Hamilton

Hamilton Light Rail Transit Project

Operational Models
LRT Sub-Committee
January 29, 2024

PLANNING & ECONOMIC DEVELOPMENT DEPARTMENT

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.
- The 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

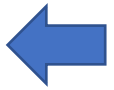
July 26, 2023 LRT Sub-Committee

Stage 2: Present preliminary analysis of operational models

September 25, 2023 LRT Sub-Committee

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

January 29, 2024 LRT Sub-Committee



We are here

Operational 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 have separated these bundles so the City can consider if it wants to provide either/neither or both Bundles 1 and 2.

Potential Staffing Requirements

Operational Bundles	Job Type	Approx. FTEs
Bundle 1: LRT B Line Operations	Controllers, Supervisors, etc.	Up to 15 FTEs
Bundle 2 : LRT Vehicle Operations	Operators, Trainers, Recruiters, Supervisors, etc.	Up to 70 FTEs
Bundle 3: Passenger Interface Provider	Safety and Security, Fare Enforcement, Customer Service and Communications Specialists, Supervisors, etc.	Up to 30 FTEs

Note: The above information is based on the City's high-level assessment per review of the *2011 Preliminary Operations and Maintenance Plan* and learning from similar projects. This must be reassessed and confirmed at a later stage.

Operational 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

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.

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 coordination of operational activities.

Consultation

LRT Project Office and Operational Models Working Group: staff involving various city departments worked together throughout this assessment process.

Consultation with Metrolinx: a series of workshops arranged by Metrolinx provided necessary knowledge on key activities involved with operations and maintenance of the LRT project.

Strategic Advisory Services: Mike Murray (former Region of Waterloo Chief Administrative Officer) provided strategic advisory services throughout this assessment process, including the Waterloo ION LRT lessons learned presentation at the December 11, 2023, LRT Sub-Committee.

Peer Review Services: Dennis Fletcher & Associates (DFA) provided peer review services.

Assessment of Models

Model 1	Model 2	Model 3	Model 4
Advantages • Provides the City with more cost certainty, minimal upfront cost and low ongoing cost with the lowest overall cost to the City • Consistent number of interfaces compared to Model 2, with moderate complexity • Consistent number of known risks compared to Model 2, with low to moderate overall risk **Disadvantages** • Creates customer confusion • Complex schedule coordination • Potential for lack of alignment between fare enforcement and optimizing revenue • Least public profile (presence) • Least opportunity to influence Inclusion, Diversity, Equity and Accessibility (IDEA)	**Advantages** • Seamless customer experience • Opportunity to influence IDEA • City controls alignment between fare enforcement and optimizing revenue • More public profile (presence) • More opportunity to consider socio-economic factors • Consistent number of known interfaces compared to Model 1, with reduced complexity (low to moderate) • Consistent number of known risks compared to Model 1, with low to moderate overall risk • Medium cost certainty, low upfront cost and low ongoing cost with the second lowest overall cost to the City **Disadvantages** • Complex schedule coordination • Reputation/public perception risk for City compared to Model 1	**Advantages** • Seamless customer experience • Moderate opportunity to influence IDEA • Enable the City to control alignment between fare enforcement and optimizing revenue • More public profile (presence) • More opportunity to consider socio-economic factors **Disadvantages** • Complex schedule coordination • High reputation/public perception risk for City compared to Model 2 • Highest number of known interfaces compared to other models, with moderate to high complexity • Highest number of known risks compared to other models (driver-related collision risks now transferred to the City), with medium to high overall risk • Low cost-certainty, medium upfront cost and medium ongoing cost, with the second highest overall cost to the City	**Advantages** • Most seamless customer experience • Greatest opportunity to influence IDEA • Seamless schedule coordination • Controlled alignment between fare enforcement and optimizing revenue • Most public profile (presence) • Greatest opportunity to consider socio-economic factors **Disadvantages** • Greatest reputation/public perception risk for City • Specific set of known interfaces, with moderate to high complexity • Known risks associated with Light Rail Vehicle and driver-related collisions (these risks are transferred to the City), with medium to high overall risk • Minimal cost certainty, high upfront cost and high ongoing cost with the highest overall cost to the City

Assessment Scoring Summary (corrected)

Assessment Criteria	Established Weights	Model 1	Model 2	Model 3	Model 4
Customer Experience	35%	2	5	6	7
Accountability - Interfaces between parties (No. of Interfaces, Complexity and Ease of Mitigation)	~~30%~~ 10%	6	7	5	6
Risks and Liabilities (Consequence, Likelihood, Overall Risk)	~~25%~~ 30%	8	9	6	5
Cost (Cost certainty, Upfront and Ongoing Cost)	~~10%~~ 25%	6	6	3	2
Weighted Scores		**5 (5.2)**	**7 (6.7)**	**5 (5.2)**	**~~6~~ 5 (5.1)**

* Scores 1 to 9: 1 is the least favourable to the City, and 9 is the most favourable to the City.

Recommended Model – Model 2

Model 2, City performs Passenger Interface Provider Activities, is recommended as the most preferred model for the City. Benefits include, but are not limited to:

- relatively seamless customer service, with the City providing the customer-facing functions;
- minimizes risks associated with the transitions from design and construction to operations and maintenance;
- minimizes the City's risk related to operational activities;
- provides greater cost-certainty to the City; and,
- is likely one of the lowest cost options for the City.

Recommended Model – Transitional Approach

Recommendation: Certain functions operated by a third party for an initial "start-up" period, with the option for the City to assume responsibility for those functions after an established period of time.

For Hamilton LRT operations, Model 2 is selected for start-up period with the option to transition to Model 4 after an initial 10 year term.

Recommended Model – Transitional Approach

Model 2 with transition to Model 4

1. City takes on the role as Passenger Interface Provider from the outset, which would provide a seamless customer service experience, create profile with transit customers and an opportunity to advance the City's objectives and policies related to Inclusion, Diversity, Equity and Accessibility.
2. Minimizes the risks associated with the transitions from the design and construction phase to the start-up, commissioning, operations and maintenance phases, as a single third party entity would be responsible for all activities.
3. Minimizes the City's risks related to operations for the initial operating period.
4. Provides opportunity for the City to observe and monitor the LRT operation activities, driver management, LRT Line operation, and provide the necessary knowledge and experience for the City to make an informed decision about the risks, costs and benefits to taking on these activities in the future.
5. Provides opportunity for the City to choose to take on additional operational activities in the future. Presumably the City would have access to the systems and processes that had been developed for the initial operations period, which would make it more efficient for the City to put in place the necessary operating procedures.

Recommendation

That the City endorse Operations Model 2 *(Municipality performs passenger interface activities)* to be selected as the City's preferred LRT operations model with the right to opt-in *(transition)* to Operations Model 4 *(Municipality performs all aspects of Operational activities except facility operations)* after an initial 10-year term.

Hamilton

QUESTIONS?