Jen McCutcheon, Electoral Area A
Mayor Dan Ruimy, Maple Ridge

ALSO PRESENT:
Michael Buda, Executive Director, Mayors' Council on Regional Transportation Secretariat
Nick Lovett, Senior Planner, TransLink
Andrew McCurran, Director, Strategic Planning and Policy, TransLink
Kevin Quinn, Chief Executive Officer, TransLink
Sarah Ross, Vice-President, Transportation Planning and Policy, TransLink

PREPARATION OF MINUTES:
Carol Lee, Mosaic Writing Group

CALL TO ORDER
Chair Brad West declared that a quorum was present and called the meeting to order at 9:00 a.m.

Chair West acknowledged, with respect, that the meeting is taking place on the traditional and unceded territories of the Indigenous people upon which we are fortunate to live, work and operate. The Mayors' Council recognizes that in planning and managing the region's transportation system, we have a role to play in supporting reconciliation with Indigenous peoples and the importance of doing our best to build respectful relationships that contribute to stewarding the land and waters in the community with integrity and consideration for future generations.

1. PRELIMINARY MATTERS

1.1. Adoption of the Agenda

Draft agenda for the March 24 2023 Public Meeting of the Mayors' Council on Regional Transportation, version dated March 17, 2023, was provided with the agenda material.

It was MOVED and SECONDED

That the agenda of the March 24, 2023 Public Meeting of the Mayors' Council on Regional Transportation be adopted, as presented.

CARRIED

1.2. Approval of Minutes (March 2, 2023)

Draft minutes of the March 2, 2023 Public Meeting of the Mayors' Council on Regional Transportation was provided with the agenda material:

It was MOVED and SECONDED

That the minutes of the March 2, 2023 Public Meeting of the Mayors' Council on Regional Transportation be adopted, as presented.

CARRIED

2. PUBLIC DELEGATIONS

Report titled "Item 2 – Public Delegate Presentations", dated March 16, 2023, was provided with the agenda material.

2.1. Marlene Mydske

Ms. Mydske requested that priority be placed on ensuring the continuous operation of elevators at SkyTrain stations to enable the disabled community to access TransLink services.

2.2. Nathan Davidowicz

Mr. Davidowicz requested that pre-COVID-19 service levels be reinstated on the 50 bus routes where service has been reduced and suggested that the Province provide additional funding to TransLink to achieve its GHG emission targets.

2.3. Patrick Ngo

Mr. Ngo suggested that TransLink coordinate the planning and building of high-density housing developments and transit expansion.

3. REPORT OF CHAIR AND VICE CHAIR

Chair West reported on:

- Premier Eby's announcement of the provision of $479 million of relief funding
- Ongoing conversations with the federal and provincial governments regarding funding to enable the delivery of transit to meet the region's growing needs.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation receive this report.

CARRIED

4. REPORT OF TRANSLINK MANAGEMENT

Kevin Quinn, Chief Executive Officer, TransLink, led the review of a presentation and highlighted:

- Provincial announcement of $479 million in relief funding
- Ridership update

Member Arrived

Sarah Kirby-Yung joined the meeting at 9:19 a.m.

- Construction updates on:
  - Capstan Station
  - Broadway Subway
  - Surrey Langley SkyTrain
- Encouragement to take transit for the planet during Earth Day celebration on April 22, 2023.

Discussion ensued on:

- The factors considered in determining bus service reallocation
- Suggestion to provide extra service on Earth Day to meet the expected demand
- Concern with the impact of elevator outages.

Action Item (01)*: TransLink management to report on the potential of installing two elevators to provide redundancy when new SkyTrain stations are constructed.*

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation receive this report.

CARRIED

5. REPORT OF THE PLANNING AND PRIORITIES COMMITTEE

5.1. Update on System Pressures Facing the Transportation System

Report titled "Item 5.1 – External Pressures Facing the Transport System", dated March 17, 2023, was provided with the agenda material.

Nick Lovett, Senior Planner, TransLink, led the review of a presentation titled "System Pressures" and highlighted:

- System pressures facing the next investment plan:
  - Population growth due to immigration and migration from other parts of BC and Canada
  - Transportation impact of working from home
  - Transition to zero-emission vehicle (ZEVs)
- Implications of the pressures on the transportation system.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation receive this report.

CARRIED

5.2. Report on Clean Transportation Action Plan (CTAP) Submission

Report titled "Item 5.2 – BC Clean Transportation Action Plan – Mayors' Council Submission", dated March 16, 2023, was provided with the agenda material.

Andrew McCurran, Director, Strategic Planning and Policy, TransLink, led the review of a presentation titled "Clean Transportation Action Plan Submission" and highlighted:

- Metro Vancouver greenhouse gas (GHG) emissions
- GHG emissions from light-duty vehicles remain stubbornly high
- Requests of the Province included in the CTAP submission:
  - Incorporate *Transport 2050*, *Climate 2050* and *Metro 2050* into their planning and analysis
  - Collaborate in expedited way on funding and implementing Transport 2050: 10-Year Priorities
  - Collaborate to evaluate viable regulatory and policy tools, should they be needed to achieve shared targets and to do so through the lens of fairness, equity and affordability.

It was MOVED and SECONDED

That the Mayors' Council on Regional Transportation (Mayors' Council):

1. Endorse the attached submission to the Provincial government in response to their request for input on the development of the Clean Transportation Action Plan; and
2. Receive this report.

