

Strathcona County Transit

Replacing Local Evening & Weekend
Service with On-Demand Transit

Presentation Agenda

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What is On-Demand Transit?

Transit agencies must be flexible and offer a suite of services to retain and attract new customers.

On-Demand Transit Services are shared-ride, demand-responsive services that typically use smaller vehicles and mobile app technology to provide mobility to customers.

The service model is similar to Dial-A-Bus, however, leverages technology to provide:

- Instant access to booking services;
- Near real-time tracking of vehicles; and
- The most efficient route to a requested destination.

Strategic Alignment

The 2019 TMP made the following recommendations under Strategic Direction MM1:
Explore the Introduction of Dynamic Transit Service

- Further explore the use of Dynamic Transit Services as a replacement of certain fixed-route services in the Urban Service Area. This should include a review of both dedicated and non-dedicated service models.
- Develop a Dynamic Transit Service model and business case for low demand areas and operating periods, allowing customers to use a mobile app to book a shared-ride demand-responsive service to connect to the fixed-route service.

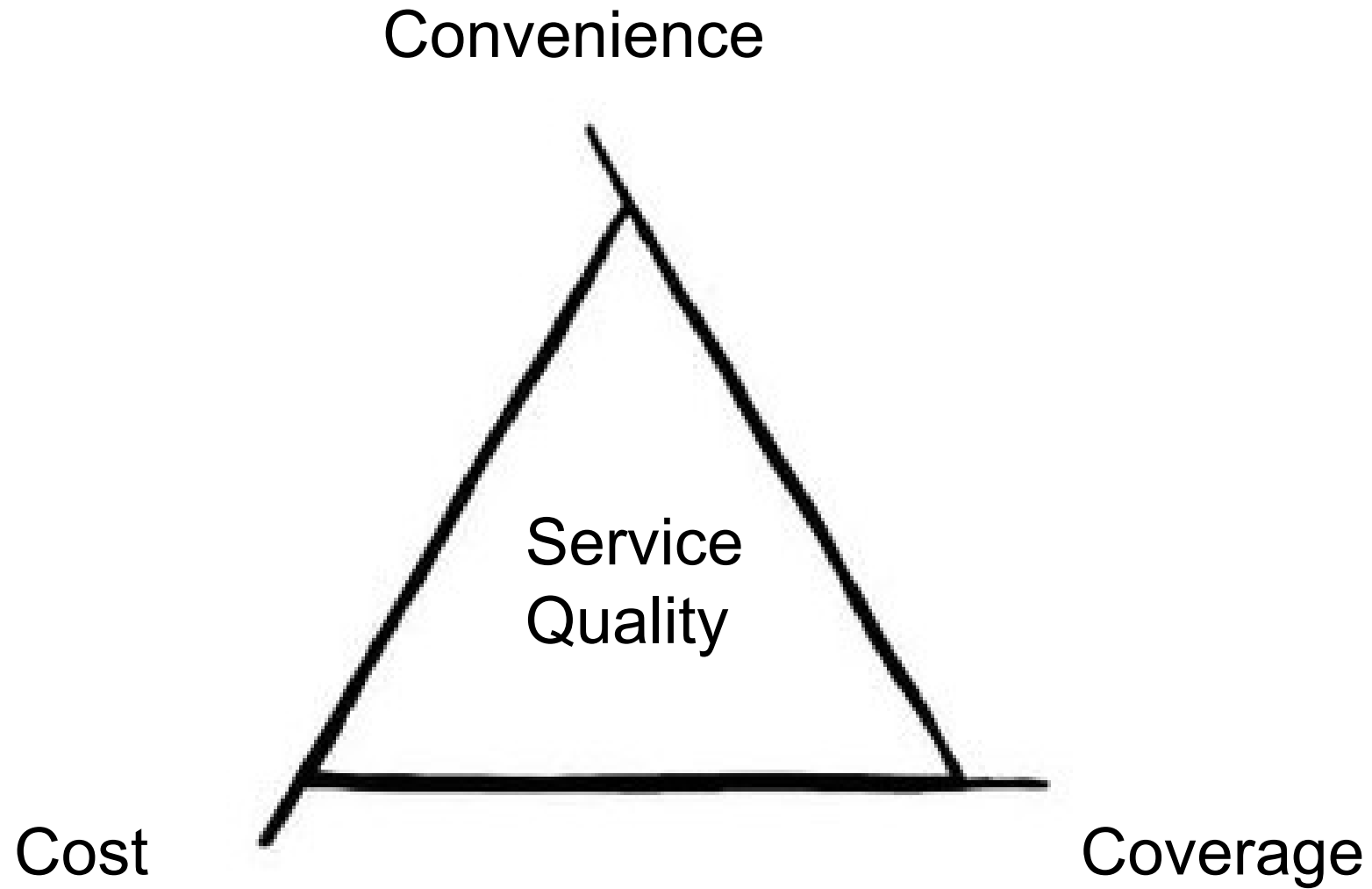
Strategic Alignment

Strathcona County's Strategic Direction #6: Provide facilities and services that are available and accessible to residents.

