



PRESTO Today & Tomorrow

Request for Information

2022 Procurement Program

Tender Reference # RFI-2020-PVMD-065

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1 Introduction

Metrolinx has spent over a billion dollars on PRESTO's fare management system and related services since PRESTO's inception.

Metrolinx is currently at a crossroad and is seeking partners for PRESTO's future.

This Request for Information is the first step in a phased procurement exercise that will move quickly in 2021. We will be using the data we gather to create a strategy that reduces costs and assures a seamless and successful transition for the benefit of our clients and customers.

We appreciate your time and effort in helping us by responding to this Request for Information.

1.1 Purpose of this document

The purpose of PRESTO Today and Tomorrow Request document is to:

1. Give an overview of Metrolinx & PRESTO, and the environment we operate in
2. Describe PRESTO's objectives for this RFI, and what we want from you, the vendors
3. Outline PRESTO's business objectives
4. Set out the Request for Information (RFI) process and timeline, including how this document relates to the included attachments

The second section (from section 5) of this document becomes more technical and seeks to:

1. Outline PRESTO's vision and high-level business objectives
2. Show PRESTO's desired future transit rider experience
3. Explain the business models PRESTO has with its transit agency clients
4. Describe PRESTO's end to end System

Any response to this RFI will be voluntary and will not be a precondition to bidding on any subsequent opportunity.

Please note that The TTC and YRT recently released a separate Request for Information (reference number R01PV21001) to inform their 5- and 10-year fare collection strategies. These market requests are complementary. Metrolinx has been working closely with the TTC in the development of that RFI, and Metrolinx and TTC will collaborate on how the resulting TTC policies and strategy informs subsequent Metrolinx procurement activities.

1.2 Metrolinx & PRESTO

Metrolinx is the regional transportation agency of the Province of Ontario, tasked to work with federal, provincial, and municipal partners, the private sector and other stakeholders to create an integrated transportation system to support a higher quality of life, a more prosperous economy and a healthier environment. Metrolinx is responsible for making investment and planning decisions to expand transit and ensure a well-connected region. GO Transit and the Union Pearson Express are operated as part of Metrolinx.

PRESTO is the electronic fare payment system that seamlessly connects 11 transit agencies across the Greater Toronto and Hamilton Area (GTHA) and Ottawa. PRESTO was first conceived through a Request for Proposal issued by the Ontario Ministry of Transportation in 2006. The PRESTO rollout began in 2009 with the installation of payment devices at select GO Transit stations and on select municipal transit buses. In July 2011, PRESTO became an operating division of Metrolinx.

Today, the PRESTO system had over 737 million taps in 2019 across 22,440 devices and 8.3 million active cards over which approximately 2 million are used each month. PRESTO processes over \$2.5 billion per year in fares and over 67 million boardings per month, with an adoption rate of over 70% across all agencies at the end of 2019.

More detailed statistics about the PRESTO system can be found in Appendix 1 of Attachment 1.



Figure 1 – Graphic showing the current agencies served by PRESTO

Further information about Metrolinx and PRESTO can be found at the following links:

- 1) <https://www.prestocard.ca/en/about/using-presto>
- 2) http://www.metrolinx.com/en/projectsandprograms/presto/presto_background.aspx
- 3) <https://blog.metrolinx.com/category/presto/>

2 Context and Purpose of the RFI

The PRESTO Fare Collection Platform, supporting services and customer channels have been developed in partnership with, and managed by, Accenture since PRESTO's inception. With the current contract between Metrolinx and Accenture set to expire in October 2022, Metrolinx is going to market to establish a series of new contracts that result in:

- Decreased total costs,
- Value for PRESTO's customers and agencies
- Ongoing evolution of the PRESTO platform through a modern and flexible technical and commercial approach.

Metrolinx see this as a hugely exciting opportunity to transition from a monolithic, heavily customised platform that is costly to maintain. We aim to become current and even leading in terms of customer experience and product features and move to a multi-vendor operating model encouraging competition across our eco-system and exploring software-as-a-service type approaches. We see this as an opportunity to reduce our upfront and ongoing costs and risk of change, while delivering a modern and frictionless experience for our agencies and their customers.

PRESTO is client & customer-centric and want our new model to enable greater speed to market. This will help innovate the product offering and be more relevant to our clients and customers. PRESTO needs to deliver on outstanding contract deliverables to our clients. We want to meet and exceed these obligations and want proficient and innovative vendors at our sides to do this well.

Specifically, through our questions, PRESTO seeks to understand:

Costs and Commercial Structure – PRESTO wants to understand a rough order of magnitude cost for the seven lots we are planning to procure. Vendors are invited to explain the options PRESTO has at its disposal to lower total cost of ownership. We also looking to optimise the commercial terms that will drive the best value.

Transition strategies and timelines – PRESTO is seeking information to:

1. Better plan the transition approach from our legacy ticketing system to our new ecosystem.
2. Understand the risks and benefits of various approaches.
3. Develop approaches that help us move quickly, minimise dual running of systems (and associated costs) over the transition period.
4. Minimise the expenses required to transition.

Opportunities and Risks – We are open to suggestions that bring us closer to using standard platforms and minimise expensive custom development. We encourage discussing commercial terms that bring value to all parties and minimise cost and risk.

3 PRESTO Business Objectives

Procurement Program Outcomes

Ultimately, Metrolinx and the agencies served by PRESTO will consider the 2022 Procurement a success when it:

1. **Significantly reduces total cost of ownership** of the end-to-end system and services.
2. Delivers a solution that **enables fare policies and is flexible** for future change, ensuring TTC-specific fare collection needs are met alongside other PRESTO member agencies.
3. Ensures **access and equity** for our customers and drives a seamless, **modern fare payment experience** for customers across the region.

3.1 Total Cost of Ownership

Transit Agencies globally are experiencing a drastic drop in ridership prompted by the COVID-19 pandemic. Metrolinx, like many agencies, is using this opportunity to re-evaluate and reduce our total costs while still meeting our Transit Agency client's needs and providing Ontario's transit riders with a world class transit payment experience.

Metrolinx is using the responses from this Request for Information to model the potential cost savings that can be realised during the transition from the current single fare collection services contract to a new multi-vendor operating model and technology stack.

3.1.1 Pricing Models

Metrolinx wants to provide transit agencies and transit riders across Southern Ontario with a modern, state of the art, ticketing system. No one knows how much, or how quickly, ridership will return to pre-pandemic levels – Metrolinx wants to have options on how to manage that unknown variable.

It is important that Metrolinx can budget for upcoming years and implement flexible pricing models for the various elements of the PRESTO fare collection service.

Metrolinx is interested in understanding the different pricing models available, including subscription models, fare payment as-a-service, and other models which balance up front capital investment, ridership and ongoing operational costs over a 5-10 year timeframe. Metrolinx is open to working with suppliers to find a pricing model that works for both parties.

Metrolinx invites vendors to provide options for pricing models and the associated risks and impacts on budgets over a 5-10 year period.

3.1.2 Levers to Lower Cost

PRESTO operates in a complex, multi-stakeholder environment. Multiple Transit Agency clients mean that simplifying fare policy and aligning business rules is challenging, and results in a more complex set of requirements and a need to be extremely flexible.

In order to balance flexibility with an excellent return on investment, PRESTO would like to better understand which outcomes and requirements are the biggest levers to lower cost.

