

Application to the City of Calgary Council Innovation Fund

Date: October 12, 2018

Name of Project: On-Demand Transit Service Pilot

Sponsor: Councillors Gondek and Keating

Affected Business Unit(s) and / or Departments:

Calgary Transit, Information Technology, Community Standards

Amount of Funds Requested: \$338,000

Project Description:

The On-Demand Transit Service Project is exploring new public transit service delivery methods to identify opportunities for providing more cost-effective service options. A review of new technologies, best practices and pilot projects at other transit agencies has identified that a demand-responsive service model may be able to provide better service at a lower cost than traditional models in areas or time periods that typically experience lower customer demand. This type of on-demand operation, common with ride-sharing companies, is very new to public transit. A pilot project is being recommended to determine the efficacy of this model within Calgary, and confirm outcomes prior to making large investments in capital and process change.

The pilot will focus on providing on-demand transit services in newer communities where demand is presently insufficient to warrant traditional fixed route/fixed schedule operations. By applying a demand responsive model, the pilot will identify whether a new community can be serviced more efficiently, at a lower total cost. The pilot will also monitor customer uptake and satisfaction with this service model. The project is intended to connect new communities with the existing transit network, and to retail and community services not available locally, via short trips and shared rides. Regular fares will be charged for this service.

The on-demand nature of this model has the potential to provide customers with convenient access to a shared transportation service while lowering operating costs and increasing efficiency of service delivery. If proven, this model could be applied to other areas and time periods that typically have low transit ridership.

The application of on-demand and ride-aggregating technology to a large public transit system is relatively new. Use of the innovation fund will allow Calgary Transit to test this technology in a new community by gathering information and customer feedback in the Calgary context. If successful, this model can be applied to other areas across the city where low demand restricts the ability to provide cost-effective traditional fixed route transit services.

Project Benefits – Why is this Project Needed, and Why Now?

The desire for public transit continues to grow across the city, while limited operating budgets and competing demands for resources constrain our ability to address that growth. We want to provide

Calgarians with improved travel options. Council has prioritized initiating transit service in actively developing and new communities, and lower density employment areas faster and more cost-effectively.

This project looks to pilot a service tool that could help address the need. This pilot is meant to enhance the tools in CT's service delivery toolbox, while not taking away from the need for continued investment in high-quality mass transit as the most efficient and cost-effective way to enable people's movement throughout the city.

During periods of moderate to high rider demand, transit systems can tailor vehicle size and route frequency to match demand and minimize the cost per rider. However, in times of low demand, even the smallest vehicle has a significant hourly cost that includes labour, maintenance costs, fuel, and capital costs. This translates in to a relatively high cost per rider.

Several of Calgary Transit's routes, which are highly cost-effective during peak hours, have a higher cost per rider during off-peak periods such as late nights and weekends. Transit continually reviews our routes, looking for ways to combine or redraw them to make them more effective. But where this cannot be achieved, the only option is to run a low performing route or to cancel it. While cancelling routes can look good for our bottom line, it comes with a high impact to our customers.

As a citizen-focused organization that is also a good steward of tax revenues, we must find another option, one that will allow us to provide more cost-effective and efficient service that increases value by better matching to demand at a lower cost. This project allows us to apply peer learnings and private sector practices to operate an on-demand transit service. In addition, the multitude of technology applications in relation to transportation and ride-sharing makes this a good time to test this model.

Project Partners

- **Information Technology Companies:** Although many Transportation Service Providers have developed their own dispatching and ride-hailing technology, we anticipate that some of the proposals will be partnerships between a service provider and an IT company. Fueled initially by Transportation Network Companies (TNCs), this market space is growing rapidly and moving in to the public transit sphere. Technology platforms for on-demand transit can be purchased off-the-shelf, or customized and branded for the client.
- **Transportation Service Providers:** Until an RFP is evaluated, it is unknown what type of company will offer the next service plan. We anticipate proposals from bus lines, taxi companies and other transportation providers. Each has a different business model, and each brings with it certain advantages and insights in to the efficient movement of people.
- **City Business Units:** as a leading-edge initiative, the project has worked closely with City representatives from Community Standards (Bylaws and Livery), Law, Risk, Labour Relations, and IT to ensure that risk to The City is minimized.