CARRIED

6. OTHER BUSINESS

6.1. Next Meeting

The next Public Meeting of the Mayors' Council will be held on April 27, 2023 at a location to be determined.

7. ADJOURNMENT

There being no further business, the March 24, 2023 Public Meeting of the Mayors' Council on Regional Transportation was adjourned to a Closed Session at 9:40 a.m.

Certified Correct:

Mayor Brad West, Chair	Carol Lee, Recording Secretary Mosaic Writing Group

TO: Mayors' Council on Regional Transportation

FROM: Gemma Lawrence, Coordinator, Mayors' Council Secretariat

DATE: May 23, 2023

SUBJECT: **ITEM 2 – Public Delegate Presentations**

RECOMMENDATION:

That the Mayors' Council on Regional Transportation receive this report.

PURPOSE:

To introduce the objectives and process for hearing from public delegates.

BACKGROUND:

Public participation at meetings is valued by the Mayors' Council, and 30 minutes is set aside at each open meeting to receive public delegations. The Mayors' Council will only receive public delegations who intend to speak on matters that are within the authority of the Mayors' Council.

Individuals can apply to be a delegate by completing the online Application Form up until 8:00AM, two business days prior to the meeting. In situations where there isn't enough time to hear from everyone wishing to speak, the Mayors' Council encourages written submissions be sent to mayorscouncil@translink.ca.

The webpage for public delegates includes a Protocol for Public Delegates that notes:

- the Mayors' Council Chair will exercise discretion in maintaining a reasonable level of order and decorum;
- delegates and all meeting participants are reminded that different points of view are respected, and discussions are kept above the level of personal confrontation, disruptive behaviour and profanity.

DISCUSSION:

The deadline to apply to speak to the Mayors' Council is 8:00am two days prior to the meeting. At the time of this report, not all prospective speakers will have had a chance to complete applications. Accordingly, the **list of approved speakers, as well as any written submissions or presentations, will be provided on table**. Any presentations provided by delegates will also be provided to Mayors' Council members only, on table (up to 10-pages maximum). Each delegation will be given a maximum of three minutes to address the Mayors' Council. As a general rule, there are no questions or discussion between Council and delegates. The policy governing Public Delegates can be found online.

TO: Mayors' Council on Regional Transportation

FROM: Sarah Ross, VP Transportation Planning & Policy
Nick Lovett, Senior Planner – Funding Strategy

DATE: May 4, 2023

SUBJECT: **ITEM 5.1 – Transit Funding Models from Peer Agencies**

RECOMMENDATION(S):

That the Mayors' Council on Regional Transportation receive this report

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PURPOSE:

This report responds to a discussion item from the March 2, 2023 Mayors' Council meeting requesting an overview and comparison of peer jurisdiction transit funding models, and shared issues and challenges.

This report provides an overview of how TransLink's funding model compares to other jurisdictions, noting the unique and varied mandates of various authorities. The report focuses on Canadian counterparts, as other countries have significantly different governance and fiscal arrangements when it comes to public transportation funding models.

BACKGROUND:

TransLink is unique in Canada in that it is an integrated regional multi-modal transportation authority responsible for the planning, funding and management of the region's major road network, including several key regional bridges, and the planning, funding, maintenance and operations of the region's public transit system. In other Canadian metro areas, major roads are either the responsibility of the Province or municipality, therefore there are no directly comparable Canadian transportation authorities with the same scope of mandate or geography as TransLink. Metro Vancouver is comprised of 23 relatively small constituent municipalities which make up a service area much larger than the City of Toronto or the island of Montreal. Furthermore, municipalities are supported by cost share programs that support multimodal infrastructure improvements.

Additionally, as one of the few major regions in Canada with a single fully integrated transit system across the entire metropolitan region, Metro Vancouver is the only region in Canada with a dedicated Transit Police force to serve this large network spanning nearly two-dozen local jurisdictions. Most other cities use a combination of special constables and a transit division of their local police force, mirroring the patchwork of local transit systems typically operated by each municipality.

DISCUSSION:

While no other peer regions have a similar funding structure, particularly with vehicle-based revenue sources comprising such as large share of revenue – making direct peer to peer comparisons somewhat challenging. Despite this challenge, three peer metropolitan regions are discussed for illustrative and comparative purposes below[1].

Calgary (Calgary Transit)

Calgary Transit is the largest business unit within the City of Calgary which operates bus, and light rail (C-Train) services. Calgary Transit funds its operations primarily through transit fares and property taxes. Multimodal infrastructure is provided by a separate City of Calgary business unit.

Greater Toronto

Local transit service in greater Toronto is provided by nine local transit operators (e.g. the TTC or Durham Regional Transit) or directly by Metrolinx's operations (e.g. GO Transit or the UP Express). Metrolinx is tasked with the coordination and integration of all modes of transportation in the Greater Toronto and Hamilton Area and also operates the regional transit farecard PRESTO.

Local transit service is primarily funded by fares and property taxes whereas regional transit (Metrolinx) is funded through fares and operating subsidies from the Province of Ontario. The Ontario government also apportions 2c/Litre of provincial gas tax revenues to municipal transit agencies based on a formula of 70% ridership and 30% population.

