

Positive Economic Impacts from Transit Investment in London

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Waterloo

Presentation Overview

- ❖ Understanding the benefits of “successful” public transport
- ❖ Assessing the success of London Transit
- ❖ Comparing recent investments / Land use changes amongst peer cities
- ❖ Making recommendations

The Economic Impact of Transit Investment:
A National Survey

Prepared by:

Metropolitan Knowledge International
McCormick Rankin Corporation
Dr. Jeff Casello, University of Waterloo

For:

The Canadian Urban Transit Association

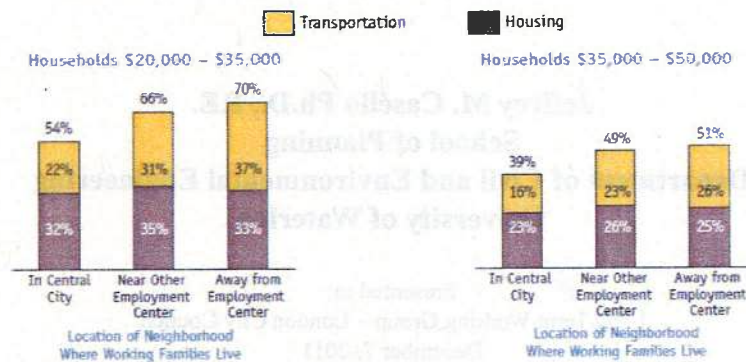
Final Report – 31 January 2010

Benefits of Public Transportation

Successful Transit Systems:

❖ Lower household transportation costs:

- ✓ Transportation costs range from 15 – 40% of household expenditures; Larger burden in low-income households.
- ✓ *Presence of transit saves Canadian households \$5B annually;*



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Center for Clean Air
Policy, (2009)

Benefits of Public Transportation

Successful Transit Systems:

❖ Improve accessibility / mobility:

- ✓ Likelihood of full time employment increases by 30% with access to transit (Kawabata, 2003);
- ✓ Sanchez (1999) notes link between labor participation and access to transit;
- ✓ As population ages, importance grows;

❖ Increase safety of transportation:

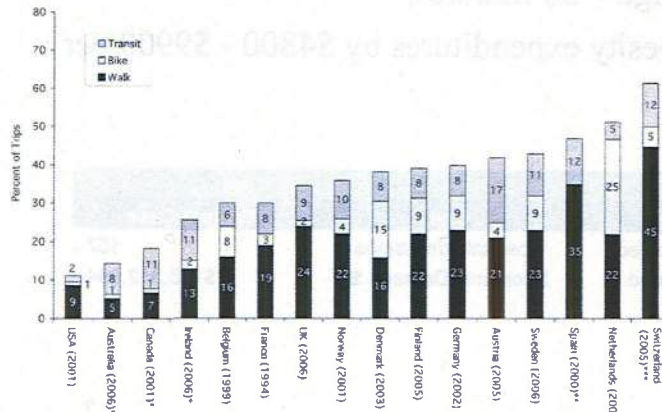
- ✓ Transit fatality rate approximately 1/20th of autos;
- ✓ *Transit saves Canada approximately \$2.5B in reduced accidents / property damage*

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Benefits of Public Transportation

Successful Transit Systems:

- ❖ Complement walking, cycling and active modes:



Journal of Physical Activity and Health, 2008, 5, 795-814



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Benefits of Public Transportation

Successful Transit Systems:

- ❖ Mitigate Congestion:

- ✓ 1 km of rail transit is 4x more effective than the 1 km of freeway;
- ✓ In US cities, presence of LRT has slowed congestion growth;
- ✓ Each pass-km of transit travel reduces congestion costs by \$0.30
- ✓ In US, absence of transit would increase travel costs by \$18B
- ✓ In Canada: estimated savings of \$5B.



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Benefits of Public Transportation

Successful Transit Systems:

- ❖ Improve public health:
 - ✓ Transit riders average 19 minutes of daily walking;
 - ✓ 29% of transit riders average > 30 minutes;
 - ✓ Transit systems reduce obesity expenditures by \$4800 - \$9900 per year;
 - ✓ *In Canada:*

RESULT		
Social and Community Benefit Account	Unit	Project Case
Public Health - Air Quality Hospital Admissions Avoided	Hospital admissions	157
Public Health - Air Quality Economic Damage Avoided	Economic Damage \$	\$115,312,394

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Benefits of Public Transportation

Successful Transit Systems:

- ❖ Improve the local and global environment:
 - ✓ GHG emissions ½ to ¼ of auto emissions;
 - ✓ Emissions reductions save \$0.051 / passenger mile;

