



Fare Modernization Update

Date: February 28, 2023

To: TTC Board

From: Chief Strategy and Customer Officer

Reason for Confidential Information

This reports contains information that is subject to solicitor-client privilege.

This report is about litigation or potential litigation, including matters before administrative tribunals.

This report contains information about a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on, or to be carried on, by or on behalf of the TTC.

Summary

The purpose of this report is to provide an update on the progress made since the last Fare Collection update to the Board in June 2022.

This report describes the number of initiatives taking place concurrently to modernize fare collection on the TTC that are in partnership with Metrolinx-PRESTO; all with the purpose of improving the customer experience on the TTC.

Recommendations

It is recommended that the TTC Board:

1. Receive this report for information; and
2. Receive the Confidential Attachment and authorize that the information contained in the Confidential Attachment remain confidential as it is subject to solicitor-client privilege.

Financial Summary

Current PRESTO System

Work to implement Open Payments is ongoing with PRESTO. PRESTO is responsible for costs to implement Open Payments, with no change to the current 5.25% commission rate. The TTC, however, is responsible for costs to upgrade the Fare Gate Card Readers with an estimated total cost for hardware purchase and installation of \$4 million, net of HST rebate.

The 2023-2032 Capital Budget and Plan, approved by the TTC Board on January 9, 2023 and City Council on February 15, 2023, includes funding of \$79.2 million in project costs for the PRESTO project, of which \$68 million was incurred to the end of 2022 based on preliminary year-end results, resulting in cash flow funding of \$11.2 million from 2023 to 2025.

TTC Business Case Development and Risk Mitigation Plan

Work on a business case and Risk Mitigation Plan to determine the best path forward once the current agreement with PRESTO expires in 2027 has begun.

The 2023 Operating Budget, approved by the Board on January 9, 2023 and City Council on February 15, 2023, includes funding of \$800,000 to support the development of a business case for the modernization of the fare collection system. The results from this scope of work will enable the TTC to assess whether to either: a) re-sign with PRESTO for a longer term with an upgraded system; or b) specify and procure a new TTC fare card system to replace PRESTO.

The Chief Financial Officer has reviewed the report and agrees with the financial impact information.

Equity/Accessibility Matters

As the TTC works with PRESTO on closing out contract items and planning for the future, equity and accessibility continues to be imperative. The TTC is committed to meeting the Accessibility for Ontarians with Disabilities Act, 2005 (AODA) requirements through continuing consultations with the Advisory Committee on Accessible Transit (ACAT), and introducing policies that promote equity and accessibility.

As work to deliver Open Payments proceeds, the TTC must be mindful that, while leveraging credit/debit payment channels and mobile technology can improve the customer experience for many customers, reliance on these capabilities may pose some equity and access impacts for marginalized and equity-seeking customers. The TTC and PRESTO have been working to proactively identify potential barriers to transit equity and access in joint modernization efforts by virtue of TTC and PRESTO customer research; comprehensive online research; and engagement with the City of Toronto's Poverty Reduction Strategy Office. The intent of identifying barriers is to avoid or mitigate these potential barriers, ensuring that no customer segments are left behind.

A key component of continued service to customers will be the ongoing availability of the physical PRESTO card and limited-use PRESTO Tickets. These options provide the greatest control and the most protection from banking fees associated with debit and credit transactions, which may particularly impact those who are unbanked or under-banked and with low or volatile income. The availability of PRESTO Tickets will ensure continued access for social and community agencies that distribute fares to numerous groups, such as newcomers, those experiencing homelessness and clients with low incomes. These products will be improved by the introduction of account-based functionality and will be supported by an expanded cash-accepting network of retail locations and in-station self-serve devices.

For more tech-comfortable customers, virtual cards will provide a smartphone-based experience with many similarities to the physical PRESTO card, including the ability to maintain a transit funds account that is separate from other spending. Importantly, PRESTO in Mobile Wallet does not require an internet connection to travel, and even enables fare payment with a drained smartphone battery. PRESTO conducted underserved research and when tested, they found a moderate-to-high degree of interest in the concept alone or in conjunction with a physical PRESTO card. There is also clear demand for the product expressed in the PRESTO Customer Satisfaction survey in fall 2020. Twelve per cent of respondents answering how they would improve the PRESTO mobile app requested some sort of virtual card unprompted. Of the respondents asking for a virtual card who primarily ride the TTC, 22% have an income below \$25,000.

For customers who are able and willing to tap their credit or debit card to travel, Open Payments present minimal obstacles in paying a transit fare. With this new capability, there is nothing to buy or load. To pay their fare, customers simply tap their physical credit or debit card or use the same cards on their mobile device.

Decision History

At its meeting on January 25, 2018, the TTC Board considered and adopted, with amendments, the [TTC Corporate Plan](#). This plan highlights the need to develop a fare strategy and connect the region by achieving broader fare integration. The TTC will also need to ensure that it keeps up with the changing technologies and strides in modernization as outlined by Critical Path 5 in the Plan.

At its meeting on October 24, 2019, the Board moved a motion to complete a [Fare Collection Request for Information \(RFI\)](#). The RFI will help the TTC determine new service providers and technologies, including Open Payment, being used by transit properties worldwide. The intent is to provide customers with a modern, efficient and customer-focused fare collection system.

At its meeting on December 12, 2019, the TTC Board considered a report entitled the [5-Year Service Plan & 10-Year Outlook](#), which identified service-related improvements to public transit in the city of Toronto between 2020-2024 and beyond.

