Toronto Pearson Noise Management Forums Neighbourhood Table

September 22, 2021

Welcome + Introductions

Neighbourhood Table

Objective

- Provides a forum for community stakeholders who represent residents or ratepayer associations and community groups who have knowledge of and interest in airport operations
- Topics include updates on our progress toward the Noise Management Action Plan, as well as other initiatives related to airport growth that may result in changes to aircraft noise impacts

Representation

- Alderwood Airplane Noise
- Don Mills Residents Inc. Airplane Noise Committee
- Community Alliance Air Safety (CAAS)
- Former Community Environment and Noise Advisory Committee (CENAC) Reps
- Grand Highland/McKecknie Woods Park Community
- Leaside Property Owners' Association
- Long Branch Neighbourhood Association
- Markland Wood Homeowners Association
- Meadow Wood Rattray Residents Association Quality Airspace for Campbellville Milton
- Residents’ Air Noise Group of Oakville (RANGO)
- Resident of Etobicoke-Centre
- Rockwood Homeowners' Association
- Toronto Aviation Noise Group (TANG)

Agenda

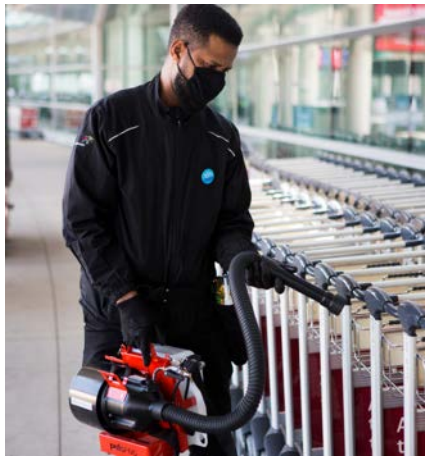
- Airport Updates
  - Healthy Airport Initiatives
  - Trends in Operations, Returning Traffic & Complaints
  - Briefing: 2021 Airside Maintenance
- Member Raised Issues
  - Flightpaths + Returning Traffic
- NAV CANADA Updates
  - RNP Consultation
- GTAA Noise Management Program Updates
  - Discussion: Communicating re Returning Traffic
  - Update: Noise Management Action Plan
- Discussion and Roundtable

Airport Updates

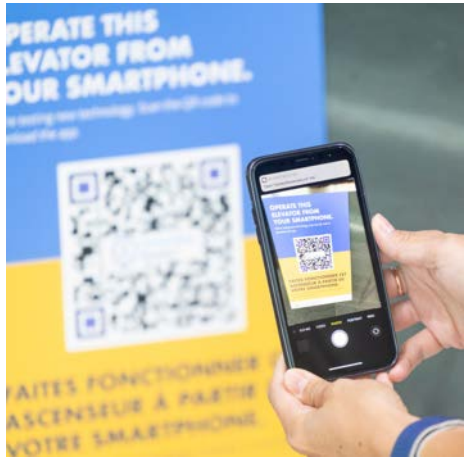
THE HEALTHY AIRPORT EXPERIENCE

HEALTHY AIRPORT

Keeping passengers and employees safe:
Enhanced cleaning, mask-wearing, air quality upgrades, UV disinfection and more.



bluedot



WHEN YOU'RE READY TO TRAVEL

The Government of Canada has slowly begun to lift travel restrictions, including allowing fully vaccinated travellers to enter by air without mandatory quarantine.

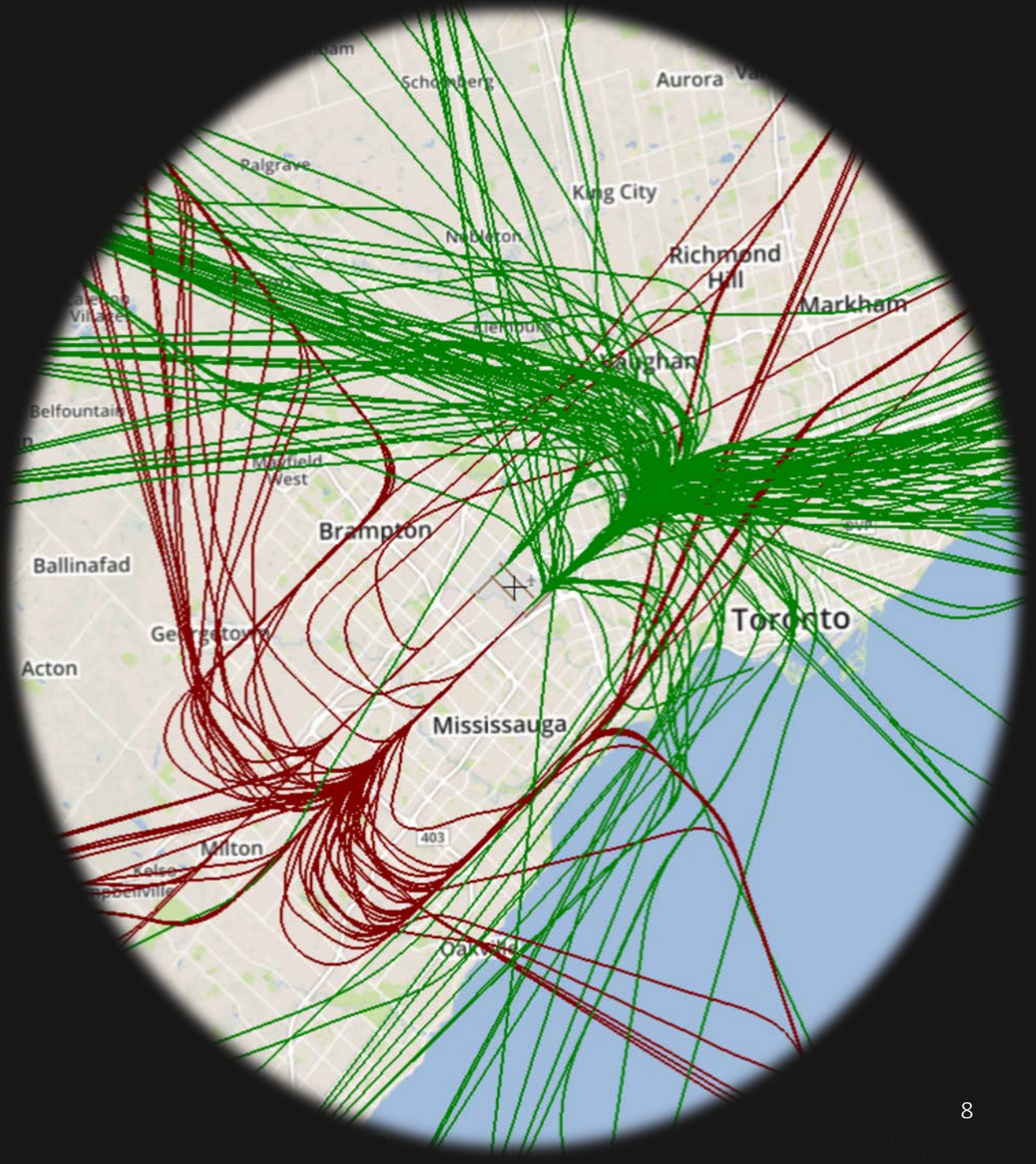
Arriving Fully Vaccinated Passengers: Must test before departure to Canada, submit health declarations through ArriveCAN, and are subject to random testing on arrival.