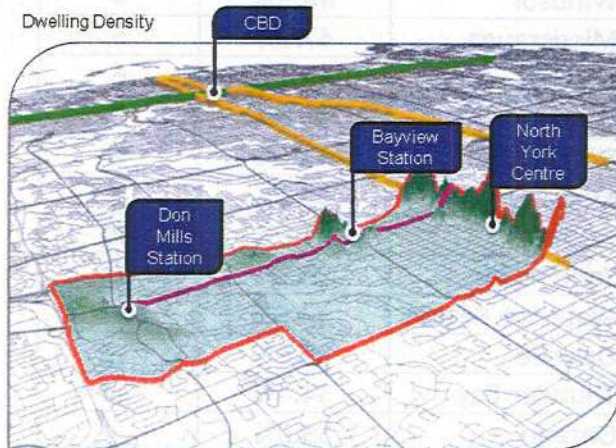
RESULTS		
Environmental Account	Unit	Project Case
GhG Emissions Savings	Tonnes/Year	2,396,237
Monetary Value of GhG Emissions Savings	\$ (Total)	\$110,161,465
Critical Air Contaminants (CAC) Emission Savings	Tonnes/Year	119,319
Monetary Value of (CAC) Emissions Savings	\$ (Total)	\$22,390,790
Summary Metric: Environmental Benefits	\$ (Total)	\$132,552,255

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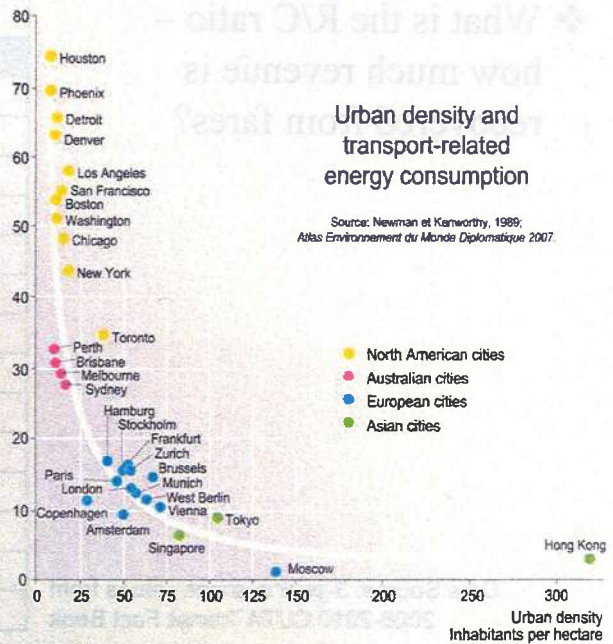
Benefits of Public Transportation

Successful Transit Systems:

- ❖ Promote intensification;
- ❖ Reduce energy consumption.



Transport-related energy consumption
Gigajoules per capita per year



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Summary

Successful Transit Systems:

- ❖ Lower household transportation costs;
- ❖ Improve accessibility / mobility;
- ❖ Increase safety;
- ❖ Complement cycling and walking;
- ❖ Mitigate congestion;
- ❖ Contribute to public health;
- ❖ Improve local / global environments.

Is London Transit “*Successful?*”

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LTC as a Successful System

Using Traditional Metrics:

- ❖ What is the R/C ratio – how much revenue is recovered from fares?

City	R/C	Rank
Toronto	70.4%	1
London	58.2%	2
Hamilton	51.4%	3
Windsor	48.5%	4
Mississauga	47.6%	5
Ottawa	47.2%	6
Barrie	46.6%	7
Brampton	43.5%	8
Kingston	43.3%	9
Guelph	42.6%	10
York Region	39.9%	11
Waterloo Region	37.6%	12
Oakville	35.8%	13
Thunder Bay	34.4%	14
Ontario	59.0%	-
Ontario + GO	61.6%	-

Data Source: 3-year average values from 2008-2010 CUTA Transit Fact Book

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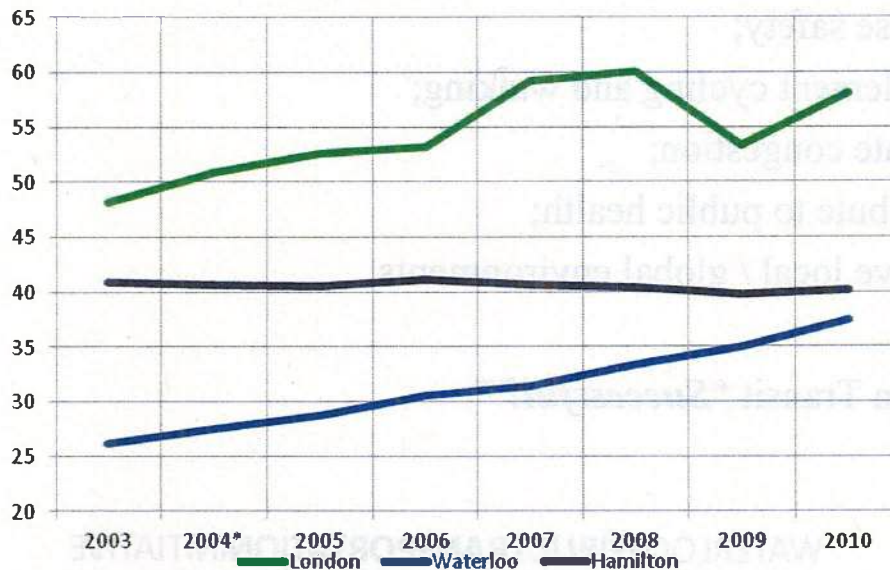
LTC as a Successful System

Using Traditional Metrics:

- ❖ How well-utilized is the system?

