Welcome back!

Toronto Pearson Residents' Reference Panel on Noise Fairness and Airport Growth

Please sit where you like We will get started at 9am





Remembering your mandate

The Reference Panel is tasked with advising the GTAA on the measures, standards and commitments it should adopt to meet the needs of area residents and support regional growth.

Specifically, the Reference Panel will develop:

- A set of values which describe its vision of responsible growth;
- A list of issues which the GTAA should attempt to address within its growth plan
- Criteria for evaluating options to mitigate and manage aircraft noise
- Additional recommendations concerning transit options, noise management, environmental stewardship and public communications and engagement



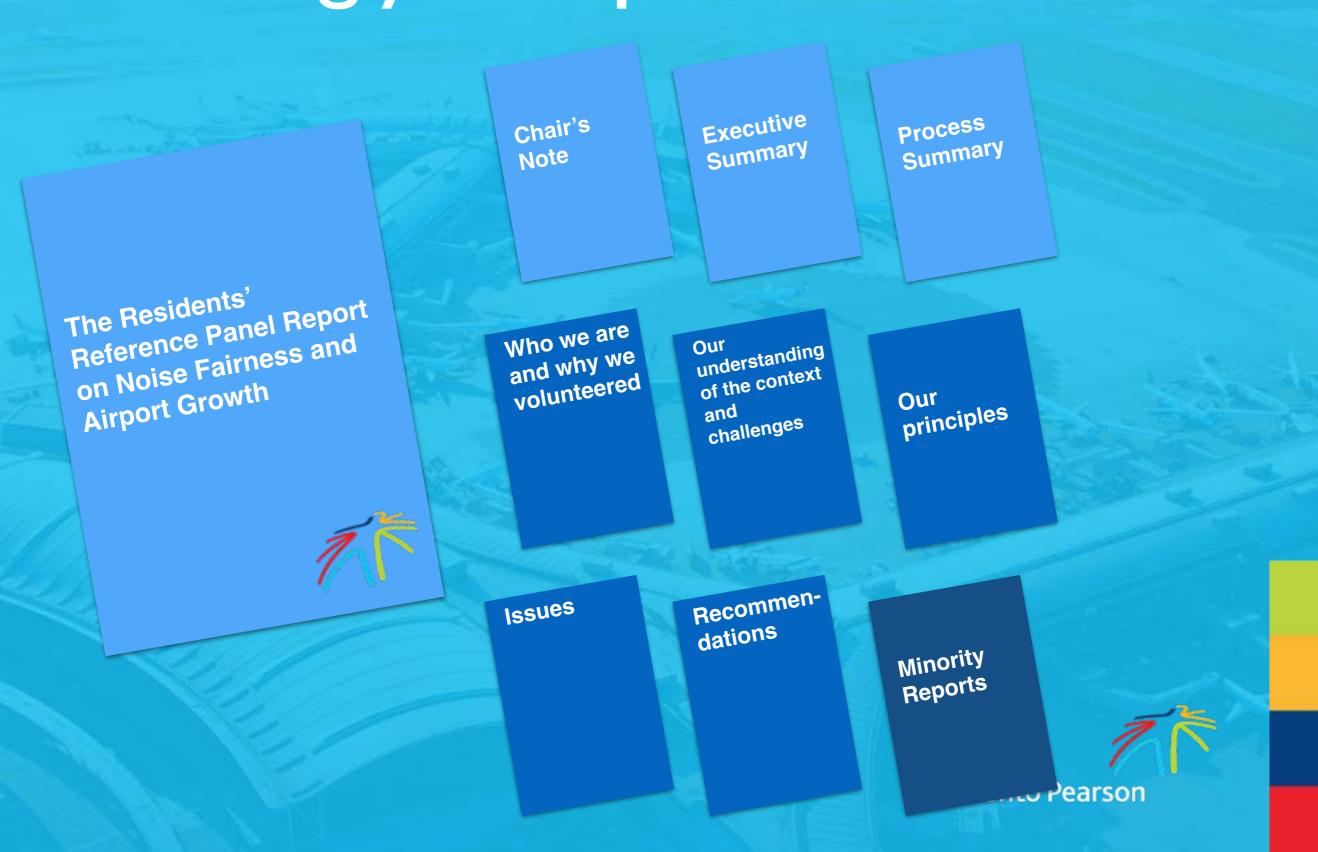
Picturing your report

The Residents'
Reference Panel Report
on Noise Fairness and
Airport Growth

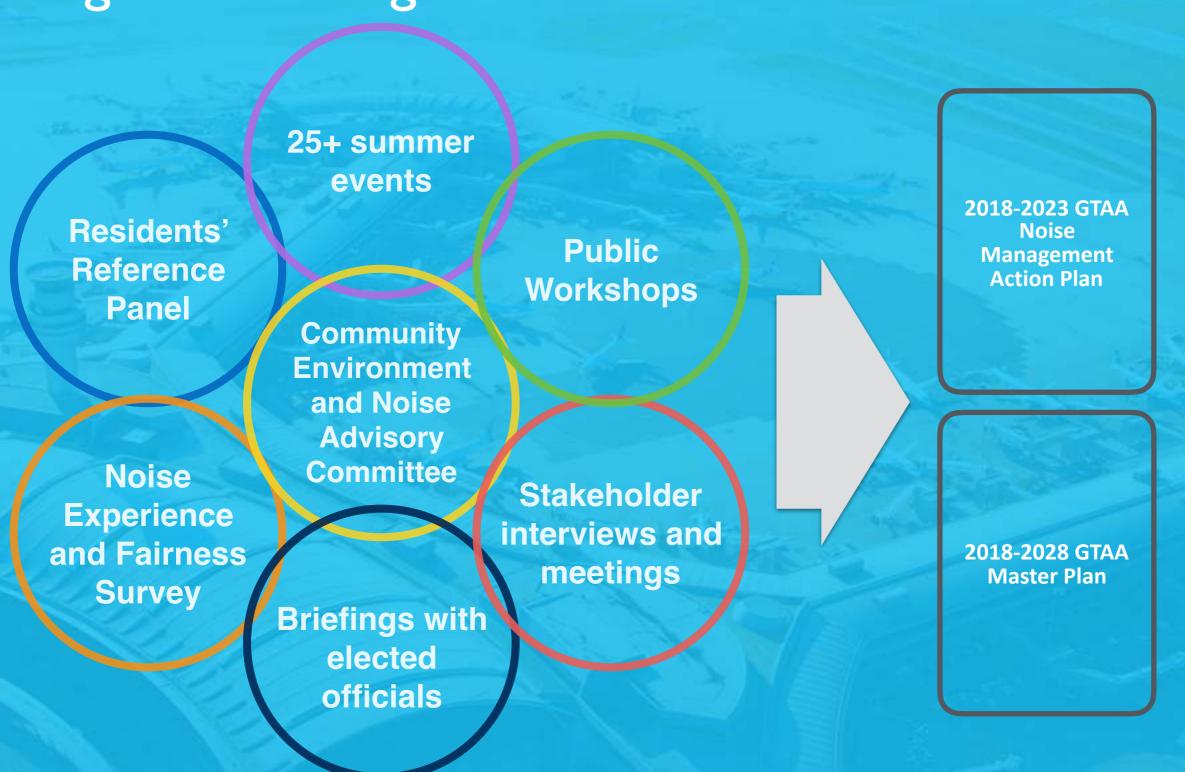




Picturing your report



The Reference Panel is one of six initiatives underway to gather the insights and concerns of residents



A busy autumn ahead... but we're in the home stretch

September 9 and 16, 2017

GTAA Reference Panel on Noise Fairness & Airport Growth will hold its final two meetings

September 18, 2017

NAV CANADA will release its Third Party Airspace Review.

