

# CAPACITY WHERE IT COUNTS

## The GTA East Airport at Pickering



JANUARY 2018

**URBAN  
STRATEGIES  
INC .**



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# 1

## EXECUTIVE SUMMARY

The Greater Toronto Area (GTA) is **among the fastest growing large metropolitan regions in North America**<sup>1</sup>, with a population approaching 10 million by 2041. Yet its airport network is underdeveloped. Toronto's peer group of leading global urban centres — New York, Los Angeles, Chicago, Paris, Sydney and London for example — have main metropolitan international airports supported by a '360 degree' ring of other airports serving the air travel catchment area.

By contrast, in the GTA today Toronto Pearson Airport (Pearson) alone handles nearly all of the region's air passengers. **The GTA will need significant new air capacity to meet growing air travel demand, even after the enhancements planned for Pearson are completed.** Investments in new air capacity must also address existing geographic gaps in air travel service. Currently, all existing airports with the potential to significantly serve air travel growth in the GTA are some distance to the west of Toronto.

The Pickering Lands provide the best opportunity to meet the growing demand for air travel and goods movement in the GTA, demand that Toronto Pearson will soon be unable to accommodate. Airports are critical to regional, provincial and national economic health. A major new airport on the east side of the GTA would effectively address the coming airport capacity crisis by providing service where it is needed most in the region. The combination of available lands, transportation access and partnerships with post-secondary educational institutions would create a unique environment for expansion of the aviation and aerospace industry, one of Canada's key economic growth opportunities.

### **The Pickering Lands have five major advantages:**

1. Optimal location in the region, within reach of the core GTA catchment area and to the east of Pearson;
2. Excellent accessibility, with direct access from a 400-series highway, a future dedicated transit corridor, and potential for rail transit and/or rail freight service;
3. Space for versatile 3,000 metre runways to accommodate a full range of aircraft types;
4. Extensive potential for an aerospace employment cluster; and
5. A site large enough to set a new standard for incorporating leading-edge sustainability and community-oriented design.

### **There is an urgent need to respond to the region's imminent lack of airport capacity. The case for a GTA East Airport on the Pickering Lands is strong. It is time for the federal government to move forward on development of the Pickering Lands with three critical steps:**

1. Commit to proceeding with an airport in Pickering, based on all of the past and ongoing studies that have identified the need for the airport;
2. Prepare an initial development concept and sustainable management plan for stakeholder review; and
3. Issue a request for expressions of interest (REI) to the airport construction, operation and management industry to determine the level of interest and define the scope of the development.

<sup>1</sup> Ontario Ministry of Municipal Affairs, *Growth Plan for the Greater Golden Horseshoe, 2017. Schedule 3 Distribution of Population and Employment for the Greater Golden Horseshoe to 2041*, [http://placestogrow.ca/index.3php?option=com\\_content&task=view&id=430&Itemid=14#schedule3](http://placestogrow.ca/index.3php?option=com_content&task=view&id=430&Itemid=14#schedule3).

# 2

## INTRODUCTION

In 1972 the Government of Canada recognized that the Toronto metropolitan area would one day need an additional airport. To secure space for future airport use it assembled the Pickering Lands, creating a substantial site in northeast Pickering that would reach 19,800 acres in size. The federal government later transferred 10,200 acres to the Rouge National Urban Park, leaving 9,600 acres remaining for a potential airport and related uses.

Since 1972, studies have regularly and consistently concluded both that the GTA will need an airport at Pickering, and that without that airport the GTA east of Pearson will be underserved<sup>2</sup>. The clearest description of the value of the Pickering Lands is found in the 2010 *Needs Assessment Study* prepared by the Greater Toronto Airports Authority (GTAA)<sup>3</sup>:

*It is inconceivable that a large parcel of land comparable in size to the Pickering Lands could be amassed again in the future... The site offers a unique, one-time opportunity to meet the long-term aviation needs of the Greater Golden Horseshoe. The existence of a site such as the Pickering Lands for the future development of a reliever airport is the envy of many other major metropolitan areas. It is prudent planning to retain and protect the site, thereby preserving the option of building an airport, if and when required.*

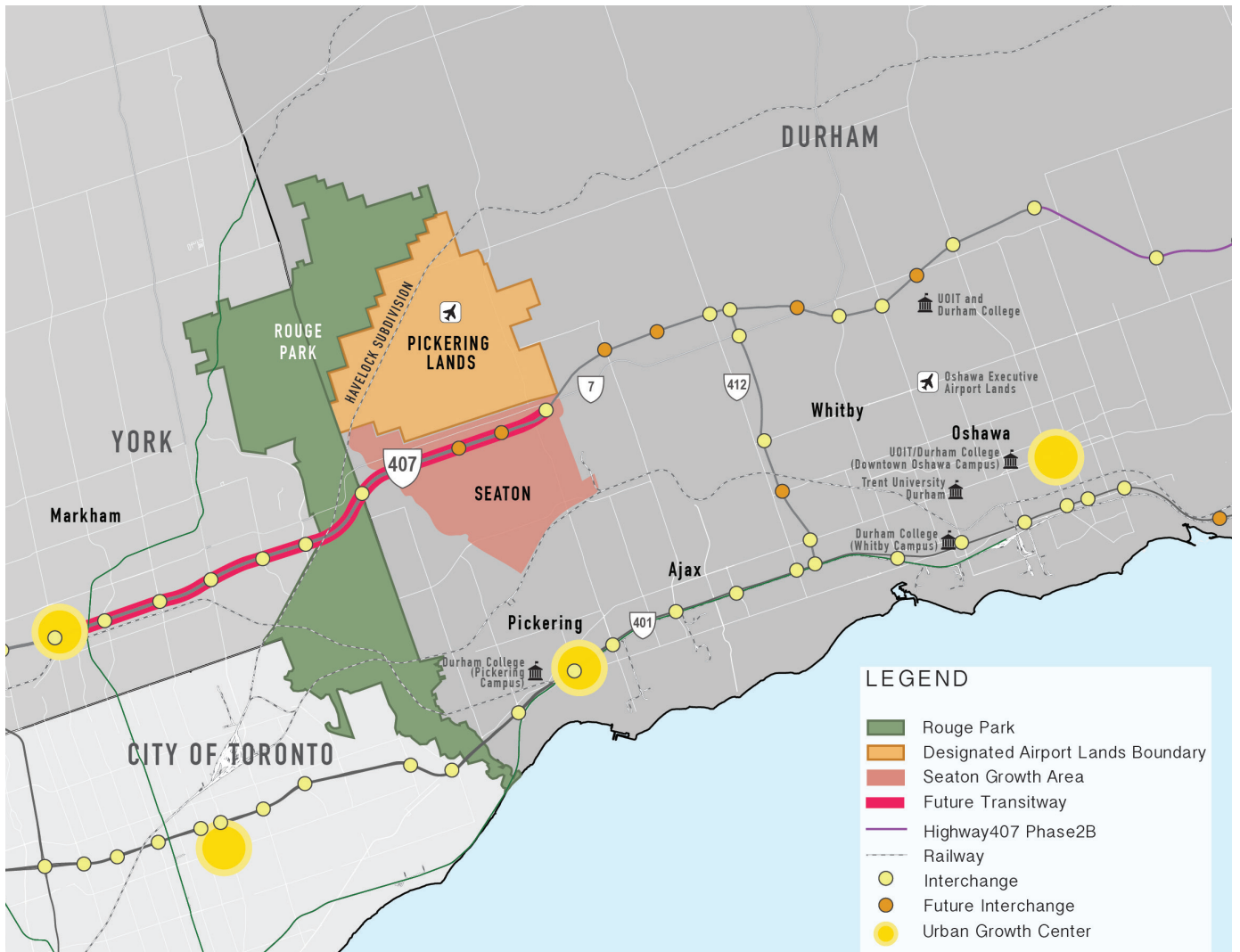
This statement is still true today, but the need for a new airport in the GTA is now even more urgent. Air travel demand is accelerating toward levels that Toronto Pearson will soon not be able to serve on its own, even after planned improvements. That moment is near. The GTAA's 2015 white paper (*Growth, Connectivity, Capacity: The Future of a Key Regional Asset*) established that **demand for air travel in Southern Ontario will exceed the capacity of the region's airports by the mid-2030s.**

Airport system capacity is now on the regional planning agenda. The eleven most significant existing airports in Southern Ontario have formed the Southern Ontario Airport Network (SOAN) to discuss how they can grow their airport operations to accommodate future airport demand in the broader region.

