City of Hamilton

LIGHT RAIL TRANSIT SUB-COMMITTEE

AGENDA

Meeting #:	23-004
Date:	September 25, 2023
Time:	10:30 a.m.
Location:	Council Chambers Hamilton City Hall 71 Main Street West

Carrie McIntosh, Legislative Coordinator (905) 546-2424 ext. 2729

Pages

1. CEREMONIAL ACTIVITIES

2. APPROVAL OF AGENDA

   (Added Items, if applicable, will be noted with *)

3. DECLARATIONS OF INTEREST

4. APPROVAL OF MINUTES OF PREVIOUS MEETING

   4.1 July 26, 2023 — 3

5. COMMUNICATIONS

6. DELEGATION REQUESTS

7. DELEGATIONS

8. STAFF PRESENTATIONS

   8.1 Light Rail Transit Operations Models (PED23166(a)) (City Wide) — 10

9. CONSENT ITEMS

10. PUBLIC HEARINGS

Members of the public can contact the Clerk’s Office to acquire the documents considered at this meeting, in an alternate format.

11. DISCUSSION ITEMS

12. MOTIONS

13. NOTICES OF MOTION

14. GENERAL INFORMATION / OTHER BUSINESS

15. PRIVATE AND CONFIDENTIAL

15.1 Labour Relations Analysis of Light Rail Transit Model (HUR23014) (City Wide)

Pursuant to Section 9.3, Sub-section (d) of the City's Procedural By-law 21-021, as amended, and Section 239(2), Sub-section (d) of the *Ontario Municipal Act*, 2001, as amended, as the subject matter pertains to labour relations or employee negotiations.

16. ADJOURNMENT

4.1

LIGHT RAIL TRANSIT SUB-COMMITTEE
MINUTES 23-003
10:00 a.m.
Wednesday, July 26, 2023
Council Chambers
Hamilton City Hall
71 Main Street West

Present: Mayor A. Horwath, Councillors M. Wilson (Chair), N. Nann (Vice-Chair) C. Cassar, J.P. Danko, and T. Hwang

Absent with Regrets: Councillors M. Francis and C. Kroetsch – Personal

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THE FOLLOWING ITEMS WERE REFERRED TO GENERAL ISSUES COMMITTEE FOR CONSIDERATION:

1. Light Rail Transit Operations Models (PED23166) (City Wide) (Item 8.1)

(Cassar/Nann)
That Report PED23166, respecting Light Rail Transit Operations Models, be received.

Result: Motion CARRIED by a vote of 6 to 0, as follows:

Yes - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

FOR INFORMATION:

(a) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda:

6. DELEGATION REQUESTS

6.1 Brian Connolly, ATU Canada, respecting Keep Transit Public and Perils of Using Public-Private-Partnerships (P3) / Alternative Finance Procurement (AFP) to Design, Build, Finance, Operate and Maintain Public Transit (for today's meeting)

6.2 Anthony Marco, Hamilton & District Labour Council, respecting the Procurement and Tendering Processes with Regard to Operation and Maintenance of Hamilton's LRT (for today's meeting)

6.3 Eric Tuck, ATU Local 107, respecting ATU Historical Contractual Rights and Major Stakeholder (for today's meeting)

6.4 Violetta Nikolskaya, YWCA Hamilton, respecting Gendered Issues Impacting Transit (for today’s meeting)

6.5 Koubra Haggar, Hamilton Centre for Civic Inclusion, respecting Keeping the LRT Public (for today's meeting)

6.6 Lyndon George, HARRC, respecting LRT Transit Models (for today's meeting)

(Cassar/Hwang)
That the agenda for the July 26, 2023 Light Rail Transit Sub-Committee meeting be approved, as amended.

Result: Motion CARRIED by a vote of 5 to 0, as follows:

Not Present - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) June 2, 2023 (Item 4.1)

(Cassar/Hwang)
That the Minutes of the June 2, 2023 meeting of the Light Rail Transit Sub-Committee be approved, as presented.

Result: Motion CARRIED by a vote of 5 to 0, as follows:

Not Present - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

(d) COMMUNICATIONS (Item 5)

(i) Correspondence from Ian Borsuk, Environment Hamilton, respecting Item 8.1 Light Rail Transit Operations Models (PED23166) (City Wide)

(Cassar/Hwang)
That the correspondence from Ian Borsuk, Environment Hamilton, respecting Item 8.1 Light Rail Transit Operations Models (PED23166) (City Wide), be received and referred to the consideration of Item 8.1

Result: Motion CARRIED by a vote of 5 to 0, as follows:

Not Present - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

(e) DELEGATION REQUESTS (Item 6)

(Cassar/Hwang)
That the following Delegation Requests, be approved:

(i) Brian Connolly, ATU Canada, respecting Keep Transit Public and Perils of Using Public-Private-Partnerships (P3) / Alternative Finance Procurement (AFP) to Design, Build, Finance, Operate and Maintain Public Transit (for today's meeting) (Item 6.1)

(ii) Anthony Marco, Hamilton & District Labour Council, respecting the Procurement and Tendering Processes with Regard to Operation and Maintenance of Hamilton's LRT (for today's meeting) (Item 6.2)

(iii) Eric Tuck, ATU Local 107, respecting ATU Historical Contractual Rights and Major Stakeholder (for today's meeting) (Item 6.3)

(iv) Violetta Nikolskaya, YWCA Hamilton, respecting Gendered Issues Impacting Transit (for today's meeting) (Item 6.4)

(v) Koubra Haggar, Hamilton Centre for Civic Inclusion, respecting Keeping the LRT Public (for today's meeting) (Item 6.5)

(vi) Lyndon George, HARRC, respecting LRT Transit Models (for today's meeting) (Item 6.6)

Result: **Motion CARRIED by a vote of 5 to 0, as follows:**

Not Present - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

(f) DELEGATIONS (Item 7)

(i) Brian Connolly, ATU Canada, respecting Keep Transit Public and Perils of Using Public-Private-Partnerships (P3) / Alternative Finance Procurement (AFP) to Design, Build, Finance, Operate and Maintain Public Transit (Item 7.1)

Brian Connolly, ATU Canada, addressed the Committee respecting Keep Transit Public and the perils of using Public-Private-Partnerships (P3) now known as Alternative Finance Procurement (AFP) to design, build, finance, operate and maintain public transit.

(ii) Anthony Marco, Hamilton & District Labour Council, respecting the Procurement and Tendering Processes with Regard to Operation and Maintenance of Hamilton's LRT (Item 7.2)

Anthony Marco, Hamilton & District Labour Council, addressed the Committee respecting the procurement and tendering processes regarding the operation and maintenance of Hamilton's Light Rail Transit.

(iii) Eric Tuck, ATU Local 107, respecting ATU Historical Contractual Rights and Major Stakeholder (Item 7.3)

Eric Tuck, ATU Local 107, addressed the Committee respecting ATU's historical contractual rights and status as a major stakeholder Hamilton's Light Rail Transit.

(iv) Koubra Haggar, Hamilton Centre for Civic Inclusion, respecting Keeping the LRT Public (Item 7.4)

Koubra Haggar, Hamilton Centre for Civic Inclusion, addressed the Committee respecting Keeping the LRT Public.

(v) Violetta Nikolskaya, YWCA Hamilton, respecting Gendered Issues Impacting Transit (Item 7.5)

Violetta Nikoskaya, YWCA Hamilton addressed the Committee respecting Gendered Issues Impacting Transit.