Arriving Non-Vaccinated Passengers: Must test before departure to Canada, on arrival and Day 8, submit health declarations through ArriveCAN.

U.S. to lift travel restrictions for fully vaccinated foreign nationals in November, allowing these travellers once again to connect over Toronto Pearson.

Toronto Pearson is working in collaboration with airlines, CBSA, PHAC, and testing partners to manage number of passengers arriving and being processed throughout the terminal buildings.

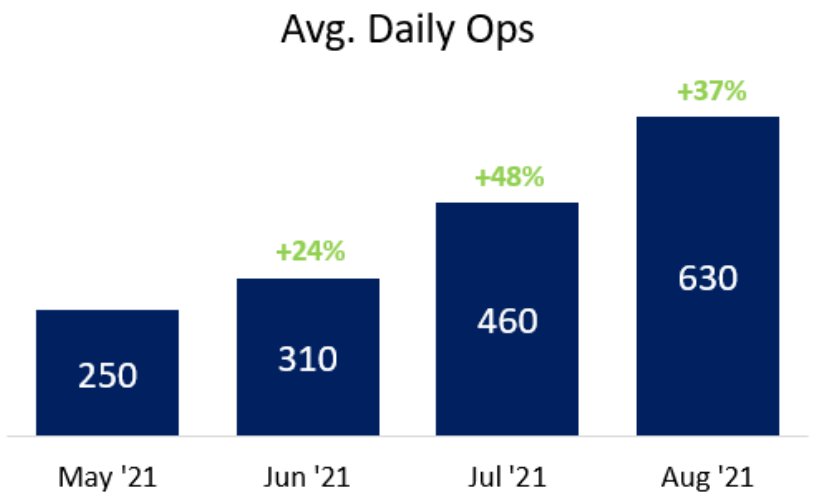
Trends in Operations & Complaints



Operations & Complaints

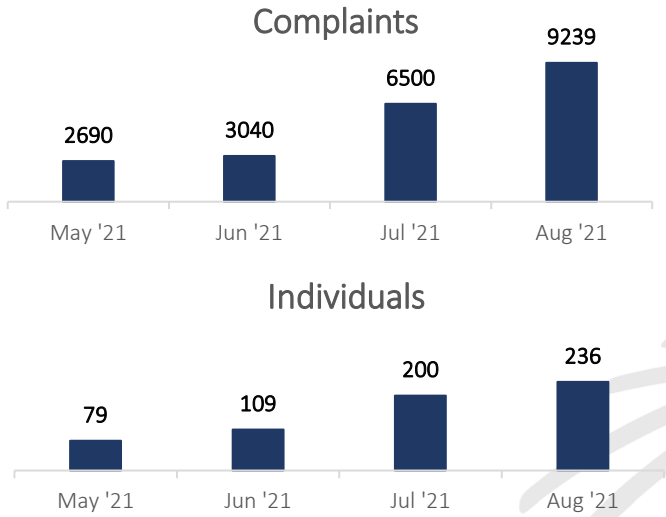
Operations

- **Aug '20:** 10,344 movements (330 per day)
- **Aug '21:** 19,238 movements (620 per day)
  - Movements are +86% compared to this time last year
- **However,** traffic levels are still -54% compared to Aug ’19 and remain years away from full recovery



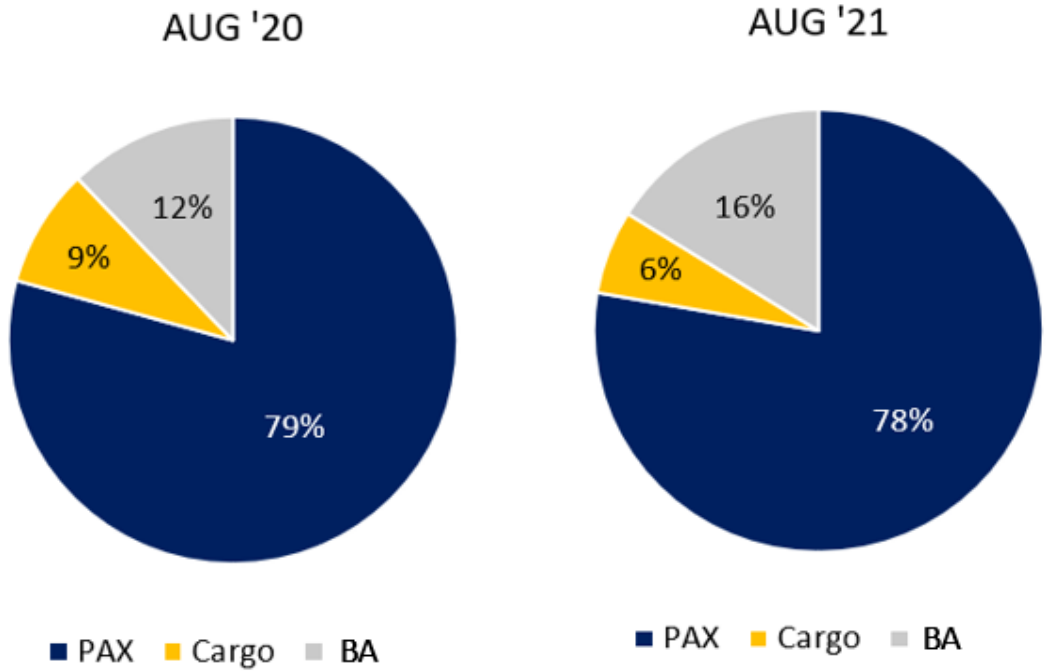
Complaints

- **Aug ‘20**: 1,516 complaints from 88 individuals
- **Aug ‘21**: 9,239 complaints from 236 individuals.
- Month over month increases May-August 2021



Operations by Type

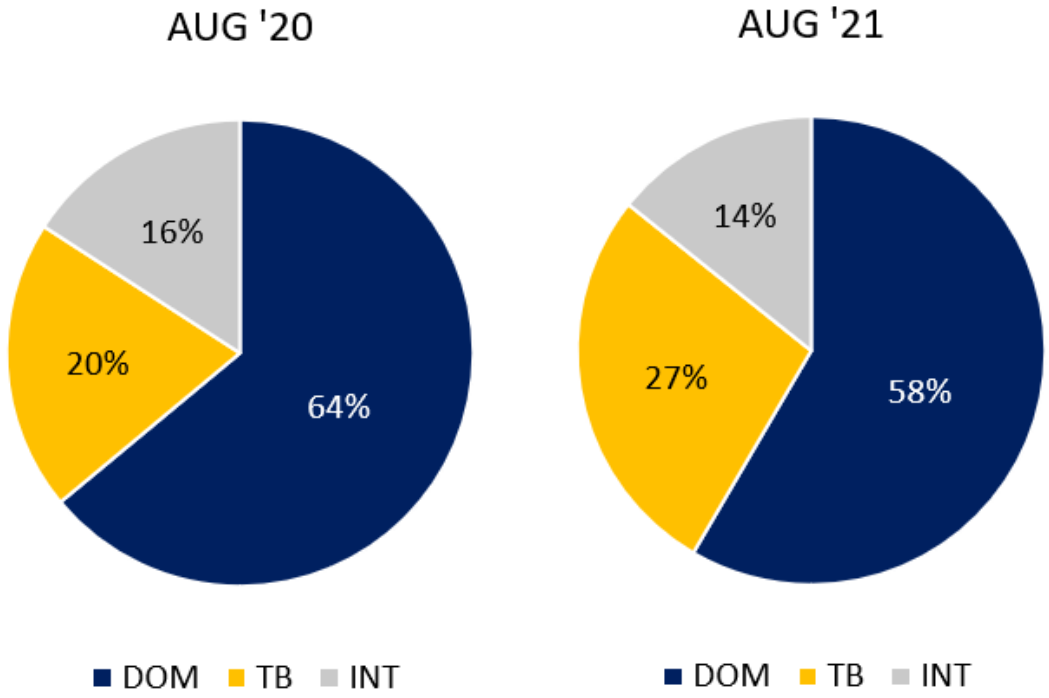
	AUG '20		AUG '21	
PAX:	8,225	→	15,102	+6,877 (+84%)
Business Aviation:	1,257	→	3,131	+1,874 (+149%)
Cargo:	889	→	1,188	+299 (+33%)



