



Benefits of Transit Investment Phase 2 Project Final Report to TTC

Date: May 14, 2025

To: TTC Board

From: Deputy Chief Executive Officer

Summary

Public transit is the backbone of any major metropolitan economy, serving as the vital link that connects residents to employment, education, healthcare, and commerce. In a city as large and economically dynamic as Toronto, the TTC plays a central role in enabling economic growth, reducing congestion, and promoting environmental sustainability.

The Economic Benefits of Transit, Phase 2 Project Final Report to the Toronto Transit Commission, provides a comprehensive and data-driven assessment of the far-reaching economic, social, and environmental benefits of TTC investment. Conducted by transportation and economic experts from the University of Toronto, the study applies a rigorous dual-modelling approach to quantify both the direct and indirect impacts of transit funding decisions.

The analysis consists of two main components:

1. **Macroeconomic Model:** This measures the broader economic effects of TTC investment, including its contribution to GDP, job creation, and industrial output at both the provincial and national levels.
2. **Microsimulation Modelling:** This detailed, agent-based transportation analysis evaluates the real-world effects of transit investments on travel behaviour, congestion, environmental outcomes, and accessibility.

At the heart of the study is an examination of how different levels of TTC service and infrastructure investment affect Toronto's economic competitiveness and mobility. The report evaluates four distinct service scenarios:

1. **Base Case (2023 Service Levels):** Reflects post-pandemic constraints when service hours were at 91% of pre-pandemic levels.
2. **2019 Full-Service Scenario:** Represents pre-pandemic service levels.
3. **Line 2 Subway Shutdown Scenario:** Illustrates the impacts of severe disinvestment.
4. **2024 Service Plan:** Accounts for operational changes.

Additionally, multiple operating and capital investment scenarios are analyzed to determine the economic and employment benefits of sustained infrastructure spending.

The findings of this study reinforce the idea that transit investment is not merely a public expenditure, but a high-return economic strategy. With benefit-cost ratios averaging seven-to-one, the report demonstrates that **every \$1 invested in TTC services and infrastructure generates approximately \$7 in economic and social benefits**. Furthermore, the analysis highlights the consequences of disinvestment, revealing that failing to maintain service levels or deferring critical capital projects could lead to a substantial loss of economic output, increased congestion, higher transportation costs for households, and diminished environmental and health outcomes.

As the TTC Board considers future investment strategies in the face of fiscal constraints, this report underscores the fact that public transit is not a discretionary service, but an economic necessity. Sustained investment in TTC operations and infrastructure is crucial to Toronto's long-term prosperity. The results of this study should serve as a foundation for discussions on funding priorities, ensuring that the TTC continues to fulfill its role as a key driver of economic growth, mobility, and sustainability in the Greater Toronto and Hamilton Region.

Recommendations

It is recommended that the TTC Board:

1. Receive this report for information.

Financial Summary

This report has no direct operating or capital financial impact beyond what has already been approved in the 2025 Operating Budget and 2025-2034 Capital Budget and Plan. However, the analysis of specific scenarios looking at both the impact of not investing in key state-of-good-repair projects, and the benefits of investing in improving services, provides a crucial resource for guiding the TTC's short- and long-term service and capital planning, priority-setting, and budgeting. It also reinforces the urgency and impact of transit investments to funding partners.

The insights will enable evidence-based decision-making, prioritizing initiatives with the highest economic and social benefits, while ensuring the sustainability and accessibility of Toronto's transit system. Understanding the economic, environmental, health, and social benefits of transit investment becomes even more critical not only to determine the allocation of resources to meet the current and future needs of the city's transit system, but also to achieve the economic, environmental, social, and mobility goals and outcomes for the City and Region, the Province and Canada.

Equity/Accessibility Matters

The TTC is an important contributor in creating access to opportunity and the conditions for an inclusive Toronto. The TTC serves a diverse customer base, reflective of the diversity of Toronto and the surrounding region. In 2024, the TTC provided more than 423.4 million customer trips. The geographic coverage and seamless integration of the TTC's multi-modal system enables the TTC to serve equity-deserving communities across Toronto. TTC customers are diverse and use the system at different rates.