On-Demand Transit Services will meet this Strategic Direction by resulting in:

- A connected and accessible multi-modal transportation network; and
- Enhanced community interaction and connectedness; and
- Improved access to the community and cultural events, entertainment, shopping and dining opportunities.

Pilot Objectives



Why On-Demand Transit?

Not only cost savings...

On-Demand Transit represents an opportunity to improve the customer experience, while addressing the mobility needs of residents who demand flexible, on-demand transportation.

It would further improve Transit's image within the community by using the appropriately sized vehicle for demand.

Closest model to compete directly with personal transportation.

Service Description

Proposed pilot to test the service model and how successful it will be by implementing a 20-month pilot beginning May 2022.

Pilot to operate:

During these service periods:

- Weekdays – 7:15pm to 12:15am
- Saturday – 6:15am to 12:15am
- Sunday – 7:15am to 8:15pm

Improving wait times with these targets:

- <25-minute wait times.
- <30-minute travel times.



Local Ridership

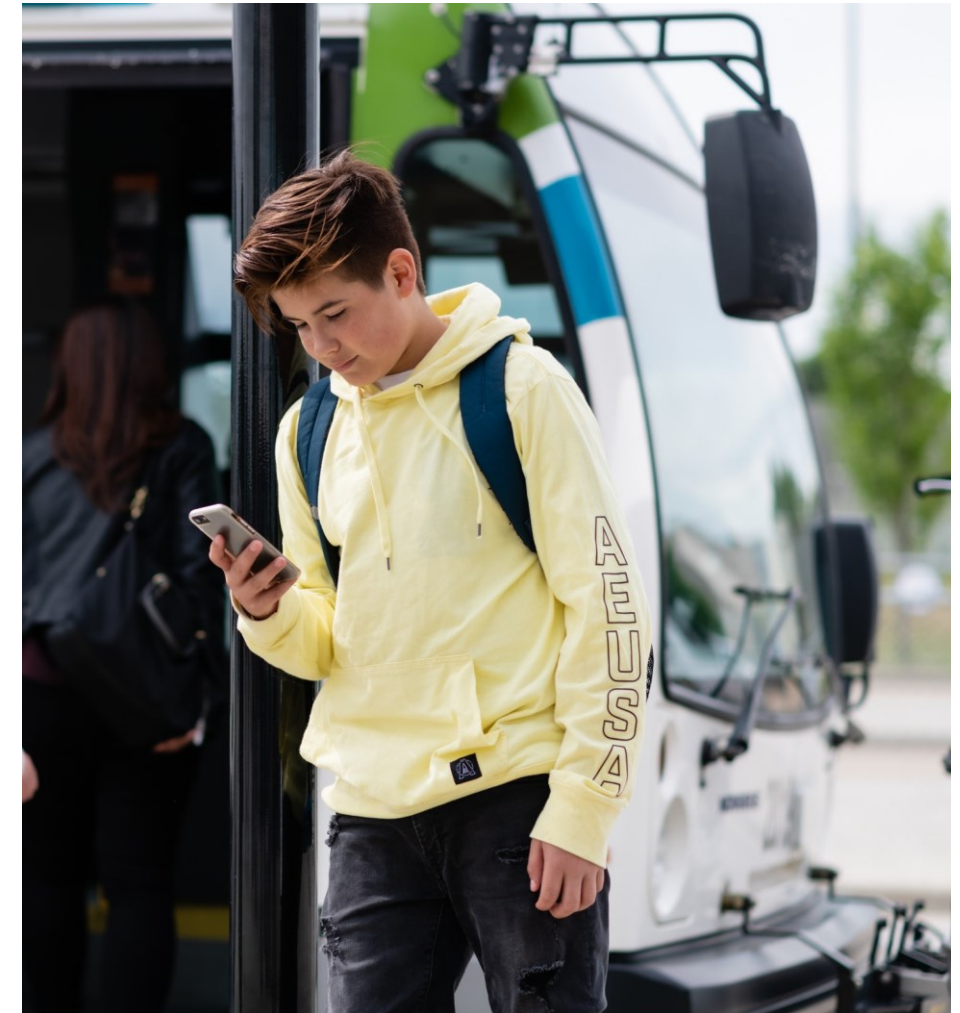
Evening & Weekend Peak Periods

Weeknights - 7:15pm to 9:15pm

Saturday - 9:15am to 6:15pm

Sunday – 9:15am to 4:15pm

Average Passenger Trips Per Hour (2019)			
	Weeknight	Saturday	Sunday
Peak	37	52	40
Off-Peak	19	21	19