- Total Movements +86% compared to same time last year:
  - PAX traffic has increased substantially, but still represents just under 80% of traffic
  - Business Aviation traffic has outpaced the overall increase in operations and is up 149% vs. August 2020
    - Currently >100 BA flights per day
  - Cargo operations have increased slightly compared to August 2020, but have lagged behind the increases seen in PAX and GA/BA operations

Operations by Sector

	AUG '20		AUG '21	
DOM:	6,643	→	11,369	+4,726 (+71%)
TB:	2,086	→	5,290	+3,204 (+154%)
INT:	1,642	→	2,762	+1,120 (+68%)



- Domestic and International flights have each increased by about 70% compared to the same time last year
- Transborder flights have surged due to the easing of travel restrictions and are up 154% compared to the same time last year

Runway Usage Summary

Runway Usage

	Aug 2020	%	Aug 2021	%
05	1,923	19%	3,059	16%
06L	1,687	17%	341	18%
06R	97		3,131	
23	3,534	34%	5,409	28%
24L	173	28%	4,122	26%
24R	2,716		904	
33L	206	2%	457	7%
33R	4		860	
15L	0	0%	606	5%
15R	4		349	

	Arr	Dep
33L	21	437
33R	8	851
15L	321	285
15R	345	4

Runway Configurations

	Aug 2020		Aug 2021		Change in Usage (hrs)
	Hours	%	Hours	%	%
Single	215	29%	51	7%	-164
L1D1	13	2%	41	6%	28
L1D1 w/ Offloads	364	49%	331	44%	-33
L2D1	0	0%	2	0%	2
Dual	134	18%	82	11%	-52
Triple	0	0%	1	0%	0
Multi-Direction	17	2%	236	32%	219

- Construction activities on runways 05/23 and 06L/24R and increasing traffic levels led to the following impacts in August:
  - Runway 06R/24L being the primary runway used on the south complex instead of runway 06L/24R
  - Significant increase in multi-direction runway configurations to accommodate demand when 05/23 and 06L/24R were unavailable
    - Multi-direction configurations were also used much more during the preferential runway hours in August 2021 whereas single runway configurations were primarily used in August 2020

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Traffic Distribution & Density

August 2020/2021

Traffic Distribution Summary

When looking at the following heatmaps, we are watching for changes in flight track patterns and flight track densities.

Overall, we found:

Arrivals

- No material change in the location of arrival flight tracks
- Increasing traffic levels have led to higher density along the primary arrival routes
- Altitudes along the downwind remain equal to, or higher than, pre-COVID altitudes
- Increasing traffic levels are resulting in base turn locations expanding slightly along the downwind. This expansion was practically eliminated during the low traffic periods during COVID

Departures

- No material change in the location of departure flight tracks
- Increasing traffic levels have led to higher density along the primary departure routes

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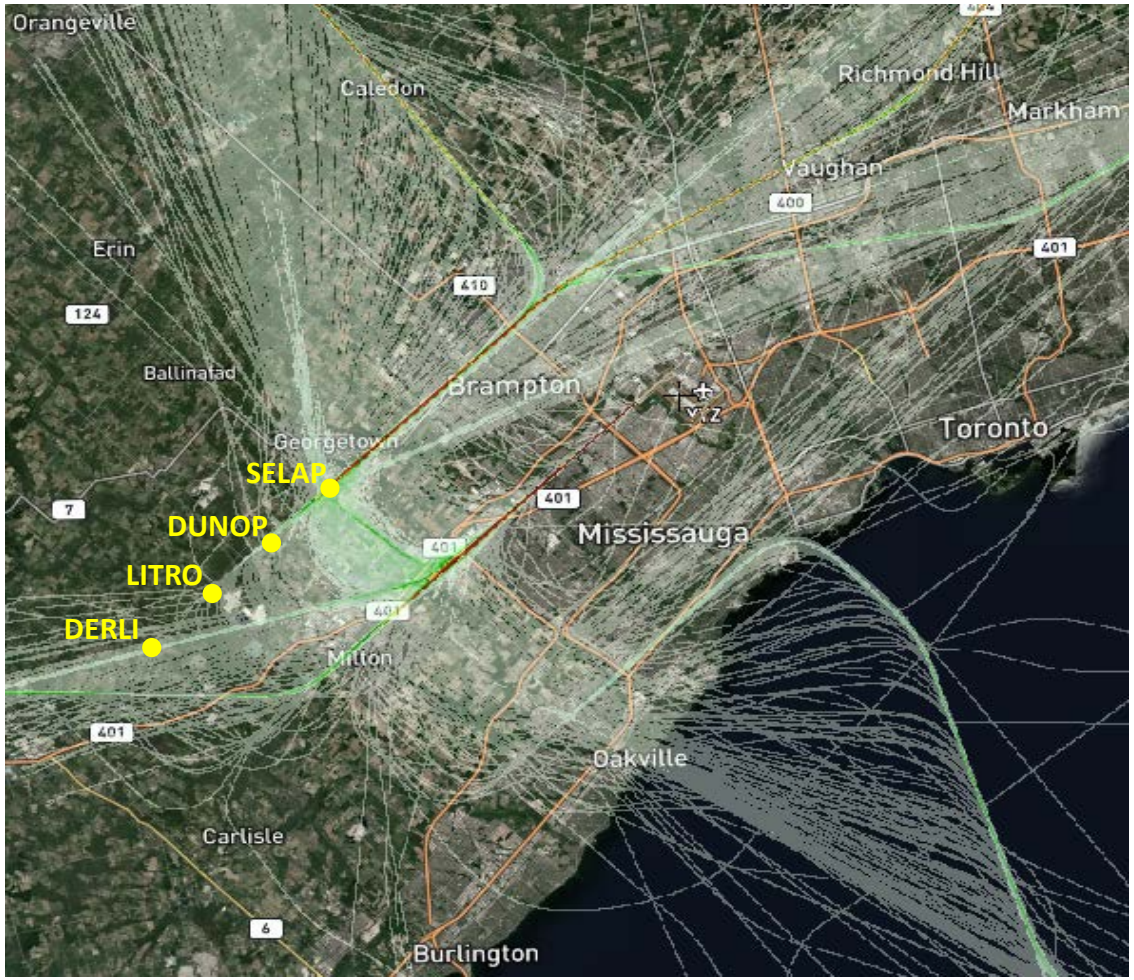
Arrival Tracks