(v) Lyndon George, Hamilton Anti-Racism Resource Centre (HARRC), respecting LRT Transit Models (Item 7.5)

Lyndon George was not present when called upon.

(Nann/Hwang)
That the following Delegations, be received:

(i) Brian Connolly, ATU Canada, respecting Keep Transit Public and Perils of Using Public-Private-Partnerships (P3) / Alternative Finance Procurement (AFP) to Design, Build, Finance, Operate and Maintain Public Transit

(ii) Anthony Marco, Hamilton & District Labour Council, respecting the Procurement and Tendering Processes with Regard to Operation and Maintenance of Hamilton's LRT

(iii) Eric Tuck, ATU Local 107, respecting ATU Historical Contractual Rights and Major Stakeholder

(iv) Koubra Haggar, Hamilton Centre for Civic Inclusion, respecting Keeping the LRT Public

(v) Violetta Nikolskaya, YWCA Hamilton, respecting Gendered Issues Impacting Transit

Result: Motion CARRIED by a vote of 6 to 0, as follows:

Yes - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

(g) PRESENTATIONS (Item 8)

(i) Light Rail Transit Operations Models (PED23166) (City Wide) (Item 8.1)

Jason Thorne, General Manager of Planning and Economic Development, and Abdul Shaikh, Director of Hamilton Light Rail Transit, provided the Committee with a presentation respecting Report PED23166, Light Rail Transit Operations Models, with the aid of a PowerPoint presentation.

(Cassar/Horwath)
That the presentation by Jason Thorne, General Manager of Planning and Economic Development, and Abdul Shaikh, Director of Hamilton Light Rail Transit respecting Report PED23166, Light Rail Transit Operations Models, be received.

Result: Motion CARRIED by a vote of 6 to 0, as follows:

Yes - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis

Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

For further disposition of this matter, refer to Item 1.

(h) ADJOURNMENT (Item 15)

(Cassar/Horwath)
That there being no further business, the meeting adjourned at 11:40 a.m.

Result: **Motion CARRIED by a vote of 6 to 0, as follows:**

Yes - Mayor Andrea Horwath
Yes - Ward 1 Councillor Maureen Wilson
Not Present - Ward 2 Councillor Cameron Kroetsch
Yes - Ward 3 Councillor Nrinder Nann
Yes - Ward 4 Councillor Tammy Hwang
Not Present - Ward 5 Councillor Matt Francis
Yes - Ward 8 Councillor John Paul Danko
Yes - Ward 12 Councillor Craig Cassar

Respectfully submitted,

Councillor M. Wilson, Chair,
Light Rail Transit Sub-Committee

Carrie McIntosh
Legislative Coordinator
Office of the City Clerk

INFORMATION REPORT

TO:	Chair and Members Light Rail Transit Sub-Committee
COMMITTEE DATE:	September 25, 2023
SUBJECT/REPORT NO:	Light Rail Transit Operations Models (PED23166(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Abdul Shaikh (905) 546-2424 Ext. 6559 Farhad Shahla (905) 546-2424 Ext. 5360
SUBMITTED BY: **SIGNATURE:**	Abdul Shaikh Director, Hamilton LRT Project Office Planning and Economic Development Department 

COUNCIL DIRECTION

Not Applicable.

INFORMATION

At the July 26, 2023, Light Rail Transit (LRT) Sub-Committee meeting, staff presented Report PED23166 (Light Rail Transit Operations Models), which provided an overview of potential LRT operating models. Report PED23166 included high-level background information on the activities and responsibilities associated with the operations and maintenance of a light rail transit system, identified potential operating models for the Hamilton LRT, and set out how these operating models will be assessed to arrive at a recommendation for the preferred model.

The purpose of this Information Report is to provide Council and the public with staff's preliminary assessment of the potential LRT operating models using the assessment criteria identified in the previous report, and to outline the next steps and analysis staff will undertake prior to bringing forward a recommended operating model to Council in Q4 2023.

This Information Report also describes how the assessment criteria will be ranked and weighted for the draft recommended operating model in Q4 2023.

Upon receiving Council direction on the City's preferred operating model in Q4 2023, staff will communicate the preferred operating model to Metrolinx. As mentioned in Report PED23166, Metrolinx is the owner of the Hamilton LRT Project and the ultimate decision of selecting the operating model for the Hamilton LRT Project is solely Metrolinx's to make. Once Metrolinx has selected the preferred operating model, Metrolinx and the City will work together to develop the requirements for procurement and execute the legal agreements necessary for the operating and maintenance period in accordance with terms and conditions set forth in the Memorandum of Understanding.

OPERATIONAL ACTIVITIES

Pursuant to the Memorandum of Understanding, the City is financially responsible for the operating costs associated with the LRT system. Staff has worked with Metrolinx to develop a list of operational activities and grouped related activities into three different bundles. These bundles are designed to assess the advantages, disadvantages and/or implications to the City in taking on any of the bundle activities. Details of each bundle were set out in Report PED23166 and included herein as Appendix "A" to Report PED23166(a) hereto ("Operational Activities").

a) Bundle 1: Light Rail Transit B Line Operations

b) Bundle 2: Light Rail Transit Vehicle Operations

c) Bundle 3: Passenger Interface Provider

As presented and discussed at the July 26, 2023 LRT Sub-Committee meeting, in addition to the above, there are operational activities pertaining to facility operations as well as a series of maintenance activities (lifecycle and non-lifecycle) which will be the responsibility of a third party selected through Metrolinx's procurement process.

LRT OPERATING MODELS

As noted in the previous report, based on reviews of other LRT systems in Ontario, there are several models for how the operational activities described above can be performed. Staff have set out four broad operating models for the Hamilton LRT Project for assessment purposes. Staff completed a preliminary assessment of these models with respect to their applicability and pros/cons in order to inform a future recommendation for the City's preferred operating model.

The following four operating models have been selected for review and assessment:

a) Model 1: Third party performs all 'Operational Activities.' Staff are not presently aware of any use of this model for LRT systems in Ontario.

b) Model 2: City performs 'Passenger Interface Provider Activities.' This model is presently used in the Region of Waterloo's LRT system and will also be used for the Hazel McCallion Line in Peel Region.

c) Model 3: City performs 'LRT Vehicles Operations and Passenger Interface Provider Activities.' Staff is not presently aware of any use of this model for LRT systems in Ontario; however, this model is similar to the operating arrangement used by GO Transit, whereby a third party provides staffing and operates GO under a contract with Metrolinx.

d) Model 4: City performs all 'Operational Activities'. This is the approach planned for operating the Eglinton Crosstown and Finch West lines, whereby the TTC will perform all operating functions. This model is identical to Ottawa's Confederation Line, which is being operated by the City of Ottawa's OC Transpo.

The table below provides a summary of the four operating models.

Table 1: Light Rail Transit Operating Models

Operational Activities	Operating Model 1		Operating Model 2		Operating Model 3		Operating Model 4	
	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	

Consideration for Model 5

Consideration for an additional model, referred to as "Model 5," in which the City would undertake all operational and maintenance activities of LRT infrastructure, was raised by a number of delegates at the July 26, 2023 LRT Sub-Committee meeting. As mentioned in Report PED23166, Metrolinx states that undertaking facility operations and all maintenance

activities will be the responsibility of a third party selected through Metrolinx's procurement process. In response to the questions raised at the LRT Sub-Committee on July 26, 2023, staff requested that Metrolinx comment on the potential for pursuing "Model 5" and Metrolinx has reiterated its position that Model 5 should not be used in the City's assessment as this responsibility would remain with a third party selected through Metrolinx's procurement process.