PRESTO is seeking feedback on which of the elements of our Customer Proposition (Section 5.3) and our desired outcomes for each lot (Attachment 1) carry the most delivery risk and are the most costly. We would like your advice on alternatives which will still deliver an excellent transit rider experience, whilst maintaining value for money.

3.1.3 The Ongoing Cost of Change

PRESTO is focused on drastically reducing the ongoing cost of change.

PRESTO wants our system to stay modern, secure, up to date and evolve over time in line with global trends. PRESTO wants to move away from an unpredictable, never ending set of change requests, to partnerships with vendors which have keeping the system “evergreen” as part of the contract and will look for commercial models that address this objective.

PRESTO is asking vendors to propose how they can help us keep ongoing capital costs down while staying modern and current, aligned to other leading transit cities of the world.

3.2 PRESTO’s Procurement Approach and Operating Model

Through the 2022 Procurement, Metrolinx will transition from the current Master Services Agreement to several individual contracts managed by a SIAM (Service Integration and Management) provider.

The current agreement with the incumbent delivers the following core services to Metrolinx:

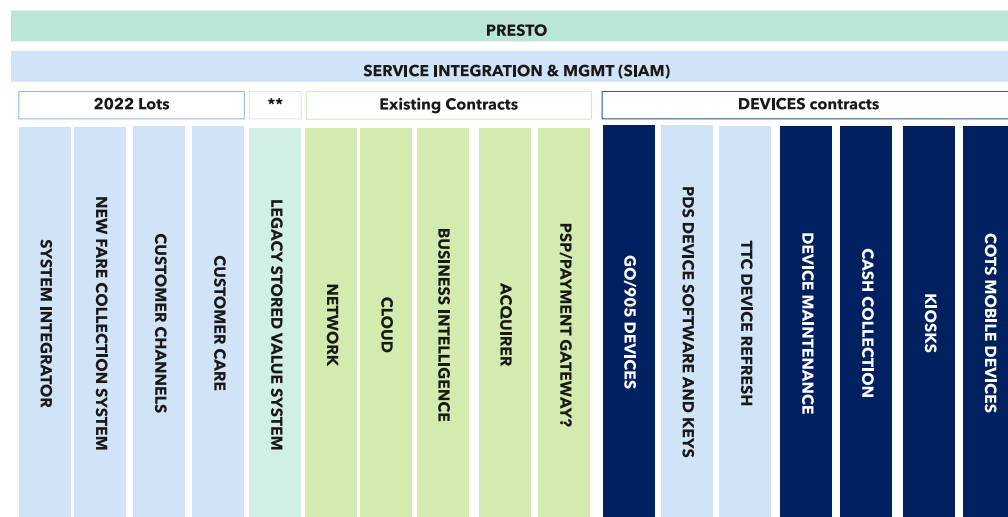
Application Maintenance
Infrastructure Outsourcing
Field Operations
Service Management
Help Desk

Contact Centre - Front Office
Contract Centre - Back Office
Application Development (covering back-office systems, digital customer channels, and fare payment equipment)

Through the 2022 Procurement, Metrolinx will split those capabilities into the following services:

1. New Fare Collection System
2. TTC device refresh
3. PDS Device Software Management
4. System Integrator
5. Service Integrator & Management
6. Customer Channels
7. Customer Care

The 2022 Procurement will result in up to 8 contracts (the 7 marked in light blue below plus the legacy system contract), with the SIAM provider managing the overall Operating Level Agreements and ensuring that all contracts are working together to meet PRESTO's service level agreements (SLAs).



METROLINX

** remaining with incumbent until switched off

*Dark blue indicates existing device contract

PRESTO's Future Contract Landscape including existing contracts with other vendors

PRESTO is seeking feedback from the market on the operating model that we should be striving towards, and how it will meet our objectives, manage risk and drive value for money.

Suppliers will have the opportunity to bid on individual lots or across several lots in a super-bid. Information from this RFI will be used to:

1. Refine and finalise this lotting structure, including the capabilities in each lot.
2. Finalise the sequence to market of the lots.
3. Decide any dependencies or segregation of duties maintained between suppliers to make the overall model commercially, technically, and operationally effective.
4. Optimise the ownership and management of risk across the model.

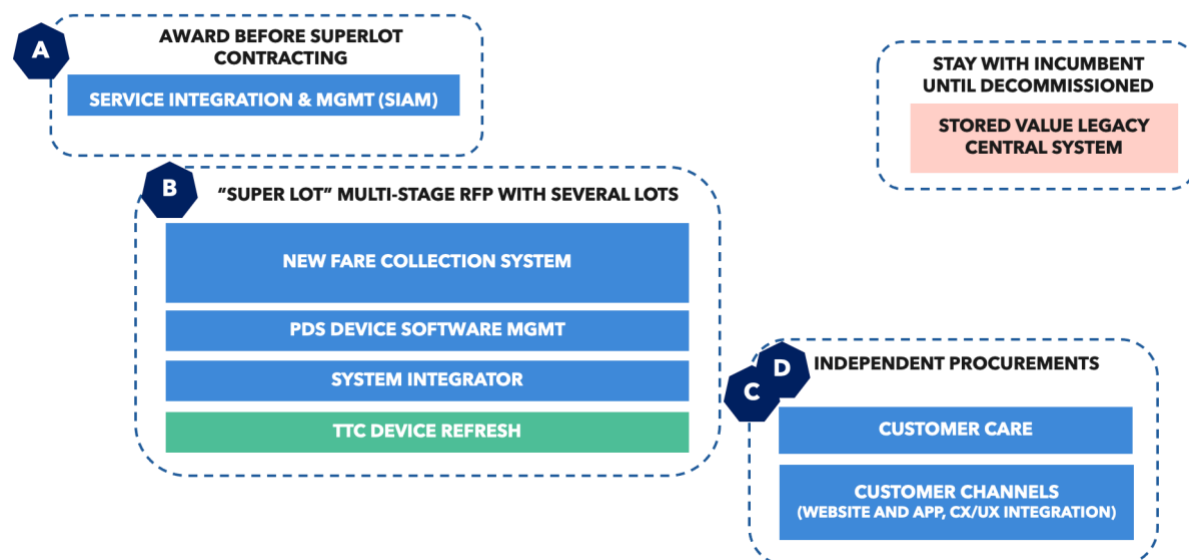
Lotting Strategy and Order to Market

PRESTO is radically changing the way we contract with and manage our suppliers going forward.

By introducing an independent Service Integration and Management (SIAM) partner before we contract with the other vendors, Metrolinx intends to de-risk the transition and the subsequent governance of the new multi-vendor operating model.

The marketplace strongly advised this course of action during the March 2019 Market Sounding, therefore PRESTO plans to award the SIAM provider first, while going to market for four of the remaining contracts together as a Super Lot and the remaining Customer Channels and Customer Care lots independently.

ORDER TO MARKET



PRESTO is seeking vendor's opinions on whether our lotting strategy and go-to-market plan is fit for purpose, or whether there are ways it could be changed to de-risk the transition or further reduce costs.

Further information about the planned scope of each lot is provided in Attachment 1 – PRESTO Lot Descriptions.

3.3 Transition

Moving from a single supplier of PRESTO's Fare Collection services to several separate contracts is an enormous undertaking.

Keeping the Greater Toronto and Hamilton Area and Ottawa's transit ticketing infrastructure working at 100% and having seamless customer care and ability for transit riders to pay for their journeys during that transition is even more of a challenge and comes at a potential high cost.