August 2020/2021

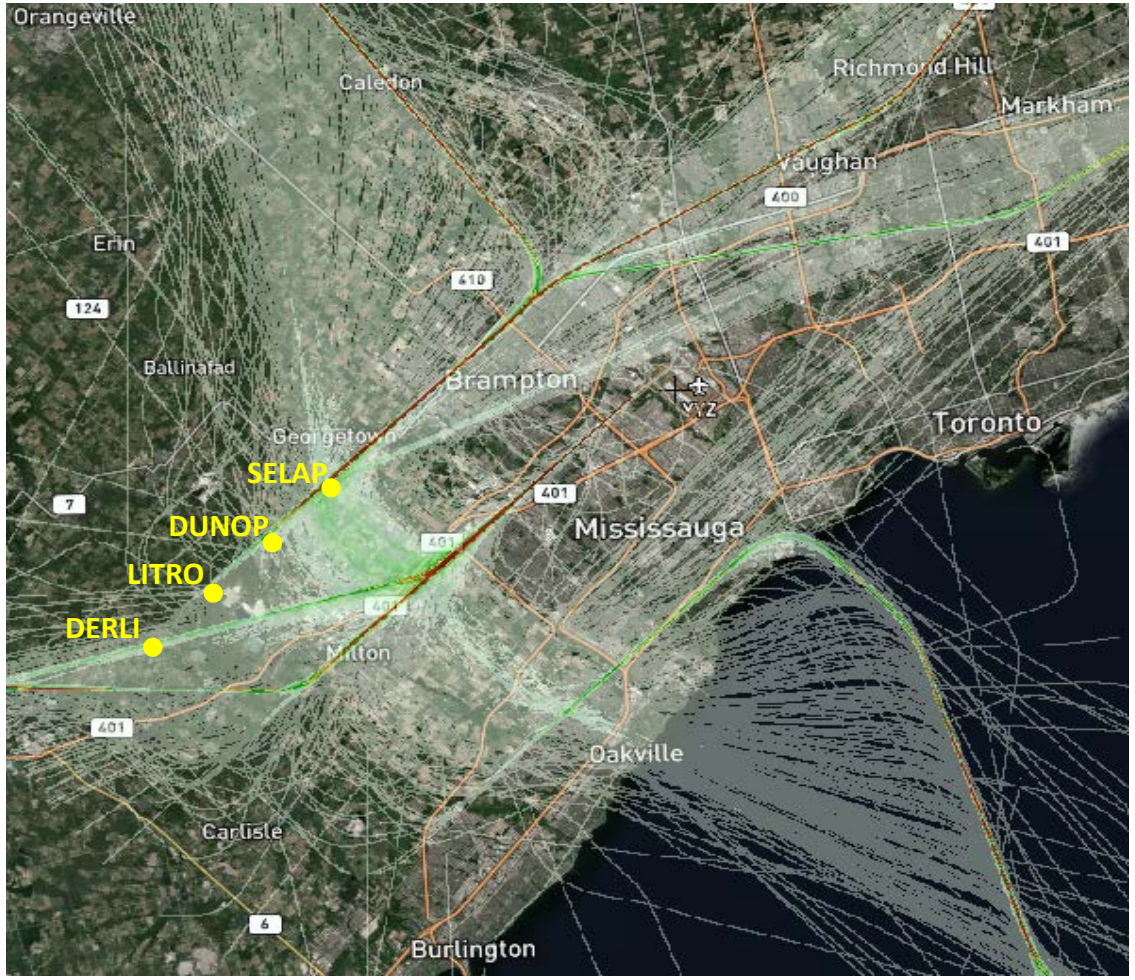
Arrivals Track Density – Runway 05

August 2020



Ops: 1,673

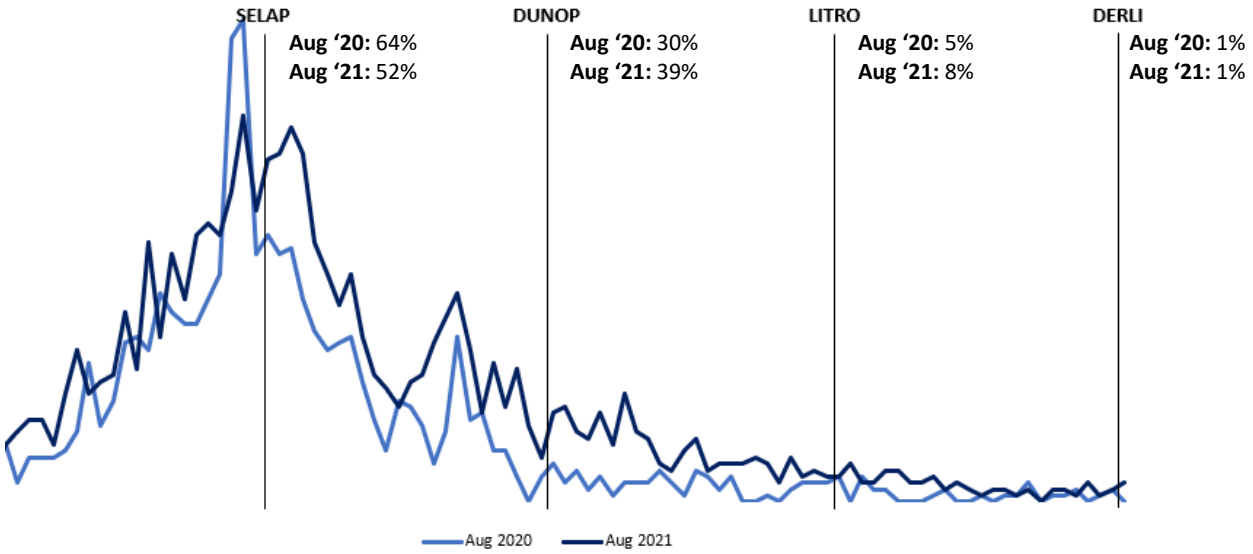
August 2021



Ops: 2,684

NW Downwind – Detailed Analysis

Location of Base Turns



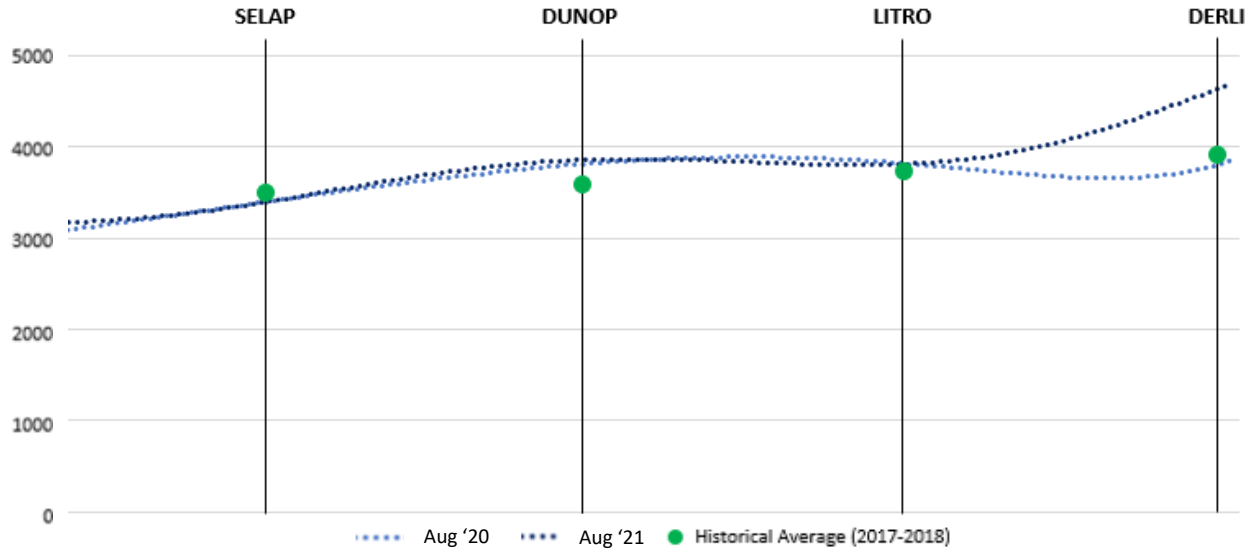
- Increasing traffic in Aug '21 resulted in aircraft flying longer average downwinds
- Base turn locations were more spread out along the downwind compared to Aug '20

Downwind Usage

Aug '20: 662 operations (35% of easterly arrivals)

Aug '21: 1,022 operations (29% of easterly arrivals)

Altitude of Base Turns



- Average altitudes along the downwind remained very consistent with the historical averages
