

April 2018

LAKE SIMCOE REGIONAL AIRPORT STRATEGIC PLAN



STRATEGIC PLAN

LAKE SIMCOE REGIONAL AIRPORT

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EXECUTIVE SUMMARY

This Strategic Plan proposes a vision for the development of Lake Simcoe Regional Airport (LSRA) and a path into the future, based on a range of business opportunities and industry trends that will benefit the communities surrounding the Airport in significant ways. The proposed vision is grounded in the recognition that airports, in a modern global economy, provide the critical connectivity to markets and knowledge-based resources, which in turn, represents a key driver of economic development and prosperity in an airport's catchment area.

Capitalizing on this vision aligns with the vision of the LSRA Shareholders – the City of Barrie, County of Simcoe and Township of Oro-Medonte. All three shareholders, have identified LSRA as a significant asset and a regional priority that can be better leveraged. This common vision will help grow both the local and regional economy, encourage investment, create new opportunities for local businesses and improve the quality of life for residents. An enhanced airport will assist the regional economy in creating high-value employment, expand access to markets and improve connectivity with potential buyers and suppliers.

Positioning Lake Simcoe Regional Airport as a key driver of economic development and prosperity is an essential element of the vision laid out in the following pages of this Strategic Plan.

The development opportunity for Lake Simcoe Regional Airport received a significant boost in early 2017 with the inclusion of the Airport as one of 11 of southern Ontario's most commercially significant airports, forming the Southern Ontario Airport Network (SOAN). SOAN was officially launched at Lake Simcoe Regional Airport in May 2017. LSRA is the only airport in the SOAN network located north of Toronto, which presents tremendous opportunities for the region.

The rationale for re-examining the role for Lake Simcoe Regional Airport at this point in time is because it has been presented with a number of opportunities, and threats, including some that were not present, even two or three years ago. These include:

- The Greater Toronto Airports Authority (GTAA) has stated that Toronto-Pearson International Airport (Toronto-Pearson) cannot accommodate forecasted travel demand for the region, even with proposed infrastructure improvements. Excess demand must be accommodated among the surrounding regional airports;
- The catchment population within Simcoe County and City of Barrie has achieved a threshold where it can support scheduled air service;
- Corporate aviation, which is currently centred at Toronto-Pearson, is gradually being pushed out to regional airports as the GTAA focuses on its vision of becoming an international mega-hub airport; and
- Other municipalities located on the fringe of the Greater Toronto Area (GTA) are making significant investments in their local airports as a means of positioning themselves for future economic growth and competitiveness.

Given these opportunities and threats, and recognizing the timeframe required to finance, plan and implement infrastructure improvements, the 'Stakeholders' of LSRA must make an important decision regarding the vision and future role(s) of Lake Simcoe Regional Airport.

The Vision Statement for Lake Simcoe Regional Airport is as follows:

To become a premier regional commercial airport that stimulates the socio-economic development of Simcoe County and City of Barrie by improving connectivity, enhancing the competitiveness of the region and improving the quality of life for its residents.

The Mission Statement for Lake Simcoe Regional Airport is as follows:

To drive the region's economic prosperity, enhance business opportunities, increase the region's competitive position and support the travel needs of the community through increased connectivity.

The recommended role for Lake Simcoe Regional Airport is to become a true 'regional' commercial airport with the infrastructure and capacity to become a centre for corporate aviation, as well as to support scheduled commercial air services serving regional domestic and international leisure markets. Although this role requires substantial

capital investment to improve and expand the Airport's existing infrastructure, it is a role that best provides opportunities to support the economic development of Simcoe County and the City of Barrie today, and in the years to come, by enhancing connectivity and accessibility.

This role cannot be achieved overnight. Therefore, capital investment in the Airport must be undertaken in a phased and fiscally responsible manner that responds to the tangible needs of the community and the aviation industry. Delaying projects like runway widening and extension of the single LSRA runway at a later stage could seriously disrupt airport operations at a time when prolonged periods of runway shutdowns would affect the growing level of activity.

Proposed development phases include:

Phase I – Position Airport to Enhance Corporate Aviation Activity (1 to 3 Years)

- Undertake Airport Certification and Registered Airport Zoning Protection.
- Extend Runway 10-28 from the current 6,001 ft. (1,829 m) to 7,000 ft. (2,134 m) and widen the runway from the current 100 ft. (30 m) to 150 ft. (45 m).
- Enhance electronic and visual aids including the installation of an approach lighting system.
- Undertake a Master Servicing Plan.
- Enhance airport support services and related infrastructure.
- Undertake a Business Development Strategy.

Phase II – Enhance Opportunities for Air Service (Demand Based)

- Prepare Economic Impact Study;
- Enhance Charter Service Activities;
 - Based on market research and travel demand, encourage the implementation of corporate and/or tourism charter service activities.
- Air Service Development Strategy;
 - Develop a business case and the resources required to enhance small-scale scheduled service (e.g. operational support or infrastructure).
 - Investigate Air Service Incentives.
- Prepare Air Terminal Building Project Definition Document (PDD).

Phase III – Support Scheduled Air Service (Demand Based)

- From the business case/development strategy, execute infrastructure improvements;
 - Enhance groundside infrastructure.
 - Provide expanded/new air terminal building.
 - Expand services and utilities for a new terminal.
 - Accommodate support services including CATSA security screening, CBSA international arrival functions, and improved NAV CANADA services.

Through a phased approach, based on sound business decisions and market demands, Lake Simcoe Regional Airport can fulfill its vision of becoming a premier regional commercial airport that serves as a catalyst for socio-economic development by improving connectivity, enhancing the competitiveness of the region, and improving the quality of life for its residents.

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1 INTRODUCTION

1.1 AIRPORTS = CONNECTIVITY = DRIVER OF REGIONAL ECONOMIC DEVELOPMENT & PROSPERITY

This Strategic Plan proposes a vision for the development of Lake Simcoe Regional Airport (LSRA) and a path into the future, based on a range of business opportunities and industry trends that will benefit the communities surrounding the Airport in significant ways. The proposed vision is grounded in the recognition that airports, in a modern global economy, provide the critical connectivity to markets and knowledge-based resources that in turn represents a key driver of economic development and prosperity in an airport's catchment area.

Capitalizing on this vision aligns with the vision of LSRA Shareholders – the City of Barrie, County of Simcoe and Township of Oro-Medonte. All three shareholders, have identified LSRA as a significant asset and a regional priority that can be better leveraged. This common vision will help grow both the local and regional economy, encourage investment, create new opportunities for local businesses and improve the quality of life for residents. An enhanced airport will assist the area economy in creating high-value employment, expand access to markets and improve connectivity with potential buyers and suppliers.

Positioning Lake Simcoe Regional Airport as a key driver of economic development and prosperity is an essential element of the vision laid out in the following pages of this Strategic Plan.

LSRA's development opportunity received a significant boost in early 2017 with the inclusion of the Airport as one of 11 of southern Ontario's most commercially significant airports, forming the Southern Ontario Airport Network (SOAN). SOAN was officially launched at Lake Simcoe Regional Airport in May 2017. Lake Simcoe Regional Airport is the only airport in the SOAN network located north of Toronto, which will present tremendous opportunities for the region.

Lake Simcoe Regional Airport is at the threshold of transitioning from a small community airport to a larger regional network hub, providing many economic and community benefits for the catchment area.

This Strategic Plan and its underlying vision are intended to provide a phased-in, demand-based approach to the expansion of the Lake Simcoe Regional Airport, which will be implemented by subsequent detailed business development plans.

1.2 AIRPORT AT A CROSSROADS

Lake Simcoe Regional Airport (LSRA) has come to an important crossroad. With projected capacity constraints at Toronto-Pearson Airport, the Airport has an opportunity to capture an increase in corporate aviation activity. As well, the Airport's catchment area has the travel demand to support small-scale scheduled air service and vacation destination charters. LSRA has the potential to transition from being strictly viewed as a cost-centred asset to becoming a key catalyst supporting socio-economic growth and development in Simcoe County and the City of Barrie by providing increased connectivity, access, and competitive positioning.

There is a clear and demonstrated relationship between the presence of scheduled air service and regional economic growth. Those communities that have air service, or where air service is expanding, generally experience better economic growth over those communities that do not.

Going forward, it is important that the Airport's key 'Stakeholders' - the County of Simcoe, City of Barrie, and Township of Oro-Medonte - embrace a vision for Lake Simcoe Regional Airport that enhances the Airport's role as a driver of regional economic growth and regional competitiveness; and that they undertake the steps necessary to achieve that vision.

The rationale for re-examining the role for Lake Simcoe Regional Airport at this point in time is because it has been presented with a number of opportunities, and threats, including some that were not present, even two or three years ago. These include:

- The Greater Toronto Airports Authority (GTAA) has stated that Toronto-Pearson International Airport (Toronto-Pearson) cannot accommodate forecasted travel demand for the region, even with proposed infrastructure improvements. As a result, the GTAA, together with ten (10) of the most commercially significant airports in Southern Ontario, have created the Southern Ontario Airport Network (SOAN). The intent of SOAN is to collectively examine opportunities to accommodate future travel demand, including offsetting some of the potential travel demand at Toronto-Pearson, to surrounding regional airports, including Lake Simcoe Regional Airport;
- The catchment population within Simcoe County and the City of Barrie has achieved a threshold where it can support scheduled air service. In addition, areas north of the Greater Toronto Area (GTA), including Simcoe County, account for 15% of originating passengers (2 million) that travel through Toronto-Pearson every year. LSRA is the only regional airport located north of the GTA;
- Corporate aviation, which is currently centred at Toronto-Pearson, is gradually being pushed out to regional airports as the GTAA focuses on its vision of being an international mega-hub airport. The airport has a limited capacity for landings and takeoffs and, as travel demand increases, the likelihood is that corporate aviation's access to this capacity will decrease. Similarly, Toronto-Pearson has no capacity to accommodate the growth of general aviation-related commercial development. It is anticipated that by 2037 the number of corporate and general aviation annual movements will be reduced from 24,000 to 12,000¹; and,
- Other municipalities located on the fringe of the GTA are making significant investments in their local airports as a means of positioning themselves for future economic growth and competitiveness. These communities include the Region of Waterloo, Hamilton, and the City of Peterborough.

Given these opportunities and threats, and recognizing the timeframe required to finance, plan and implement infrastructure improvements, the 'Stakeholders' of LSRA must make an important decision regarding the vision and future role(s) of Lake Simcoe Regional Airport.

1.3 THE STATUS QUO WON'T DO

If Lake Simcoe Regional Airport remains 'as is', it is very unlikely the Airport will be capable of serving the air travel demand that already exists in the region or capitalize on any potential opportunities to accommodate the spill off of scheduled commercial flights and corporate aviation from Toronto-Pearson.

The runway's current length and width restricts the use of the Airport by larger corporate aircraft. Similarly, despite indications of potential travel demand and expressed interest from airlines, the current runway length and lack of appropriate air terminal facilities prohibit any substantial level of scheduled passenger activity, including domestic airlines, ultra-low cost carriers and international leisure airlines.

Remaining as 'status quo' will result in this activity relocating to those airports surrounding the GTA that have the infrastructure in place to accommodate this spill-off demand. This includes Waterloo Airport and Hamilton Airport. The catalytic economic effect of this could be that businesses and industries, looking for locations in which to establish themselves, could select these communities over Simcoe County and the City of Barrie because of better air access and connectivity to markets. Without the ability to accommodate corporate aviation and commercial air service, the region may lose some of its competitiveness with those communities surrounding the GTA that have airports that can accommodate these activities.

Furthermore, without future investment in the development of Lake Simcoe Regional Airport, there is the potential that existing tenants and operators may choose to relocate to those surrounding regional airports that have made investments, which in turn enhance the operations of those based at the airport.

¹ November 30 2017 SOAN workshop

Numerous studies have concluded that presence of air service does have a positive effect on regional economic growth and that increases in air service activity translate into increased GDP and employment. Without infrastructure improvements necessary to accommodate corporate activity and scheduled air service, the region would not be able to avail itself to these opportunities.

Although, LSRA can accommodate increased corporate aircraft activity, without additional hangar facilities and support services, it is difficult to gain any momentum in this area. LSRA suffers because of its narrow runway and lack of an approach lighting system, which can deter larger, faster, corporate aircraft from operating from the Airport. These larger aircraft make up a significant portion of the corporate fleet, and without their participation opportunities to develop LSRA as a corporate aviation centre may be compromised.

Without scheduled air service and/or a strong base of corporate aircraft, it is difficult to build up any momentum with respect to the establishment of aircraft maintenance and servicing facilities, which in turn generate high-value employment at the Airport.

Therefore, it is important that the ‘Stakeholders’ of Lake Simcoe Regional Airport embrace a vision for the Airport that enhances connectivity, optimizes the competitiveness of the region, and maximizes the Airport’s potential as a catalyst for regional economic growth and social opportunity.

1.4 PURPOSE OF A STRATEGIC PLAN

“Strategic planning is defined as the process undertaken by an organization to define its future and formulate a road map to guide the organization from its current state to its vision of the future”²

The intent of this Strategic Plan is to define a Vision and Mission Statement for Lake Simcoe Regional Airport that envisages for its key ‘Stakeholders’ a desired future for the Airport and to describe the actions necessary to achieve that future. The Strategic Plan takes into account potential challenges and opportunities facing the Airport in achieving its vision and describes some of the trends which may shape its future. The elements of the Strategic Plan include the following:

- **Context** – the circumstances that form the setting for the Strategic Plan. This includes historical activity, regional economics and travel demand, and industry trends;
- **Strategic Objectives** – the vision and mission statements and key objectives;
- **Opportunities and Constraints** – the opportunities and challenges facing the Airport in achieving the strategic objectives;
- **Strategic Initiatives** – key opportunities that constitute the future role(s) of the Airport; and
- **Implementing the Plan** – a description of phased operational and capital improvements required to realize the strategic objectives.

The Strategic Plan forces a look into the future and provides a proactive posture in achieving the vision. The key benefits of the Strategic Plan include the following:

- Provides the Airport and Stakeholders with a blueprint and long-term focus;
- Helps to communicate the mission and objectives;
- Facilitates decision making; and
- Helps to nurture community and political support.

The Airport Strategic Plan is not a business plan. Once a vision for the Airport has been endorsed by the ‘Stakeholders’ through the Strategic Plan, the next step will be to prepare a business plan that draws its direction from the Strategic Plan.

² ACRP Report 20, Strategic Planning in the Airport Industry, Transportation Research Board, 2009

2 LSRA PROFILE

2.1 BACKGROUND

Lake Simcoe Regional Airport is centrally located in Simcoe County, approximately 10 km northeast of the City of Barrie and 15 km southwest of the City of Orillia. The Airport is situated on 240 ha of land and is located 0.7 km north of Highway 11, a major transportation route that links Southern Ontario and the Greater Toronto Area with Northern Ontario, the Muskoka tourism/recreation district, and the rest of Canada to the west. Driving time from the City of Toronto to the Airport is approximately one hour.

The City of Barrie is served by GO Train and GO Bus service, which provides direct access to downtown Toronto. Lake Simcoe Regional Airport is located approximately 15 minutes from the Barrie GO Train station. The Ontario government recently announced proposed enhancements to the GO Train service that includes twinning of the track and more frequent service. Similarly, The County of Simcoe is rolling out an expanded regional transit plan that by 2020 will connect the various communities within Simcoe County to Barrie GO services and potentially to Lake Simcoe Regional Airport.

Figure 1 describes the location of the Airport in context to Southern Ontario and the City of Toronto.

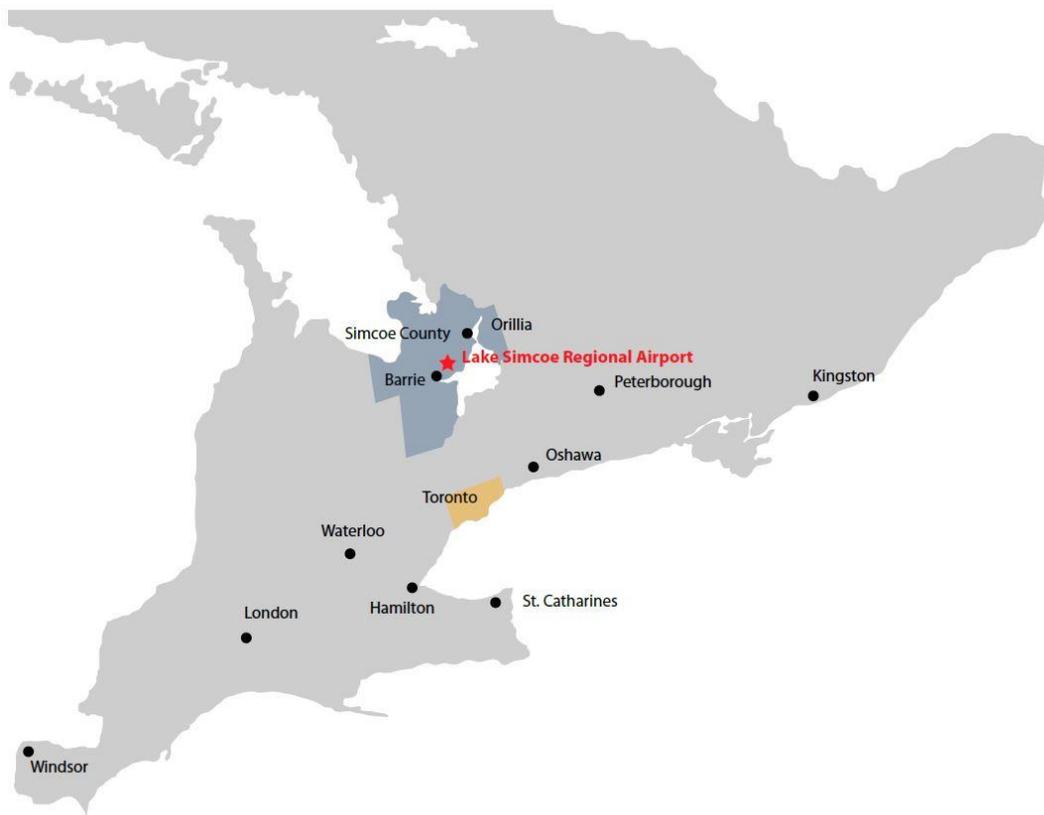


Figure 1 Airport Location in Context to Southern Ontario

The Airport initially opened in 1991 with a 3,500 ft. runway and a small apron located to the north of the runway. In 1993 the runway was extended to 5,000 ft. and a larger apron and terminal building were constructed on the south side. A subsequent phase of development was completed in 2011 and included a further extension of the runway to 6,001 ft., the construction of a partial parallel taxiway, and the development of the Southwest Commercial Development Area.

Today, Lake Simcoe Regional Airport is one of the busiest uncontrolled³ airports in Canada for corporate jet and turboprop aircraft.

The Airport is jointly owned by the City of Barrie (60%), County of Simcoe (20%), and the Township of Oro-Medonte (20%), and managed by a Municipal Service Corporation (Lake Simcoe Regional Airport Inc.) with representation from each of the constituent stakeholders. The Board of Directors is comprised of nine members, five of which are City of Barrie appointees, two of which are County of Simcoe appointees, and two of which are appointed by the Township of Oro-Medonte.

Figure 2 illustrates the location of Lake Simcoe Regional Airport within Simcoe County.



Figure 2 Airport Location in Context to Simcoe County

The Airport's airside infrastructure is comprised of a single 6001 x 100 ft. (1829 m x 30 m) paved, lighted, instrument non-precision approach runway, a partial parallel Code C taxiway, and a large terminal apron. Runway 10-28 is capable of accommodating a wide range of aircraft, including corporate jets (CRJ-200/CRJ-705) and turboprops (Dash 8-300, Dash 8-Q400), plus narrow-body jet aircraft such as the B737 (with operational restrictions). The Airport is served by GPS-based RNAV (GNSS) approaches to both runway ends. The current approach minima are 305 ft. minimum decision height, 1 mile visibility for Runway 28 (LPV approach) and 368 ft., ¼ miles for Runway

³ Airport without a NAV CANADA control tower.



Figure 4 Airport Layout

2.2 CURRENT ROLE

Since its opening in 1991, LSRA has served as a general aviation airport providing services to a wide spectrum of users. Although the Airport, at present, does not have regularly scheduled passenger service, the facility is becoming increasingly utilized by general aviation, including corporate aviation, air charter services, on-demand air taxi services, rotary wing operators, and government agencies. An indicator of LSRA's increasing importance as a corporate aviation airport is the recent construction of a 34,000 sq. ft. hangar for G&G Jet Centre. The hangar is designed to accommodate a number of private corporate aircraft and includes amenities such as a passenger lounge, pilot's rest area and office space. In addition to the G&G Jet Centre hangar, there is approximately 60,000 sq. ft. of additional hangar space accommodated in 4 buildings.

LSRA is home to a number of commercial operators and government agencies based at the Airport. They include:

- Ontario Provincial Police (OPP) Air Services Branch
- Hydro One
- Air Bravo
- Future Air Flight School
- Georgian International
- LaTour Aviation
- Vins Plastics / Flightpath International

The Airport is also used regularly by the Department of National Defence (DND) to support activities at nearby CFB Borden, and by air ambulance operators, including ORNGE.

LSRA's central location is used by a number of organizations as an embarkation point for dedicated charter flights to work sites and remote locations. These organizations include:

- CN
- Hydro One
- BELL
- Ontario Provincial Police
- Department of National Defence

Lake Simcoe Regional Airport is a member of the Southern Ontario Airport Network (SOAN). Comprised of Toronto-Pearson International Airport and the ten (10) most commercially significant airports in Southern Ontario, SOAN was created to address potential constraints where the growth in air travel demand is forecast to outpace the capacity of these airports. The intent of SOAN is to “identify synergistic business opportunities that enhance air transportation service and capacity for the region” and “support the needs of Southern Ontario communities and help develop economic opportunities”.

The short, medium, and long term goals of the SOAN include:

- “Completing a catchment and demand study of the region to identify opportunities for future point-to-point growth in leisure, business aviation, and short-haul markets at regional airports”;
- “Understanding the ground transportation needs in Southern Ontario and advocating for investment in ground transportation improvements that will reduce congestion and greenhouse gas emissions”; and
- “Developing best-in-class strategies for responsible and sustainable airport growth including community engagement and noise management”.

“With plans to become a mega hub airport, Toronto Pearson will play a specific role as a member of SOAN, attracting and accommodating a greater number of international routes and passengers. By 2035, Toronto Pearson aims to serve 80 million passengers annually, facilitate 700,000 jobs in the airport employment zone, connect Canada to 80 per cent of the world’s economy and account for 8.5 per cent of Ontario’s GDP. The Southern Ontario airports will benefit from the increased economic opportunity and air travel demand facilitated by the mega hub. Each airport will play a role in increasing their capacity using local demand drivers as well as open and transparent conversations with their communities.” - GTAA

2.3 HISTORICAL ACTIVITY

Historically, LSRA has experienced significant swings in activity. While itinerant aircraft movements⁵ have generally increased over the years, there have been significant fluctuations in the amount of local aircraft movements⁶, largely due to changes in flight training activity. Beginning with about 6,000 aircraft movements in 1993, flight activity peaked at approximately 35,000 movements in 2001, largely due to flight training, with itinerant movements accounting for approximately 20%. In 2016 the total aircraft movements was 16, 315, of which approximately 38% were itinerant.

Figure 5 describes the historical aircraft movement statistics for the Airport.

⁵ Itinerant aircraft movements are where aircraft fly to or from other airports or outside of the airport’s general vicinity.

⁶ Local aircraft movements are where aircraft remain in the vicinity of the airport. The majority of local movements are related to flight training where the aircraft remains in the circuit.

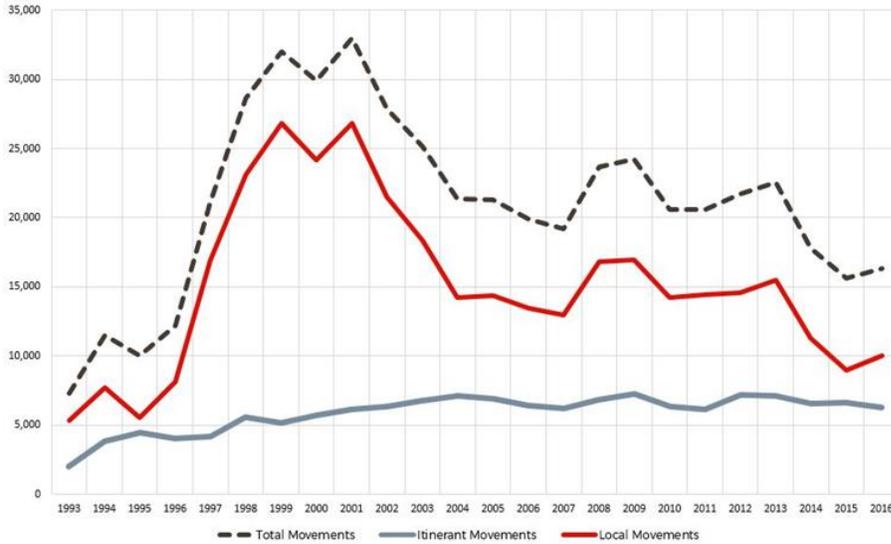


Figure 5 Aircraft Movement Statistics

In comparison to airports such as Peterborough Airport and Waterloo Airport, the percentage of itinerant movements versus local movements is much higher at Lake Simcoe Regional Airport, suggesting that a larger percentage of aircraft movements at LSRA are related to aircraft visiting to/from other airports as opposed to local movements, which is indicative of flight training. Both Peterborough and Waterloo airports have a significantly greater levels of flight training activity. As stated previously, LSRA is one of the busiest non-controlled airports in Canada with respect to itinerant movements.

