



Revised REPORT FOR ACTION

Bike Share Toronto: Four-Year Growth Plan

Date: September 23, 2022
To: Board of Directors, Toronto Parking Authority
From: President, Toronto Parking Authority
Wards: All

SUMMARY

Bike Share Toronto is a sustainable, healthy, and affordable mobility program that is an integral component of Toronto's transportation network. Designed to improve mobility options for Torontonians, the program has seen tremendous success and growth in the first half of 2022, including record ridership, growth in annual memberships, an increased deployment of e-bikes, and marked progress towards securing a strategic sponsor.

As North America's 4th largest bike share system in size, it is projected to reach 4.3 million rides by the end of 2022, a 23 percent increase in ridership versus 2021. The program also continues to enjoy broad support amongst its customers with a 92 percent overall satisfaction rating reported in the summer of 2022.

Toronto Parking Authority (TPA) aspires to make Bike Share Toronto the best bike sharing system in the world. As outlined in TPA's 2022 Operating Plan, accelerating bike share's growth is a key strategic priority and a central component in TPA's transformation into a mobility services provider.

As the City of Toronto continues to invest in cycling infrastructure to support its goals of having trips under 5 kilometres (km) completed by cycling, walking or transit, there is an opportunity for Bike Share Toronto to accelerate the conversion of short-distance and first/last mile trips, which will continue to support TPA's strategic priorities and growth agenda.

This report provides an overview of the Four-Year Growth Plan, including the study methodology, the results of stakeholder and public consultation, the recommended plan and details about how the plan will be implemented through 2025. This report will be supported by a presentation by Management on the contents of this report and the Four-Year Growth Plan.

RECOMMENDATIONS

The President, Toronto Parking Authority recommends that:

1. The Board of Directors, Toronto Parking Authority approve the Four-Year Bike Share Toronto Growth Plan (2022 - 2025), as outlined in the Bike Share Toronto Four-Year Growth Plan (2022- 2025) Report, dated September 2022.

FINANCIAL IMPACT

The annual Bike Share Toronto system operating costs budgeted for 2022 are \$9,131,000. At the completion of the Four-Year Growth Plan, Bike Share Toronto's operating costs will increase by \$6,409,000 to an estimated \$15,540,000 annually.

Ridership revenue in 2022 is forecasted to reach \$6,924,000, increasing by \$4,201,000 to \$11,125,000 by 2025. Advertising is expected to deliver an incremental \$1,500,000 in revenue, while additional revenues are expected from sponsorships.

Bike share is also conducting a rate review of its annual and casual pass structure and recommendations will be brought forward at the November 29th 2022, TPA Board of Directors meeting.

As a result of increased ridership, advertising and sponsorship revenue the expansion of the Bike Share Toronto system is not expected to negatively impact the financial outlook for Bike Share or the TPA.

Capital investments supporting implementation of the Four-Year Growth Plan have been identified in TPA's proposed 2023 Capital Budget and 2024 - 2032 Capital Plan as follows:

2022	2023	2024	2025	Total
\$6,642M	\$9,696M	\$7,304M	\$5,420M	\$29,062M

The total financial impact associated with the planned expansion to Bike Share Toronto is expected to keep the program financially sustainable against annual system operating costs by 2025 with the total subsidy per ride (refer to Appendix A) expected to decline from \$0.57 per ride in 2022 to zero by 2025.