- There were no points along the NW downwind where the average altitude of arrivals materially decreased relative to historical averages

Arrivals Track Density – Runways 06L/R

August 2020

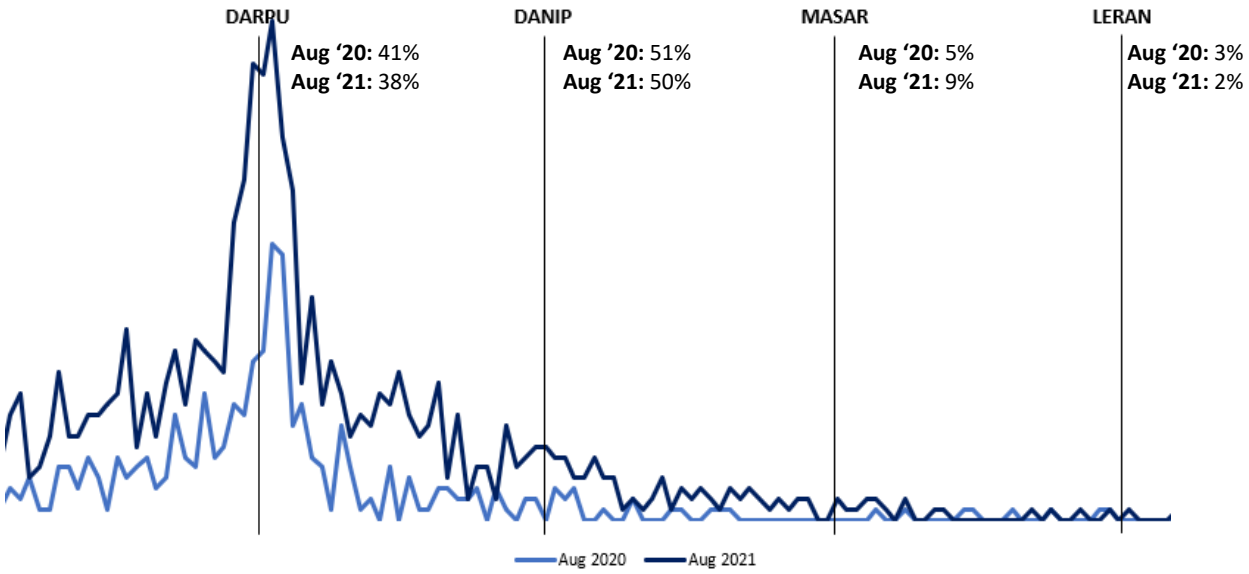
Ops: 219

August 2021

Ops: 825

SW Downwind – Detailed Analysis

Location of Base Turns



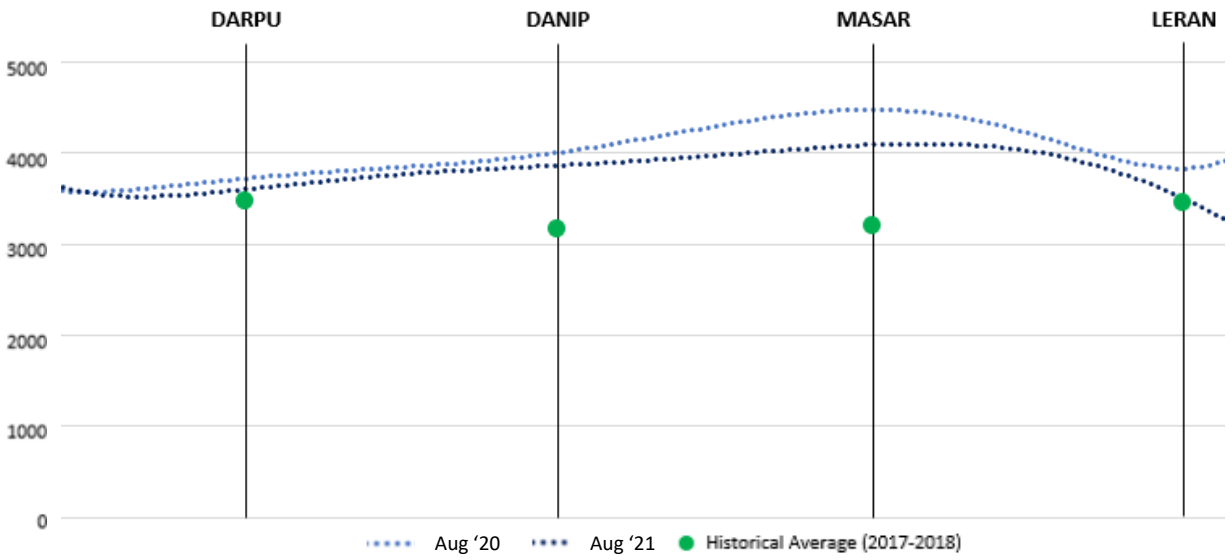
- The distribution of base turn locations in Aug '21 was very similar to that of Aug '20
- There was an increase in arrivals along the SW downwind in Aug '21 relative to Aug '20

Downwind Usage

Aug '20: 145 operations (8% of easterly arrivals)

Aug '21: 518 operations (15% of easterly arrivals)