This review assesses new airspace procedures to reduce noise impact for residents. NAV CANADA will analyze this review and release a public response before pursuing any new initiatives.

September 27, 2017

CENAC Meeting and the release of the Noise Management Best Practices and Benchmarking Review. This Review compares the GTAA's noise management policies with programs in other global airports, including Fly Quiet programs, noise committee mandates, financial incentives and other initiatives. This review will help to inform the GTAA's new 2018-2023 Noise Management Action Plan.

October 11, 2017

GTAA will release the Reference Panel Report and survey findings

This report and survey be used by the GTAA to inform the 2018-2023 Noise Management Action Plan and the implementation of its new Master Plan.

December 2017

GTAA will release its new 10 year Master Plan which will guide the development of the airport and the use of its lands.

CENAC Meeting and release of the Noise Mitigation Initiatives (6 Ideas) technical analysis and recommendations

Launch of 60 day consultation period on potential changes stemming from the Noise Mitigation Initiatives technical analysis

Winter 2018

GTAA will release its new 2018-2023 Noise Management Action Plan and begin to phase-in changes to the GTAA noise management programs. This plan will outline the GTAA's new commitments for managing the impact of airplane noise.

May 27 Sept 9 Sept 16 June 3 9 **Welcome & Orientation** Mega-hubs: Drafting recommendations **Transit Perspectives** The Frankfurt Experience Max Philipp Conrady 10 **Toronto Pearson Operations 101** Break Cynthia Wood Break **Environment Perspectives Understanding the GTAA:** 11 Break History, structure, responsibilities, **Fundamentals of Acoustics** service volumes **Communications & Engagement** and Aircraft Noise Colin Novak, Ph.D., P.Eng. What is the mega-hub vision: Demand-led growth, implications, Lunch 12 opportunities Issues **Summer** Lunch Lunch Lunch **Public** Workshops **Managing the Toronto Pearson** Airspace Airport Tour: Nick Boud, HELIOS Introduction to Pearson, and understanding the passenger pathway **Community Perspectives** Better Flights Paths 2 Markland Wood Rockwood **Break** Alderwood Identifying issues and questions Break Report Break Break 3 Noise fairness discussion **Priorities** 4 Roundtable Prep and Adjourn Adjourn Adjourn Adjourn

May 27

9 **Welcome & Orientation** 10 Break **Understanding the GTAA:** 11 History, structure, responsibilities, service volumes What is the mega-hub vision: Demand-led growth, implications, 12 opportunities Lunch Airport Tour: Introduction to Pearson, and understanding the passenger pathway 2 Identifying issues and questions Break 3

4

Adjourn



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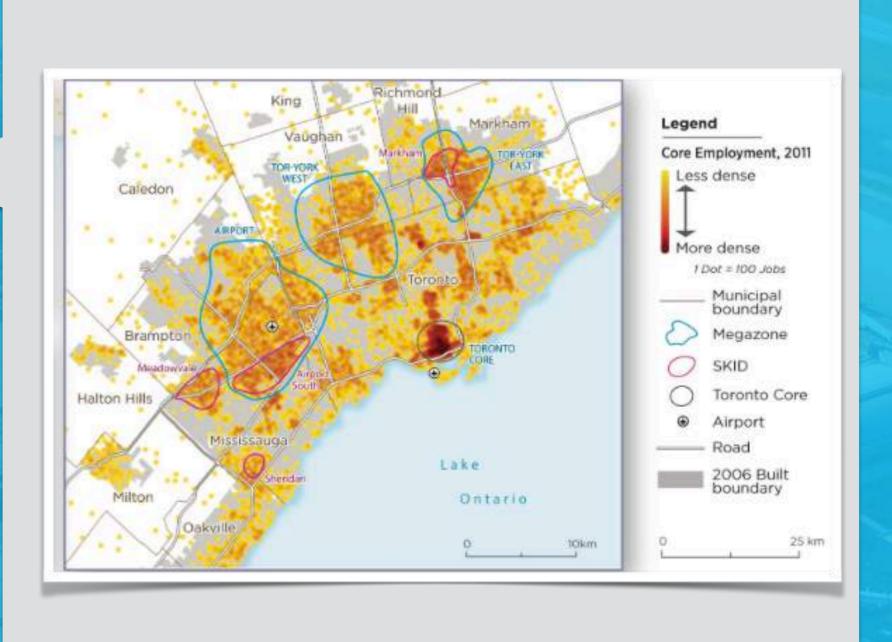


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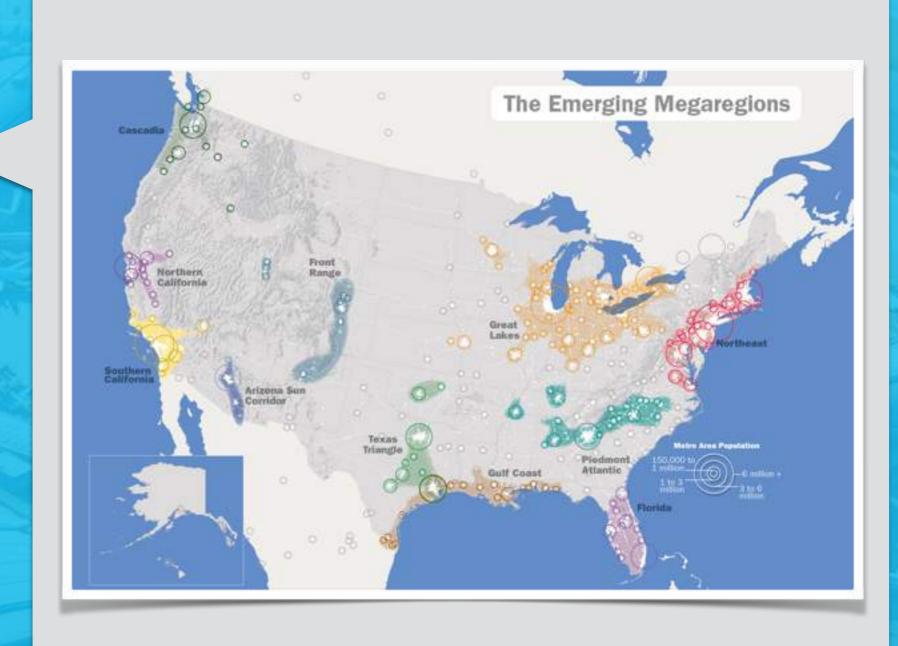
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Adjourn

1970s
10.5 Million

1990s 21 Million



2016 44 Million



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Adjourn

Toronto Pearson's significance on the world stage is increasing

Airport	Passenger traffic, 2016, Millions	Change in passenger traffic between 2015 8 2016, %
Dubai	83.7	+7.2%
London/ Heathrow	75.7	+1.0%
Paris	65.9	+0.3%
New York JFK	60.6	+3.8%
Singapore	58.7	+5.9%
Pearson	44.3	+8.0%

SOURCE: Arport traffic stationics, GSAA Passanger Traffic statistics, Arport Council International, press search

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Adjourn



June 3

Mega-hubs:

The Frankfurt Experience
Max Philipp Conrady

Toronto Pearson Operations 101

Cynthia Wood

Break

Fundamentals of Acoustics and Aircraft Noise

Colin Novak, Ph.D., P.Eng.