Aircraft movements can be broken down by aircraft type. **Figure 6** describes the breakdown of 2016 aircraft movements by type of aircraft. Jet aircraft are largely corporate aircraft that range in size from the medium-range Learjet 45 to long-range, intercontinental aircraft such as the Gulfstream 5 and Bombardier Challenger 650. Turboprop activity is a mix of corporate activity as well as the OPP, which have a portion of their flight operations based at the Airport. Helicopter movements include a mix of corporate activity, charters, and Hydro One, which is based at the Airport. Piston activity is a mix of private aircraft, flight training, corporate activity, as well as the OPP's Traffic Program.

Jet and turboprop aircraft constitute 29% of itinerant movements at LSRA, whereas at Waterloo Airport, they only constitute 14% of their total itinerant movements.

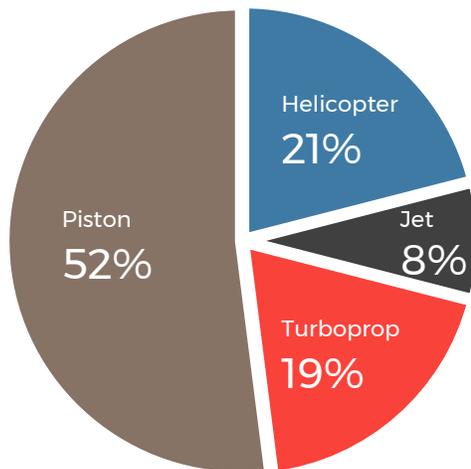


Figure 6 Itinerant Aircraft Movements by Type of Aircraft

3 REGIONAL ECONOMIC PROFILE

3.1 SOUTHERN ONTARIO

Southern Ontario leads the country with respect to economic productivity, accounting for 37% of the Canadian GDP, 39% of goods exported and 48% of services exported. It is home to approximately 13 million people, which represents 35% of the Canadian population. By 2043 it is anticipated that the population will increase to 15.5 million and the region's GDP will reach \$1.1 trillion. Real GDP is forecasted to increase by 2.7% in 2017 and 2.0% in 2018, while unemployment is expected to decrease to 6.1% and 5.8% respectively⁷.

The centre of this economic region is the Greater Toronto Area (GTA). With a population of approximately 6.6 million, the GTA is defined by the City of Toronto and the surrounding regions of Durham, Halton, Peel and York. Businesses and services located in the GTA account for nearly 50% of Ontario's GDP and 20% of Canada's GDP. The GTA is one of the fastest growing metropolitan areas of North America, with international migration being a main driver of this growth. By 2040, the population of the GTA is expected to grow by another 2.7 million, reaching almost 9.4 million. A large percentage of this growth will be to the north of the City of Toronto, where land is available for urban development because populations are being deflected away from Toronto due to the high cost of home ownership. Improved service on the 'GO Train' commuter line to Barrie as well as the expansion of Highways 400 and 404 will also stimulate growth to the north of the GTA.

Key indicators suggest economic performance in the Toronto area will continue to be relatively robust following an economic resurgence in 2015.⁸ Much of this growth will be in service and knowledge-based industries. Growth in the service and knowledge-based economy will further increase demand for the movement of people to and from the GTA.

Southern Ontario accounts for the largest air travel demand in Canada. In 2014 this demand was approximately 42 million passengers.

By 2042 air travel demand is predicted to increase to a staggering 110 million passengers a year, far outreaching the existing capacity of airports in Southern Ontario to accommodate such demand.

- GTAA

3.2 SIMCOE COUNTY AND CITY OF BARRIE

Simcoe County

Simcoe County (including Barrie and Orillia), with a population of approximately 479,650, is the second largest county in Ontario based on population and is one of the fastest growing in the province, with a growth rate that is almost double that of the provincial average. It is anticipated that by 2031, the population of the County will grow by 40% to approximately 670,000⁹. Coinciding with the population growth, building permit values have more than doubled since 2012, with 2016 values at \$1.4 billion. Similarly, job growth in the County has been strong, growing by 6.8% since 2012¹⁰. The top five industries in the County with regards to job numbers are retail trade, health care and social assistance, manufacturing, accommodations and food services, and construction, accounting for 51% of total jobs¹¹. According to the 2016 Census, Simcoe County has over 250,000 people in the labour force and a 6.9% unemployment rate, compared to a provincial rate of 7.4%⁵. The County has a median household income of \$78,705, which compares to \$75,270 for Toronto.

⁷ June 2017 Ontario Provincial Outlook, RBC Economics

⁸ 2016 Ontario Economic Update: Toronto Economic Region, Ontario Chamber of Commerce

⁹ Growth Plan for the Greater Golden Horseshoe (2017) Ontario Ministry of Municipal Affairs, May 2017

¹⁰ EMSI Analyst, Dataset 2017.1

¹¹ 2016 Canadian Census

The County is home to a diverse cross section of businesses that range in size and represent a variety of sectors. Businesses range from major manufacturing facilities such as Honda Canada, which manufactures almost 400,000 vehicles per year, to smaller leading-edge high technology firms. The County is also home to Canadian Forces Base Borden, Canada’s largest military training facility, Casino Rama Resort, and the General and Regional Headquarters of the Ontario Provincial Police. Major public sector employers include the following:

— Simcoe County District School Board	6,600 employees
— CFB Borden	5,000
— Simcoe Muskoka District Catholic School Board	3,400
— Georgian College	2,500
— Royal Victoria Regional Health Centre	2,465
— County of Simcoe	1,750
— Ontario Provincial Police	1,550

Major private sector employers include:

— Honda Canada	4,300 employees
— Casino Rama	2,712
— F&P Manufacturing	864
— Simcoe Parts Service Inc.	810
— Napoleon/Wolf steel Ltd.	800
— Georgian International Limited	675
— Horseshoe Resort	630

City of Barrie

The largest urban centre within Simcoe County is the City of Barrie, with a population of 141,434. Similar to Simcoe County, the top five industries in the City of Barrie with regards to job numbers are retail trade, health care and social assistance, manufacturing, construction, and accommodation and food services, accounting for 50% of total jobs. The three fastest growing industries from 2015-2017 include finance and insurance at 18%, utilities at 12%, and both ‘information and cultural industries and arts’ and ‘entertainment and recreation’ at 11%. Similarly, overall job growth in Barrie has been strong, growing by 6.8% since 2012.¹²

In 2016, the Canadian Federation of Independent Businesses rated Barrie as one of “Canada’s top places to start and grow a business”, ranking third behind Kelowna and Toronto. The ranking was based on a number of factors including entrepreneurial spirit, business performance, and government regulations and policy. Similarly, KPMG’s 2016 Competitive Alternatives, which compares business costs for more than 100 cities in 10 countries, ranked Barrie 2nd among 23 cities in the Northeast US and Canada.

Household spending on leisure-related airline tickets in Barrie is approximately \$225 per capita. This is lower than any of the communities in Southern Ontario that have scheduled air service at their local airport, and is likely due to the fact that air service is not readily available from the local airport. However, estimated business spending of air transport per unit of output in Barrie is the highest of any community in Southern Ontario. It is suggested that spending on leisure-related airline tickets could increase if scheduled air service were made more accessible to the population from a local airport.

¹² City of Barrie

4 AVIATION INDUSTRY OVERVIEW AND TRENDS

4.1 NATIONAL AVIATION OVERVIEW

4.1.1 COMMERCIAL AVIATION OVERVIEW

In recent years, Canada has experienced robust growth in air travel, in part due to a growing economy, reduced air travel costs and a greater propensity for leisure travel. From 2009 to 2016 the total number of enplaned and deplaned passengers rose from 104.8 million to 140.2 million, an increase of 34%. It was the seventh consecutive annual increase following the economic downturn of 2009.¹³

More recently in Q2 2017, Canadian passenger activity grew by 7.8%, with domestic activity increasing by 11.6% compared to Q2 2016. For the same period, domestic airfares decreased an average of 6%. Domestic passenger activity in 2016, which accounts for nearly 60% of total passenger activity, rose by 4.8% (3.8 million passengers) from the previous year.

The rise in passenger activity reflects healthy growth in the economy. Between Q2 2016 and Q2 2017 the Canadian GDP annual growth increased by 3.7%, while the unemployment rate decreased to 6.3%, the lowest since 2008.¹⁴

Evolving airline business strategies and product offerings, such as the introduction of Low Cost Carriers (LCC) and Ultra Low Cost Carriers (ULCC) are also boosting air travel demand by attracting consumers who might otherwise use other forms of transportation or not travel at all. These strategies include point-to-point flights (often between secondary airports), single class, higher density aircraft seating configurations, lower yield but higher volume business models, and the provision of just basic services to reduce costs.

Looking to the future, it is anticipated that over the long term, domestic air travel will continue to grow at approximately 2.4%¹⁵. Some trends that will affect commercial aviation in the future include the expansion of LCC and ULCC airlines in the market place, which will result in pressure to reduce fares and force legacy airlines to diversify their product offerings, as well as growth in intra-regional routes that will expand point-to-point city pair air service that will demand smaller, right-sized aircraft.

4.1.2 CORPORATE AVIATION OVERVIEW

Corporate Aviation plays an important role in facilitating connectivity by providing expedient transportation services to specialist employees and business executives, which further enhances business initiatives, productivity, customer service, and supply chain performance. In some cases, corporate aviation provides the only viable transportation option for those businesses that need to access smaller or remote communities directly. There are an estimated 1,900 corporate aircraft registered in Canada, with the largest component (504 aircraft) based in Ontario¹⁶.

It is estimated that the operation of one corporate aircraft:

¹³ Airport Activity: Air carrier Traffic at Canadian Airports, Statistics Canada, 2016

¹⁴ Statistics Canada

¹⁵ Global Market Forecast 2017/2036, Airbus

¹⁶ Economic Impact of Business Aviation Operations and Business Aircraft manufacturing in Canada, 2017, InterVISTAS for Canadian Business Aviation Association

“Generates 6.1 person years in employment, earning approximately \$460,000 in wages. This contributes \$690,000 in direct GDP and \$1.7 million in direct economic output to the Canadian economy. Including multiplier impacts, the operation of a single corporate aviation aircraft supports labour hours for a total of 12.8 person years, earning \$820,000 in wages annually. Furthermore, the total GDP contribution of one corporate aviation aircraft is estimated at \$1.4 million in GDP, while the total economic contribution is measured at \$2.9 million.”¹⁷

An example of corporate aircraft use is Vins Plastics based in Bradford, Ontario. The company utilizes a corporate jet, based at Lake Simcoe Regional Airport, to transport sales and engineering staff to client meetings all over North America. Without the corporate jet, and direct access to the regional airport, the company could not provide the speed and responsiveness necessary to succeed in a competitive global market.

4.1.3 “PRIVATE” AIRLINES

A recent phenomenon in air transport, which is emerging in the United States and Europe, is the introduction of ‘private’ or ‘boutique’ airlines. These are airlines that operate between fixed based operators (FBO) and/or private terminals, rather than traditional air terminal buildings. They typically operate with aircraft having 9 seats or less, the most common aircraft being the Pilatus PC12. Flights are typically point-to-point with durations of an hour or less. The focus market for these airlines are business travelers who make frequent trips. Flights typically operate from secondary airports where there is less congestion and lower airport fees.



The advantages of this type of service are that it eliminates the need for security screening, therefore reducing the time required to arrive at the airport prior to departure and it provides travellers with a more executive-style service. Often the airlines that provide such service also offer customers personalized, concierge type of services that include car rental and hotel bookings.



Some airlines, such as Boutique Air sell individual tickets, while other airlines, such as Surf Air, offer a subscription-based, all-you-can-fly membership.

In Canada, Pascan Airlines recently initiated twice-daily service with a Pilatus PC12 between Billy Bishop Toronto City Airport and St. Hubert Airport on the south shore of Montreal. At both airports, the flights originate from private terminal facilities, negating the need for passenger screening. Another airline, Greater Toronto Airways (FlyGTA), operates a similar air service between Billy Bishop Toronto City Airport (BBTCA) and Niagara District Airport operating an 8-seat Piper Navajo aircraft. The airline has been successful, in part because approximately 60% of their passengers connect at BBTCA onto Porter Airlines and Air Canada Express for onward travel. FlyGTA recently initiated a daily return flight between Lake Simcoe Regional Airport and Billy bishop Toronto City based on an ‘on-demand’ level of service.

¹⁷ Economic Impact of Business Aviation Operations and Business Aircraft manufacturing in Canada, 2017, InterVISTAS for Canadian Business Aviation Association

4.1.4 LEISURE AIRLINES OPERATING FROM REGIONAL AIRPORTS



An increasing trend from leisure airlines such as Sunwing, Air Transat, and to a lesser extent airlines such as WestJet and Air Canada Rouge is to operate to international leisure destinations directly from regional and secondary airports, rather than larger airports, such as Toronto-Pearson. The reasons for this are twofold. Firstly, the airport-related cost of operating from regional airports is less expensive than the larger airports, so the ticket yield is higher for the airline, and secondly, operating

"Providing our customers with the option to save time and money by departing from their local airport has long been a priority for us"

- Sunwing Airlines

from a regional airport provides airlines with a greater opportunity to capture a larger component of the leisure travel market within that local catchment area.

As an example, in the winter, both Sunwing and Air Transat operate weekly flights from Fredericton and Moncton, NB, and Sunwing operates weekly flights from St. John NB. All of these communities have substantially smaller catchment areas than the City of Barrie and all are within a short drive of other airports served by the airlines.

4.1.5 ULCC

Ultra-low cost carriers (ULCC) are by definition airlines that generally offer lower fares than traditional air carriers, as well as fewer amenities and services. In Europe and the United States there are a number of established ultra-low cost carriers. They include Ryanair and Easy Jet in Europe and Southwest Airlines, Spirit Airlines, and Allegiant in the United States.



A strong focus of ULCC's is on price sensitive traffic, which is typically the leisure travel market. In some instances, these carriers have generated new air travel demand by making inroads into markets that traditionally use buses or trains as forms of transportation.

ULCC's typically operate single-class aircraft from regional/secondary airports where operational costs, including landing fees, terminal charges and ground handling expenses, are less than those encountered at the major airports, and where there

is less competition from mainline airlines and greater opportunity for marketing support by the airport and surrounding community. ULCC's generally fly point-to-point on short to medium haul domestic routes.

Recently, Canada has seen an emergence of the low cost carriers. New Leaf, which started as a reseller of airline capacity from Flair Airlines, began operations in July 2016 from Hamilton International Airport. At present, the company, which was recently acquired outright by Flair Airlines, offers flights to/from Abbotsford, Edmonton, Winnipeg, and Hamilton. Swoop, an ultra-low cost product of WestJet is anticipated to begin operations in 2018

"I can provide assurance that our ULCC marketing plan covets the ability to provide regular service to the area north of the GTA. If YLS [LSRA] develops the required infrastructure, it would be an attractive location from which to provide that service"

*- Darcy Morgan, Chief Commercial Officer
Enerjet*

Other potential start-ups, include Enerjet, and Canada Jetlines, both of which are in the process of developing their business structure, including deciding on which airports to operate from. Both of these prospective ULCC's have stated that they will avoid Toronto-Pearson and instead operate from secondary regional airports in Southern Ontario. Potential airports that have been identified by the carriers to date include Hamilton International Airport, the Region of Waterloo International Airport, and Lake Simcoe Regional Airport. Lake Simcoe Regional Airport has initiated discussions with these operators to determine potential interest in operating from the Airport, and assess what infrastructure improvements would be necessary to support their operations.

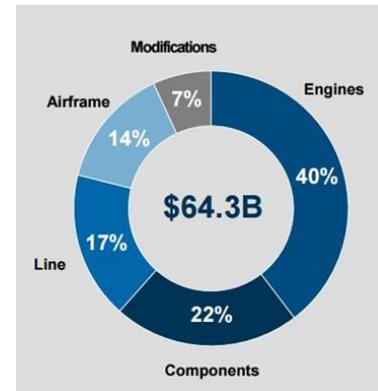
A significant boost to the emergence of the ultra-low cost airlines was an announcement by the federal government in November 2016 to relax foreign ownership restrictions on Canadian air carriers and raise the cap from 25% to 49%.

4.1.6 AIRCRAFT MAINTENANCE REPAIR AND OVERHAUL

At a global level, the aircraft Maintenance Repair and Overhaul (MRO) industry is expected to grow by approximately 4.1% per year over the next ten years. For large commercial aircraft, much of this growth is in Asia, where the growth of the aviation industry is most significant. In Asia the value of MRO work over the next 10 years is forecasted to be \$14.3 Billion US, whereas in North America it is \$3.2 Billion. **Figure 7** provides a breakdown of the current MRO demand by the nature of work.

In Canada the aircraft maintenance, repair and overhaul (MRO) industry accounts for approximately 30% of the total aerospace industry. In 2016 MRO activities generated approximately \$9.3 billion in direct, indirect and induced GDP, and over 77,000 jobs. Approximately 24% of this activity was located in Ontario.

“Ontario remains a leader in aerospace growth in North America. International customers represent 80% of revenue for most aerospace firms, in part because of free trade agreements with 15 countries, a highly skilled workforce, strong educational programs and a business friendly environment”¹⁸



Source: ICF International

Figure 7 MRO Demand by Segment

A recent review of on-line employment websites suggests the aircraft maintenance/MRO industry in Ontario remains robust with demand for in-excess of 100 aircraft maintenance technicians and engineers for various companies including airlines, aerospace industries, and MROs.

MRO activity can include industries such as Flying Colours, located at Peterborough Airport, Field Aviation, located at Toronto-Pearson, and New United Goderich, at Goderich Airport, that focus on aircraft modifications and heavy maintenance, to companies like Leggat Aviation at Buttonville Airport and Eagle Aircraft at Parry Sound Airport that specialize in the servicing of recreational and small general aviation aircraft.

Opportunities for MRO activity at LSRA could include the relocation of existing industries from airports such as Buttonville or Toronto-Pearson, where events, such as an airport closure or higher baseline operating costs, will force their relocation, or the start-up of new enterprises that are attracted to LSRA, either because of activity at the Airport or because of locational incentives/opportunities.

Given that many airports in Southern Ontario are trying to attract aviation-related commercial activity, the challenge for LSRA will be to position itself ahead of these other airports. A major constraint for many aviation-related industries is the cost and time required to construct facilities in which to conduct their business. A possible means of attracting potential industries is for the Airport and/or a third party to construct facilities that could then be leased out to aviation-related businesses. For example, a major reason why Chartright Airgroup moved some of its operation to Waterloo Airport was the fact that there was an existing hangar available for their use, plus the availability of serviced commercial land.

It is anticipated that any growth in aviation-related commercial activity at Lake Simcoe Regional Airport will be the result of a growing number of aircraft based at the Airport requiring maintenance services and/or the presence of scheduled air service, rather than the establishment of third party heavy maintenance facility.

¹⁸ Ontario: A Magnet for Aerospace, Aviation Week, July 2016

4.2 REGIONAL AVIATION OVERVIEW AND TRENDS

4.2.1 TORONTO-PEARSON CONSTRAINTS

The Greater Toronto Airports Authority (GTAA) has clearly stated that Toronto-Pearson International Airport is constrained in its ability to accommodate forecasted demand. Restricted by both physical constraints and limits to the number of aircraft movements airport can accommodate, the GTAA will need to carefully manage activity in the future.

Toronto-Pearson is a slot constrained airport, which means that there is a limited number of movements (landings and take-offs) that can be accommodated per hour. Under the current 5-runway configuration, the maximum number of movements per hour is 90. This number is lower when certain weather conditions prevail and/or when runways are out of service due to maintenance or snow removal. During peak periods, such as early morning and during the afternoon, runway capacity is often being reached. Therefore, the airport must assign arrival and departure slots to scheduled air carriers, with a small portion going to general aviation.

With the intention of becoming a mega-hub airport and prime international gateway into North America, the increased emphasis will be on international and transcontinental flights. To meet this intent, the GTAA will need to objectively manage activity such that the priority for available slots is given to larger aircraft operating on long-haul scheduled international flights. It is unlikely that improvements to airport infrastructure or the management of air space will significantly increase the capacity of movements in the peak hour in the future.

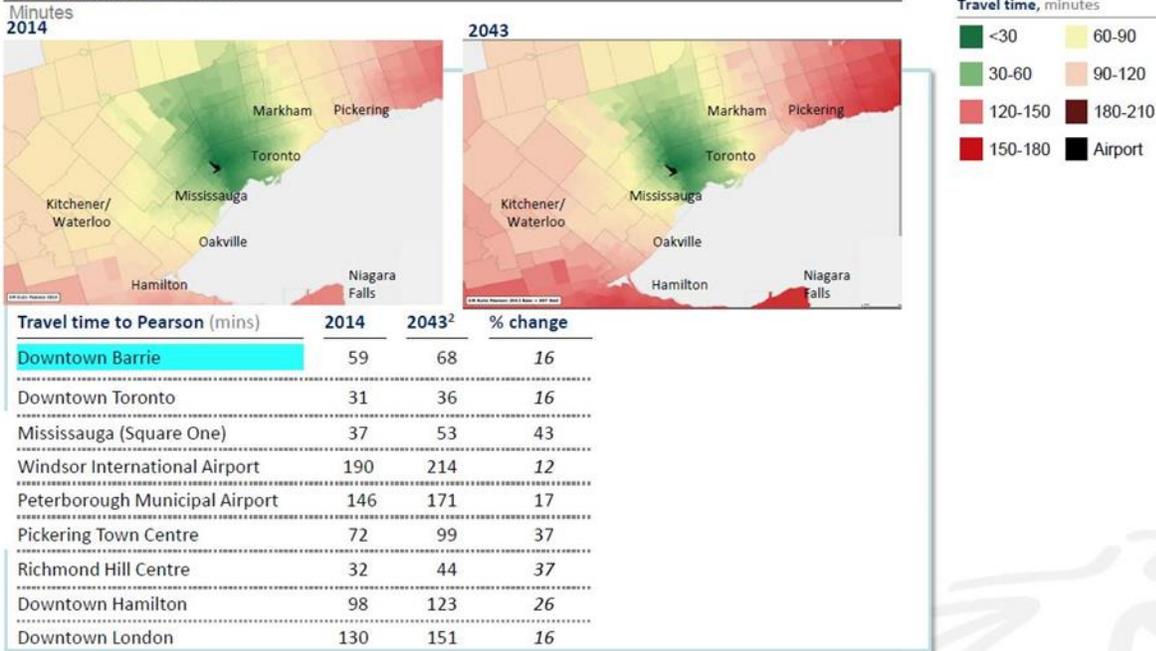
The GTAA has already begun to impose restrictions on general aviation activity. In March 2017, the Airport Authority issued a directive that required general/corporate aviation operators to book arrival and departure slots 48 hours in advance. It was during this period, the number of corporate movements at LSRA increased by 50%.

Given that corporate aviation is generally founded on the principle of providing air travel on short notice, without restrictions, this directive will significantly impact this segment of the industry, and will likely result in business aviation operators relocating activities to other airports surrounding the GTA.

The GTAA has stated that one of the objectives of the Southern Ontario Airport Network is to provide opportunities to shift short-haul regional aircraft movements and general aviation activity away from Toronto-Pearson.

Another significant constraint to Toronto-Pearson Airport is the forecasted increase in ground travel times. The GTAA estimates that commute times to the airport during rush hour will increase anywhere from 16% to 43% between now and the year 2043. **Figure 8**, extracted from a November 2015 presentation to Lake Simcoe Regional Airport by the GTAA, describes the forecasted change in commuting time. Commute times from areas surrounding Toronto could increase as much as 37%.

AM rush travel to Pearson¹



1 AM rush is 6am-9am

2 Assumes no additional investment in ground transportation infrastructure other than UP Express and 407 East Extension

SOURCE: Eric Miller, McKinsey analysis

19

Figure 8 Forecasted Commute Times

This increase in ground travel time to Toronto-Pearson will make scheduled flights from local airports more appealing, especially those flights of a short duration such as Ottawa or Montreal.

