Recommended Vision for the Downtown Rapid Transit Network

April 2008

Presentation Overview

- Context
- Transit options
- Assessment of options
- Recommended network
- Building the network

Our Vision

- **Rapid**
- **Reliable**
- **Convenient**
- **Comfortable**
- **Flexible**
- **Affordable**

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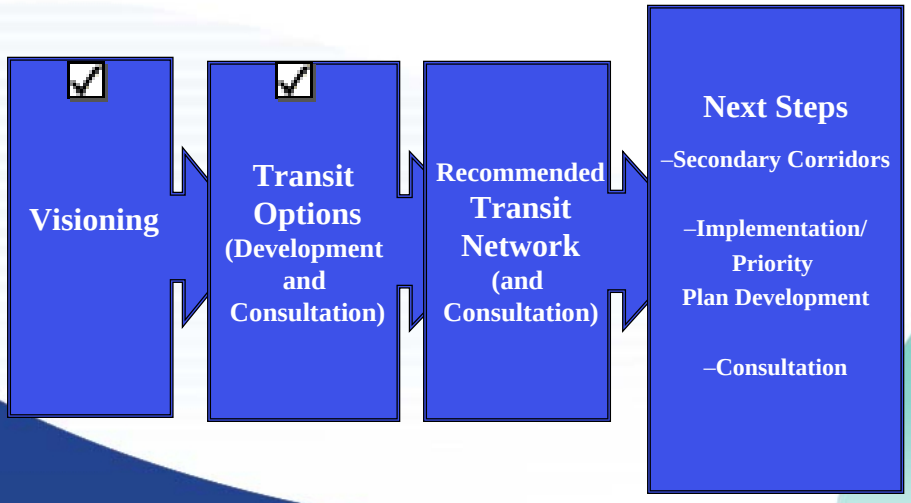
Context

Transit Planning in Context



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Our Objective

Build a rapid, reliable, comfortable, and affordable transit system to connect people and places now and for future generations

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Guiding Principles

- Develop a network from the core out
- Proactively engage public and key stakeholders
- Commit to a staged decision making process

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Background Tools

- Growth Forecasts
- 2005 Origin-Destination Survey
- 2006 Commercial Vehicle Survey
- 2007 Upgraded TRANS model

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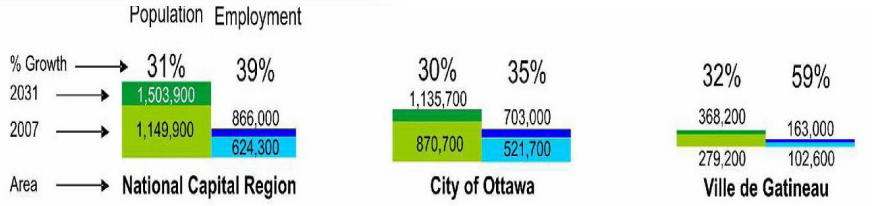
Growth Projections



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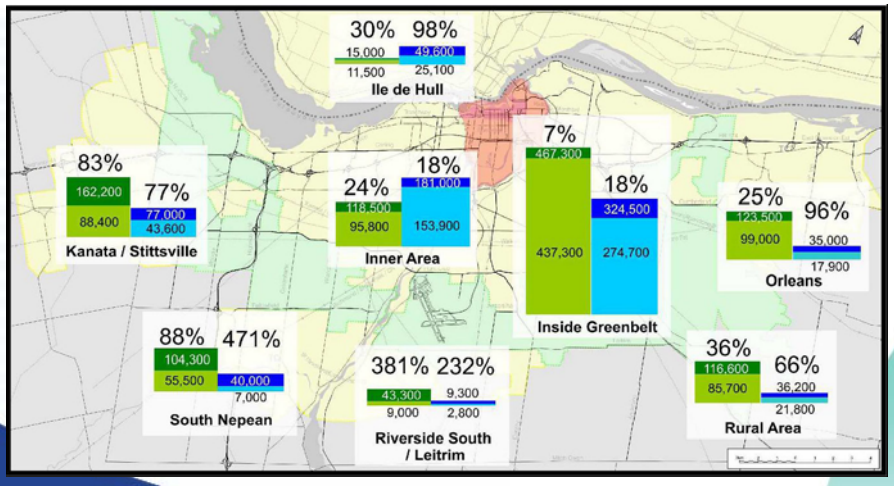
Growth Projections – By Area