At its meeting on May 13, 2020, the TTC Board considered a report detailing the proposed scope of work for two TTC policy documents: the [5-Year Fare Policy and the 10-Year Collection Outlook](#).

At its meeting on September 24, 2020, the TTC Board received the report, [PRESTO Annual Update](#) on the PRESTO implementation achievements, the progress on the negotiations with Metrolinx on further improvements to the PRESTO system, how to achieve the remaining key milestones, and resetting the TTC's ongoing relationship with PRESTO.

At its meeting on February 10, 2021, the TTC Board received the report, [PRESTO, Fare Policy and Collection Strategy Update](#) on the PRESTO implementation achievements, progress made since the last update in September 2020, and ongoing negotiations with Metrolinx on achieving the key remaining milestones. This report also provided a progress update on the development of the 5-Year Fare Policy and 10-Year Fare Collection Outlook.

At its meeting on May 12, 2021, the TTC Board received an update on the [5-Year Fare Policy and 10-Year Fare Collection Outlook](#). An analysis of the existing TTC fare policies and the findings from the fare collection RFI were presented. Seven strategic fare policy goals were approved, which have informed the technical analysis of several fare options. Staff were also directed to move forward with vendor demonstrations of Full System Integrators.

At its meeting on February 10, 2022, the TTC Board received an overview of the opportunities and benefits of a fare capping model along with key findings and messages from various stakeholder and customer groups, titled: [Advancing the 5-Year Fare Policy](#). Fare capping was endorsed in principle, with a motion directing staff to conduct additional financial analysis to be presented to the Board.

At its meeting on February 10, 2022, the TTC Board received an update on [TTC's Fare Collection Modernization](#) initiatives and endorsed in principle the technology and operations fare collection options in principle, including Open Payments, that informed the implementation plan.

At its meeting on June 23, 2022, the TTC Board received the report, [TTC's 10-Year Collection Outlook – Modernizing Fare Collection](#) on the TTC's Fare Collection Modernization, including overview of the progress made with the 10-Year Fare Collection Outlook, including a Business Case Outline, and a PRESTO update on how business deliverables have been progressing with Metrolinx.

Issue Background

The TTC's vision for modernization through the use of technology to improve customer experience and flexibility of fare payment predates the establishment of PRESTO.

Metrolinx was established as an agency of the Ontario Government in 2006, and in 2008 adopted the Regional Transportation Plan ("the Plan"). The Plan set out the priorities, policies and programs for a GTHA-wide transportation system with the continued development and implementation of the PRESTO electronic fare system as part of its scope.

The TTC had long considered the benefits of implementing automated fare collection technology, supported by comprehensive studies in 2000 and 2007. The [2007 Business Case Review](#) report outlined the concept of operations for a smart card system that would be owned and operated by the TTC, highlighting benefits, costs and risks. It concluded that although the TTC's current fare system had limitations, it was

comparatively more cost efficient to operate compared to the technology then available, and did not need to be replaced. The report also concluded there were some TTC business needs that were not fully supported by the PRESTO system, which was under development at the time.

TTC staff were directed to review with the Province how TTC business needs could be accommodated by the PRESTO system and to consider the associated overall financial impact for the TTC/City. The results of ongoing discussions were outlined in a [November 2009 report](#), with the most significant risk noted that provincial funding for ongoing TTC capital programs and projects could be jeopardized if the TTC did not adopt the PRESTO system. The report recommended that the TTC adopt PRESTO to achieve TTC objectives for an automated fare collection system.

The TTC and Metrolinx entered into a Master E-Fare Agreement (“the Agreement”) with the goal to achieve the provincial inter-regional policy objective: Increase and improve cross-boundary travel through a single fare media across the GTA.

The parameters for an agreement with PRESTO were still under discussion in May 2010 when TTC staff were directed to engage a consultant to assist with developing the business case for an Open Payments fare collection system. In September 2010, TTC staff were directed to complete the procurement, identify the successful proponent, and seek agreement with the Province for a plan to implement a system based on Open Payments. Through a Request for Proposal process in 2010, a successful proponent was identified after being deemed capable of meeting the TTC’s business needs.

During the discussions that began in fall 2010, the Province and Metrolinx maintained that the common PRESTO Farecard system was their recommended approach to achieving the Plan’s inter-regional policy objective of increasing cross-boundary travel. The Province and Metrolinx committed to upgrade the PRESTO system to meet the TTC’s distinct and forward-looking customer, business and financial needs, including advances in fare payment technologies using Open Payments. Adoption of PRESTO by the TTC, was also introduced by the Province as a condition for the TTC to continue to receive provincial gas tax funding, amongst other capital grant contributions. The adoption of PRESTO was approved by the Board in June 2011, subject to developing acceptable operating and financial agreements and confirming the funding necessary to proceed.

The TTC entered into the Agreement with Metrolinx on November 12, 2012. The base term is 15 years (expiring in 2027), with an option to extend for one additional year at Metrolinx’s discretion and an additional four years by mutual agreement. Key elements of the Agreement include:

- Metrolinx to make modifications and enhancements to the PRESTO system to allow for an e-fare account based payment system with an open architecture using industry standards to accommodate open loop financial cards, mobile applications and future technological innovations (“PRESTO Next Generation”).
- Metrolinx to finance, implement and operate the PRESTO Next Generation system and provide a wide range of “managed services” (e.g. back office

operations; customer services; revenue collection and maintenance of all system field equipment).

- In return, TTC to pay a fee of 5.25% of TTC fare revenues processed through the PRESTO system.