**While the *if* and *when* questions about airport capacity are now being addressed, there has been less discussion about *where* it is most needed.** As Pearson reaches its limits, the GTA will need new airport capacity where it will best serve its growing population and job centres. However, the existing airports in southern Ontario are all either west of Pearson, have expansion restrictions, or are beyond the GTA catchment, leaving the entire GTA east of Pearson underserved.

<sup>2</sup> Greater Toronto Airports Authority, *Needs Assessment Study, Pickering Lands. Final Report*. Submitted to Transport Canada, 2010; Leigh Fisher and Associates, *Economic Development Study: Regional Reliever Airport on the Pickering Lands*. Prepared for Greater Toronto Airports Authority, 2004; Greater Toronto Airports Authority, *Pickering Financial Assessment Analysis Report*, 2003; Greater Toronto Airports Authority, *Pickering Airport Draft Plan Report*, 2004; Transport Canada, *Southern Ontario Area Airports Study*, 1995.

<sup>3</sup> Greater Toronto Airports Authority, 2010. *Needs Assessment Study, Pickering Lands. Final Report. Submitted to Transport Canada*. March 2010.



**FIGURE 1.** The Pickering Lands are located in Durham Region north of Highway 407, adjacent to the Seaton Growth Area and the Rouge National Urban Park.

New air capacity can and must be added in many places in the GTA, but the priority should be to add capacity in the right places. **The Pickering Lands are the best opportunity to most effectively serve the GTA as Pearson reaches capacity.**

They offer excellent accessibility, an unparalleled opportunity for associated employment land development, and a site that can effectively balance community interests and sustainability goals while accommodating new regional air capacity.

# 3

## GROWING PAINS IN THE GTA: SURGING POPULATION, AIR TRAVEL DEMAND AND ROAD CONGESTION

The GTA is one of the fastest growing large metropolitan regions in North America, projected to grow from 6.4 million people to 9.4 million by 2041, a 46% increase<sup>4</sup>. Toronto will remain the epicentre of people and jobs in the region, but all areas of the GTA will see significant population growth, including the Regions of York and Durham with their substantial population and employment centres in the eastern GTA.



FIGURE 2. The Region of Durham is one of the fastest growing municipalities in Canada.

TABLE 1. Distribution of Population for the Greater Toronto Area to 2041 (figures in 000s)

Municipality	Population		
	2016	2031	2041
Region of Durham	646	970	1,190
Region of York	1,110	1,590	1,790
City of Toronto	2,732	3,190	3,400
Region of Peel	1,382	1,770	1,970
Region of Halton	548	820	1,000
<b>TOTAL</b>	<b>6,418</b>	<b>8,340</b>	<b>9,350</b>

SOURCE: 2016 populations: Statistics Canada. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001.Ottawa. Released October 25, 2017.

2031 and 2041 population projections: Growth Plan for the Greater Golden Horseshoe, 2017. May 2017. Schedule 3 Distribution of Population and Employment for the Greater Golden Horseshoe to 2041.

4 Ontario Ministry of Municipal Affairs, *Growth Plan for the Greater Golden Horseshoe, 2017. Schedule 3 Distribution of Population and Employment for the Greater Golden Horseshoe to 2041*, [http://placestogrow.ca/index.php?option=com\\_content&task=view&id=430&Itemid=14#schedule3](http://placestogrow.ca/index.php?option=com_content&task=view&id=430&Itemid=14#schedule3).



This population and employment growth is generating the surge in air travel demand. This is a worldwide trend, particularly for leading global cities like Toronto. Global passenger demand is growing by 3.7% annually, leading to 7.2 billion passengers by 2035, which will be nearly double the 3.8 billion passenger volume in 2016<sup>5</sup>. **Yet Pearson is now growing at a greater rate than many of the world's busiest international passenger airports, surpassing Los Angeles, Dubai, and Beijing, among others.**

TABLE 2. Passenger growth of Pearson and its peer airports

Airport	Passenger Growth Rate %, 2016
Pearson	8.04
Los Angeles	7.96
Dubai	7.23
Beijing Capital	4.95
John F. Kennedy	3.44
Hong Kong	2.97
Chicago O'Hare	1.79
Heathrow	0.97
Charles de Gaulle	0.25
Frankfurt	-0.4

SOURCE: The Port Authority of NY & NJ. "Airport Traffic Report", 2016, <https://www.panynj.gov/airports/pdf-traffic/ATR2016.pdf>.

Pearson's passenger growth rate reflects the GTA's growing population and appetite for air travel. Annual air passenger volume in Southern Ontario is expected to more than double in three decades, from 44.2 million in 2014 to 110 million in 2043.

**Without significant new airport capacity Southern Ontario's air travel demand could outpace supply capacity by the mid-2030s, and exceed it by 20 million by the mid-2040s<sup>6</sup>.**

To address this growing demand, Pearson is planning significant capacity growth and aims to evolve into a "mega-hub" airport with a focus on international connecting passengers. The airport plans to increase its annual passenger volume from 44.3 million in 2016 to 85 million by 2037 by maximizing airside capacity, improving passenger processing and terminal facilities, and developing a new regional transit centre<sup>7</sup>.


Even with these changes, **Pearson cannot address the GTA's projected air capacity shortfall alone.** The GTA will need new airport capacity to serve 110 million passengers by 2041 and accommodate the air services that no longer fit at Pearson as it focuses on long-haul and international travel.

Travellers will have to rely on other airports for shorter point-to-point or regional flights, as well as for charter flights, executive travel, and general aviation, and other area airports will likely have to play a larger role in air cargo and airport-related maintenance, repair and overhaul (MRO) services.

5 International Air Transport Association. "IATA Forecasts Passenger Demand to Double Over 20 Years", October 18, 2016, <http://www.iata.org/pressroom/pr/Pages/2016-10-18-02.aspx>.

6 Southern Ontario Airport Network, "Flying Together: The Southern Ontario Airport Network", May 2017, <https://www.soairportnetwork.com/news/2017/5/9/southern-ontario-airport-network-report-released>.

7 Toronto Pearson, "Growing Canada with a Mega Hub Airport", December 2016, [https://torontopearson.com/uploadedFiles/Pearson/Content/About\\_Pearson/Economic\\_Impact/Regional\\_Growth/GTAA\\_GrowingCanadaWithAMegaHubAirport.pdf](https://torontopearson.com/uploadedFiles/Pearson/Content/About_Pearson/Economic_Impact/Regional_Growth/GTAA_GrowingCanadaWithAMegaHubAirport.pdf).