PRESTO is seeking vendor's expertise on how best to transition to the new operating model and contracts, while maintaining a world class transit ticketing experience for both our Transit Agency clients and the transit riders who rely on the system every day. We welcome ideas that keep costs to a minimum while continuing to offer excellent service to customers.

Change Freeze

PRESTO seeks to constantly improve our offering, delight transit riders and upgrade our system to meet our Transit Agency client's outcomes.

In order to successfully transition to the new contracts and a new account-based system, PRESTO recognises that many agencies globally implement a change freeze to their system and services before and after the transition.

PRESTO would like to understand vendor's experience in transitioning from a live system to their solution, and for vendors to recommend how long of a change freeze should be implemented to balance transition risk vs the desire for continuous improvement and innovation.

3.4 New TTC Devices

PRESTO needs to replace 5000 validators on TTC Streetcars and buses, 800 validators on para-trans vehicles and 400 multi-use inspection devices. We are using this request for information to seek information from the market about our options, potential costs and transition timelines for procuring and installing that specific set of new devices

At the same time PRESTO has an existing estate of over 15,000 devices that are going to continue to be used until end of life.

Separately from this specific procurement program, PRESTO and our transit agency clients have ongoing modernisation plans, which include upgrading TTC's faregates and rolling out new equipment to meet the needs of our ongoing expansion in the region.

PRESTO would like to understand what options there are in the market to replace validation and inspection devices, the associated costs and transition timelines, and what options are available to transition from the existing devices to the new ones balancing cost, functionality and transit rider experience.

3.5 Other Key Commercial Considerations

This Request for Information seeks primarily to provide input to Metrolinx's modelling of cost, transition timing and risks and options for the TTC device refresh.

Metrolinx is also taking this opportunity to gain insight on the risks, cost implications, and benefits of card technology, reader simplification, payment method/ticketing mix and contracting options.

How PRESTO delivers is linked to brand reputation. Many of the current pain points are due to technical limitations (load delay, website etc.). The nimble, quick turnaround changes that are needed to respond to customer and client demands has been a gap. PRESTO's new vendor model and partners need to have products and solutions that address these shortcomings – and do so quickly once on board.

Vendors are requested to answer the questions in Doc 2 – RFI Questions and Pricing Sheet to give Metrolinx and PRESTO a fulsome set of information and data to be able to make the final decisions required to go to market in a well-planned and expedient manner.

4 Request for Information (RFI) Process & Timeline

4.1 Summary of Information Provided to Vendors in this RFI

This Request for Information consists of this Executive Briefing and several attachments.

These documents contain the following information:

1. Doc 1 – RFI – PRESTO Today and Tomorrow gives an overview of PRESTO, its goals for the RFI and vision for the future. The document also provides Process and Timeline Information for this RFI and an overview of PRESTO's desired transit rider experience, business models and end to end system.
2. Doc 2 – PRESTO RFI Questions and Pricing Template, contains the general RFI questions and lot specific questions and lot specific pricing sheets. Vendors are asked to answer the questions and fill out the pricing tables for each lot they would be interested to bid on during the RFP process. Doc 2 needs to be electronically returned to PRESTO no later than 3pm ET on Monday, March 1, 2021.
3. Attachment 1 – PRESTO RFI Lot Descriptions, gives lot specific information. Each lot chapter follows the structure of:

- a. Lot Summary
 - b. Lot Scope
 - c. Predicted Volumetrics and SLAs
4. Attachment 2 – PRESTO 2022 Outcomes per Lot. This document lists the expected responsibilities of the vendors per lot and highlights responsibilities shared with other lots. This document also provides an overview of the required customer outcomes of the new PRESTO system and indicates the relevant customer outcomes per lot. In Attachment 2, PRESTO is seeking feedback on these lot specific outcomes regarding their impact on total cost of ownership and implementation risk.
 5. Attachment 3 – PRESTO's Business and Fare Rules provides an overview of the currently active business and fare rules under the PRESTO scheme. Attachment 3 also gives an overview of the business and fare rules planned to be implemented under the new system. Attachment 3 summarizes which business and fare rule relates to which lot. In Attachment 3 PRESTO is seeking feedback on these business and fare rules regarding their impact on total cost of ownership and implementation risk.
 6. RFI RESPONDENT SUBMISSION FORM – Please fill out, sign and return this document with the Question and Pricing Sheet.

4.2 How to Respond to this RFI

1. Read this document "RFI Today and Tomorrow" for an overview of PRESTO and the procurement.
2. Read Attachment 2 for an overview of PRESTO's desired transit rider experience, business models and end to end system.
3. Read Attachment 1 to determine which lots you are interested in bidding on.
4. In "Doc 2 – RFI Questionnaire" answer the General Questions for all interested vendors as well as the questions for each of the lots you may be interested in bidding on.
5. If relevant to the lot(s) you are interested in, fill out column F (Support for Current Rule) and column G (Support for Desirable Future State) in Attachment 3 – PRESTO's Business and Fare Rules and return it to Metrolinx.
6. Fill out, sign and return the RFI RESPONDENT SUBMISSION FORM.
7. Submit the completed questionnaires (Doc 2, Attachment 3 and RFI Respondent Submission form) electronically via the Metrolinx MERX Portal before 3pm ET on Monday March 15th, 2021

4.3 Response Submission

1. Submissions shall only be accepted electronically via the Metrolinx MERX Portal. Submissions submitted in any other manner shall be found non-compliant and disqualified.
2. If during the preparation of its Submission, the Proponent desires to make a change which requires correction, alteration or erasure to any information previously entered in a designated

section of the Submission by the Proponent, documents that have been uploaded to the Metrolinx MERX Portal may be added, removed and/or re-submitted as often as required at any time, prior to Closing.

3. For assistance with registration and login credentials, subscription information, fees, and general use of the Metrolinx MERX Portal, please watch the online Electronic Bid Submission tutorial at: <https://www.youtube.com/watch?v=To0fqSccw3M>. Alternatively, you can contact MERX directly at 1-800-964-MERX (6379). For additional Metrolinx MERX Portal guidelines, refer to the document entitled "Metrolinx MERX Portal — General Information" under "Attachments" in this Request Document.
4. Information contained in the most recent Submission submitted via the Metrolinx MERX Portal and received prior to the Closing will take precedence over the information contained in previously received Submissions from the Proponent.
5. The Proponent may withdraw a Submission at any time prior to the Closing date specified by Metrolinx by logging into www.metrolinx.merx.com.

4.4 RFI Schedule

The schedule for this RFI will be as follows:

Release of RFI	Tuesday, February 2, 2021
Final Clarification Questions Due [NOTE: Please send questions as they arise.]	By 4pm ET on Wednesday, February 17, 2021
Question Responses Posted	Friday, February 26, 2021
RFI Closing Date	By 3:00pm pm ET on Monday, March 15, 2021
RFP for Service Integrator & Management released	Mid 2021
Request for Qualifications for Core System Lots	Late 2021

Submit any clarifying questions regarding this RFI to Nadia.Elliston@metrolinx.com by the time and date listed in schedule above. Answers to questions will be posted via MERX.

PRESTO will not be conducting formal interviews with respondents to this RFI. However, PRESTO reserves the right to contact individual respondents for clarification or further detail.

Vendors are requested to submit questions during the Question-and-Answer period and are requested to not wait until the due date to submit questions.