Current Status: Milestones Achieved

To date, the TTC and Metrolinx have accomplished a number of fundamental activities needed to enable a full customer transition to the PRESTO Farecard system.

Milestones achieved since 2012 have included:

- PRESTO readers have been installed on all buses, streetcars, Wheel-Trans vehicles and contracted accessible vans.
- New fare gates have been installed at all subway stations.
- Vending Machines selling PRESTO fares at all subway stations.
- City of Toronto's Fair Pass Program was launched in April 2018, which provides a discount for eligible adult residents when using the balance on their PRESTO card or a monthly pass.
- Two-Hour Transfer was launched in August 2018, which makes short-distance travel more affordable for all customers.
- The monthly TTC Metropass was moved on to the PRESTO card.

In September 2020, staff provided the Board with a comprehensive PRESTO update, including the additional achievements made towards the full implementation of PRESTO, including:

- The discontinuation of ticket and token sales at all subway stations;
- PRESTO acceptance on cross-boundary and downtown express routes, and on Wheel-Trans vehicles; and
- PRESTO Tickets for one ride, two ride and day pass are widely available at TTC stations and the retail network.

However, the September 2020 report also noted that the remaining gaps in the Agreement prevented the TTC from fully migrating onto PRESTO. While some progress had been made since 2012, it was not enough to realize the full vision of the Agreement between the TTC and Metrolinx. As a result, the TTC and Metrolinx entered into Settlement Negotiations to resolve the remaining gaps:

1. *Open Payment and Account-Based Technology*: To provide more convenience and a better customer experience.
2. *Flexible Fare Rules and Policy*: Updated and expanded to better meet the TTC's present and future fare system.

3. *System/Device Performance and Functionality*: Improved to reduce the instances where system faults result in customers not being able to use their PRESTO card or ticket.
4. *Limited Use Media (PRESTO Tickets) on surface vehicles*: Providing cash-paying customers with a machine-readable transfer, allowing electronic access to stations through the fare gates and allowing the TTC to move to its new station model.
5. *Expansion of the PRESTO third-party network*: To improve access to purchase and reload PRESTO cards, especially those who want to load with cash.

In February 2021, a further update was provided on the ongoing settlement negotiations, outline Metrolinx's re-procurement of their major vendor and an update on the delayed Open Payments launch. More details on the five key gaps can be found in Attachment 2.

Since February 2021, the TTC and Metrolinx have collaborated to address some of the gaps, resulting in long-awaited modernized fare payment options for TTC customers.

Bulk Sales

As part of the Agreement, and to further our fare modernization efforts, the TTC is looking to discontinue the TTC ticket and token in favour for PRESTO and Open Payments. A dependency to stop selling tickets and tokens was to enable bulk sales of PRESTO Tickets (LUMs) to social agencies, city programs and other institutions to provide and distribute fares for their clients.

In 2022, the TTC and Metrolinx collaborated to transition approximately 200 institutions from TTC Legacy fares to PRESTO Tickets through a new Bulk LUMS sales program. The program has successfully sold 1.4 million PRESTO tickets since June 2022. This work has enabled the TTC to end the sales of its TTC Legacy tickets as of July 2022. The TTC has seen an approximate 40% decrease in the usage of TTC Legacy tickets and tokens since the introduction of the new BULK LUMs program. The number of TTC tickets held by customers is declining, and as a result TTC Legacy tickets will no longer be accepted as valid fare payment after September 4, 2023. This will be widely communicated to customers well in advance of that date. TTC tokens are still sold through a network of third-party retailers, and with the declining sales and low use of tokens, the TTC will stop selling tokens to retailers, and close down our TTC retail sales program as of March 10, 2023. No date has been set for when tokens will no longer be accepted for valid fare payment.

Open Payments

A major component of the 2012 Agreement is the delivery of Open Payments – paying a fare with a credit card or debit card – which could be either a physical card or one in on a mobile wallet. The foresight in our 2012 Agreement will be partly realized, and Metrolinx has committed to deliver Open Payments for adult customers in Q3 2023.

PRESTO Virtual Cards, a PRESTO card on your mobile device, will also be launched to extend fare modernization to all customer groups (youth, senior, fair pass and post-secondary).

In 2022, the TTC agreed in principle to the Metrolinx's Open Payments plan and shared a set of conditions to proceed in order to modify the already designed solutions in place for UP Express and the regional transit agencies around Toronto. The conditions were required to meet the needs of the TTC's customers and to provide them with a world-class, innovative Open Payments platform, and aligning the TTC with our peers internationally. The conditions include real-time fare processing, real-time inspections and the removal of pre-authorization fees. More information is provided in Attachment 2.

The TTC continues with its proactive approach by redefining our fare collection strategy, in preparation for the end of the Agreement, at the end of 2027.

In 2022, the TTC completed its visioning exercise for the 10-Year Fare Collection Outlook¹ ("the 10-year Outlook"), which identified a roadmap for Fare Modernization driven by Fare Policy. It also identified two options for implementation:

- 1) Renegotiating with Metrolinx and continuing with a next-generation PRESTO system from 2027; or
- 2) Evaluating in detail a TTC Risk Mitigation Plan to determine whether the best path is to move forward with an independent fare collection system from 2027.

A business case will be completed in Q4 2023 and will further compare the two system options based on cost, governance and schedule.

In the near-term, Metrolinx is in the process of procuring its next-generation PRESTO system, targeted to be fully completed in 2025. The outcomes of the 10-Year Outlook and the Risk Mitigation Plan will be used as the basis for the TTC's input into the process to ensure a feature-rich system that meets our customers' needs today and in future years.