Hybrid Models

Though the operating models are being presented in this report as discrete models for the purposes of the assessment, in practice, opportunities exist for some "hybridization" of the models. For example, the City may propose an initial "start-up" period in which certain functions are operated by a third party, with an option for the City to assume responsibility for those functions after an initial period of time. This can be an automatic option, or an optional "opt-in" approach. These types of "hybrid" opportunities will form part of staff's consideration of the models when recommending the preferred operating model in Q4 2023. For example, Waterloo Region's LRT project includes a contract with a third party operator for an initial 10-year operation period, with up to four five-year extensions, which means Waterloo Region has the option to operate LRT after the expiry of an initial period. Similarly, Metrolinx has an agreement with the TTC to operate Eglinton Crosstown LRT for an initial period of 10 years with two successive renewal terms, each for an additional 10-year term.

ASSESSMENT CRITERIA

Staff have applied the following draft criteria in assessing the operating models:

a) *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);

b) *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. Typically, fewer and less complex interfaces would be preferred, as it leads to clearer accountability. More interfaces often lead to less clear accountability.

c) *Risks and liability:* To assess the types of risks and liabilities that exist for each model, their likelihood of occurrence, the consequences associated with each risk and the potential for mitigation.

d) *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. At this stage, it is likely

this will be a “high-level” qualitative assessment of the relative costs associated with each model.

As presented in Report PED23166, a series of questions are used for each criterion to assist with context and the application of the criterion.

At the July 26, 2023 LRT Sub-Committee meeting, staff were directed to account for Inclusion, Diversity, Equity and Accessibility (IDEA) as part of the model assessment. This is now accounted for as part of the Customer Experience criterion. IDEA is reflected in HSR’s Guiding Principles, and in *HSR Way,* the internal employee engagement and culture change program which aims to transform the customer experience. For example, HSR customer policies are being reviewed and implemented from an IDEA lens.

Furthermore, an issue of accountability was raised at the last LRT Sub-Committee. Staff believe accountability is closely related to the Interface(s) between Parties criterion. For example, any LRT model with more interfaces and a more complex interface will create less clarity on which party is responsible for or accountable, and this would require more effort to ensure accountability provisions are well documented in agreements with all parties involved.

Ranking and Weighing of Criteria

Since the July 26, 2023 LRT Sub-Committee meeting, staff have been working to determine and prioritize the draft assessment criteria and the quantitative importance (weights) of each criterion. From various discussions among the working group, staff developed the following ranking (1 is highest, 4 is lowest) and their associated weights:

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

Based on the above, the first three criteria, i.e. 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 to attract ridership and serve the residents of Hamilton, which in turn contribute to the City’s goals of environmental benefit, economic uplift, and equity. Interfaces between Parties criteria are given lesser importance, as these can be mitigated through carefully planned operations. The above information will be used as a qualitative lens when staff bring forward the City's preferred operating model to the LRT Sub-Committee in Q4, 2023 (staff are not intending to include quantitative measures, such as numbers or scorings, as part of this assessment, due to the complexity involved with the assessment).

PRELIMINARY ASSESSMENT

Staff have completed a preliminary review of the operating models against the various assessment criteria, which is summarized in Appendices B to E.

Consistent with the feedback received during the July 26, 2023, LRT Sub-Committee meeting, staff have developed three key themes to guide the review of the draft operating models:

1) Maximize seamless customer experience with enhanced opportunities for Inclusion, Diversity, Equity and Accessibility;

2) Minimize risk exposure and liability for the City with consideration for 'ease of mitigation' of the risk or deficiency; and,

3) Maximize accountability.

The above themes are consistent with the draft assessment criteria identified and will assist with a focused review of the models.

NEXT STEPS

Staff are presenting the preliminary assessment of the operating models through this report in order to provide an opportunity for input and feedback from Council, stakeholders and the public. Subject to the feedback received, staff will further refine and validate the preliminary assessment.

Staff intend to bring forward a recommendation on the City's preferred operating model to the LRT Sub-Committee in Q4 2023. Upon receiving Council direction on the City's preferred operating model, staff will communicate the City's preferred option to Metrolinx. The ultimate decision of selecting the operating model for the Hamilton LRT Project will remain solely with Metrolinx. Once Metrolinx has selected the preferred operating model, Metrolinx and the City will work together to develop the requirements for procurement and execute the legal agreements for the operating and maintenance period in accordance with terms and conditions set forth in the Memorandum of Understanding.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" to Report PED23166(a) – Operational Activities
Appendix "B" to Report PED23166(a) – Preliminary Assessment for Operations Model 1
Appendix "C" to Report PED23166(a) – Preliminary Assessment for Operations Model 2
Appendix "D" to Report PED23166(a) – Preliminary Assessment for Operations Model 3
Appendix "E" to Report PED23166(a) – Preliminary Assessment for Operations Model 4

Operational Activities

Activity Bundles	List of Main Activities*
Bundle 1: Light Rail Transit B Line Operations	Activities include, but are not limited to, the following: - Light Rail Transit Operations Control Centre (24/7/365) - manage on-time service performance and disruptions, service in the event of an emergency, and implementing service recovery post-emergency, including coordination with City traffic and transit - unplanned event management, including coordination with power utilities, HSR, Traffic, etc. - emergency event oversight - scheduling and planning of LRT service, including planned event management - establishing, monitoring and reporting operational performance (on-time performance, root cause analysis of service faults, etc) - safety and security of the LRT line, including guideway and corresponding infrastructure. i.e., traction powered substations, overhead catenary systems, platform stops - power control authority for traction power with local hydro provider - training to third parties who access right of way (emergency services, utility companies, etc) - associated employee management activities for groups listed above, including staffing and forecasting, recruitment, training/testing, scheduling, performance management
Bundle 2: Light Rail Transit Vehicle Operations**	Activities include, but are not limited to, the following: - operating LRT vehicles (i.e. drivers) - driver staffing and forecasting, recruitment, training/testing, scheduling, performance management; - driver performance, including safe operation of vehicles and adhere to schedules - driver adherence to safety-sensitive protocols, specifically during service disruptions and emergencies
Bundle 3: Passenger Interface Provider	Activities include, but are not limited to, the following: - overall customer experience: call centre management, public inquiries, issues management, public affairs and media relations

	- communications, including meeting AODA standards for service disruptions - safety and security of employees and passengers on board the vehicles and at stops, including vandalism, loitering, threat response, medical emergency response - fare collection and enforcement, fraud investigation and fare evasion ticketing - passenger communication during emergencies

* List of activities is not exhaustive. List is intended to highlight major components for illustrative and comparison purposes.

** Typical industry practice includes combining Bundle 2 (Light Rail Transit Vehicle Operations) within Bundle 1 (Light Rail Transit B Line Operations). Staff has "deconstructed" these two bundles in order to allow the City to consider if it wants to provide either, neither or both of Bundles 1 and 2.