4.5 Terms and conditions of this RFI

1. Participation

Participation by vendors in this RFI process is strictly voluntary and is neither a pre-requisite nor a pre-qualification requirement necessary for participation in any future opportunities related to PRESTO's fare collection services. Information provided by any vendor as part of this RFI shall not be construed in any way as part of a competitive solicitation.

2. Rights of Metrolinx

- a) This RFI is not an agreement to solicit or purchase goods or services. Metrolinx is not bound to enter into a contract with any vendor that submits a response to this RFI. Metrolinx shall be under no obligation to receive further information, whether written or oral, from any vendor or provide any feedback.
- b) Metrolinx, at its sole discretion, will decide if the procurement of the lots specified relating to PRESTO's fare collection services is warranted. In the event that Metrolinx decides to proceed with the procurement, the procurement will be conducted in accordance with Metrolinx' procurement policies and procedures.

3. Submissions Property of Metrolinx

Metrolinx shall not return the submission, or any accompanying documentation submitted by the vendor.

4. Vendors shall bear their own costs

Metrolinx shall not be liable for any expenses incurred, including the expenses associated with the cost of preparing responses to this RFI. The vendors shall bear their own costs associated with or incurred through this RFI process, including any costs arising out of or incurred in: (a) the preparation and issuance of this RFI; (b) the preparation and making of a submission; or (c) any other activities related to this RFI process.

5. Disclosure of information

The vendors hereby agree that any information provided in its submission may be disclosed by Metrolinx where required by law, order of a court, or tribunal. The vendors are advised that Metrolinx may be required to disclose all, a part, or part of a vendor's submission pursuant to Freedom of Information and Protection of Privacy Act (FIPPA).

6. Commercial Submission

- 1. Proponents are requested to complete and submit Document 2 – RFI Questions and Pricing Sheet. The intent of this pricing request is to provide Metrolinx with an understanding of the potential cost of the system described within this RFI, so that Metrolinx can more accurately budget for this system and to inform the potential scope of this system. Proponents are asked to confirm their pricing model, i.e. do they provide module-based pricing.

This is a non-binding pricing request and is intended only for informational purposes and will not be used in the evaluation of any future Metrolinx procurement process.

When this information is presented by Metrolinx Procurement Services, the information will be only available to limited core team members.

5 PRESTO Tomorrow

5.1 PRESTO's Vision

PRESTO's Vision is:

"To enable and encourage transit ridership, providing seamless, accessible, and sustainable travel across the region, connecting our communities and getting people where they need to go, better, faster, and easier."

...TO ENABLE SEAMLESS, ACCESSIBLE, AND SUSTAINABLE TRAVEL ACROSS THE REGION



Supporting personal journeys



With a frictionless fare system



That offers a great experience when travelling



And through channels of choice



To position PRESTO as the GTHA travel experts



And connecting to growing payment and mobility ecosystems

FRONTSTAGE

BACKSTAGE

1. Modular architecture with Open Standards

2. The right ecosystem of suppliers and partners

3. Strong integration capabilities

4. Tight business processes

5. Excellent customer data and analytics

5.2 Key Performance Indicators (KPIs)

PRESTO's strategic objectives include delivering on our mission to enable and encourage greater transit ridership and providing value to stakeholders in the form of: lowering the total cost of fare collection, improving data & analytics capabilities to support better transit planning, and increasing value for transit customers. PRESTO KPIs are built around ensuring the long-term delivery of that value and observing measurable progress against our strategic agenda. PRESTO expects our vendor base to provide a system that is capable of and delivers on these objectives and KPIs, which include the following categories.

Key Performance Indicator Categories



5.3 The Future PRESTO Transit Rider Customer Proposition

The chart on the following page shows the envisioned PRESTO Transit Rider user needs that will be met by PRESTO post 2022 procurement:

Further details about which outcomes of the Customer Proposition are to be delivered by each lot can be found in Attachment 2 – PRESTO 2022 Outcomes per Lot.

The end-to-end transit rider journey – PRESTO Customer Needs – post 2022

Discover, Plan, Evaluate	Fare Purchase	Fare Payment	Journey To/From Transit & Traveling	Fare Management	
I want to learn about PRESTO options, purchase and use.	I want to control my spend (and how and when funds are loaded).	I want to pay my fare using cash.	I want to see my journeys and charges as I travel.	I do not want to share my personal information and need an option to check my balance, transactions and load funds without creating an account.	I want to receive notifications of important developments through my preferred channel.
I want to plan and receive support for one-off and ongoing journeys according to my needs and preferences.	I want to benefit from savings by paying for a travel pass in advance.	I don't want to pay full fare if I have to transfer.	I want to know who to contact if I encounter problems with my PRESTO fare media, including while travelling.	I want to view my PRESTO physical/mobile card or fund balance.	I want to be refunded automatically if my journeys are eligible for a refund (e.g. due to an on-time guarantee).
I want to see the benefits of registering and what information I need to provide.	I want to benefit from savings if I travel regularly.	I want to travel simply by tapping my fare media.	I want to prove to a revenue inspector that I have paid for my travel.	I want to be able to clear debt balances that prevent me from traveling.	I want the ability to unregister a PRESTO card so I can remove unneeded cards from my account.
I want to understand the benefit of using the different ticketing types.	I want to automatically benefit from discounts for which I'm eligible.	I want to be able to change my mind and not travel after having tapped.	I want to receive notifications of important events affecting travel.	I want to be able to view all charges I have incurred and the journeys they cover.	I want PRESTO to follow up with me to ensure my issue has been resolved and/or allow me to initiate follow up communications.
I want PRESTO to proactively communicate service changes and support my transit use.	I want to load funds/passes to pay for the travel of my dependents.	I want to know whether I have to tap in <u>and</u> out or just in.	I want to notify PRESTO/a transit agency of an issues I encounter while traveling without having to call in.	I want customer service tools to be accessible to people with disabilities.	
I want to be prompted with travel options when I purchase admission to cultural events, sporting events, etc.	I want the option to pay individually for specific journeys (tickets).	I want to see my physical/mobile PRESTO Card funds balance as I travel.	I want to be notified of nearby PRESTO perks.	I want to be able to seek assistance from a person if I have an issue.	I want fare payment issues like missed tap to be resolve automatically based on system logic.
I want to receive targeted offers for transit that make sense based on my personal needs and behaviours.	(If I'm eligible) I want my AODA support person to travel for free.	I want to see my transfer window when I pay my fare and tap for transfer.	I want to be notified of relevant first or last mile options.	I want to challenge a revenue inspection charge.	I want to transfer my balance to another card or person.
I want to know how PRESTO will use my information, and protect my privacy.	I want to know my PRESTO physical/mobile card funds balance so I don't run out of funds.	I want to know when I've tapped my travel media that I'm accepted to travel.	I want to find wayfinding information in my app based on where I'm located.	I want to block my PRESTO card/mobile if it is lost or stolen.	I want PRESTO to provide me with status updates of ongoing processes, emerging issues or changes related to my account.
I want to know what proof of concession/discount eligibility I'll need to provide.	I want to automatically renew and pay for my transit pass(es).	I want to pay for the travel of a group of individuals.	I want real-time in-app vehicle crowding information while I await transit.	I want to manage the accounts of my dependants.	I want PRESTO gather my feedback after specific interactions.
I want to see/know how PRESTO is changing, access stories, studies and reports that showcase their work and impacts.	I want to purchase fare or load my funds balance using cash, credit/debit or mobile.	(For fare by distance) I want the opportunity to correct a missed tap off.	I want to receive notifications regarding my preferred transit routes within specified times on an ongoing or one time basis.	I want to view the details of any transit passes I have purchased.	
I want to know what's happening in my community, my frequent destinations and with the transit agencies I use.	I want to choose which travel media my transit passes are associated with.	I want to pay for my fare directly with a debit card, credit card or mobile wallet.	I want to set prompts for when to depart to catch a vehicle based on point of origin, route, and intended stop/station.	I want to view the details of any discount I have added to my account.	
	I want different fare type options available at initial purchase.	I want to pay my fare with PRESTO using my mobile device.	I want to be able to manage my parking from my phone/account.		
	I want reminders to load my funds or purchase a period pass relevant to my behaviours, account status and the date.	(For fare by distance) I want to be able to tap on any fare payment device and the correct TA be charged based on where I tap off.			
	I want to be prompted to load if my PRESTO card balance is low and I'm in a loading location.				
	I want to be able to start registration of my PRESTO fare media from the point of purchase.				
	In stations with more than one TA I want to be able to purchase my fare from any device by selecting the TA I want.				