**The GTA needs a solution to the looming capacity shortage, especially in the east GTA, before the airport system reaches capacity. Otherwise, businesses and travellers in the GTA, and the regional economy, will feel the impacts of the air travel capacity shortfall well before 2041.**

As demand for peak airport slots increases at Pearson, landing fees will likely adjust to the point where they are only suitable for the most valuable international and domestic services. This will reduce the availability of prime travel times for other smaller-scale or shorter-haul services unless additional regional air capacity is provided. An important segment of GTA travellers — entrepreneurs or small businesses travelling for meetings or conferences, sports teams travelling to tournaments, or ‘snowbirds’ heading south to the US, for example — will rely on a shrinking number of off-peak flight options. Some will decide to travel by road or rail and face much longer travel times. Other travellers may decide to fly from US airports such as Buffalo, diverting potential economic benefits away from the GTA. These scenarios would inconvenience travellers and create a drag on the GTA economy from lost productive time and foregone business opportunities.

## **Road Traffic Will Affect Airport Accessibility**

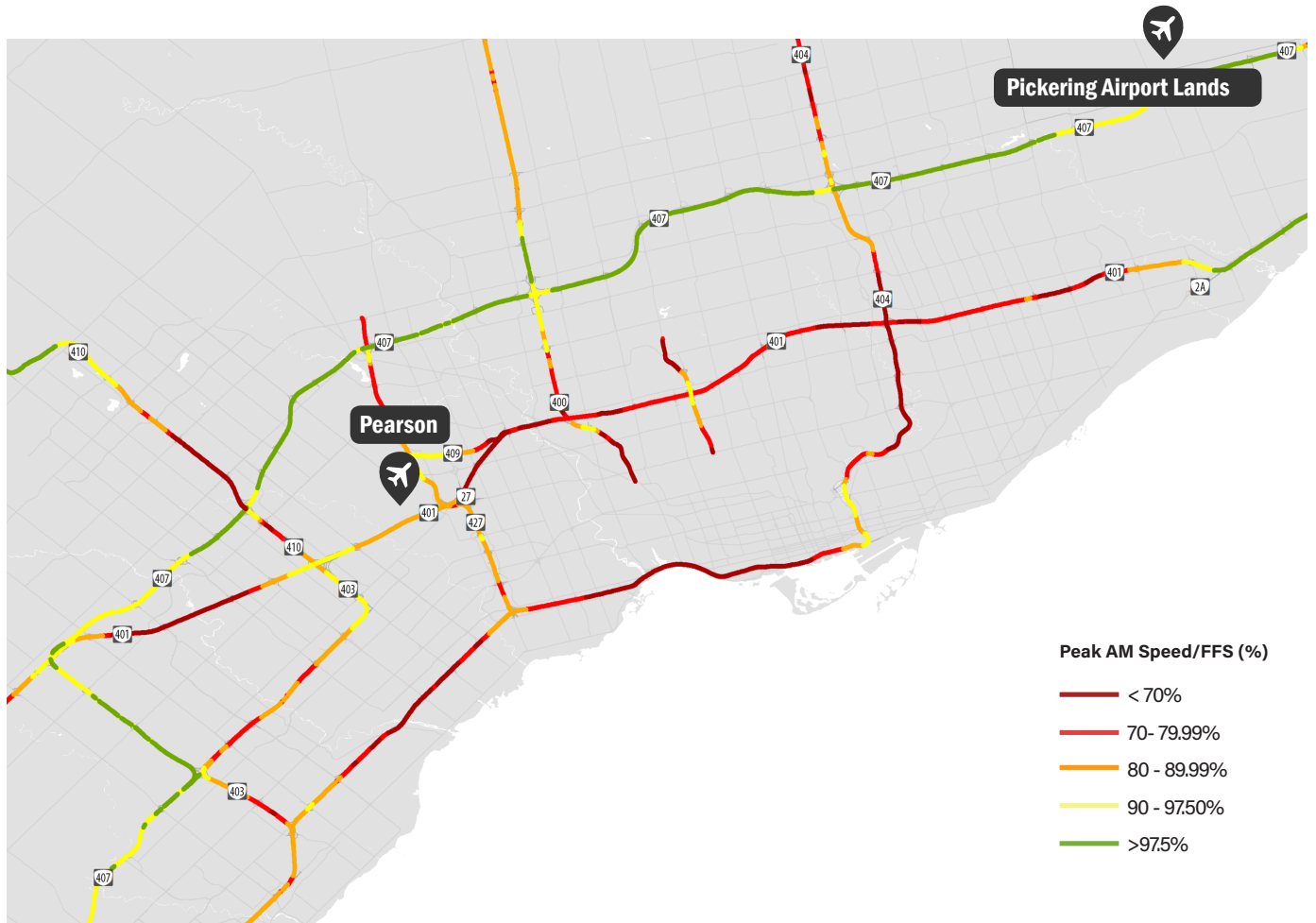
In a region with a booming population and air travel demand, the airport system can only function as well as the surface transportation system. **Travellers cannot catch flights if they are caught in traffic.**

As the GTA plans to add airport capacity to meet its growing population, it must also tackle its growing congestion problem, which threatens the accessibility and success of its airports. The GTAA expects that congestion on the region’s highways will significantly worsen in the coming decades, resulting in a 25-35% increase in driving times to Pearson by 2043<sup>8</sup>. The Union-Pearson Express service and the proposed Regional Transit Centre at Pearson will help ease, but not completely relieve, this congestion.

Planning an airport system that can serve the entire GTA market requires recognizing where there are barriers in the road network. Unfortunately, the **greatest congestion hotspot in Canada is the area around Pearson**. The Canadian Automobile Association (CAA) has identified all of the major highway routes to Pearson from the north and the east as consistently congested throughout a weekday (see Figure 3). Highway 401 between Yonge Street and Highway 427 — a critical route to Pearson from the east — is the single worst bottleneck in Canada, creating 3.2 million hours of delays annually for commuters and an estimated \$82 million drag on the economy<sup>9</sup>.

8 Greater Toronto Airports Authority (GTAA), “Growth, Connectivity, Capacity: The Future of a Key Regional Asset”, September 2015, <http://www.cip-icu.ca/CMSPages/GetFile.aspx?nodeguid=6ab5953c-dacc-4459-97c1-654df223ea28&lang=en-US>.

9 Canadian Automobile Association (CAA), “Grinding to a Halt: Evaluating Canada’s Worst Bottlenecks”, January 2017, [http://www.caa.ca/wp-content/uploads/pdfs/en/16170\\_Canadian\\_National\\_Bottlenecks\\_Study\\_EN\\_1\\_4\\_17.pdf](http://www.caa.ca/wp-content/uploads/pdfs/en/16170_Canadian_National_Bottlenecks_Study_EN_1_4_17.pdf).



The implications of this are significant, especially since congestion will only get worse. **The GTA needs supporting air capacity east and west of Pearson.** Driving past Pearson through the GTA traffic to reach other airports will be increasingly difficult.

**FIGURE 3.** This map demonstrates the extent of congestion on the highways surrounding Toronto Pearson, and the lack of congestion on Highway 407, which provides direct access to the Pickering Lands. The map shows the average peak AM travel speeds relative to free flow speeds (FFS), which are the average speeds at which motorists would travel if there were no congestion or other adverse conditions. Average peak PM congestion is similarly high.