4.2.2 RELOCATION OF CORPORATE AVIATION AWAY FROM TORONTO-PEARSON

Given the current and foreseeable runway capacity limitations at Toronto-Pearson International Airport, general aviation activity, including corporate aviation, will continue to experience constraints with respect to both the availability of land on which to develop hangar facilities, and access to arrival and departure slots. As previously described, the GTAA recently introduced a directive that requires general aviation operators to reserve arrival and departure slots 48 hours prior to estimated time of arrival or departure. Although the GTAA and corporate aviation negotiated a short reprieve, the GTAA has indicated that the 48 hour reservation requirement will be reinstated in the future. This sends a clear message to corporate aviation operators that the focus at Toronto-Pearson is scheduled commercial flights and, in order to accommodate increased scheduled passenger demand, constraints will be placed on corporate aviation activity.

It is estimated that there is a shortfall of approximately 90,000 sq. ft. of hangar space at Toronto-Pearson Airport that cannot be accommodated because of a lack of available land.

- GTAA

The other significant constraint at Toronto-Pearson is the deficiency of hangar space. It is estimated that there is a current shortfall of approximately 90,000 sq. ft. (8,360m²) of hangar space that cannot be accommodated because of a lack of available land. This has been exacerbated by the recent loss of one bay of the GTAA's three-bay hangar that had been leased to the Skyservice FBO, but is now leased to WestJet. Corporate operators are also faced with diminishing access to services such as aircraft de-icing.

A number of the existing corporate aviation operators at Toronto-Pearson have expressed a reluctant need to relocate at least a portion of their operation to other airports in the GTA. As an example, Chartright Aviation recently opened a 50,000 sq. ft. (4,645 m²) hangar/FBO at Waterloo Airport.

As Toronto-Pearson moves towards becoming a mega-hub airport and a North American port of entry, it is anticipated that general aviation will be faced with further constraints, forcing them to relocate their facilities and operations to surrounding regional airports. The only airports in the GTA that can adequately accommodate this type of activity are Hamilton International Airport, Region of Waterloo International Airport and Lake Simcoe Regional Airport.

4.2.3 POINT-TO-POINT AIR TRAVEL

Although major air carriers, such as Air Canada, rely on hub airports to support their air service networks, there is a growing demand for point-to-point service between non-hub and regional airports, bypassing the major hub airports. In the US and Europe, much of this is the result of the growth of low cost airlines and leisure airlines. The requirement for point-to-point travel is having sufficient travel demand between two cities. This activity is often generated by business travel demand between two centres, or leisure demand to specific vacation destinations. Point-to-point air travel often satisfies regional travel demands between smaller centres that are ignored by the larger air carriers. Examples of regional airlines in Canada include Pacific Coastal Airlines in BC, which fly to more than 15 communities throughout BC using 30 and 19 seat aircrafts, and Bearskin Airlines in Ontario, which operate between 12 communities in Northern and Northwestern Ontario using 19 seat aircrafts. Many of these flights operate from terminals that do not have passenger screening facilities.

Figure 9 illustrates the growth of air service between city pairs.

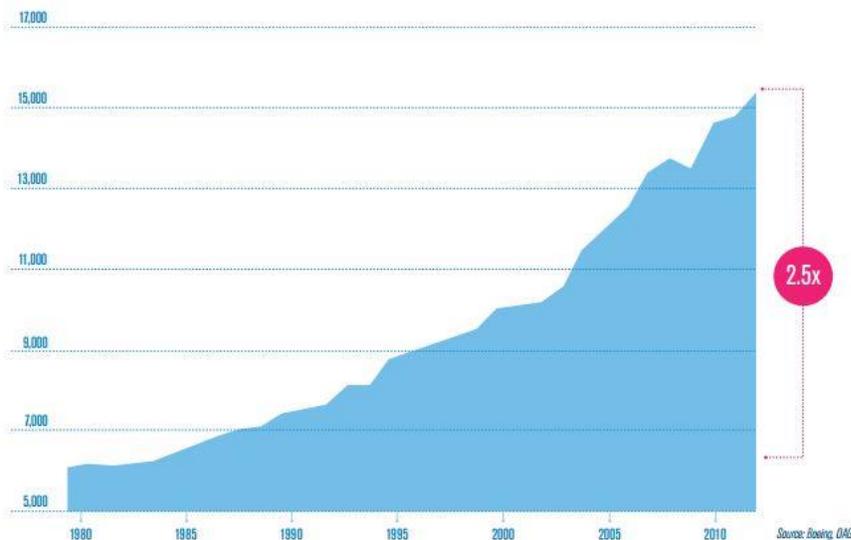


Figure 9 Growth of Flights between City Pairs

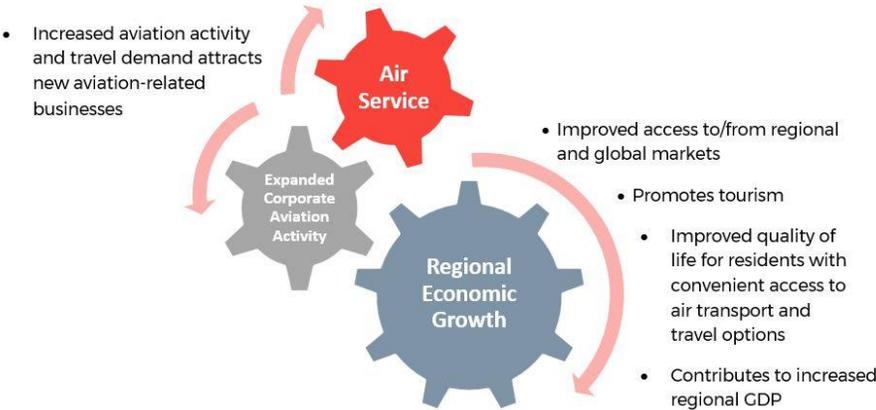
5 BUSINESS CASE

5.1 THE CONTRIBUTION OF AIRPORTS IN REGIONAL ECONOMIC AND SOCIAL DEVELOPMENT

“Airports play a considerable role in economic development and the most important cargo they move is people” – Richard Florida, Professor, Rotman School of Management, University of Toronto

Too often seen as merely supporting assets, airports have the potential to stimulate significant economic benefits to the regional economy, permitting connections between cities, which in turn promotes economic growth and competitiveness. There have been a number of academic studies to assess the contribution of airports to regional economic development. The overwhelming findings of these studies support the belief that airports, and specifically scheduled airline service, contribute significantly to the growth of local economies. “When designed, executed and operated well, airports will generate more jobs, facilitate increased business interactions, encourage co-located commercial development, support increased trade in goods and will likely open up regions to more cross sector investments”¹⁹

A study by economist Jan Brueckner²⁰ concluded that a 10% increase in passenger enplanements leads to an approximate 1% increase in regional employment.



A similar study undertaken by Nicholas Sheard²¹ concluded that airport size is found to have a positive effect on local GDP, the number of firms located in the region, population size and employment rates. The study found that “in a typical metropolitan area with one million residents, a 10% increase in air traffic leads to the creation of about 1,100 new jobs”. The metropolitan areas located closer to the airport were the areas where the benefits were most pronounced. This is true with Toronto-Pearson, where the area immediately surrounding the airport is the second largest centre of employment in the GTA after downtown Toronto.

¹⁹ Future-Ready Airports – Airports are back in the spotlight as catalysts for future growth. PWC, January 2017

²⁰ Airline Traffic and Urban Economic Development, Jan K. Brueckner, July 2003

²¹ Airport Size and Urban Growth, Nicholas Sheard, October 2015

The proximity of Lake Simcoe Regional Airport was instrumental in the OPP selecting Orillia as their headquarters site.

A further study by Bruce Blonigen and Anca Crista²² concluded that “increases in air services lead to statistically and economically significant increases in regional growth”. The findings of the study, which examined the link between air traffic and local economic growth after airline deregulation in the US, found that a 50% increase in air traffic growth corresponds to a 7.4% increase in real GDP over a 20 year period.

Similarly, it has been estimated that “one narrow-body scheduled flight can produce the equivalent of \$4-9 million in GDP and 50 person-years of employment over the period of a year.”²³

“25% of all company’s sales are dependent on air travel. 70% of businesses report that serving a bigger market is a key benefit of using air services”.

- Air Transport Action Group

An economic impact study undertaken for Lakeland Linder Regional Airport in Florida concluded that a three-times-daily air service with a 75 seat aircraft would generate 78 full time equivalents (FTEs) and over \$10 million in local economic output (direct, indirect and induced). A similar study²⁴ at John Wayne Airport in Orange County, California estimated that four (4) daily flights using B737-700/A320 aircraft generated 700 FTEs and \$131 million in economic output.

Airports contribute to local and regional economies in various ways. **Figure 10** describes the direct and indirect value of an airport to the regional economy.

Lake Simcoe Regional Airport already contributes significantly in many ways. The OPP has gone on record as saying that close proximity to a regional airport was a prerequisite in determining a location for their headquarters and

“I am sure all of you who have been on the 401 and driven to Pearson know what it’s like and what that adds to your air travel plans. Getting to our airport here is an easy experience. The local airport provides access to a global economy in a quick, easy and customer-friendly way”

- Matthew Chandy, Manager Economic Development, Region of Waterloo

Lake Simcoe Regional Airport was instrumental in the OPP selecting Orillia as the headquarters site. Lake Simcoe Regional Airport is visited by hundreds of corporate aircraft a year. Contrary to wide belief, the majority of corporate aircraft are not flown by large fortune 500 companies but rather by small and mid-sized businesses that have less than 500 employees. These companies all have one thing in common; they require fast, flexible, cost effective and convenient access to markets and suppliers.

Various economic forecasts for Canada, Ontario, and the Greater Toronto Area all recognize that future growth is dependent upon our ability to compete in the global marketplace. The provincial government’s Long-Term Report on the Economy states, “*The Ontario economy is linked through trade and financial markets to other economies in the rest of Canada and North America, and across the globe*”.

The Province recognizes that a key element in supporting economic growth is the provision of infrastructure that supports access and the movement of people and goods. “*Improvements in connectivity contribute to the economic performance of the wider economy through enhancing its overall level of productivity. This improvement in productivity in firms outside the aviation sector comes through two main channels: through the effects on domestic firms of increased access to foreign markets, and increased foreign competition in the home market, and through the freer movement of investment capital and professionals between countries*”.²⁵

From a social perspective, air service improves the quality of life by expanding people’s leisure opportunities, reducing travel costs, encouraging collaboration and innovation, providing a wider choice in travel options, and facilitating local tourism.

The direct economic impact of scheduled air service is also significant in that it generates additional jobs and necessitates the purchase of fuel, services and leased space. As an example, the direct impact of activities at the Region of Waterloo International Airport in 2015 was \$32.7 million, much of this comes from scheduled airline activity. The total impact, including indirect and induced, was \$90 million.

²² Air Service and Urban Growth, Bruce Blonigen and Anca Cristea, January 2015

²³ Passenger Air Service Development Techniques, Report 18, Airport Cooperative Research Program, 2009

²⁴ Economic Impact Study of Mexico Air services at John Wayne Airport, Intervistas, 2013

²⁵ Economic Benefits from Air transport in Canada, Oxford Economics, 2011

An economic impact study has not been prepared for Lake Simcoe Regional Airport in recent years. Such a study will be prepared in Phase II.

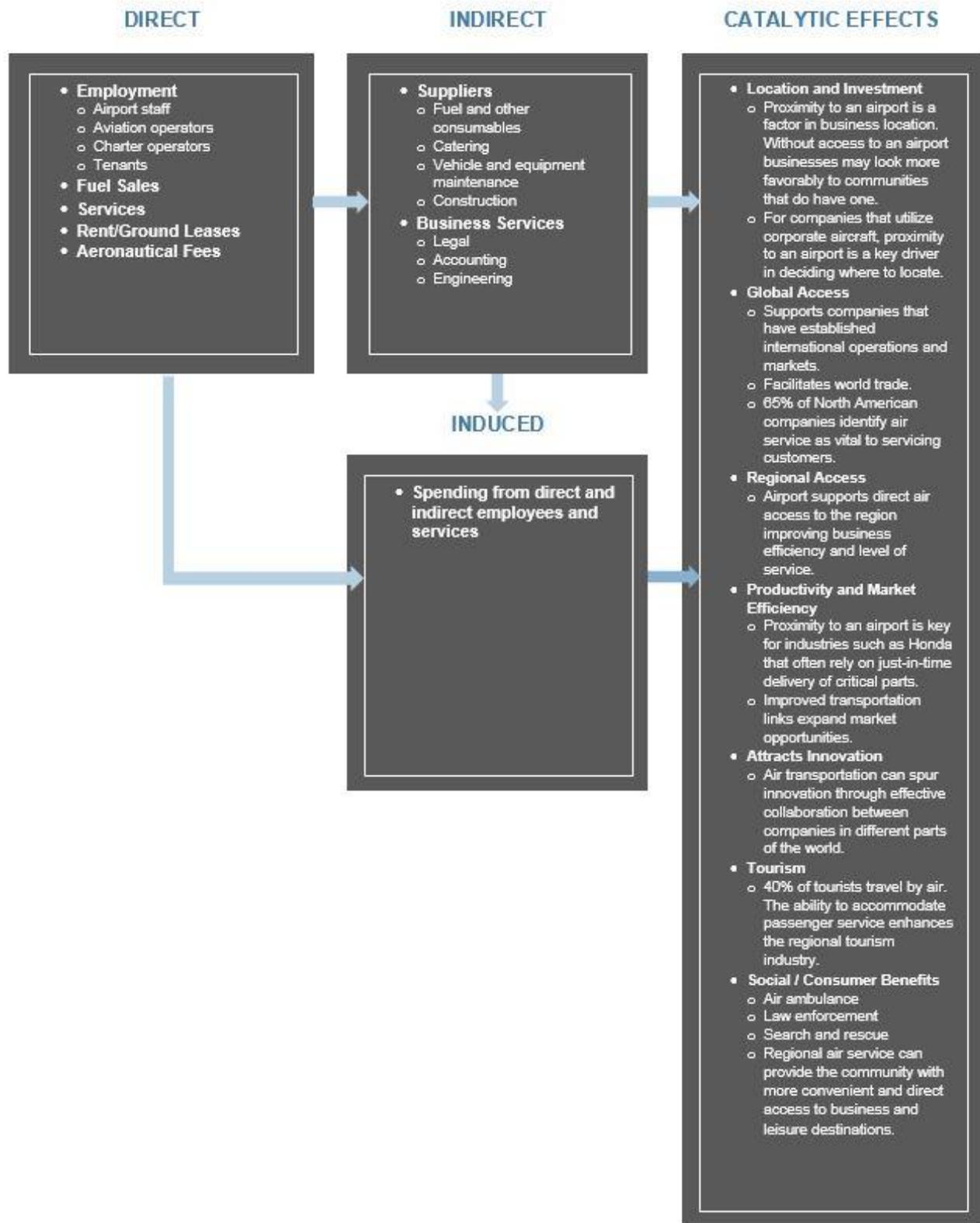


Figure 10 Airport Impact on the Regional Economy

5.1.1 CURRENT BENEFACTORS OF LSRA AS AN ECONOMIC CATALYST

Both private and public sector employers in Simcoe County, including Barrie and Orillia, utilize the Lake Simcoe Regional Airport (LSRA) on a regular basis for the movement of goods and people. In a recent report highlighting the '2016 Top 100 Employers in Simcoe County', 49% of the top employers are identified as users of the Airport. Collectively, these businesses employ close to 35,000 people, mainly operating in the manufacturing, public administration and tourism related industries, aligning closely with top industries outlined in Section 3.2.

Other users and benefactors of the Airport that are not listed on the 'Top 100 Employers' list also align closely with the region's top industries, encompassing businesses from manufacturing, tourism and retail trade industries. LSRA also has positive local spin off effects for specific sectors including various skilled trades, HVAC, food and hospitality, courier services and property maintenance. Each year the LSRA facilitates 300-400 car rentals through various partnerships and also sells over 1 million litres of aviation fuel through its Avfuel dealership.

In total, users of the LSRA travelled to/from more than 350 unique destinations in Canada and the United States. Through analysis, the top five Canadian locations from which users are arriving/departing are Thunder Bay, Toronto, Ottawa, Montreal and Windsor. The top five States from which users are arriving/departing include New York, Illinois, Pennsylvania, Michigan and Florida. Data shows that the LSRA could provide direct connectivity to major markets in both Canada and the United States, making the Airport a key asset and conduit for local businesses to thrive. As the LSRA continues to grow and capitalize on new opportunities, new business prospects and markets will continue to open for local businesses.

The LSRA is also a key asset for regional, provincial and federal essential services and major utilities. The Royal Canadian Mounted Police, Ontario Provincial Police, CFB Borden and Medevac Air Transport and Hydro-One are regular users of the Airport, accounting for hundreds of movements each year. The LSRA provides the connectivity required for these services to operate in our region and continue to grow, having both an impact on the economic benefit and quality of life achieved.

5.1.2 COMPARABLE AIRPORTS: COMPARISON OF REGION OF WATERLOO INTERNATIONAL AIRPORT AND PETERBOROUGH AIRPORT

The following text provides an overview of two comparable regional airports that are included in the Southern Ontario Airport Network (SOAN). Both of these airports are recognized as important catalysts for regional economic development by their respective municipal stakeholders and as such, receive substantial funding from the governments that own the facilities.

REGION OF WATERLOO INTERNATIONAL AIRPORT

ACTIVITY

Located about an hour's drive west of Toronto, the Region of Waterloo International Airport is included under the Southern Ontario Airport Network. The airport is owned and operated by the Region of Waterloo. In addition to serving the needs of the general aviation community, the airport has scheduled air service that includes a daily WestJet flight to Calgary and seasonal leisure flights to Punta Cana operated by WestJet and Sunwing. In 2016, approximately 128,000 passengers used commercial air service. In the past, the airport was served by American Airlines, with a direct flight to Chicago, and Bearskin Airlines, with flights to Ottawa. The American Airlines service was subsidized by the Region of Waterloo and by the private sector. The Region contributed approximately \$1.25 million in subsidies to the airline.



INFRASTRUCTURE

The airport has two runways, 7,002 ft. x 150 ft. and 4,100 ft. x 150 ft. The longer runway is equipped with a Category I instrument landing system and a 34,000 sq. ft. terminal building that includes CATSA security screening services and CBSA customs and immigration facilities. The airport also has on-site Aircraft Rescue and Fire Fighting (ARFF) service.

STAKEHOLDER SUPPORT

Region of Waterloo's Corporate Strategic Plan recognizes the importance of the airport and air service as a catalyst in attracting and sustaining economic development to the area. In light of potential capacity constraints at Toronto-Pearson Airport, the airport's management sees an opportunity for Waterloo International Airport to expand its role in providing regional passenger service. A major constraint to expanded activity is the close proximity of residential areas and the noise impacts that would be associated with increased traffic.

The Region contributes \$6 million annually to the airport's operation, which equates to approximately \$22 per household.

CAPITAL INVESTMENT

The Region has embarked on an ambitious plan to significantly expand the capacity of the airport, which comprises a \$474 million capital improvement program that includes an expansion of the runways and an expanded terminal facility. Half of this amount is to be funded directly from the Region. Based on a new Airport Master Plan, expansion of airport infrastructure is to be phased, triggered by increases in activity. In April 2017 the Region approved \$3.1 Million for the planning and design of the first phase of capital.

PETERBOROUGH AIRPORT

ACTIVITY

Peterborough Airport is owned by the City of Peterborough and operated by Loomex Group. With an emphasis on general aviation, the focus for the airport is on flight training and aerospace industries. The airport is home to an extensive flight training program, offered by Seneca College School of Aviation and Flight Training. The College, which relocated from Buttonville Airport, was attracted to Peterborough by offers from the City to construct facilities to support the training program.



With respect to the aerospace industry, a number of aviation maintenance and aircraft modification industries are located at the airport. This includes Flying Colours, which specialize in the refurbishment and conversion of business aircraft, and Airtech Canada, which specializes in special purpose aircraft modifications.

Although the airport currently has no scheduled passenger flights, a local travel agency has organized B737/Q400 charters to New York City and other locations in the US; and in 2016, an ill-conceived commuter service to Waterloo and Ottawa was introduced, but short lived due to the operator withdrawing service. The airport is actively pursuing opportunities to attract a scheduled airline to serve the community.

INFRASTRUCTURE

Infrastructure includes two runways; Runway 09-27 (7,000 ft. x 100 ft.) and Runway 13-31 (2000 ft. x 49 ft.). Runway 09-27 is non-instrument and Runway 13-31 is non-instrument day use only. The airport has a small 6,500 sq. ft. terminal building that is used by the general aviation community. A large number of hangars are located on the airport, the majority of which are used to store recreational aircraft. Larger hangars are associated with the Flying Colours business and Seneca College's flight training program.

STAKEHOLDER SUPPORT

The City of Peterborough’s Economic Development office works closely with the airport to “position the community as a destination for investment and identify companies that would benefit from locating here”. The City recognizes the contribution the airport makes to the community and over the years had made significant financial investments to upgrade facilities and attract new businesses.

The operating budget in 2017 is approximately \$2.3 million.

CAPITAL INVESTMENT

In 2009 the airport embarked on an ambitious development program that included \$14.6 million funding from the City of Peterborough and \$7 million each from the federal and provincial governments through an infrastructure stimulus fund. The capital improvement program included the extension of the main runway from 5,000 ft. to 7,000 ft., a new terminal building, and the development of serviced commercial lots to accommodate aviation-related industries.

In 2013, Peterborough Economic Development announced the launch of the Peterborough Aerospace Center (PAC) as a means of leveraging the concept of the airport being a centre of excellence for the aerospace industry and attracting new business.

In 2014, the City of Peterborough overwhelmingly approved spending up to \$12 million to accommodate Seneca College plus an additional \$4 million to expand an apron and other works.

In 2015, the Airport received an additional \$1.5 million in grants from the province to further increase the City’s \$4.1 million investment in airport improvements. At the same time, Flying Colours received a grant of \$1.2 million going towards the expansion of their aircraft refurbishment facility.

The City of Peterborough has identified a 10-year capital budget of approximately \$2.6 million, to support various projects including the development of airside serviced lots.

IN COMPARISON

Table 1 provides a comparison of stakeholder funding at Waterloo and Peterborough Airports in context to Lake Simcoe Regional Airport.

Table 1 Comparative Airports

Airport	Current Activity	Infrastructure	Annual Operating Expenditure	Previous (10-year) Capital Investment* (Approx.)	Proposed 10-year Capital Budget
Lake Simcoe Regional Airport	General Aviation Business Aviation	One 6,000 ft. runway	\$0.60 Million	\$6.6 Million	None Identified
Waterloo Airport	General Aviation Scheduled Passenger service	Two runways, one 7,000 ft. and one 4,100 ft.	\$6 Million	\$60 Million	\$28.3 Million**
Peterborough Airport	Flight Training MRO	Two runways, one 7,000 ft. and one 2,000 ft.	\$2.3 Million	\$33.2 Million	\$2.6 Million

* By the local municipality. **Region of Waterloo has identified a total budget of \$474 million contingent on the airport meeting future activity milestones.

5.2 SOUTHERN ONTARIO AIRPORT NETWORK (SOAN)

In September 2015 the Greater Toronto Airports Authority (GTAA) released a White Paper²⁶ (see Appendix A) on the future of Toronto Pearson International Airport. After an extensive analysis of passenger trends and socio-economic activity in the Greater Toronto Area, the GTAA concluded that air travel demand in the region would start to approach capacity by the mid-2030's, even after contemplated expansion of infrastructure at Toronto Pearson. Furthermore, the capacity constraints placed on regional air travel would, in turn, become a major impediment to continued economic growth in Southern Ontario. It is estimated the economic impact of a constrained air service network could be as much as a \$15 billion loss in GDP.²⁷

*“Growth is coming.
The time to plan is now”.*
- Howard Eng CEO, GTAA

It is projected that by 2043, air travel demand will exceed 110 million annual passengers. Yet today, airports in Southern Ontario have the capacity to support approximately 89 million annual passengers. Without significant infrastructure enhancements it is likely that by the late 2030s, passenger demand will soon outpace capacity, resulting in delays, congestion, and lost economic opportunity as business decides to move elsewhere.

In response to these concerns, and given the physical constraints of Toronto-Pearson, the GTAA's White Paper recommended the development of an airport system for Southern Ontario, whereby a number of key airports in the region would work collectively to meet forecasted travel demands. Such a proposition has been used successfully in a number of major international centres where multiple airports support the air travel needs of the region. This includes New York City, Los Angeles, London, England and Paris, France.

From the release of the White Paper, The GTAA helped to establish the Southern Ontario Airport Network (SOAN), a group of ten (10) most commercially significant airports in addition to Toronto-Pearson. These airports include:

- Windsor Airport
- London International Airport
- Hamilton International Airport
- Region of Waterloo International Airport
- Billy Bishop Toronto City Airport
- **Lake Simcoe Regional Airport** (only airport out of the 10 which is located north of Toronto)
- Oshawa Executive Airport
- Peterborough Airport
- Kingston Airport

The criteria used to determine membership in SOAN included:

- Location within a reasonable driving distance to offer a viable alternative to Toronto-Pearson;
- Location within a population centre where the airport will support underlying growth within the local catchment area;
- Can accommodate regularly scheduled flights; and,
- Can support business jets and/or DHC8-100.