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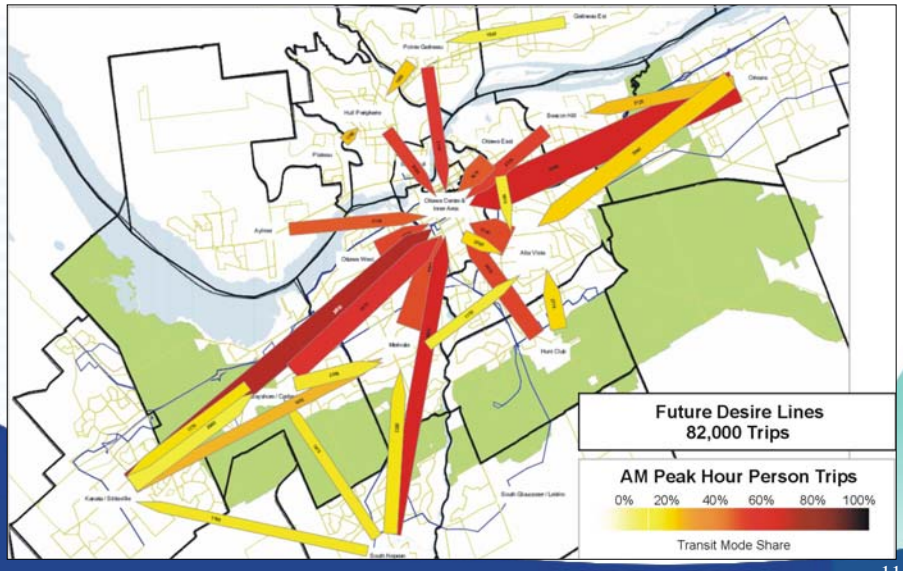
Travel Desire Lines – 2031 (AM Peak)



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Transit Options

What we Considered

- **Surface-Only Option**

- **Not feasible in the planning period due to:**
  - **High volume of vehicles required**
  - **Growth capacity issues**
  - **Creates conflict between trains and access points (for LRT)**

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What we Considered

- **Elevated Grade-Separated Option**

- **Not feasible due to:**
  - **Narrow street widths**
  - **Visual obstruction**
  - **Station access**
  - **Vibration concerns**

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Tunnel Option

- **Tunnel**
  - **Ensures reliable service (removes transit bottleneck in the downtown)**
  - **Supports achievement of 30% transit modal split target**
  - **Catalyst for development**
  - **Improves surface environment**
- **Four options unveiled March 3**

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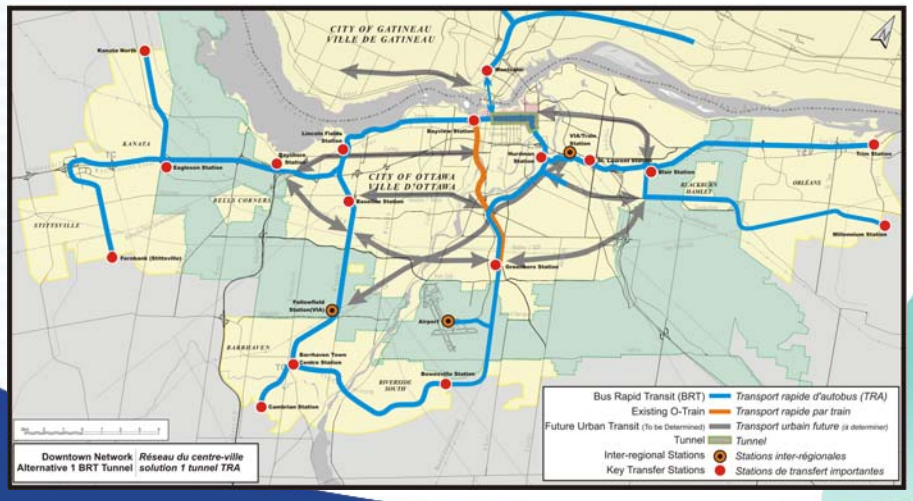
Option 1: Bus-based Tunnel (and O-Train)