Comments

Status of Remaining Requirements

Since the Board Update in February 2021, the TTC and Metrolinx have had success addressing some gaps and outstanding business requirements, such as a partial Open Payments launch in 2023. However, there are still more than 30% of our requirements to be completed and there are five major gaps that are still unmet by Metrolinx and continue to have an impact on our customers and operation performance. They are identified in Table 1:

¹ [10-year Fare Collection Outlook- June 2022 Board Report](#)

Table 1: Status of Remaining Gaps from the Agreement

Remaining Gaps from the Agreement	Current Delivery Date	Status and Remaining Gaps	Current Customer Impact
<p>1. Open Payment and Account- Based Technology</p> <ul style="list-style-type: none"> • <u>Account Based Technology</u>: Flexible fare products and real-time loading/payment • <u>Open Payment</u>: Purchase fares using contactless debit/credit cards or mobile wallet • 90% in progress, 10% outstanding requirements with no delivery date confirmed yet 	Q3 2023	<i>Partial Open Payments (Adult Only)</i>	<ul style="list-style-type: none"> • No ability to pay a fare with credit and debit cards already in a customer’s wallet or mobile wallet. Removing the need for proprietary fare cards, which holds a customer’s money until used • If using a PRESTO card, loading is not always real-time and there are limited fare products possible
	TBD	<i>Full Open Payments</i> Timelines not yet provided by Metrolinx for the remaining Open Payments functionality	
	TBD	<i>Full System Account-Based</i> To be achieved after Metrolinx’s PRESTO procurement – indicated to be complete at the end of 2025, but not confirmed	
<p>2. Flexible Fare Rules and Policy</p> <ul style="list-style-type: none"> • Flexible and dynamic fare policies and fare products: Location or time of day, changes within 24 hours, multiple loyalties • 100% outstanding requirements with no committed delivery date 	TBD	Metrolinx’s PRESTO procurement will deliver an account-based system – required to fulfill the requirements	<ul style="list-style-type: none"> • Limited fare options, which could offer customers the best price automatically

Remaining Gaps from the Agreement	Current Delivery Date	Status and Remaining Gaps	Current Customer Impact
<p>3. System/Device Performance and Functionality</p> <ul style="list-style-type: none"> • Device reliability and monitoring, replace all fare payment readers to enable Open Payment • Additional Features on Vending Machines • Customer Channel Improvements and Call Centre integration 	Q2 2023	<p>Four delays to deliver accurate performance metrics and reporting from October 2021, with a new target completion date for May 2023.</p> <p>TTC is receiving compensation for loss fare revenue from Metrolinx in the interim.</p>	<ul style="list-style-type: none"> • TTC unable to hold PRESTO fully accountable to meet the Service Level as agreed.
<p>4. Limited Use Media (PRESTO Tickets) on surface vehicles</p> <ul style="list-style-type: none"> • PRESTO Tickets (LUMs) available via dispensers as proof-of-payment (POP) for cash fares on board vehicles • PRESTO Tickets for Groups and Special Events • 10% fulfilled, 90% outstanding requirements with no delivery date confirmed yet 	TBD	<p>Requirement Review Sessions started in January 2023.</p> <p>Metrolinx to provide solution and completion plan for TTC approval by end of March 2023. However, the delivery date may move out to 2025 after its procurement is complete.</p>	<ul style="list-style-type: none"> • Customers paying with cash or Legacy fares are provided a paper transfer, that does not open fare gates or provide the two-hour transfer. This impedes the TTC's ability to enable Station Transformation • No PRESTO tickets with different fare types that can be offered to Groups and Special Events

Remaining Gaps from the Agreement	Current Delivery Date	Status and Remaining Gaps	Current Customer Impact
<p>5. Third-Party Fare Media Network</p> <p>Metrolinx to ensure:</p> <ul style="list-style-type: none"> • “the third party network extends across the City of Toronto” • “the same convenience and accessibility as TTC’s current network” • 100% outstanding requirements 	TBD	<p>Since Settlement in 2021, little movement has occurred and time is running out. Metrolinx’s PRESTO procurement will pause new functionality, including additional retailers, as they switch to new vendors.</p>	<ul style="list-style-type: none"> • Limited locations to load a PRESTO card with cash or set the fare type, specifically in the northwest of Toronto and Scarborough