The intent of SOAN was for the GTAA and the member airports to identify potential opportunities, both collectively and as individual airports, to accommodate forecasted air travel demand through the growth of scheduled air service and improved infrastructure, and to promote community engagement and support.

Figure 11 illustrates the location of airports included in the Southern Ontario Airport Network and the relative driving times from mid-town Toronto to each of the airports. As previously stated, Lake Simcoe Regional Airport is the only airport in the SOAN network that is located north of Toronto.

²⁶ Toronto Pearson: Growth, Connectivity, Capacity. The future of a key regional asset, Urban Strategies Inc., September 2015

²⁷ Flying Together: The Southern Ontario Airport Network, May 2017

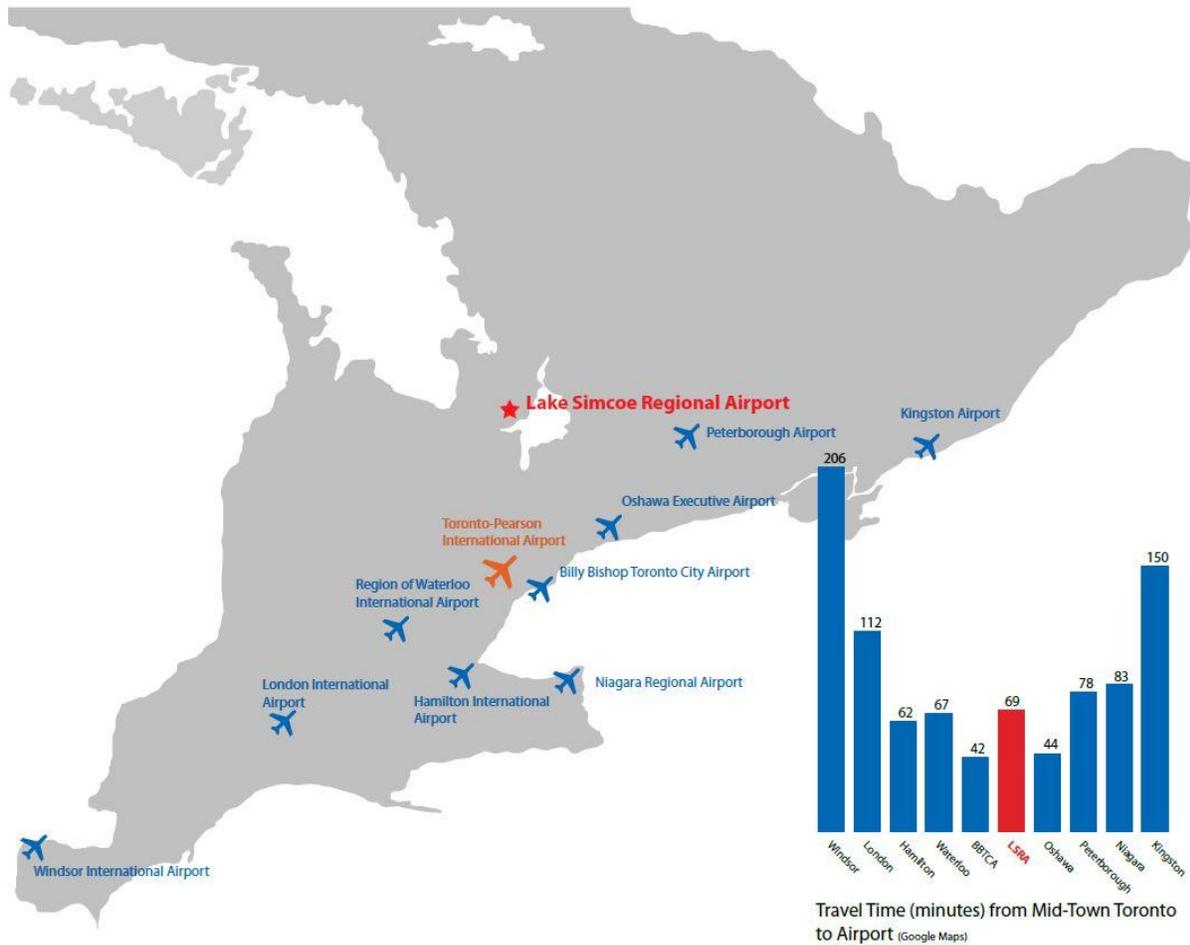


Figure 11 Southern Ontario Airport Network

The airports included under the Southern Ontario Airport Network have worked collectively to best identify the role(s) they could play in responding to potential capacity constraints. While each of the airports continues to develop its business and make strategic decisions based on local business drivers and community needs, they support the goal of accommodating long-term air travel demand and aiding in the growth of Southern Ontario as a centre of economic growth. In April 2017 SOAN issued a white paper (see Appendix B) describing its objectives.

The vision of the Southern Ontario Airport Network over the next 15 years is:

- Increase scheduled passenger and charter air service from Southern Ontario communities providing better regional connectivity;
- Employ best-in-class strategies for responsible and sustainable airport growth;
- Attract greater tourism, trade and foreign direct investment to the region’s communities;
- Enhance security and customs screening technology and ground transportation needs to support aviation growth;
- Establish a network of routes into and out of airports across Southern Ontario;
- Realize Toronto-Pearson as becoming a mega hub airport;
- Invest in transit solutions to airports; and
- Support niche economic development at airports that support local needs and markets.

Analysis undertaken by the GTAA clearly concludes that the communities surrounding the GTA have the capacity to generate scheduled air service. “The catchment area around each of the five non-Toronto airports with scheduled service generates roughly 45% of Southern Ontario’s GDP, but only 5% of scheduled passengers pass through these airports”. The analysis also concluded that “**Peterborough, Niagara and Lake Simcoe airports have the capacity to start charter or smaller scale scheduled service and expand current general aviation operations**”.

The cost of inaction is high. If regional airports do not respond to growth opportunities there is a real possibility that Southern Ontario communities will miss out on the economic and social benefits of air service growth and that Toronto-Pearson will be unable to fulfill its potential as a mega hub airport, reducing Southern Ontario’s connectivity to the world. - GTAA

5.3 REGIONAL TRAVEL DEMAND

Significant travel demand is generated from areas north of Toronto. In a survey conducted at Toronto-Pearson in 2014 by McKinsey & Company,²⁸ it was estimated that approximately 2 million (15%) of originating passengers are from the GTA-North area, which includes LSRA’s catchment area. Of this, 0.8 million were domestic passengers and 1.2 million international/transborder passengers. Market demand data obtained from Environics Analytics (see **Table 2**) indicates that in 2016 the total number of airline trips generated from an area within a 60 km radius of the Lake Simcoe Regional Airport was in excess of 254,872, and that within a larger catchment area the number of trips increases to 784,450. This number excludes trips with leisure airlines, such as Sunwing and Air Transat, and non-North American foreign-based airlines. Of this travel demand, the number of business-related trips were 75,247 and 257,320 respectively.

The total number of airline trips identified under the 60 km catchment area would equate to approximately 2,100 flights a year using a 150-seat narrow-body jet aircraft, or approximately 6 flights per day. **Figure 9** illustrates the approximate geographical area of the catchment areas surrounding LSRA. With a growing population base, the number of airline trips is expected to increase in the future.

Table 2 2016 Airline Trips

Airline	60 km Catchment Area	100 km Catchment Area
Air Canada	110,194	350,626
WestJet	72,412	215,197
Porter	11,937	43,652
United Airlines	21,441	60,424
American Airlines	20,878	55,546
Delta Airlines	18,010	59,005
TOTAL	254,872	784,450

Source: Environics Analytics

²⁸ Toronto-Pearson Passenger Survey, September, 2014, McKinsey & Company

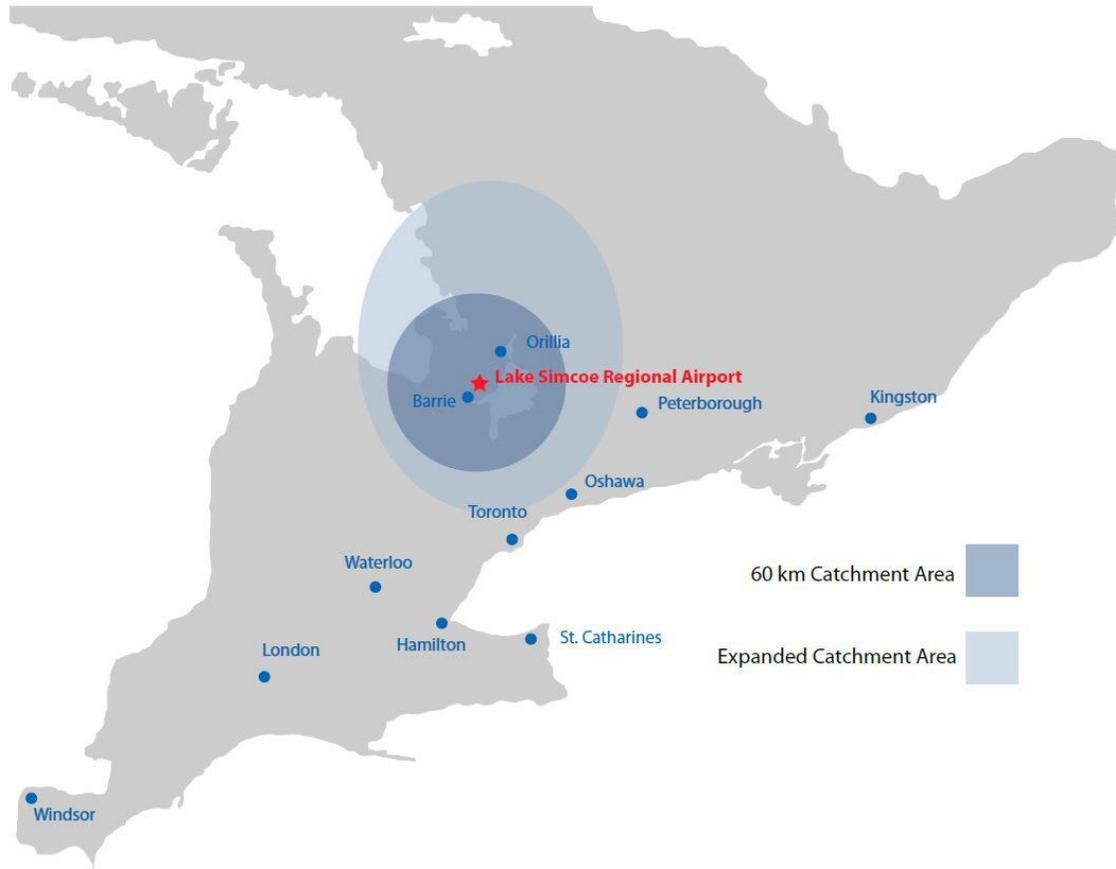


Figure 12 Airport Location in Context to Simcoe County

It can be assumed that the majority of airline trips (70%) are related to personal or leisure travel. **Table 3** describes the most popular leisure destinations, by rank, over a three-year period. This includes all forms of transportation. Based on the following statistics, there would be sufficient demand from the immediate catchment area to support twice-weekly air service to both Cuba and Mexico. Similarly, a large portion of trips to Florida is likely undertaken by air, therefore there is probably sufficient demand to support twice weekly air service to Florida as well. Given the time, stress, and associated cost of driving to Toronto-Pearson and parking a vehicle, the opportunity of flying out of a local airport for a flight to Cuba or Mexico would be highly appealing to local consumers. Similarly, the ability for an airline to operate out of a regional airport, at a cost significantly below that of Toronto Pearson, would be appealing to the airline.

Travel data supports the view that Simcoe County currently has the travel demand to support flights from LSRA. However, the Airport's existing infrastructure cannot support this type of activity. In some respect the Airport is behind in meeting the travel needs of the community.

Table 3 Leisure Destinations

RANK	DESTINATION	NO. OF TRIPS (2014-2016)	
		60 km CATCHMENT AREA	EXPANDED CATCHMENT AREA
1	Florida	67,195	223,253
2	Montreal	46,238	156,592
3	Ottawa	45,877	150,390
4	Cuba	33,379	96,114
5	New York City	31,797	120,918
6	Vancouver	31,524	87,985
7	Mexico	29,165	96,404
8	Las Vegas	20,053	69,486
9	Boston	18,895	64,128
10	Other B.C.	17,164	46,256

Source: Environics Analytics

5.4 MISSED OPPORTUNITIES / CONTINGENT LIABILITY

The current runway length and width, as well as other important airport infrastructure limitations have already adversely impacted business development opportunities for the Lake Simcoe Regional Airport. It has caused corporate aircraft flight operations and new commercial air services to look at other airports, reduce aircraft size for deployment at LSRA, and put airline service opportunities on indefinite hold for the Airport.

The existing 6000' x 100' runway is considered to be too short and narrow for larger corporate jet aircrafts, especially during inclement weather conditions and during winter operations when runway contamination is a concern for pilots. Reduced runway friction under rainy, snowy and icy conditions, as well as high crosswinds, reduce the margins of safety for flight operations, when runway length and width are close to minimum aircraft take-off and landing performance specifications. With corporate aviation being an important core target business sector for LSRA, such limitations constitute a significant loss in connectivity and regional economic impact potential.

Throughout 2016 and 2017, airport management was in repeated contact and face-to-face conversations with new Ultra Low Cost Carriers (ULCC) that are expected to present many new air travel choices to Canadians across the country. Two of these ULCCs have shown interest in the markets served by the Airport, but indicated that launch of services from LSRA in the future requires infrastructure investment and expansion. ULCCs cannot operate viably and profitably with a reduced passenger and baggage load required by limited runway dimensions. Some of the infrequent narrow-body airline charter flights that are currently using LSRA operate under less than maximum payload to accommodate runway limitations.

One example of a new air service and revenue opportunity that has been jeopardized by limited infrastructure at LSRA has been presented by an innovative concept of a tour operator with plans to operate Boeing 737-300 aircraft on weekend charter to US destinations from LSRA. When that particular aircraft type under consideration became unavailable by the aircraft provider, no other aircraft with similar runway performance and a 140-passenger capacity was available in Canada and plans had to be put on hold. This is only one known example – there will be countless examples that have been unknowingly lost as operators pre-emptively view the LSRA infrastructure as marginal and ultimately a contingent liability.

Prior to any additional businesses relocating or establishing operations at the Lake Simcoe Regional Airport, it is imperative that a runway expansion is completed in the very early development stages in order to avoid massive, operational disruptions. The Airport is rapidly approaching a critical mass in regards to current based tenants and

businesses as well as transient users accessing the regional economy. The concern is that future activities levels will become unsustainable if impacted by extended periods of construction-related closure. Unlike the redevelopment of a road that sees vehicles detoured to alternate routes; the closure and redevelopment of the Airport's primary and only runway will completely interrupt all airport users for several weeks. As current and new business activities continue to develop and expand locally at the Airport as well as overall regional use; this problem will only compound. Moreover, failure to complete the runway expansion during the early stages of development, could result in businesses looking to other airports that have already completed infrastructure expansions because they can effectively plan their business operations, knowing the Airport will not be experiencing complete runway shutdowns to accommodate expansion resulting in significant lost opportunities.

Finally, a potential by-product of the construction closure itself is that the Airport may become liable to pay penalties to operators that experience costly disruptions to their businesses and relocation of their established flight operations from LSRA to other airports. This will also compound as Airport usage and developments continue to increase.

6 STRATEGIC VISION

6.1 VISION

The Vision Statement for Lake Simcoe Regional Airport is as follows:

To become a premier regional commercial airport that stimulates the socio-economic development of Simcoe County and the City of Barrie by improving connectivity, enhancing the competitiveness of the region and improving the quality of life for its residents.

The Mission Statement for Lake Simcoe Regional Airport is as follows:

To drive the region's economic prosperity, enhance business opportunities, increase the region's competitive position and support the travel needs of the community through increased connectivity.

6.2 A ROLE FOR LAKE SIMCOE REGIONAL AIRPORT

The airport is not a destination in itself. The airport is the conduit that provides access and connectivity to the community, which is the true destination.

The recommended role for Lake Simcoe Regional Airport is to become a true 'regional' commercial airport with the infrastructure and capacity to become a centre for corporate aviation as well as supporting scheduled commercial air services, serving regional domestic and international leisure markets. Although this role requires substantial capital investment to improve and expand the Airport's existing infrastructure, it is a role that best provides opportunities to support the economic development of Simcoe County and the City of Barrie today and in the years to come, by enhancing connectivity and accessibility.

This role cannot be achieved overnight. Therefore, capital investment in the Airport must be undertaken in a phased and fiscally responsible manner that responds to sound business decisions, demonstrable demand, and specific operational requirements.

Although recreational flying and flight training will likely continue to be activities conducted at LSRA, this is not to be a strategic focus for the Airport.

6.3 STRATEGIC OBJECTIVES

In moving forward with a strategic vision for the Airport, the objectives include:

1. **Support the socio-economic development of the region** by enhancing air access and connectivity, facilitating the growth of tourism, enhancing business opportunities and providing residents with increased travel options.
2. **Become a premier corporate aviation airport**, serving the needs of the region as well as the Greater Toronto Area.
3. **Attract and retain scheduled air service** thereby enhancing access and connectivity.
4. **Pursue aviation-related and aerospace businesses** that contribute to the long-term viability of the Airport and region and provide high-value employment.

7 OPPORTUNITIES & CONSTRAINTS

7.1 SWOT ANALYSIS

The following text describes the Strengths, Weaknesses, Opportunities, and Threats associated with achieving the long term vision for the Airport.

7.1.1 STRENGTHS

- LSRA is located in the centre of Simcoe County between the two largest urban centres and adjacent to a major provincial highway with direct access to the GTA.
 - Existing infrastructure provides a good basis from which to expand in the future, with the capability to expand within the existing property boundaries.
 - Airport has been designed with the forethought of future expansion including precision instrument runway approaches.
 - Airport is in close proximity to the GO Train and other forms of regional ground public transportation.
 - Aircrafts have unrestricted access to the Airport – no slot controls or curfews.
 - Minimal flight training on the Airport to interfere with corporate activity and commercial air service.
 - LSRA has the same driving distance from central Toronto as Waterloo Airport and Hamilton Airport.
 - Less noise sensitivity as compared to other regional airports because the Airport is located away from residential neighbourhoods and other noise sensitive land uses.
 - Large regional catchment area currently sufficient to support air service.
 - Strong regional economic and population growth projections.
 - Infrastructure in place to accommodate limited non-screened scheduled air service operating from the existing terminal facilities. A small regional airline has initiated on-demand daily service to Toronto City Airport utilizing the facility.
 - Serviced and un-serviced commercial lots are available.
-

7.1.2 OPPORTUNITIES

- Corporate activity is likely to move away more frequently from Toronto-Pearson Airport given expanding commercial activity and limited runway slot availability, especially during peak business hours.
- Corporate activity at LSRA is on the increase.
- New G & G jet Centre development is attracting corporate awareness of the Airport.
- Airport is recognized as a commercially significant airport by Southern Ontario Airport Network and as such will benefit from collaboration with other regional airports and the Greater Toronto Airports Authority.
- Commuting times within the GTA is expected to increase significantly. Therefore LSRA is well positioned to support the north GTA and its continued growth (i.e. King, Vaughn, York, etc.).
- The rise of the Ultra-Low Cost Carriers are looking to provide air service from regional airports rather than Toronto-Pearson.
- Ultra-Low Cost Carriers have expressed interest in operating from LSRA if the infrastructure were in place to support their services.
- Leisure airline business model supports operations from regional airports where associated costs are lower compared to major hub airports.

- It is recognized that Toronto-Pearson will reach runway slot constraints and that regional airports will need to take some of the forecasted travel demand.
- The Greater Toronto Airports Authority is in support of the development of regional air services at LSRA.
- Strong potential for sun and ski (Mont Tremblant) destinations.
- With scheduled air service LSRA would be eligible for ACAP funding from Transport Canada for safety improvements.

7.1.3 WEAKNESSES

- Lack of momentum in developing the Airport, which is falling behind other regional airports.
- Lack of capital investment and operating budgets as compared to other regional airports.
- Current staffing levels are already low considering the Airport operates 24-hours a day, 365 days of the year, and in addition to operating the Airport, staff also operate and manage the Fixed Base Operations (FBO). Staff are also expected to ‘build the business’.
- Perception that the Airport is viewed as a cost centre rather than a catalyst for economic development.
- Airport governance model may not be ideal. Ownership by three different municipal bodies complicates funding and decision making effectiveness.
- Lack of airport certification, which is required by Transport Canada if the Airport is to serve sustained scheduled commercial air service.
- Runway length at 6,000 ft. and lack of approach lighting is not sufficient to support larger corporate aircraft and commercial airlines. The runway length and lack of approach lighting may discourage airlines from operating jet aircraft from LSRA.
- Narrow 100 ft. wide runway is a concern for larger corporate aircraft operators and commercial airlines at times when the runway is wet or contaminated with snow. Need to increase width of runway to 150 ft.
- Lack of air terminal infrastructure that is capable of supporting narrow-body commercial air service requiring passenger screening function.
- An upgrade of approach aids and lighting is likely required in order to attract commercial operators.

7.1.4 THREATS

- Competition from other regional airports that have established scheduled air service and are receiving funding to support expansion of commercial air services.
- Entrenched behavior of public to use Toronto-Pearson Airport.
- Entrenched behavior on the part of operators that are reluctant to leave Toronto-Pearson despite the reduced availability of runway slots.
- Perceived opposition to invest in airport infrastructure.
- Time required for funding approvals, design and construction of required infrastructure.
- There could be potential misunderstanding of the value and economic opportunity provided through airport investment and growth.

8 IMPLEMENTATION PLAN

8.1 DEVELOPMENT STRATEGY

The Airport has the potential to transition from a local community airport to a key catalyst supporting economic growth and development in Simcoe County and the City of Barrie by providing increased connectivity, access, and competitive positioning. The vision outlined in this strategy enhances the Airport's role as a leader or facilitator of regional economic growth, connectivity and regional competitiveness.

In order to become a key economic catalyst in the region, a long-term and phased-in, demand-based approach to development is required. The first phase of development needs to focus on a current strength and segment in which Lake Simcoe Regional Airport operates – Corporate Aviation. There is great opportunity for the Airport to not only maintain its status in this segment but to further position itself as a leader in the market place. The region is forecasting major population and economic growth and new opportunities arising from capacity issues at Toronto Pearson International Airport that create a strong business case to enhance corporate aviation capabilities, facilitated by formation of the Southern Ontario Airport Network (SOAN) and its mission for member airports to take on displaced business. In order to support and maintain competitive positioning in this segment and to pursue new opportunities, funding is required to accommodate new trends and safety regulations in the industry.

Although the development strategy of Phase I is geared towards corporate aviation, investments undertaken in Phase I will help build the foundations for subsequent phases.

Phase II and Phase III build towards the support of scheduled commercial air service starting with increased charter service opportunities in the business and consumer segment in Phase II and ultimately under Phase III providing the infrastructure necessary to support enhanced scheduled air service.

8.1.1 PHASE I – POSITION AIRPORT TO ENHANCE CORPORATE AVIATION

The primary objective of Phase I of the Airport Development Strategy would be to undertake improvements to airside infrastructure that in turn would address operational constraints identified by current operators and position the Airport to attract and sustain additional corporate activity.

Elements of Phase I would include:

Primary Objectives

- Undertake Airport Certification and Registered Airport Zoning Protection;
- Extend Runway 10-28 from the current 6,001 ft. (1,829 m) to 7,000 ft. (2,134 m) and widen the runway from the current 100 ft. (30 m) to 150 ft. (45 m);
- Enhance Electronic and Visual Aids including the installation of an approach lighting system;
- Undertake a Master Servicing Plan for un-serviced Commercial Development Areas;
- Enhance Airport Support Services and Related infrastructure;
- Acquire additional lands;
- Business Development Strategy; and
 - Marketing Strategy
 - Community Engagement

- Capture Additional Opportunities.
 - Business Segment – Charter Service
 - Tourism Market – Charter Service
 - Regional Scheduled Service – Scheduled Service
-

8.1.2 PHASE II - PREPARE BUSINESS CASE AND ENHANCE OPPORTUNITIES FOR AIR SERVICE (DEMAND BASED)

The primary objective in Phase II is to enhance opportunities for charter activity utilizing existing terminal facilities and developing a sound business case and resources that will attract scheduled commercial airlines.

- Prepare Economic Impact Study;
 - Enhance Charter Service Activities;
 - Based on research, implement business and/or tourism charter service activities
 - Air Service Development Strategy;
 - Develop business case and resources required to enhance scheduled service (e.g. operational support or infrastructure)
 - Investigate Air Service Incentives
 - Prepare Project Definition Document (PDD) for new/expanded Air Terminal Building
-

8.1.3 PHASE III – SUPPORT SCHEDULED AIR SERVICE (DEMAND BASED)

Under Phase III, the infrastructure necessary to support sustained mainline scheduled commercial air service would be developed. This would occur only if it is supported by a strong business case and proven demand for such services.