For many, public transit is a primary mode of mobility. The TTC's commitment to equity and accessibility is also reflected in how it plans and delivers transit services, and continues to seek ways to improve its approach.

The TTC continues to work toward creating new partnerships and strengthening current ones, based on respect and transparency, to foster and improve trust between the TTC and the community. The TTC is strongly committed to making Toronto's transit system barrier-free and accessible so that all customers can enjoy the freedom, independence, and flexibility to travel anywhere on the public transit system, regardless of ability. Inadequate financial support for public transit will have a significant implication on the achievement of an inclusive Toronto and Region.

Decision History

At its meeting of January 9, 2023, the TTC Board approved the 2023 TTC Conventional and Wheel-Trans Operating Budgets. The TTC Conventional Operating Budget was approved in the amount of \$2.237 billion and the Wheel-Trans Operating Budget was approved in the amount of \$143 million.

Report: [2023 TTC Conventional and Wheel-Trans Operating Budgets](#)

Decision: [Joint Budget Decision Report](#)

At its meeting of January 9, 2023, the TTC Board endorsed the TTC 15-Year Capital Investment Plan (\$38.05 billion) and Real Estate Investment Plan Update and approved the 2023-2032 Capital Budget and Plan (\$12.34 billion). The report and presentation by the Chief Financial Officer introduced the University of Toronto's preliminary findings of the economic and other benefits of capital investments.

Report: [TTC 15-Year Capital Investment Plan, Real Estate Investment Plan Update and 2023-2032 Capital Budget and Plan](#)

Presentation: [TTC 2023-2032 Capital Budget and Plan Presentation](#)

Decision: [Capital Plan Decision Report](#)

At its meeting of December 20, 2023, the TTC Board received a presentation on the interim findings of the Value of Transit Research as part of the 2024 Budget process. These findings demonstrated that every \$1 invested in TTC services and Capital Works resulted in \$7.14 in benefits.

Presentation: [Value of Transit Deck](#)

At its meeting of December 20, 2023, the TTC Board approved the 2024 TTC Conventional and Wheel-Trans Operating Budgets. The TTC Conventional Operating Budget was approved in the amount of \$2.404 billion and the Wheel-Trans Operating Budget was approved in the amount of \$164 million.

The TTC Board also endorsed the TTC 15-Year Capital Investment Plan (\$47.86 billion) and Real Estate Investment Plan Update and approved the 2024-2033 Capital Budget and Plan (\$12.34 billion). The report and presentation by the Chief Financial Officer introduced the University of Toronto's preliminary findings of the economic and other benefits of capital investments.

Report: [Staff Recommended 2024 TTC Conventional and Wheel-Trans Operating Budgets and 2024-2033 Capital Budget and Plan](#)

Presentation: [TTC 2024 Operating Budget and 2024-2033 Capital Budget and Plan Presentation](#)

Decision: [Joint Budget Decision Report](#)

At its meeting of January 10, 2025, the TTC Board approved the 2025 TTC Conventional and Wheel-Trans Operating Budgets. The TTC Conventional Operating Budget was approved in the amount of \$2.64 billion and the Wheel-Trans Operating Budget was approved in the amount of \$183 million.

The TTC Board also endorsed the TTC 15-Year Capital Investment Plan (\$53.38 billion) and Real Estate Investment Plan Update and approved the 2025-2034 Capital Budget and Plan (\$16.40 billion). The report and presentation by the Chief Financial Officer introduced the University of Toronto's preliminary findings of the economic and other benefits of capital investments.

Report: [Staff Recommended 2025 TTC Conventional and Wheel-Trans Operating Budgets and 2025-2034 Capital Budget and Plan](#)

Presentation: [TTC 2025 Operating Budget and 2025-2034 Capital Budget and Plan Presentation](#)

Decision: [Joint Budget Decision Report](#)

Issue Background

Toronto is the fourth largest city in North America with a population of more than three million residents and is forecasted to grow to more than four million residents by 2046. As Canada's largest city, Toronto produces approximately 26% of Ontario's GDP, accounting for 10% of Canada's GDP. Toronto is consistently ranked as one of the greatest cities in the world to live, visit, and do business.