SOURCE: Canadian Automobile Association (CAA), "Grinding to a Halt: Evaluating Canada's Worst Bottlenecks", January 2017, [http://www.caa.ca/wp-content/uploads/pdfs/en/16170\\_Canadian\\_National\\_Bottlenecks\\_Study\\_EN\\_1\\_4\\_17.pdf](http://www.caa.ca/wp-content/uploads/pdfs/en/16170_Canadian_National_Bottlenecks_Study_EN_1_4_17.pdf)

# 4

## AIRPORT SYSTEMS IN COMPARABLE GLOBAL CITIES

Worldwide, major urban regions rely on multi-airport systems to meet their air travel demands. For example, the Port Authority of New York and New Jersey oversees three major international airports (John F. Kennedy, LaGuardia, and Newark Liberty), as well as a number of smaller airports (Stewart, Teterboro, and Atlantic City), that together meet demands for general aviation, charter flights, executive travel, and regional and lower-cost travel. Similarly, the London, UK urban region relies on Heathrow as the major international hub, while Gatwick, Stansted, Luton, and London City provide other domestic, European and international services.

**To meet all demands, regional airport systems must cover all of the market areas in their metropolitan catchment area.** They typically have '360-degree' geographic coverage patterns around the primary city in the area, except where that city borders on a large body of water or other uninhabited area.





**FIGURE 4.** The distribution of airports around New York, London, Paris, Chicago and Los Angeles



# 5

## THE SOUTHERN ONTARIO AIRPORT NETWORK AND THE NEED TO PLAN FOR THE GTA EAST

The GTA airport system is unbalanced and underdeveloped compared to international examples. Pearson, with its 44 million annual passengers, handles almost all of the scheduled passenger traffic for the region. To meet future demand in the region, Toronto Pearson and 10 other airports have formed the Southern Ontario Airport Network (SOAN), enabling the region's leading commercial airports to work together to support growth and amplify the economic impact of air service for Southern Ontario. SOAN provides a forum to identify air service development opportunities in the region in a comprehensive way as Pearson focuses on becoming an international mega-hub.

The creation of SOAN is a critical step in addressing the region's air travel needs and is a significant advancement in regional air system planning. Pearson's mega-hub evolution and capacity constraints will require other airports to take on a range of displaced air travel services and airport-related industries, which could bolster those airports and help to spur related industry clusters in the surrounding areas.

However, while the incremental enhancement of all airports will be good for the air sector and the province as a whole, it will not necessarily fill major gaps in air travel service or create the typical coverage seen in other airport systems.

Even if all SOAN member airports maximize their airport capacities, the east GTA would still be underserved as Pearson approaches its limits.

### **The GTA east will need access to a supporting airport that meets the following criteria:**

1. Proximity to the east GTA catchment area<sup>10</sup>
2. Ability to accommodate at least one 3,000 metre runway<sup>11</sup>
3. Sufficient land for expanded airport or employment uses<sup>12</sup>

### **None of the existing airports within 100 km of Pearson can meet these criteria:**

- Billy Bishop is the only airport with scheduled service east of Pearson, and it is close to downtown Toronto. However, it cannot expand its runways, airport lands, or introduce jet aircraft, and has an estimated capacity of 4.2 million passengers annually (it served 2.7 million in 2016).
- Oshawa is well-positioned geographically, but is restricted from having scheduled passenger service and has runway length constraints.
- Lake Simcoe, Peterborough, and Kingston Airports are all too far from the centre of the GTA to be major supporting airports.
- Waterloo and Hamilton are both beyond a one-hour travel time to most of the GTA (see Figure 6).

<sup>10</sup> The GTAA's 2010 *Needs Assessment Study for the Pickering Lands* includes peak-hour traffic modelling to predict driving times to Pearson, Hamilton, and Region of Waterloo Airports, as well as the Pickering Lands. The study revealed that only Pearson and the Pickering Lands will be accessible within one hour for the majority of Toronto, Region of York, and Region of Durham.

<sup>11</sup> The GTAA's 2004 *Pickering Airport Draft Plan Report* indicates that a reliever airport will need to handle all types of aircraft handled at Pearson, and would therefore require 10,000 foot (3,048 metre) runways.

<sup>12</sup> The 2004 *Economic Development Study for a Regional Reliever Airport on the Pickering Lands* by Leigh Fisher Associates and the 2017 paper "Flying Together" by the Southern Ontario Airport Network both identify airport employment clusters as major economic development opportunities for Ontario.

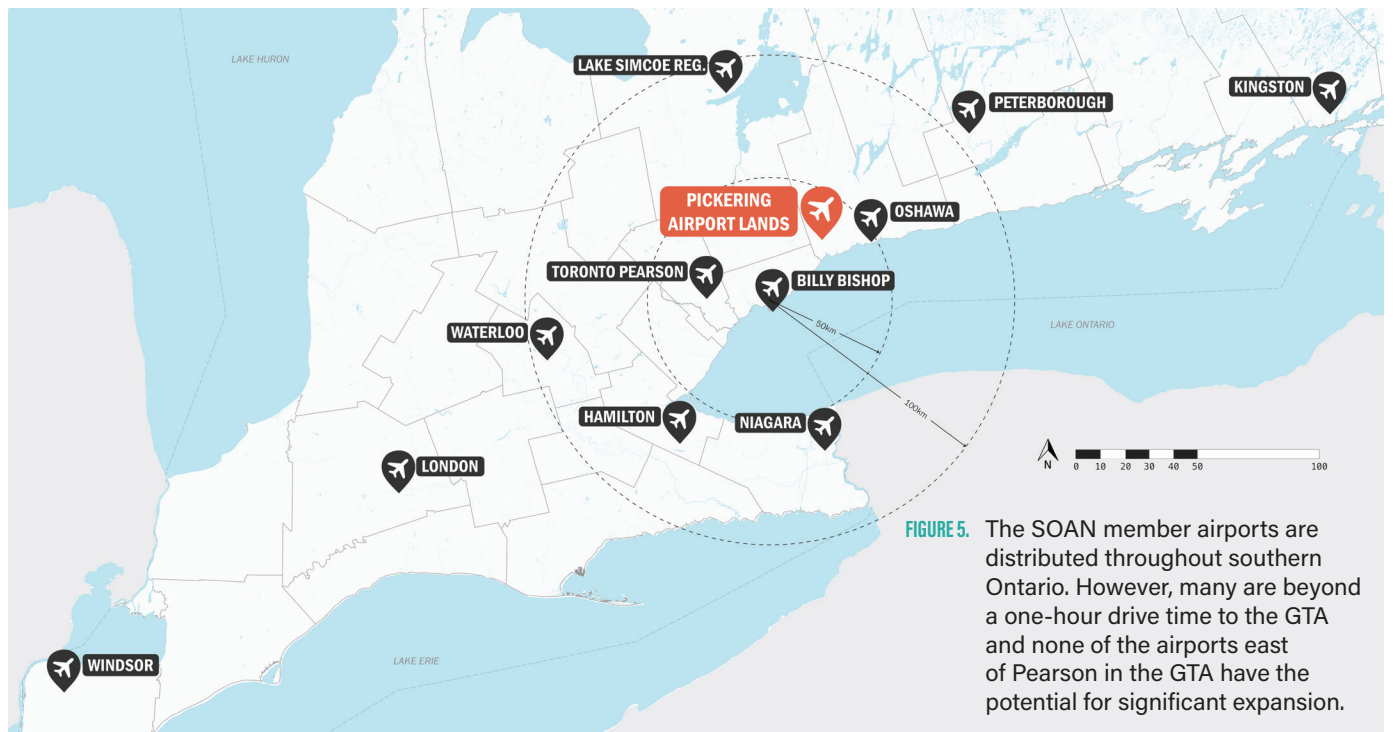
**TABLE 3.** None of the SOAN airports fully meets the criteria to fill the gap in air service in the east GTA