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Managing the Toronto Pearson Airspace

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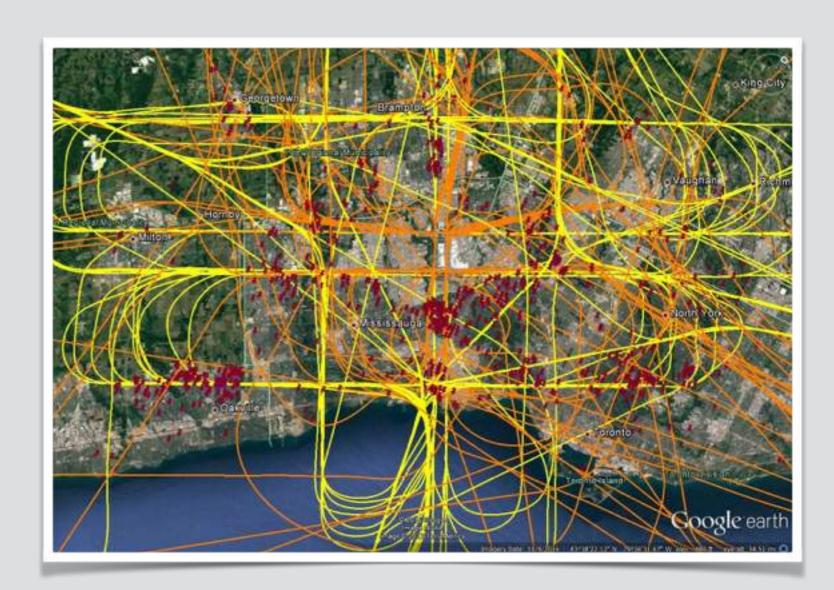
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Noise Complaints - 2016

Federal Riding	Complaints	Callers
Beaches-East York	119	2
Bramalea - Gore - Malton	1	1
Brampton Centre	437	38
Brampton East	30	10
Brampton North	12	7
Brampton South	58	23
Brampton West	2	2
Burlington	1	1
Davenport	39	4
Don Valley East	5086	17
Don Valley North	6	3
Don Valley West	2276	47
Dufferin-Caledon	41	3
Eglinton-Lawrence	260	19
Etobicoke - Lakeshore	266	48
Etobicoke Centre	2918	109
Etobicoke North	2643	32
tumber River-Black Creek	89	48
King-Vaughan	92	18
Markham-Stouffville	858	2
Markham-Thornhill	8	4
Markham-Unionville	9	4

Federal Riding	Complaints	Callers
Mississauga Centre	5	4
Mississauga East-Cooksville	198	37
Mississauga-Bram. South	1	1
Mississauga-Erin Mills	40	13
Mississauga-Lakeshore	69	13
Mississauga-Malton	270	33
Mississauga-Streetsville	891	44
Oakville	2610	67
Oakville North-Burlington	11606	88
Parkdale-High park	14756	35
Richmond Hill	2	2
Scarborough Centre	6	2
Scarborough-Agincourt	1	1
Scarborough-Guildwood	2	2
Scarborough-Rouge Park	639	1
Spadina-Fort York	1	1.
Thornhill	12	10
Toronto-Danforth	3	3
Toronto-St.Paul's	991	19
University-Rosedale	6	4
Vaughan-Woodbridge	207	9
Wellington-Halton Hills	5431	23
Willowdale	73	10
York Centre	16	6
York South-Weston	3	3
Grand Total	53135	880

June 3

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Toronto Airspace Noise Review	 Commissioned by NAV CANADA Led by Helios Review of Toronto airspace, to determine whether all reasonable actions to reduce aircraft noise are being considered with respect to design and operation of the Toronto area airspace. 	
Toronto Noise Mitigation Initiatives	NAV CANADA and the GTAA are studying six noise mitigation ideas: 1. New Approaches for night-time operations 2. New Nighttime departure procedures 3. Increase downwind arrival speeds 4. Use new technology to reduce need for low altitude leveling of arriving aircraft 5. Weekend Runway Alternation 6. Review of Preferential Runway System	
Noise Management & Best Practices Benchmarking Study	 Commissioned by GTAA Initiative of the Noise Management Action Plan, Working with Helios to benchmark Toronto Pearson Noise Management Program and identify potential new programs or initiatives to pursue. 	

June 3

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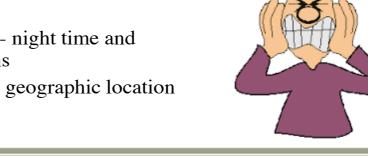
Roundtable Prep and Adjourn

Other Factors Driving Annoyance

- Noise level is not the only factor to drive annoyance of aircraft noise
 - Relative difference between aircraft noise level to ambient noise level
 - Frequency of aircraft flyover events
 - Higher concentration of aircraft flying a narrower slot due to improved navigation
 - Higher frequency component to aircraft noise is psychoacoustically less desirable
 - Time of day/week night time and weekend operations

akoustik

• Demographics and geographic location



June 3

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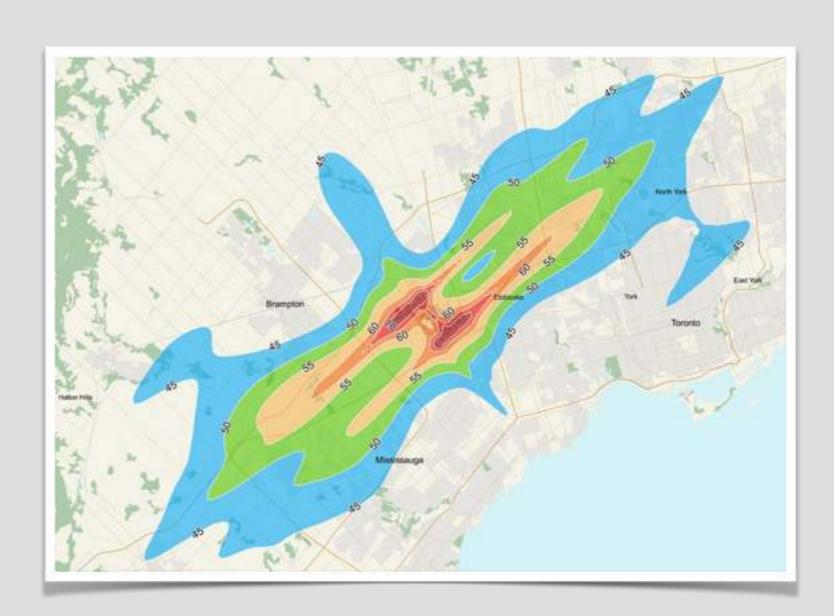
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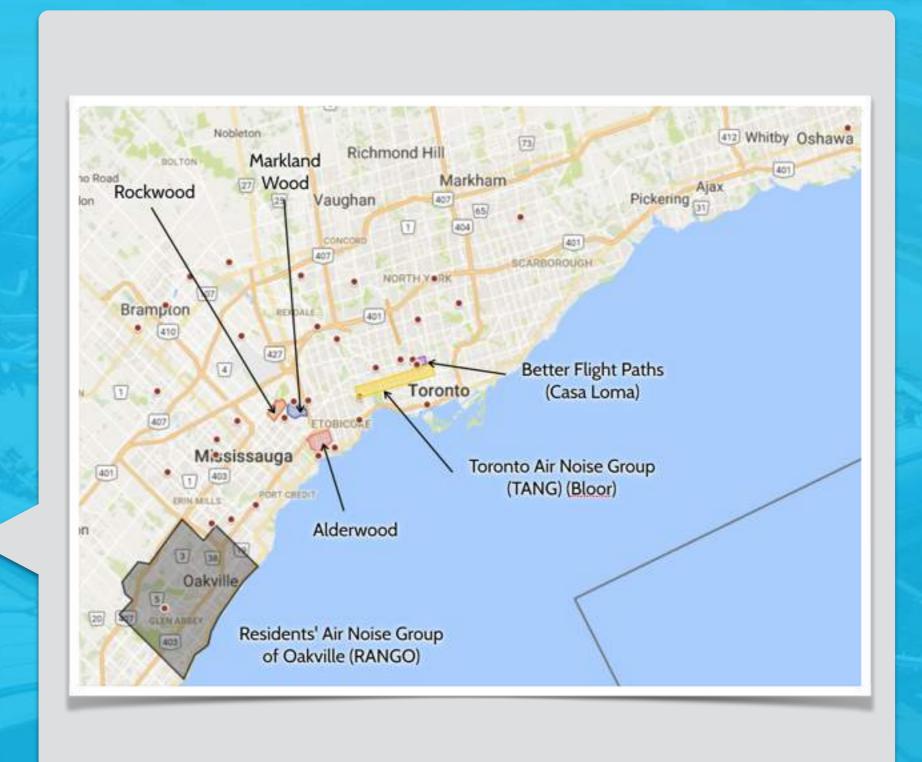
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Your work so far...

