

Transportation Report to
SPC on Transportation and Transit
2020 June 24

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On Demand Transit Update

EXECUTIVE SUMMARY

In August of 2019, Calgary Transit launched a one-year pilot of an On Demand Service to provide service to areas of the city that did not already have fixed-route transit. The pilot was funded through the Council Innovation Fund and provided transit service to the communities of Carrington and Livingston.

In the first seven months, the On Demand pilot surpassed its four project charter goals for ridership, customer satisfaction, app downloads and cost-per-ride. Metrics for the first-seven months were used to due to COVID-19's substantial reduction of ridership numbers.

The pilot was able to demonstrate that the On Demand technology can effectively provide a valuable customer experience with shared rides from individual requests, covering a wider geographic area than fixed-route service. The pilot provided evidence that in areas with lower ridership, the On Demand model can provide an average trip length that is only a few minutes longer than if the customer had driven themselves; with an on-time performance of more than 98 per cent.

ADMINISTRATION RECOMMENDATION:

That the Standing Policy Committee on Transportation and Transit recommends that Council accept this report and discussion for the Corporate Record.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2020 June 09, Priorities and Finance Committee approved the On Demand Pilot Service Update Briefing.

On 2018 November 19 Council approved, "1. That the Priorities and Finance Committee recommend Council approve this application for the CIF for the On-Demand Transit Service pilot project in the amount of \$338,000; and 2. That the Priorities and Finance Committee Direct Administration to report back to PFC indicating how the money was spent and outcomes of the project no later than Q2 2020.

BACKGROUND

Faced with demand for transit service in new communities at a time of economic uncertainty, Calgary Transit has been looking for innovative ways to deliver service. On Demand transit – that is, transit vehicles that are routed dynamically based on user demand – is one option that has shown potential. Like previous generations of Dial-A-Bus, On Demand transit matches individual user requests to create an efficient route.

On 2018 November 19, Council approved \$338,000 from the Council Innovative Fund to support the creation of an On Demand Transit Service pilot for one-year in the communities of Carrington and Livingston. As developing communities, these areas did not yet have the population to support traditional fixed-route transit services. The pilot demonstrated the ability of the new technology to accept bookings in real time or in advance, and to schedule cost-effective shared rides. It also confirmed a high level of customer satisfaction with the service.

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Due to COVID-19 and the unprecedented reduction of ridership, the findings of the report are based on the first-seven months of the pilot. An update was provided at the 2020 June 09 Priorities and Finance Committee with a briefing to share findings from the pilot (Attachment 1).

INVESTIGATION: ALTERNATIVES AND ANALYSIS

In 2018, a peer review of other transit agencies was undertaken to determine if and how they were responding to the issue of connecting suburban customers in low density communities with the transit network. Concurrently, a market survey of new and developing dispatching technologies was undertaken.

An RFP was released to market in November 2018. The RFP deliverables were written broadly to encourage as many alternative proposals as possible. Proposals were received from Taxi companies, Transportation Network Companies (TNCs), and bus lines, using various combinations of old and leading-edge technology.

Findings

By the end of February of 2020, On Demand had surpassed its four project charter goals of ridership-per-week, customer rating, app downloads, and weekday cost per ride (Attachment 2).

The pilot achieved a maximum utilization of 22 passengers per revenue operating hour (PROH) using two 12-passenger vehicles at peak-periods, demonstrating that the technology effectively creates shared rides from individual trip requests, while still providing a valuable customer experience. The pilot also showed that the On Demand model can cover a wider geographic area than a fixed-route service while providing a comparable level of service; the average trip was only four-minutes longer than if the customer had driven and customers were picked up within the promised four-minute window more than 98 per cent of the time. It is likely that low-demand areas and times of day would see similar results (Attachment 2).

When it comes to moving a high volume of passengers over longer distances, fixed routes and fixed schedule that group riders by time and location together are likely more efficient. This threshold will be different for each application, but it is likely around the 20 PROH mark, where larger fixed route vehicles become more cost-efficient.

Much of the direct savings in this pilot resulted from the use of an external (lower cost) service provider; however, cost savings were also achieved because there were no dispatching costs with On Demand; and infrastructure costs to maintain bus stops is reduced. The need for route planning, maps and schedules is also minimized.