<b>Southern Ontario Airport Network Member Airports Other than Pearson</b>	<b>Proximity to the east GTA catchment area</b>	<b>Ability to accommodate at least one 3,000 metre runway</b>	<b>Sufficient land for expanded airport or employment uses</b>
Billy Bishop Toronto City Airport	✓	X	X
Oshawa Executive Airport	✓	X	✓
Kingston/Norman Rogers Airport	X	X	X
Lake Simcoe Regional Airport	X	✓	✓
Peterborough Airport	X	X	✓
Hamilton John C. Munro International Airport	X (west GTA only)	✓	✓
Region of Waterloo International Airport	X (west GTA only)	✓	✓
London International Airport	X	✓	✓
Niagara District Airport	X	✓	✓
Windsor International Airport	X	✓	✓

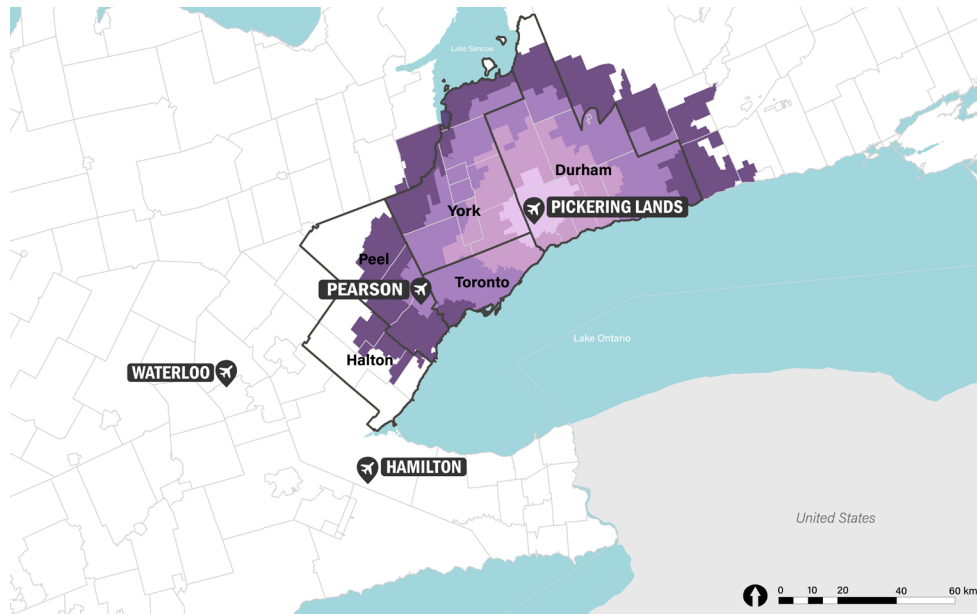
The SOAN airports will play a role in meeting the coming air travel demands in southern Ontario — and Hamilton and Region of Waterloo in particular will be key in serving the GTA west and beyond — but a solution without the Pickering Lands will fall short because Toronto, Region of York and Region of Durham will be underserved. **The existing SOAN airports with runway space are not close enough to the GTA, and none of them serves the gap in the east GTA** (see Figure 5).

Individually or collectively, they cannot match the space advantages, economic boost and sustainable airport potential of the Pickering site.

The case for the Pickering Lands is strong. The site meets all three criteria set out above and is the only airport location that can serve the east GTA. It also has the added advantages of excellent accessibility by several transportation modes and the space to balance the region’s needs for airport capacity, employment, and green space and sustainability.

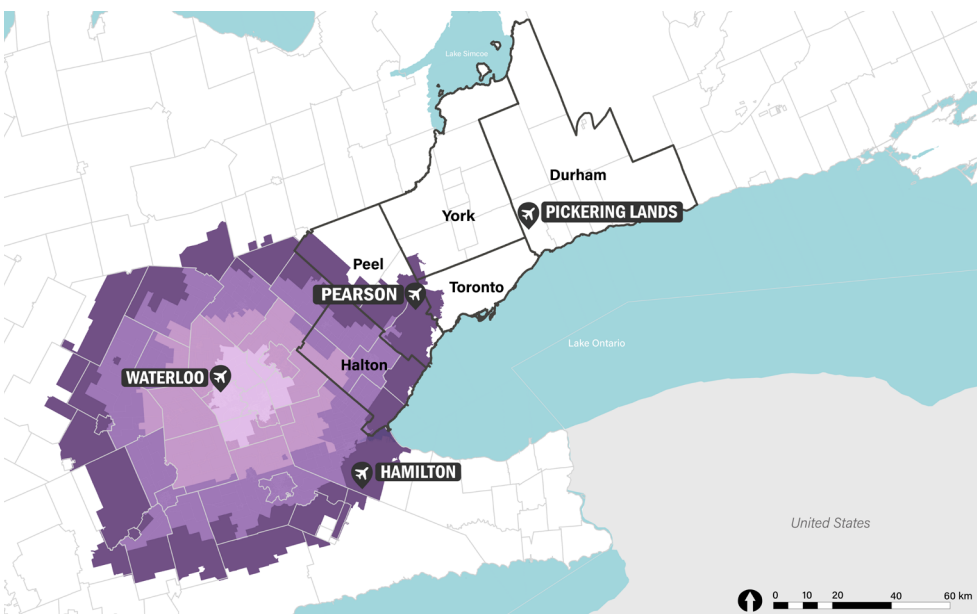
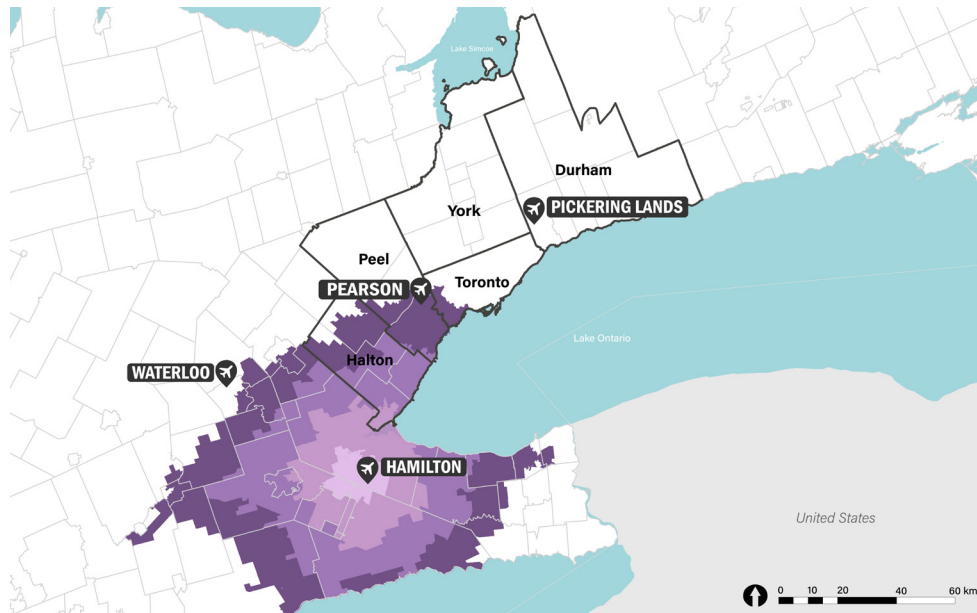


**FIGURE 5.** The SOAN member airports are distributed throughout southern Ontario. However, many are beyond a one-hour drive time to the GTA and none of the airports east of Pearson in the GTA have the potential for significant expansion.