Eight Values

Economic growth
Affordable Connections
Healthy Environment
Accountable Governance
People-focussed
Transformative investments
Safety and Security
Responsive to Community

Four Principles

Communicate clearly
Share noise fairly
Be accountable
Show leadership

Seven Issues

Unclear responsibility and accountability

Tense relationship with impacted communities

Impact of night flights

Loud aircraft

Low landings and takeoffs over densely populated areas

Unpredictable runway usage

More noise as the airport grows



Sept 9 Sept 9 Sept 16 Drafting recommendations **NAV Canada: Transit Perspectives** Role and responsibilities Break Break **Environment Perspectives Political perspectives** Communications & Engagement Issues Lunch Lunch Issues Issues and actions Lunch Break Report Break Break **Priorities** Priorities Adjourn Adjourn Adjourn

Today

NAV CANADA: Roles and Responsibilities Political Perspectives: Councillor Stephen Holyday

Recalling our principles and refining our issues Connecting issues with actions



NAV CANADA: Roles and Responsibilities

Michelle Bishop Director, Government and Public Affairs





2017-09-08

NAV CANADA Who we are and what we do

Michelle Bishop Director, Government and Public Affairs

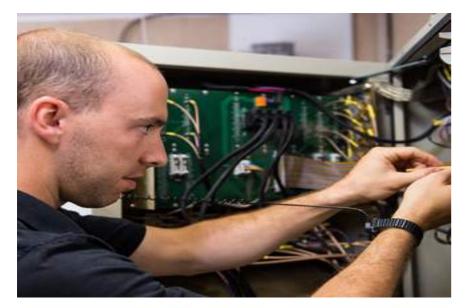




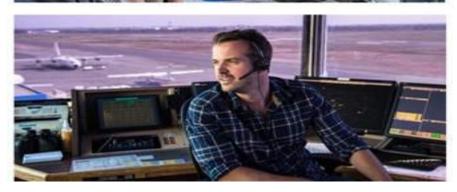
ABOUT NAV CANADA



- > Private company since 1996
- Purchased the "air navigation system" from federal government for \$1.5 billion
- A not-for profit company funded through service charges levied on aircraft operators
- Regulated by federal government
- Second largest air navigation service provider in the world
- Have been named the "Best ANS" in the world 3 times by international airlines

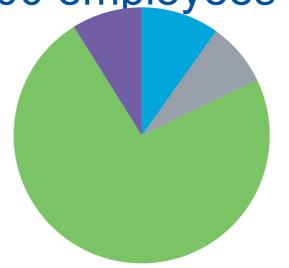






OUR PEOPLE

4,800 employees across the country



- Technical Opera
- Engineering
- Operations
- Support Function

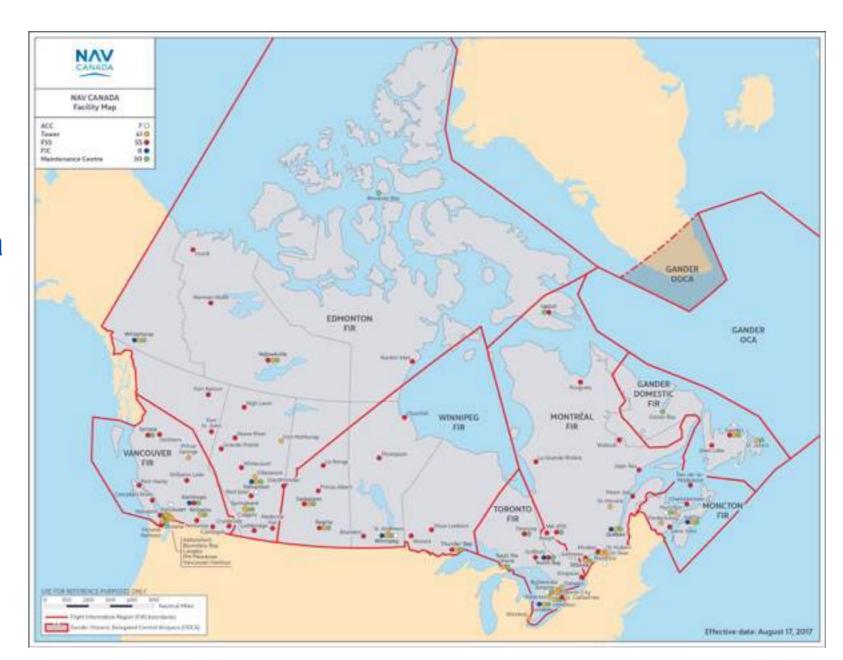
OUR SERVICES

- Air traffic control
- > Airport advisory services
- > Flight information
- Weather briefings

- Aeronautical information
- Navigation aids, radar and other infrastructure
- International technology sales

OUR FACILITIES

- Over 130 operational facilities across Canada
- At CYYZ we operate both the air traffic control tower and an area control centre



