CONNECTIVITY IN A GLOBAL CITY: Planes, Trains, and Automobiles
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Understanding regional airport & ground transportation needs for Southern Ontario

- Airports require long-term planning cycles of 20-30 year periods in order to support the development of large scale infrastructure like terminals and runways.

- As part of its long-term planning process, the GTAA is studying the regional airport and ground transportation network in Southern Ontario.

- We developed a perspective on growth for the economy, population, air travel and ground transportation requirements of the region.

- The study was supported by McKinsey & Company, The Centre for Spatial Economics (C4SE) and Professor Eric Miller.

- We are consulting with all levels of government and stakeholder groups, including the Province (MTO, Finance, Municipal Affairs, Tourism), Transport Canada, Metrolinx, City of Toronto.

- We are engaging with 10 regional airports and their host municipalities in Southern Ontario to understand their growth plans and operational capabilities.
We studied the macroeconomic conditions in Southern Ontario and the implications on ground and air transportation 30 years from now.

- **$1.0 Trillion**: Ontario GDP in 2043
- **~15.5 Million**: people Population in 2043
- **90 Million**: passengers Air travel demand in 2043
- **Substantially increased**: ground transportation time
Based on planned capacity, after 2032, the region will not be able to accommodate expected increases in demand for air travel.
Driving times to Pearson will increase over the next 30 years

**Projected Pearson 2043 passenger volume (for one day)**

<table>
<thead>
<tr>
<th>Time</th>
<th>2014</th>
<th>2043</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midnight to 5AM</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td>6AM - 9AM</td>
<td></td>
<td></td>
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<tr>
<td>9AM - 11AM</td>
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<td>11AM - 1PM</td>
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<td>3PM - 5PM</td>
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<td>5PM - 7PM</td>
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</tbody>
</table>

**Percent of passengers**

- Passengers will need to leave much earlier than ever before prior to their departure time due to traffic.

**Travel time to Pearson**

<table>
<thead>
<tr>
<th>Location</th>
<th>AM rush 2014</th>
<th>PM rush 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downtown Toronto</td>
<td>27</td>
<td>49</td>
</tr>
<tr>
<td>Downtown Hamilton</td>
<td>66</td>
<td>49</td>
</tr>
<tr>
<td>Pickering Town Centre</td>
<td>54</td>
<td>38</td>
</tr>
</tbody>
</table>

1 Does not correlate to flight departures. This chart represents when passengers leave to reach the airport on average 2 hours earlier.
Toronto Pearson is increasingly becoming a major global hub airport.

<table>
<thead>
<tr>
<th>Airport name</th>
<th>Passenger traffic, 2014, Millions</th>
<th>Change in passenger traffic between 2013 and 2014, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>London Heathrow</td>
<td>73.4</td>
<td>+1.3%</td>
</tr>
<tr>
<td>Dubai International</td>
<td>70.5</td>
<td>+5.5%</td>
</tr>
<tr>
<td>Charles de Gaulle</td>
<td>63.8</td>
<td>+2.6%</td>
</tr>
<tr>
<td>Singapore Changi</td>
<td>54.1</td>
<td>-0.2%</td>
</tr>
<tr>
<td>John F. Kennedy International</td>
<td>53.2</td>
<td>+5.8%</td>
</tr>
<tr>
<td>Toronto Pearson International</td>
<td>38.6</td>
<td>+6.8%</td>
</tr>
</tbody>
</table>

There are two options for Southern Ontario to accommodate growing air passenger demand

<table>
<thead>
<tr>
<th>Description</th>
<th>Example airport</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Status quo</td>
<td>▪ Limited coordination amongst airports and ground transportation to accommodate demand</td>
</tr>
<tr>
<td>2. Develop a robust regional airport system</td>
<td>▪ Network of regional airports throughout greater Toronto</td>
</tr>
</tbody>
</table>

We are working with the GTAA, regional airports, and other stakeholders to refine these options.
Key considerations in supporting regional growth

- Airports are economic catalysts; driving major regional economic benefits
- Global cities have prioritized airports as part of their growth plans
- There are multiple ways to accommodate investment in airports
- Ground transportation is critical to airport and regional growth
Growth is coming

2043:
- 15.5 million residents
- 90 million passengers
Growth is coming. What is our plan?