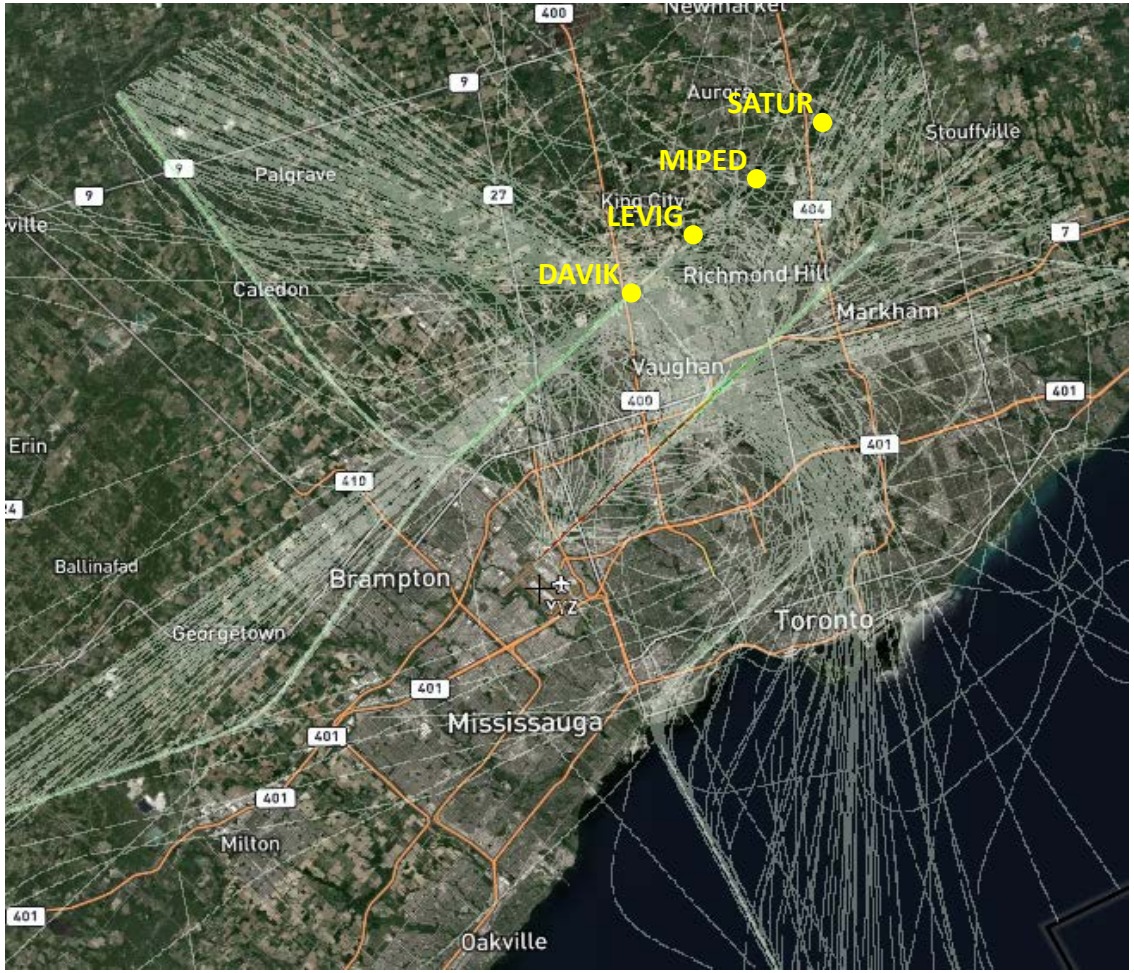
Altitude of Base Turns



- Average altitudes along the SW downwind were slightly lower in Aug '21 compared to Aug '20, but still well above the historical averages