Customer Experience

On Demand provides a predictable and personalized experience for customers who can pre-book their rides 24 to 48 hours in advance, enabling exact pick-up times. Last minute bookings are subject to longer delays as seats are often full. Calgary Transit developed policies to reduce wait times to less than 15-minutes for last minute bookings.

Fifteen per cent of On Demand customers had not previously used Calgary Transit, which demonstrates the ability of On Demand service to grow ridership.

The On Demand app was downloaded by 1676 customers (project goal was 200) and after each trip, the customer was given the ability to rate the trip from one to five. To date, the average rating is 4.92/5.00 with 97.2 per cent of customers giving a rating of four or five (project

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goal was to achieve 85 per cent customer rating). From survey and feedback, customers expressed what they liked:

- Ease of Use (app, payment, policy, and stop locations);
- Total time in Vehicle; and
- Feeling of a more personalized service.

In addition, the survey provided Calgary Transit feedback on what improvements the On Demand Transit service could make: reduce ride-delays during peak hours and increase service hours. In response to the expressed concerns, the project added an hour of service to the end of the day and developed and communicated a no-show policy to reduce unused seats and delays.

Stakeholder Engagement, Research and Communication

Calgary Transit staff attended open houses at local community centres and met with community developers and community associations both before and during the procurement process. As there was no transit available at the time, stakeholders were anxious for any type of transit service. But the community expressed an openness and interest in a technology driven solution.

Marketing and communication included door-to-door mail drops to more than 1,200 homes, info sessions, and social media. A second marketing campaign was run five months in to the service to collect feedback and respond to new concerns.

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Strategic Alignment

This report is aligned with the Calgary Transportation Plan, Municipal Development Plan and RouteAhead by providing cost effective transportation options, increasing mobility choice and incorporating new transit technologies and innovations.

Additionally, this report is aligned with Council priorities of A Prosperous City and A Well-Run City by providing transit to low density communities and embracing new ideas and methods for delivery of public services.

Social, Environmental, Economic (External)

The pilot has improved access to transit services for citizens in new and developing communities, reducing reliance on automobiles and increasing access to employment and other services.

The On Demand model has also demonstrated the potential to reduce vehicle mileage, and the resulting emissions. While a fixed route service in Carrington/Livingston would travel 484 km in a weekday, On Demand averaged 390 km. This is a 20 per cent reduction in pollution, fuel costs, and capital depreciation. During COVID, On Demand vehicles have averaged only 80 km per day.

Since On Demand trips are pre-booked and confirmed, On Demand service does not experience overloads.

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Financial Capacity

Current and Future Operating Budget:

Funds for the one-year pilot were provided, in part, by a grant from the Council Innovation Fund.

Future funding will be allocated from Calgary Transit's 2020 and 2021 operating budget using funding identified for service in this area.

Cost per-trip in the new community was lower than anticipated and was in-line with the lower end of existing route performance. As ridership develops, cost per ride will continue to drop.

Findings from the pilot suggest that the flexibility of the On Demand model may allow it to out-perform fixed route cost in certain existing service areas.

Current and Future Capital Budget:

As this service is wholly provided by a third party, there is no impact on capital budgets. However, upon completion of the pilot and in response to growing travel demand, there will be an expectation that transit service be implemented in the area. Commensurate fleet and infrastructure costs will be reflected in future capital budgets

Risk Assessment

This service is currently being provided by a third-party. Transit unions will expect their members to be involved if the service continues or expands over the longer term.

It is also recognised that the pilot introduced a new transit service where none existed previously. Customers of existing fixed-route service may not be as accepting of a change to an On Demand transit model.

The potential cost savings in a larger implementation have not yet been confirmed and will depend on a number of variables specific to each area.

REASON(S) FOR RECOMMENDATION(S):

The On Demand transit model has demonstrated that it can be cost effective in low ridership neighbourhoods by servicing a large geographic area, thus increasing the pool of potential riders. The On Demand nature allows this model to service a large area while providing a reasonable level of service. Wait times and trip length are reasonable, and customer feedback has been positive with a high level of satisfaction reported.

ATTACHMENT(S)

1. Attachment 1 – PFC Briefing- On Demand Transit Pilot Service Update
2. Attachment 2 – On Demand Additional Metrics