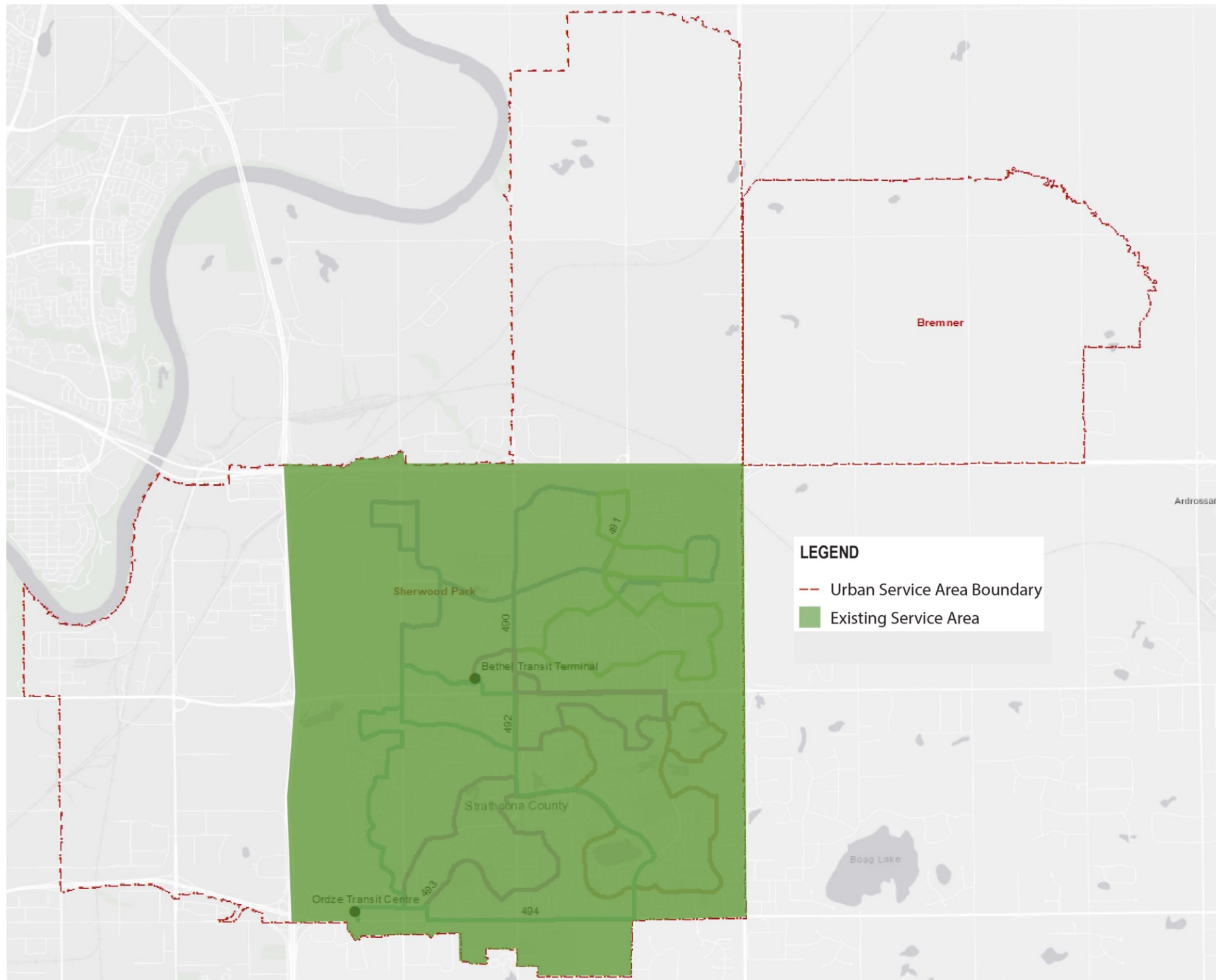


Proposed Service Area

Coverage of areas currently served by fixed-route transit.

Potential service expansion to Cambrian Crossing once the service standards have been met.

Stop-to-stop using existing bus stops.