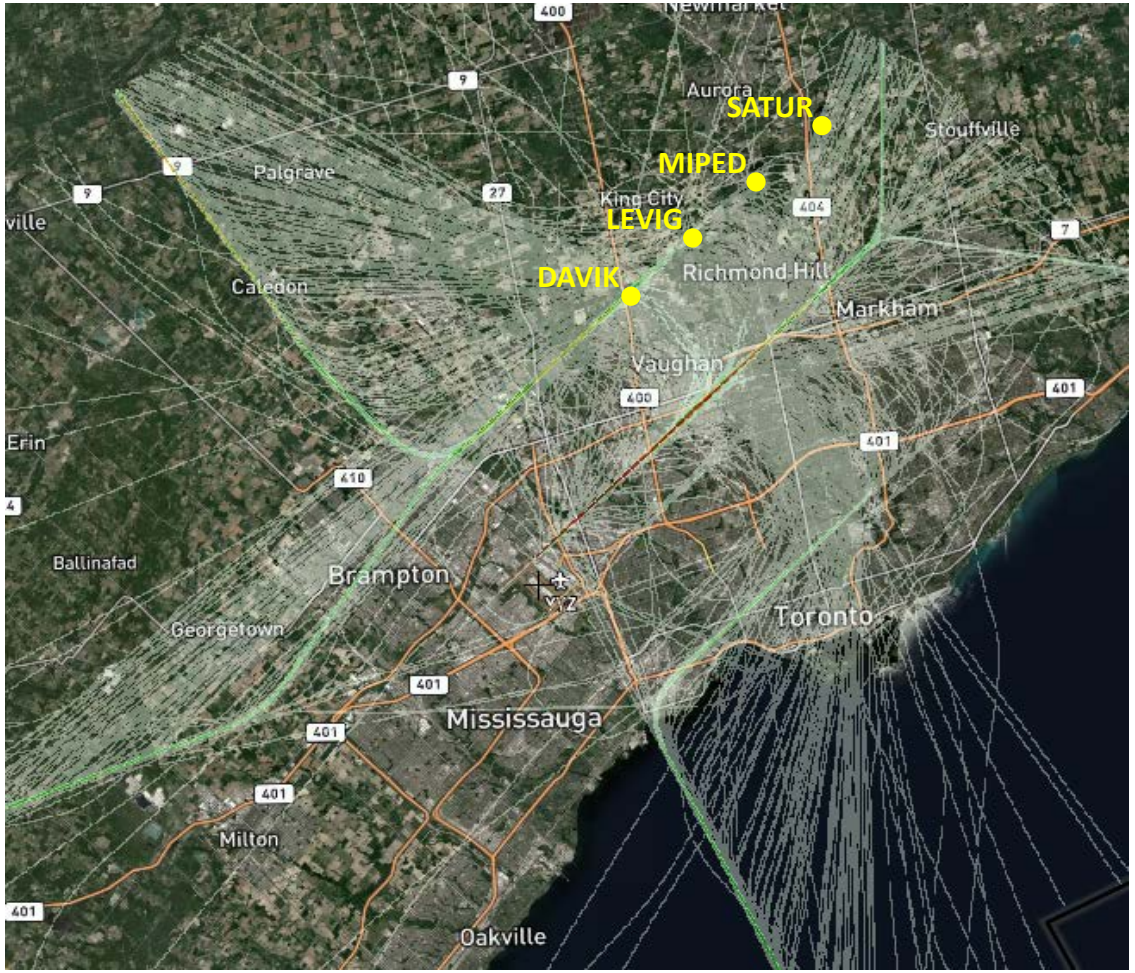
Arrivals Track Density – Runway 23

August 2020



Ops: 597

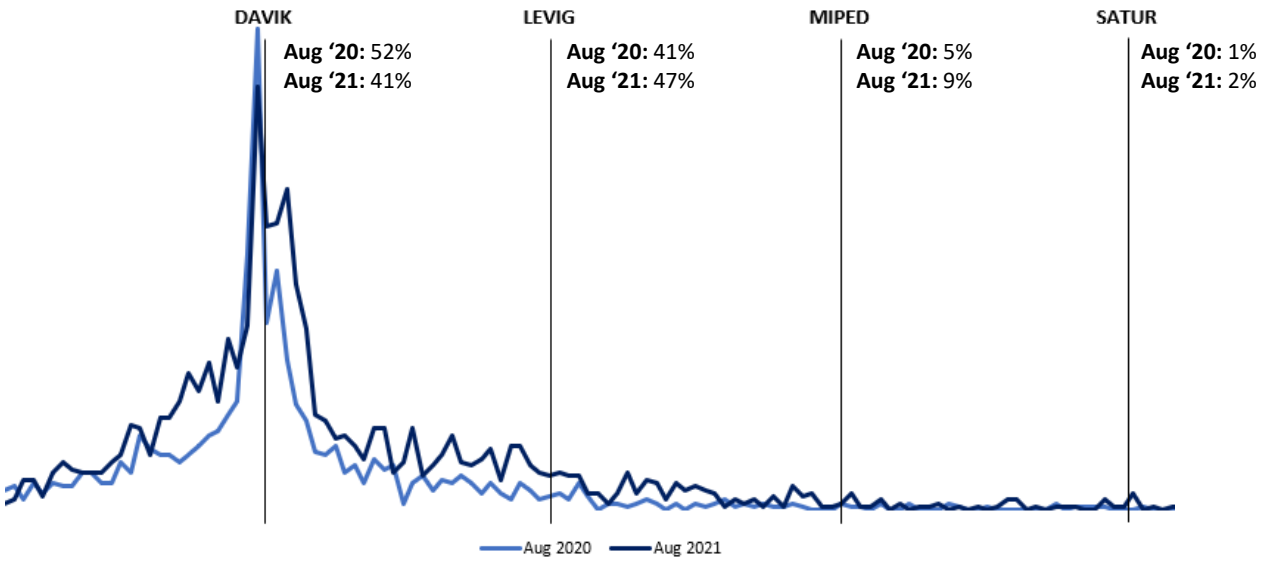
August 2021



Ops: 925

NE Downwind – Detailed Analysis

Location of Base Turns



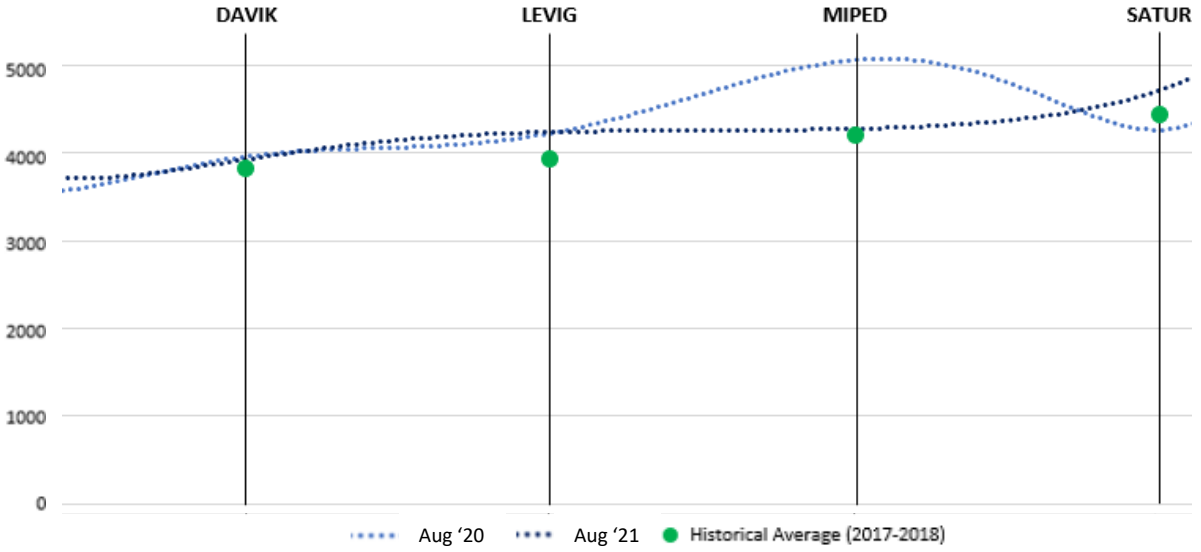
- The distribution of base turn locations in Aug '21 was very similar to that of Aug '20

Downwind Usage

Aug '20: 420 operations (13% of westerly arrivals)

Aug '21: 771 operations (14% of westerly arrivals)