Greater Montréal (Autorité régionale de transport métropolitain -ARTM)

Local Transit service in the greater Montreal area is primarily provided by three operators covering Laval (STM) Longueuil (RTL) and Montréal (STM). Regional transit (bus and commuter rail) is provided by Exo – formerly Réseau de transport métropolitain (RTM). All operators are overseen by ARTM which organizes, finances, develops and promotes public transit in the greater Montreal metropolitan area. ARTM also coordinates fares and pricing across operators for the region.

All transit is funded through ARTM which collects fare revenues, property tax revenues from municipalities, and senior government grants. ARTM also receives revenue from motorists through a $30 registration levy and 3c/L of fuel tax applied within the region.

Mandate and funding comparison

Three peer metropolitan areas are described below with key highlights and differences in their mandate with respect to regional transit and transportation. For the greater Toronto region, the TTC, Metrolinx and a sum of five other operators are included to illustrate the wide variety of approaches and the uneven distribution of service in an urban agglomeration covering nearly ten million people.

[1] Two systems from the Greater Toronto and Hamilton Area are used (the TTC and Metrolinx) to distinguish the local and regional nature of their functions.

Mandate	Metro Vancouver	Calgary	Toronto Region			Greater Montreal
			Greater Toronto[2]	Toronto / TTC	GO/Metolinx	
Service area Population (2019)	2.7 million	1.3 million	6.5 million	2.8 million	9.7 million	4 million
Primary Entity	TRANSLINK	Calgary Transit	Various[2]		METROLINX	ARTM
Entity type/mandate:	Regional transportation authority	Municipal transit operator	Various[2]	Transit Commission	Provincial crown agency	Regional transportation authority
Operates transit directly?	✓Yes – (though subsidiaries and contractors)	✓Yes – (directly operated)	✓Yes	✓Yes	✓Yes (regional rail & regional express bus)	✗No – (but funds STM, STL, RTL & Exo)
Responsible for Major Roads?	✓ Yes	No ✗	No ✗	No ✗	No ✗	No ✗

Key Indicators and Metrics (2019)

A selection of key criteria and metrics are provided for comparative analysis. Data was sourced from the 2019 CUTA Factbook and supplemented with figures from annual reports where applicable[2]. Data is available for the 2021 financial year, although the timing and nature of provincial relief payments may portray a misleading picture of senior government revenues.

Key Indicators from 2019	Metro Vancouver	Calgary	Toronto Region			Greater Montreal
			GTA	TTC	GO	
Ridership/capita	101	83	109	173	8	132
Service hours/capita	2.04	2.08	2.79	3.94	0.14	2.33
Ridership/service hour	49	40	39	44	58	57
Cash Fare in 2023	$3.10	$3.60	N/A	$3.35	N/A	$3.50
Municipal contributions/capita	$157	$185	140	189	-	193
Vehicle funding/capita	$180	-	37	30	-	38
Transit revenue/Capita	$243	$129	313	390	61	221
Total Own-source funding/capita[3]	**$580**	**$314**	**$453**	**$578**	**$61**	**$452**

Metro Vancouver benefits from relatively high levels of service and commensurate funding compared to peer regions. The levels of service also translate into ridership, and system productivity outcomes despite density and scale of larger peer metros in eastern Canada.

[2] Greater Toronto (GTA) is defined for this analysis as the following transit systems: Brampton, Durham Region, Milton, Mississauga, Oakville, Toronto and York Region plus GO/Metrolinx beyond the GTA service catchment.

[3] Own-source funding is defined as regionally controlled and determined sources such property tax and transit fares, or local vehicle-related charges, levies and taxes. The Gas Tax in Ontario is collected province-wide and therefore not included as 'own-source'

Locally supported, own-source funding for transit is higher in Metro Vancouver than in other peer regions. Metrolinx in the Greater Toronto Area does a no property tax base and is consequently supported in large part from provincial operating subsides.