There are 2 options:

1. Status quo
2. An integrated and optimized regional airport system
Option 1: Status Quo

Planning for each airport carries on, largely uncoordinated.

Each facility reaches capacity due to its own constraints.
Option 1: Status Quo

London Heathrow:

“While London remains a well-connected city its airports are showing unambiguous signs of strain.”

“Without action soon… the entire London system will be full by 2040.”
Option 2: Integrated, Optimized Regional Airport System

**Optimize:**
Airport specialization maximizes overall system capacity

**Integrate:**
Many modes of ground transportation connect airports to key destinations, and each other
Option 2: Integrated, Optimized Regional Airport System

Port Authority of NY & NJ
A specialized, multi-airport system:

- **JFK**: International travel & cargo
- **LaGuardia**: Short haul domestic travel
- **Newark Liberty**: International travel & small package hub
- **Stewart**: Gateway to Hudson Valley
- **Teterboro**: General aviation reliever
Option 2: Integrated, Optimized Regional Airport System

But it’s not perfect...

“I must be in some third world country.”
- US Vice President Joe Biden
Option 2: Integrated, Optimized Regional Airport System

PANYNJ investing $27.6 billion in air infrastructure

Proposed new Central Terminal Building at LaGuardia
Global Competitiveness requires all modes of transportation

How will people get to and from the region’s airports?

2043:
- 25 to 35% increase in driving times
Global Competitiveness requires all modes of transportation

Globally competitive cities and world-class airports are connected with:

- High-speed rail
- Commuter/local rail
- Automobile
- Bus Rapid Transit
Global Competitiveness requires all modes of transportation

London Heathrow:
- Heathrow Express
- Heathrow Connect
- Underground
- National Rail
- TfL bus lines

Coming soon:
- Crossrail
- Inter-city rail direct to London Heathrow
Global Competitiveness requires all modes of transportation.

Frankfurt International:

✓ Connections to airport from anywhere in Germany or Europe.
Global Competitiveness requires all modes of transportation.

Manchester Airport:
✓ Planning for HS2 high-speed rail
Global Competitiveness requires all modes of transportation

How do our region’s biggest airports compare?

Toronto Pearson:
- UP Express
- 192 Airport Express bus
  - Local and regional bus
  - Taxi/private auto

BBTCA:
- Shuttle bus
  - Local streetcar & bus
  - Taxi/private auto

Hamilton International:
- Local bus
- Taxi/private auto

Waterloo International:
- Local bus
- Taxi/private auto

London International:
- Local bus
- Taxi/private auto
Global Competitiveness requires all modes of transportation

Toronto Pearson:

Routes are increasingly approaching the Airport…

… but few direct connections
Global Competitiveness requires all modes of transportation

Pickering Airport:

Transportation investments will be essential if Pickering Airport is to serve as a true multi-modal airport
Now is the time to start planning.
Airport investments take time.

Heathrow Terminal 5:  
- 20 years concept to completion

Dubai Terminal 3:  
- 4 years to construct
Transportation investments take just as long, or longer.

13 years (estimated) 14 years
What does this mean for an airport in Pickering?

Local demand will drive timing:

- There is no airport on the eastern side of the GTA to help meet demand while western GTHA is well served by Hamilton, Waterloo, and even London airports.
- Identify air traffic niche and develop business plan to support
  - Cargo, MRO, business jets
- Ground transportation will strengthen any future airport
  - 407 connectivity a strong asset; transit needs to be addressed
- Transport Canada will make decision about timing
  - Studying demand is positive step – evidence based decision
Thank you.