Project Timeline

November 2018	RFP to market for eight weeks
January 2019	Preferred Proponent awarded
February 2019	Community outreach begins
February 2019	Operational modelling and development of operations plan
April 2019	Twelve-month pilot project begins

Project Budget

The total budget for the project is \$338,000, which is net of (estimated) new revenue generated. The budget includes:

- **Communications, targeted marketing and branding**, identified as key to ensuring uptake of the service as was identified in the research and peer review.
- **Project administration costs**, including project management, contract management, data analysis, revising service levels as required throughout the pilot, and responding to customer inquiries.
- **Start up costs**, including app development, backend technology requirements, and training.
- **Pilot service costs**, which is the estimated cost to provide the service net of estimated new revenue. This estimate is based on providing approximately 100 rides per weekday and 60 rides per weekend day, over the course of a 12-month pilot. Costs will vary based on demand for service.

How does this Project meet the Criteria of the Fund as set out in the Terms of Reference?

The Council Innovation Fund applies to programs and pilot projects that encourage innovation and support the goals of Council as set out in current Council Priorities.

Council Priorities

Specifically, this project supports the following Council Priorities:

1. A prosperous city:
 - a. Moving our citizens efficiently and in a cost-effective manner promotes business growth and tourism, while reducing traffic congestion and pollution.
 - b. Providing transit to low density communities in a more cost-effective manner promotes new communities by providing potential home buyers with more transportation options
2. Inspiring neighbourhoods:
 - a. Promoting more transportation options allows freedom of movement across the City, encouraging our citizens to explore not only their own neighbourhood, but also other Calgary communities.
3. A city that moves:
 - a. Improved transit connections reduce reliance on personal vehicles, freeing up road space.
 - b. Improved transit affords low-income citizens greater access to the job market.

4. A health and green city:
 - a. Moving our citizens efficiently reduces reliance on personal vehicles and decreases traffic and noise pollution.
5. A well-run city:
 - a. By partnering with the private industry and embracing new technologies, The City will be presented with new ideas and methods for delivering public services.

Municipal Development Plan and Calgary Transportation Plan

The project aligns with the goals of the Municipal Development Plan (MDP) and the Calgary Transportation Plan by supporting City Council’s Sustainability Principles and Key Directions for Land Use and Mobility:

1. By increasing the range of cost-effective transit options, the project directly supports Sustainability Principle #1: Creating a range of housing opportunities and choices.
2. The project also aligns with
 - a. Sustainability Principle #4; Provide a variety of transportation options
 - b. Sustainability Principle #9: Connect people, goods and services locally, regionally and globally
 - c. Sustainability Principle #10: Provide transportation services in a safe, effective, affordable and efficient manner that ensures reasonable accessibility to all areas of the city for all citizens.
3. The project directly supports Key Direction #5: Increased mobility choices.
4. The project indirectly supports Key Direction #6: Develop a Primary Transit Network.

Although the Plan suggests the development of areas of high population density to support cost effective transit, there is the problem of “which comes first?” To entice potential buyers in to new high-density communities, developers want to offer an existing transit network. By finding new models to service low density populations, this project will allow The City to fill the gap until densities allow for fixed route, high frequency transit services.

What does Success look Like and How will it be Measured?

This pilot is intended to connect new communities with the existing transit network, and to retail and community services not available locally. Higher transit usage is associated with increased quality of life and lower municipal infrastructure costs.

The project will be a success if there is a reasonable uptake in usage and customer satisfaction, and cost per rider is lower than what would be expected using traditional fixed route services in low demand areas.

Success will be measured and reported back to PFC in Q2 2020 with the following key indicators:

Measure	Target
Ridership	620 trips per week
Customer satisfaction	85%

Apps downloaded	200
Cost per Ride	<i>confidential</i>