**FIGURE 6.** These maps show one-hour drive times from the Pickering Lands, Hamilton Airport, and Region of Waterloo Airport (based on GIS road network analysis).

With Pearson focusing its capacity on international mega-hub activities, the Pickering Lands are the only potential supporting airport site within one-hour drive time to Toronto, York and Durham. Much of the GTA is beyond a one-hour drive from Hamilton and Region of Waterloo Airports.



- 15 minutes
- 30 minutes
- 45 minutes
- 60 minutes



# 6

## PICKERING: THE TIME IS NOW

### 6.1 Proximity to Toronto and ability to serve the GTA east

The Pickering Lands are the closest potential airport site to the centre of the GTA and the only one east of Pearson. It is within an approximately 50 km driving distance from downtown Toronto and can be reached in 40 to 60 minutes in peak morning traffic. The Pickering Lands could balance the region's air travel service and allow passengers to avoid the increasing congestion along the road networks to Pearson, the western GTA, Hamilton and the Region of Waterloo.

#### Excellent accessibility

The Pickering Lands have the best potential accessibility of any GTA supporting airport site. Highway 407 passes immediately south of the Pickering Lands, providing express highway access. Plans are also in place to include LRT or BRT service within a dedicated corridor as part of the planned 407 Transitway. The CPR Havelock Subdivision rail corridor also passes through the site. The corridor currently provides very limited freight service, but the existence of an active rail corridor on a large-scale potential airport site is a regional asset. New rail corridors are extremely hard to establish in urban regions, and no other significant airport in the GTA, other than Pearson, has direct rail access on site.

### 6.2 Space for versatile 3,000 metre runways

Runway infrastructure is critical in meeting future air travel needs. As regional air demand increases and Pearson focuses on international mega-hub activities, a supporting airport will need to be able

to satisfy a wide range of air services, potentially including scheduled passenger service, charter and executive flights, cargo movement, flight training, general aviation, and others. It is not possible to predict the precise mix of services a supporting airport will need to provide, so flexibility will be important. Transport Canada and the GTAA have both established that the 9,600 acre Pickering Lands site can fit two parallel primary runways with a length of 3,048 metres, and a single crosswind runway with a length of 2,591 metres. This is a major advantage of the Pickering site, because 3,000 metre runways can accommodate a full range of aircraft.

### 6.3 A site that can deliver air capacity, employment, and leading-edge sustainable and community-oriented design

The original Pickering Lands site was 19,800 acres in size. Transport Canada later determined that 9,600 acres should be preserved for potential aviation uses. The scale of the remaining lands presents a remarkable opportunity to establish a supporting airport with room for versatile infrastructure and expansion, in balance with employment uses, green space and sustainable design so that the lands serve the needs of the surrounding communities.

This uniquely-sized site is large enough to host an airport the size of Pearson with nearly 5,000 acres remaining to deliver other benefits for the region and easily buffer its operations from surrounding areas. No adjacent land uses constrain development or expansion, such as adjacent communities or other noise-sensitive uses, or tall structures.



## The potential for a major employment cluster at the Pickering Lands

Airport areas can catalyze valuable employment clusters that generate jobs and GDP for the surrounding region<sup>13</sup>. Pearson is an excellent example. The cluster of 300,000 jobs around the airport make it the second largest employment area in Canada after downtown Toronto. This kind of 'aerotropolis' or 'airport city', as such clusters are increasingly known, often has a combination of higher intensity office and hotel uses nearest the airport; lower intensity uses such as assembly, logistics, manufacturing and processing in the industrial areas near the airport and connecting highway system; and a wider arc accommodating the full range of other economic activities that benefit from being close to an airport.

Pearson is an example of a mature airport employment zone, but airports can also activate new industry clusters with the potential to grow into regionally-significant employment areas, something the SOAN member airports hope to achieve as they take on displaced services from Pearson. This approach is also present at Downsview Park in Toronto where the Downsview Aerospace Innovation and Research (DAIR) Consortium has created a cluster to bring together academia, small and medium-sized enterprises (SMEs), and government partnerships to enhance working training, skills and development. While its future is uncertain, the DAIR cluster features diverse aerospace activities currently centered around the Bombardier Downsview plant, and benefiting from the parkland and employment land, as well as airport, highway, and transit infrastructure of the area.

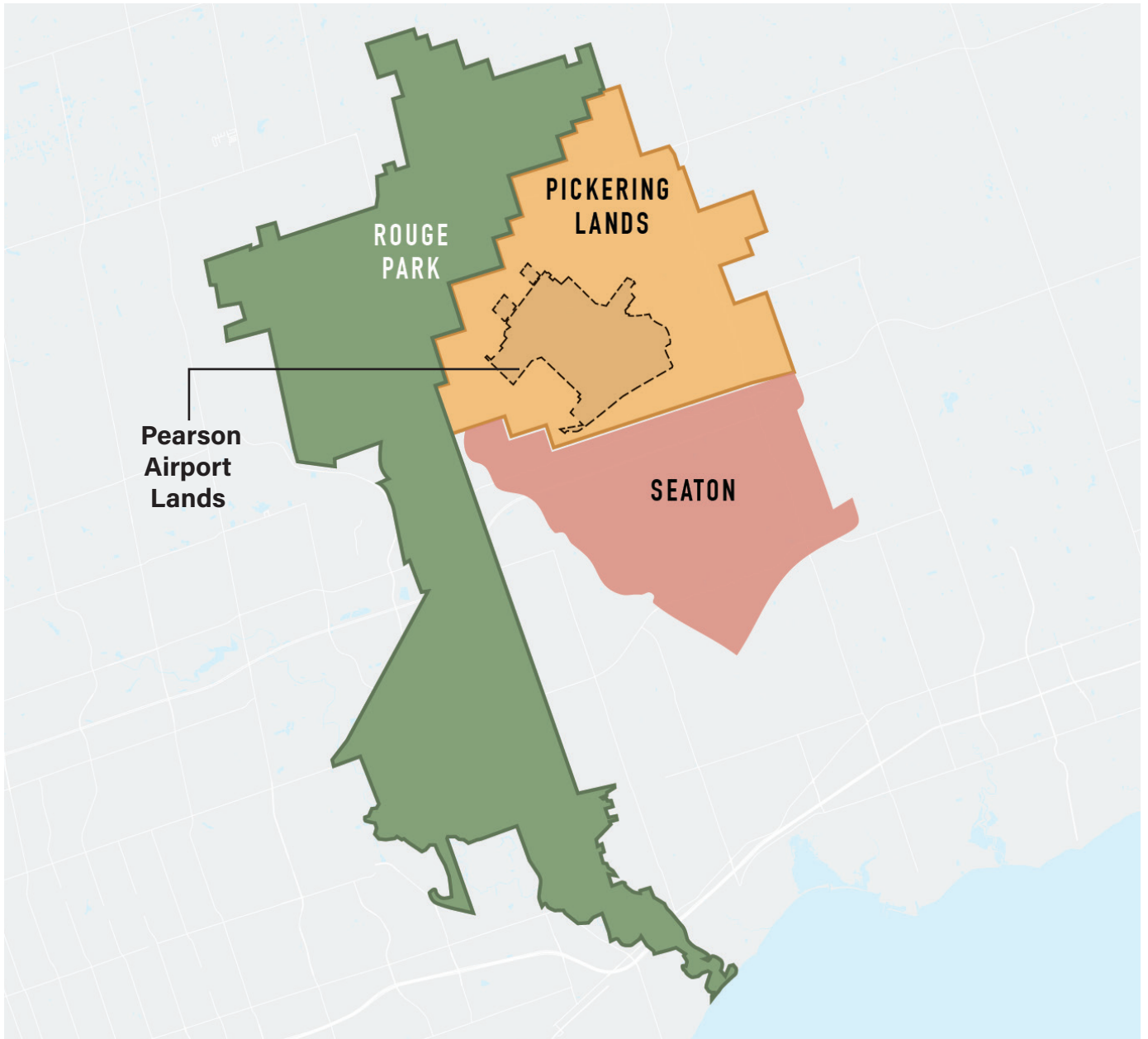
**The Pickering Lands present a similar aerospace cluster opportunity, with even more development land and better accessibility.** The thousands of acres of potential employment lands on the site are complemented by the Pickering Innovation Corridor to the immediate south, which consists of 800 dedicated acres of greenfield employment lands along Highway 407 and the future 407 Transitway LRT or BRT service. The region's post-secondary institutions, such as University of Ontario Institute of Technology (UOIT) and Durham College, are innovation incubators that could establish research links to the airport employment cluster. The combination of available airport lands, highway and transit access, and local educational institutions would create an attractive and competitive environment for the expansion of the aerospace industry, which is one of Canada's key economic growth opportunities.