- Scheduled Air Service.
 - Implement plan from development strategy, which may include:
 - Ground Side infrastructure
 - Air Terminal Building
 - Expanded services and utilities for new terminal
 - Airport Support Services and Related Infrastructure
 - CATSA services to support scheduled service
 - NAV CANADA facilities

8.2 DEVELOPMENT PHASING

Figure 13 outlines key deliverables under each of the phases.

ACTIVITY	PHASE I POSITION AIRPORT TO ENHANCE CORPORATE AVIATION (1 TO 3 YEARS)	PHASE II PREPARE BUSINESS CASE & ENHANCE OPPORTUNITIES FOR AIR SERVICE (DEMAND BASED)	PHASE III SUPPORT SCHEDULED AIR SERVICE (DEMAND BASED)
AIRPORT CERTIFICATION	✓		
REGISTERED AIRPORT ZONING PROTECTION	✓		
EXTEND AND WIDEN RUNWAY	✓		
ENHANCE ELECTRONIC AND VISUAL AIDS	✓		
UNDERTAKE MASTER SERVICING PLAN	✓		
ENHANCE AIRPORT SUPPORT SERVICES /	✓		
ACQUIRE ADJACENT LANDS	✓		
BUSINESS DEVELOPMENT STRATEGY	✓		
ECONOMIC IMPACT STUDY		✓	
AIR SERVICE DEVELOPMENT STRATEGY		✓	
INVESTIGATE AIR SERVICE INCENTIVES		✓	
PREPARE AIR TERMINAL PDD		✓	
LANDSIDE INFRASTRUCTURE			✓
AIR TERMINAL BUILDING			✓
EXPANDED SERVICES AND UTILITIES FOR TERMINAL			✓
AIRPORT SUPPORT SERVICES / INFRASTRUCTURE			✓
CATSA SERVICES			✓
NAV CANADA SERVICES / FACILITIES			✓

Figure 13 Development Phases

9 PHASES AND COSTS

Please note, that all costs provided in the following text are very preliminary ‘rough order of magnitude’ estimates only. Prior to the approval and execution of any capital improvements, Project Definition Documents (PDDs) would be prepared that would describe the project justification and scope together with a Class ‘D’ cost estimate.

In addition, with the expansion of infrastructure and services, there will be additional associated operational costs for staffing, equipment and other applicable airport operational requirements.

9.1 PHASE I - POSITION AIRPORT TO ENHANCE CORPORATE AVIATION (1 TO 3 YEARS)

9.1.1 AIRPORT CERTIFICATION

To better ensure long term safety for corporate aviation and support sustained scheduled air service in the future, Lake Simcoe Regional Airport must transition from its current ‘Registered’ aerodrome status to becoming a ‘Certified’ airport, as required under Transport Canada. A Certified airport is an aerodrome that has been granted a Certificate from the Minister of Transport that identifies that it meets Transport Canada’s stringent guidelines, regulations and standards in the interest of aviation safety. Airports that accommodate scheduled commercial air services operating aircraft with greater than 19 seats must be ‘Certified’ under Transport Canada. Certification also provides corporate aviation with the confidence that the Airport meets Transport Canada requirements with respect to design and safety. Of the 10 regional airports included in the Southern Ontario Airport Network, Lake Simcoe Regional Airport is the only airport that is not certified.

An Airport Certification Gap Analysis Study was recently completed by WSP Canada Inc. The purpose of the study was to assess the steps and improvements required to achieve certification from Transport Canada. The Airport’s current infrastructure generally conforms to certification standards proscribed in Transport Canada’s TP312 5th Edition; therefore upgrades required to bring LSRA up to certification would not be significant. Documentation upgrades and the introduction of a Safety Management System (SMS) would be the biggest challenges. Under the Canadian Aviation Regulations (CAR’s), the Airport is required, under certification, to prepare a number of management plans including: Emergency Response Plan; Disabled Aircraft Remove Plan; and Wildlife Management Plan.

A Safety Management System, required for all certified airports, would need to be prepared and audited on a periodic basis. The SMS program describes policies, processes and procedures that address issues such as roles and responsibilities, communication and reporting protocols, safety planning, record management, training, and quality assurance.

Certification is also required if the Airport is to be protected under the Federal/Provincial Airport Zoning regulations (AZR) that ensure that the various aeronautical surfaces surrounding the Airport are protected from obstructions through enforceable legislation.

The Airport has an opportunity to accommodate limited scheduled air service as a ‘Registered’ airport. This would require the air carrier to operate under Canadian Aviation Regulations (CAR’s) 703 (Air Taxi) or 704 (Commuter) and where the air carrier is certified to operate into and from ‘aerodromes’. Under CAR’s 703 aircraft are limited to 9 seats, whereas under CAR’s 704 aircraft are limited to 19 seats.

The cost of the Airport Certification process would be approximately **\$200,000**.

In addition to the initial costs associated with certification, there would be ongoing costs incurred by the Airport. This would include maintaining and updating documentation required under the SMS program as well as preparing for periodic audits.

9.1.2 REGISTERED AIRPORT ZONING PROTECTION

Once the Airport has received ‘Certification’ it would be prudent for the Airport to protect the airspace surrounding the Airport from structures and objects, such as buildings, cell towers and vegetation that could obstruct runway approaches. Aeronautical Zoning Regulations (AZR) ensure that future development near the Airport remains compatible with the safe operation of aircraft and the Airport itself. Given that aeronautical zoning is a federal responsibility, the Federal/Provincial AZR process describes the aeronautical surfaces surrounding the Airport that are to be protected through height restrictions and provides municipalities with the authority to act on behalf of the federal government in enforcing these restrictions. The AZR’s not only enforce the current runway layout but can also be used to protect for the future expansion of runways.

The cost of undertaking the Federal/Provincial AZR process would be approximately **\$100,000**.

9.1.3 RUNWAY 10-28 EXTENSION AND WIDENING

In the short to medium term, the vision for LSRA is to position itself as a leader in corporate aviation activity. The current runway design, with a length of 6,001 ft. and a width of 100 ft. is a potential operational constraint to those who operate medium to large corporate aircraft. So much so that some operators are prevented from operating their aircraft into LSRA by their insurers because of potential liability. **Table 4** describes the runway length requirements for a number of typical medium-to-large corporate aircraft.

Extending the runway to 7,000 ft. would permit medium sized corporate aircraft, such as the Learjet 45 to operate at maximum take-off weight under dry and wet runway conditions, and would allow the largest intercontinental corporate jets to operate at maximum takeoff weight under dry runway conditions, and near their maximum weight under wet runway conditions. By allowing aircraft to takeoff at or near their maximum takeoff weight means that corporate aircraft can carry the fuel required for extended trip lengths, which in turn provides greater connectivity, accessibility, convenience and time savings for those using the aircraft.

Table 4 Corporate Aircraft Runway Length Requirements

Aircraft	FAA Takeoff Field Length (Dry)*	FAA Takeoff Field Length (Wet)*
Bombardier Learjet 45	5,392	6,201
Cessna Citation 650	5,510	6,337
Gulfstream IV	5,649	6,497
Dassault Falcon 7X	5,564	6,398
Bombardier Learjet 60XR	5,831	6,706
Bombardier Challenger 601	6,099	7,000
Gulfstream 550	6,323	7,272
Gulfstream 650	6,420	7,383
Bombardier Global Express	6,741	7,752
Bombardier Challenger 890	6,825	7,849

* Maximum take-off weight and standard day temperature

In the medium to long term, the vision for LSRA is to become a full service regional airport with the capability to accommodate regional scheduled air service, ultra-low cost airlines, and leisure flight to sun destinations such as Cuba, the Dominican Republic and Mexico. The target design aircraft are the B737-800, and Airbus A320, which are widely used by the domestic airlines such as WestJet and Air Canada, and by the leisure airlines, such as Sunwing, Air Transat, and Air Canada Rouge. To accommodate such aircraft on typical non-stop routes to sun destinations, a minimum runway length of 7,000 ft. (2,134m) x 150 ft. is required. For example, with a 7,000 ft. runway a B737-800 with a 100% load factor (189 passengers) has a range of approximately 1,700 nautical miles (3,148 km, under a

Standard Day conditions²⁹ and dry pavement³⁰), which is sufficient to reach much of the Caribbean, Mexico and North America. With the current runway length of 6,001 ft., B737-700/800, which is typically used by the ultra-low cost airlines and leisure airlines, would not be able to operate to sun destinations.

Figure 13 illustrates the approximate range of the B737-800 with a 7,000 ft. runway. Further extension of the runway beyond 7,000 ft. would be examined based on future operational requirements and cost/benefit analysis.

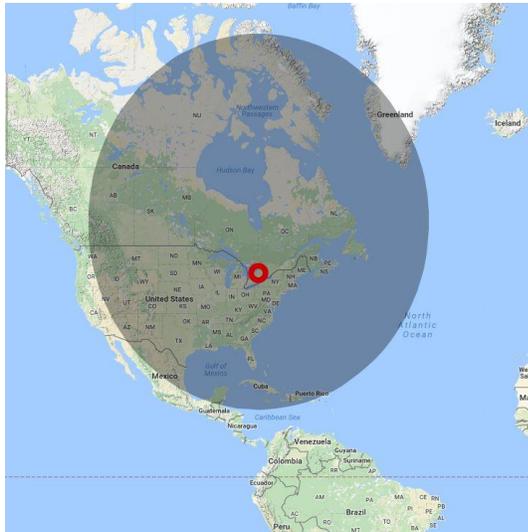


Figure 14: B737-800 Range with 7,000 ft. Runway

In addition to extending the runway, it is also recommended that the runway be widened from 100 ft. to 150 ft. This provides an additional margin of safety for larger aircraft, especially during periods when the runway is wet or contaminated with snow. In discussions with airline operators, they have also indicated that a 150 ft. wide runway is a requirement.

The cost of extending and widening the runway would be approximately **\$18 million**.

9.1.4 ENHANCED ELECTRONIC AND VISUAL AIDS

At present, LSRA is provided with a non-precision instrument approach system which is based on GPS positioning equipment provided on board the aircraft. In order to provide greater precision and improved access during periods of poor weather, an enhanced GPS approach, equivalent to a Category I instrument landing system (ILS) would be desirable. This would be proposed for Runway 10. The enhanced RNAV GPS approach would reduce the approach minimums from the current 305 ft. ceiling and 1 mile visibility to 200 ft. ceiling and ½ mile visibility. This in turn would increase the usability of the Airport and provide an improved margin of precision and safety for operators.

The enhanced GPS approach would be dependent upon potential obstructions that may be in the vicinity of the Airport and would require the installation of an approach lighting system.

The provision of runway approach lighting system guides an aircraft to the end of the runway and provides an additional margin of precision and safety, especially for larger corporate aircraft that have higher approach speeds. Approach lighting should be installed irrespective of the installation of an enhanced GPS approach.

The cost of an enhanced GPS precision instrument approach and runway approach lighting system would be approximately **\$2.5 million**.

²⁹ Standard Day = 15° C.

³⁰ Source: Airplane Characteristics for Airport Planning, Boeing Commercial Airplanes, 2013

The separate cost of a runway approach lighting system would be approximately **\$1 million**.

9.1.5 MASTER SERVICING PLAN

A key to the success in expanding the number of corporate aircraft based at the Airport is the provision of hangar space. Corporate aviation departments and charter operators are generally reluctant to base their aircraft at an airport unless they can be accommodated within a hangar. Unfortunately, the cost of constructing a hangar is typically not offset by revenues generated from the storage of aircraft. Revenues are generated through the provision of additional services, including fuel sales, ground support, maintenance, aircraft grooming, and catering. In order to attract hangar development there needs to be ample serviced land available that can support hangars of various sizes and depths.

Approximately 5 ha of serviced land is available in the Airport's Southwest Commercial Area (identified as 'A' in **Figure 15**). With a lot depth of 300 ft. (92 m), the lots are suitable for medium sized corporate hangars and general aviation hangars, but would not likely be large enough to accommodate larger corporate hangars or MRO facilities servicing narrow-body aircraft such as B737s. To accommodate commercial activity requiring larger lot sizes, the Northeast Commercial Area (identified as 'C' in **Figure 15**) would have to be developed.

This would include the provision of services and utilities, landside access, and airside access. The area identified as 'B' in **Figure 15** is only suitable for small hangar development because of its proximity to the approach to Runway 28.

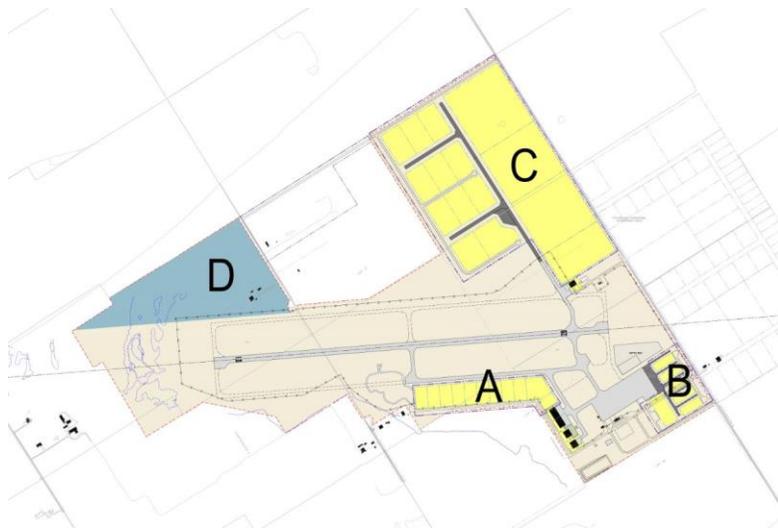


Figure 15: Commercial Development Lands

In order to accommodate expanded hangar development, the site would have to be prepared and airport services and utilities would have to be expanded. As part of this phase, a Master Servicing Plan, including detailed design, would be prepared that would include landside and airside pavement design, site drainage as well as the design of services and utilities. Design documents would be such that the Airport would be 'tender ready' to respond quickly to demands for additional serviced commercial land.

The cost of preparing the Master Servicing Plan, including detailed design, of infrastructure improvements would be approximately **\$500,000**.

9.1.6 ENHANCED AIRPORT SUPPORT SERVICES AND INFRASTRUCTURE

A number of services are required in order for the Airport to be an attractive location in which to base an aircraft. Such services are typically provided by the private sector. The dilemma is that these types of services may not be

provided until a certain number of aircraft is based at the Airport; and operators may not base their aircraft at the Airport unless the services are available.

In addition to services provided by the private sector, the Airport would be required to enhance and expand services as well. This would include the acquisition of additional airfield maintenance equipment and the expansion of support facilities including maintenance garages and storage building. In addition to physical infrastructure, the Airport would also need to increase staffing to support administrative, operational, and maintenance functions.

The cost of enhancing airport support services equipment and infrastructure only would be approximately **\$3.5 million**.

9.1.7 ACQUIRE ADDITIONAL LANDS

To protect the long term operation and viability of the Airport and ensure an adequate land reserve for future, development and infrastructure expansion, additional lands, adjacent to the existing airport property should be acquired.

The cost of acquiring additional land would be approximately **\$2.5 million**.

9.1.8 BUSINESS DEVELOPMENT / MARKETING STRATEGY

A key objective of the Marketing Strategy should be to build on the current strength and business focus of LSRA in the corporate aviation sector and diversify into new market opportunities from that core market niche, based on realistic opportunities. New market sectors in the strategy that build on existing strength and infrastructure make up part of the longer-term vision that pursues practical, incremental steps in Phase I towards a larger role for LSRA in subsequent phases --- as it grows from its role of Community Airport to a more diverse role of Regional Systems Airport (including the Airport's envisioned role as part of SOAN).

Proposed steps:

- Closer cooperation with the Canadian Business Aviation Association (CBAA) and the National Business Aviation Association (NBAA), both of which LSRA is a member of, in efforts to build awareness among corporate aviation users based in the Greater Toronto Area and operators flying into this market. Part of this program would be regular participation in events for corporate aviation users and supporting organizations, such as the annual NBAA Schedulers & Dispatchers Conference in the US around February of each year. Other, similar events would be part of these activities.
- Develop a marketing campaign to attract users of LSRA's serviced and un-serviced airside lots, including advertising in relevant media targeted at developers and potential airport tenants.
- Prepare for a more diversified role of the Airport by raising its profile in trade and public media through further expanding the existing media relations activities, including proposing editorial coverage of developments at the Airport to editors and some targeted advertising.

Expand staff resources with part-time or full-time personnel dedicated to marketing activities and program development. This is also important to prepare the Airport for its growing diversity in target markets, including air service development in the following development phase.

9.1.9 COMMUNITY ENGAGEMENT

Based on the initial corporate aviation marketing focus, community engagement is proposed to emphasize building a stronger relationship with the larger corporations and organizations that tend to use, or would benefit from the use of, corporate aircraft.

Proposed steps:

- Establish regular contact with Chambers of Commerce and other business organizations in the Airport's wider catchment area, including Simcoe County, but also adjacent counties and municipalities.

- Offer educational / informative presentations that promotes the Airport as a connectivity tool to business organizations at regular or special meetings and events.
- Host business events at the Airport and sponsor association meetings to build a strong profile of LSRA in the area business communities.
- Build relationships with area hospitality establishments, such as resorts, hotels, entertainment facilities, to build awareness about the Airport as a means of transportation for high-end clientele and celebrity guests and entertainers. Such strategic alliances with local market stakeholders will also serve in the emerging role of the Airport as a base for scheduled and chartered air services.

An approximate annual budget for ongoing marketing/business development (9.1.8) and community engagement would (9.1.9) be **\$200,000**.

9.2 PHASE II - PREPARE BUSINESS CASE & ENHANCE OPPORTUNITIES FOR AIR SERVICE (DEMAND BASED)

In addition to developing an Air Service Development Strategy for sustained scheduled air service, efforts would be undertaken to attract ad-hoc charter activity that can operate from the extended runway and make use of the existing terminal facilities. Such activity has been successfully implemented at Peterborough Airport utilizing limited terminal facilities.

9.2.1 ECONOMIC IMPACT STUDY

A study should be prepared that identifies the current economic impact the Airport generates with respect to employment, tax contribution, and direct, indirect, and induced economic contribution (GDP) to the local and regional economies. The Economic Impact Study would serve as the basis for future studies, which could then be used to measure, in part, the future success of the Airport in terms of its economic contribution.

An approximate budget to prepare an Economic Impact Study would be **\$20,000**.

9.2.2 AIR SERVICE DEVELOPMENT STRATEGY

An Air Service Development Strategy (ASD) is a well-developed plan that will help attract, maintain and build long-term relationships with airlines of all sizes, flying to various destinations to best capitalize connectivity opportunities.

Forming the strategy, it is proposed that the Lake Simcoe Regional Airport, along with the full support of the airport stakeholders and air service users will work together to support new air services and their market growth in LSRA's catchment area in the form of long-term partnerships.

In addition to the Airport and airport stakeholders, further partnerships of this initiative may include the relevant County and City Economic Development Offices, Chambers of Commerce and other pertinent area organizations and corporations. Each partner may decide to contribute certain elements of support, resources and air travel incentives, depending on their ability and mandate.

Each airline has different expectations and requirements with regard to local support. The partnerships need to meet these individual needs and the Airport's approach to such relationships should be based on customized programs for maximum effect.

Air Service Development has been an ongoing activity at LSRA over the past few years and relationships with suitable airlines have been built, some of which are now producing results in the form of established or planned air services from LSRA; other relationships, although strong and full of potential are unable to progress further as a result of the Airport's limited infrastructure.

There are eight major types of air carriers, operating different levels of air services with different types of aircraft that can be targets for ASD. Others would be targets once future airport expansion projects become operational:

- **Major Canadian Network Carriers** (Air Canada, WestJet);
- **Regional Airlines affiliated with the major network carriers** (Air Canada Express, WestJet Encore and others), **Charter / Leisure Airlines** (Air Transat, Sunwing, Air Canada Rouge, Nolinor and others);
- **Low Cost Carriers /Ultra Low Cost Carriers** (Flair Airlines, Canada Jetlines, Swoop, Enerjet);
- **Independent Regional Airlines** (Porter Airlines, First Air, Canadian North, Bearskin Airlines, Pascan Aviation, Air Creebec, Wasaya Airways, Air Liaison, FlyGTA and others);
- **US and International Airlines** (United Airlines, American Airlines, British Airways and others);
- **US and International Low Cost Carriers** (Spirit Airlines, Allegiant Air, Norwegian Air International and others); and
- **Cargo Airlines** (CargoJet, KF Cargo and others).

An approximate budget to develop an Air Service Marketing Strategy would be **\$250,000**.

9.2.3 INVESTIGATE AIR SERVICE INCENTIVES

The Airport needs to be prepared to support small, independent air carriers with a meaningful long-term partnership that assists in the development of the airline passenger (and possibly air cargo) market in the LSRA catchment area. These incentive and support programs may include reduced landing fees and other reduced operational charges for a limited start-up period, assistance with start-up staffing. Time-limited route exclusivity, based on airline performance, may also be entertained. However, the focus should be on initiatives to increase rapid revenue passenger growth, to make the services viable and enable growth of such services at LSRA.

The development of a comprehensive joint marketing program is proposed. This includes advertising the Airport and the air services offered from LSRA, promotional event co-sponsorships with airline partners, joint sales activities targeting businesses and travel retailers, marketing partnerships with area hospitality, leisure and entertainment businesses and other related initiatives. The support programs can be scaled back as new services become viable and focus resources on new air service development. All such programs should be designed to promote the Airport, along with the service providers.

The approximate budget for these aforementioned support services would be: **‘To Be Determined’**.

9.2.4 PREPARE AIR TERMINAL PROJECT DEFINITION DOCUMENT

Based on the analysis and findings of the Business and Air Service Development Strategies, together with an understanding of tangible travel demand, a first step in realizing the construction of an air terminal building that meets the functional requirements of the community and operators would be the preparation of an Air Terminal Project Definition Document (PDD). The scope of the PDD would include a functional space program, based on material requirements, along with a schematic design concept, outline specifications and Class D cost estimate. The PDD would serve as the basis for further detailed design.

The approximate budget for the preparation of a Project Definition Document would be **\$80,000**.

9.3 PHASE III – SUPPORT SCHEDULED AIR SERVICE (DEMAND BASED)

9.3.1 EXPANDED PASSENGER TERMINAL

The existing air terminal building is well suited for corporate use and can easily accommodate ‘air taxi and ‘commuter’ air services that do not require CATSA security screening. However, in order to accommodate expanded regional air service, ultra-low cost airlines, and/or leisure airlines that require CATSA passenger and baggage screening, as well as accommodating limited international arrival facilities, a new or expanded terminal facility would be required.

Based on a preliminary program of requirements, an air terminal building capable of supporting one narrow body (up to 189-seat) aircraft or two 78-seat regional aircraft during the peak period would need to be approximately 40,000 sq. ft. (3,648 m²) with flexibility to expand in the future. This represents a facility that is similar to the existing air terminal building at Region of Waterloo International Airport, which currently accommodates both regional flights with WestJet and leisure flights with Sunwing Airlines.

In addition to expanded terminal facilities, landside infrastructure including utilities and services would need to be upgraded. This would likely include a new access road and terminal curb as well as expanded surface parking. Utilities and services would need to be upgraded to accommodate the larger building.

The cost of a new air terminal building and landside infrastructure improvements would be approximately **\$35 million**.

9.3.2 SUPPORT SERVICES

The introduction of expanded scheduled commercial air service would necessitate a requirement for additional support services provided by both the private sector, the Airport, and government agencies.

Ground Service Support

The introduction of scheduled passenger flights would trigger the requirement for expanded ground handling services such as passenger and baggage handling, aircraft de-icing and possibly line maintenance. Typically, this is handled by a local FBO, or private ground handler, who would be required to obtain additional ground service equipment such as air stairs, baggage loaders, baggage carts, ground power units, lavatory and water trucks and de-icing equipment.

CATSA Services

To accommodate scheduled flights within the traditional domestic air service network and to international destinations, travelling passengers and their baggage would have to be screened as per the requirements of the Canadian Aviation Security Regulations 2012. The sole agency mandated to provide such security screening is the Canadian Air Transport Security Authority (CATSA). At present there are 89 airports in Canada designated to receive CATSA screening services. For these airports, the screening services are fully funded by CATSA. In 2015 new legislation was passed that would allow smaller non-designated airports to receive CATSA screening services. However, this model is based ‘cost recovery’, whereby the airports would pay for ongoing operational costs associated with the screening equipment and staffing. Such costs could be passed on to passengers through an Airport Improvement Fee or Security Fee.

The Airport would also have to comply under the Canadian Aviation Security Regulations with security regulations as a Class 3 airport. This in turn would likely incur some additional costs related to pass control equipment.

Canada Border Services Agency (CBSA)

To accommodate expanded international arrivals associated with flights to sun destinations Canada immigration and customs services would have to be expanded. This would include both physical expansion of facilities, but also an expansion of manpower. Such changes in resources would have to be negotiated with CBSA.