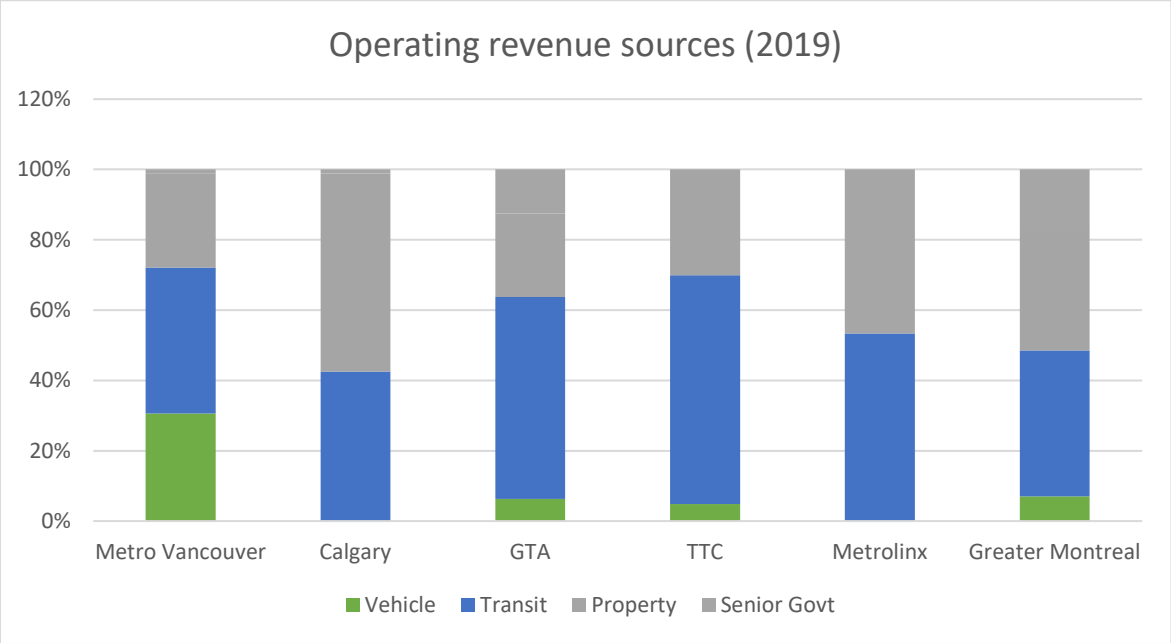


Figure 1 - Illustrative funding source breakdown from 2019 CUTA Factbook and annual financial reports[4]

Property based contributions in Metro Vancouver are proportionally smaller as compared to peer regions. Importantly this is because residents contribute through other means such as the regional fuel tax, Hydro Levy, and farebox (Figure 2). It is these regional revenue contributions that make the TTC and TransLink unique in that they provide high levels of self-funded service. Service levels per capita are also high in greater Montreal, although in Quebec, the Province directly funds public transportation to help advance provincial objectives[5].

[4] Data from 2019 was used to reflect the unusual fiscal accounting of COVID relief funding payments and how these were recorded for each jurisdiction in 2021.

[5] The Public transit development assistance program (PADTC) and greater Montreal congestion mitigation funding are two such examples of this funding arrangement.

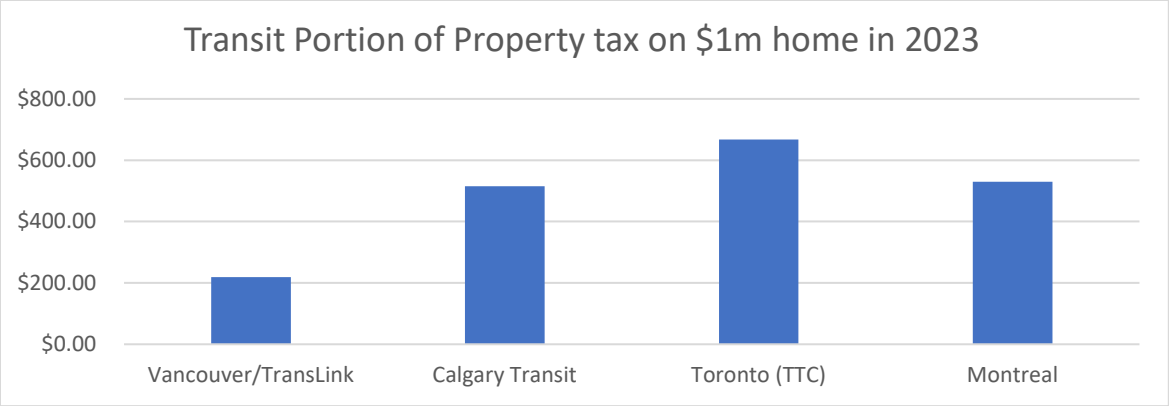


Figure 2 – Amount of tax apportioned to transit in Vancouver, Calgary, Toronto and Montreal (See endnotes for sources and calculations) [i]

All agencies across Canadian and international transit authorities face the shared challenge to their funding and business models given suppressed ridership and revenue in the wake of COVID-19. TransLink and peer Canadian regions have been supported by senior government funding to maintain liquidity and stave off service cuts[6]. Internationally, with our peer regional transportation authorities the experience has been similar with recurring funding gaps occurring beyond the pandemic funding stabilization periods – and all are actively looking at potential new revenue tools and sources in addition to cost-saving measures[7].

Senior Government operating funding for transit is typically not provided to transit authorities in Canada as a significant source of funding. The exceptions are GO/MetroLinx in Greater Toronto and funding to the ARTM in the Montreal region. In 2020-2022 significant relief funding was provided to transit operators from provincial and federal sources which is why 2019 revenue data was used for comparative analysis and discussion.

CONCLUSION:

The comparative analysis of peer regions in Canada shows that TransLink is less reliant on property tax, but at the same time draws revenue from a much broader range of sources so that on a per capita basis transit funding is the same or higher than other major Canadian metros.

NOTES AND REFERENCES:

[1] The Following sources were used to calculate transit proportions of property taxes on a $1,000,000 residential property:

- Calgary - Property Tax Breakdown (calgary.ca)
- City of Toronto Property Tax Calculator – City of Toronto
- City of Montreal https://portail-m4s.s3.montreal.ca/pdf/2023_tax_rates.pdf and Types of taxes | Ville de Montréal (montreal.ca)

[6] B.C. supports stable, expanded transit services in Metro Vancouver | BC Gov News, March 15, 2023
[7] TfL Statement - Update on Government funding settlement - Transport for London, 30 August 2022

TO: Mayors' Council on Regional Transportation

FROM: Sarah Ross, Vice-President, Transportation Planning and Policy
Jeffrey Busby, Vice-President, Engineering
Marisa Espinosa, Director, Major Studies, Transportation Planning and Policy

DATE: May 18, 2023

SUBJECT: **ITEM 6.1 - Planning and Delivering Major Projects**

RECOMMENDATION:

That the Mayors' Council on Regional Transportation receive this report for information.