DECISION HISTORY

At its meeting on July 26, 2022, TPA Board of Directors received a presentation from TPA about Bike Share Business Review. The presentation (PA 31.2) was received for information.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.PA31.2>

At its meeting of February 18, 2022, TPA Board of Directors received a report (PA 28.6) entitled "Bike Share Toronto First Quarter Update 2022". This item was adopted, without amendment, by TPA Board of Directors at its meeting of February 18, 2022.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.PA28.6>

At its meeting of February 18, 2022, TPA Board of Directors received a report (PA 28.7) entitled "Bike Share 2022 Equipment Purchase". This item was adopted, without amendment, by TPA Board of Directors at its meeting on February 18, 2022.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.PA28.7>

At its meeting on May 12, 2021, TPA Board of Directors received a report (PA23.14) entitled "Improving Toronto's Bike Share Program". This item was adopted, without amendment, by TPA Board of Directors at its meeting of May 14, 2021.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.PA23.14>

At its meeting of November 8, 2021, TPA Board of Directors received a presentation from TPA about TPA's 2022 Annual Operating Plan. The report (PA27.1) and presentation were received for information.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.PA27.1>

COMMENTS

Bike Share Toronto is recognized as an integral part of the City's transportation network. In 2022 Bike Share Toronto hit new ridership milestones, already exceeding three (3) million rides and expected to reach 4.3 million rides by the end of the year, an increase of almost one (1) million rides versus 2021.

The increase in ridership can be attributed to bike share's growing popularity as a mobility option, the increased availability of cycling infrastructure in the City of Toronto, marketing efforts, and operational excellence. This success is, however, putting a strain on the system, where increasingly bike share is not able to meet the demand for its service, potentially impacting customer experience.

In addition to a need to increase the supply of equipment (bikes and stations) to support the existing service area, customer feedback has shown a demand to expand the network beyond the boundaries of the central system. Responding to these demands, Bike Share Toronto created two (2) pilot zones in North York and Scarborough, with up to nine (9) stations serving each area in 2020. Data collected from January 1 to December 31, 2021, demonstrated that there is a strong demand for bike share beyond

the central system area and in the suburban communities of the city that hosted the pilot zones (refer to Appendix A).

Expanding bike share services across the city with a focus on providing services that provide Bike Share customer access to cycling infrastructure, public transit, employment centres and recreational trails will provide more people with the opportunity to use bike share to get around, ultimately reducing traffic congestion.

Four-Year Growth Plan

To lay the foundation for the future of Bike Share Toronto, TPA has carried out a Four-Year Growth Plan study that will guide a system expansion into 2025. The study sets an ambitious goal of extending the system's coverage area into all 25 wards of Toronto by the end of 2024 and to expand to upwards of 1,000 stations and 10,000 bikes, including 2,000 e-bikes, by 2025.

On October 21, 2021, TPA released a Request for Proposals (RFP) to seek submissions from qualified transportation consultants to support the delivery of the study, which included the analysis of historic system performance, completion of alternative expansion scenarios, stakeholder consultation, and phased annual implementation planning. Following careful consideration by the evaluation committee, Alta Planning + Design, which received the highest total score in the evaluation process, was awarded the project in January 2022.

Study Methodology

The key outcome for the Four-Year Growth Plan was to guide system expansion over the next four (4) years by directing placement of the 375 stations to be added to the system. The development of the plan included a spatial analysis as well as public and stakeholder consultation that directly contributed to the new station locations that are recommended. Decision-making for the plan was informed by Bike Share Toronto's planning objectives of ridership, equity, first/last-mile transit integration, accessibility, and revenue generation.

Spatial Analysis

To complete the Four-Year Growth Plan, alternative expansion scenarios were developed using spatial analysis and evaluated against key network goals. The comparative analysis of expansion scenarios considered where and how the system should strategically expand over the next four (4) years.

Criteria for the expansion scenario options considered alternative weightings of Bike Share Toronto's planning objectives of increasing ridership, promoting equitable access to the system, providing first/last-mile transit integration, and revenue generating capabilities. These objectives were developed into key inputs used in a spatial analysis and further refined using feedback collected from stakeholder consultation and public engagement.