NAV CANADA

Increased cooperation is required with NAV CANADA in order to better integrate communication and information systems. This includes the installation of a peripheral station (PAL) to allow aircraft on the ground at LSRA to communicate with NAV CANADA's area control centre, and integration of meteorological data from the AWOS system into the NAV CANADA Aviation Weather Web Site.

Airport Support

With development of an expanded terminal building and the introduction of sustained scheduled commercial air service and potential leisure flights to sun destinations, the Airport would need to further invest in improvements to support airport operations and provide an appropriate level of service to customers and operators. Improvements would include both equipment and infrastructure as well as increased staffing.

The approximate budget for these aforementioned support services would be: **'To Be Determined'**.

9.4 SUMMARY OF ESTIMATED COSTS

Table 5 provides a summary of the preliminary budgets described in the previous sections. Budget forecasts do not include increased staffing requirements required to implement and manage all of these strategies, initiatives and new services. Additional staffing resources will be required beginning in Phase 1, which in turn, would occur as an annual cost.

Table 5 Preliminary Budget Summary

Element		Budget
9.1	Phase I – Position Airport to Attract Corporate Aviation	
9.1.1	Airport Certification	\$200,000
9.1.2	Registered Airport Zoning Protection	\$100,000
9.1.3	Runway 10-28 Extension and Widening	\$18,000,000
9.1.4	Enhanced Electronic and Visual Aids	\$2,500,000
9.1.5	Master Servicing Plan	\$500,000
9.1.6	Enhanced Airport Support Services and Infrastructure	\$3,500,000*
9.1.7	Acquire Additional Lands	\$2,500,000
9.1.8	Business Development Strategy	\$200,000
	Total	\$27,500,000
9.2	Phase II – Prepare Business Case and Enhance Opportunities for Air Service	
9.2.1	Economic Impact Study	\$20,000
9.2.2	Air Service Development Strategy	\$250,000
9.2.3	Investigate Air Service Incentives	TBD
9.2.4	Prepare Air Terminal Project Definition Document (PDD)	\$80,000
	Total	\$350,000
9.3	Phase III – Support Scheduled Air Service	
9.3.1	Expand Passenger Terminal	\$38,000,000
9.3.2	Support Services	TBD* **
	Total	\$38,000,000
	TOTAL	\$65,850,000

* Cost reflects capital costs. Additional staff and operating resources will be required.

** Resources required will be established based on future review with independent support service providers

10 CONCLUSION

It is important to recognize not only the potential economic and social benefit that the development of Lake Simcoe Regional Airport can bring to the region, but also the cost of non-action.

In conclusion, the vision for the development of Lake Simcoe Regional Airport (LSRA) is based on a range of business opportunities and industry trends that will benefit the communities around the Airport in significant ways. The vision recognizes that the Airport provides the region with critical access and connectivity to markets that in turn represents a key driver of economic development and prosperity in an airport's catchment area.

Capitalizing on this vision aligns with the vision of the LSRA Shareholders – the City of Barrie, County of Simcoe and Township of Oro-Medonte. All three shareholders, have identified the LSRA as a significant asset and a regional priority that can be better leveraged. This common vision will help grow both the local and regional economy, encourage investment, create new opportunities for local businesses, and improve the quality of life for residents. An enhanced Airport will assist the area economy in creating high-value employment, expand access to markets, and improve connectivity with potential buyers and suppliers.

The recommended role for Lake Simcoe Regional Airport is to become a true 'regional' commercial airport with the infrastructure and capacity to become a centre for corporate aviation as well as supporting scheduled commercial air services, serving regional domestic and international leisure markets. Although this role requires substantial capital investment to improve and expand the Airport's existing infrastructure, it is a role that best provides opportunities to support the economic development of Simcoe County and the City of Barrie today and in the years to come, as connectivity and accessibility are enhanced.

This role cannot be achieved overnight. Therefore, capital investment in the Airport must be undertaken in a phased and fiscally responsible manner that responds to the tangible needs of the community and the aviation industry. However, without these investments, the Airport will not be able to fulfill this recommended role, and will be limited in its ability to facilitate regional economic growth, connectivity and regional competitiveness.

APPENDIX

A

TORONTO PEARSON –
GROWTH, CONECTIVITY,
CAPACITY – THE FUTURE OF
A KEY REGIONAL ASSET

TORONTO PEARSON:

GROWTH, CONNECTIVITY, CAPACITY

The future of a key regional asset

September 2015



**URBAN
STRATEGIES
INC**



Toronto
Pearson

1 INTRODUCTION

Southern Ontario is growing so significantly that regional air travel demand will start to approach a capacity milestone by the mid-2030s, even after contemplated expansions at Toronto Pearson. That is the essential conclusion reached by the Greater Toronto Airports Authority (GTAA) after recent in depth analyses of passenger trends and economic and population growth in the region. The dynamic health of the city region's economy is good news, as is the fundamental role Toronto Pearson plays in enabling and fuelling that growth as it emerges as one of the world's most significant airport hubs. It is a story of remarkable success, but also of major future challenges.

Now is the time to start planning to accommodate the growing demand and to start designing an airport system for Southern Ontario that continues to be a key driver of its transformation into a leading global urban region. Toronto Pearson and the other

airports in Southern Ontario are major city-building assets, but they also represent one of the most significant planning challenges for the future of the region. Regional stakeholders must consider how and where to accommodate increasing air travel demand, and also ensure that the region's airports are readily accessible through strong ground transportation connectivity.

The region's air travel system constraints will otherwise become impediments to economic activity. Valuable air travel activity will simply divert to other airports in other city regions in the world, and those that can accommodate that demand will enjoy the benefits. Our loss will be their gain.

To prevent this, and to ensure the continued economic success of the region, decision makers, airport stakeholders, planners, and the public must begin a dialogue to consider some critical air travel planning questions:

- How can the region's governments and airport communities work more collaboratively? What are their mutual interests?
- What air transportation model should the region pursue in the face of the expected growth: Uncoordinated planning at multiple airports or an integrated and optimized regional airport system?
- How can planners and decision-makers leverage the inherent connectivity provided by airports to inform infrastructure investment and overall development decisions?
- What ground transportation connections (rail, bus, truck, and car) are needed to support regional air travel demand and economic growth?

This paper highlights Toronto Pearson as a key global connection and an economic asset locally, regionally, and internationally, and describes the existing and anticipated air travel demand in the region. It then outlines the planning options available for Southern Ontario to address the critical and combined issues of population and air travel growth. Ultimately, it puts the public on notice that air travel capacity in Southern Ontario, and as importantly the associated ground transportation connections, will not meet future demand unless there is immediate, proactive, and coordinated planning.

**“Growth is coming.
The time to plan for it is now.”**

- Howard Eng, CEO, Greater Toronto Airports Authority



2 THE SIMULTANEOUS GROWTH OF TORONTO PEARSON AND THE REGION

Air travel activity at Toronto Pearson has risen dramatically in a generation. Canada's major air carriers continue to grow demand and use Toronto Pearson as a key hub airport. The number of annual passengers travelling through the Airport grew from 10.5 million in 1974 to 21 million in 1994. That trajectory continued for two more decades, and in 2014 Toronto Pearson moved 38.6 million passengers, accommodating 92 per cent of the 42.2 million passengers served in the region that year. Air travel is roughly doubling every twenty years.

Toronto Pearson's growth is an expression of the growth of our regional metropolis. Put simply, Southern Ontario is booming. More and more people are choosing to visit and settle in a diverse, metropolitan region, increasingly competitive at a global level in its quality of life, business opportunity and economic prosperity. The region also is without question the economic heart of Canada, and the engine driving Ontario's 2014 GDP of \$721 billion, which represents 36 per cent of the total national GDP.

In this period of growth the region's population, economic success and air travel have fuelled each other. With the strength of the economy the regional appetite for air travel—particularly international trips—has expanded, and the region's airports have responded with additional capacity, allowing more people to travel for personal trips and business, and opening the region to visitors and commerce.

3 EXPECTED REGIONAL GROWTH AND THE LIMITS AT TORONTO PEARSON

The future outlook for Southern Ontario is even more impressive. Growth projections suggest that the region's population and economic performance will continue to increase over the next three decades. By 2043 it is expected that Southern Ontario will be home to 15.5 million people,¹ and the provincial GDP will be greater than \$1 trillion. Meanwhile, a conservative estimate of air travel demand over the next two decades by the GTAA puts Toronto Pearson Airport at roughly 65 million passengers per year by the mid-2030s, with no signs of slowing down. By 2043 the regional air travel volume is expected to reach a staggering 90 million passengers annually, or more.

This is a significant outcome of the region's economic growth, but how much more air travel demand can our regional air transport system accommodate?

The current regional air travel capacity across all airports in Southern Ontario is estimated to be around 70 million passengers per year, even taking into account already planned capacity investments at Toronto Pearson. The implications are sobering: by the mid to late 2030s, regional air travel demand will approach a capacity making it more difficult to accommodate expected demand for air travel. With no plan in place to increase the region's air travel capacity there will be a demand/capacity gap of around 24 million passengers by 2043.

4 ECONOMIC SIGNIFICANCE OF TORONTO PEARSON TO TORONTO, ONTARIO AND CANADA

The economic implications of a regional air capacity shortfall are significant. Toronto Pearson is a vital piece of regional and national infrastructure that both generates and facilitates economic growth. It is a global hub that connects people to and from the world's most significant business centres, increases visitation to the region's attractions and events, increases foreign direct investments, attracts new business opportunity and creates and supports employment.

Today Toronto Pearson facilitates an estimated 277,000 jobs across the province and accounts for \$35.4 billion in economic impact. That represents 5.6 per cent of the total GDP of Ontario. Based on anticipated growth, by 2030 it will facilitate 478,000 jobs in the province and generate \$62.1 billion in economic impact, or 6.6 per cent of the Ontario GDP.

Toronto Pearson's economic impact is directly linked to its location, scale and reach. At the heart of a major growth region that extends across the border, the airport serves 12.5 million potential customers in a 3-hour drive time catchment area that includes London, Kitchener, Hamilton, Barrie, Kingston, Buffalo, and Rochester. That number rises to between 150-200 million people when one considers a catchment area based on either a 90 minute or two hour flight time, reflecting the real market area for international airports.

¹ Based on an estimate from McKinsey & Company that is aligned with Government of Ontario projections, including Places to Grow

“If you’re lucky enough to have a hub, you better support it.”

- Richard Florida, Director of Cities at the
Martin Prosperity Institute

Building on its strategic regional location, Toronto Pearson is successfully expanding its international reach and profile. From 1985 to 2014 Toronto Pearson increased its percentage of international passengers from 48 per cent to 60 per cent, and it is expected that the share of international travellers will increase to almost 70 per cent by 2033. International hub airports bring substantial benefits and drive economic growth. Direct connections to other global destinations fuel more travel, more trade, and more opportunity than regional and domestic airports, returning significant economic benefits to the region.

Toronto Pearson is especially strong in this regard. Unlike many other international hubs where the majority of travellers are simply connecting to other flights, 70 per cent of Pearson’s passengers are so-called “Origin and Destination” (or O&D) travellers visiting or returning to the Airport’s surrounding region. Toronto Pearson is not simply a major local job generator; it is an international gateway that draws people and economic activity into the region.



5 HOW DOES TORONTO PEARSON COMPARE TO GLOBAL CITY AIRPORTS

In addition to supporting the regional economy, Toronto Pearson is emerging as a significant global hub airport. While North America's 13th busiest airport for total passengers, it is the 2nd busiest for international passengers. Its global standing also is increasing; in 2014 it was ranked the world's 23rd busiest airport for international travellers. With approximately two thirds of its passengers international travellers, Toronto Pearson has not yet achieved the level of top global hubs like London Heathrow (93 per cent international) or Dubai International (98 per cent international), but it is undeniably a major player on the world air travel stage and punching significantly above its weight. In terms of providing global connections Toronto Pearson already outpaces major US airports such as John F. Kennedy (54 per cent international) and Chicago O'Hare (15 per cent international).

“Toronto Pearson allows local businesses to go global and global businesses to connect locally.”

- Jan De Silva, President & CEO, Toronto Region Board of Trade

Toronto Pearson also is now growing at a faster pace than many of its global competitors as it accommodates the rapidly increasing air travel demand to and from Southern Ontario, leveraging its significant geographical and regional advantage that many cities around the world could only hope to emulate. The projected gap in capacity to accommodate expected demand therefore represents a major threat to the region's economic competitiveness.

Airport	2014 Passenger Traffic (millions)	% Change, 2013-2014
London Heathrow	73.4	+1.3%
Dubai International	70.5	+5.5%
Charles de Gaulle	63.8	+2.6%
Singapore Changi	54.1	-0.2%
John F. Kennedy International	53.2	+5.8%
Toronto Pearson International	38.6	+6.8%

Source: Airport traffic statistics, GTAA Passenger Traffic statistics, Airport Council International, press search, via McKinsey & Company

6 THE TWO STRATEGIC OPTIONS FOR TORONTO PEARSON

The looming demand/capacity gap is a wake-up call for Southern Ontario, and not just for those in the aviation industry. Toronto Pearson and the other airports in the regional system are so essential to the success of the region that the issue requires the attention of decision makers, planners, the business community and the general public in addition to airport and airline operators.

“Smart cities prioritize airports in their growth plans.”

- Bruce Simpson, Director, McKinsey & Company



Two possible courses of action have been developed into scenarios for discussion:

I. STATUS QUO

In this scenario, planning for each airport in the region carries on in a largely uncoordinated manner, and each facility reaches capacity due to its own constraints. Some airport specialization and minimal coordination among airports might occur to meet demands, but without a coordinated plan to maximize collective airport benefits.

The implication of a status quo approach is an inability at a regional level to accommodate air traffic demand. Air travel constraints will impede regional economic activity, and other airports in other cities will accommodate the valuable air travel activity that our region cannot. This scenario is currently playing out in London, England. The airports within the London air travel system have a collective maximum capacity of 130 million passengers annually. London Heathrow accounts for more than half of these passengers, and is operating at 99 per cent capacity with its two existing runways. The challenge is that the real demand in the London city-region is actually 170 million passengers annually. Many of the 40 million passengers that London cannot accommodate are diverting to other European hub cities and to Dubai International Airport, which is unconstrained by a dense urban context.

II. CREATE AN INTEGRATED SYSTEM OF AIRPORTS IN SOUTHERN ONTARIO WITH COMPLEMENTARY ROLES

The second scenario is to increase the regional coordination among airports so that they function as a multi-airport system instead of a collection of individual airports. The key difference in this scenario is that each airport takes on a particular role—an air travel division of labour—so that the overall air travel capacity is optimized to best meet the range of demands.

Formal and informal multi-airport systems are increasingly common in global city-regions. In North America, the clearest example of a formal multi-airport system is that operated by the Port Authority of New York & New Jersey, which includes John F. Kennedy, Newark Liberty, La Guardia, Stewart, Teterboro, and Atlantic City airports. Each airport plays a distinct role. For instance, John F. Kennedy is the main hub for international travel and cargo while LaGuardia specializes in short-to-medium haul travel. Newark plays a continental and more discount-priced international role. Even the relatively small Teterboro Airport has a key function: it acts as a general aviation (GA) reliever so that the small, private aircraft of the high-end business community do not take up commercial capacity at the major airports.

Well-known European examples include those in the London city-region, which includes the London Heathrow, Stansted, Luton, Gatwick, and London City airports, and the Paris city-region that relies on both the Charles de Gaulle and Paris-Orly airports.

An integrated, multi-airport system for Southern Ontario could take a number of forms, and the GTAA has initiated dialogue with airport stakeholders to assess the development of a multi-airport system that would best suit the air travel demands in Southern Ontario. An air travel division of labour already appears to be emerging in the region even without coordinated planning. As Toronto Pearson is increasingly becoming an international travel and cargo hub, Billy Bishop Toronto City Airport (BBTCA) provides short- to medium-haul travel within eastern North America, Oshawa Municipal Airport is increasing its private executive-class travel profile, and Hamilton International Airport is leveraging its strengths as a leading multi-modal cargo and courier airport.



A plan for an effective multi-airport system would need to consider all of the airports in the region in a coordinated manner to ensure that their services are complementary and not directly competitive, to maximize the system's effective capacity. It also will be critical to connect each airport to the region's urban centres through effective ground transportation, and public transit in particular. For a multi-airport system to succeed and truly support the prosperity of the region, each component must be highly accessible or else travellers will choose to use the most convenient airports, reducing the viability of the poorly connected airports while overburdening those that are well connected.

An integrated approach to ground transportation and the overall types of services provided would allow the region to maximize its comparative air advantage, so that the combined operations of the airports benefit the region as a whole. Transportation planning for the regional airport system should prioritize ease of access to and from each airport individually, but there also may be opportunities to improve the connections between the airports themselves. This would provide even greater travel choices for customers.

7 THE GROUND TRANSPORTATION IMPLICATIONS OF ACCOMMODATING AIRPORT GROWTH

Ground transportation to area airports will be critical for the region under any future air travel scenario. By 2043 there will be 15.5 million people residing in Southern Ontario—how will they get to and from Toronto Pearson and other regional airports? The regional economy and the success of the air transportation system depend on convenient trips from home or the office to the airport. In many international destinations the trip from the airport to the city centre is severely constrained by high levels of traffic congestion and a lack of transit investment. Southern Ontario may well be beginning to approach this point.

It is clear that reliance on single occupancy vehicles will no longer adequately service airport demand. In 2043 we will see a 25-35 per cent increase in driving times compared to 2014 conditions, and passengers will need to leave much earlier than ever before prior to their departure time due to traffic, creating severe passenger anxiety. Southern Ontario will need to follow the example of other successful regions and invest in airport-focused transportation systems that can provide reliable, convenient connections to key urban centres.

As a rule, best-in-class city regions invest in combinations of high speed rail, rail and bus rapid transit connections to their airports. These systems increase airport access for travellers and employees, connect airports to city centres and other transport nodes, and drive mutual airport and regional growth. London Heathrow is a prime example of a well-connected airport that serves the city-region. Travellers can pay a premium for direct access from the airport to central London via the Heathrow Express, or pay less for local service on the Heathrow Connect, and less again for the slower Underground line. Bus services also link the airport to a series of National Rail lines. Even with these effective existing transit services, new connections to the airport are under construction. Once completed, the new Crossrail transit system will provide metropolitan-wide high-speed rail service for London and the South-East, connecting the airport to significant employment areas such as the City and Canary Wharf, as well as commuter areas to the east and west of the city centre.

Integrated transportation planning has connected Greater London to its airport by considering the air, rail, and roadway systems holistically. Southern Ontario must emulate this model, and in particular focus on the crucial “last kilometre” connections to airports. In Southern Ontario, airports are not currently a focus of municipal and regional transportation planning because they are perceived as quasi-federal entities. However, airports like Toronto Pearson are in fact major transit hubs, and must be considered as integrated components of municipal and regional transportation systems.

A growing number of existing and planned transportation routes approach Toronto Pearson, including the existing GO Transit Kitchener line, the planned Regional Express Rail system, the under-construction Eglinton Crosstown, and even the SmartTrack concept, but none include plans to connect directly to the Airport. The new Union Pearson Express service does connect directly to the airport, and is an encouraging first step in integrated regional transportation planning. However, the Union Pearson Express system will only serve 800 passengers per hour, or 8 per cent of the passengers arriving by surface, and much more connectivity is needed to meet regional growth needs.

Passengers want proximity, flexibility and certainty when it comes to air travel, and will pay a premium for well-connected airports. Regional transportation investments—particularly those approaching Toronto Pearson—should be planned with this in mind, and should seize the opportunity to provide systems of supporting infrastructure that will connect everybody to the airports, and from the airports to the rest of the world.

Better transit connectivity can also support economic activity locally, as Toronto Pearson and the associated commercial and industrial lands are major employment areas in their own rights. Toronto Pearson has a 40,000 person employee community, of which just 17 per cent currently use transit to get to work. According to Metrolinx data, the surrounding employment area hosts an additional 245,000 employees,² which when combined with Toronto Pearson’s 40,000 employees represents the region’s second largest employment area after downtown Toronto.

Providing improved transit connectivity to Toronto Pearson and the surrounding employment lands could significantly reduce work-related private automobile trips in the area and provide safe and convenient travel options for employees.



Wikimedia - Craig James White

² March 3, 2015 Presentation to Metrolinx Board of Directors on Transportation Study of the Pearson Airport Area

8 THE PLANNING PROCESS GOING FORWARD

There is no longer any question of whether Southern Ontario could or should be a global urban region; it has achieved that status in every respect, and become a metropolis that is growing, thriving, diversifying and increasingly connected to other places around the world. The region may have acquired this status somewhat unintentionally, but the region must now face its future growth without hesitation and with proactive planning, so that its future population of 15.5 million people feel empowered by urban growth and not constrained by it.

The region's airports will play a major role in accommodating and supporting this growth, and there is a real opportunity to get out ahead of air travel demand by enhancing and optimizing aviation infrastructure and the ground transportation components that support it. Successful global city-regions have prioritized airports as part of their growth plans; regions that have not planned ahead for growth inevitably regret it. Regions that cannot keep pace with air travel demand will quickly see it divert to other regions, and it is very difficult and expensive to build infrastructure to fix a problem after it emerges. The London Heathrow experience is sobering and should not be repeated here. The Port Authority of New York and New Jersey is currently moving proactively to face their own growth challenge, and is poised to invest \$8 billion in the region's airports, including \$3.4 billion for new terminals at LaGuardia and Newark Liberty International airports. While these investments are badly needed to meet existing demand, they are catch-up measures expected to be very disruptive.

Southern Ontario can prevent the loss of un-accommodable demand and disruptive mid-stream upgrades by initiating the planning process now, but the window of opportunity is limited. Airports require long-term planning cycles of 20-30 years to support the development of large scale infrastructure like terminals and runways. Major ground transportation investments take nearly as long. The first decision that politicians, airport operators and planners must therefore make is simply to commit to coordinated transportation and land use planning at the regional scale, beginning immediately. The process will be complicated, so the region cannot afford to delay the dialogue. Of course, air carriers will also be essential participants in these discussions, as no air transportation plan can be viable without their input.

“There is no greater regional challenge or opportunity for planning and infrastructure development of the Toronto region than that presented by the maturation of Pearson International Airport. How we respond to this opportunity will define our future as a global city.”

- Richard Joy, Executive Director, Urban Land Institute (ULI) Toronto

Once the region's air travel stakeholders, planners, and decision-makers have committed to planning together to accommodate 90 million air passengers by 2043, they should address the critical questions outlined at the outset of this paper:

- **How can the region's governments and airport communities work more collaboratively? What are their mutual interests?**
- **What air transportation model should the region pursue in the face of the expected growth: uncoordinated planning at multiple airports or an integrated and optimized regional airport system?**
- **How can planners and decision-makers leverage the inherent connectivity provided by airports to inform infrastructure investment and overall development decisions?**
- **What ground transportation connections (rail, bus, truck, and car) are needed to support regional air travel demand and economic growth?**

The product of these discussions should be a coherent, long-term plan to integrate infrastructure funding, transportation planning (road, rail and air), and land use planning in the region and to support the role of airports as economic catalysts that drive major regional economic benefits.

For its part, the GTAA is taking a proactive stance and is laying out facts, engaging with the airlines, and reaching out to the governments and the surrounding communities. It is now time for other airport operators, decision-makers and planners to join the discussion and seize the opportunity to plan for successful regional growth.



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APPENDIX

B

FLYING TOGETHER, THE
SOUTHERN ONTARIO
AIRPORT NETWORK



Flying Together: The Southern Ontario Airport Network

May 2017



**SOUTHERN ONTARIO
AIRPORT NETWORK**

1

INTRODUCTION

Southern Ontario is set to experience significant growth over the next three decades and is one of the fastest growing regions in North America. Not surprisingly, demand for air travel across the region will follow suit, rising to approximately 110 million passengers over the same timeframe. This growth presents significant opportunities for the region, local communities and their airports.

As growth comes to Southern Ontario it is critical that we are ready for it. By working together, our region's airports will be better placed to support local economic development, and in doing so increase the competitiveness of the region, the province and the country. Successful cities and regions around the world have reaped the benefits of a network approach to supporting air service needs, and by better using the available airport infrastructure in Southern Ontario, our region can benefit as well. This approach will ensure that Southern Ontario is well placed to keep the jobs and economic benefits of growth in air service demand in the region.



UNPRECEDENTED AIR TRAVEL DEMAND IS COMING TO SOUTHERN ONTARIO

As the most densely populated and economically productive region in Canada, Southern Ontario is an engine of the Canadian economy. The region is Canada's export powerhouse, accounting for 37 per cent of the Canadian economy overall, 39 per cent of the goods exports and 48 per cent of the services exports. The region is also home to several Fortune 500 companies, 28 universities and colleges, and an innovation corridor that features the second-largest concentration of tech companies in North America.

