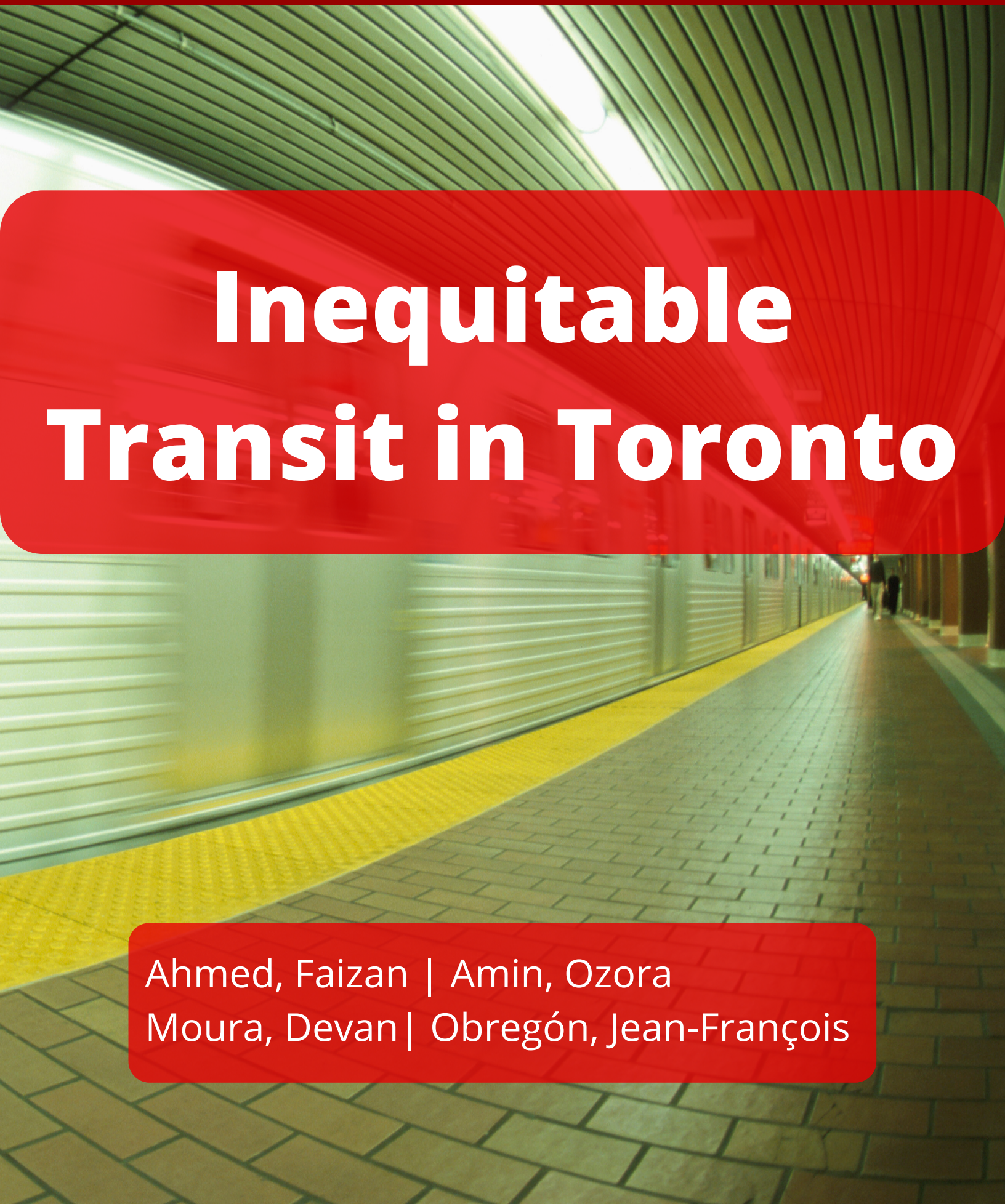
A VOICE
FOR TRANSIT



Inequitable Transit in Toronto

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A VOICE FOR TRANSIT

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Introduction

Quality of life is measured based on a city's political, social, cultural, economic environment. Toronto has maintained a steady quality of life ranking among the world's top 20 cities over the past decade (Mercer, 2011; Mercer, 2019). With Toronto's growing population and scarce land availability, public transit infrastructure becomes vital to access employment, groceries, healthcare, and enabling opportunities for social inclusion. The necessity of public transit in combination with aging infrastructure, plurality of governance structures and multiple stakeholders involved in its operations has perpetuated an intrinsically complex system disproportionately impacting equity (MacLeod et al, 2018).