PURPOSE:

The purpose of this report is to respond to interest from the Mayors' Council on the Ottawa Light Rail Transit (LRT) project lessons learned. This memo has been prepared to provide an overview of the case study of Ottawa LRT and compare and contrast TransLink's approach to planning and delivering significant infrastructure projects. This case study, along with an overview of how TransLink plans and manages major projects, may inform proactive response to mitigate risk in future TransLink projects.

BACKGROUND:

Case Study of Ottawa LRT

Project Overview

In 2011 the City of Ottawa began a procurement process to retain a private sector partner to design, build, finance and maintain Stage 1[8] of the Confederation Line LRT system. This system was to be 12.5 km long, provide 13 stations, and include a tunnel through downtown Ottawa.

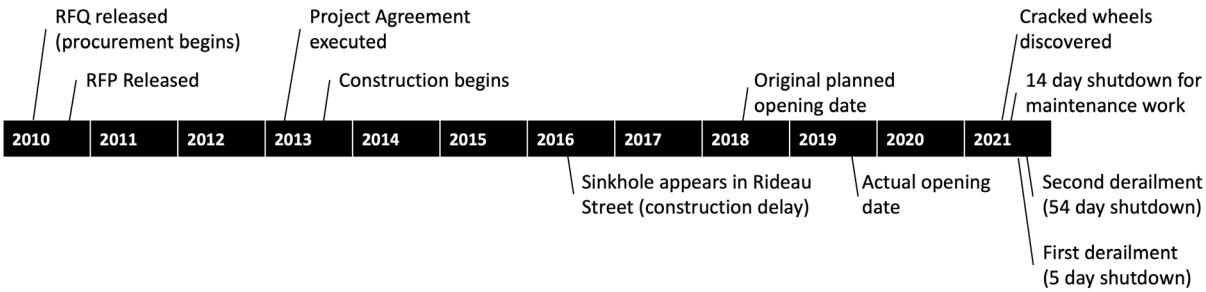
Key Facts	
Delivery Model	P3 DBFM
Owner	City of Ottawa
Budget	$2.1B (including contributions from Province - $600M, Federal Government - $600M, and gas tax - $192M)
Scope	12.5 km LRT line including track, vehicles, stations and downtown tunnel (2.4km)

The project was built as a fixed price, Design/Build/Finance/Maintain (DBFM) public-private partnership (P3). Under this model design, construction and maintenance responsibility (for a 30-year term) is bundled together and awarded to a single consortium of companies that forms for the sole purpose of delivering the project. The contract was awarded to the Rideau Transit Group which included companies such as Alstom, Thales Canada, ACS Infrastructure Canada, EllisDon and SNC-

[8] Prior to Stage 1 being completed, the City of Ottawa initiated Stage 2 of the expansion that will see an additional 35km of alignment and 19 stations be added to the system. Construction of Stage 2 is currently underway with completion expected in 2026. However, this memo focuses exclusively on the issues observed in Phase 1. This information provided with assistance from Michael Himmel, formerly with Infrastructure Ontario and drawn from the executive summary of public inquiry.

Lavalin. The City of Ottawa drew on external expertise for technical and financial advice to supplement in-house resources. Because the City of Ottawa was not experienced in the use of P3 delivery, it retained the services of Infrastructure Ontario (provincial procurement agency) to act as its commercial advisor. Substantial Completion of the project was achieved more than a year behind schedule and only after the City of Ottawa lowered its criteria for acceptance. Then, after the City of Ottawa reduced the trial running test procedure, the system was opened to the public in September 2019 – 16 months behind schedule.

Shortly after operations began, the system began experiencing numerous operating challenges. Later in 2021, more serious issues emerged including discovery of cracked wheels and the occurrence of two derailments. These events resulted in extended system shutdowns of 14 days, 5 days and 54 days respectively.[9] They were each in turn investigated with their cause determined. In at least two of the three events the cause can be directly tied to errors made by the contractor. In late 2021, shortly after the major shutdown events, the Government of Ontario ordered a Commission of Public Inquiry into the project.



Major findings of the Public Inquiry

The public inquiry [10]took place between December 2021 and November 2022. Justice William Hourigan was tasked with investigating the commercial and technical circumstances that led to the breakdowns and derailments of the system and to make recommendations to prevent these issues from happening again. The inquiry included more than 80 interviews and 18 days of public hearings with 41 witnesses. An expert panel was also called with leading academics that study infrastructure megaprojects. The final report was released November 2022 and exceeded 600 pages in length. The observations of the expert panel provide helpful context to understand the challenges of the Confederation Line project. Professor Bent Flyvbjerg, a leading researcher on 'megaprojects' participated in the expert panel and described his research documenting how it is typical for approximately nine of every ten large projects to be delivered late, nine of ten delivered over budget and nine of ten do not to achieve their planned benefits.

It is important to understand that the problems observed on the Confederation Line are not isolated to that project alone. Professor Flyvbjerg notes that an essential step to improving megaproject performance is to draw learning from similar projects.