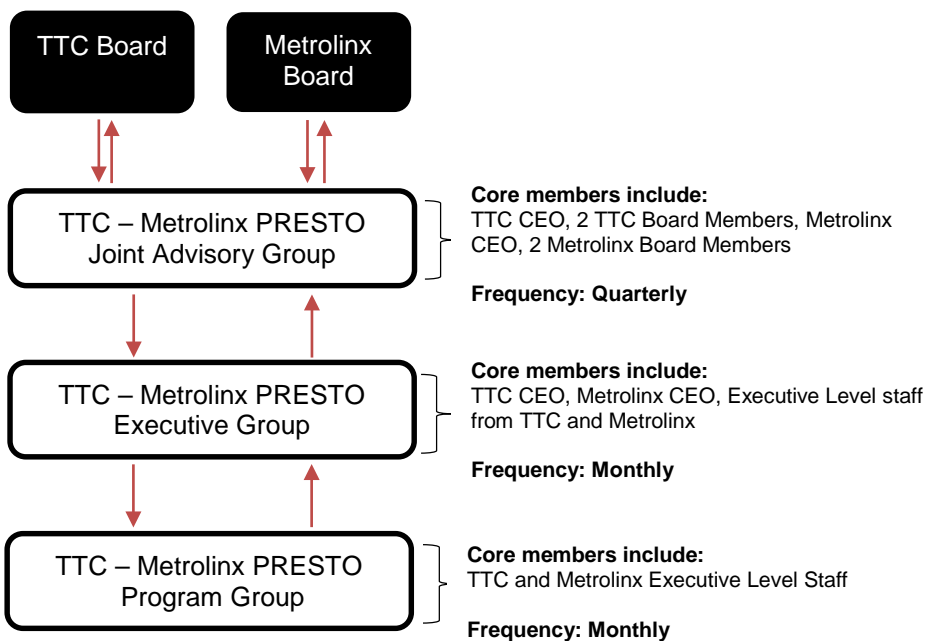
Program Oversight

In order to provide oversight to this critical program, the TTC had the foresight to include governance as part of the Agreement, called the PRESTO/TTC Joint Executive Committee (JEC). Since then, governance structures have changed resulting in four different iterations over the past 10 years. As of 2019, all 11 transit agencies with PRESTO were combined into one governance forum as an effort to improve collaboration and achieve consensus among participating agencies. However, in practice, the TTC was limited in our capacity to achieve meaningful change and improvements to the system for our customers.

As PRESTO's largest client with more than 65% of the system transactions with over \$30 million paid in commissions in 2022 (approximately \$46 million paid in 2019 at pre-pandemic ridership levels), there is a need to look at future governance models for the next generation of the fare collection system that ensures the TTC has direct voice at the table with the vendor.

Through settlement negotiations, it was critical that a TTC specific governance be reformed to increase transparency, accountability and develop stronger working relationships. The TTC and Metrolinx developed an updated governance structure (Figure 1).

Figure 1: CURRENT TTC-Metrolinx Governance Model



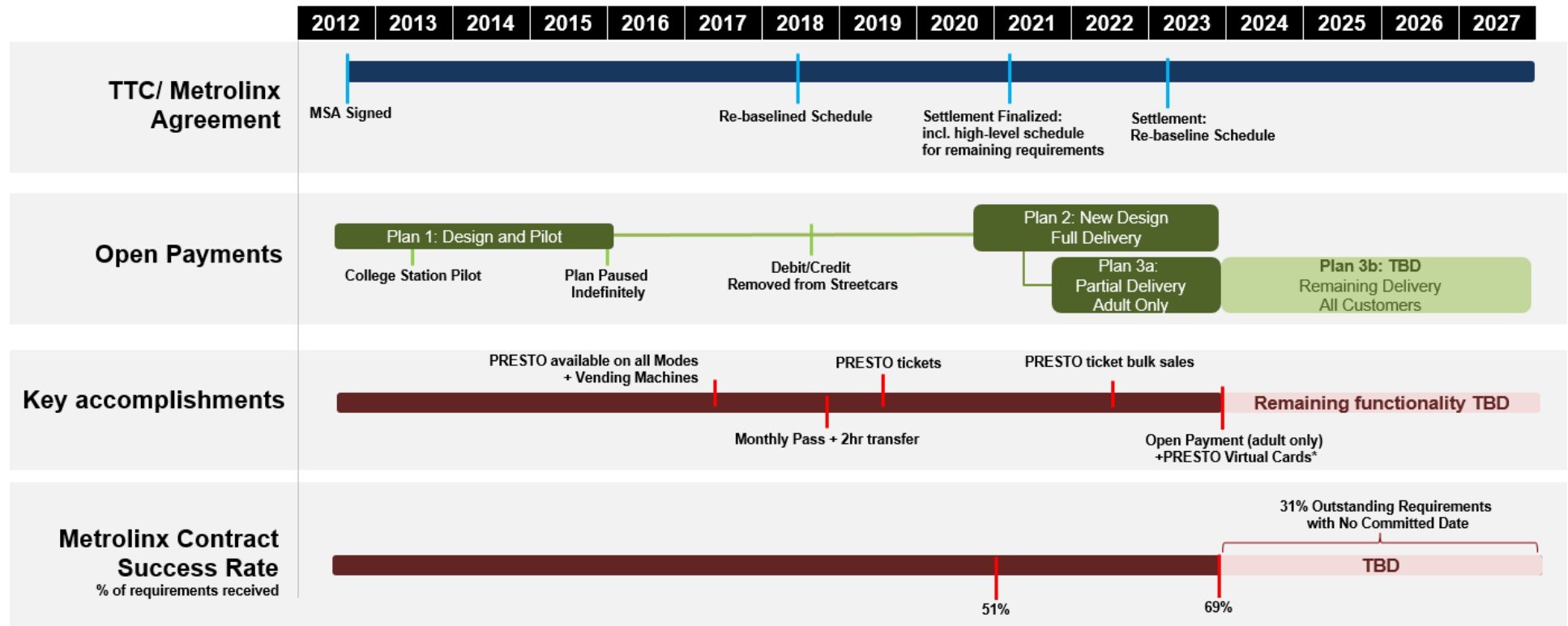
An outcome of the 10-Year Outlook found that effective governance is imperative to the success of any Fare Collection system. Through a gap analysis and consultations with internal and external stakeholders, it found that the TTC/Metrolinx governance is ineffective in achieving the TTC's vision and goals and cited the following areas of concern:

A. *Metrolinx has not shared full insight into the planning and execution of multi-year strategies and modernization roadmaps.*