Transit Equity in Toronto

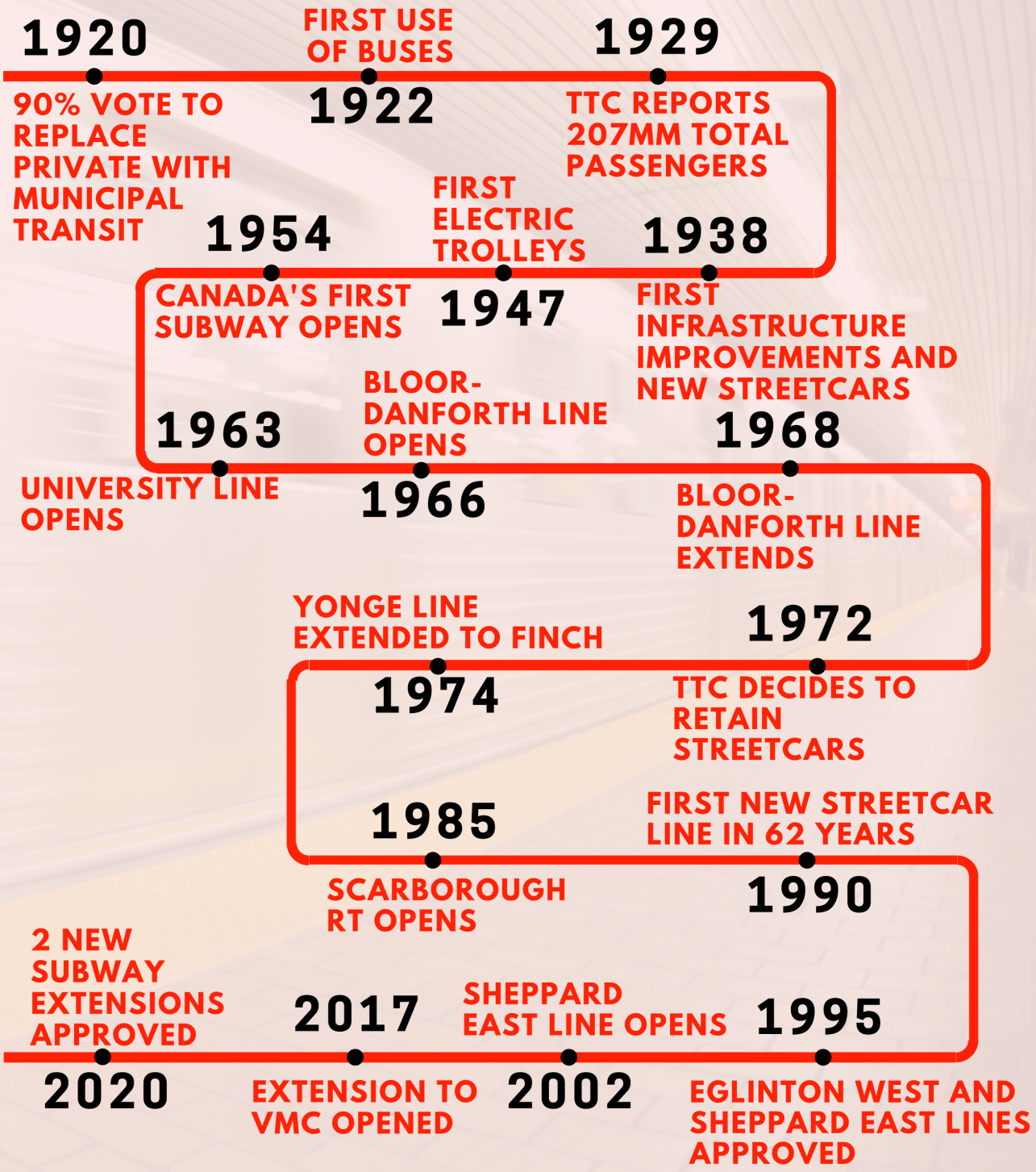
Transit equity seeks to understand the ways in which the system is fair and accessible among the needs of different populations. Transit equity can be addressed horizontally or vertically. A horizontally equitable transit system aims to maximize the average access to transportation while maintaining a certain minimum for all within a defined geographic range (Foth et al., 2013). A vertically equitable transit system, first maintains a decent level of benefits for socially disadvantaged groups, then maximizes the average for all and narrows the range (Foth et al., 2013). The current paradigm of public transit is through an infrastructure mindset versus a public service. Although public transit provides essential access to services that are required to live a productive life for many people who live in spatially marginalized neighbourhoods there are many factors which allow inequitable transit to persist.