Data Source: 3-year average values from 2008-2010 CUTA Transit Fact Book

Passenger Trips per Capita



LTC as a Successful System

Using Traditional Metrics:

- ❖ How efficiently does LTC deliver service?

City	Direct Operating Costs \$/rev-veh-kms	Rank
Oakville	\$2.20	1
Thunder Bay	\$2.30	2
Kingston	\$2.31	3
London	\$2.47	4
Toronto	\$2.60	5
Guelph	\$2.61	6
Brampton	\$2.72	7
Mississauga	\$2.72	7
Ottawa	\$2.78	9
Hamilton	\$2.86	10
Barrie	\$2.88	11
Windsor	\$2.92	12
Waterloo Region	\$2.94	13
York Region	\$4.53	14
Ontario	\$2.73	-
Ontario + GO	\$2.77	-

Data Source: 3-year average values from
2008-2010 CUTA Transit Fact Book

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Summary

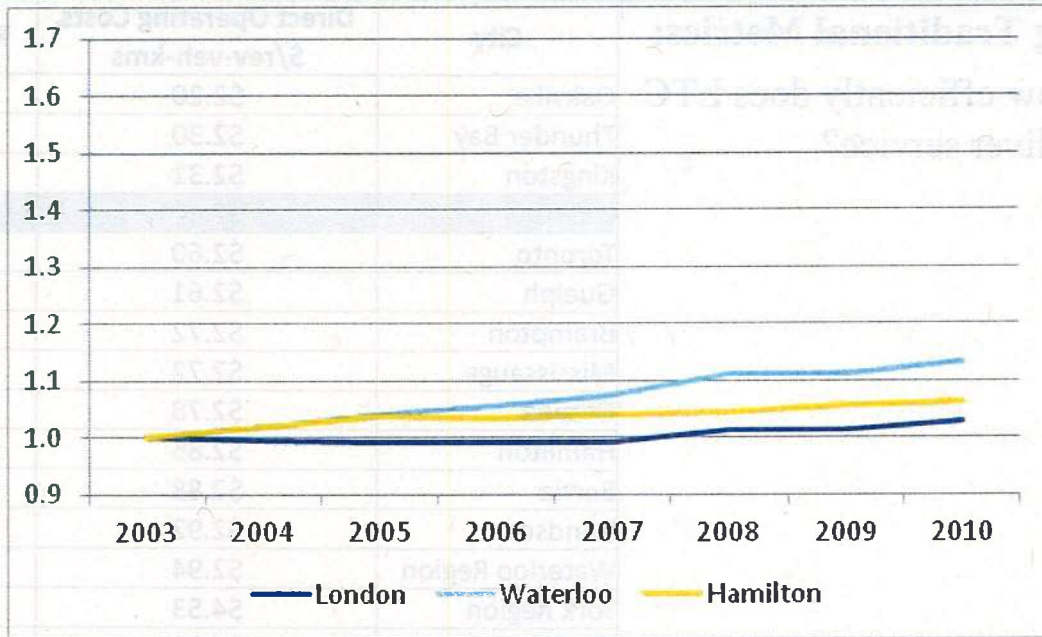
Compared to peer cities / agencies, LTC:

- ❖ Has very positive R/C ratios;
- ❖ Has very high utilization;
- ❖ Delivers services very efficiently.

Can London Transit be “*More Successful?*”

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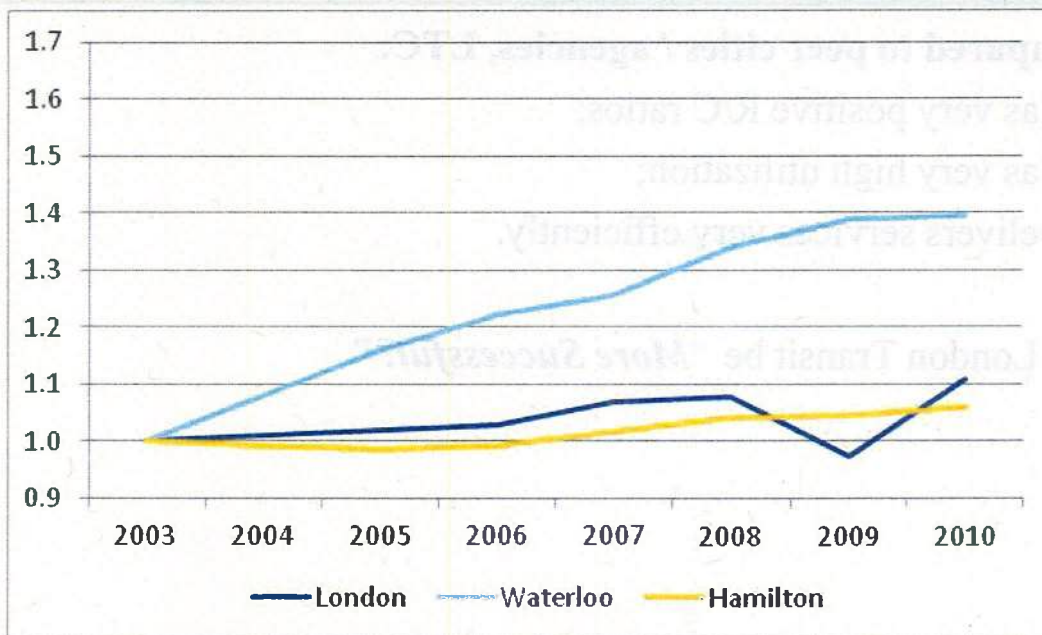
Comparing System Growth - Population