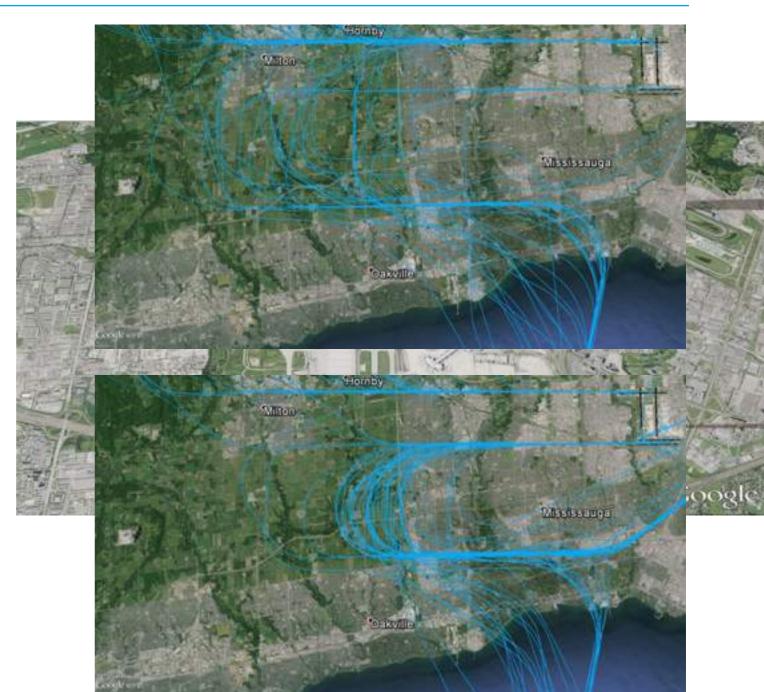


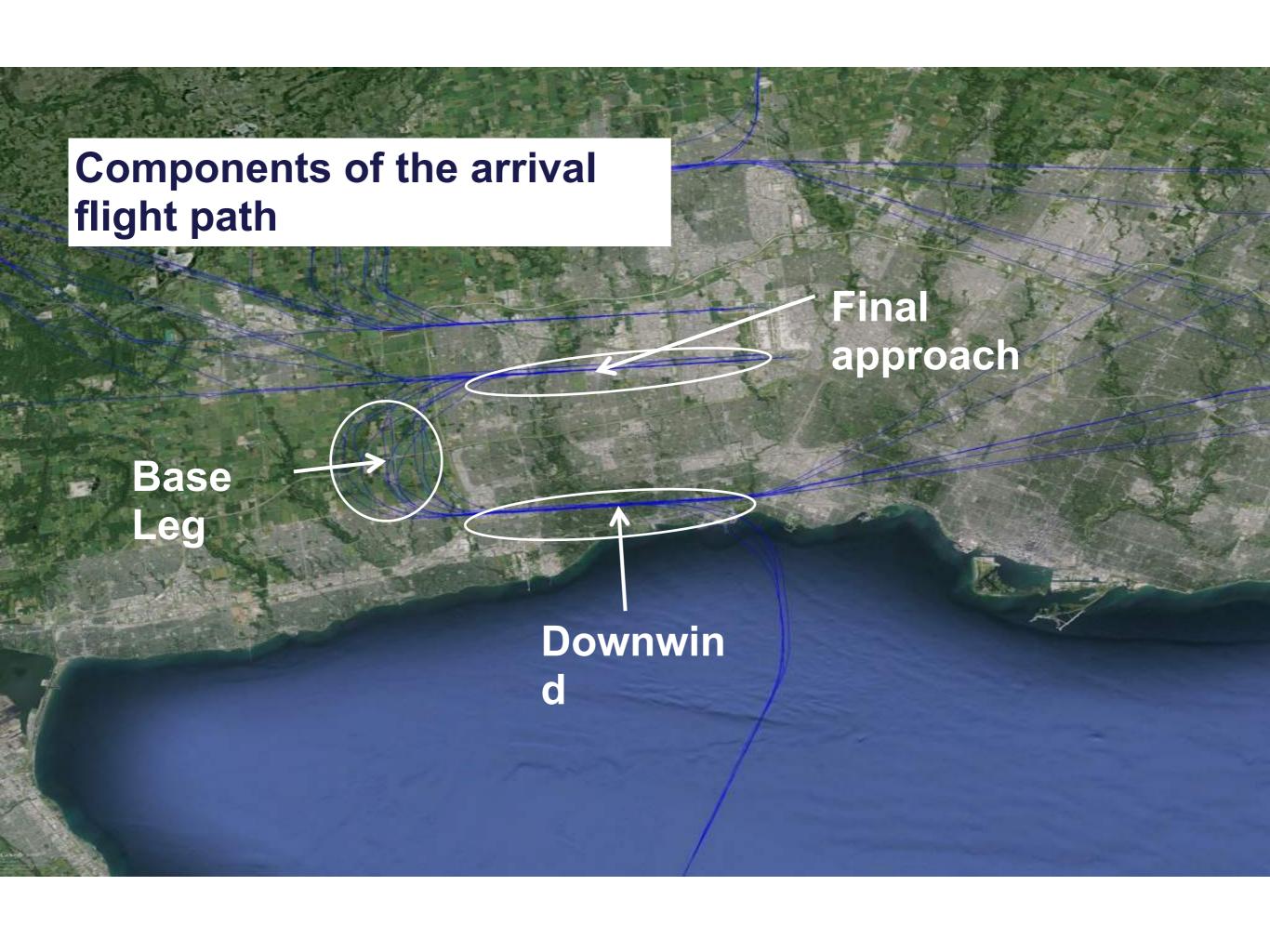
WHAT ARE WE RESPONSIBLE FOR

- Providing air traffic control
 - Clearances/instructions for aircraft operating on runways and taxiways and in the airspace
 - Managing a safe and efficient flow of traffic
- Providing air navigation infrastructure (CNS and ATM)
 - Communications frequencies for voice or data link
 - Navigation instrument landing systems, GPS approaches, enroute airways
 - Surveillance radars, surface surveillance
 - Air traffic management i.e. flight plan filing
- > Providing information
 - Weather and other flight information services
 - Produce pilot publications and official databases

ATC PRINCIPLES

- Generally, aircraft land and depart into the wind
- Planes must be separated by either 3 nautical miles laterally, or, 1000 ft vertically
- Capacity is measured by the aircraft arrival rate (the number of planes you can land in an hour).
 That rate varies by type of operation and weather conditions.
- No two days are the same





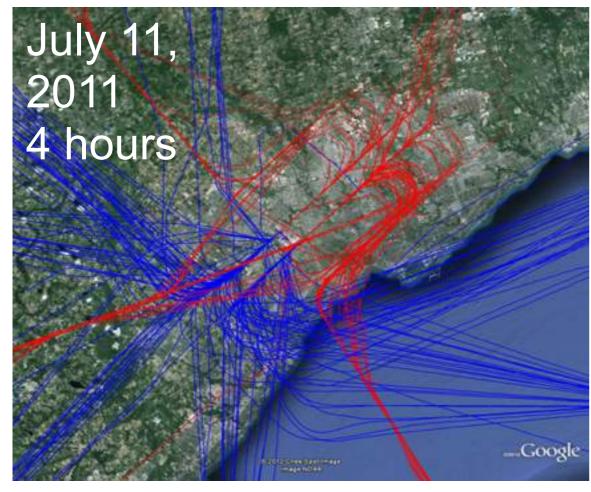
WHAT IS THE AIRSPACE STRUCTURE FOR CYYZ

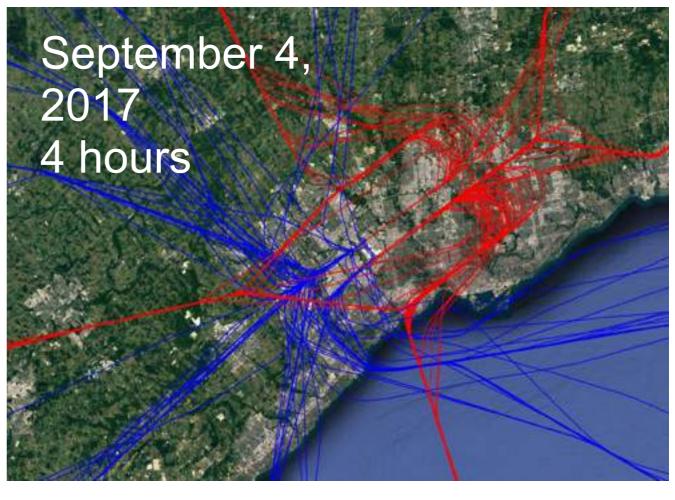
And how did that change in 2012

- In 2012 NAV CANADA implemented changes to airspace that affected arrival flight paths at Montreal, Ottawa and Toronto and enroute airways in the corridor in between.
 - Most change occurred in enroute airspace to improve efficiency
 - A new arrival "gate" was created to better balance traffic approaching Toronto-Pearson from the east on new enroute airways
 - Other adjustments were made to adhere to updated design criteria
 - Some adjustments for eastern bound departures
- In 2014 further changes were made to some CYYZ departure routes and transborder airways south and west of Toronto