Preliminary Assessment for Operations Model 1

Assessment Criteria	Model 1 - Third party performs all Operational Activities.
<u>Customer Experience</u> Is the model likely to contribute to a seamless customer service experience between bus service and the LRT service?	- High potential for overlaps and/or gaps in customer experience - High potential for customer confusion about who to call for inquiries - Significant effort needed to coordinate customer communication between the City and third party - High potential for inconsistent public messaging from the City and third party - Creates complexities for call centre, incident management, reporting and lost/found - Creates complexities related to stop communications: multiple screens/signs - Creates barriers for customer experience improvements, leading to customer experience issues/confusion may impact overall HSR brand.
Is the model providing benefits to schedule and service integration requirements of the project?	- High level of effort will be needed to coordinate schedules between HSR and third party - Coordination required through Metrolinx creates more complexities. - Potential for confusion when unpredicted schedule disruptions occur.
Does the model give the City the desired profile with transit customers?	- City would have limited presence on LRT system or vehicles - Low ability to influence and provide quality control over customer interactions - Potential for lack of alignment between fare enforcement activities, and optimizing revenue to the City
Does this model provide appropriate opportunities for the City to consider socio-economic circumstances when dealing with transit customers? Does the model foster opportunities for enhanced Inclusion, Diversity, Equity and Accessibility (IDEA) for the public?	- Limited or no opportunity for the City to consider socio-economic factors when dealing with customer service and fare enforcement i.e., addressing the barriers that affordability and enforcement can present to some. - Least opportunity for the City to influence delivery of the City's mandate for enhanced IDEA - Low ability to influence and provide quality control over customer interactions

Does model allow for the integration/coordination of some customer facing roles to enhance efficiency? (e.g., security also performs fare enforcement and passenger relations)	- Two separate customer service departments (HSR and LRT) would introduce inefficiencies (duplication of some effort) - Same party (third party) would be responsible for all LRT customer facing functions, which would potentially enhance LRT customer service efficiency.
Accountability - Interface(s) between parties In the model, what interfaces exist between the City and other parties? How complex are the interfaces between the City and other parties?	Model 1 contemplates some commonly known interfaces as Model 2, with the addition of customer service and fare enforcement/fare revenue interfaces. Interfaces in this model are mainly Moderate in complexity. For this model, known interfaces include but are not limited to the following: Key interfaces include: - Scheduling: Third party will be responsible for Light Rail Vehicle (LRV) scheduling; The City (HSR) will be responsible for bus scheduling. Will need close coordination to integrate scheduling, hours of operation, etc. Complexity: Low to Moderate - Bus Bridging: Third party will be responsible for LRT operations, but the City (HSR) will be responsible for providing buses and operators needed for bus bridging, for planned and emergency service disruptions. Complexity: Moderate - Emergency Response: Third party will be responsible for responding to LRT-related emergencies; especially collisions involving LRVs. The City will likely also be involved in some aspects of emergency response (e.g., related to traffic operations; EMS; fire; etc.) Protocols will be needed for the communication of notifications of emergencies between LRV and general traffic. Complexity: Moderate - Operations Monitoring/Payments: Third party is responsible for operations; Metrolinx is responsible for monitoring Project Agreement (PA) compliance; the City is responsible for paying all operating costs. The City needs efficient, effective mechanisms to obtain operations monitoring/PA compliance information to determine appropriate payments and/or penalties. Complexity: Moderate - Traffic Signal Operation: Higher level of coordination for different modes of transportation will be required between

	LRT's Operation Control Centre and the City's Traffic Signals Operations. Complexity: Moderate - Customer Service: The City and third party will both be providing customer service. Will need to be close coordination between them with respect to responsibility for various calls, complaints, and transfer and tracking protocols. Complexity: Low to Moderate. - Fare Revenue/Fare Enforcement: Depends on physical design of system and platforms, and location of "fare-paid zone". City is entitled to fare revenue, but third party is responsible for fare enforcement. May be motivation for third party to minimize (cost of) fare enforcement, which may reduce City's revenue. Complexity: Moderate. - Agreements: Anticipated that Metrolinx will have a PA with third party for design, construction, maintenance, network, LRV, and facility operation), and a separate agreement with the City for Customer interface. This may be cumbersome as the many interfaces between City and third party will need to be managed by Metrolinx, as there likely will not be an agreement between City and third party. Complexity: Moderate to High.
Ease of Mitigation: How easy or difficult will it be to create agreements that clarify interface roles and responsibilities and provide adequate incentive for other parties to act responsibly?	In general, interface issues can be partially mitigated through appropriate provisions in the Project Agreement (PA) and in Standard Operating Procedures (SOPs) between the various parties: - Scheduling Mitigation: Create or use current PAs/SOPs to specify initial hours of service and need to coordinate/align schedules. PA could provide mechanism for ongoing coordination of schedules - Bus Bridging Mitigation: PA and/or SOPs could specify roles and responsibilities and financial arrangements for bus bridging. Need to avoid incentive for third party to over-use the frequency or duration of bus bridging. - Emergency Response Mitigation: PA and/or SOPs could specify roles and responsibilities related to emergency response - Operations Monitoring/Payments Mitigation: PA could include mechanisms for monitoring operations performance and tracking appropriate payments and penalties. Operation & Maintenance payment agreement between The City and

	Metrolinx could contain provisions to ensure The City gets appropriate information to inform Operations payments - Traffic Signal Operation Mitigation: New SOPs established between the City and third party. - Customer Service Mitigation: Create or use current PAs/SOPs (who handles which types of calls, tracking customer calls, transferring calls, lost and found, etc.) - Fare Revenue/Fare Enforcement Mitigation: PA could provide a minimum standard for fare enforcement.
Risks and Liability What risks to the City does the model create? What are the likelihood and consequence of each risk?	The risks associated with all of the operational activities (LRV drivers, vehicle collisions, etc.) are borne by third party operator, not by the City. This model generally has the same number of commonly known risks compared to Model 2; however, contemplates Medium overall risk to the City. - Poorly integrated/coordinated customer service and customer information. Likelihood: Medium; Consequence: High; Overall Risk: Medium - Schedules are not integrated/aligned. Likelihood: Low; Consequence: Medium; Overall Risk: Low to Medium - Bus bridging is not well-coordinated and/or is overly costly to the City. Likelihood: Medium; Consequence: Medium; Overall Risk: Medium - Emergency response not well-coordinated. Likelihood: Medium; Consequence: Medium; Overall Risk: Medium - Misalignment with COH objectives/philosophies when choosing third party contractor e.g. changes in priorities. Likelihood: Medium; Consequence: Medium; Overall Risk: Medium - Lack of reporting of LRV-related collisions, untimely investigations, resulting in claims. Likelihood: Low; Consequence: Low to Medium; Overall Risk: Low - Fare enforcement is not appropriately aligned with fare revenue optimization. Likelihood: Depends on system design; Low to Medium; Consequence: Medium; Overall Risk: Medium - Reputational/Public perception risk for having public

	interface e.g. customer service, communication, fare enforcement and passenger interface security by third party (any bylaw issues or privacy issues having third party performing public interface security and fare enforcement). Likelihood: Low; Consequence: Medium; Overall Risk: Low - Operations do not meet PA service standards. Likelihood: Low; Consequence: Medium to High; Overall Risk: Low to Medium.
How easy can the potential risks be mitigated?	In general, risks can be partially mitigated through appropriate provisions in the Project Agreement and appropriate Standard Operating Procedures between the various parties. Create or adjust PAs/SOPs to mitigate the risks and manage high liability circumstances, and to achieve: - Integrated/coordinated customer service and customer information - Schedule integrated and alignment - Bus bridging coordination and/or reduced cost to City - Emergency response coordination - Enhanced public interface - Alignment with the City's objectives - Fare enforcement appropriately aligned with fare revenue optimization (design system to minimize potential for customers to board LRVs without paying fares) - Operations meet PA service standards (adequate information available to City to ensure that appropriate payments are made and/or penalties withheld). - Accurate and timely reporting of LRV-related collisions: ensure collisions are reported to the City, handling of all LRV related collisions with other modes of traffic. i.e. documentation, reporting and investigation. Further mitigation could include the City proposing an initial "start-up" period e.g. 5 years, in which certain activities are operated by a third party, with an option for the City to assume responsibility for those activities after the expiry of the initial start-up period.