Data Source: 2003-2010 CUTA Transit Fact Book

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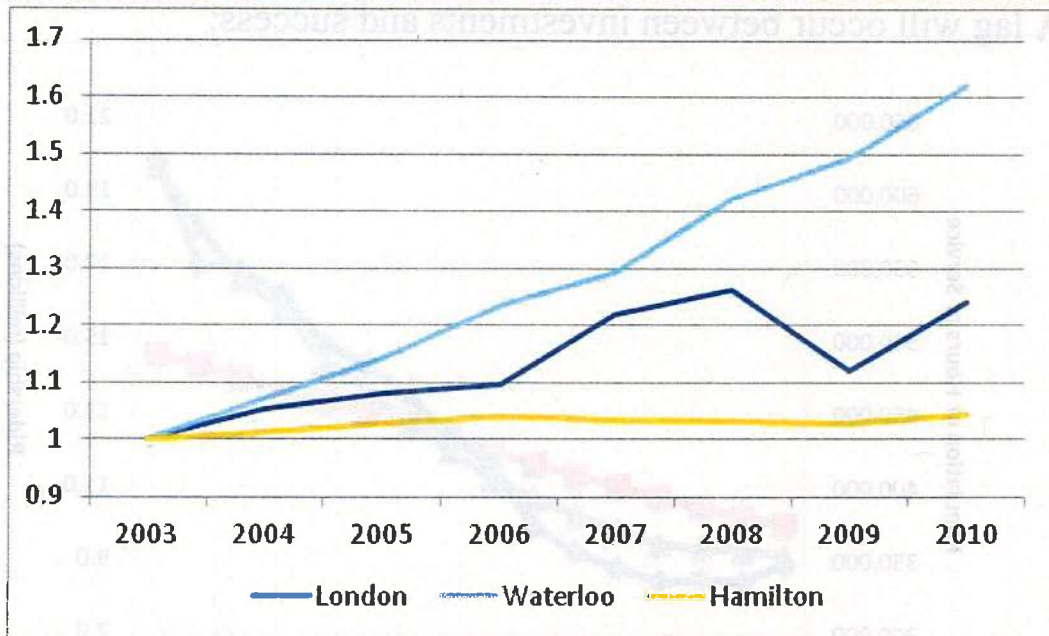
Comparing System Growth – Rev-veh-km



Data Source: 2003-2010 CUTA Transit Fact Book

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Comparing System Growth - Ridership