Transportation infrastructure can support the development of business clusters, and a new GTA East Airport at Pickering would be a key addition to the infrastructure of the Durham and York regions that would have mutually beneficial relationships with exiting industry clusters in information technology; automobiles and parts; materials; furniture; pharmaceutical/biotech; automotive and other manufacturing; media; distribution; power generation; hospitality and amusement; and agri-food. The existing clusters would both generate general aviation, cargo, and passenger activity, and benefit from the increased transportation infrastructure<sup>14</sup>.

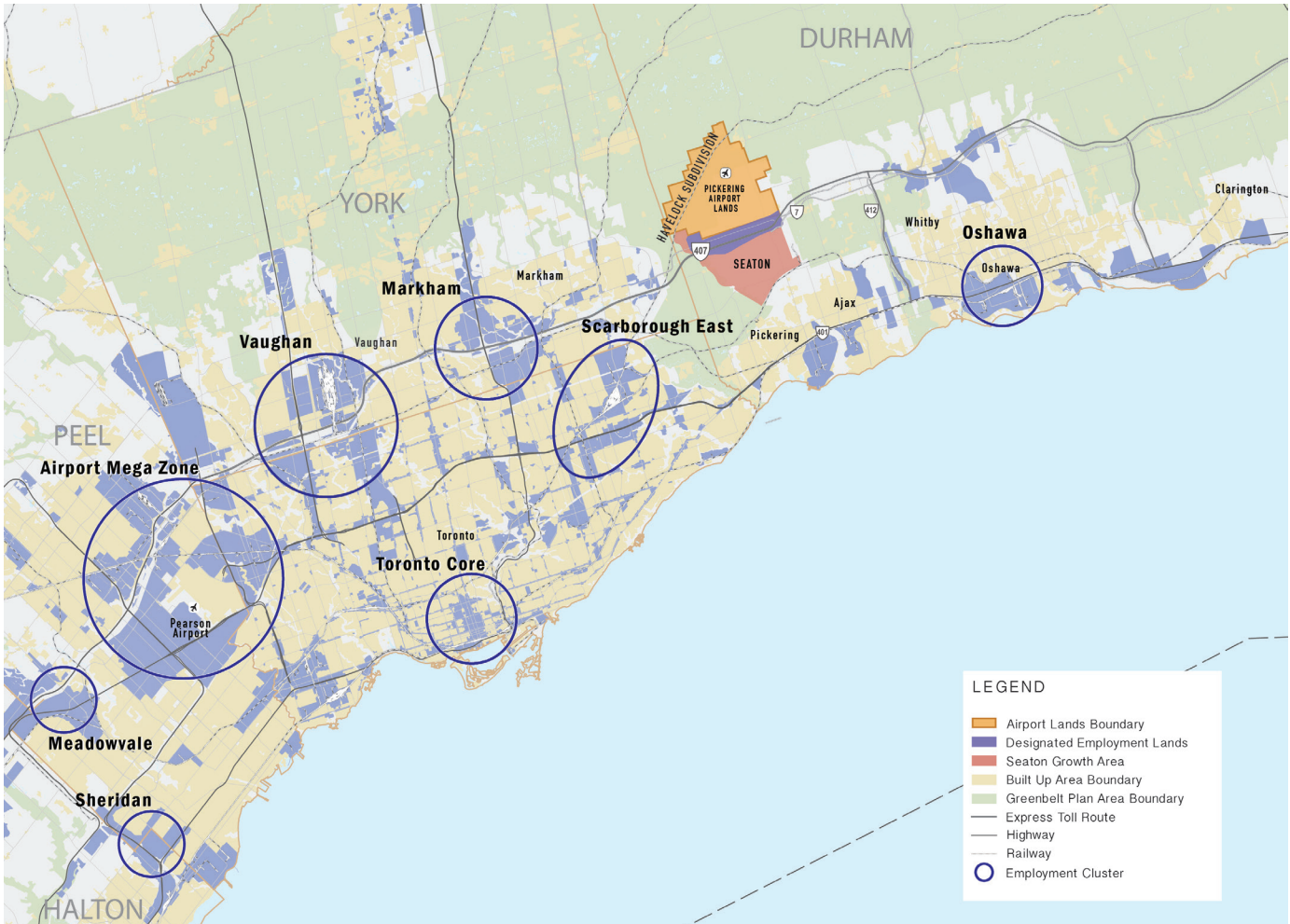
Figure 7 indicates the extensive employment lands along the 407 corridor and elsewhere in Durham and York Regions and eastern Toronto that would both service and benefit from a new GTA East Airport.

<sup>13</sup> See: Southern Ontario Airport Network, "Flying Together: The Southern Ontario Airport Network", May 2017, <https://www.soairportnetwork.com/news/2017/5/9/southern-ontarioairport-network-report-released>; and Leigh Fisher and Associates, *Economic Development Study: Regional Reliever Airport on the Pickering Lands*, prepared for Greater Toronto Airports Authority, 2004.

<sup>14</sup> Leigh Fisher and Associates, *Economic Development Study: Regional Reliever Airport on the Pickering Lands*, prepared for Greater Toronto Airports Authority, 2004.



**FIGURE 7.** A comparison of the size of the Pickering Lands to the size of the Pearson Airport Lands, highlighting the potential for complementary uses on the site.



**FIGURE 8.** A map showing the regional growth structure, and highlights employment clusters across the GTA.

The development potential of the Pickering Lands and the Pickering Innovation Corridor is of national significance. It will also likely attract interest from domestic and international investors and developers, which may present an opportunity to support the airport’s financing and development through appropriate public-private partnership.

## A strategic site for valuable goods movement

Airports have a symbiotic relationship with their regional economies: growing populations and business sectors increase airport demand, and as airports expand their destinations people can access more markets. Increasingly, airports also help goods reach new markets. Airports are critical components of a valuable supply chain that allows Canadian producers and suppliers to reach both domestic and global markets. Freight-intensive industries, which move goods by road, rail, water and air generate hundreds of thousands of jobs, and account for 38% of Ontario's economy<sup>15</sup>. Air cargo plays a specific and high-value function in the goods movement system, providing fast delivery of the most specialized and time-sensitive goods. An airport sized for cargo services and with efficient connections to road and rail freight lines can enable billions of dollars of Canada's high value exports such as pharmaceuticals, manufacturing components, and food products.