To support a growing Toronto and surrounding region, the TTC provides a necessary service, through its three subway lines, 11 streetcar lines, 162 bus routes and a paratransit service (Wheel-Trans). The movement of people is critical to a growing region, enabling residents to access employment, education, and services. In 2024, the TTC (including Wheel-Trans) provided more than 423 million rides.

Providing safe, reliable, and seamless transit service is vital to the City of Toronto's economic health and social well-being. Investing in the TTC is not only critical for the viability of the transit system, but also for its adaptability to meet future demand. Toronto's continued success as a thriving social and economic hub depends on a reliable, frequent, and safe public transit system that creates access to opportunity for everyone.

Investing in the TTC's service and capital works yields benefits far beyond immediate improvements in service and the completion of capital projects. These investments significantly impact local, regional, provincial and national economies and provide environmental, social, and health benefits. They contribute to the economic, environmental, and social goals of the city, the Greater Toronto Area (GTA), Ontario, and Canada and strengthen their overall vitality and well-being.

In 2022, the TTC partnered with the University of Toronto's Mobility Network to undertake research to identify and quantify the economic and other key benefits resulting from investment in transit and the TTC, in particular. To establish the overall value of transit, the research intended to determine the following:

- Economic impact of the TTC on the local, regional, provincial, and national economy;
- Economic benefits realized from investments in transit services and capital works that enhance the TTC's existing transit network;
- Qualitative and quantitative social, equity, health, and environmental benefits realized from TTC services and investments, including the economic spin-off benefits;
- The TTC's contributions to economic recovery, health, and resilience; and conversely
- Impacts if necessary service and capital investments are not made in the TTC.

Phase 1 of the research focused on quantifying the economic benefits of capital investments and identifying other key benefits. These preliminary findings, presented to the TTC Board during the 2023 Budget deliberations, demonstrated the economic impact that investments in the TTC's Capital Plan have on all of Canada, and the importance the TTC plays in achieving local, provincial, and national economic goals:

- Every \$1 invested creates the equivalent of \$2.40 of economic activity (gross output).
- Every \$1 invested adds an additional \$1 dollar in GDP, generating a value-added impact resulting in an increase in profit, taxes, and spending on labour.
- Every \$1 million invested creates 15 new jobs.
- The TTC's 10-Year Capital Budget and Plan will add \$12.6 billion in additional GDP, \$29.7 million in economic activity (gross output) and more than 180,000 jobs.
- 89% of these economic benefits will be realized in Ontario (with 52% of that being within the GTHA) and a further 11% to be realized nationally.
- State of Good Repair (SOGR) investments also provide positive economic benefits, matching those of expansion projects. Improving service reliability prevents passenger delays and reduces the cost of lost productivity.

The analysis from the University of Toronto also demonstrated that the TTC also plays an important role in meeting environmental, social, and public health goals and outcomes. For example:

- **Addressing Congestion:** Public transit is key to unlocking gridlock. To replace the capacity on the Line 1 Yonge-University Subway, Toronto would need to build the equivalent of eight-to-nine Gardiner Expressways to move the same amount of people.
- **Reducing Emissions:** Shifting users from private vehicles to public transit will reduce greenhouse gas (GHG) emissions and improve air quality. Personal travel emissions are reduced by 79% when taking the TTC instead of a car. Additionally, the TTC's Green Bus program will reduce 165,000 tonnes of emissions per year once fully completed.
- **Improving Public Health:** Studies from comparable North American cities demonstrate that public health outcomes, such as obesity, stroke, traffic collisions, exposure to air pollutants, and physical activity all improved when there is access to transit.
- **Cost Savings:** Transit users who switch from personal automobiles realize significant cost savings from auto ownership.
- **Expanding Opportunities:** Improved service expands opportunities to travel to jobs and training not otherwise accessible and allows more people to access leisure activities and cultural events.