<u>Cost to the City</u> Is the model likely to result in greater or lesser cost certainty to the City? Is the model likely to result in higher or lower costs to the City associated with bringing in new functions, setting up the staffing units and appropriate skills and expertise? Is the model likely to result in greater or lesser ongoing cost to the City for operations (excluding facility operations)?	Greatest cost certainty with third party contract compared to other models (most services contracted to third party) Least upfront cost to the City to bring in new functions compared to other models Ongoing Costs should be similar to Model 2 and slightly lower than Models 3 or 4: - third party will need to make a profit on all aspects of contracted operations - some duplication of customer service functions would lead to slightly higher costs for that function compared to Model 2 - fewer interfaces requiring management by City staff than Models 3 or 4 - fewest additional City staff required compared to other models - the relative cost of City staff vs third party staff is unknown

Preliminary Assessment for Operations Model 2

Assessment Criteria	Model 2 - Municipality performs Passenger Interface Provider Activities; Third Party Responsible for Everything Else (HC, Waterloo)
<u>Customer Experience</u> Is the model likely to contribute to a seamless customer service experience between bus service and the LRT service?	- Should be relatively seamless customer experience, as City will be responsible for customer interface for HSR and LRT
Is the model providing benefits to schedule and service integration requirements of the project?	- Effort will be needed to coordinate schedules between HSR (City) and third party - Coordination required through Metrolinx creates more complexities. - Potential for confusion when unpredicted schedule disruptions occur.
Does the model give the City the desired profile with transit customers?	- City will have public profile as the customer interface provider (although not as the system operator). - City will have the ability to optimize fare enforcement activities to achieve best balance between customer service and revenue objectives
Does this model provide appropriate opportunities for the City to consider socio-economic circumstances when dealing with transit customers? Does the model foster opportunities for enhanced Inclusion, Diversity, Equity and Accessibility (IDEA) for the public?	- Increased opportunity (compared to Model 1) for the City to consider socio-economic factors when dealing with Customer Service and Fare Enforcement (i.e. addressing the barriers that affordability and enforcement can present to some) - Moderate opportunity for the City to influence delivery of the City's mandate for enhanced IDEA (coordination required with Metrolinx, and third party)
Does the model allow for the integration/coordination of some customer facing roles to enhance efficiency? (e.g., security also performs fare	- This should be efficient as the City will provide fully integrated customer service activities (e.g., one call centre, one communications team, one escalation process, etc) - Same party (City) would be responsible for all LRT customer facing functions, which would potentially enhance LRT customer service efficiency

enforcement and passenger relations)	
Accountability - Interface(s) between parties In the model, what interfaces exist between the City and other parties? How complex are the interfaces between the City and other parties?	Model 2 contemplates some commonly known interfaces as model 1 with the addition of operation/communications interface. This model has the fewest number of interfaces. Interfaces in this model are mainly Low to Moderate in complexity. For this model, known interfaces include but are not limited to the following: Operation / Communications: Third party will be responsible for operations; City will be responsible for customer interface. Will need close coordination between third party operations staff and City Communications staff to ensure timely and accurate operational information is communicated to customers. Complexity: Low Scheduling: Third party will be responsible for Light Rail Vehicle (LRV) scheduling; The City/HSR will be responsible for bus scheduling. Will need close coordination to integrate scheduling, hours of operation, etc. Complexity: Low to Moderate Bus Bridging: Third party will be responsible for LRT operations, but the City/HSR will be responsible for providing buses and operators needed for bus bridging for planned and emergency service disruptions. Complexity: Moderate Emergency Response: Third party will be responsible for responding to LRT-related emergencies, especially collisions involving LRVs. The City will likely also be involved in some aspects of emergency response (e.g., related to traffic operations; EMS; fire). Complexity: Moderate Operations Monitoring/Payments: Third party is responsible for operations; Metrolinx is responsible for monitoring Project Agreement (PA) compliance; The City is responsible for paying all operating costs. The City needs efficient, effective mechanisms to obtain operations monitoring / PA compliance information to determine appropriate payments and/or penalties. Complexity: Moderate Traffic Signal Operation - Higher level of coordination for different modes of transportation will be required between LRT's Operation Control Centre and the City's Traffic Signals Operations. Complexity: Moderate Fare Revenue/Fare Enforcement: Depends on physical design of system and platforms, and location of "fare-paid zone"

	City is entitled to all fare revenue, but third party is responsible for fare enforcement. May be motivation for third party to minimize (cost of) fare enforcement, which may reduce City's revenue. Complexity: Moderate. Agreements: Anticipated that Metrolinx will have a PA with third party for design, construction, maintenance, network, LRV, and facility operation), and a separate agreement with the City for Customer interface. This may be cumbersome as the many interfaces between City and third party will need to be managed by Metrolinx, as there likely will not be an agreement between City and third party. Complexity: Moderate.
Ease of Mitigation: How easy or difficult will it be to create agreements that clarify interface roles and responsibilities and provide adequate incentive for other parties to act responsibly?	In general, interface issues can be partially mitigated through appropriate provisions in the Project Agreement (PA) and in Standard Operating Procedures (SOPs) between the various parties: Operation / Communications: Mitigation – SOPs to specify roles and responsibilities for timely sharing of operational information with Communications staff. Potential for customer service/communications staff to have real time access to operational information Scheduling: Mitigation – PA could specify initial hours of service and need to coordinate/align schedules. PA could provide mechanism for ongoing coordination of schedules Bus Bridging: Mitigation – PA and/or SOPs could specify roles and responsibilities and financial arrangements for bus bridging. Need to avoid incentive for third party to over-use the frequency or duration of bus bridging. Emergency Response: Mitigation – PA and/or SOPs could specify roles and responsibilities related to emergency response Operations Monitoring/Payments: Mitigation – PA could include mechanisms for monitoring operations performance and tracking appropriate payments and penalties. Operation & Maintenance payment agreement between the City and Metrolinx could contain provisions to ensure the City gets appropriate information to inform Operations payments. Traffic Signal Operation: Mitigation: Create updated SOPs for coordination between the systems

	Agreements: PA between Metrolinx and third party for design, construction, maintenance, network, LRV, and facility operation, and a separate agreement with the City for Customer interface.
Risks and Liability What risks to the City does the model create? What are the likelihood and consequence of each risk?	In this model, the risks associated with all the operational activities (LRV drivers, LRV-related collisions etc.) are borne by third party operator, not by the City. In this model, the City's assumption of public interface activities eliminates some problematic interfaces. This model generally has the same number of commonly known risks compared to Model 1; however, contemplates the least overall risk to the City (Low), compared to all models: Customer Service/Communications may not be given access to timely/accurate operational information Likelihood: Low to Medium, Consequence: Low Overall Risk: Low Schedules are not integrated/aligned Likelihood: Low, Consequence: Medium Overall Risk: Low Bus Bridging is not well-coordinated and/or is overly costly to the City Likelihood: Medium, Consequence: Medium Overall Risk: Medium Emergency Response not well-coordinated Likelihood: Medium, Consequence: Medium Overall Risk: Medium Misalignment with COH objectives e.g. change in priorities Likelihood: Low, Consequence: Low to Medium Overall Risk: Low Lack of reporting of LRV-related collisions, untimely investigations, resulting in claims Likelihood: Low, Consequence: Low to Medium Overall Risk: Low Operations do not meet PA service standards Likelihood: Low, Consequence: Medium to High Overall Risk: Medium Fare Enforcement/Revenue Collection Likelihood: Low, Consequence: Low to Medium