While the report of the public inquiry is highly detailed, its findings can be distilled into three main themes:

[9] Notably, in 2023 reports of shutdowns have continued to occur.

[10] Executive Summary of the full 600 page report can be accessed at https://wayback.archive-it.org/17275/20221221181523/https://www.ottawalrtpublicinquiry.ca/documents/final-report/

1. **The influence of the P3 delivery model on the outcomes of the project**
   This decision to use a P3 delivery model was made with advice from the City's advisors and influenced by concerns that funding could be withdrawn if another model were selected. The City also sought to achieve budget certainty, and the P3 model was viewed as an effective way to control costs. The public inquiry found that the delivery model achieved mixed results. When a sinkhole was discovered on Rideau Street during construction in 2016, the model protected the City from cost escalations estimated at over $100M. The public inquiry noted that the P3 model lessened the City's control over the project and contributed to a breakdown in the relationship between the City and Rideau Transit Group. As issues emerged throughout delivery and operations, the public inquiry found that both parties focused on protecting their contractual rights rather than working together to resolve problems

2. **Project requirements, systems integration, and experience**
   Transit projects are inherently complex, and their successful delivery is dependent on close coordination between owners, designers, suppliers, builders and operators. The delivery model and specifications selected for the project were intended to minimize risk and maximize integration across the whole delivery organization, however in practice that did not occur within the contractor team. This was exacerbated by inexperience of the operator OC Transpo (the City's Transit Agency) whose experience was generally limited to bus operation and had limited capacity to contribute to design development, commissioning, and the transition to operations.

3. **Project governance and the City's response as issues emerged throughout project delivery**
   The project's governance structure features several layers of oversight and committees to help guide the project. The Finance & Economic Development Committee of City Council was the main project oversight body and met in a public setting, receiving regular updates on the progress of the project. After the sinkhole was discovered in 2016, the contractor became aware that it could not meet its contractual completion date. The contractor delayed communicating this information to the City to protect its commercial position. This and other delays put pressure on the time allotted for testing and commissioning. Reduced time for testing and commissioning and pressure to open the already delayed system and City officials relaxed acceptance thresholds without informing Council.

Comparing Metro Vancouver and Ottawa Contexts

The delivery context for transit projects in Metro Vancouver differs from Ottawa in several important ways. First, the Confederation Line was delivered by the City of Ottawa, which the public inquiry notes was not experienced in delivery or operations of an LRT system of this scale and complexity. In contrast, transit projects in Metro Vancouver are typically delivered either by the Province through special-purpose entities like the Transportation Infrastructure Corporation or TransLink. In both cases, the agencies have mature project delivery and/or operations capabilities and expertise. Second, changes in senior government policy have reduced the linkage between eligibility for funding support and the delivery model. This encourages the selection of a model that better aligns with owner's experience and capacity and the specific project risks to be managed. Recent transportation projects have adopted the approach of splitting contracts into multiple smaller scopes and/or sharing select project risks.

DISCUSSION:

Learnings for TransLink

Delivery Model Selection
Although P3 procurement has been used to successfully deliver transit projects in Canada, including the Canada Line in Metro Vancouver, the model has also seen some difficulties (e.g. Ottawa LRT, Edmonton Valley Line LRT, Toronto Eglinton Crosstown LRT). The public inquiry noted that the P3 model is not in itself flawed, but that it can lead to high levels of risk transfer to the private sector that may not be well understood or manageable. In the case of the Confederation Line, this risk transfer resulted in a tense adversarial relationship. When difficulties emerged, the parties restricted communication and sought to protect their commercial positions rather than focus on issues resolution. However, as the Confederation Line illustrates, risk transfer in the P3 environment may prove to be beneficial in some circumstances. Choosing delivery models that balance the degree of risk transfer, and promote collaboration and integration can help to make projects more resilient to recover when challenges occur. Increasingly, public agencies are using collaborative models such as Alliancing/Integrated Project Delivery or Progressive Design Build to better manage project risk and promote collaboration.

Integration in Delivery
As illustrated by the Confederation Line example, strong integration within the design and construction team, and between the owner and the private sector partner was not present. Not only did the suppliers of the vehicles and control system fail to collaborate, but the private sector partner did not engage collaboratively with the City of Ottawa or OC Transpo. Although this was partly a product of the delivery model, it was also related to the governance and communications structure of the project. In the Metro Vancouver setting TransLink, BC Rapid Transit Company, Transportation Investment Corp, Infrastructure BC, the Ministry of Transportation and Infrastructure, and local municipalities all exist as separate entities. To ensure that projects benefit from open communication and collaboration, effective governance including clear reporting lines and well-articulated roles and responsibilities are needed, with particular emphasis on project integration. As well, the operator needs to be actively and collaboratively engaged in defining project requirements, reviewing design, testing/commissioning and transitioning to operations.

Budgets & Schedule
From the start, the Confederation Line struggled with ambitious schedule and budget targets. The initial project budget was based on an early planning estimate from 2009 that had a +/- 25% range of uncertainty and did not include adjustments for inflation. However, this figure became the affordability ceiling for the project and it was designed to meet this constraint. Consequently, scope decisions were based on affordability rather than the business case.

Later in the project an ambitious schedule for completion was established and not revised, even after Rideau Transit Group became aware it could not be met. After a revised opening date was communicated, all parties resisted changing it, even after it became clear the system did not meet the previously agreed reliability standards.