RUNWAY 23/24 OPERATION

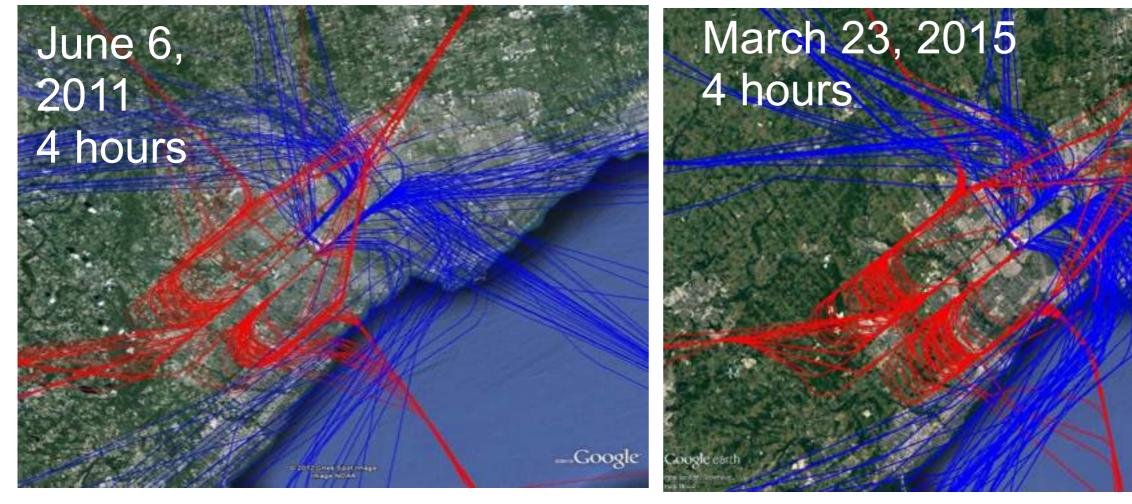
Before After





RUNWAY 05/06 OPERATION





BEFORE



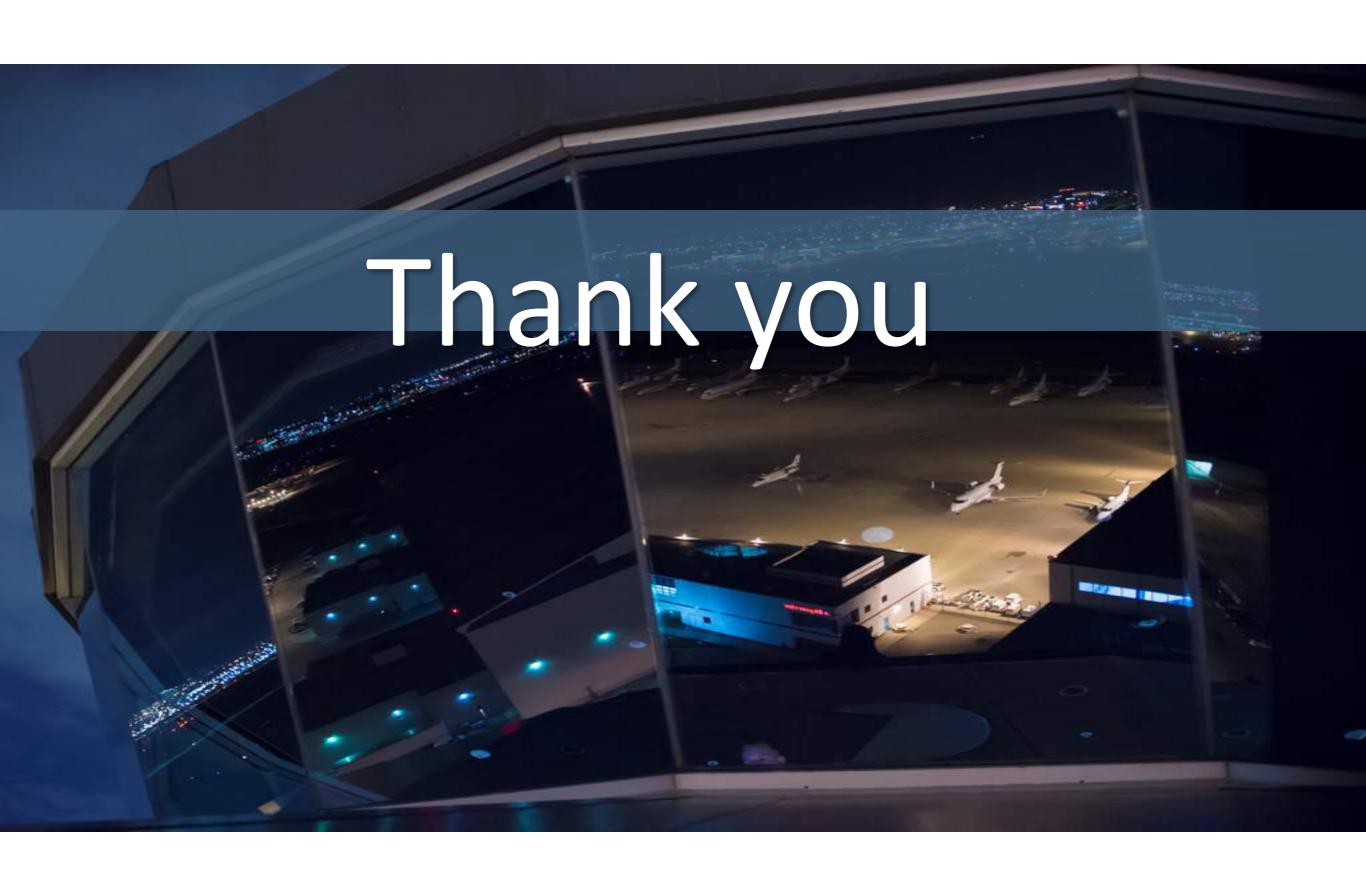
AFTER



TORONTO INDEPENDENT AIRSPACE REVIEW

"Helios Study"

- NAV CANADA announced its intention to commission an independent review of Toronto airspace in early May 2016
- > Driver was communities continued view that "more could be done" to reduce noise impacts
- Bo Redeborn and Helios started the Independent Review in September 2016
- > Study is commissioned by, but independent of NAV CANADA
- > Study is set up to:
 - Make recommendations for items within NAV CANADA's jurisdiction
 - Consult with the local communities and stakeholders
 - Examine best practices from other comparable international airports
 - Look for other opportunities to reduce noise either through ATM practices, flight path design or aircraft operating practices
- > Final report will be delivered September 18