PRESTO is seeking feedback on the areas of PRESTO's Customer Proposition (above and detailed in the customer outcomes listed in each lot in Attachment 2), Business and Transit Agency Outcomes (Attachment 2), Business Rules & Fare Policies (Attachment 3) & Technology choices which are not delivered as part of your standard offering and will lead to PRESTO's overall cost being higher due to the need for customization.

5.4 Transit Agency Business models, commission and settlement

Our Transit Agency clients are the heart of PRESTO. While PRESTO and the Transit Agencies have a requirement to lower our total cost of ownership, especially in light of the reduced ridership due to the pandemic, all of PRESTO's products and services must be flexible, scalable and future proof to enable them to meet their fare collection objectives while providing a consistent and excellent PRESTO-wide transit rider experience.

PRESTO wants to support various business arrangements with its transit agency (TA) clients, retailers, and other institutions and to charge custom commissions and fees by business-entity, transaction type and other parameters such as fare line.

Currently PRESTO supports the following business models with different commission pricing:

- Device Managed-Service: PRESTO provides equipment and services to manage front-office devices for Transit Agencies (currently TTC and the GTHA).
- Device Acquirer-Model: The agency provides the fare-equipment, and PRESTO provides the back-office processing, contact centres, and digital channels (currently used by OC Transpo in Ottawa).
- Retail: A 3rd-party retailer (Currently Loblaw's) sells loads and products on behalf of PRESTO and its agencies and provides payment acquirer services (cash and card).
- Transit Agency Retailer: PRESTO pays a commission to TAs for e-purse loads, sold by the TA, but not pass products sold by the TA.
- Voucher program: For bulk sales of individual PRESTO tickets, PRESTO charges a commission for each ticket sold.

PRESTO also wishes to be able to support different models and contracts for individual Transit Agencies.

5.5 PRESTO System End to End

5.5.1 Payment Methods (Ticket Types)

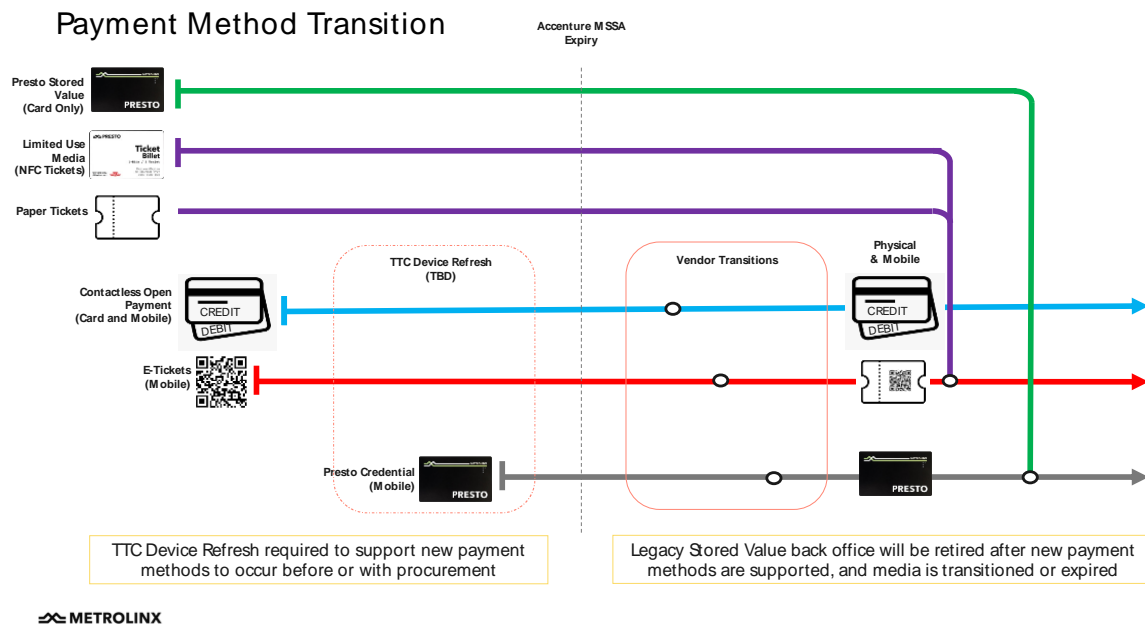


Figure 1: Payment Method Transition

Today PRESTO offers transit riders the following ways to pay for their journey:

1. Legacy PRESTO card: A MiFare DESFire based, stored value card, which holds the balance on the card.
2. PRESTO Tickets: Disposable, MiFare based, NFC tickets for limited use.
3. Paper Tickets: Paper tickets sold from vending machines giving the holder the right to travel. Not machine readable.
4. Mobile E-Tickets: Some PRESTO transit agencies are selling PRESTO tickets via a mobile app, with QR codes to allow them to interact with PRESTO devices.

Between now and the award of the new contracts, PRESTO plans to introduce new payment methods to its customers and to continue its modernization throughout the procurement cycle.

Post 2022, PRESTO intends to offer the following ways to pay:

1. New PRESTO Card: An account based PRESTO card that can be obtained in physical plastic form, or as a digital card in a mobile wallet.
2. Open Payments: The ability to travel by touching your debit or credit card directly on PRESTO readers and be charged the correct fare for your journey directly from your bank account. Both physical plastic bank cards and their digital formats will be accepted.

3. PRESTO Tickets: Machine readable, limited use tickets which can be dispensed by vending machines and other retailers (including in bulk by social services and other B2B customers).

PRESTO recognizes that there is a lot of variation in available technologies and are interested in understanding your experience and thoughts on which technologies we should choose for the new PRESTO card (Stay with MiFare DESFIRE or move to EMV or another technology) and for PRESTO tickets.

4. Mobile E-Tickets: Machine readable pre-purchased tickets that are held on transit riders' mobile phones.

5.5.2 Business and fare rules

PRESTO is a key tool for enabling regional transit interoperability. Each of the 11 transit agencies will benefit from an improved and simplified PRESTO system. In addition to standard concessions across the region, each transit agency defines its own fares, concessions, pass products, and inter-agency transfer rules.