In the case of the Confederation Line, both the budget and schedule of the project became political commitments. The Mayor of Ottawa campaigned in 2010 on delivering the project on-budget and on-schedule. However, as the expert panel from the public inquiry noted, megaproject delivery is inherently

risky and projects rarely meet their planned budgets and schedule. The Confederation Line provides three important lessons related to budget and schedule:

1. Set budgets and schedules only after sufficient planning work has been done to ensure they are reliable, with the contractor and third parties consulted to validate.
2. Build appropriate contingencies into budgets and schedule, informed by historic project performance, to accommodate the probable occurrence or risks.
3. When issues emerge be flexible to adjust budgets and schedules as required to achieve the desired outcomes of the project.

TransLink's Approach to Major Projects Planning and Delivery

TransLink developed its Business Case Framework [11]to help standardize business casing approaches for more significant initiatives. This includes the project budget and scope development at different lifecycles of a project.

TransLink requires the development of business cases using the Business Case Framework for most major initiatives, including all expansion rapid transit projects. This process is used to advance development of potential major projects identified in approved regional strategies, such as in Transport 2050: 10-Year Priorities, as well as to advance other potential initiatives.

Taking a consistent, structured, and evidenced-based approach to the planning and business casing work on potential major initiatives help ensure that these initiatives:

- Focus on key strategic, customer/traveler, financial, and operational objectives throughout the development, evaluation, and implementation process;
- Advance important benefits such as socio-economic and environmental benefits, Indigenous reconciliation, and equity, diversity, and inclusion;
- Consider cost effectiveness;
- Are the most beneficial initiatives for the region to consider; and
- Include a sound understanding of how to mitigate and manage adverse impacts related to planning and implementation.

The development of a TransLink Business Case follows a five-stage process, as illustrated below.

Each stage includes a decision point. At these key decision points, decision makers must decide whether to advance a potential initiative to the next stage of development or to pause or discontinue further development. The decision makers consider input from partners, Indigenous groups, stakeholders, and the public as part of their decision-making process.

Within the Business Case development process, the level of detail and rigour increases with each stage to support decisions on whether a business case should proceed to the next stage.