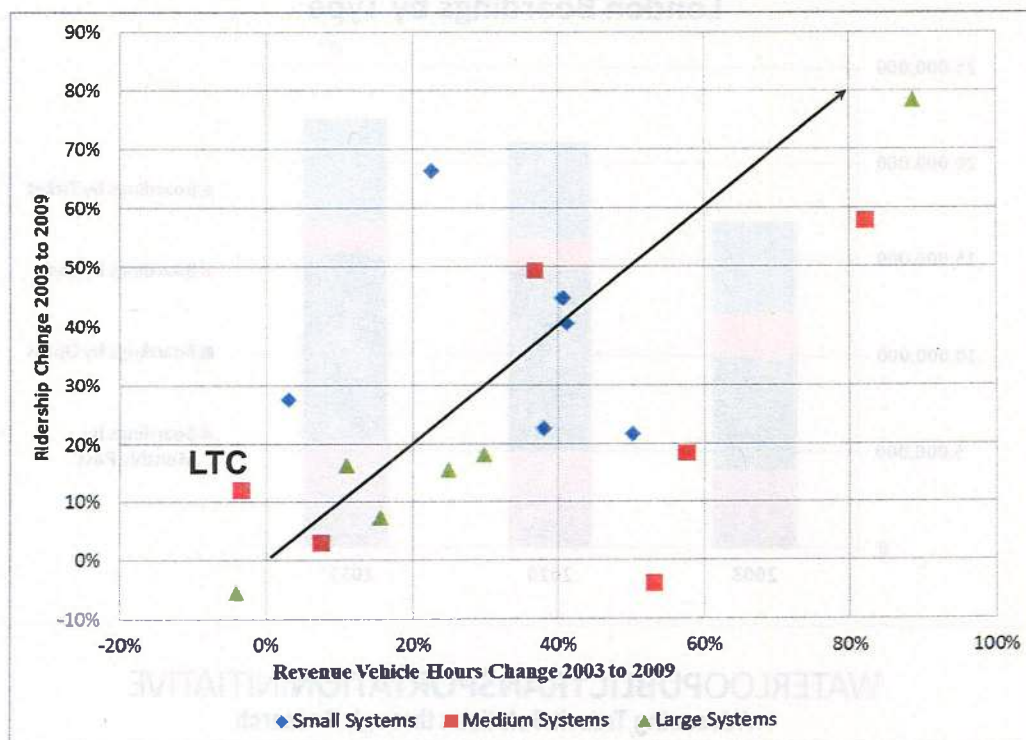


Data Source: 2003-2010 CUTA Transit Fact Book

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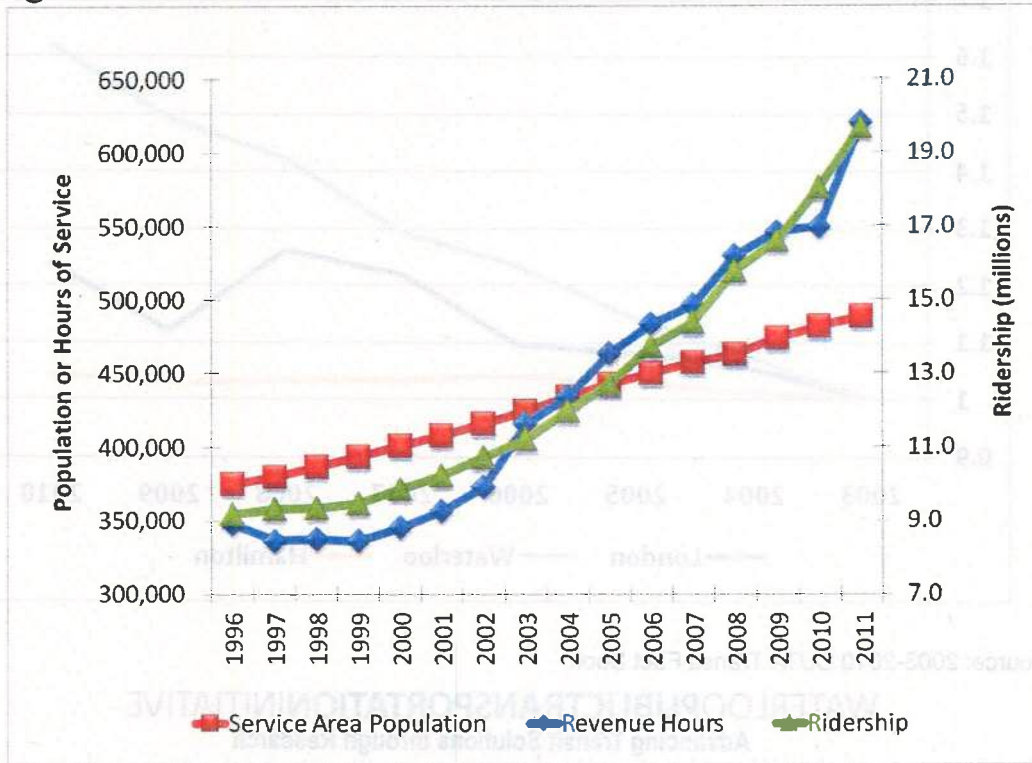
Relationship of Investments to Ridership Growth