Our analysis of public transit in Toronto, has identified that transit equity is impacted by the planning and investment decisions in the following areas:

1. **The network, access to transit, impact of where new routes and lines will go;**
2. **The service, quality of trips, user experience;**
3. **The cost, of using the service (if people pay), and of funding the service.**

A Brief History of Toronto Transit

Figure 1: History of Toronto
Information Source: Filey, 1997



The Toronto Transit Commission (TTC) was breaking even from 1954 to 1971, as mandated by Metropolitan Toronto. Its annual losses starting in 1968 were driven by increased labour costs (TTC, 1969; S. Wickens, personal communication, March 31, 2020). The Government of Ontario (Ontario) provided operating subsidies, covering 50% of the losses starting in 1971 with the remaining half covered by Metropolitan Toronto Council (TTC, 1975). A strike by unionized TTC staff in 1974 resulted in a 23-day system-wide closure that led to wage increases decreed by an arbitrator and agreed by Toronto Council (TTC, 1974, p.11; S. Wickens, personal communication, 2020). Toronto transit researcher Stephen Wickens (personal communication, 2020) identifies this strike, subsequent annual wage and fares increases, and cost overruns on two subway lines in the 1970s as prompting Ontario to reduce its funding formula and consider capital projects beyond the TTC.

Ontario cut the TTC's operating subsidies in 1998 (TTC, 2020). Service reductions and fare increases after a recession in the early 1990s led to ridership falling by 20% by 1996 (Spurr, 2020a). Ontario cut transit capital budgets in 1995, cancelling the Eglinton West subway (Flack, 2016). These changes disproportionately affected inner-city routes and suburban TTC riders (S. Wickens, personal communication, March 31, 2020). Provincial funding was restored through gas tax proceeds in 2003. This will be replaced by a municipal levy in 2020 to fund transit capital projects (City of Toronto, 2020).

Numerous transit plans have been proposed since 1910, but they have changed with different municipal and provincial governments (English & Bow, 2017). Certain plans have favoured providing relief to the downtown core. This has encouraged gentrified communities near each stop and simultaneously pushing low-income communities to the peripheries of reliable transit services with limited access to essential services (i.e. groceries and healthcare, entertainment, education, and employment) (Kaur, 2013; West, 2016).

Subway and LRT development have been limited since 1980 despite the City of Toronto's (Toronto) population growing from 2.1 million in 1981 to 2.956 million in 2018 ("Page C2", 1981; City of Toronto, 2019) Significant growth rates have also occurred in the Toronto Census Metropolitan Area, which straddles the Greater Toronto Area, growing from 2.998 million in 1981 to 5.928 million in 2016 ("Page C2," 1982; Statistics Canada, 2017). Such growth has placed increased demands on Toronto's transit network and has outpaced the system's ability to address it.

The Problem: Ontario Line, an example

Many stakeholders (Appendix A) are involved in developing and enhancing transit in Toronto. A relief line was first proposed in 1910 when consulting engineers recommended two north-south lines (Levy, 2013). A relief line also appeared in the TTC's Network 2011, released in 1985, and Metrolinx's 2008 Big Move (Metrolinx, 2008). However, a lack of strong transit leadership and governments' fiscal conservativism have prevented it from being prioritized.

Stakeholders
Each stakeholder has varying priorities and overlapping responsibilities creating a web of interrelated and interdependent connections.

Fiscal Conservatism
Economic recessions are often met with lower public spending. Following the recession of the early 1990s and the 2007-2008 Financial Crisis, there has been a shift among public officials to cut costs when completing projects through "efficiencies".

With considerable back and forth between the TTC, Metrolinx, Government of Ontario, and the City of Toronto, Toronto City Council approved a relief line in March 2016. Ontario committed $150 million for design and planning work (City of Toronto, 2016; Fox, 2020). In April 2018, with approval and funding, project implementation began. The City of Toronto set-up a department to design and plan a 7.5 kilometre "Relief Line South" from Pape to Osgoode station with a projected cost of $8.3 billion and to be opened in 2029 (CBC, 2019; Spurr, 2019; Ontario, 2019).