[11] Business Case Framework | TransLink

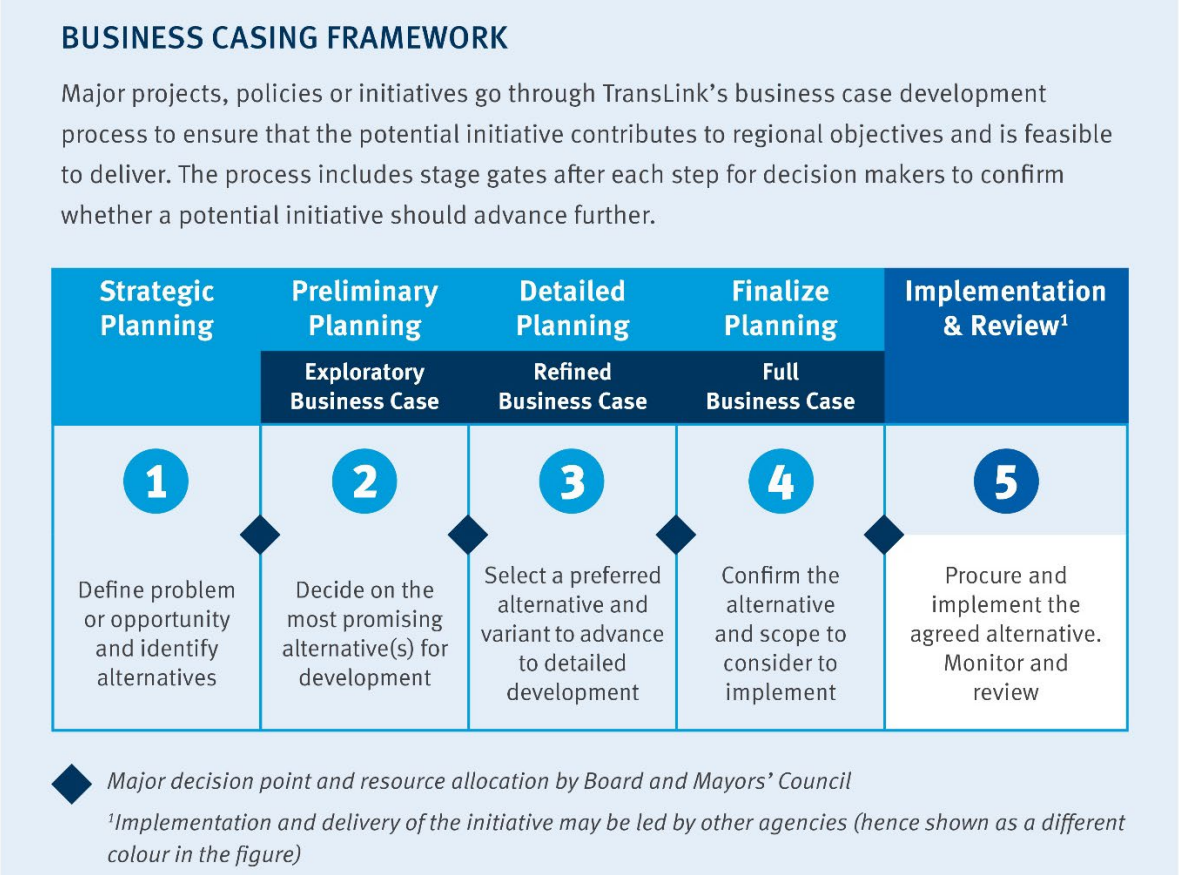


Figure 1: *Overview of TransLink Business Casing Framework*

Delivering TransLink's Major Projects

Responsibility for delivery of major projects has varied between TransLink and the Province, depending on the project. For example, the Province is delivering the replacement of the Pattullo Bridge, the Broadway Subway Project, and Surrey Langley SkyTrain projects while TransLink is delivering the Marpole Transit Centre for battery-electric bus operations and maintenance, and enabling projects on the Expo and Millennium Lines including a new control centre, a new operations and maintenance centre, and acquiring new rolling stock.

TransLink aligns its project delivery with the Government of British Columbia's Capital Asset Management process[12]. This is a framework that aims to ensure that assets are managed in a cost-effective and sustainable manner throughout their entire lifecycle. The process involves asset planning, acquisition, operation and maintenance, renewal, and disposal.

During the asset planning stage, TransLink identifies its asset needs, develops a long-term asset management strategy, and prioritizes investments based on factors such as asset condition, risk, and criticality.

In the acquisition stage, TransLink and the provincial government use a rigorous, evidence-based

[12] Capital Asset Management Framework Guidelines - Province of British Columbia (gov.bc.ca)

process to select the appropriate procurement model for capital projects, which involves analyzing various factors, such as project complexity, risk, value for money, and stakeholder considerations. The procurement selection process is designed to ensure that capital projects are procured using the most appropriate and cost-effective approach, while also considering stakeholder interests and maximizing value for money.

For projects delivered by the Province, TransLink enters into agreements that set out roles and responsibilities of the parties. The agreements set out a framework for design review, change management, and coordination of parallel projects to ensure the project can be successfully integrated into the transit network and that TransLink's operations, maintenance, customer service and sustainability requirements are met.

Once a transit asset is in operation, TransLink assigns an operating company to maintain it according to industry standards and best practices to ensure it operates safely and efficiently. This involves regular inspections, preventive maintenance, and repair work. The renewal stage involves upgrading or replacing an asset when it reaches the end of its useful life or when it no longer meets needs.

CONCLUSION:

In summary, TransLink carries a myriad of roles in the planning, managing, delivery and operations of major projects, as summarized in Figure 2 below. TransLink's approach, from its planning to delivery models, identifies risks at key stage gates.

Context: Outline of TransLink's risk, ownership, and interests

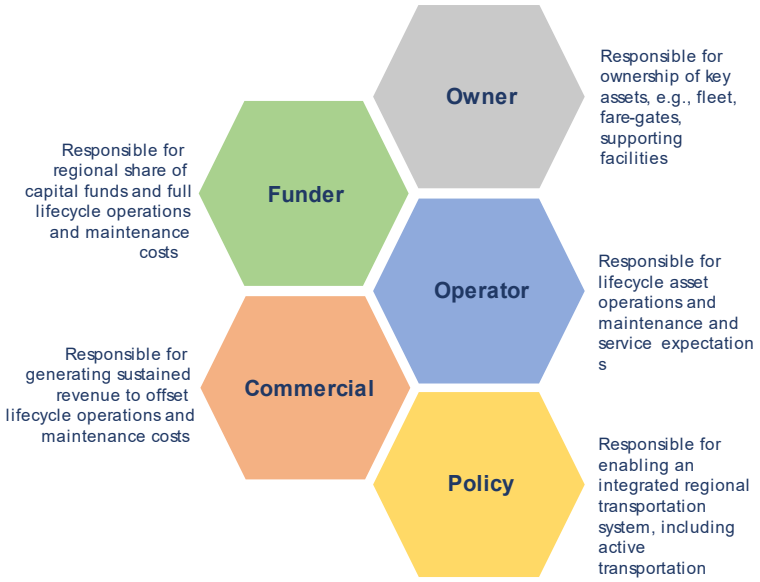


Figure 2: *Context of TransLink's risk, ownership and interests*

Understanding Ottawa LRT as a case study with lessons to be learned, will help TransLink, its partners and operating companies improve its governance and delivery models to continuously improve delivery and operations of megaprojects. Rigorous business casing, which includes analysis of the appropriate procurement delivery model by project type, an assessment of the project definition, budget, schedule and risks as the project progresses through various stages of planning is an important process step to ensure early mitigation of risks to the project; that the project delivers the best value for money for the

region, and that the stakeholder impacts and social benefits are also considered as part of the delivery of major transportation infrastructure projects. Yet, even under rigorous business casing practices, new information may emerge during implementation that may require adjustment to project budget or schedule to ensure successful project delivery.

[i] The Following sources were used to calculate transit proportions of property taxes on a $1,000,000 residential property:

- Calgary - Property Tax Breakdown (calgary.ca)
- City of Toronto Property Tax Calculator – City of Toronto
- City of Montreal https://portail-m4s.s3.montreal.ca/pdf/2023_tax_rates.pdf and Types of taxes | Ville de Montréal (montreal.ca)