Data Source: 2003-2009 CUTA Transit Fact Book

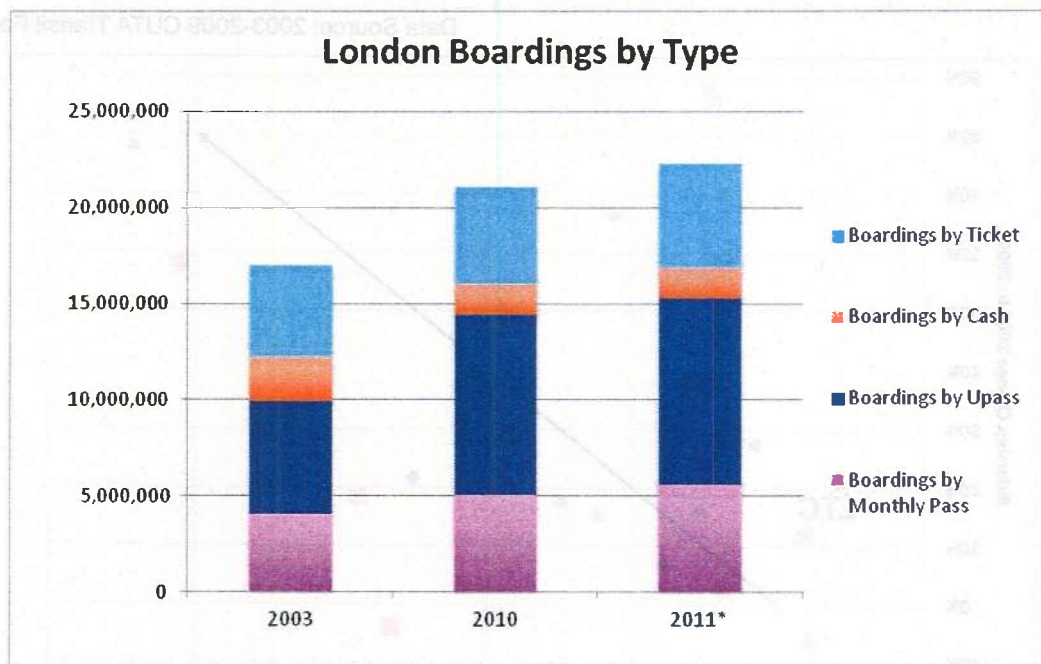


More Impacts of Increasing Supply

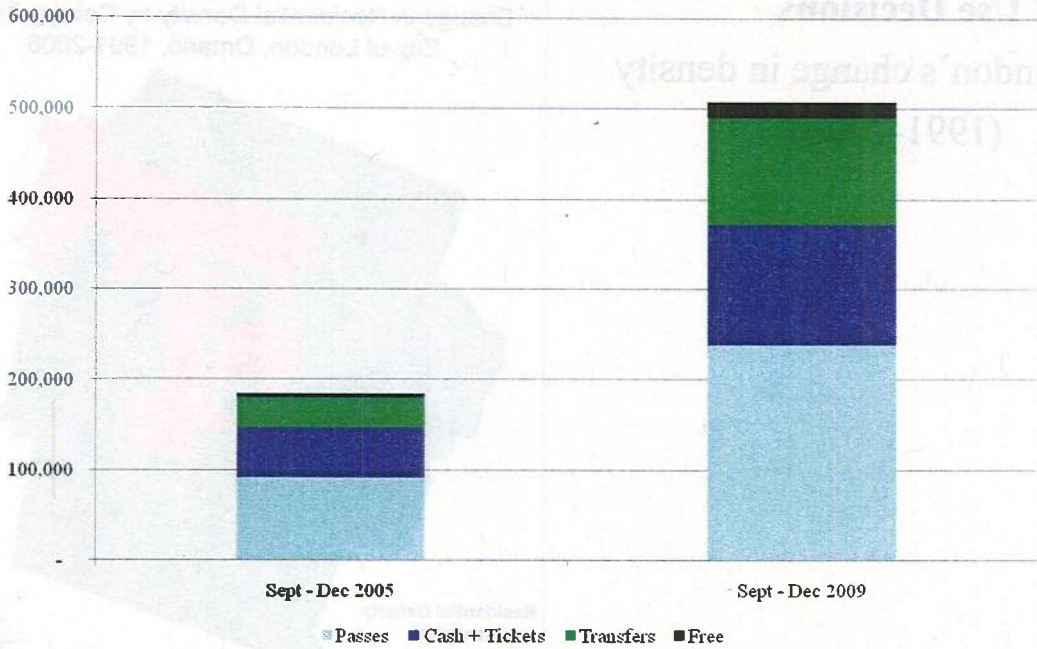
❖ A lag will occur between investments and success:



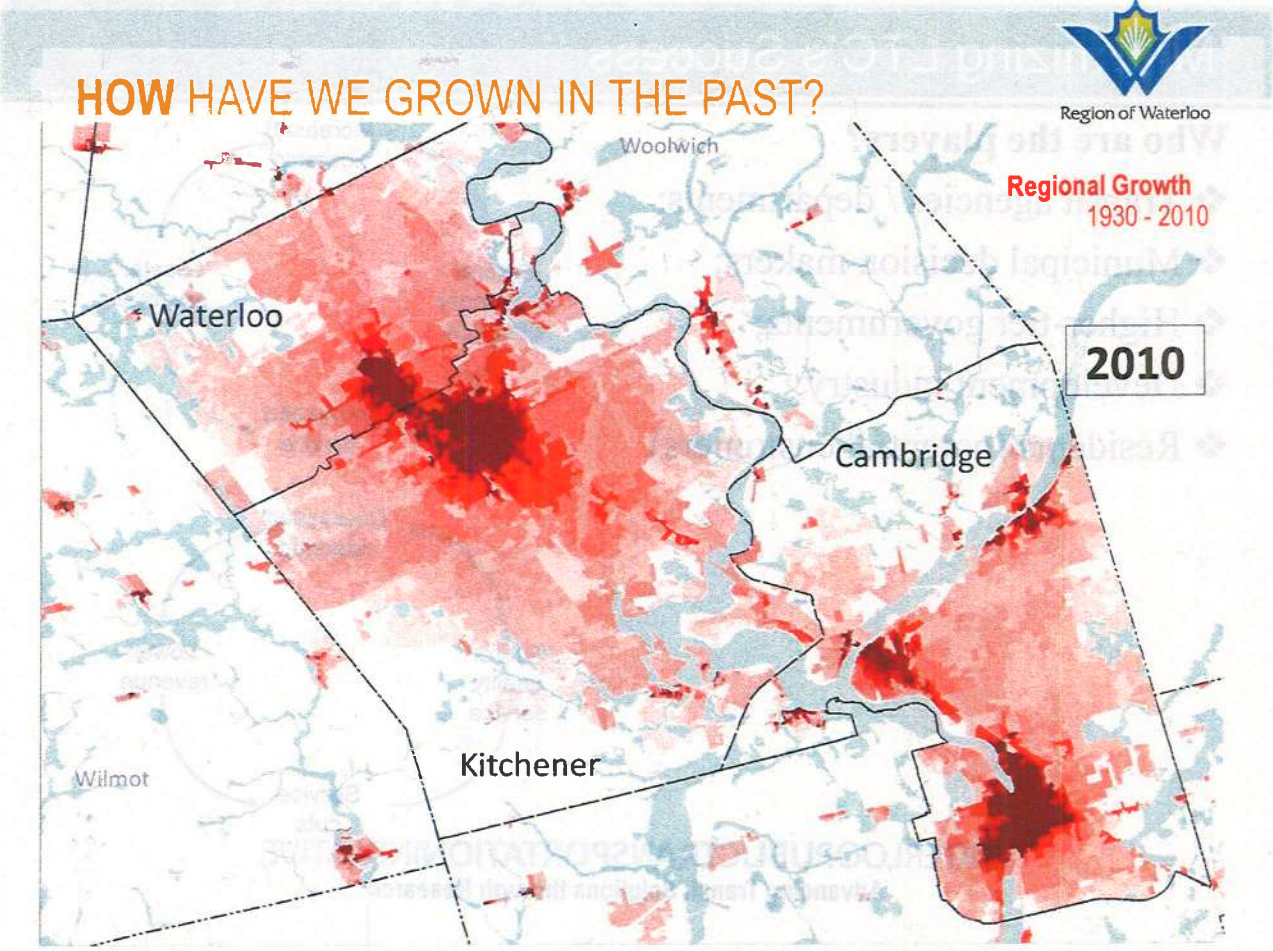
Growth in LTC a Function of UPass



Growth in Waterloo from Passes / Transfers



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Achieving Success

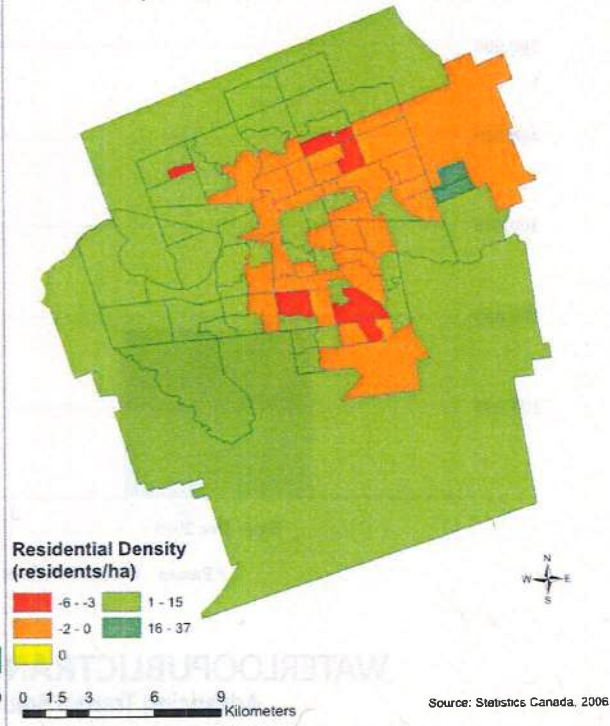
Land Use Decisions

- ❖ London's change in density (1991-2006)



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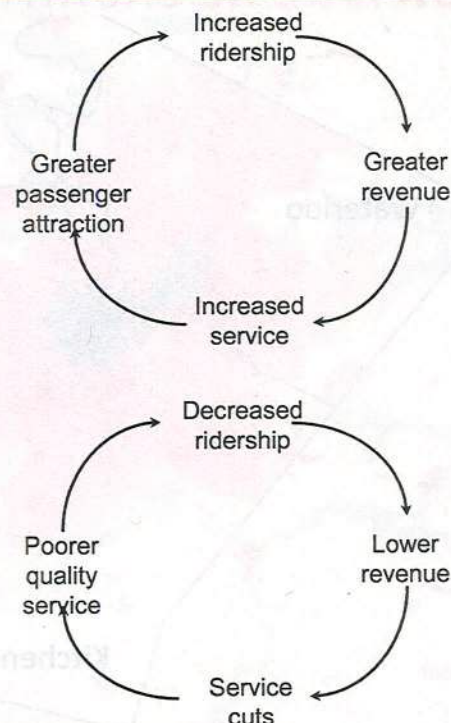
Change in Residential Density by Census Tract, City of London, Ontario, 1991-2006



Maximizing LTC's Success

Who are the players?