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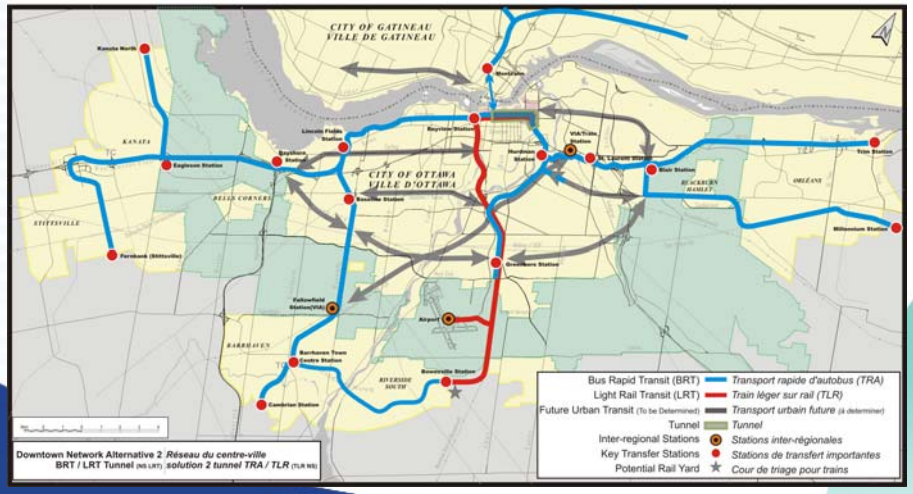
Option 2: Bus-Light Rail Tunnel
(and N-S LRT)



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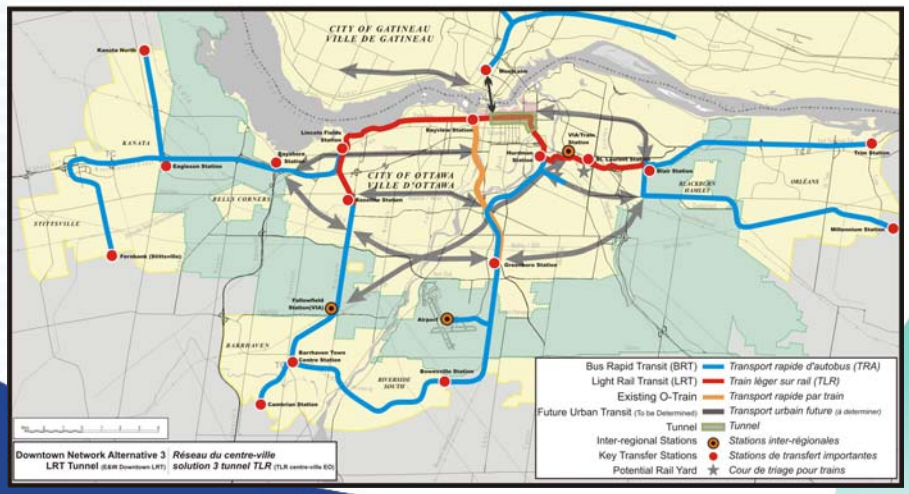
Option 3: LRT Tunnel
(E-W LRT (Baseline-Blair), O-Train)



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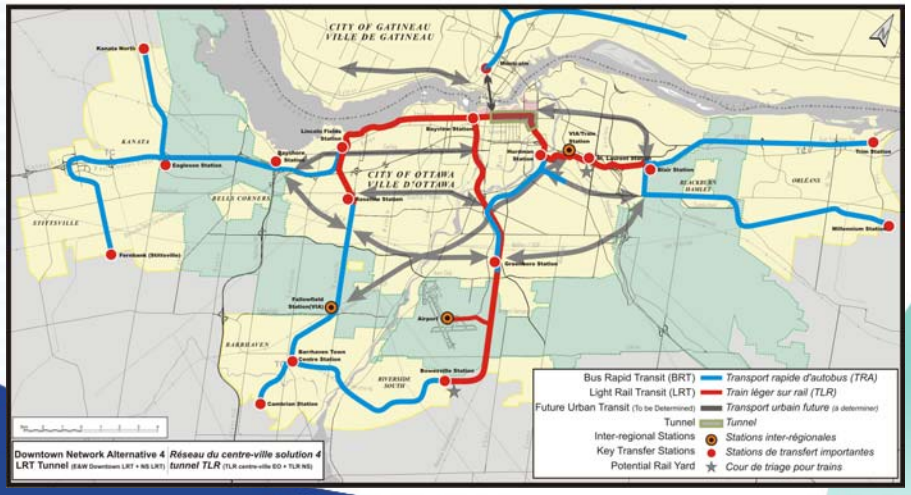
Option 4: Light Rail Tunnel (and E-W, N-S LRT)