It is no surprise this region has become a destination for people to live, work, play and invest, and the outlook for the region over the next several decades is strong. By 2043, the region's population is expected to grow to more than 15 million people. At the same time, the region's GDP is expected to double, reaching upwards of \$1.1 trillion. Driven by increased population, productivity gains and continued demand for Southern Ontario's exports, this growth will translate into a substantial increase in air passenger demand. It is estimated that more than 110 million passengers and over 1 million tonnes of cargo will flow through Southern Ontario's airports in 2043, compared to 49.1 million passengers and more than 470,000 tonnes of cargo today.

This expected growth in population, economic activity and air service demand presents challenges for which Southern Ontario must acknowledge and prepare.

First, a single airport alone cannot meet all the region's diverse demands. Based on current terminal capacity, the regional air travel capacity across all airports in Southern Ontario is currently estimated at 89 million passengers per year. The implications are sobering: By the late 2030s, regional air travel demand is likely to outpace the current capacity of the region's airports, making it more and more difficult to accommodate the needs of passengers and aviation stakeholders. If nothing changes, by the mid-2040s there could be an excess passenger demand of around 20 million passengers per year. These passengers could face crowded and congested facilities in Southern Ontario, or may even leave the region to have their travel needs met. The economic impact of those passengers not being served in Southern Ontario could reach as high as \$15 billion in GDP.

88 per cent of Southern Ontario's population lives in the metropolitan areas of the Greater Toronto Area, Hamilton, Kingston, Kitchener-Waterloo, London, Barrie/Simcoe County region, Niagara Falls/St. Catharines region, Oshawa/Durham region, Peterborough and Windsor.



Around the world, mega hub airports provide long haul, global connectivity and regional airports offer a range of important air travel services for the region. Services include flights to short and medium haul and/or leisure destinations; general aviation including, business aviation and flight training; provincial air services such as medevac and police services; processing of air cargo; establishing economic clusters to facilitate on-airport maintenance, repair and overhaul (MRO); and providing sites for aircraft and component manufacturing or R&D facilities.

Second, as the population and economy of Southern Ontario grow, so too will traffic congestion. Automobile travel times to Toronto Pearson are expected to rise 25–30 per cent on average, meaning passengers will need to leave earlier than ever before for their flights. Passengers throughout Southern Ontario will face worsening commute times to Toronto Pearson for travel.

Southern Ontario is not the first region to face this kind of growth and level of air service demand—the region can learn from the experiences of other regions around the world, particularly those that have mega hub airports. These regions rely on a network of regional airports to meet a range of air travel services that cannot all be accommodated at one airport alone. London, Paris, Los Angeles and New York all have a number of airports that support the diverse aviation needs of their region. In these regions, passengers and businesses are served by various airports, allowing overall air service capacity to be optimized to best meet the needs of the region as a whole.

3

THE SOUTHERN ONTARIO AIRPORT NETWORK

Each member of the Southern Ontario Airport Network believes it is essential to prepare for growth by better using the available capacity of these airports and the transportation options that link them in order to keep the region connected and support local economies in a sustainable and responsible way. The network consists of eleven of the most significant commercial airports in the region, which vary greatly in scale and service profile, and share the goal of supporting the needs of Southern Ontario communities and helping develop economic opportunities. These airports are:

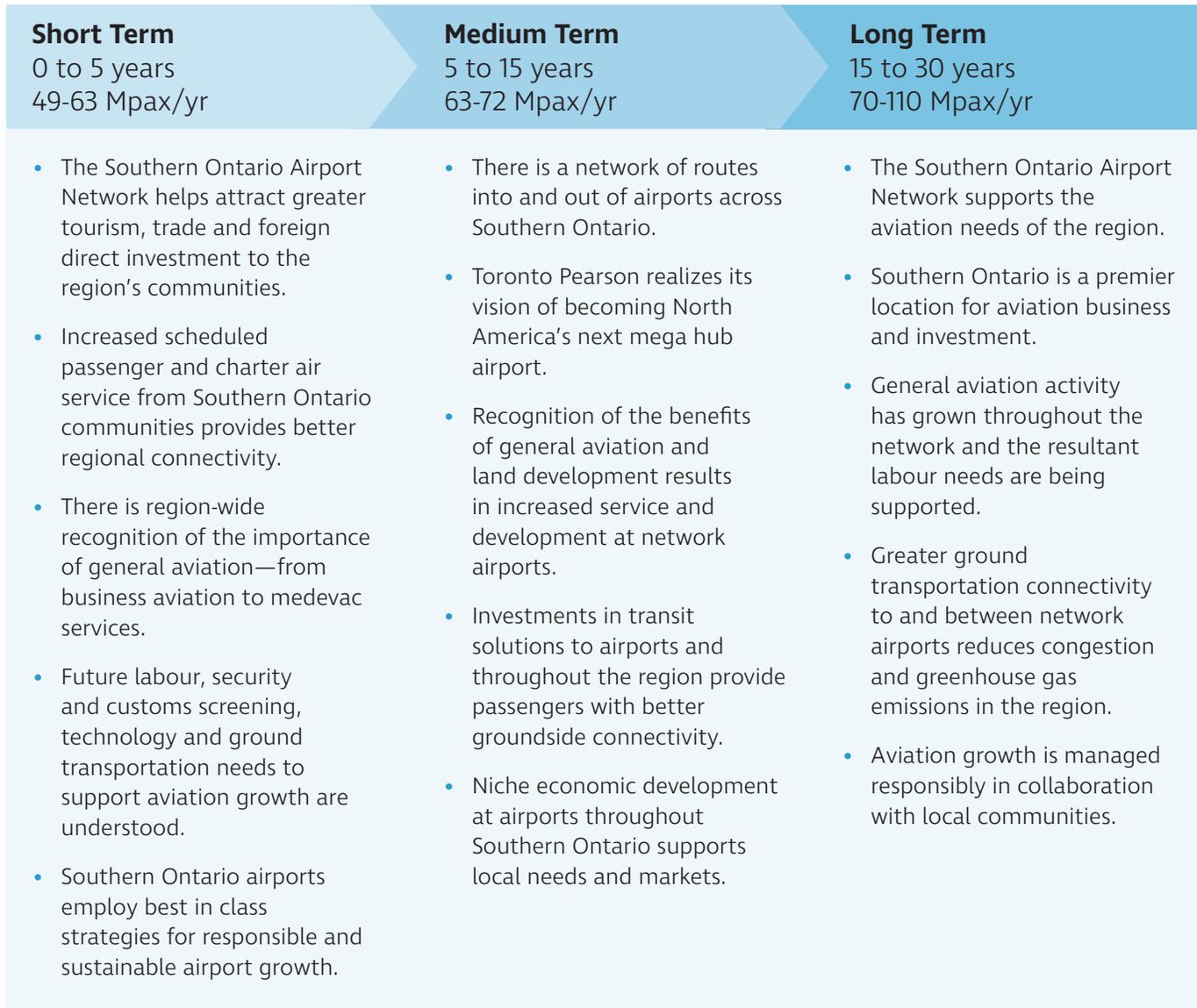
- **Toronto Pearson Airport**
- **Billy Bishop Toronto City Airport**
- **Hamilton John C. Munro International Airport**
- **Kingston/Norman Rogers Airport**
- **Lake Simcoe Regional Airport**
- **London International Airport**
- **Oshawa Executive Airport**
- **Niagara District Airport**
- **Peterborough Airport**
- **Region of Waterloo International Airport**
- **Windsor International Airport**

While each airport will continue to develop its business and make independent strategic decisions based on local business drivers and community needs and acceptance, the Southern Ontario Airport Network provides a forum to discuss how to understand the opportunities and constraints to air service development in the region in a comprehensive way.



Together, the members of the Southern Ontario Airport Network have a clear vision for Southern Ontario and the benefits they can deliver over the next 30 years, which is set out in the graphic below:

The Southern Ontario Airport Network’s Vision



The members of the Southern Ontario Airport Network believe the best way to support the region is through open discussion about the opportunities and challenges that growth presents—not only for airports, but also for their surrounding communities; however, airport operations and growth have impacts on local communities, such as noise, and these communities expect airports to grow responsibly and operate in a sustainable manner. The members commit to remain engaged with their communities and develop in ways that are considerate of the surrounding communities. Doing so will support the region’s growth and keep the social and economic benefits associated with growth in Southern Ontario.

The Region of Waterloo International Airport recently updated its 20 year Master Plan. This long-term growth strategy was the result of extensive consultation with local residents and the business community including numerous community information sessions, an online feedback portal and public speaking opportunities. The widely supported \$375 million plan pursues a “just-in-time” approach to infrastructure investment that is tied to passenger traffic so that as the community and its need for connectivity grow, so too will the airport.



SOUTHERN ONTARIO AIRPORTS CAN PROPEL THE REGION'S ECONOMY

Southern Ontario's airports are drivers of connectivity and economic activity; they promote economic development both directly and indirectly, and generate significant economic impact through catalytic effects on other industries. These airports are enablers of tourism, trade, investment and improved productivity.

All airports in the network offer economic benefits to the region and their respective communities, and all have unique specialties, capabilities and demand drivers. Each airport supports its surrounding community by amplifying the strengths and capabilities that already exist locally, and by supporting three fundamental air transport sectors:

1. Scheduled/charter passenger and cargo air service
2. Airport-based businesses that support industry operations (e.g., aircraft maintenance, repair and overhaul, aircraft and components manufacturing, logistics and supply centres, fuel depots, etc.)
3. General aviation (e.g., flight training, corporate aviation, medevac flights, etc.)

Mega hub airports support overall regional and national economic growth and international connectivity, which drives up economic opportunity, tourism and other air travel demand. Southern Ontario airports benefit from the increased economic opportunity and air travel demand generated by the mega hub, while accommodating

air transportation operations that may no longer represent the "highest and best use" of capacity at the mega hub airport. The relationship between airports is synergistic. For example, additional international connectivity at Toronto Pearson facilitates trade, investment and tourism that support jobs in communities throughout the region, including our network airport communities, which in turn stimulates the demand for air travel from those airports.

As the roles of airports in Southern Ontario grow and evolve, network airports will provide enhanced, customized mixes of services from the three sectors according to their individual strategic plans and the strategic plans of their surrounding communities, and Toronto Pearson will continue to focus on long haul international traffic that connects the region and North America to the world.

Jobs throughout Southern Ontario are made possible by the global connectivity provided through Toronto Pearson. As a result, demand for air travel—both for business and leisure—is generated throughout the region.



A mega hub airport generates economic benefits for the region and Canada

Toronto Pearson provides world-class connectivity and economic benefits to Canada. It connects Southern Ontario to the rest of Canada, and Canada to 67 per cent of the world's economies. Toronto Pearson has experienced unprecedented growth in recent years, reflecting the region's growth in demand for air services, and it has established itself as North America's second-busiest airport by international passenger volumes. The airport's global connectivity facilitates roughly 330,000 jobs in communities all over Ontario.

To support the needs of the region and the country, Toronto Pearson is pursuing a vision to become North America's next mega hub airport. Mega hub airports are highly connected to a large portion of the world's economies and benefit from a high proportion of international connecting passengers. This connectivity is a potential competitive advantage for the region and brings with it economic benefits through the facilitation of greater trade, tourism and foreign direct investment. Specifically, Toronto Pearson's evolution to a mega hub is expected to connect Canada to 80 per cent of the world's economy, boost the airport's GDP contribution, and facilitate additional jobs.

To realize these benefits and support economic development and growth in Southern Ontario, the region must better use the available capacity at network airports. This will spread the economic benefits of growth across the region.

Toronto Pearson Global Hub, 2016

- 44 million passengers
- 330,000 jobs facilitated
- 6.3% of Ontario GDP
- Connected to 67% of global

Toronto Pearson Mega Hub, 2035

- 80 million passengers
- 700,000 jobs facilitated
- 8.5% of Ontario GDP
- Connected to 80% of global economies

Windsor International Airport has seen 42 per cent growth over the last three years due in large part to increased demand from the Windsor area and Americans utilizing the connection to Toronto Pearson for their national and global air travel needs.



Wikimedia - P199

Airports can support greater economic opportunities throughout Southern Ontario

There is a clear opportunity for our airports to enhance their economic performance by accommodating a greater volume and variety of air service demand. Currently, each airport has available capacity for additional air service or related operations:

- London, Windsor, Waterloo, Hamilton and Kingston airports all have the ability to substantially expand current operations as they have available capacity.
- Peterborough, Niagara and Lake Simcoe airports have the capacity to start charter or scheduled service and expand current general aviation operations.
- Oshawa airport has capacity for additional general aviation activity.
- Billy Bishop Airport continues to optimize its scheduled air service and general aviation operations while moving to add US Customs and Border pre-clearance services, upgrading terminal facilities and can support new regional services from their fixed based operators.

In consultation with its local community, stakeholders and government, each airport will determine how best to enhance its own operations or economic impact by augmenting the air services it provides and/or leveraging its land development opportunities.

Untapped air travel demand exists in Southern Ontario

Many of the network airports have the capacity to support additional air service. There are also clear indications that there is market demand to match. Today, the catchment area around each of the five non-Toronto airports with scheduled service generates roughly 45 per cent of Southern Ontario's GDP, but only 5 per cent of scheduled passenger flights pass through these airports. Introducing new or enhanced scheduled service could present significant economic benefits for airport communities.

Although it is ultimately an airline's business decision to determine where to grow or establish service, local passengers are increasingly searching for flights to several leisure and business destinations from communities throughout Southern Ontario that have airports. For example, in 2015, these passengers bought more than 1.4 million tickets on just one flight search website (www.skyscanner.com). Although the majority of these flights originated from Toronto Pearson, the demand is clearly originating in network airport communities. As the population increases across Southern Ontario, this demand will only grow in tandem.

The available capacity at network airports presents an opportunity to develop passenger service based on local market demands, providing more choice to passengers and businesses. In doing so, network airports can grow to cater to their local areas better than Toronto Pearson can for domestic and local-driven leisure service. Recent examples demonstrate that airports throughout the region can support new scheduled air services for untapped markets.



Seasonal summer flights from Hamilton to Vancouver will double in 2017, jumping from three times weekly in 2016 to seven times weekly in 2017. This represents more than 100 per cent growth in capacity over last year and will provide Southern Ontario passengers more frequent service to Canada's west coast.

In 2016, Greater Toronto Airways introduced twice daily, 12-minute flights between Billy Bishop Airport and Niagara District Airport in Niagara-on-the-Lake, providing a high-speed service connecting the city to the popular tourist destination.



Additional passenger service from network airports would deliver the following benefits:

- Passengers would enjoy faster, more convenient airport access from home and work, and faster processing times.
- Airports would realize the financial benefits of increased passenger service.
- Local communities would experience economic growth in terms of jobs and tourism.
- The region would increase its overall passenger volume capacity by using its airport infrastructure and resources more efficiently.
- Air carriers could support traffic demands throughout Southern Ontario while using Toronto Pearson's capacity as a mega hub airport.

Air passenger growth can benefit all of Southern Ontario's airports and their surrounding communities, but only if the region's air and ground transportation infrastructure is proactively enhanced to accommodate the surge in demand.

Airports are critical for general aviation and the future of the air travel sector

In addition to enhancing commercial passenger service, network airports are well positioned to expand their role in providing general aviation services which may migrate to alternative, less congested airports given that they can provide greater options for departure and arrival times. General aviation refers to all civilian flying except scheduled passenger and cargo services. This includes corporate aviation, recreational aviation, medevac and flight training on all non-military aircraft.

Network airports already play an important role in supporting general aviation in Southern Ontario, and many are hubs for these activities and have already prioritized general aviation in their future planning. Southern Ontario has the potential and local demand to successfully pursue growth opportunities in this space.

Airports provide facilities for important and life-saving provincial aviation services including police and medevac operations. Last year, Southern Ontario Airport Network airports supported more than 11,000 medevac movements.

Advanced education and training are critical to the success of the region's air industry and connectivity. As the region's air service demand increases, the aviation industry will need to attract and train new employees. Pilots are in heavy demand globally, and when more than 50 per cent of pilots in North America retire in the next 15 years, the demand for pilots—and the flight schools that train them—will climb even higher.

Establishing and enhancing flight schools can bring significant economic benefits to airports and their surrounding communities, and many Southern Ontario airports are investing in flight schools to fuel their own success and ensure the continued success of the regional air sector.



In 2016, Oshawa Executive Airport accommodated just over 70,000 movements supporting corporate aviation, medevac and flight training activities

Seneca College's Peterborough Aviation Campus, accessed by 150 students and 50 faculty, is expected to result in \$13 million in local economic benefit annually.



Airports can leverage their land holdings to establish new economic clusters

Many network airports have the ability to develop their airport lands for a variety of aviation and non-aviation uses. Outside of Toronto, network airports have considerable land available for development (more than 2,000 acres in total), much of which already has airside access or can be zoned accordingly.

Developing airport land at network airports can help attract valuable airport-related uses such as MRO facilities, flight training centres, fixed-base operators to provide general aviation services and aircraft manufacturing facilities.

As Southern Ontario's GDP increases, so will opportunities to develop airport land and establish high-value clusters of these airport-related uses. These aviation-related clusters would not only generate rental revenues for the airports, but also allow them to establish value-added economic zones within their communities, attract investment, businesses and jobs, and increase demand for air travel.

The following are some existing industry-leading examples of aviation-related clusters:

- Alma, Quebec's unmanned aerial services cluster, with 19 related firms on the airport's premises
- Wichita, Kansas' aircraft manufacturing cluster, including facilities for major manufacturers such as Beechcraft, Bombardier and Cessna
- Daytona Beach, Florida's flight training cluster, which is home to Embry-Riddle University and seven other flight schools

Airport clusters unrelated to aviation are also possible, given the quantity of land that many airports have available for development. For example, Windsor, Indianapolis and Thunder Bay airports have large solar farms, and Lake Simcoe will soon have a solar farm of its own.

Over the past 24 months, the Lake Simcoe Regional Airport has generated over \$9 million in private investment for commercial aviation facilities that support the airport's 2,500 jet/turbine aircraft movements annually.



London International Airport is home to more than 50 aviation businesses, including maintenance, charter, training and manufacturing operations. The airport cluster employs more 1,300 individuals and ranks in the top 10 employers in the London area, and it has an economic impact to the area in excess of \$357 million annually.

5

TAKING FLIGHT: FROM CONCEPT TO REALITY

The Southern Ontario Airport Network is a forum for Southern Ontario's leading commercial airports to work together to support the region's growth and amplify the overall impact of air service to the region. This forum is the best way to identify such synergistic business opportunities and to enhance air transportation service and capacity for the region rather than on an airport-by-airport basis. Airports will continue to make their own business decisions based on their local business drivers and community input, but they will be supported by a group of airports dedicated to ensuring the economic and social benefits of the region's growth remain in Southern Ontario.



Realizing this long term vision of having all of Southern Ontario's aviation needs supported by a network of airports across the region with convenient connectivity will take decades. That is why members have prioritized the following activities in the first five years:

1. Raise the awareness and profile of airports within the Southern Ontario Airport Network as:
 - key enablers of trade, tourism and foreign direct investment (FDI) in Ontario and Canada;
 - sources of jobs in each airport community and beyond;
 - providers of diverse airport options for passengers, shippers, businesses and air carriers; and
 - enablers of Toronto Pearson's role as Canada's mega hub airport.
2. Promote Southern Ontario to attract greater tourism, trade and FDI.
3. Develop a common source of data that will allow all airports to understand the future needs of this growing region and identify future air service development opportunities. To accomplish this, network airports are committed to:
 - updating and expanding economic impact analyses to assess how airports collectively and individually support trade, tourism and foreign direct investment;
 - engaging with businesses in Southern Ontario and aviation industries, and developing an assessment of current and future aviation industry growth needs, including for labour, security screening and technology;
 - completing a catchment/demand study of the region to identify opportunities for future point-to-point growth in leisure, business aviation and passenger markets at our airports;
 - understanding the ground transportation needs in Southern Ontario and advocating for investment in ground transportation improvements that will reduce congestion and greenhouse gas emissions; and
 - developing best-in-class strategies for responsible and sustainable airport growth, including community engagement and noise management.

CONCLUSION

The members of the Southern Ontario Airport Network are pleased to launch their collective efforts to support Southern Ontario's future air travel needs. In consultation with their local communities and key stakeholders, they will continue to develop detailed action plans for each of their airports independently; however, they will do so with a view to long-term and region-wide needs.

The potential benefits of this approach are substantial. Better use of network airports' capacity will:

- increase air service choice for passengers and businesses into and out of Southern Ontario from the metropolitan areas of Southern Ontario;
- boost the economic impact of individual airports and support new economic activity in communities throughout the region;
- support better people and goods movement across the region by decreasing traffic congestion;
- support the up-take of emerging industry trends, including ultra low cost carriers;
- increase job opportunities and economic productivity for the region, the province and Canada; and
- allow Toronto Pearson to become a mega hub airport, bringing with it the extensive associated social and economic benefits.

Conversely, the cost of inaction is high. If Southern Ontario airports do not capitalize on the growth opportunities in the short, medium and longer terms and continue to plan and develop individually, the following scenarios are possible:

- Southern Ontario will miss out on the economic and social benefits of air service growth and will not be able to serve passenger demands effectively.
- Toronto Pearson will be unable to realize its full potential as a mega hub airport and passengers that use Toronto Pearson as a connection hub would bypass the airport and go to other hubs in the United States and elsewhere.
- Flight frequency to less popular destinations may decrease in favour of larger aircraft flying to more popular destinations, reducing options for Southern Ontario's passengers and opportunities for Southern Ontario businesses.
- Southern Ontario residents may be forced to take other forms of transportation to travel to short or medium-haul destinations.
- Nearby U.S. airports (e.g., Detroit, Buffalo, Niagara Falls and Syracuse) may become much more attractive to passengers leaving from or arriving in Southern Ontario.

The members of the Southern Ontario Airport Network each believe that these scenarios are unacceptable, and network airports are committed to optimizing the use of their existing assets to accommodate future growth so that southern Ontario can reap the benefits of excellent domestic and international connectivity.

The member airports look forward to continuing consultations with their communities and stakeholders, aviation partners and government to collectively advance air travel and economic prosperity in Southern Ontario.



SOUTHERN ONTARIO AIRPORT NETWORK

**BILLY
BISHOP**
TORONTO CITY AIRPORT

John C. Munro
HAMILTON
INTERNATIONAL AIRPORT

NIAGARA | DISTRICT AIRPORT
gateway to the peninsula

LakeSimcoe
Regional Airport

London
International
start here. go *anywhere.*

Kingston
Airport
from here to anywhere™

Oshawa
Executive Airport

Peterborough Airport

Region of Waterloo
**INTERNATIONAL
AIRPORT**

Toronto Pearson
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APPENDIX

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FUTURE-READY AIRPORTS

Future-ready airports

Airports are back in the spotlight as catalysts for future growth

January 2017



Highlights

- pg. 3* We begin by describing the catalytic role of airport infrastructure
- pg. 5* We define the ingredients for success that airports should focus on to be future-ready
- pg. 9* We test the top 30 US airports against our ingredients for success in PwC's Index of Future-Ready Airports
- pg. 11* Finally, we discuss some of the practical steps necessary for US airports to take that helps increase regional growth and competitiveness

The aviation industry in the United States has evolved considerably over the last few decades. Taking a flight is now a frequent occurrence for many, as common for some as taking a city bus, with passenger experiences and expectations having changed along the way. Deregulation of the aviation sector since 1978 has spurred much of the growth of airport assets. With passenger volumes growing, the aviation sector in the US now generates nearly \$1.6 trillion per annum for the economy through its entire value chain.¹ As the Federal Aviation Administration (FAA) anticipates a 2.6% year-on-year growth rate in US aviation traffic out to 2036,² the sector looks set to grow faster than the US economy as a whole during the same time.

Airports have always had a significant, if under-appreciated, role to play in enabling regional economic growth. They permit connections between cities, which catalyzes economic activities through amenities and needs for non-resident passengers in transit, as well as supporting aviation-related services, co-located commercial development and the provision of infrastructure.

Investment in airport infrastructure and services is therefore critical to sustain this economic dividend. However, with a projected funding shortfall of \$75.7 billion by 2019 that is already making it hard to keep pace with passenger and freight carriers' demand,³ US airports will likely struggle to improve their legacy infrastructure, let alone consider improvements that maximize their regional economic benefits.

This report addresses the key issues that airports should consider in planning for and implementing future-ready infrastructure that could deliver improved economic growth and competitiveness for the cities and regions they serve.

¹ Federal Aviation Administration, *The Economic Impact of Civil Aviation on the U.S. Economy*, November 2016, https://www.faa.gov/air_traffic/publications/media/2016-economic-impact-report_FINAL.pdf.

² Federal Aviation Administration, *FAA Aerospace Forecast: Fiscal Year 2016-2036*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2016-36_FAA_Aerospace_Forecast.pdf.

³ Airports Council International – North America, *Airport Capital Development Needs 2015-2019*, March 2015, http://www.aci-na.org/sites/default/files/2014-15_capital_needs_survey_report_final.pdf.