- ❖ Transit agencies / departments;
- ❖ Municipal decision makers;
- ❖ Higher-tier governments;
- ❖ Development industry;
- ❖ Residents (potential customers)



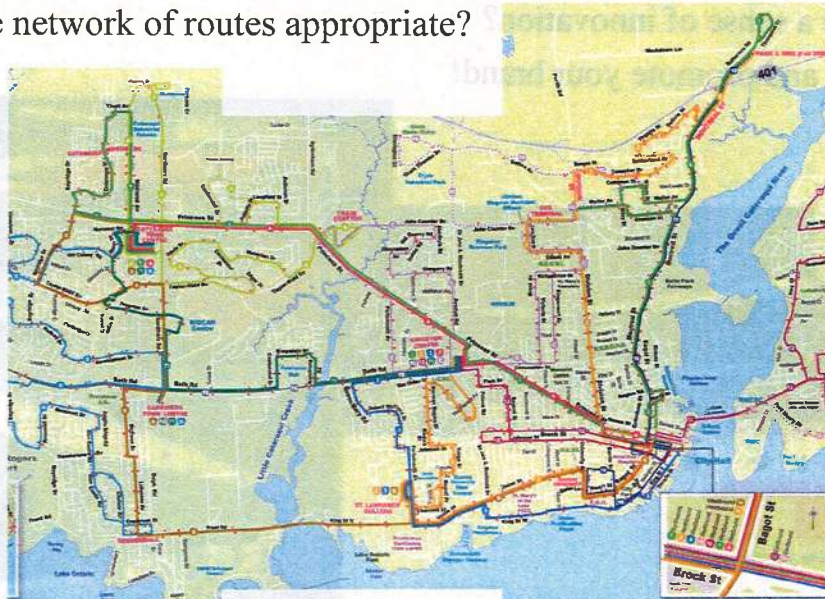
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Achieving Success

Who are the players / what are the metrics?

❖ Transit agencies / departments:

- ✓ Is the network of routes appropriate?



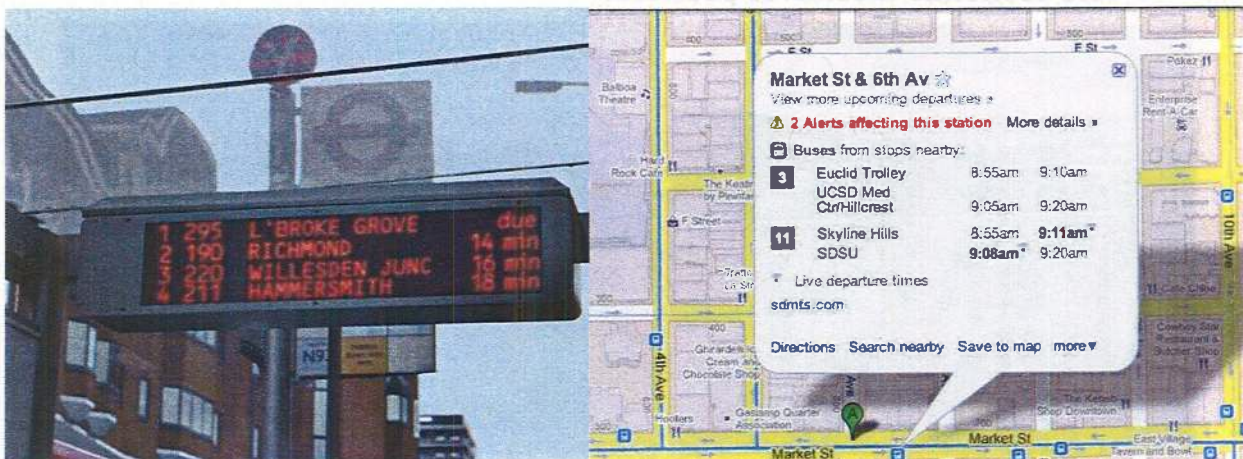
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Achieving Success

Who are the players / what are the metrics?

❖ Transit agencies / departments:

- ✓ Is the system reliable?
- ✓ Does the system compete with alternative modes?



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Achieving Success

Who are the players / what are the metrics?

- ❖ Councils / staff who develop and implement policy:
 - ✓ Is there a sense of innovation?
 - ✓ Protect and promote your brand!



it's all about ü



Achieving Success

Who are the players / what are the metrics?

- ❖ Councils / staff who develop and implement policy:
 - ✓ Are decisions (land use, parking, design) made that are contrary to transit goals?
 - ✓ Are economic incentives possible?



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Going Forward

Recommendations

❖ LTC:

- ✓ The system is poised to grow very rapidly!
- ✓ Make good decisions – infrastructure, technology, routing;
- ✓ Continue to deliver service efficiently;
- ✓ Use the data that you're gathering to document quality;
- ✓ Create and emphasize your image.

❖ Municipal decision-makers:

- ✓ Consider express / ROW upgrades;
- ✓ Understand long term costs / benefits of land use decisions;
- ✓ Think long term;
- ✓ Ask the right questions of your transit planners.

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Going Forward

Concluding Remarks

- ❖ The socio-political climate is right
- ❖ We'd love to help
- ❖ <http://www.civil.uwaterloo.ca/WPTI>
- ❖ Thanks and Questions?

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