The purpose of the spatial analysis was to use quantitative data to assess and identify areas most suitable for Bike Share expansion from 2022 to 2025. Inputs to the spatial analysis included historic Bike Share ridership and revenue by station, socio-economic demographics, existing and planned cycling infrastructure, proximity to transit stations, routes and ridership, and motor vehicle traffic. Data was provided by the TPA and otherwise obtained from the Toronto Transit Commission, Statistics Canada, and through the City of Toronto's Open Data Portal. The spatial analysis process was iterative and collaborative, using stakeholder engagement and insights to refine quantitative outputs. The process included the following elements to produce the recommended expansion option:

1. **Priority Index Layers:** Input data were used to assess four (4) Bike Share planning characteristics across the city: ridership and revenue, equitable access (equity), transit integration (first/last-mile), and future growth (planned cycling infrastructure and property development). Each characteristic was assessed independently to identify its relative intensity across Toronto. The output of this step produced Priority Index maps highlighting areas where each characteristic was relatively high or low.

2. **Scenario Allocation:** Priority index layer outputs were combined into a scenario allocation tool to develop alternative expansion scenarios. Five unique scenario options for expansion were created by applying different relative weights to each priority index layer. All five scenario options were evaluated against the study's planning objectives to identify one preferred expansion scenario. The scenario options, including an explanation of the evaluation process, are provided in Appendix B of the Four-Year Growth Plan.

3. **Scenario Refinement:** The preferred expansion scenario was manually refined to reflect feedback from stakeholder engagement and maximize operational feasibility.

4. **Implementation Schedule:** Proposed station expansion locations in the preferred scenario were grouped into four (4) buckets for annual implementation. Key considerations for grouping stations included creating a connected network by growing from the boundaries of the existing system and expanding into all 25 wards by 2024.

Stakeholder Consultation

TPA carried out an extensive consultation program throughout the development of the Four-Year Growth Plan. The consultation program included engagement with internal TPA business units and external stakeholders, such as City Divisions and Agencies and other government agencies (refer to Appendix B, Section 1.4 in the Four-Year Growth Plan). The consultation program also included outreach with local Councillors, Bike Share Toronto annual members and the general public.

The stakeholder engagement program involved two (2) rounds of workshops with internal and external stakeholders that included the City's Transportation Services Division (Cycling and Pedestrian Projects Unit), City Planning Division, Toronto Transit

Commission, Metrolinx, Toronto and Region Conservation Authority, Business Improvement Areas, and various secondary and post-secondary institutions, such as the University of Toronto. The first round of workshops were held April 13, May 2, and May 5, 2022. These workshops were completed to collect input on historic challenges and upcoming opportunities for an expansion of Bike Share stations across Toronto, which would be used to inform the spatial analysis and development of a preferred expansion scenario option.

The second round of workshops were held July 11, 13, 14, and 15, 2022 after the spatial analyses had concluded and were intended to collect feedback on the preferred expansion scenario. For each round, stakeholders were placed into focus groups based on their relative interest and expertise: City Divisions and Agencies, Transit Partners, Public Institutions (e.g. post-secondary institutions, conservation authorities), and Private Partners (e.g. Business Improvement Areas, property developers). Refer to Section 1.4 in the Four-Year Growth Plan (Appendix B to this report) for a list of the stakeholders invited for both workshops.

Through both workshop rounds, stakeholders emphasized the need to align Bike Share expansion with infrastructure investments in suburban areas such as major cycling corridors, new LRT and BRT routes (RapidTO), and redevelopment projects. Stakeholders also noted that Highway 401 presents a north-south barrier for cyclists in Toronto and that comfortable crossing opportunities are limited. Feedback received encouraged TPA to plan stations along the Humber and Don Valley Trail systems to connect the system across the 401. Post-secondary institutions indicated keen interest to improve multimodal access to their suburban campuses with new Bike Share stations.

Bike Share Customer Consultation

An online survey of existing Bike Share users was conducted between May 9 and June 13, 2022. The online survey was promoted in Bike Share Toronto's May & June newsletters. The survey contained 21 questions (refer to Appendix A of the Four-year Growth Plan Report - Executive Summary) and collected feedback on trip behavior, challenges and barriers, and how trip choices may differ in urban and suburban communities.