The catalytic role of airport infrastructure

Originally seen as risky enterprises that required the support of local governments, nearly all airports in the US are still publicly owned and operated. But with fiscal tightening from all sides – constrained local government coffers, the halving in real terms of federal funding through the Passenger Facility Charge⁴ (PFC), the restricted uses of grants under the Airport Improvement Program (AIP), and limited access to private investment – US airports are struggling to invest in capital improvement. This is contributing to tangible issues apparent to passengers such as congestion and delays inside terminals and at gates – and a drag on the economy in the order of \$22 billion as of 2012, anticipated to rise to \$34 billion by 2020 and \$63 billion by 2040.⁵

Some airports are starting long-awaited terminal upgrades: Los Angeles International Airport (LAX) is working on a \$5 billion program to modernize and improve accessibility, Atlanta has started a \$6 billion expansion of its Hartsfield-Jackson Airport, and the Port Authority of New York/New Jersey has started work on a \$2 billion program for a new Terminal A at Newark Liberty International Airport and closed on a \$4 billion public-private partnership (PPP) to renovate LaGuardia Airport's Terminal B. While welcome improvements, the fact remains that the average airport terminal (including renovation) in the US is over 20 years old. The scale of the challenge facing airports across the US therefore remains significant.

Our view is that recapitalization of airport infrastructure should be tailored to maximize regional economic growth and contribute to city competitiveness.

Airports can drive competitive advantage

Airports are too often seen as merely supporting assets to the revenue generators of air travel. However, airports have the potential to catalyze massive economic benefits outside of the perimeter fence. The degree to which this can be capitalized depends on comprehensive and strategic planning, and prudent and integrated execution.

When designed, executed and operated poorly, airports can be a drain on a city, over drawing public funds, choking highways with traffic, squeezing in passengers through long security lines and providing a negative experience for users overall. In a recent PwC survey of business travelers through New York City's three main airports,⁶ over half said that they had decided at least once in the past year to avoid flying into the city for a meeting, citing dissatisfaction with airport facilities as their main reason. The loss of future passengers – and missed opportunity for increased economic growth – is therefore apparent.

However, when designed, executed and operated well, airports will generate more jobs, facilitate increased business interactions, encourage co-located commercial development, support increased trade in goods, and will likely open up regions to more cross-sector investment. This is being recognized in airport developments around the world, with European and Asian airports dominating various surveys and rankings of airport quality and projected economic growth.

⁴ US Congress, Senate, Committee on Commerce, Science, Technology, *Statement of Todd Hauptli President and CEO American Association of Airport Executives Before the Subcommittee on Aviation Operations, Safety, and Security*, April 23, 2015, https://www.commerce.senate.gov/public/_cache/files/5fa4e196-a57b-4c53-b9d3-ba2ba3f5fe86/FEF643B2FA75EAFB6B9602C1D28B4640.04-23-15-hauptli-final.pdf.

⁵ American Society of Civil Engineers, *2013 Report Card for America's Infrastructure*, <http://www.infrastructurereportcard.org/a/#p/aviation/overview>.

⁶ 3,763 executives from 74 companies representing every US state and 32 foreign countries responded to the survey, conducted this July and August in association with the Partnership for New York City (PfnYC).

The aviation sector in the US generates nearly **\$1.6 trillion**.⁷

For example, Singapore Changi (SIN) – the World’s Best Airport in Skytrax’s 2016 awards⁸ – gets a number of things right. Designed with passenger experience in mind, the airport terminal boasts a number of both leisure and business amenities, making it an ideal transit hub. With high-frequency rail links to the city, SIN is integrated with the urban fabric of Singapore.

In the US, airports such as Dallas-Fort Worth (DFW) – the World’s 58th Best Airport in Skytrax’s 2016 awards – have addressed other areas. While passenger experience and terminal quality may not have been comparable to European and Asian peers, DFW has focused on the economic linkages that connect it to the Dallas-Fort Worth metropolitan area through the co-located retail and commercial Las Colinas development. DFW has focused on creating opportunities for various economic sectors to benefit from access to the airport, serving as the primary hub of economic development in northern Texas with multiple corporate headquarters located nearby and strengthening the economic corridor through capital projects such as the high speed rail (HSR) proposals under consideration.

An airport that embraces and plans for these activities will likely influence where companies choose to do business. In our survey, over a third of companies said airport quality had a medium or high impact on where corporate headquarters and other offices are located, clearly indicating that is one of several major criterion to evaluate in the growth plans for their respective businesses. US airports are increasingly recognizing this, with concepts such as "airport cities" in various stages of planning, such as in the cases of Memphis and Denver international airports.



***New York City’s
LaGuardia Terminal B
renovation via Public-
Private Partnership⁹***

⁷ Federal Aviation Administration, The Economic Impact of Civil Aviation on the U.S. Economy, November 2016, https://www.faa.gov/air_traffic/publications/media/2016-economic-impact-report_FINAL.pdf.

⁸ Skytrax, “Singapore Changi Airport named as the World’s Best Airport,” March 16, 2016, http://www.airlinequality.com/news/airport_awards_2016/.

⁹ New York State Governor Andrew M. Cuomo press release, “Governor Cuomo Announces Financial Closing on Transformational Redevelopment of LaGuardia Airport,” June 1, 2016.

Ingredients for success

Five focus areas for future-ready airports to help maximize regional growth and competitiveness

To be ready for the future, airports should plan for infrastructure that is holistic and maximizes its region's competitiveness. We know this from our experience working with a number of airport clients. And we see five key focus areas that airports should get right to be future-ready.



1. On-time performance

An issue that is always top of mind for airport executives is on-time performance, even though, to a large extent, it is widely acknowledged that airports are often at the mercy of airlines and the weather in this regard. Although on-time performance across US airports in the last five years is a respectable 80%¹⁰ – a system average that is among the top 20 airports globally¹¹ – airports can still enable better performance through efficient terminal design, signage and ground handling practices. Efficient flight operations ensures that passengers get to their destinations on time, and that air freight arrives on a scheduled basis, with time-sensitive and just-in-time cargo deliveries being important to ensure the smooth running of a local economy.

US airports are also maximizing their regional competitiveness by working together with airlines and other stakeholders within the Next Generation Air Transportation System (NextGen) to ensure safe and timely flight operations.

¹⁰ US Department of Transportation, Bureau of Transportation Statistics, "Airline On-Time Statistics and Delay Causes, On-Time Arrival Performance – National (August 2016)," http://www.transtats.bts.gov/ot_delay/OT_DelayCause1.asp?pn=1.

¹¹ OAG, *2014 On-time performance results for airlines and airports*, January 2015, <http://airlines.iata.org/system/files/whitepaper/oag%20white%20paper%20knowledge%20centre%20sponsored%20content.pdf>.

The *aggregated cost of getting to and from* the airport in NYC is estimated to reach **\$16.1 billion** by 2025.



2. Terminal efficiency

Airports that allow the efficient movement of passengers from curbside drop-off to gates reap tangible benefits in terms of increased passenger satisfaction, which translates into greater passenger volumes and increased terminal revenue. At a foundational level, this can be facilitated through terminal signage, information provision, and efficient design that factors in how passengers move through the terminal and where bottlenecks occur – such as at security, which has an average wait time of 18 minutes across the 30 largest airports in the US.¹²

Airports are increasingly becoming future-ready by using technology to provide real-time information to passengers regarding wait times, and by providing remote check-in, pre-clearance options and self-service baggage drops that speed up navigating the airport maze. Mobile technology has been a boon to airports, allowing them to offset the cost of dedicated infrastructure by making such information platform-agnostic, with passengers being able to access relevant airport information through a mobile app. However, to be future-ready, airports should weigh these benefits against the risks to information security from cyber threats, for example, and put into place managed safeguards that protect against those threats.



3. Terminal amenities

Terminal amenities are a key issue for a significant number of airport ranking indices. While many of these focus on the needs of (typically) leisure travelers – incorporating into their scoring the availability of retail, leisure and cultural facilities – airports also need to cater to the needs of business travelers if they are to drive regional competitiveness. Of particular importance are amenities tailored to business travelers that allow continuity of work while passing through terminals. In our survey of business travelers through New York City airports, more than a third cited passenger comfort and terminal cleanliness as priorities.¹³ While the majority of US airports offer free Wi-Fi,¹⁴ for example, airports can do more to make it easy for business travelers to work on the go. These include collaboration spaces such as #Converge@flySFO at San Francisco’s International Terminal, as well as low-cost, sensible measures such as clean restrooms, workstations and power charging. The short of it is that business travelers, in particular, are savvy and can identify best practices from around the world. US airports should do more to meet the expectations of a more global and discerning customer base.

¹² US Customs and Border Protection, CBP Airport Wait Times online database, <http://awt.cbp.gov/>, accessed November 7, 2016.

¹³ 3,763 executives from 74 companies representing every US state and 32 foreign countries responded to the survey, conducted this July and August in association with the Partnership for New York City (PfNYC)

¹⁴ Keri Ann O’Riordan, “Updated Airport Wi-Fi Guide”, April 16, 2015, blog at Airfarewatchdog.com, <http://www.airfarewatchdog.com/blog/22912913/updated-airport-wi-fi-guide/>, accessed November 7, 2016.



4. Urban connectivity

Airports are ultimately a means to getting to an end, rather than a destination in and of themselves. Airports need to prioritize high-quality mass transit connections to and from downtown areas. Passengers incorporate travel times between airports and final destinations into their trip planning, and airports need to do the same. Private vehicle use is currently the main mode of transport to and from US airports, and while there are benefits to this in reduced infrastructure costs, this needs to be weighed against the costs of congestion. For example, in New York City, which is known for gridlocked traffic patterns in getting to and from its airports, particularly during rush hour, this aggregated cost associated with congestion is estimated to reach \$16.1 billion by 2025.¹⁵

While many airports are still grappling with the emergence of rideshare apps disrupting the relationships that regulated taxicabs have had with cities, there is recognition that there is no one-size-fits-all transit solution for airports. Each option depends on ridership, density, flight schedules and more, and airports need to work with cities as well as transport agencies and providers to identify better ways of facilitating passengers in reaching their final destination.



5. Regional economic links

Airports drive regional competitiveness when physical, economic and material connections are optimized between airports and their respective cities. Most large US airports consider, or at least quantify, their economic impacts in some way but rarely focus on using this understanding to strengthen their contribution to regional competitiveness.

There are a few exceptions, such as the previously mentioned DFW, which are optimizing airport strategy to adopt a focus on driving regional economic growth. For many airports this begins with in-terminal amenities for business travelers; for others it is about working with cities to establish reliable and frequent transport connections to cities – such as Denver’s new University of Colorado A-line, and the planned Phase II Dulles extension of the Washington Metro Silver Line. Where it is available, more sophisticated airports also consider utilizing on-airport or adjacent real estate for high value-added commercial developments. These can include commercial infrastructure such as datacenters, research facilities and incubators as well as both established and start-up firms that cannot afford downtown commercial leases. Leading airports are integrating these regional assets with airline route strategy and partnering with regional economic development organizations to attract and expand business across a global portfolio.

Variouly called “airport cities” or “aerotropolises”, airports are beginning to leverage their strong political backing, global reach, high-quality infrastructure, and undervalued real estate to serve as growth poles in driving regional competitiveness. This will be a key feature of future-ready airports.

¹⁵ “The Facts: New York Air Congestion,” fact sheet, Better Airport Alliance, Regional Planning Association, <http://www.rpa.org/pdf/BetterAirportsAlliance-Sheet.pdf>.

“Business travelers are savvy and can identify best practices from around the world.”



How future-ready are US airports?

Airports should address five focus areas to optimize their contribution to regional growth. We evaluated 30 of the largest airports in the US, accounting for 72% of all passenger boardings,¹⁶ to understand which airports have the ingredients to help increase competitive advantage for their regions.

While numerous airport indices and league tables exist, these are typically catered to airport users and emphasize overall passenger experience. PwC's *Index of Future-Ready Airports in the United States* identifies those that have the key ingredients necessary to catalyze regional competitiveness and growth.

PwC's 2017 Index of Future-Ready Airports in the United States

Rank			Urban connectivity	On-time performance	Terminal efficiency	Terminal amenities	Regional economic links	SCORE
1	CLT	Charlotte-Douglas International Airport	6.9	8.4	9.1	7.3	9.4	8.0
2	SEA	Seattle-Tacoma International Airport	6.8	8.3	6.7	6.3	9.3	7.3
3	SLC	Salt Lake City International Airport	7.4	8.9	8.3	5.6	5.1	6.8
4	DEN	Denver International Airport	6.7	6.7	7.2	7.9	5.1	6.7
5	PHX	Phoenix Sky Harbor International Airport	4.8	8.5	9.3	7.6	5.1	6.6
6	ATL	Hartsfield-Jackson Atlanta International Airport	8.1	6.6	7.7	7.0	3.2	6.6
7	BWI	Baltimore-Washington International Airport	6.0	7.5	8.5	5.9	6.1	6.5
8	MSP	Minneapolis-St. Paul International Airport	5.9	6.5	7.8	8.9	2.3	6.3
9	BOS	Logan International Airport	8.5	3.8	3.9	3.7	8.5	6.1
10	DFW	Dallas-Fort Worth International Airport	3.2	3.1	6.3	6.7	9.2	5.7
11	TPA	Tampa International Airport	5.3	5.2	5.3	9.2	2.5	5.7
12	SAN	San Diego International Airport	8.4	8.1	7.8	3.3	1.5	5.6
13	DCA	Ronald Reagan Washington National Airport	8.1	5.3	5.6	2.3	5.5	5.5
14	SFO	San Francisco International Airport	7.6	0.7	1.2	8.7	2.5	5.2
15	HNL	Honolulu International Airport	6.1	9.3	5.5	1.1	6.5	5.2
16	PDX	Portland International Airport	2.7	8.7	7.4	9.0	0.7	5.2
17	MDW	Midway International Airport	7.1	8.7	9.0	2.6	0.4	5.1
18	PHL	Philadelphia International Airport	7.1	5.0	6.4	4.0	1.5	4.9
19	LAS	McCarran International Airport	5.6	7.0	3.7	5.2	2.5	4.7
20	FLL	Fort Lauderdale-Hollywood International Airport	8.4	2.8	4.4	3.0	2.4	4.7
21	EWR	Newark Liberty International Airport	7.6	1.0	6.1	0.8	5.7	4.7
22	MCO	Orlando International Airport	5.4	3.8	0.5	8.4	2.1	4.6
23	DTW	Detroit Metropolitan Airport	0.1	6.5	6.2	8.2	4.1	4.5
24	IAD	Washington Dulles International Airport	2.8	7.1	7.4	2.1	4.8	4.1
25	LAX	Los Angeles International Airport	4.2	4.2	2.6	1.0	8.0	3.9
26	ORD	Chicago O'Hare International Airport	5.7	3.1	4.3	1.8	3.7	3.8
27	IAH	George Bush Intercontinental Airport	1.8	5.7	3.1	1.6	7.0	3.4
28	MIA	Miami International Airport	7.5	2.1	0.4	0.7	2.7	3.2
29	JFK	John F. Kennedy International Airport	4.2	0.6	2.0	1.3	3.8	2.7
30	LGA	LaGuardia Airport	2.9	0.6	1.4	0.6	6.0	2.5

Sources: PwC analysis using data from 30 US airports, Federal Aviation Administration (FAA), US Department of Transport (DoT) Bureau of Transportation Statistics (BTS), US Customs and Border Protection (CBP), International Air Transport Association (IATA), Skytrax, Google Maps. Weightings applied to emphasize regional and urban connectivity dimensions.

¹⁶ US Congress, House of Representatives, "U.S. Airports in Crisis," Congressional staff report, May 21, 2015, <https://mica.house.gov/uploads/Airports%20in%20Crisis%20W-Mica%20Edits%202%20FINAL.pdf>.

A few trends become immediately apparent. US airports that typically dominate other rankings in terms of passenger experience, such as SeaTac (SEA), Denver (DEN) and Atlanta (ATL), also feature in the top 15 in this index – strongly indicating the importance of overall passenger experience in setting regional profile and economic contribution. In contrast, New York City airports are hampered by dated infrastructure, long security lines, inadequate amenities and difficulty in transport access. In line with PwC’s own survey results, there is a consensus – at least among business travelers – that airport infrastructure in New York City may not be optimizing some of the economic benefits that could be realized on the region’s economy.

Topping the index is, perhaps surprisingly, Charlotte-Douglas International Airport (CLT) in North Carolina. The second largest hub for American Airlines, it has considerable international connections for an airport of its size, with direct connections to the Caribbean and Europe. Although having the lowest number of restaurants per passenger¹⁷, CLT makes up for this in having an excellent on-time record. It is also well connected with downtown Charlotte through the Charlotte Area Transit System (CATS) Sprinter Enhanced Bus Service – demonstrating that strong urban connections need not be prohibitively expensive. The presence of the Charlotte Air National Guard Base, which employs nearly 1,500 personnel, as well as CLT’s on-airport intermodal logistics and freight rail facility, strengthens the airport’s role in driving economic growth and enhancing the region’s competitiveness. Indeed, two thirds of the total economic impact of the CLT is in indirect and induced economic activity and generates more than half a billion dollars in local and state taxes.¹⁸

Notable mentions in the index are the middle-ranking airports such as San Diego International Airport (SAN) and Philadelphia International Airport (PHL). These airports have either invested in strong urban connections, or have raised standards of passenger experience through effective and quality terminal design and amenities. But in these cases, contributions to regional growth and competitiveness do not extend outside the terminal. These airports should do more work to develop and sustain regional economic linkages by working with cities and the private sector to maximize airport infrastructure and assets.

Charlotte-Douglas International Airport

- large hub airport for mainline carrier
- international connections
- dedicated rapid connections to downtown
- on-site aviation and defense activities
- on-site logistics zone



¹⁷ Michael Y. Park, “The Best and Worst Airports in the US,” thepointsguy.com, <http://thepointsguy.com/2016/11/best-and-worst-airports-usa-2016/>, accessed November 7, 2016.

¹⁸ North Carolina Department of Transportation, Division of Aviation, *Economic Impact of Airports in North Carolina*, 2016, https://connect.ncdot.gov/municipalities/State-Airport-Aid/Documents/2016_NCAirportEconImpact.pdf.

Getting US airports future-ready

The US accounts for 22% of the global aviation market in terms of passenger volumes, yet airports in the US comprise only 12% of Skytrax's World Top 100. In other words, US passengers are experiencing a lower level of airport infrastructure quality than passengers in other regions. Adding to the need for improvement is expected future growth in passenger volumes, a doubling of international flights to and from the US in the next 20 years,¹⁹ and point-to-point routes becoming increasingly profitable.²⁰ US airports will be busier and face greater competition from peers both domestically and internationally, and airports will likely no longer be seen as just an infrastructure facility but engines of growth whose impacts ripple through local and global economic value chains.

Capital improvement projects on the scale and complexity of airport renovation or expansion are fraught with risks – and the impact on planned funding commitments can be enormous. Recent airport programs in the US (e.g., LAX) and around the globe (such as Dusseldorf and Dubai) have dealt not only with massive cost overruns but also delays to opening and operations which are constant reminders that the massive economic upside resultant from airport strategic growth plans can be clipped by failures during execution and construction.

Similarly, airport capital improvement programs that simply solve yesterday's airport infrastructure problems, or refresh existing facilities as a lower-risk remedy, miss the opportunity to maximize dividends for the regions they serve.

Instead, airports need to focus on programs that yield regional and systemic benefits that help drive growth and competitiveness. These may include terminal rationalization efforts, new mass transportation links, intermodal logistics complexes, enterprise zones, co-located commercial development or innovations in terminal amenities and the use of cyber-secure technology to improve passenger experience. In order to do this, we recommend the following:

Four steps to make an airport future-ready:

- 1 Conduct a strategic planning exercise
- 2 Win stakeholder support and mobilize organizational resources
- 3 Consider a range of financing options to optimally allocate risk and returns
- 4 Implement a program of well-managed capital projects

Failure in any one of these steps will likely dramatically limit the potential of regional economic returns.

¹⁹ Federal Aviation Administration, *FAA Aerospace Forecast: Fiscal Year 2016–2036*, http://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2016-36_FAA_Aerospace_Forecast.pdf.

²⁰ Boeing, *Current Market Outlook 2015–2034*, http://www.boeing.com/resources/boeingdotcom/commercial/about-our-market/assets/downloads/Boeing_Current_Market_Outlook_2015.pdf.

1. Conduct a strategic planning exercise

Airports should take the time and make a concerted effort to better understand their regional contexts and the role that they play in facilitating city-to-city connections. Conducting a comprehensive strategic planning exercise can anticipate growth trends and their impact on route strategy, and take into account regional assets such as airport real estate, local businesses and institutions. The exercise may identify regional economic clusters that airports can enhance, new international routes that might be considered, and design partnerships with local government, the private sector and academia to drive innovation-led growth. This exercise will evaluate the options and allow priorities to be made with a full understanding of implications and requirements, stakeholders that need to be engaged, and consideration of scenarios related to how airport and city resources may be most effectively deployed.

2. Win stakeholder support and mobilize organizational resources

Often the biggest hurdles to executing capital projects are not just obtaining political and regulatory approval and mobilizing financial resource; rather, the challenges are from not engaging the right stakeholders and sponsors at the right times and not clearly aligning their more focused objectives. Developing effective and well-planned comprehensive stakeholder engagement plans – ones that can be operationalized by dedicated resources to win support of local government, communities, the private sector and regulators – is therefore critical to ensure that airport development is seen as aligned and additive to wider regional initiatives. Most US airports are municipally governed and therefore political in nature, with the Mayor or County Commissioners of these

airport regions expected to be good stewards of public funds and balance a myriad of competing interests, some of which may or may not focus on the future of a significant transportation entity for the region. With US airports subject to the municipal civil service structures, resources are likely to be a challenging parameter when seeking top talent to run strategic infrastructure assets with an increasingly global profile.

3. Consider a range of financing options

Working with a range of stakeholders also opens up channels of financing; indeed, one of the models gaining greater attention in the US, are public-private partnerships (PPPs). While a known quantity in the rest of the world, PPPs in the US have not generated as much interest because of the prevalence of tax-exempt bonds that allow most cities and states to raise money inexpensively. The benefit to airport infrastructure is that PPPs not only allocate project risk to those most able to mitigate or bear it (e.g., project developers in design, build and operation phases), but they also tap in to the deep pockets of the private sector.

LaGuardia Airport is a leader in this respect; Port Authority of New York recently closed on a \$4 billion deal with a private consortium to upgrade key infrastructure at the airport as part of a ten-year \$28 billion capital investment program.²¹ The success of the deal has whet the appetites of other airports seeking alternative financing methods with LAX and others exploring PPP models. Ultimately, taking a holistic approach to airport improvement financing – whether from federal grants in the form of AIP and PFC, municipal bonds or non-aviation revenue streams – ensures that funding streams are optimized and allocated with maximum utility.

²¹ New York State Governor Andrew M. Cuomo press release, “Governor Cuomo Announces Financial Closing on Transformational Redevelopment of LaGuardia Airport,” June 1, 2016.



4. Implement a program of well-managed capital projects

Finally, and most importantly, airports need appropriate governance, controls and execution strategies in place to effectively manage capital projects and airport infrastructure to ensure delivery of an income generating asset as planned and on time. A modern airport development program leverages a wide variety of funding sources (i.e. federal, state, private), procurement strategies (traditional vs. public-private partnerships) and contracting plans (design-bid-build vs. design-build) to construct a myriad of assets (such as terminals, runways, air-side services, road and bridge networks, public transportation connections) and typically, airport authorities execute such programs at this scale once every few decades.

Placing the execution risks in the hands of the entity best able to manage is important, as is having an organization that has the resources and management approach to understand the nuances between each project in the airport redevelopment program. If any single project in the program is not managed effectively, this can result in requests for significant additional funding, delays to revenue generation from operations, and adverse public relations at even world-class airport facilities. There are a number of very visible and high-profile lessons learned from the world over, ranging from the failure of London Heathrow's automated baggage handling system at Terminal 5 upon its opening in 2008, and the on-going planning, organizational, and technical problems with the delayed Berlin Brandenburg Airport (BER) - to name just a few. Minimizing these risks requires integrating deep skills associated with project planning and management, financing and funding structures, governance and controls, capacity building and effective technology enablers to ensure that future airport infrastructure is delivered on time and on budget and that the desired economic returns are being realized as planned and justified.

Here in the US, airports are primarily functions of a public sector environment, with both the limitations and opportunities that environment brings. Airport capital improvement projects are inherently costly and fraught with complexity and risk, and layering on the responsibility of being an engine for regional economic growth and competitiveness can be daunting to airport executives. It is easy to de-prioritize these strategic capital improvement programs or put this in the "too difficult to deal with" bucket, which may be part of the reason why airports across the country have to extend significant efforts to become future-ready. But, as some of the world-class examples have shown us, careful planning and effective management of capital project strategy through execution can yield massive benefits, not just for the airport but for cities and regions.

Given the scale of transformation required for airport infrastructure – and the catalytic benefits that they offer – making US airport infrastructure future-ready is a generational opportunity and one that should not be missed.

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