STO Integration

- **Continue to operate on Ottawa downtown streets**
- **A downtown tunnel facility for STO**
- **Transfer at a station in Ottawa**
- **Transfer at a station in Gatineau**
- **Integration discussions on-going**

Assessment of Options

Assessment Approach

- **Transit Options were assessed against the following:**
  - **Technical criteria**
  - **Expert Peer Review Panel**
  - **Public consultation**

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Technical Evaluation

- Ridership and reliability
- Environmental and social criteria
- Capital and operating costs

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Ridership and Reliability

	Option 1 Bus Based	Option 2 Bus with NS LRT	Option 3 EW LRT	Option 4 EW, NS LRT
Ridership	Base	2% more	7% more	9% more
Demand By 2031	Can accommodate (at theoretical capacity)	Can accommodate (Close to theoretical capacity)	Can accommodate	Can accommodate
Demand beyond 2031	Cannot accommodate	Can accommodate (Minimum room)	Can accommodate	Can accommodate
Reliability Issues	Reduced reliability	Reduced reliability	Operates well	Operates well

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Environmental and Social

	Option 1 Bus Based	Option 2 Bus with NS LRT	Option 3 EW LRT	Option 4 EW, NS LRT
Air Quality	**Highest emission**	**2nd highest**	**2nd lowest**	**Lowest emission**
Salt use	**Highest**	**2nd highest**	**2nd lowest**	**Lowest**
Noise and Vibration	**Highest**	**2nd highest**	**2nd lowest**	**Lowest**
Property value and TOD	**Lowest**	**2nd lowest**	**2nd highest**	**Highest**
Capital Image	**Lowest**	**2nd lowest**	**2nd highest**	**Highest**

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Cost ($ Billions)

	Option 1 Bus Based	Option 2 Bus with NS LRT	Option 3 EW LRT	Option 4 EW, NS LRT
Capital Cost	3.55	4.20	3.57	4.03
Operating Cost/year	.485	.472	.453	.434

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Capital Cost Breakdown ($ Billions)

	Option 1	Option 2	Option 3	Option 4
	BRT (O-Train)	BRT-LRT (N-S)	LRT (O-Train, E,W)	LRT (E,W, N-S)
Baseline to Blair (including tunnel)	0.85	1.12	1.00	1.00
North – South (Bayview to Bowesville)	0.10	0.44	0.10	0.44
Other Transitway (East–South–West)	0.90	0.90	0.90	0.90
Maintenance Facilities	0.30	0.34	0.22	0.32
Sub-Total (infrastructure)	2.15	2.80	2.20	2.66
Vehicles	1.40	1.40	1.35	1.37
Total	**3.55**	**4.20**	**3.57**	**4.03**

Notes:
Estimates are in 2008 dollars.
Cost estimates are subject to verification through EA studies.
Estimates do not include costs for Gatineau solutions.
Vehicle costs are estimated over 30 years.