As part of the second phase of research, the TTC and University of Toronto have quantified metrics that will broaden the scope of benefits to be realized from investments in transit and that contribute to achieving economic and regional development; quality of life; and environmental sustainability goals and outcomes, as outlined in Chart 1 below. It is important to stress that the analysis covers a set of benefits but is not an exhaustive list of metrics. Specifically, measures outside the scope of this phase of research include agglomeration benefits and health benefits related to active travel.

Table 1
Summary of Outcomes, Benefits, and Metrics

Outcome	Benefits	Performance Metrics	Measures
Economic and Regional Development	Economic Impact and Job Creation	Gross Output	\$
		Value Added	\$
		Job Output	# of Jobs
	Connecting Commuters to Jobs	Travel time for commuters on transit	Hours saved and \$
		Number of jobs within access distance of transit	# of Jobs
	Supporting Innovation and Prosperity	Level of connectivity between major employment hubs, academic institutions, and other centres of innovation	Access scores
Quality of Life	Transit Rider Benefits	Cost Savings associated with Mode Shift to Public Transit	\$ and Mode Shift %
		Cost Savings from Reduction in Auto Ownership	\$
		Travel Time Reductions and Associated Cost Savings	Hours saved and \$
	Healthier Communities	Road Safety due to reduced vehicles on the road	\$
		Public health benefits due to reduced emissions and air contaminants	\$ and # of cases
	Access to Destinations	Access Scores to Jobs	Access scores
		Access Scores to Services	Access scores
		Access Scores to Destinations (schools, shopping, amenities, recreation)	Access scores
Environmental Sustainability	Reduced Emissions	GHG/Emissions Reduction due to electrification of the TTC's fleet	GHG (Tonnes) and \$
	Energy Use and Efficiency	Reduction in auto vehicle trips (reduced GHG/Emission due to mode shift to public transit)	GHG (Tonnes) and \$

To assess these metrics, this study uses two modelling approaches. A macroeconomic analysis examines how TTC spending influences the provincial and national economy, measuring the effects on GDP, employment, and industry output. Simultaneously, a detailed microsimulation model evaluates how transit investment affects individual trip-making, congestion levels, travel costs, and accessibility across the Greater Toronto and Hamilton Area (GTHA).

First, the results of this work has been used to update the economic modelling by quantifying the economic benefits to be realized from 2023 approved investments in services, operations, and capital works to establish a current state baseline. Results also examine the economic impact of the approved 10-year Capital Plan and a fully funded Capital Investment Plan, along with economic impact scenarios for key critical funded and unfunded capital priorities, with a focus on unfunded SOGR capital projects.

Second, the output from the economic modelling was applied to the 2024 Operating Budget and 2024-2033 Capital Budget and Plan to illustrate additional GDP, economic activity and jobs that will be added.

As part of the second stream of analysis, the transit rider, health, equity, and environmental benefits have also been quantified, along with an assessment of the benefits of investing in additional service and unfunded capital priorities, with a focus on SOGR capital projects. The analysis will also examine the impacts and risks if these critical new investments are not made. The analysis provides a more Toronto-centric view of the benefits from the upcoming GTHA results and further disaggregate the outputs through both a geographic and social equity lens.

Comments

This report informs the TTC Board that the Economic Benefits of Transit, Phase 2 Project Final Report will be presented by the University of Toronto on April 16, 2025. The presentation will highlight key findings from Phase 2 of the Value of Transit Research and provide an in-depth assessment of the benefits derived from TTC service and capital investments. It will also address the risks, service implications, and unrealized benefits associated with underinvestment in public transit at the municipal, provincial, and national levels.

A Case for Investing in Transit: Benefits Analysis Applied

This study evaluates the TTC's far-reaching impact across economic growth, quality of life, and environmental sustainability.

The TTC plays a crucial role in regional, provincial, and national economic development. It supports job creation, facilitates connectivity between employment centres, and enhances access to destinations. **Every \$1 invested in TTC operations and capital projects generates approximately \$7 in economic, social, and environmental benefits**, underscoring the value of sustained transit investment.