Pearson alone processes over 45% of Canada's air cargo, and \$35.2 billion in exports passed through the airport in 2016<sup>16</sup>. This has enabled the development of competitive employment clusters, such as Toronto's remarkable rise to being a major food-producing city in North America. This air cargo capacity also brings significant benefits for industries across Canada. Gold, pharmaceuticals, and even live lobsters are among the top five exports from Toronto Pearson<sup>17</sup>.

The Pickering Lands are perfectly located to handle air cargo and support goods movement-related industries. The site is large enough for 3,000 metre runways and cargo facilities, and the immediate access to Highway 407 is the best connection to an express highway of any airport site in southern Ontario. The Havelock Extension heavy rail line that runs through the Pickering Lands also presents a goods movement opportunity, potentially providing a rail freight link on site for both air cargo and the other industries in the employment cluster.



**FIGURE 9.** Air cargo infrastructure connected to efficient road networks allows Canadian goods to reach both domestic and global markets

<sup>15</sup> Ontario Ministry of Transportation, "Freight Supportive Guidelines", 2016, <http://www.mto.gov.on.ca/english/publications/pdfs/freight-supportive-guidelines-english.pdf>.

<sup>16</sup> James Muir, "High value focus for Toronto Pearson", July 2017, <http://www.aircargoweek.com/high-focus-toronto-pearson>.

<sup>17</sup> Ibid.



## **A site where the vision for a contemporary, sustainable airport can be realized**

The Pickering Lands provide the opportunity to create an airport that sets a new standard for modern, sustainable and community-oriented design.

The main objection against an airport on the Pickering Lands has been the loss of agricultural land. However, 10,200 acres — more than half of the original land base — have already been transferred to the Rouge National Urban Park to remain as rural green space and agricultural uses in perpetuity. The remaining 9,600 acres provide an unparalleled opportunity to create an airport district that integrates green space and agricultural uses into its site design from the start.

The site is also large enough to include other meaningful sustainable design components. Contemporary airports are increasingly setting carbon-neutrality as an operating goal, through careful management practices and the implementation of appropriate energy and conservation techniques. Pearson has made great strides in this direction, and a GTA East Airport could implement a comprehensive Environmental Management System (EMS) similar to that currently in place at Pearson.

The Pickering Lands' substantial agricultural land assets also provide opportunities for other innovative sustainability and environmental management approaches. The airport site could be used for agricultural research with links to industries within the airport employment cluster and educational institutions such as the Durham

College Centre for Food. This could support advances in agricultural practice and potentially create a local source for the airport's food services. These lands could also be used to grow and demonstrate the viability of bio-fuels, which will likely become essential for air industries in order to achieve more rigorous carbon-reduction standards.

These opportunities to make a new GTA East Airport the greenest in the world and a centre for innovation in agricultural production are readily achievable given the nature, location and scale of the site. They can become part of the brand of the new airport and themselves sources of economic and employment activity.

In addition to the unique on-site sustainability opportunities, a new GTA East Airport could be designed from the outset to maximize transit access for passengers and for employees in the employment cluster around the airport, something that is lacking at many world airports.

Major changes are taking place in the modes and fuel sources of both ground and air transportation. Autonomous vehicles, 'green' electric power sources, ecological-friendly fuels, logistics technologies and the full gamut of artificial intelligence innovations will transform the ways people and goods move around urban areas and to and from airports. The GTA East Airport could set an entirely new standard, again something that can become a part of its brand and a competitive advantage for the region.



**FIGURE 10.** Pearson's first honeybee apiary, YYbeeZ, is situated along the trail near the Etobicoke Stormwater Facility (GTAA Partners in Project Green)



**FIGURE 13.** As one of the first airport terminal projects in the world to target LEED certification, the Living Wall demonstrates Edmonton International Airport's commitment to sustainable design (Plant Connection, Inc.)



**FIGURE 11.** The T5 Farm located on the Departures level of Terminal 5 at John F. Kennedy International Airport contains the world's first blue potato farm at an airport (JetBlue Airways)



**FIGURE 12.** The Heathrow transport pod system provides a link from the T5 Business Car Park to the terminal and consists of 21 battery powered, driverless, zero emission vehicles (Golf Hotel Whiskey)

# 7

## THE GTA EAST AIRPORT'S POTENTIAL ROLE IN THE REGIONAL AIRPORT SYSTEM

The scale and type of air services that the East GTA Airport could and should provide would grow and evolve over time. Some current population trends and existing constraints in the region's air and road transportation systems suggest some potential start-up scenarios:

### **Consolidation of former Buttonville and existing Oshawa air services:**

Oshawa Executive Airport has absorbed many of the air services from Buttonville Municipal Airport since it announced its closure in 2009. Oshawa now offers executive air travel, flight training, air ambulance services, passenger charter services, freight services, aerial police operations, aircraft maintenance and aircraft restoration services at the airport, as well as other aviation-related services such as fuelling, maintenance and logistical support. Its air services and related industries could form the initial uses at the new airport.

### **New charter/vacation services based on latent regional demand:**

The development of a new, full-service airport at Pickering could present an opportunity for travel companies in the east GTA and across the region to provide charter vacation services.

### **Travellers displaced by road congestion to Pearson:**

The congestion bottlenecks along the highway system leading to Pearson are significant and expected to worsen, and a new GTA East Airport would likely provide a welcome alternative for travellers originating from east of Yonge Street. This may provide the needed demand to introduce scheduled regional or point-to-point service at a new airport on the Pickering Lands. As Billy Bishop reaches its capacity, a new GTA East Airport could also provide an alternative location to expand similar services for the region.

### **Air services displaced from Pearson as it evolves to mega-hub status:**

As Pearson focuses on expanding its scheduled international travel services as a mega-hub airport, smaller-scale and more local services, such as intra-regional flights, some cargo services, and general aviation may be displaced, along with related services and industries such as maintenance repair and overhaul tenants. A new GTA East Airport at Pickering could absorb these functions.

The new GTA East Airport may eventually attract longer-haul scheduled service carriers, but that segment of the air industry is very hard to predict. An initial 3,000 metre primary runway would provide very versatile and future-proofed infrastructure for the new airport, allowing it to meet nearly any emerging demands.



# 8

## NEXT STEPS FOR THE GTA EAST AIRPORT

**There is an urgent need for new airport capacity in the GTA, and particularly in the east GTA where no existing airports can realistically serve the market area. The Pickering Lands are best positioned to meet that demand and deliver economic and sustainability benefits for surrounding region. To move that vision forward, there are three critical next steps:**

**First**, the federal government should make a formal commitment to proceed with a new GTA East Airport at Pickering.

**Second**, an initial development concept plan and a sustainable management plan should be developed and refined through a comprehensive stakeholder engagement process. These plans should provide the framework for the GTA East airport to set a new standard for modern, sustainable and community-oriented design. That ambitious vision would have a number of components, including airside and landside operational strategies and active support of air fuel innovations but would also encompass an ecological management plan for the entire airport site.

That plan would include a comprehensive strategy for supporting the adjacent Rouge National Urban Park and the range of initiatives for the utilization of those sections of the site not immediately required for aviation use as areas for food production and processing. Stakeholder feedback would be incorporated into a revised concept plan, airport vision and green strategy.

**Third**, the federal government should issue a request for expressions of interest (REI) to the airport construction, operation and management industry to determine the level of interest in the Pickering Lands. This will help to define the scope of the development and establish whether a public-private partnership development model is feasible.

