Hamilton

Hamilton Light Rail Transit Project

Operational Models
LRT Sub-Committee
September 25, 2023

PLANNING & ECONOMIC DEVELOPMENT DEPARTMENT

Roles and Responsibilities

Roles	Responsibilities
Owner	• Metrolinx is the owner of LRT assets and infrastructure
Project Delivery	• Metrolinx has a contractual responsibility for design, planning, construction, maintenance and operations, as well as the acquisition of property, and community/stakeholder engagement
Costs	• Metrolinx is responsible for all capital costs, including land acquisition costs associated with the Project • Metrolinx is responsible for lifecycle maintenance costs • The City is responsible for operating and non-lifecycle maintenance costs
Revenues	• The City will set fares and will be entitled to all fare box and certain non-fare box revenues
Operations and Maintenance	• **The Memorandum of Understanding does not set out which party will operate the LRT line (City or a third party through Metrolinx)**

Roles and Responsibilities

- MOU defines the **funding** responsibilities between the City and Metrolinx (regardless of who the operator is).
- MOU **does not** set out which party will operate the LRT (the City or a third party through Metrolinx).
- As Metrolinx remains the owner of the LRT assets and infrastructure, they will retain final approval over the selection of the operations model.
- LRT operations will be subject to performance standards set by Metrolinx.
- MOU acknowledges the importance of achieving a seamless customer experience between LRT and HSR services.
- Regardless of who operates the system, Metrolinx, in consultation with the City, will set schedules and service levels. The City will set fares and is entitled to farebox revenues.
- If Operations is contracted to a third party, the contractor will be required to meet Metrolinx performance standards. **Under all scenarios, the LRT system will remain publicly owned.**

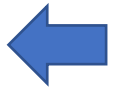
Decision-Making Timeline

Stage 1: Present operational models and assessment criteria for how staff will assess models

July 26, 2023 LRT Sub-Committee

Stage 2: Present preliminary analysis of operational models

September 25, 2023 LRT Sub-Committee



We are here

Stage 3: Present final analysis as well as recommended operational model

December 11, 2023 LRT Sub-Committee

Operations Activities

The term “LRT Operations” encompasses an extensive list of functions. For clarity, we have separated like activities into ***bundles***.

Bundle 1 – LRT B Line Operations

Bundle 2 – LRT Vehicle Operations*

Bundle 3 – Passenger Interface Provider

*Note: Typical industry practice bundles together Bundle 2 (LRT Vehicle Operations) into Bundle 1. Staff has separated these bundles so the City can consider if it wants to provide either/neither or both Bundles 1 and 2.

Operations Models

Operational Activities	Operational Model 1		Operational Model 2		Operational Model 3		Operational Model 4	
	Third party Performs all Operational Activities		City performs Passenger Interface Provider Activities.		City performs Passenger Interface Activities and LRT Vehicle Operations		City performs all aspects of Operational Activities except for Facility Operations	
	City	third party	City	third party	City	third party	City	third party
Bundle 1: LRT B Line Operations		x		x		x	x	
Bundle 2 : LRT Vehicle Operations		x		x	x		x	
Bundle 3: Passenger Interface Provider		x	x		x		x	

Examples:

Model 2: Region of Waterloo Line, Hazel McCallion Line in Peel Region

Model 4: Eglinton Crosstown and Finch West lines in Toronto and Confederation Line in Ottawa

Operations Models: Assessment Criteria

1. **Customer experience:** to assess a seamless experience between all modes of transit, ease of information, and continuity for the public and to determine if the model fosters opportunities for enhanced Inclusion, Diversity, Equity and Accessibility (IDEA);
2. **Interface(s) between parties:** to assess the interface(s) between Metrolinx, the City and various third parties and to determine the associated complexities with shared activities;
3. **Risks and liability:** to assess the types of risks and liabilities to the City that exist for each model, their likelihood of occurrence, the consequences associated with each risk and the potential for mitigation; and,
4. **Cost to the City:** to assess the relative cost impact of each model to determine if this creates an additional funding liability for the City.

Operations Models: Assessment Criteria

Ranking and Weighting of Assessment Criteria (1 is highest, 4 is lowest):

1. Customer Experience (35%);
2. Risks and Liability (30%);
3. Costs to the City (25%);
4. Interfaces between Parties (10%).