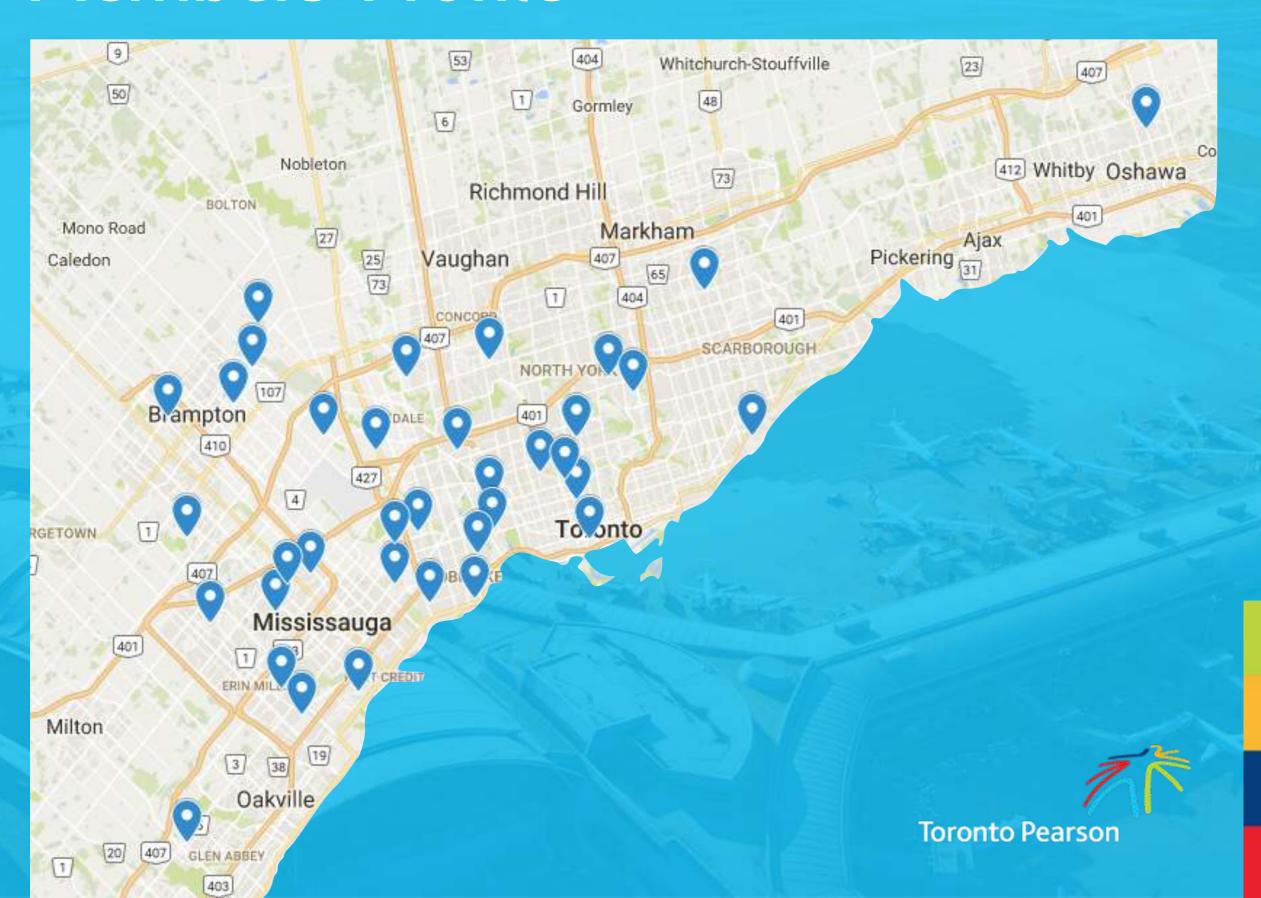


Political Perspectives

Stephen Holyday Ward 3 Councillor, City of Toronto



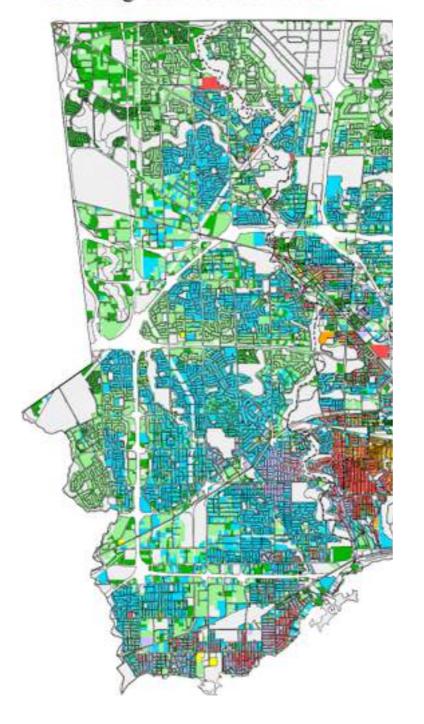
Members' Profile



Stephen Holyday Member, Toronto City Council Ward 3 - Etobicoke Centre



City of Toronto Building Construction Dates



Corridor
Former Municipal Boundaries
Building Construction Dates
PRE 1901
1901 - 1915
1916 - 1930
1931 - 1945
1946 - 1960
1961 - 1975
1976 - 2003
Building Date of Construction
Not Available or Greenspace