Further consultation with the TTC is needed in the creation of modernization strategies and plans. For example:

- Further information is required on PRESTO's Modernization roadmaps to ensure they capture the needs of our business and of our customers, often relying on research and analysis done in-house. The outcome is often reworking existing roadmaps to fit in TTC requirements.
- The needs from all agencies in the GTA are not connected. This leads to inconsistent customer experiences, such different products in different agencies. Metrolinx's mandate for PRESTO is to enable fare integration. However, multiple inconsistencies exist today as a barrier to achieving this objective, such as different fare products and payment methods.
- The TTC does not know the transition plan for Metrolinx's upcoming procurement, which may pause any new functionality or delivery of the remaining gaps until the end of 2025. Further, Metrolinx's procurement has shifted multiple times towards the end of the Agreement, leaving little time for Metrolinx to deliver the remaining requirements.
- Frequently re-baselining schedules for both delivering functionality and products. Examples of this include (Chart 1):
 - Re-baselining the settlement timelines, leaving little time to deliver on the remaining requirements post Metrolinx procurement, end of 2025.
 - Timeline to deliver Open Payments, where 10 years have passed and several delivery dates have been promised (November 2022 and Q3 2023).

Chart 1: PRESTO Timelines and re-baselined schedules.



*not part of the Agreement

B. More consultation on the design of new functionality or products is needed to fully address TTC's business or customer needs.

Often the TTC is not part of the functionality that is designed for key components of the system. For example:

- Open Payments were designed and built for the UP Express, a one-line, premium transit service to the Toronto Airport. This is in contrast to the TTC with TTC weekday ridership currently averaging over 1.2 million rides per day on varying modes, for customers of varying backgrounds and where affordability and equity are a priority.

Since the TTC were not part of the original design, the TTC included 11 conditions to redesign the UP Express Open Payment solution to ensure it would meet our customers' needs. This includes the real-time fare inspections and removal of pre-authorization holds. More information can be found in Attachment 2.

- The Agreement outlines a specific design process that is often not met by Metrolinx, providing little oversight or details on the specificities of a solution. Moreover, Metrolinx's vendor is responsible to deliver on the design and implementation of any new products or functionality. However, often times, there are few instances where Metrolinx, its vendor and the TTC meet to review designs and implementation plans.

Metrolinx Recovery Plan Status

A notional Recovery Plan has been delivered by Metrolinx and states that business and customer outcomes such as machine readable transfers that will enable customers to use a transfer at the fare gate may not be implemented until the end of 2025 (which is 13 years after the start of the contract). The Recovery Plan is required to provide the TTC with a holistic view of contract deliverables, including all interdependencies and any impacts associated with Metrolinx's procurement for its next-generation PRESTO fare collection system.

The TTC continues to seek clarity from Metrolinx on how the new PRESTO procurement will fulfill the remaining requirement gaps from our current agreement or our future requirements from the 10-Year Outlook. A traceability of our contract requirements to the procurement RFP is still pending from Metrolinx.

By the end of 2024, the TTC will begin to see the outcomes of Metrolinx's procurement and our own Risk Mitigation Plan, and will be able to make a decision on our path forward come the end of our Agreement with Metrolinx.

Attachment 2 provides further details on the Settlement outcomes and remaining gaps to be fulfilled by Metrolinx.

The TTC's Risk Mitigation Plan is underway starting with the development of a Business Case in progress to determine our path forward once our Agreement with Metrolinx is at term in 2027.

Metrolinx has informed the TTC they will not exercise their right to extend the Agreement by an additional year, concluding the Agreement at the end of 2027. However, the Agreement does provide for an automatic extension of the contract by four years unless either Metrolinx or the TTC decides to opt out of this extension on or before November 2025. The TTC is undertaking a Risk Mitigation Plan, including the business case and preparing our business requirements in 2023 to determine how to proceed beyond 2027.

Prior to the Agreement with Metrolinx in 2012, the TTC completed a comprehensive Business Case, Concept of Operations, developed Business Requirements and issued an Request for Procurement. This ensured the TTC had a comprehensive understanding of the fare collection landscape, commercial models and our business and customer requirements to achieve the best possible outcome for our customers and the TTC.

The current Risk Mitigation Plan follows the same approach to ensure that the TTC is well-equipped to either renegotiate with Metrolinx on a new agreement or procure its own system. Since the Agreement in 2012, the fare collection landscape has been transformed and the market has changed. Therefore, a comprehensive Business Case, concept of operations and business requirements would include new models and technology not available when this work was originally done in 2012.

The Business Case currently underway will compare the two options based on cost, governance and schedule, and will include the following major components:

- Concept of Operations
- Implementation and Transition
- Procurement Plan
- Governance and Oversight
- Staffing and Resourcing Plan
- Capital Cost Analysis
- Operating Cost Analysis
- Cost of Fare Collection Summary
- Funding and Commercial Models

A final Business Case will be brought to the Board in Q4 2024.

Key lessons learned from the existing agreement and governance model will be taken into consideration in the development of the business case. The TTC needs to accelerate our timelines, and in 2023 begin developing our future requirements for a new Fare Collection System. These future requirements, coupled with the Concept of Operations and Business case, will provide us with the insights and knowledge required for either scenario:

1. Negotiation a new Agreement with Metrolinx; or
2. Procure an independent Fare Collection System

Given the limited timeframes, complexity and depth of this work, the TTC will hire a consultant, with experience developing fare collection requirements for a large transit agency, to support future requirement gathering. Staff will report back to the Board in April with a full costing and scope of this work.