The current PRESTO system employs a wide variety of rules around fare payment and pricing, interagency transfers, account features and more. These rules directly affect the customer's interaction with the fare payment system, both in paying for fares and managing their card and account. The rules also affect PRESTO's internal financial management and credential management processes, and back-end system configuration requirements. While some such rules may be subject to change as a result of fare simplification initiatives, many of the rules will need to be supported by the selected vendor(s) of the new program. The most likely and impactful change to PRESTO's business rules following the upcoming transition period is in regard to fare capping, which has the potential to introduce significant operational cost savings for PRESTO as the expenses of managing and selling passes could be eliminated. There is also significant potential for simplification regarding fare classifications, transfer policies, concessions, and loyalty programs.

The 2022 Procurement Program offers a unique opportunity to seek solutions from market participants regarding regional fare simplification and integration within the context of upgrades to PRESTO technology and business processes. PRESTO needs to be able to deliver the Transit Agencies fare policies without that resulting in driving up cost of collection.

Current Business Rules Highlights

1. Multi-agency support
 - PRESTO currently operates a multi-tenant fare system with universal fare rules to enable regional (inter-agency) travel. Each TA can define its own:
 - TA-specific fare types (concessions) including eligibility criteria and expiry duration
 - Paper Ticket Fares (the cash fare)
 - PAYG Fares (currently a multiplier of the cash fare)
 - Trip-based fare capping (for e-purse)
 - Pass products (calendar aligned)
 - Service Classes (e.g. express routes)

- Time of Day and Day of Week periods and pricing
- Specific distance based TAs give their transit riders the ability to set a “default trip” which results in them not needing to touch out at their destination, but requires them to press a button on the validator before they touch in if they are travelling to a destination other than their set default.

Due to current card-based limitations, a customer can only have one fare type: either one universal fare type, or one TA-specific fare type. This leads to undesirable situations for the regional travel (e.g. a senior in one municipality receives a discount but pays full fare in the adjacent municipality.). PRESTO wants to consider the option to support multiple concessions and charge the best price for the customer based on their journey.

2. Regional Travel

Regional travel on multiple agencies is supported, with transfers and co-fare discounts available on e-purse and some tickets in the 905. There are currently no regional passes, and no transfer discounts offered to customers with pass products (e.g. a customer travelling in one agency with a pass, cannot receive a discount when transferring to an adjoining agency). However, both options are desired.

The following regional travel scenarios are supported:

- Municipal agencies – support free inter-agency time-based transfers
- Municipal-GO – a reduced fare when transferring to/from GO Transit (co-fare/fare credit)
- TTC “Cross-Boundary” - TTC provides bus service in adjoining York and Mississauga regions, and charges a second fare when a customer taps-off in the adjoining region
- OCT-STO – each agency honours a transfer from the other agency (note STO is on a different stored-value fare system)

PRESTO is seeking feedback from vendors on the most impactful ways to reduce Total Cost of Ownership by simplifying the business and fare rules while still being flexible and policy driven.

For a comprehensive list of PRESTO’s current and anticipated business rules, see Attachment 3.

5.5.3 Customer Channels

PRESTO offers transit riders in the region a seamless electronic fare payment card that can be loaded with prepaid funds and/or time-based passes through multiple channels including:

- Self-serve machines in GO Transit and TTC stations
- The PRESTO App**
- The PRESTO website**
- Customer service outlets
- PRESTO Call Centre (Including IVR system, web chat)**
- Retail outlets (Currently Shoppers Drug Mart/Loblaws)

PRESTO will be procuring new contracts to deliver the channels marked in bold above. If you are interested in providing information regarding any of those contracts, please fill in the relevant sections of the questionnaire in Doc 2.

By registering for a PRESTO account, customers can claim additional features such as balance protection for lost or stolen cards, integration with GO and auto-load and auto-renew to have funds or transit passes automatically added to the card.

The PRESTO App offers customers the ability to create a PRESTO account, load funds and transit passes directly to the card, use Apple Pay/Google Pay or saved payments for loading/purchases, set/change/remove GO default trips, view current balances and transaction information, manage multiple cards, and more. In the future, PRESTO will offer better integration with Trip Planning to serve customers all along their journeys.

5.5.4 PRESTO Architecture and Infrastructure

The current PRESTO infrastructure includes front-office and back-office functionalities.

The PRESTO system's front office devices include fare gates and validators at stations and onboard transit buses and streetcars. PRESTO transit riders also interact with a set of mobile validators used on Paratransit vehicles and Sedan Taxis, as well as a network of self-serve Kiosks and staffed Point of Sale devices. (See section 5.6 for full list of PRESTO devices.)

PRESTO intends to continue using the currently installed front office devices, with the exception of the devices on TTC's network, which will be replaced over the coming 2 years to become Open Payments (EMV) capable and to be able to read PRESTO limited use tickets, and a new Kiosk (Ticket Vending Machine) which is being procured now.

The central system back office includes the PRESTO Hub, which is an integration layer and system of open application program interfaces (APIs) that facilitates a secure and reliable streamlining of different business and customer capabilities and technology suppliers. The PRESTO Hub is owned by PRESTO and will be transitioned to and managed by the new System Integrator contract post 2022. The entire PRESTO central system and back office will be transitioned to being hosted in the cloud (Microsoft Azure) before the new contracts are awarded.

PRESTO ARCHITECTURE

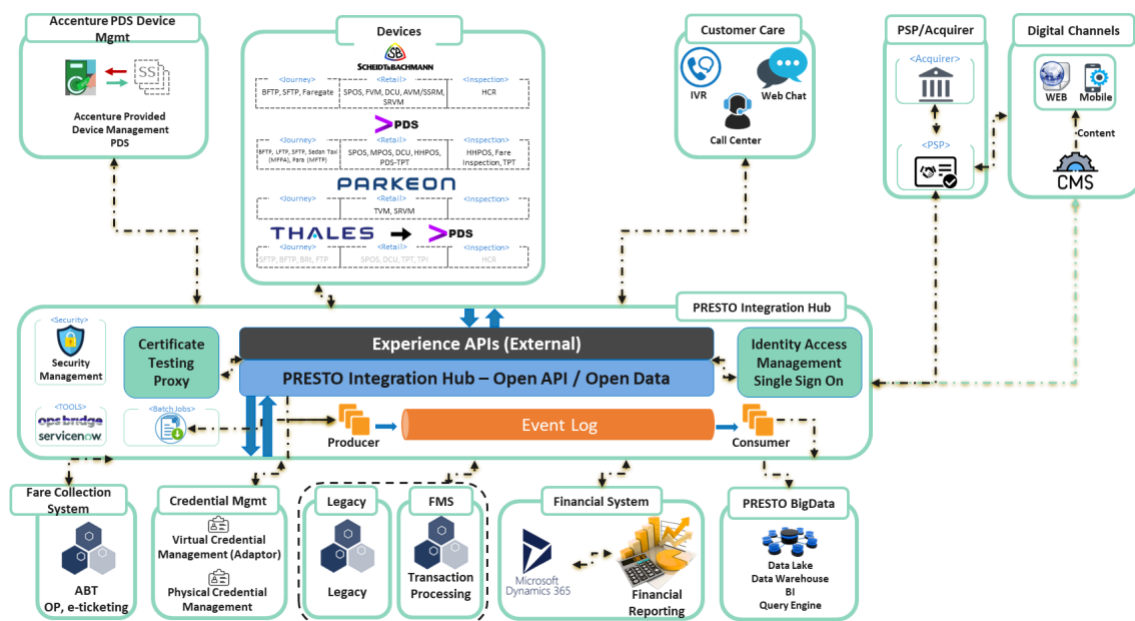


Figure 2: PRESTO Architecture

For a more detailed diagram of the intended post 2022 PRESTO system architecture, see Attachment 1 - Appendix 2

5.5.5 Data and Reporting

PRESTO's post 2022 systems will provide access to all data in real time without constraints, feed our Business Intelligence (BI) systems, and follow our data governance strategy.