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Technical Evaluation

- **Option 4 offers the greatest benefit and value to the City:**
  - **Lowest annual operating costs**
  - **Lowest emission**
  - **Highest potential for increased ridership**
  - **Capacity for growth beyond 2031**
  - **Most direct rail connections between key destinations**
  - **The best overall image of the city as a world capital**

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Expert Peer Review

- **Respected professionals with decades of transit and urban planning experience**
  - **Paul Bedford (Paul Bedford & Associates, Toronto, Ontario)**
  - **Russell Chisholm (Transportation Management and Design, Inc., San Diego, California)**
  - **Alan Danaher (Kittelson & Associates, Orlando, Florida)**
  - **Alan Jones (Steer Davies Gleave, London, UK)**
  - **Glen Leicester (Shirocca Consulting, Vancouver, BC)**
- **Completed technical review of the proposed rapid transit vision**

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Public and Agency Consultations

- **Objective: Obtain feedback on transit options**
- **Completed: March 3 – 31**
- **Who we heard from:**
  - **Open Houses – almost 400**
  - **Mayor Streeter Surveys – nearly 500**
  - **1,200 total written submissions**
  - **Almost 10,500 hits to the transit portion of Ottawa.ca**

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Consultation Trends

- **Strong support for the downtown tunnel**
- **Majority support for Option 4**
- **Some support for Option 3**
- **Virtually no support for Options 1 and 2**
- **Preference for LRT throughout City**
- **Prudent investment for long term**

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Consultations - Areas of Interest

- Extension of LRT Service
- Use of Rail Corridor
- Interprovincial Integration
- Urban Design
- Amenities in Stations
- Environmental Impacts
- Social, Mobility and Accessibility Impacts
- Economic and Financial Implications
- Technology Choice
- Construction Phasing

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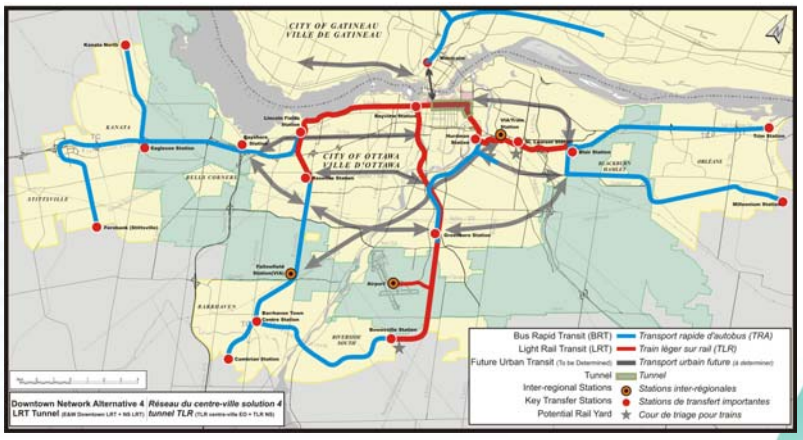
Recommended Network

Recommended Network



Popular Support

*"**The Downtown Coalition strongly supports the City's vision for the future of transportation in the downtown.** The acknowledgement that planning should start with the downtown and work from the core out is a very important step in the process."*

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Popular Support

*"It makes sense to build the best now. It is always good to have the infrastructure in place for further expansion. **This design also allows for the most 'options' for future use implementation of 'add-ons'.**"*

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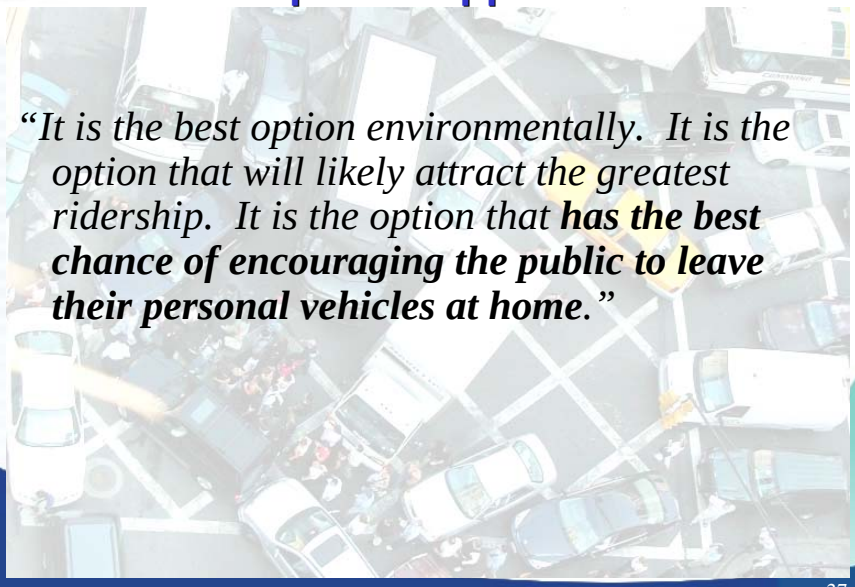
Popular Support