Stakeholder Negotiations (back and forth)
Long-term issues in transit development persist due to the difficulty in finding common ground. Each stakeholder perceives a zero-sum interaction, where the wants of one stakeholder to serve their constituencies come at the detriment of another. Public transit stakeholders cannot be divided into categories such as the public, private organizations, and government organizations. However, members of transit advocacy groups that include suburban commuters are not a formal part of governance systems.

In 2018, the newly-elected provincial government reportedly looked into alternatives to the Relief Line South partly through a transit consultant (Spurr, 2020b). The Ontario Line was officially proposed by Premier Doug Ford on April 10, 2019 as a 15-stop 15.5 kilometre subway estimated to cost $10.9 billion (Ontario, 2019) (Figure 1). Ontario approved the Ontario Line as part of its 2019 Ontario Budget on April 11, 2019 (Ontario, 2019). The Ontario Line's Initial Business Case offers strategic outcomes like rapid access to more communities, relieving crowding, and increasing access to economic opportunities alludes to equitable outcomes (Metrolinx, 2019, p. 21; Brown, 2019; Infrastructure Ontario).

Politicization (newly-elected)
During municipal and provincial campaigns for the past 15 years, increased transit funding and expansion have been promised. When elected, new governments interrupt previous long-term project planning with new proposals. This extends the timeline to address transit-related issues.

During Metrolinx's Ontario Line public consultations in Toronto staff told attendees that the train technology, train capacity, and train length were yet to be determined (Metrolinx, 2020; Landau, 2020). Attendees complained about the Relief Line South project being abandoned, whose design was modified based on public feedback (Metrolinx, 2020; City of Toronto, 2016). A March 2019 survey of transit riders by A Voice for Transit found that 80.5% supported prioritizing relief line construction.

Based on the "Ontario-Toronto Transit Partnership" (OTTP), a preliminary agreement between the City of Toronto and the Province of Ontario, signed March 13, 2020. Ontario, Toronto, and the TTC work together on the planning, design, construction, and operations stages of four transit projects, including the Ontario Line (City of Toronto, 2020, Government of Ontario, 2019). Ontario will have sole responsibility (planning, designing, construction and operations) of the new lines (City of Toronto, 2020). Toronto citizens will now be paying the sunk costs of the previous proposal and wait for delays in the new line opening.

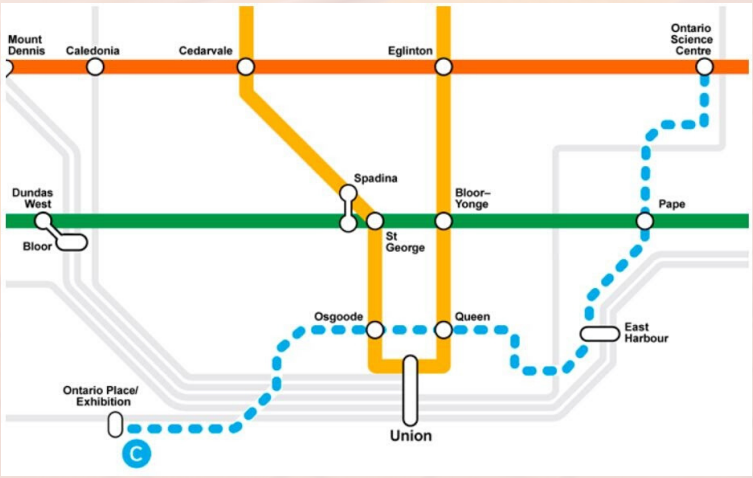


Figure 2: Ontario Line
Source: Infrastructure Ontario, 2020

Current Solutions

Within this section, challenges to transit equity have been paired with current solutions implemented by stakeholders.

Challenge	Current Solution(s)
SERVICE	
Equity Concerns: Income and essential living costs (i.e. rent) are the biggest factors in choosing a home, method of transportation, and how you advocate for yourself.	
Quality of trips • Reliability of the modal route (bus, train, streetcar) • Frequency of delays • Reasonable duration of trip	Policy • Planned overcrowding • Weekend/Off-hours maintenance and repairs • Routes/ Schedules • Shuttle Busses for planned closures • Protocols for unplanned emergencies • High frequency transit during peak hours Technology • New Streetcars/Buses/Subways • Fare gates/Fare readers Increased Staffing
User Experience • Engagement opportunities • Quality of engagement	**Customer Service** • Phone • Social Media • Email • In-Person **Communication** • Digital screens • Signs • Public announcements on/at stations, buses, streetcars, subway trains • Traditional media • Social media

