

ETSAB: Urban Gondolas in Public Transit

Is this a Viable Option for Edmonton?

Recommendation

That Administration, in consultation with key stakeholders conduct a study to explore the high-level feasibility and benefits of building an urban gondola as an alternative or complementary solution to other transport options across and into the river valley that is fully-integrated into our public transit system, and the communities it would serve.

Executive Summary

Urban gondolas are highly versatile mass transit solutions that provide fast, reliable, safe, fully accessible and cost-effective transportation into even the most geographically challenging areas. As Edmonton grapples with how to increase transport capacity across our river valley and better connect Downtown and Old Strathcona, a gondola is uniquely well-suited to provide this capacity. ETSAB's research suggests this is a viable project that warrants further consideration and study.

Report

The purpose of this report is to provide objective information and research to City Council, ETS and administration on the viability and capabilities of urban gondolas in city transportation systems. In recent months there has been a lot of publicity and media attention on the topic of urban gondolas. This report aims to dispel some common misconceptions and provide facts and evidence to facilitate an informed debate. ETSAB conducted an extensive literature review and consulted with subject matter experts and urban gondola operators from around the world to inform the findings.

ETSAB considered a number of different routes and ultimately determined the best application of the technology that would deliver the most benefits on a City-wide level would be to connect Downtown and Old Strathcona, with an interim station in the Rosedale community.

The report also highlights some of the known limitations and contains information on relevant case studies and examples from around the world.

Some of the most compelling benefits and capabilities of urban gondola transportation include:

- High passenger capacity that rivals LRT. Gondolas can accommodate between 4,000 to 6,000 passengers per hour per direction depending on the design. One gondola system can transport the same number of people per hour as 2,000 cars or 100 buses.

- Alleviates traffic congestion by providing cost-effective grade separation.
- Fast and efficient: average system speeds are in-line with the average speeds traveled by conventional bus service and comparable to urban low-floor LRT speeds when factoring time stopped at stations.
- Extremely high reliability (>99%) and safety rating compared to other modes of transit.
- Fiscally-responsible: capital costs per kilometre are a fraction of what LRT and BRT would cost. Could be an attractive investment for private partnerships given that numerous systems ETSAB studied are revenue-positive.
- One of the most environmentally friendly modes of transit. (0.1 kWh/KM / passenger)
- Barrier-free accessible transit that easily accommodates mobility aids, strollers and bikes. Individual cabins slow or stop without impacting the overall system speed.
- It is a scalable solution where capacity can be increased with minimal incremental operating costs.
- Minimal wait times for passengers and easy integration with existing transit. Since it is a continuously moving system, there is no need to align timetables/schedules.
- Fast construction times. The prefabricated design means construction is often completed in under 12 months. This minimizes disruption to residents, businesses and commuters.
- Smallest footprint for a transportation project and would entail the least amount of development, construction and infrastructure in the river valley.

Alignment with City's 10-year Strategic Plan and Corporate Outcomes:

An urban gondola system connecting Downtown with Old Strathcona would yield many benefits for all Edmontonians and the City of Edmonton. The project aligns closely with the City of Edmonton's 10 year strategic goals and would improve performance on many of the corporate outcomes and targets set by Council.

- **Enhance the Use of Public Transit and Encourage Active Modes of Transportation.** An urban gondola will provide fast and efficient mass transit across one of Edmonton's most congested and high-traffic commuting corridors.
- **Ensuring Financial Sustainability:** An urban gondola system would be one of the most cost-effective methods of providing mass transit across the river valley. For a fraction of the cost of building a new bridge or refurbishing an existing one, an entire gondola system could be built and operational in significantly less time.
- **Transforming Edmonton's Urban Form:** A gondola system requires minimal land acquisition and would preserve the nature of the river valley by minimizing

development impacts. It would offer transit-oriented development (TOD) opportunities and support high density, vibrant neighbourhoods.

- **Preserve and Sustain Edmonton's Environment:** A fast transportation option with exclusive right-of-way between Old Strathcona and Downtown would encourage more citizens to use public transit. Gondola systems are environmentally sustainable and utilize very little energy to transport large numbers of passengers.
- **Improves Liveability:** Improving connectivity between these two high-density walkable neighbourhoods will enhance liveability in both neighbourhoods by improving connectivity, safety and improving access to recreational activities.
- **Diversify Edmonton's Economy:** An urban gondola could be a significant draw for Edmonton's increasing number of overnight visitors and tourists.

Attachment

1. Report: Urban Gondolas in Public Transit - Is this a viable option for Edmonton?