Subject: Fare Technology Update

Report to: Linking Niagara Transit Committee

Report date: Wednesday, January 29, 2020

Recommendations

That this report **BE RECEIVED** for information.

Key Facts

- The purpose of this report is to update LNTC on the common transit fare technology that was identified by the Inter-municipal Transit Working Group (IMTWG) in its 2018-19 workplan.
- The Niagara Transit Service Delivery and Governance Strategy (Dillon 2017), identified the shortfalls of the overall fare systems currently being used, and recommended that harmonizing the fare structure as well as payment technology would serve as a key enabler to a more connective and integrated transit system in Niagara.
- St. Catharines Transit Commission implemented mobile ticketing in April 2019 and IMTWG staff believe this technology should be pursued, in the future, as the preferable and the most cost-effective solution for integrated fare technology in Niagara.
- The IMTWG has unanimously determined that strategically delaying the implementation of new fare technology hardware will help to streamline the process and avoid duplication of effort and costs in advance of a governance decision.

Financial Considerations

While there are no direct financial impacts associated with this report, the overall common fare strategy and fare technology strategies do contain a number of financial implications for each of the transit agencies in Niagara. The following considerations reflect the rationale for delaying a recommended strategy and quantifying the financial impacts until a future date:

- Masabi as the Technology Vendor: As detailed in the analysis section of this report, the IMTWG has two options for using Masabi as its mobile ticketing solution. The

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first would be to procure existing third party hardware and the second would be to wait until Masabi's in-house hardware (which is available in late 2020). The cost of the in-house solution is estimated at roughly 40% of the cost of the existing third party option, therefore delaying acquisition until this hardware is available would be financially prudent.

- Investing in Canada Infrastructure Program (ICIP) Approvals: This joint grant program between federal, provincial and municipal governments aims to provide funding for the improvement of public transit systems across Ontario. The program only requires a 27% contribution from the local municipality and, is therefore, an extremely cost effective way to enhance the transit system. Niagara's transit providers submitted applications in Q2 of 2019 and funding approvals are currently pending. If Niagara was to proceed with the fare technology upgrade prior to those approvals, the transit providers would be required to bear the full costs of implementation as payments cannot be made retroactively for completed projects.

- Procurement: When the time comes to procure the hardware as discussed in this report, the IMTWG will investigate the potential benefits of a joint procurement effort versus individual purchases.

  - Governance Review: With the Transit Governance Study pending completion in April 2020, the financial landscape of transit in Niagara could be significantly altered after the recommendations of the study. This financial uncertainty combined with the other factors above make strategically delaying the implementation of new fare technology a practical decision from a financial perspective.

Analysis

St. Catharines Transit Commission implemented mobile ticketing in April 2019 using a vendor already partnered and integrated with Transit, the existing route/schedule information app used in Niagara (and around the world). This implementation was done without the purchase of validation hardware for the vehicles and at present, relies on bus operators visually validating the mobile tickets. To date, the launch of mobile ticketing in St. Catharines has been a success and has seen the customer adoption rate steadily increase from 2.1% in April 2019 to 12.5% in December 2019.

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St. Catharines Transit Commission will be testing validation hardware to be used with their mobile ticketing in early 2020. The purchase of validation hardware for every vehicle in Niagara is the next step that need to be taken in fare technology in order to launch mobile ticketing region-wide, across all transit properties. Validation hardware also comes with other customer benefits such as being able to implement account-based ticketing. Account-based ticketing (ABT) is a ticketless way of allowing people to travel on public transit. In an ABT environment, passengers can use what they have in their pocket to travel, whether it be a contactless bank card, QR code paper ticket, mobile device or a smart wearable device. The payment will link with their account and ensure the passenger is charged the best fare.

Staff has determined that it is prudent to strategically delay the implementation of mobile ticketing and the associated validation hardware until the end of 2020 (or possibly early 2021) for three main reasons:

1) Technology – St. Catharines Transit Commission's current mobile ticketing provider (Masabi) has recently developed an in-house validation hardware solution. This hardware and the associated ABT will likely not be available until the end of 2020. This next generation hardware is going to cost significantly less than any of the hardware currently available from third party vendors and will increase efficiency by reducing reliance on those external vendors to push software and firmware updates to the hardware. Ensuring that each Niagara transit property is utilizing the same hardware streamlines any backend processes by avoiding the need to integrate across different platforms.

2) Governance – The outcome of the Transit Governance Study could greatly impact the way mobile ticketing is launched in Niagara. The IMTWG recognizes that the current governance structure consisting of multiple providers would require the development of an app which will require passengers to choose which Niagara transit system they want to purchase a ticket from, however, this process may radically change in the short-term and make the app obsolete. A change in governance will result in the need to develop a completely brand-new app with added timer, cost and service impacts. In addition, the cost of developing an app that can accommodate the complex business rules surrounding current separate fare revenues is significant, thus exacerbating the wastage should it become obsolete in the near term. If the proposed timeline on a possible governance change was not as imminent (April 2020), it may be worth

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pursuing this now and developing another new app in a few years time; however that is not the case.

3) Funding – In 2019, each municipality with transit service developed a fare technology related application for the Investing in Canada's Infrastructure Program (ICIP) with the expectation that the funding would be announced later that year. Based on the collective experience of the IMTWG, the evaluations of those applications are still underway and approvals are not expected for another two - three months at the earliest.

It should also be noted that the mobile ticketing and ABT solution proposed by St. Catharines Transit Commission's mobile ticketing provider has been discussed with PRESTO, the fare payment agency responsible for Metrolinx's GO Transit and UP Express systems. The IMTWG has engaged with PRESTO to this effect, and there is a willingness from PRESTO to examine potential partnerships with Niagara municipalities on a pilot fare payment program with the St. Catharines Transit Commission's current supplier. This may lead to an integrated ticketing experience with PRESTO transit systems, providing a seamless customer experience between local, Regional and GO Transit.

Alternatives Reviewed

The alternative considered was implementing mobile ticketing throughout the Niagara Region in Q2 with visual validation only. The issue with this alternative is that should the LNTC recommend a new governance option, all of the resources and efforts put into the app development will need to be redeveloped and duplicated. A governance change will result in a completely brand-new app needing to be developed again with considerable cost, time and service impacts.

Relationship to Council Strategic Priorities

Responsible Growth and Infrastructure Planning

Objective 3.1: Advancing Regional Transit and GO Rail Services
Advance and advocate for Niagara's effort towards integrated and efficient conventional, specialized and higher order transit, enabling seamless and connective travel for all people throughout Niagara, the Hamilton area and the Greater Toronto area.

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Other Pertinent Reports

LNTC-C 10-2019 Fare Harmonization and Implementation Strategy

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Recommend and Submitted by:
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