Challenge	Current Solution(s)
NETWORK	
Equity Concerns: Historically, priority was given to downtown Toronto for major subway development rather than suburban areas thus increasing disparity between access to services & opportunities.	
New Lines & Routes • Bureaucracy • Governance • Property acquisitions • Funding	**Proposals** • Extend three subway lines • Build one new subway line • Build five Bus Rapid Transit lanes (Jane, Finch East, Eglinton East, Dufferin, and Steeles West) **Under Construction** • Finch West LRT • Eglinton Crosstown LRT **OTTP** • New agreement to streamline transit governance, specifically for new subway line proposals
Access to Transit • Network coverage • Reliability of services	**Physical** • Wheel TRANS • Elevators/ Ramps • Signage **Coverage** • Bus network for peripheral commuters • Blue Night Network (overnight service) • Planned overcrowding **Reliability** • TTC App • TTC phone number / SMS • Twitter

Challenge	Current Solution(s)
COST	
Equity Concerns: Toronto's property tax rate is applied equally to homeowners regardless of income (Bingley, 2020); access to data/Wi-Fi; and, using debit or credit card to upload Presto remotely. There is a lack of transparency about the decision-making process. There are insufficient opportunities for involvement from riders in this process. Funding for TTC operations are focused on horizontal equity.	
Commuter Fare • Largest contributor of the TTC's revenue (projected to be 59% in 2020) (TTC, 2019a, p.20)	**Presto** • Online transactions • Autoload **Fare Enforcement** • Criminal offence • Fines • Advertisements **Increase fares** • Regular increases in fares to make up for inflation and deficit.
Funding Operations	**TTC Funding 2020 breakdown:** • 59% passenger fares; • 37% of City funding; • 4% of ancillary fares and reserve (Source: 2020 TTC and Wheel-Trans Operating Budgets) **Co-Fare Funding (Provincial)** • expiring March 31, 2020
Funding Capital Development	**Funded** • ⅓ each by the municipal, provincial, and federal governments. • project-by-project • There is no continuous funding model

Analysis

New Lines, Routes, Funding Capital Development

All levels of government are focused on horizontally equitable network development, with priority given to the needs of their constituents. There is no specific focus on vulnerable and underrepresented demographics (ie. low-income, suburban groups). Thus, governments risk pushing these groups to the periphery of the city. The OTTP agreement provides an opportunity to address municipal budgeting constraints (Freeman, 2019). Although transit governance is assumed to be solely the TTC's, it has the least decision-making power. Nevertheless, there is concern regarding the accessibility and influence Toronto will be able to exert within the OTTP. Non-political participation in the transit governance process is essential.

Access to Transit, Quality of Trips, User Experience

To ensure a state of good repair the TTC has scheduled partial weekend subway and early night closures for several years. Train service during these closures is replaced with shuttle busses. Prior to this arrangement, the tracks were being maintained only overnight (TTC, 2019b). Performance indicators from maintenance upgrades have not been communicated effectively. However, high-profile service disruptions in 2020 caused by train derailments may have been a consequence of insufficient track maintenance (Spurr, 2020c; Fraser & Moon, 2020).

GPS trackers on buses have been connected to a TTC app to provide real-time information and information displays have been placed at stations and select bus stops. Unfortunately, the app and the screens are prone to disappearing bus information. There is an assumption that commuters have access to data to obtain updates, especially in low-density suburban areas where street-level Wi-Fi is not available.

For those without mobile data, they can call the TTC (within business hours) or text for bus information. However, this is not ideal for commuters travelling prior or post business hours, to be informed about unplanned route diversions or who may not know how to use such services. Information displays are also meant to "provide important updates that customers would require before paying their fare" (TTC, 2018, p.1). However, most screens are located inside stations, and do not allow customers to make prior and informed decisions.

Commuter Fare, Funding Operations, Quality of Trips, User Experience

Ridership decreased by 11.8 million trips between 2017 and 2018 (TTC, 2018). Indicating that either fares were not collected (fare evasion), or users opted for alternate transportation options (Burman & Yazdani, 2020).

As the TTC's operating budget is dependent on collected fares, fare collection and enforcement have been prioritized by adopting Presto cards, installing new fare readers and gates. Fare enforcement officers have been hired to police the system. With limited options to load cards and readers not showing balances users are more likely to be ticketed.