	Overall Risk: Low Reputational/Public Perception Risk: Once the City starts taking responsibility for some elements, the public perception of responsibility begins to shift. So while there remains a medium likelihood of the public assigning responsibility to the City (at least in the short-term) the consequence is now medium, since the City will bear some responsibility for information, coordination etc., affecting the customer service, increasing the overall risk to medium. Likelihood: Medium, Consequence: Medium Overall Risk: Medium Operations do not meet PA service standards: Likelihood: Low, Consequence: Medium to High Overall Risk: Medium.
How easy can the potential risks be mitigated?	In general, the aforementioned risks can be partially mitigated through appropriate provisions in the Project Agreement and appropriate Standard Operating Procedures between the various parties: Create or use updated PAs/SOPs to mitigate the risk and to achieve: - City Customer Service/communications access to timely/accurate operational information - Schedule integrated and alignment - Bus bridging coordination and/or minimized cost to City - Emergency response coordination - Operations meet PA service standards (Adequate information available to City to ensure that appropriate payments are made and/or penalties withheld). Further mitigation could include the City proposing an initial "start-up" period e.g. 5 years, in which certain activities are operated by a third party, with an option for the City to assume responsibility for those activities after the expiry of the initial start-up period.
<u>Cost to the City</u> Is the model likely to result in greater or lesser cost certainty to the City? Is the model likely to result in higher or lower costs to the City	Slightly less cost certainty than Model 1 (because Passenger Interface activities performed by City rather than third party) Slightly more upfront cost to the City to bring in new functions compared to Model 1 (City would need to expand some HSR customer service activities and create fare enforcement program)

associated with bringing in new functions, setting up the staffing units and appropriate skills and expertise? Is the model likely to result in greater or lesser ongoing cost to the City for operations (excluding facility operations)?	Ongoing Costs should be similar to Model 1 and slightly lower than Models 3 or 4: - third party will need to make a profit on all aspects of contracted operations (except for Passenger Interface Activities) - fewest interfaces requiring management by City staff compared to other models - slightly more City staff required than Model 1, but significantly less than Models 3 and 4 - the relative cost of City staff vs third party staff is unknown

Preliminary Assessment for Operations Model 3

Assessment Criteria	Model 3 - Municipality performs Passenger Interface Provider and LRT Driver Management Activities; Third party Responsible for LRT Line Operations and Facility Operations
Customer Experience Is the model likely to contribute to a seamless customer service experience between bus service and the LRT service?	- Should be relatively seamless customer experience, as City will be responsible for customer interface for HSR and LRT
Is the model providing benefits to schedule and service integration requirements of the project?	- Effort will be needed to coordinate schedules between HSR (City) and third party
Does the model give the City the desired profile with transit customers?	- City will have high profile as the Passenger Interface Provider (PIP) and Light Rail Vehicle (LRV) driver. City will be seen as responsible for system successes and any challenges/issues. - City will have the ability to optimize fare enforcement activities to achieve best balance between customer service and revenue objectives.
Does this model provide appropriate opportunities for the City to consider socio-economic circumstances when dealing with transit customers? Does the model foster opportunities for enhanced Inclusion, Diversity, Equity and Accessibility (IDEA) for the public?	- Increased opportunity (compared to Model 1) for the City to consider socio-economic factors when dealing with Customer Service and Fare Enforcement i.e. addressing the barriers that affordability and enforcement can present to some. - Higher opportunity for the City to influence delivery of the City's mandate for enhanced IDEA; coordination required with Metrolinx, and third party (compared to Models 1 and 2).
Does the model allow for the integration/coordination of some customer facing roles to enhance efficiency? (e.g., security also performs fare	- This should be efficient as the City will provide fully integrated customer service activities (e.g. one call centre, one communications team, etc) - Same party (City) would be responsible for all LRT customer facing functions, which would potentially enhance LRT customer service efficiency

enforcement and passenger relations)	
Accountability - Interface(s) between parties In the model, what interfaces exist between the City and other parties? How complex are the interfaces between the City and other parties?	Model 3 has the highest number of known interfaces, including many associated with model 2, with the addition of operation/communications, LRV Operations/Network Operations and Transition from construction to operations. Interfaces in this model are mainly Moderate to High in complexity. For this model, known interfaces include but are not limited to the following: Operation / Communications: Third party will be responsible for operations; City will be responsible for customer interface. Will need close coordination between third party operations staff and City Communications staff to ensure timely and accurate operational information is communicated to customers. Complexity: Low Scheduling: Third party will be responsible for LRV scheduling; The City / HSR will be responsible for bus scheduling. Will need close coordination to integrate scheduling, hours of operation etc. Complexity: Low to Moderate Bus Bridging: Third party will be responsible for LRT operations, but the City/HSR will be responsible for providing buses and operators needed for bus bridging – for planned and emergency service disruptions. Complexity: Moderate Emergency Response: Third party will be responsible for responding to LRT-related emergencies, especially collisions involving LRVs. The City will likely also be involved in some aspects of emergency response (e.g., related to traffic operations; EMS; fire, etc.) Complexity: Moderate Operations Monitoring/Payments: Third party is responsible for operations; Metrolinx is responsible for monitoring Project Agreement (PA) compliance; The City is responsible for paying all operating costs. The City needs efficient, effective mechanisms to obtain operations monitoring / PA compliance information to determine appropriate payments and/or penalties. Complexity: High LRV Operations/Network Operations: Third party is responsible for network operations (including Operations Control Centre); City is responsible for LRV operations. third party Operations Control Centre staff will be directing City LRV operators to manage service delivery in real time, which will require careful coordination. Will also require careful coordination to ensure

	that LRV crew scheduling matches LRT service schedule. Complexity: High Transition from construction to operations: Third party will be responsible for design, construction, commissioning, and network operations. City will be responsible for LRV operations. Will require careful management of the start-up phase to avoid disputes about early operational challenges due to unforeseen design, construction and commissioning issues Complexity: Moderate Traffic Signal operation - Higher level of coordination for different modes of transportation will be required between LRT's Operation Control Centre and the City's Traffic Signals Operations. Complexity: Moderate Agreements: Anticipated that Metrolinx will have a PA with third party for design, construction, maintenance, network, and facility operation), and a separate agreement with the City for Customer interface and LRV operations. This may be cumbersome as the many interfaces between City and third party will need to be managed by Metrolinx, as there likely will not be an agreement between City and third party. Complexity: Moderate to High
Ease of Mitigation: How easy or difficult will it be to create agreements that clarify interface roles and responsibilities and provide adequate incentive for other parties to act responsibly?	In general, interface issues can be partially mitigated through appropriate provisions in the Project Agreement (PA) and in Standard Operating Procedures (SOPs) between the various parties: Operation / Communications: Mitigation - SOPS to specify roles and responsibilities for timely sharing of operational information with Communications staff. Potential for customer service/communications staff to have real time access to operational information Scheduling: Mitigation - PA could specify initial hours of service and need to coordinate/align schedules. PA could provide mechanism for ongoing coordination of schedules Bus Bridging: Mitigation - PA and/or SOPs could specify roles and responsibilities and financial arrangements for bus bridging. Need to avoid incentive for third party to over-use the frequency or duration of bus bridging. Emergency Response: Mitigation - PA and/or SOPs could specify roles and responsibilities related to emergency response