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Signature

Scott Haskill
Chief Strategy and Customer Officer (Acting)

Attachments

Attachment 1: Confidential Attachment
Attachment 2: Top five gaps in the Key Business Requirements as of 2023
Attachment 3: TTC Fare Modernization Program 2023

Attachment 2: Top five gaps in the Key Business Requirements as of 2023

The previous PRESTO update report in September 2020 highlighted the top five gaps in the Key Business Requirements and functionality that had yet to be delivered from the 2012 Master E-Fare Agreement:

1. Open Payment and account-based technology
2. Flexible fare rules and policy
3. System/device performance and functionality
4. Limited Use Media (PRESTO Tickets) on surface vehicles
5. Third-party fare media network

Below outlines the progress of the top five gaps:

1. Open Payments

We are working with Metrolinx to launch in Q3 2023 enabled Open Payments for adults (Credit/Debit) and PRESTO Virtual Cards for all customers (PRESTO card on a mobile device), offering the first fare modernization since the PRESTO card was fully implement at the end of 2019.

Delivering Open Payments has been a priority for the TTC since the signing of the Agreement with Metrolinx. However, the original the delivery date of Open Payments has moved several times:

- An initial pilot was conducted in 2013 with design discussions continuing into 2016, but no further development work was completed.
- During Settlement discussions in 2020, Open Payments were slated to be delivered in 2023 after the Metrolinx procurement was complete. However, the procurement plan has also shifted.
- In late 2021, Metrolinx proposed an accelerated Open Payments plan (release 1) with delivery at the end of 2022 for adult customers only. The TTC agreed in principle to the proposed Open Payments plan and shared a set of conditions to proceed based on early review of the solution. The TTC worked with Metrolinx on the detailed design and implementation plan of Open Payments and Virtual Cards to ensure the original solution developed by Metrolinx for UP Express, meet the interests of our customers and encompasses our business needs. A revised plan was developed collectively to incorporate:
 - Sufficient time for testing, piloting and contingency planning.
 - A solution that meets the needs of TTC customers and our business, including real-time fare transactions and real-time fare inspections, a different experience than that of the current UP Express implementation.
 - PRESTO Virtual Cards must be launched at the same time as Open Payments to expand fare modernization to all TTC customers, not just adults.
 - Debit pre-authorization fees will not exceed the total cost of the trip and will not cause undue burden to the customer as any pre-authorization fees will be closed within the two-hour transfer window.

- Since then, timelines have shifted again to Q3 2023 as Metrolinx's proposal for accelerated implementation of Open Payments and Virtual Cards has proven to be very aggressive.
 - Additional time was required to accommodate supply chain issues, and additional time Metrolinx to redesign the existing solution to meet our needs and requirements.
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The 2023 launch of Open Payments and Device Refresh many of our Business Requirements however, we have minimal line of sight to when the remaining requirements will be met, such as Open Payments for all fare types (release 2). Complicating matters is PRESTO's procurement program, which is targeted to be completed at the end of 2025.

2. Flexible Fare rules and policy

The TTC has done significant work on its first 5-Year Fare Policy. The TTC's fare policy vision is to ensure that transit is the obvious way to travel, ensuring that no one is excluded because of cost, technology or complexity of fares. Having a continued understanding of the differentiated needs of customers in the current environment is critical to achieving this vision, as well as improving the fare collection system by ensuring that it is driven by policy goals and decisions.

The Agreement specified a flexible system that could be changed to support dynamic fare policies and fare products without requiring large software updates. The current PRESTO system is inherently limited by its current technology to provide this flexibility. For example, it often takes multiple weeks to complete a fare change compared to our business requirements, which states no more than 24 hours. Further, it is the mandate of Metrolinx and PRESTO to deliver fare and service integration in the region. Nevertheless, when passes were migrated onto PRESTO, the PRESTO system was unable to support the implementation of the TTC's GTA Weekly Pass, which led to its elimination with no equivalent replacement pass.

The flexibility outlined in our Agreement and identified through the 5-Year Fare Policy, can be supported by an account-based fare collection system. Metrolinx is currently in the process of procuring a new system that will be account-based, to be fully transitioned over by the end of 2025.

3. System/device performance and functionality

The TTC and Metrolinx reached an agreement to replace all fare validators on vehicles and inspection devices to enable an Open Payments launch. These are the same validators in use by GO Transit and 905 transit agencies. The TTC conducted performed testing on these devices and confirmed the new devices meet the performance and reliability requirements. Installation plans were finalized in October 2022. Device Refresh commenced in October 2022 with target to complete the installation on all TTC vehicles by end of March 2023. Significant progress has been made: 100% of devices on Wheel-Trans vehicles completed in December 2022, 92% of streetcars and 10% of buses completed at the end of January 2023.

Upon testing completion with acceptable results, HHPOS (Handheld Points of Sales) devices used for inspection will be deployed starting in April 2023.

The TTC and Metrolinx had also jointly agreed on the SLAs for device availability, service Key Performance Indicators (KPIs) and the mechanism for calculating loss of revenue in July 2021. Metrolinx-PRESTO needed to update their monitoring and performance reporting systems to generate accurate device availability data by October 2021. However, the delivery schedule has moved out four times due to numerous defects that were identified during testing. The current target completion date is now May 2023. The TTC is unable to receive performance metrics reports to hold Metrolinx accountable for their managed service performance.