The quality of trips is dependent on the TTC's ability to communicate planned closures. Stations are overwhelmed with paper signage, which passengers may walk past without noticing. As a solution, transit officers have been posted at impacted stations on the days of closures to direct riders and to inform commuters of planned closures. Similarly, public announcements can occasionally be made to prepare users for unplanned emergencies. This may mitigate extreme overcrowding, confusion for staff, and commuters' frustrations.

To voice frustrations there are limited options to riders – social media or sharing concerns via phone or email with TTC customer service. During Andy Byford's tenure, he would host annual town halls with the public. Once a complaint is made, there is no opportunity to follow-up to see what actions have been taken. Although there have been positive changes to create a vertically equitable transit system, there is still room for improvement (Gupta, 2015).

Gaps, Levers, Opportunities

Within this section, gaps in the system have been identified, key levers and opportunities to address these gaps.

Gap	Lever	Opportunity
Unplanned Emergency Response (UER)	**Policy** From TTC Board & the City Councillors. **Technology** Pre-existing, requires limited training. **Budgeting** Based on scales of implementation A Voice for Transit survey in winter 2019 found strong support for improved communications as 68.3% of respondents voiced support for improved communications of delays on screens and boards.	Enhance response time of service between riders and impacted areas with “on-call" staff and equipment ready to mobilize in case of delay or emergency, such as: • Transit officers • Bus drivers • Accessible buses To prevent rerouting of in-service buses and drivers perpetuating system-wide delays. Provide UER simulation training to adequately identify communication enhancement opportunities
Fare Evasion	**Policy/Budgeting:** From Presto and the TTC, minor changes in transit use. **Technology:** Replacing old technology. **Processes:** Payment processing systems; wider Presto reload options	Improved gates in stations similar to The Netherlands. (Appendix B) Two-tap Fare Payment similar to GO Transit for reduced fares; better transit data. Without tapping twice, the full charge of the trip is issued.

Gap	Lever	Opportunity
Fare Evasion	A Voice for Transit survey in Winter 2019 found support for Presto balance showing up when you tap (45.5%) and better Presto fare gates (36.4%).	Presto balance shown on fare readers Implement online reloads with immediate effect. Reloading options are limited to stations and online – opportunities to reload should be available at high-traffic bus stops, the Toronto Bus Terminal, and VIA Rail stations. Rather than pay a fine, force evaders to buy tickets like in The Netherlands (O'Sullivan, 2019). (Appendix C)
Rider Agency	**Media:** Voice concerns through "legitimized" channels. **Social Media:** Share individual experiences and complaints with the network. **Engagement:** Meet with officials from the TTC, MTO, and Metrolinx Policy: From TTC Board & the City Councillors **Technology:** Replacing single sided reporting. **Budgeting:** Related to training customer service staff; hiring tech support.	More frequent, better publicized public engagement opportunities with the TTC, i.e. deputations, rider surveys, town halls, etc. Open Metrolinx Board meetings to the public, e.g. deputations. Create a complaints ticketing system to track and follow-up on complaints modeled on York Region Transit. Communicate actions taken to the person filing the complaint.

Gap	Lever	Opportunity
Rider Agency		Scale-up A Voice for Transit's delay log for transit users to record information in real-time as an accountability tool. Develop a non-political third-party transit office focused on the needs of riders without political influence. Mandate equity assessments in transit planning.
Funding, Reporting and Publication Transparency	**Policy:** TTC, Metrolinx, Boards must handle data more transparently. **Advocacy Groups:** Raise concerns about data reporting. **Businesses:** Through property tax and collaborative land-value capture.	Have OTTP allow for public involvement as the City of Toronto and the TTC are still involved with planning the service. Collaborate with businesses in the city core to identify mutually beneficial opportunities as a source of revenue for transit. Collaborate with independent third parties to declare bias, conduct analysis and publish reports in layman's terms.

Conclusion

Many of the team's assumptions had been invalidated throughout the research. The common theme among them is the power dynamics of municipal and provincial governments, and how those are changing with the introduction of the OTTP. This provides an opportunity to focus advocacy on a narrower target: Metrolinx and the Government of Ontario. Future research should focus on the organizational processes within Metrolinx and identifying regional interactions further in depth.

Maintaining a global leadership position for a high quality of life is not an easy task. Providing equitable access to a city's entertainment, educational, and employment opportunities is essential for unlocking its potential. A transit system's ability to enable social mobility is an indication of a society's health. An increased role for public participation in transit governance, improved tracking of customer feedback, and better funding can help bridge the gaps. Now is the time for governments and transit agencies to examine how they can encourage vertical equity through the transit system.