Upon closing of the online survey on June 13, 2022, 177 survey responses had been submitted. Survey respondents generally indicated their support for an expansion of the system.

Survey respondents were invited to attend subsequent Bike Share user workshops where TPA would present the preferred expansion scenario.

Bike Share user workshops were held on July 15 and 16, 2022 and again well attended. One interesting takeaway from the user workshops was that bike share users communicated a reasonable expectation that bike share stations would be spaced further apart in suburban areas in comparison to the downtown network. Users expected to have to walk an estimated 8-10 minutes to a bike share station, as compared to less than 5 minutes to a station within the downtown network.

Public Consultation

A public information session was held on August 8, 2022 to outline the purpose of the study, the study methodology, the preferred expansion scenario option, and implementation plan. City Councillors received an open invitation on July 21, 2022 to both attend the public information session and speak to TPA in advance of the session should they have any questions about the study or want to provide feedback in advance of the August 8, 2022 public information session.

The public information session was advertised through Bike Share Toronto's social media platforms and attendees were able to submit questions during the session that were answered by TPA and Alta during a question and answer period.

The public information session was well-attended with over 87 participants recorded. During anonymous live polling that was completed during the session, 96 percent of attendees indicated that they were supportive of the proposed expansion plan presented during the session. Key themes from the question and answer period of the public information session centred on bike share equipment, payment, and recreational service expansion. Participants expressed interest for easier payment options, enhanced storage capacity on the Bike Share bikes (e.g. larger front basket), and system service expansion to the Toronto Islands.

Bike Share Four-Year Growth Plan

The final Four-Year Growth Plan is a culmination of the spatial analysis and stakeholder engagement processes. It presents a proposed station expansion and implementation schedule that was developed through a quantitative analysis of Bike Share characteristics across Toronto and refined by feedback from key stakeholders, Bike Share users, and the general public.

The Preferred Scenario

The preferred expansion scenario (labeled 'Future Focus' in the Four-Year Growth Plan) was selected because it meets key planning and operational objectives for the Bike Share system. Compared to other scenarios, it provides a better continuous network of stations, reducing the number of isolated clusters of stations on the edge of the system. It provides a balanced distribution of stations across all wards while allocating a higher concentration of stations in communities with higher residential density, where potential trip demand is highest. It reflects areas of interest identified from stakeholder engagement and aligns station expansion with investments in transit and cycling infrastructure.

The other four alternative expansion scenarios were not selected because they did not meet the planning and operational objectives of the study. Compared to the preferred scenario, the alternative scenarios created greater volumes of isolated stations and spaced stations too far apart to offer a diversity of trip purposes to users. In an effort to maximize the opportunity for users to choose Bike Share for recreation, commuting, and

other utilitarian purposes, these four scenarios were rejected in favour of the preferred scenario.

Once implemented, the growth plan will address key service gaps within the existing network and expand the system to new wards and communities across the city. Feedback from bike share users has demonstrated a need for a continuous system that eliminates isolated 'islands' of stations that are disconnected from the system's core area. The growth plan will also address user feedback by connecting existing satellite areas to the core.