Beyond its economic contributions, TTC investment directly enhances quality of life. Riders experience significant cost savings through reduced auto ownership and lower transportation expenses, while improved transit services leads to shorter travel times and increased accessibility to jobs, healthcare, education, and recreational opportunities. Additionally, public transit fosters healthier communities by promoting active travel and improving road safety.

Environmental sustainability is another key focus of the research. The TTC's transition to battery-electric buses and other green initiatives significantly reduce GHG emissions, aligning with Toronto's climate goals. The shift from private vehicles to public transit further decreases congestion and pollution, reinforcing the importance of a well-funded transit network in achieving a more sustainable urban future.

Summary of Investment Scenarios

The study applies a macroeconomic benefit model across multiple investment scenarios to better understand how different funding levels impact regional and economic development in Toronto, Ontario, and the rest of Canada. This modelling quantified the impact of TTC spending on economic activity, gross domestic product growth, and job creation. Two primary economic modeling streams were used:

1. 2023 Operating and Capital Budgets, 10-Year Capital Plan, and 15-Year Capital Investment Plan.
2. 2024 Operating and Capital Budgets, 10-Year Capital Plan, and 15-Year Capital Investment Plan.

The micro-modelling component of the research analyzes the impact of different service levels and investment decisions on transit ridership, road congestion, travel costs, emissions, and accessibility. The study examines four key scenarios:

1. **2023 Base Line:** At a 91% service level, forms the foundation against which changes are measured.
2. **Return to 100% Service:** Uses the 2019 service as a proxy, illustrating the potential benefits and enhancements resulting from a fully restored transit system.
3. **Closure of Line 2:** Examines the repercussions of a significant operational change, illustrating the potential impact of not investing in the TTC's state-of-good-repair (SOGR) for Line 2.
4. **TTC's 2024 Service Plan:** Assesses the impact of service improvements and the permanent closure of Line 3 (Scarborough RT)

Each scenario provides insights into how different levels of transit investment and disinvestment affect broader economic, transit rider, quality of life, and environmental outcomes in Toronto and the GTHA. Table 2 below provides a summary of each scenario by benefit category:

Table 2
Summary of Modelling Scenarios

	Operating (Return to 100% Service [2019 Proxy])		Capital (Line 2 Shut Down)		Average Benefit/ \$1
	Benefits in \$ (Millions)	Per/\$1	Disbenefits in \$ (Millions)	Per/\$1	
Economic & Regional Development					
GDP (Added Value)	\$17.7	\$0.57	\$415.0	\$1.02	\$0.80
Quality of Life					
Transit Travel Time Savings	\$436.8	\$4.55	\$1,694.4	\$4.16	\$4.36
Auto Travel Time Savings	\$24.0	\$0.25	\$19.2	\$0.05	\$0.15
Auto Operating & Ownership Cost Savings	\$203.2	\$2.12	\$247.2	\$0.61	\$1.36
Road Accident Reductions	\$17.3	\$0.18	\$20.2	\$0.05	\$0.11
GHG Reduction	\$2.3	\$0.02	\$7.3	\$0.02	\$0.02
Health Outcome Improvements	\$7.4	\$0.08	\$32.5	\$0.08	\$0.08
Sub-Total Quality of Life Benefits	\$690.9	\$7.20	\$2,020.8	\$4.97	\$6.08
Total Benefits	\$708.6	\$7.77	\$2,435.8	\$5.99	\$6.88

Implications for Transit in Toronto

This research underscores the broad economic, social, and environmental benefits of public transit investment. By quantifying the TTC's contributions to economic growth, enhanced mobility, and environmental sustainability, the findings provide a compelling case for continued support of transit operations and infrastructure expansion. The TTC's research partnership with the University of Toronto reflects its commitment to evidence-based planning and sustainable transit solutions. By continuing to invest in public transit and leveraging academic expertise, the TTC can play a central role in building a more connected, resilient, and sustainable future for Toronto and its surrounding communities.

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Attachments

Appendix A – Benefits of Transit Investment Phase 2 Project Final Report
Appendix B – Economic Benefits of Transit Phase 1 Report “Economic, Social & Environmental Benefits of Transit Investment”