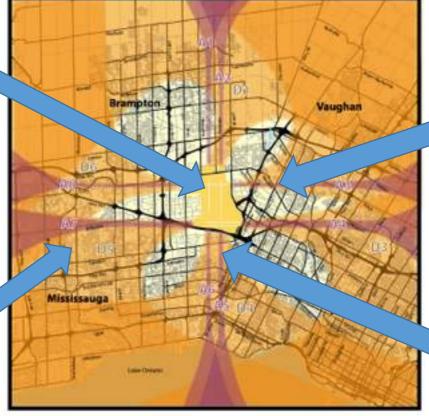
































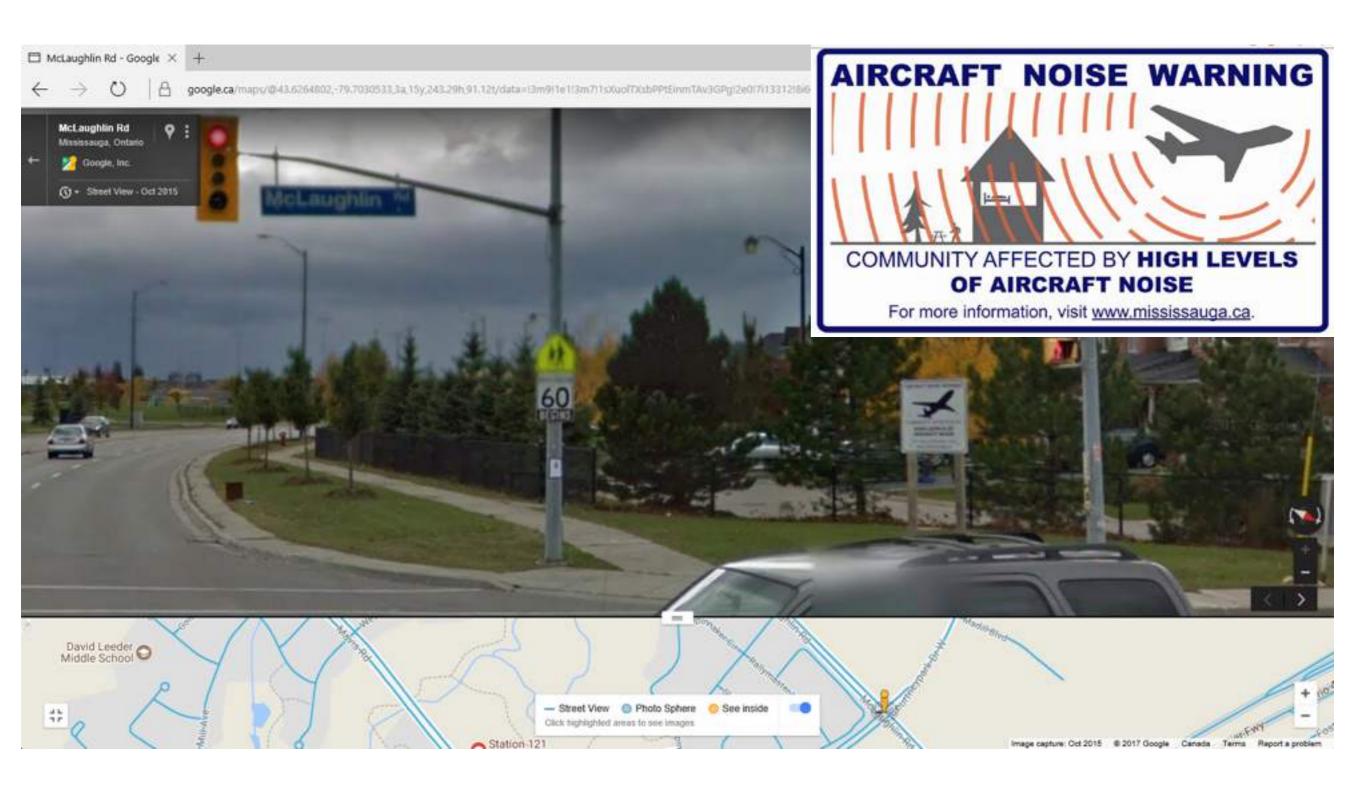






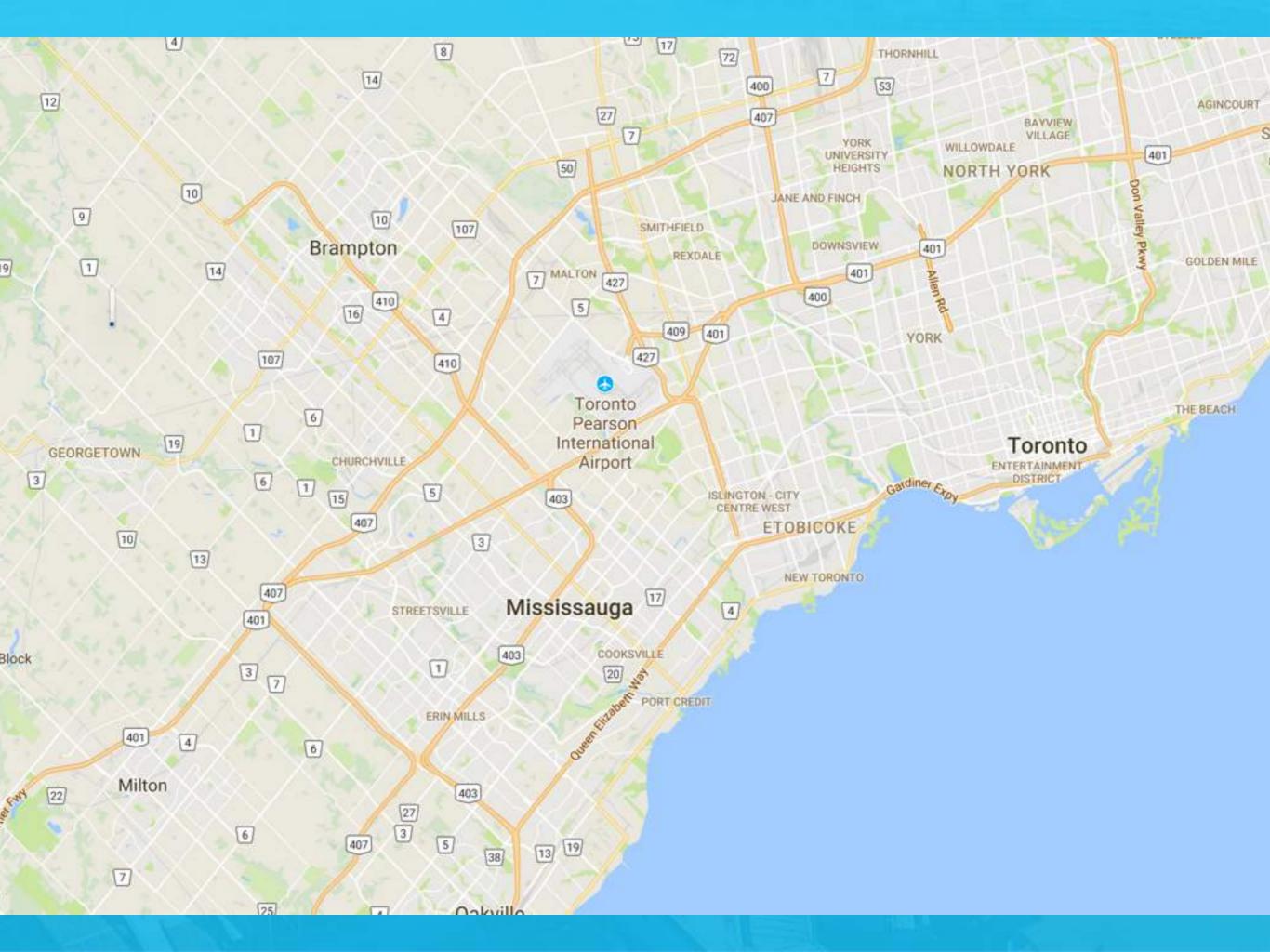






Links:

Toronto Archives (www.Toronto.ca) https://earthengine.google.com/timelapse/



Your work so far...

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Economic growth
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People-focussed
Transformative technology
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Show leadership

Seven Issues

Unclear responsibility and accountability

Tense relationship with impacted communities

Impact of night flights

Loud aircraft

Low landings and takeoffs over densely populated areas

Unpredictable runway usage

More noise as the airport grows



Communicate clearly
Share noise fairly
Be accountable
Show leadership



Communicate clearly
Share noise fairly
Be accountable
Show leadership

With other organizations

With surrounding communities

Have open dialogues

Be honest in communications with other organizations and the public

Close the loop on issues and conversations, provide remedies

Be transparent and honest



Communicate clearly
Share noise fairly
Be accountable
Show leadership

Noise should be shared fairly across the GTA

Incentives should be provided for affected communities

Airport growth should be tied to noise mitigation strategies (and environmental impact)



Communicate clearly
Share noise fairly
Be accountable
Show leadership

It should be easier to understand who to contact with a particular problem

How are decisions regarding the airport made? Who has the power to override or challenge these decisions?

Community recommendations should shape the airport's strategies

Transport Canada should be more involved in the oversight of NAV Canada and the GTAA



Communicate clearly
Share noise fairly
Be accountable
Show leadership

Invest in new technology that makes airport operations more efficient and safer

Economic growth that stems from the airport should impact the whole region

Share the wealth and increasing number of flights with other airports across Southern Ontario

Look to other international airports for inspiration and learn from them



Your task

What actions could the GTAA take to address this issue?

What other issues deserve our consideration?

Seven Issues

Unclear responsibility and accountability

Tense relationship with impacted communities

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Evaluating possible actions

Review the issue and the proposed actions.

Which actions are consistent with our values and principles?

Which actions would you suggest the panel endorse and why?

- 1. Unclear responsibility and accountability
- 2. Tense relationship with impacted communities
- 3. Impact of night flights, Loud aircraft & Low landings and takeoffs over densely populated areas
- 4. More noise as the airport grows
- 5. Other issues



Thank you

Don't worry. Don't fester.

Call us: 1-844-788-5803

torontopearson.com/rrp

See you next week!