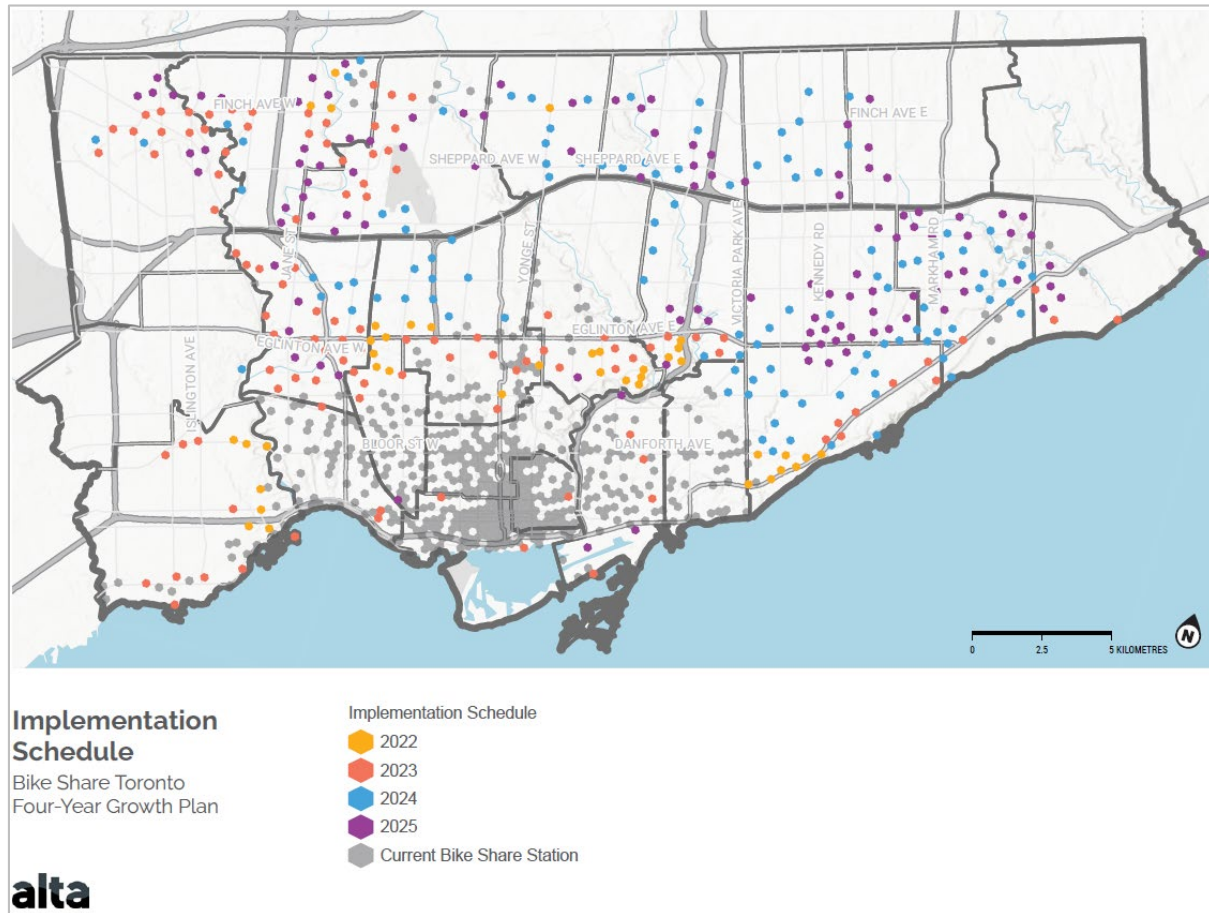
Opportunities and Key Deliverables

The Four-year Growth Plan will connect more residents and visitors to higher-order transit. It plans for bike share stations at and near transit stops to encourage multimodal travel and support active transportation for first/last-mile travel. It supports the TransformTO Net Zero Climate Action Strategy and will contribute towards achieving the City's target of 75 percent of all work and school trips under 5 km being made by walking, cycling, and transit by 2030.

The implementation of the Four-Year Growth Plan will lead to a station in every ward by 2024, with the final expansion to 1,000 stations completed in 2025. Expansion efforts in 2022 and 2023 will focus on connecting the existing core service area with the satellite service areas.