5.5.6 Key Integration Specifications

5.5.6.1 Device tap data specification

PRESTO's device landscape is a mixture of PRESTO managed service devices and devices which are Transit Agency owned and managed.

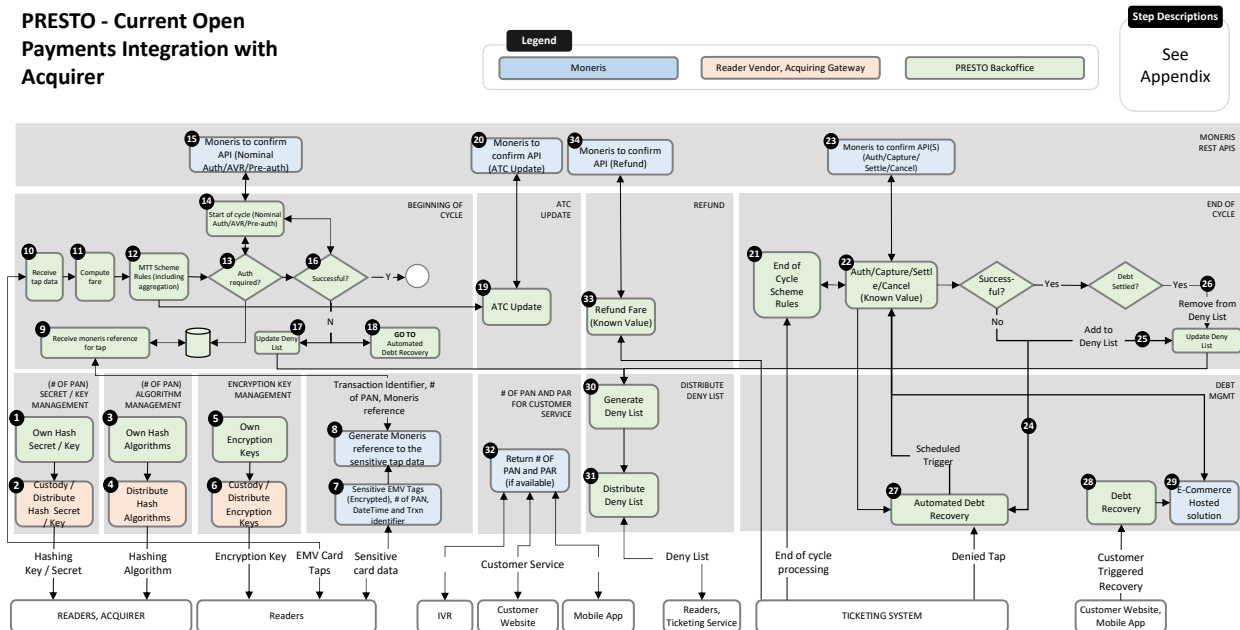
5.5.6.2 Integration with Customer Care

Today the customer care agents integrate directly with the PRESTO back office to be able to view, edit and manage customer accounts. Post 2022, the call centre agents will need to integrate with the New Fare Collection System with service tools provided by the New Fare Collection System provider via APIs and be able to view, edit and manage PRESTO accounts. This system will feed a central CRM.

5.5.6.3 Integration with PRESTO's acquirer

- Integration between Customer Payment Channels (Website, App, Call centre and retail) and PRESTO's acquirer for retail transactions
- Integration between the Open Payments Account Based Back Office and PRESTO's Acquirer

PRESTO - Current Open Payments Integration with Acquirer



2

Figure 3: PRESTO Open Payments Integration with Acquirer

5.5.6.4 PRESTO Integration Hub

The PRESTO Integration Hub is PRESTO's integration layer that:

- Facilitates single, secured, reliable and standard transit integration across all current and future transit partner systems and agencies
- Empowers an equal opportunity to all big/small players in partnering with us via this technology and vendor agnostic integration platform
- Reduce capital and operations expenditures for all players, by standardizing rules and all services over this single interface to avoid legacy or custom solutions
- Enables PRESTO's control over transient data and PRESTO's Big Data
- Enables PRESTO's Open-API and Open-Data
- Enables Event sourcing, Replay-ability and Auditability
- Enables PRESTO's certification testing
- Enables PRESTO's centralized Authorization/Authentication/SSO capability
- Enables integration via API to transit agency and other third-party systems

Thus, PRESTO Integration Hub is a collection of assets, tools, and techniques to accelerate business & customer capabilities, which are required to be followed by PRESTO and all PRESTO Scheme Participants. They form a compilation of standard business rules, architecture guidelines, practices, and common services that can be leveraged across all partner systems.

Further details can be provided on request by emailing Nadia.Elliston@metrolinx.com please note a NDA will need to be in place for further details to be released.

PRESTO is seeking feedback on if these integration specifications fit within your standard product offering, and if not, which areas will require additional development and cost? Please make any specific recommendations as to how to minimize custom development and cost.

5.5.7 Monitoring

All monitoring data from all systems to be captured real time in PRESTO's central OpsBridge instance which will be managed by the SIAM contract and help them monitor and manage SLAs across the whole PRESTO eco-system.

All vendors will be responsible to give access to their monitoring systems and to integrate with PRESTO's monitoring system to provide a "single pane of glass" which gives full visibility of the system end-to-end.

5.5.8 Security

The new System Integrator will be responsible for Identity Access Management and the end-to-end system security architecture. The SIAM provider will provide the Security Operations Centre and manage incidents as they arise. Each vendor will be responsible for maintaining secure systems which meet or exceed all industry standards and which can be audited by PRESTO on a regular basis.

5.6 Device Landscape

PRESTO has more than 10,000 device end points in production, including validators, handheld inspection and validation devices, Station Point of Sale devices, Mobile Point of Sale devices, and self-serve Kiosks, including recently installed more than 6,000 validators across 9 of the 11 participating transit agencies, which will be in service until at least 2028. These devices will continue to be integrated into the PRESTO Central System providing the Fare Payment services to customers and clients. All PRESTO devices will connect to the central system using APIs via the PRESTO integration layer (The PRESTO Hub).

PRESTO will be replacing approximately 5000 validation devices across the Toronto Transit Commission's (TTC) bus and light rail services as well as approximately 400 handheld inspection/sales devices. These device solutions as included in this Procurement RFI scope could potentially expand to other new PRESTO clients, such as new Light Rail Transit lines and other new Agencies integrated into the PRESTO Eco-system.

OCT in Ottawa is responsible for procuring, managing and upgrading all their own devices and TTC procures, manages and upgrades their own fare gates and associated readers.