Fraud Management is an area with not much progress achieved. There was one joint requirement review session in 2022, but since then, Metrolinx had not presented the fraud management strategy and plan to the TTC for further discussion and review. As of now, there is a lack of fraud reporting from Metrolinx. The TTC does not have a clear understanding of how Metrolinx manages fraud issues that would have an impact to TTC revenue and reputation.

The completion plan to fulfill requirements related improvements to Vending Machine usability and customer channels (i.e. PRESTO website and call centre) are still outstanding. Metrolinx is targeting to deliver the plan for TTC approval by end of March 2023.

4. Limited Use Media (PRESTO tickets) on surface vehicles

In 2022, Metrolinx successfully set up a Bulk LUMs sales program for social agencies and institutions to purchase PRESTO Tickets directly from Metrolinx. This enabled the TTC to stop selling TTC Legacy tickets in mid 2023. Since June 2022, there were 1.4 million PRESTO tickets sold through this program.

There is another set of requirements to introduce Limited Use Media (LUMs) for customers who want to pay cash on TTC buses and streetcars. The original intent of our vision was to make all fare payment validation automatic, meaning TTC staff would no longer need to visually inspect and validate fares. Instead, customers can “tap” a fare media on a PRESTO validator or TTC fare gate, just like using a PRESTO card. At

subway stations, we envisioned Customer Service Agents who no longer needed to visually validate fares and stay located at the fare line. They instead could be mobile and assist customer throughout the stations.

The delivery of this set of requirements would allow our Stations Transformation program to be fully realized, and to retire our current paper transfers. Review sessions are now underway and Metrolinx is targeting to provide options to the TTC no later than the end of March 2023. However, this initiative will likely not be delivered by Metrolinx until the PRESTO procurement is completed at the end of 2025.

5. Third party fare media network

In northwest Toronto and Scarborough communities, there are limited locations for customers to access and acquire PRESTO fare media.

Data shows that customers rely on physical locations to access and acquire PRESTO fare media. These locations are important as they allow customers to make purchases using cash, purchase and load PRESTO cards and PRESTO Tickets, and set concessions. The third-party network of PRESTO retailers focused on Loblaws-brand retailers, such as Shopper Drug Mart. However, these retailers are not present in all neighbourhoods, with the most significant gaps located in northwest Toronto and Scarborough communities.

The Business Requirements included in the Agreement state that Metrolinx shall establish a retail network (or third-party agent network) as part of the managed services. Although Metrolinx is provided discretion in how it establishes the retail network, the Business Requirements provide that third-party agents should, "...provide the same convenience and accessibility as TTC's current sales network."

The scope, coverage and convenience of the current third-party network does not satisfy the Business Requirements specified in the Agreement. The third-party network that Metrolinx has delivered to date does not provide the same access that is provided to customers through the TTC's existing third-party retail network.

As of 2022, there are only 165 retail locations in the city of Toronto to access PRESTO. This in contrast to the TTC's own retail network prior to the introduction of PRESTO, which had about 1,200 locations. The TTC recognizes that the alternatives for customers with the introduction of PRESTO, such as online or the PRESTO app. The need still remains for many customers to access PRESTO at an in-person retail location as illustrated by other large transit agencies in North America:

- Chicago Transit Authority's Ventra Card has over 850 locations and continues to expand as demand continues to remain high for customer wanting an in-person experience.
- Metropolitan Transportation Authority in New York, which manages its OMNY cards, has over 4,500 locations.

We continue to hear from advocacy groups and customers that more retail locations are needed. This is understandable as approximately 50% of our customers start their journey on a bus, where a retail location is likely further than their local bus stop. Metrolinx's near-exclusive agreement with Loblaws does not allow other retailers to sell PRESTO within a 1.2-kilometre radius or a 15-minute walk. There are few exceptions, such as municipal services locations. The settlement negotiations in 2021 outlined a plan to begin working these options, though little movements have happened since those discussions.

Metrolinx-PRESTO Procurement

The TTC continues to work with Metrolinx to ensure that our current and future requirements are incorporated in their PRESTO procurement.

Metrolinx is in the process of re-procuring vendor(s) who provide the payments technology and equipment for the PRESTO fare collection system, as their current vendor's contract expires at the end of 2025. The next generation of PRESTO would enable progressive fare collection innovation, including a full account-based system and open architecture.

An account-based system is quickly becoming the industry standard for a modernized fare collection system and will align the TTC with our peers in Chicago, New York and Boston. Metrolinx's transition to a new account-based system will enable business requirements that cannot be accommodated on the legacy system due to current technology limitations.

However, PRESTO's procurement has been delayed by several years and is currently in progress with contracts to be awarded at the end of 2023 and a 24-month transition period to the end of 2025.

A freeze period will be imposed by Metrolinx to stop all projects that have not started prior to Q2 2023 to facilitate their transition planning. The TTC is currently unclear of the impact that PRESTO's procurement will have on delivery on our business requirements, given that the term of our Agreement ends in December 2027, only two years after procurement is completed.

Through Settlement negotiations, delivery plans for the remaining business requirements were co-created between the TTC and Metrolinx with a delivery date of the end of 2024. This previously aligned with the completion of Metrolinx's procurement.

In Attachment 3, the delta between the delivery plans and the completion of PRESTO's procurement is identified by To Be Determined (TBD). This illustrates how Settlement delivery and PRESTO procurement continue to be pushed further into the future and remains unclear how Metrolinx will deliver the remaining business requirements in the years 2024-2027.

Attachment 3 – TTC Fare Modernization Program