Customer Experience, Risks and Liability, and Costs to the City are similar in importance. Customer Experience is proposed as the highest in importance, as it fundamentally addresses the success of the system. Interfaces between Parties criteria are given lesser importance, as these can be mitigated through carefully planned operations.

Preliminary Assessment

Operations Model 1: Preliminary Assessment

Customer Experience

- Potential for customer confusion and overlaps, or gaps in customer experience
- Potential for lack of alignment between fare enforcement activities and optimizing revenue to the City
- Least opportunity for the City to influence delivery of mandate for enhanced IDEA

Interfaces between Parties

- Similar interfaces as Model 2 with moderate complexity, with the addition of customer service and fare revenue/fare enforcement interfaces.

Risks and Liability

- The significant risks associated with the operational activities (LRV drivers, vehicle collisions etc.) are borne by the third party operator, not the City.
- Medium risks to the City include: customer service coordination; bus bridging; and fare enforcement
- Medium level of overall risk.

Costs to the City

- Greatest cost certainty with third party contract compared to other models
- Least upfront cost to the City
- On balance, ongoing costs should be similar to Model 2 and slightly lower than Models 3 or 4.

Operations Model 2: Preliminary Assessment

Customer Experience

- Should be relatively seamless customer experience, as City will be responsible for customer interface for both HSR and LRT
- City will have the ability to optimize fare enforcement
- Moderate opportunity to achieve IDEA as the City takes on some responsibilities

Interfaces between Parties

- Fewest number of interfaces with least complexity

Risks and Liability

- The significant risks associated with the operational activities (LRV drivers, LRV-related collisions, etc.) are borne by third party operator, not the City.
- Least overall level of risk (Low to Medium) to the City, considering risk likelihood and consequence severity.

Costs to the City

- Slightly less cost certainty than Model 1
- Slightly more upfront cost to the City to bring in new functions compared to Model 1
- On balance, ongoing costs should be similar to Model 1 and slightly lower than Models 3 or 4.

Operations Model 3: Preliminary Assessment

Customer Experience

- Should be relatively seamless customer experience, as City will be responsible for customer interface for both HSR and LRT and driver management
- City will have the ability to optimize fare enforcement
- Higher opportunity to achieve IDEA as the City takes on more responsibilities

Interfaces between Parties

- Highest number of interfaces (including LRV Operations/Network Operations) with Moderate to High complexity

Risks and Liability

- The City assumes significant risks related to LRV collisions because the LRV drivers are City staff
- Other medium to high risks assumed by the City include: coordination between network operations and LRV drivers; disputes during start-up and operations; operations vs maintenance conflicts; driver SOPs, training and availability
- Overall risk to the City – medium to high

Costs to the City

- Less cost certainty than Models 1 and 2
- More upfront cost to the City to bring in new functions compared to Models 1 and 2
- On balance, ongoing costs should be similar to Model 4 and slightly higher than Models 1 and 2.

Operations Model 4: Preliminary Assessment

Customer Experience

- Should be relatively seamless customer experience, as City will be responsible for customer interface for both HSR and LRT, driver management and Systems Operations
- City will have the ability to optimize fare enforcement
- Highest opportunity for the City to influence delivery of mandate for enhanced IDEA

Interfaces between Parties

- Compared to Model 3, Model 4 does not have the complexity of the network operations vs LRV interface but does have other moderately to high complex interfaces including the operations vs maintenance interface.

Risks and Liability

- Overall operational activities, all borne by the City (LRV drivers, LRV-related collisions etc.) Overall Risk: High
- Greatest risk to the City with several risks with overall medium to high

Costs to the City

- Least cost certainty compared to other models
- Most upfront cost to the City to bring in new functions compared to other models
- On balance, ongoing costs should be similar to Model 3 and slightly higher than Models 1 and 2.

Operations Model Assessment: Risks Mitigations

In general, risks and liabilities (including risks associated with multiple interfaces) can be partially mitigated through some of the following but not limited to:

- Suitable technology and solutions accounted for during the design stage
- Appropriate provisions in the Project Agreement (PA)
- Standard Operating Procedures (SOPs) between the various parties
- Establishing and adhering to Emergency Response Plans
- Operator Training for all parties
- Reporting and Communication Protocols to communicate inquiries and incidents
- Considering hybrid model with differing models for start-up period and long term

QUESTIONS?