Options Analysis and Assumptions

Several service delivery options looked at:

- Existing internal operation using 40-foot conventional buses
- Existing internal operation using Mobility Bus vehicles
- Contracted services using 10-15 passenger vans
- Ridesharing partnerships



Options Analysis and Assumptions



Assumptions included:

- Using 2019 pre-covid ridership levels for our model
- Shared ride service with a maximum of 4 passengers per trip
- Minimum and maximum travel times calculated for Sherwood Park
- Wait times up to 30-minutes or less
- Financial implications using full cost of providing service
- Up-front cost implications

Implementation Costs

	Existing	Nova	MB Vehicles	Contract
Upfront Cost	-	\$138,000	\$112,000	\$103,000
Software setup cost	-	\$50,000	\$50,000	\$50,000
Tablet/mounting cost	-	\$30,000	\$4,000	\$0
Other cost - test hours, decals, fleet readiness, marketing etc.	-	\$15,500	\$15,500	\$10,000
ITS cost for initial setup	-	\$43,000	\$43,000	\$43,000

Operating Costs

Annual Operating Costs			
	Annual Cost	Cost per Hour	Cost per Trip
Existing Service	\$1,604,746	\$536	\$16.85
On-Demand (40ft)	\$1,492,677	\$493	\$15.30
On-Demand (Contracted)	\$1,111,440	\$367	\$11.40
On-Demand (Mobility Bus)	\$1,077,951	\$355	\$11.04

Maintenance Costs

To ensure a spare ratio is maintained and daily book-outs can be met, it is proposed that SCT retains two (2) Mobility Bus vehicles set to be retired in 2021 for the duration of the On-Demand pilot project.

Annual Operating Costs for Retained Vehicles		
	2022	2023
Vehicle Maintenance	\$11,000	\$12,000

Cost-Benefit Analysis

Year 1 - May to December 2022

	Existing Service	On-Demand (40ft)	On-Demand (Mobility Bus)	On-Demand (Contracted)
Total Expenses	\$1,069,831	\$1,178,818	\$873,201	\$880,660
Existing Budget	\$1,069,831	\$1,069,831	\$1,069,831	\$1,069,831
Net Cost/Savings	\$ -	\$108,987	-\$185,630	-\$189,171

Year 2 - 2023

	Existing Service	On-Demand (40ft)	On-Demand (Mobility Bus)	On-Demand (Contracted)
Total Expenses	\$1,604,746	\$1,561,227	\$1,141,801	\$1,166,490
Existing Budget	\$1,604,746	\$1,604,746	\$1,604,746	\$1,604,746
Net Cost/Savings	\$ -	-\$43,519	-\$450,945	-\$438,256

Cost-Benefit Analysis

Year 3 - 2024 Upon Approval Through the Operating Budget Process

	Existing Service	On-Demand (40ft)	On-Demand (Mobility Bus)	On-Demand (Contracted)
Total Expenses	\$1,604,746	\$1,699,227	\$1,253,801	\$1,269,490
Existing Budget	\$1,604,746	\$1,604,746	\$1,604,746	\$1,604,746
Net Cost/Savings	\$ -	\$94,481	-\$350,945	-\$335,256

Year 4 & 5 – 2025 and 2026 Upon Approval Through the Operating Budget Process

	Existing Service	On-Demand (40ft)	On-Demand (Mobility Bus)	On-Demand (Contracted)
Total Expenses	\$1,604,746	\$1,561,227	\$1,141,801	\$1,166,490
Existing Budget	\$1,604,746	\$1,604,746	\$1,604,746	\$1,604,746
Net Cost/Savings	\$ -	-\$43,519	-\$450,945	-\$438,256

Recommendation

Based on the modelling, staff recommend the internally operated Mobility Bus option for the following reasons:

- Cost-benefit analysis indicated significant savings over the other models
- Smaller vehicle provides more flexibility to navigate the road system in Sherwood Park
- Vehicles are less expensive to operate
- Vehicle size in keeping with industry best practices
- More timely response and direct routes
- Less time on the bus

These findings provided the necessary evidence required to recommend a service model that meets the needs of Strathcona County.

Measuring Success

The success of the On-Demand Transit pilot will be measured using the following criteria:

- Overall customer satisfaction with On-Demand Transit;
- Ridership – Returning to pre-covid ridership levels;
- Decreased time on-board transit;
- Reduced wait times for transit services.

Summary



Community engagement through the TMP.

Developed partnerships with key stakeholders.

Conducted a preliminary market scan.

Modeled financial and growth scenarios.

Identify a preferred service delivery model using the supporting data.

Obtain approval to change service delivery method and retain Mobility Bus vehicles.

Identify functional and non-functional requirements and release an RFP to market.

Develop project implementation schedule.

Software implementation and piloting of the on-demand service model beginning May 2022.

Monitoring and Analysis.

Questions