The expansion of the system will prioritize neighbourhoods where residents have the greatest need for access to affordable mobility options. Major light-rail transit (LRT) projects, the Eglinton Crosstown LRT (Line 5) and Finch West LRT (Line 6), will be opening for service within the next four (4) years. TPA will take advantage of the multimodal opportunity by extending the reach of the bike share system along the new transit infrastructure. The system will also be expanded along many of the corridors where new cycling infrastructure is being built as part of the City's Near-Term Implementation of the Cycling Network Plan. It will promote cycling along these corridors, and further enhance the City's capacity to encourage active transportation among residents and visitors.

Figure 1: Four-Year Growth Plan Expansion and Implementation Schedule



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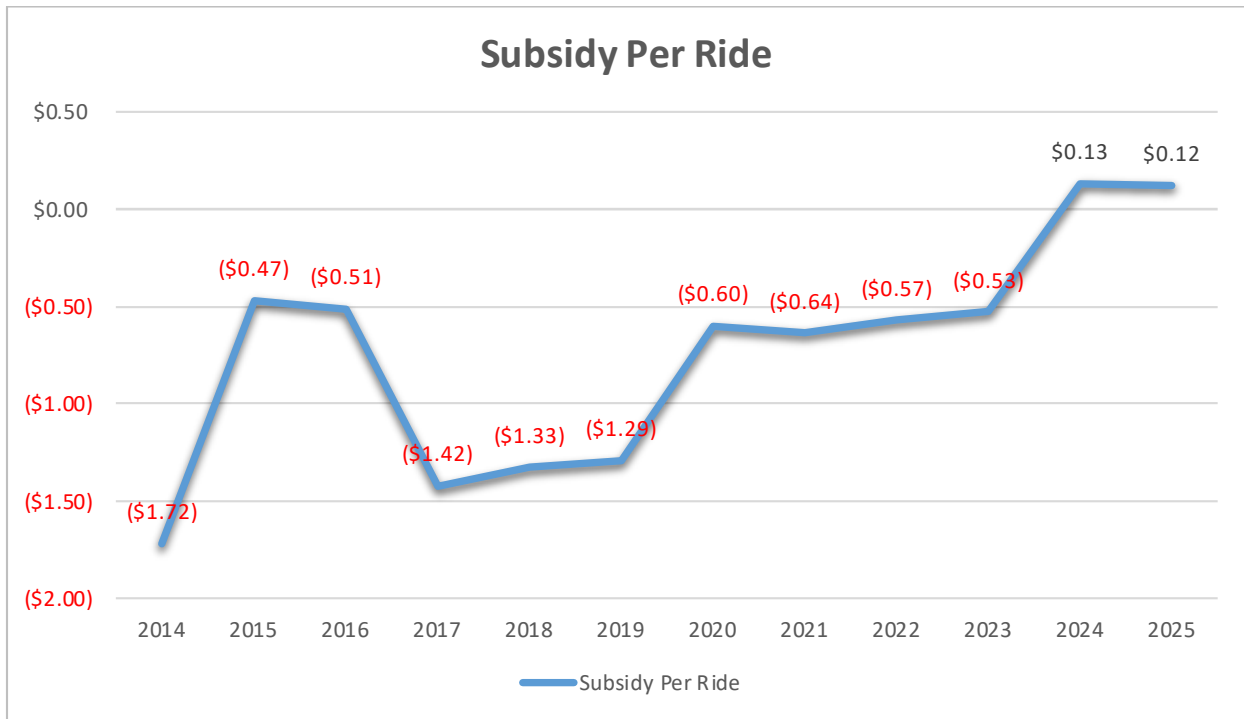
SIGNATURE

W. Scott Collier
President Toronto Parking Authority

ATTACHMENTS

- Appendix A: Subsidy Per Ride
- Appendix B: Bike Share Central System Area and Pilot Zones
- Appendix C: Bike Share Toronto Four-Year Growth Plan Report

APPENDIX A: SUBSIDY PER RIDE



APPENDIX B:

BIKE SHARE CENTRAL SYSTEM AREA AND 2020 PILOT ZONES