	LRV Operations/Network Operations: Mitigation - PA will need to include specific provisions about network operations vs LRV operations roles and responsibilities. Transition from construction to operations: Mitigation - PA will need to provide considerable detail about commissioning, start-up and acceptance testing, and mechanisms to resolve disputes about early operational issues. Operations Monitoring/Payments: Mitigation - PA could include mechanisms for monitoring operations performance and tracking appropriate payments and penalties. Operation & Maintenance payment agreement between the City and Metrolinx could contain provisions to ensure The City gets appropriate information to inform Operations payments. Agreements: Mitigation - Metrolinx agreements with third party and the City will need to be carefully structured to deal with the interfaces and relationships between City and third party.
Risks and Liability What risks to the City does the model create? What are the likelihood and consequence of each risk?	In addition to many of the risks identified for Models 1 and 2, Model 3 contemplates a new set of commonly known risks relating to LRV operation, LRV drivers and driver management and training. Risks associated with this model are perceived to be of overall Moderate to High. Some of the most commonly known risks relating to Model 3 include but are not limited to the following: For Model 3, operational activities are partially transferred to third party. For this model, similar to Model 4, in case of an LRV-related collision, the City (as the driver's employer and supervisor) is likely to bear some (or all) of the alleged liability– unless the collision is the result of non-driver related causes such as system malfunction, signal or vehicle mechanical problems. For this model risks associated with LRV driver and management (including LRV collision-related risks) are borne by the City. Likelihood: Medium, Consequence: High Overall Risk: Medium to High Customer Service/communications not given access to timely/accurate operational information. Likelihood: Low to Medium, Consequence: Low Overall Risk: Low Schedules are not integrated/aligned. Likelihood: Low, Consequence: Low to Medium Overall Risk: Low

	Bus bridging is not well-coordinated and/or is overly costly to the City: Likelihood: Medium, Consequence: Medium Overall Risk: Medium Emergency response not well-coordinated: Likelihood: Medium, Consequence: Medium Overall Risk: Medium Disputes during start-up and operations related to design, construction, and commissioning issues: Likelihood: Medium to High, Consequence: High Overall Risk: Medium to High Operations vs maintenance conflicts: Likelihood: Medium to High, Consequence: High Overall Risk: Medium to High Insufficient Operations Procedures and SOPs: Likelihood: Medium, Consequence: Medium to High Overall Risk: Medium to High Poor coordination between Network operations (Operations Control Centre) and LRV operations, due to misaligned or competing objectives between Operations Control Centre and LRV operations: Likelihood: Low to Medium, Consequence: Medium Overall Risk: Low to Medium Insufficient operator training: Likelihood: Low, Consequence: Medium to High Overall Risk: Low to Medium LRV driver scheduling problems/lack of availability of operators causing missed trips, leading to financial implications to the City and customer inconvenience Likelihood: Medium, Consequence: Medium Overall Risk: Medium City’s liability for all operator-related incidents, ranging from customer service complaints to death claims Likelihood: High Consequence: Medium Overall risk: High

How easy can the potential risks be mitigated?	In general, risks can be partially mitigated through appropriate provisions in the Project Agreement and appropriate Standard Operating Procedures, emergency response plans and operator training between the various parties. Regardless, more risks to the City in Models 3 and 4. Create or use current PAs/SOPs to mitigate the risk and to achieve: - Customer Service/communications timely/accurate operational information - Schedule integrated and alignment - Bus bridging coordination and/or cost to City - Emergency response coordination - Coordination between Network operations (Operations Control Centre) and LRV operations - reduced disputes during start-up and operations related to design, construction, and commissioning - reduced Operations vs maintenance conflicts City will need expertise to develop and deliver operation procedures/training to: - establish essential SOPs - deliver complete operator training package LRV-related collisions: establish appropriate SOPs related to operator training as well as notification, emergency response, etc. Further mitigation could include the City proposing an initial "start-up" period e.g. 5 years, in which certain activities are operated by a third party, with an option for the City to assume responsibility for those activities after the expiry of the initial start-up period.
Cost to the City Is the model likely to result in greater or lesser cost certainty to the City? Is the model likely to result in higher or lower costs to the City associated with bringing in new functions, setting up the staffing units and appropriate skills and expertise?	Less cost certainty than Models 1 and 2 (because Passenger Interface and LRT driving activities performed by City rather than third party) More upfront cost to the City to bring in new functions compared to Models 1 and 2 (City would need to expand some HSR customer service activities, create fare enforcement program, and staff, train and manage LRV drivers)) Ongoing Costs should be similar to Model 4 and slightly higher than Models 1 and 2.: - third party will need to make a profit on fewer aspects of contracted operations compared to Models 1 and 2

Is the model likely to result in greater or lesser ongoing cost to the City for operations (excluding facility operations)?	- significant complex interfaces requiring management by City staff compared to other models - significantly more new, additional City staff required than Model 1 and 2, but less than Model 4 - the relative cost of City staff vs third party staff is unknown

Preliminary Assessment for Operations Model 4

Detailed Assessment for Operations Model 4 Assessment Criteria	**Model 4 - Municipality performs all aspects of Operational Activities except for Facility Operations. (TTC, Ottawa)**
<u>Customer Experience</u> Is the model likely to contribute to a seamless customer service experience between bus service and the LRT service?	- Should be relatively seamless customer experience, as City will be responsible for customer interface for HSR and LRT
Is the model providing benefits to schedule and service integration requirements of the project?	- Schedule and service integration should be relatively seamless, as City will be responsible for both HSR and LRT operations. - Will need to coordinate with Metrolinx and third party if any schedule changes have an impact on maintenance activities (should be minimal).
Does the model give the City the desired profile with transit customers?	- City will have high public profile as the operator of the LRT and as the customer interface provider. City will be responsible for system successes and any challenges/issues. - City will have the ability to optimize fare enforcement activities to achieve best balance between customer service and revenue objectives.
Does this model provide appropriate opportunities for the City to consider socio-economic circumstances when dealing with transit customers? Does the model foster opportunities for enhanced Inclusion, Diversity, Equity and Accessibility (IDEA) for the public?	- Increased opportunity (compared to Model 1) for the City to consider socio-economic factors when dealing with Customer Service and Fare Enforcement i.e. addressing the barriers that affordability and enforcement can present to some. - Highest opportunity for the City to influence delivery of the City's mandate for enhanced IDEA; coordination required with Metrolinx, and third party
Does the model allow for the integration/coordination of some customer facing roles to enhance efficiency? (e.g., security also performs fare	- This model should be efficient as the City will provide fully integrated customer service activities (e.g. one call centre, one communications team, etc) - Same party (City) would be responsible for all LRT customer facing functions, which would potentially enhance LRT customer service efficiency.