*"It is the best option environmentally. It is the option that will likely attract the greatest ridership. It is the option that **has the best chance of encouraging the public to leave their personal vehicles at home**."*

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Popular Support

*"**It is fast, convenient, and forward thinking**. It also offers logical intensification growth opportunities along its corridors and giving sound argument for the protection and preservation of the city's natural heritage lands."*

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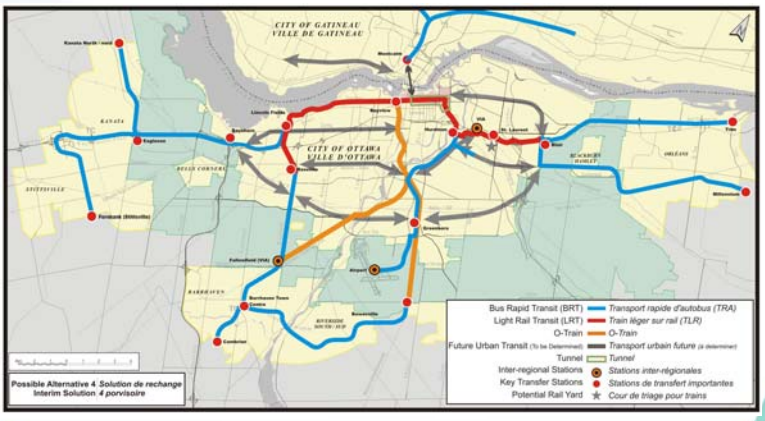
Potential Interim Solutions



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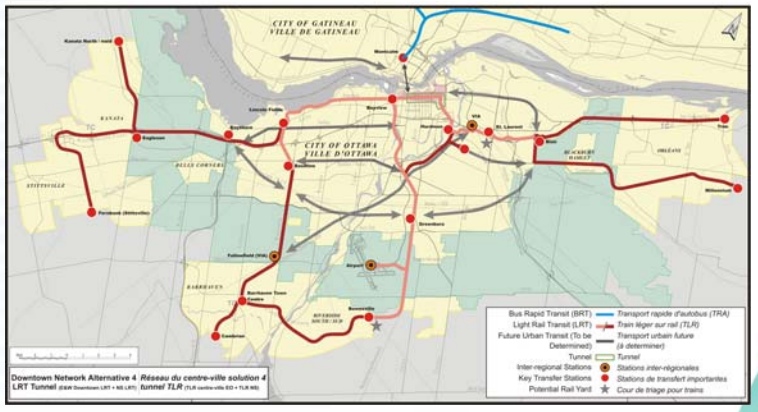
Future Scenario



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Building the Network

How Soon?

- **How fast the system is built or extended will depend on:**
  - **Actual population growth**
  - **Availability of funding**
  - **Innovative funding strategies**
- **Interim solutions will be investigated**

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Recommended Phasing Criteria

- **Ridership**
- **Status of planning work**
- **Ease of implementation**
- **Logical sequencing**
- **Opportunities to implement interim solutions/staging options**
- **Affordability**

Timetable for Action

Date	Activity
March 3	Release of Downtown Rapid Transit Network Options
March 3 - 31	Agency and Public Consultations on Options
April 16	Tabling of Recommended Downtown Rapid Transit Option at joint Transit and Transportation Committee and Peer Review comments
Apr 16 – May 7	Public Consultation on Recommended Option
May 21	Consideration by Joint Transit/Transportation Committee of Recommended Option with public feedback
May 28	Decision on Recommended Option
May - Oct	Phasing plan, secondary corridors, costs, policies, roads
Sept - Oct	Agency and Public Consultation
Nov	Tabling of draft TMP (and Official Plan)
Feb-March 2009	Approval of final TMP (and Official Plan) by Council

Ottawa Transit…

- Rapid
- Reliable
- Convenient
- Comfortable
- Flexible
- Affordable

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