The PRESTO system includes 4 Device Types:

1. Validation Devices
 - Fare Payment Devices – Device to "Tap PRESTO card"
2. Point of Sale Devices

POS device for Station Agent to reload/purchase/configure PRESTO card

3. Inspection Devices

Handheld Device used by inspection officers to inspect PRESTO cards

4. Self-Serve Kiosks

Self-Serve Vending Machines for reload/purchase

CURRENT PRESTO PAYMENT EQUIPMENT LANDSCAPE

<div>Client</div> <div>Device</div>	TTC	Metrolinx Light Trail (LRTs) ¹	GO Transit	905 Agencies	Ottawa City Transpo (OCT)
Faregates	TTC - S&B	Existing - S&B	N/A	N/A	OCT - S&B
Validators	TTC Device Refresh Lot	Station - Famoco/ Ingenico / Accenture			OCT - S&B
Vehicle - Famoco/ Ingenico / Accenture					
Mobile - Zebra/Panasonic / Accenture					
Inspection ²		Panasonic / IDTech / Accenture			OCT - S&B
Point Of Sales (Attended)	Mobile POS (Retail channel) - Panasonic / IDTech / Accenture				
	Station POS - TBD / IDTech / Accenture				SPOS OCT - S&B
Self-Serve Kiosks	S&B SSRM				
	S&B FVM	Flowbird TVM			S&B FVM
	S&B SRVM	Next Gen TVM – (Separate RFP)			

Legend:

Accenture Device
Management Lot

TTC Device
Refresh Lot

PRESTO
Managed Device
- out of scope of
Procurement

TA Managed
Device – out of
scope of
Procurement

Legend:

- Accenture Device Management Lot
- TTC Device Refresh Lot
- PRESTO Managed Device - out of scope of Procurement
- TA Managed Device - out of scope of Procurement

Note:

1. MX future LRT projects could leverage the new device solution from this RFI (e.g. Hurontario and Ontario Line)
2. TTC Device Refresh Lot is requesting a multi-functional handheld device can handle inspection, validation, and POS

Figure 4: PRESTO Payment Equipment Landscape

1. VALIDATION DEVICES







Product	Feature Description	Client & Quantity	Visual
1. Station Fare Transaction Processor (SFTP)	Enabling PRESTO fare validation at TA stations a) Validating the payment transaction b) Transaction file transmitting c) List processing (Load, Action, Hotlist)	<ul style="list-style-type: none"> 905: 140 units GO: 660 units UPE: 32 units (TTC: ~1,000 faregates own by TTC) 	
2. Bus Fare Transaction Processor (BFTP)	Enabling PRESTO fare validation at surface vehicles a) Validating the payment transaction b) Transaction file transmitting c) List processing (Load, Action, Hotlist)	<ul style="list-style-type: none"> 905 TAs: 2,146 units in production TTC: 4,432 units 	
3. Mobile Fare Transaction Processor (MFTP)	Enabling fare validation at TA Para fleet a) Validating the payment transaction b) Transaction file transmitting c) List processing (Load, Action, Hotlist)	<ul style="list-style-type: none"> 905: 150 units in production (YRT & DRT) TTC WheelTrans: 560 units 	 
4. Mobile Fare Payment App (MFPa)	Enabling fare validation at TTC (TAs) Sedan Taxi vehicles a) Validating the payment transaction b) Transaction file transmitting c) List processing (Load, Action, Hotlist)	<ul style="list-style-type: none"> Beck & Co-Op for TTC: ~1,500 vehicles Will be rolled out in Summer 2019 	 

Figure 5: PRESTO Validation Devices

2. POINT OF SALE (POS)





Product	Feature Description	Client & Quantity	Visual
1. Station Point of Sale (SPOS)	Enabling TA station attendant to serve PRESTO customer: a) Issue PRESTO card, and PRESTO tickets (TTC only) b) Load / Query / Refund ePurse and Period Pass c) Reverse transaction d) Change card preference (Language, Concessions) e) Supports Payment Acquirer pin pad integration f) User Management Portal	<ul style="list-style-type: none"> 905: 66 units (38 sites) GO: 169 in production (~200 units after device refresh) TTC: 6 units in production, asking to have 9 units after refresh 	
2. Mobile Point of Sale (MPOS)	Provide retail partner the POS device solution to a) Issue new PRESTO card b) Load / Query ePurse and Period Pass c) Set fare type (concessions) d) Online user management (UM Portal)	<ul style="list-style-type: none"> 775 units in production Across 380 SDM & other Loblaw's store locations 	
3. Third Party Terminal (TPT)	Enabling TA's 3rd party partner to serve PRESTO customer: a) Issue PRESTO card, and PRESTO tickets (TTC only) b) Load / Query / Refund ePurse and Period Pass c) Set / change fare types / concessions	<ul style="list-style-type: none"> 41 units in production for TA 3rd party partners (e.g. Community Center) 	
4. Driver Control Unit (DCU)	905 TAs and GO to serve PRESTO customer on buses: a) ePurse fare payment b) Query ePurse c) Selling paper ticket / companion fare	<ul style="list-style-type: none"> 1,838 units in production (Feb. '19) To be replaced by new bus solution as of device refresh 	

Figure 6: PRESTO POS Devices

3. INSPECTION DEVICE



Product	Solution Description	Client & Quantity	Visual
1. 905 new inspection device (Panasonic)	Enabling TA Fare Inspectors to do fare inspection a) Ruggedized Android smartphone b) External card reader to enhance throughput (~45 taps / minute according to demo) c) Custom design sleeve for reader and cable	Replacing the current GO & 905 inspection devices • GO: 135 units • YRT: 30 units • TTC: replacing the TC55 in the long term	
3. TTC & UPE Existing inspection device (TC 55)	TTC and UPE current in production device for inspectors: a) Old device, end of support by vendor b) Tapping at the back of the device c) Slow throughput, not up to standard	• TTC: ~250 units • UPE: ~30 units	

Figure 7: PRESTO Inspection Devices

4. SELF-SERVE VENDING MACHINE





Product	Feature Description	Client & Quantity	Visual
1. Fare Vending Machine (FVM)	Enabling Fare media (PRESTO Card & tickets) sales: a) Issue PRESTO card, and PRESTO tickets (TTC only) b) Load / Query / Refund ePurse and Period Pass c) List Processing d) Cash/Debit/Credit	• TTC: 240 Commissioned • 11 Pending Installation	
2. GO /UPE Ticket Vending Machine (TVM)	Enabling Fare media (PRESTO Card & GO Tickets) sales: a) Issue PRESTO card, and GO Transit paper tickets b) Load / Query / Refund ePurse c) List Processing d) Cash/Debit/Credit	GO TVM: • 198 in Production • 9 Pending Installation UPE TVM: • 17 in Production	
3. Self-serve Reload Machine (SSRM)	Enabling PRESTO reload and Period Pass sales: a) Load / Query / Refund ePurse and Period Pass (TTC only) b) List Processing c) Cash/Debit/Credit	TTC: • 199 Commissioned • 14 Pending installation GO Transit: • 76 Commissioned • 99 Pending installation	
4. Single Ride Vending Machine (SRVM)	Enables purchase of a paper POP a) Cash only b) Paper POP c) Onboard and Offboard versions d) Mix of S&B and Parkeon	TTC only: • S&B 1.5: 23 installed; 127 pending • S&B 1.1 ~140 installed • Parkeon: 109 installed; 11 pending installation • Offboard S&B 1.1: 20 installed	

Figure 8: PRESTO Self-Serve Vending Machine

5.7 Intellectual Property

All products, services & design should adopt open standards and use commercial off the shelf (COTS) software and hardware wherever possible. In cases where software is custom developed for PRESTO, Metrolinx will require sufficient rights of access to all Intellectual Property in the software so that the custom developed software can be used beyond the term of the contract.