enforcement and passenger relations)	
<u>Accountability - Interface(s) between parties</u> In the model, what interfaces exist between the City and other parties? How complex are the interfaces between the City and other parties?	While many interfaces are expected to be resolved compared to the other models, Model 4 still contemplates some of the interfaces identified for other models, with the addition of some unique interfaces, such as Operations vs Maintenance, Maintenance Scheduling, LRT's Facility Operations, etc. Interfaces in the model are mainly Moderate to High in complexity. For this model, known interfaces include but are not limited to the following: Transition from construction to operations - Third party will be responsible for design, construction, commissioning, and facility operations. City will be responsible for LRT system and vehicle operations. Will require careful management of the start-up phase to avoid disputes about early operational challenges due to unforeseen design, construction, and commissioning issues Complexity: Moderate to High Operations vs Maintenance - City will be responsible for all aspects of system and vehicle operations. Third party will be responsible for system and vehicle maintenance. This will create potential for disputes about the cause(s) of operational and maintenance issues (e.g., operational disruptions may be caused by improper maintenance; excessive maintenance may be caused by improper operation) Complexity: Moderate to High Maintenance Scheduling (Vehicles and System) - City will be responsible for scheduling of operations, including number of vehicles required etc. Third party will be responsible for scheduling the necessary preventive and corrective maintenance on the vehicles and system. This may create conflicts between the need for in-service vehicles vs vehicles requiring maintenance. Complexity: Moderate LRT's Facility Operations - City will be responsible for all aspects of operations, including network operations (such as power control/electrification). Third party will be responsible for facility operations, including stops and Traction Power Sub Station. This may create coordination issues related to operations and maintenance of stops, Traction Power Sub Station, power supply etc. Complexity: Moderate Operations monitoring/payments - Third party is responsible for operation facility; Metrolinx is responsible for monitoring Project

	Agreement (PA) compliance; The City is responsible for paying all operating costs. The City needs efficient, effective mechanisms to obtain operations monitoring/PA compliance information to determine appropriate payments and/or penalties. Complexity: Low Agreements – Anticipated that Metrolinx will have a PA with third party for design, construction, maintenance, and facility operation), and a separate agreement with the City for Customer interface and LRT system and vehicle operations. This may be cumbersome as the many interfaces between City and third party will need to be managed by Metrolinx, as there likely will not be an agreement between City and third party. Complexity: Low to Moderate.
Ease of Mitigation: How easy or difficult will it be to create agreements that clarify interface roles and responsibilities and provide adequate incentive for other parties to act responsibly?	In general interface issues can be partially mitigated through appropriate provisions in the Project Agreement (PA) and in Standard Operating Procedures (SOPs) between the various parties: Transition from construction to operations – Mitigation: PA will need to provide considerable detail about commissioning, start-up and acceptance testing, and mechanisms to resolve disputes about early operational issues. Operations vs Maintenance – Mitigation: PA will need to provide considerable detail about maintenance responsibilities, and mechanisms to resolve disputes related to the operations/maintenance interface. Models and "lessons learned" from other projects that could inform these requirements Maintenance Scheduling (Vehicles and System) – Mitigation: PA and SOPs will need to provide clarity about roles and responsibilities for vehicle (and system) availability for service vs availability for maintenance. Facility Operations: Mitigation: Metrolinx agreements with third party and the City will need to be carefully structured to deal with the interfaces and relationships between City and third party. Operations Monitoring/Payments – Mitigation: PA could include mechanisms for monitoring operations performance and tracking appropriate payments and penalties. Operation & Maintenance payment agreement between the City and Metrolinx could contain provisions to ensure the City gets appropriate information to inform Operations payments.

	Agreements: Mitigation: Metrolinx agreements with third party and the City will need to be carefully structured to deal with the interfaces and relationships between City and third party.
Risks and Liability What risks to the City does the model create? What are the likelihood and consequence of each risk?	In addition to many of the risks identified for other models, Model 4 contemplates a new set of commonly known risks relating to operational activities fully transferred to the City. Model 4 exposes many risks with overall Medium to High and High as a result of their likelihood and consequence. Some of the most commonly known risks relating to Model 4 include but are not limited to the following: For Model 4, operational activities are fully transferred to the City party. For this model, in case of a Light Rail Vehicle (LRV)-related collision, the City (as the driver's employer and supervisor) is most probable to bear any alleged liability, either related to driver or system related such as malfunctions in traffic signal or vehicle mechanical problems. In Model 4 risks associated with all operational activities are borne by the City (LRV drivers, LRV-related collisions, etc.) and not transferred to third Party) Operations vs maintenance conflicts - Likelihood: High, Consequence: Medium to High Overall Risk: Medium to High Insufficient Operations Procedures and SOPs - Likelihood: Medium, Consequence: Medium to High Overall Risk: Medium Insufficient operator training - Likelihood: Low, Consequence: Medium to High Overall Risk: Low to Medium Disputes during start-up and operations related to design, construction, and commissioning issues - Likelihood: High, Consequence: Medium to High Overall Risk: Medium to High Maintenance Scheduling Conflict - Likelihood: Medium to High, Consequence: Medium Overall Risk: Medium Coordination Issues, related to operations and maintenance of stops, Traction Power Sub Station, power supply, etc. - Likelihood: Medium, Consequence: Medium Overall Risk: Medium

	Training scheduling of Operations Control Centre staff - Likelihood: Low, Consequence: Low Overall Risk: Low Incidents associated with dispatch/communications - Likelihood: medium, Consequence: Medium Overall Risk: Medium Incidents associated with the operation of signals and control systems - Likelihood: Medium, Consequence High Overall Risk: High
How easy can the potential risks be mitigated?	These risks can be partially mitigated through appropriate provisions in the Project Agreement and appropriate Standard Operating Procedures, emergency response plans and operator training between the various parties. Regardless, more risks to the City in Models 3 and 4. - Create or use updated PAs/SOPs to mitigate the risk and to achieve: - Reduced disputes during start-up and operations related to design, construction, and commissioning - Reduced maintenance scheduling conflicts - Coordination related to operations and maintenance of stops, Traction Power Sub Station, power supply, etc. - reduced operations vs maintenance conflicts City will need expertise to develop and deliver operation procedures/training to: - Establish essential SOPs - Deliver complete operator training package - LRV-related collisions: establish appropriate SOPs related to notification, emergency response, etc., as well as operator training.
<u>Cost to the City</u> Is the model likely to result in greater or lesser cost certainty to the City? Is the model likely to result in higher or lower costs to the City associated with bringing in new functions, setting up the staffing units and	Least cost certainty compared to other models (because fewest activities are contracted to third party) Most upfront cost to the City to bring in new functions compared to other models. City would need to expand some HSR customer service activities, create fare enforcement program, and staff, train and manage LRV drivers, and staff to operate and manage the LRT system. Ongoing Costs should be similar to Model 3 and slightly higher than Models 1 and 2:

appropriate skills and expertise? Is the model likely to result in greater or lesser ongoing cost to the City for operations (excluding facility operations)?	- third party will need to make a profit on fewest aspects of contracted operations compared to other models - significant complex interfaces requiring management by City staff compared to other models - most new, additional City staff required compared to other models - the relative cost of City staff vs third party staff is unknown

Hamilton

Hamilton Light Rail Transit Project

Operational Models
LRT Sub-Committee
September 25, 2023

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.**

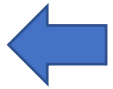
Decision-Making Timeline

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

Hamilton

QUESTIONS?