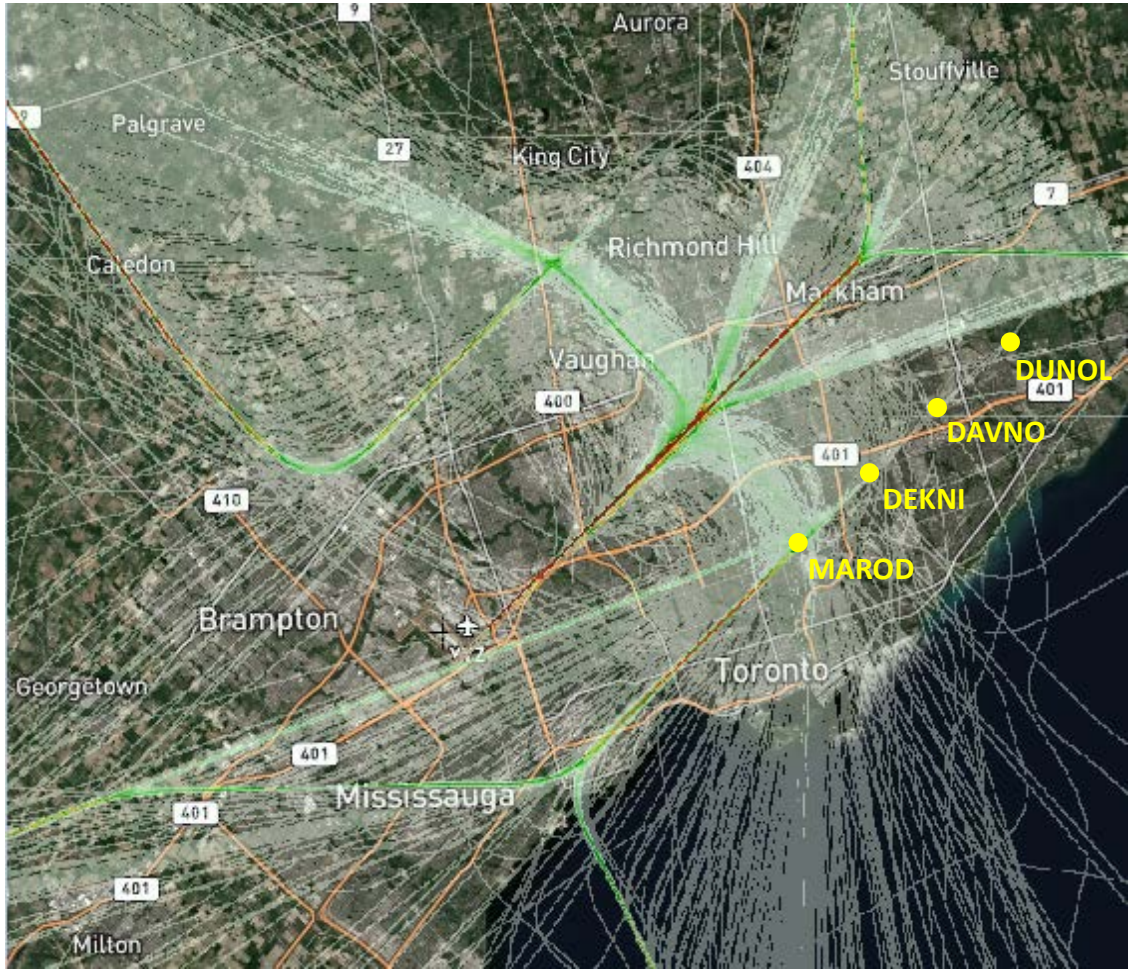
Altitude of Base Turns



- Average altitudes along the NE downwind were slightly lower around MIPED in Aug '21 compared to Aug '20 , but still in line with historical averages

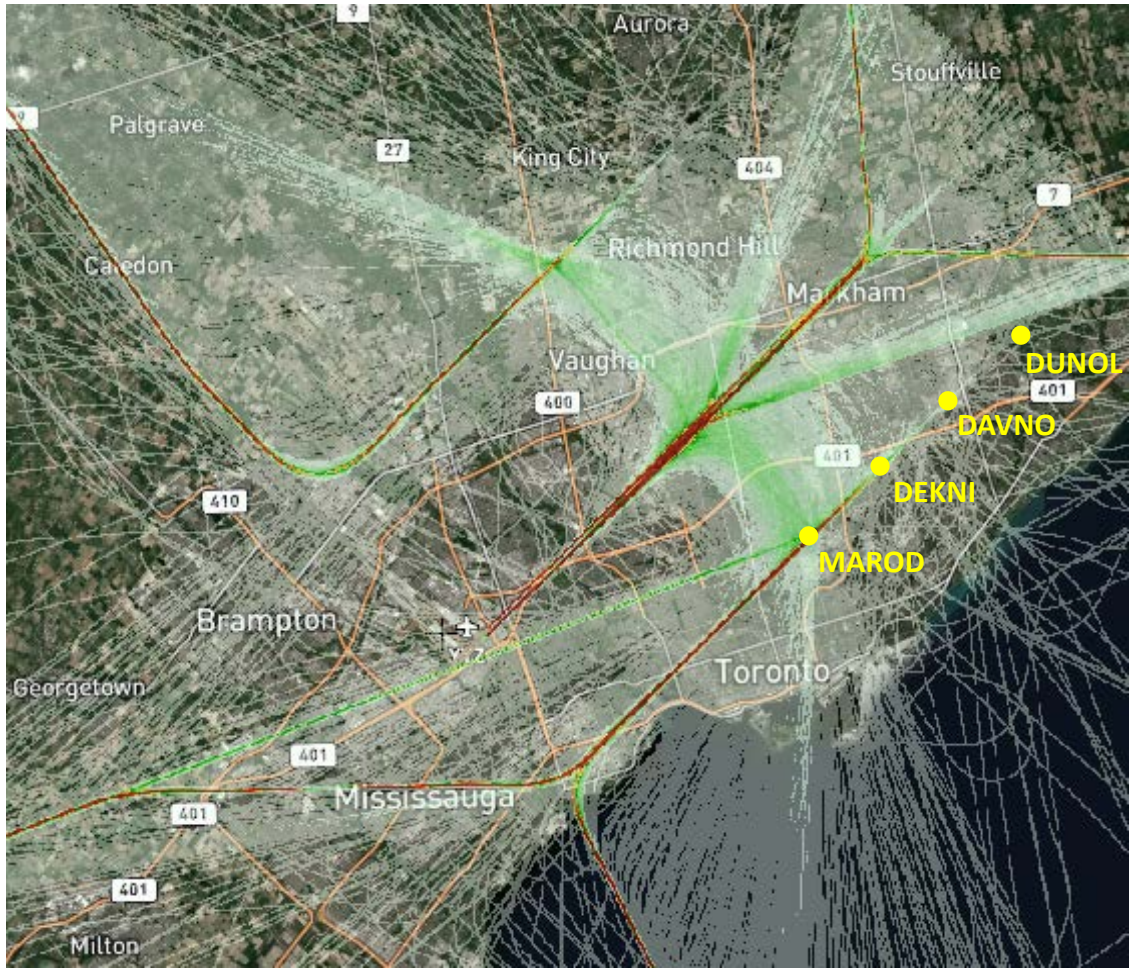
Arrivals Track Density – Runways 24L/R

August 2020



Ops: 2,613

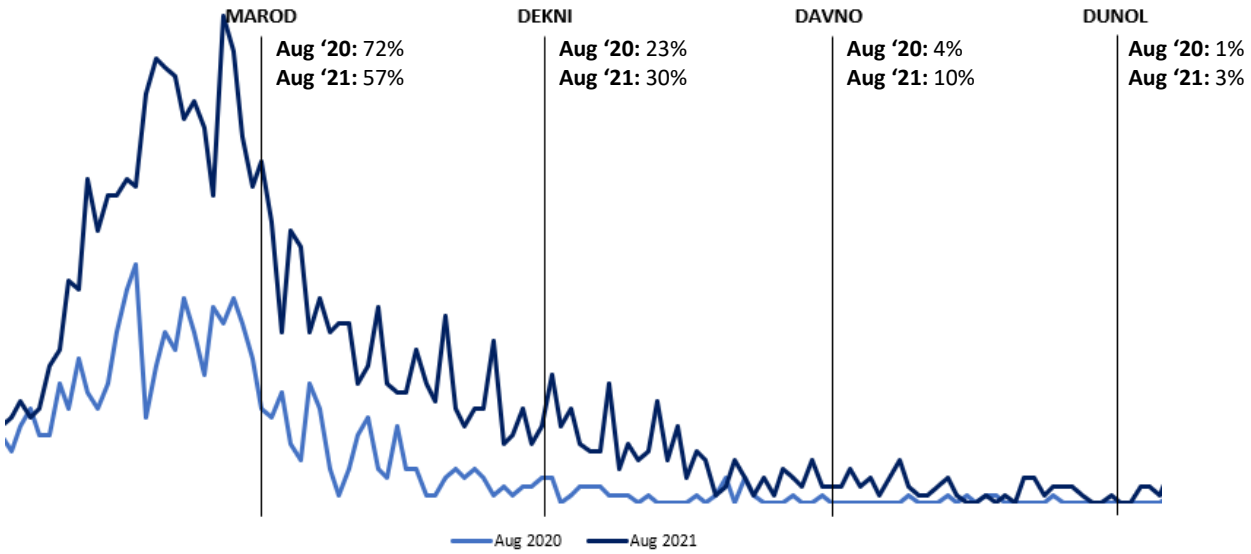
August 2021



Ops: 4,540

SE Downwind – Detailed Analysis

Location of Base Turns



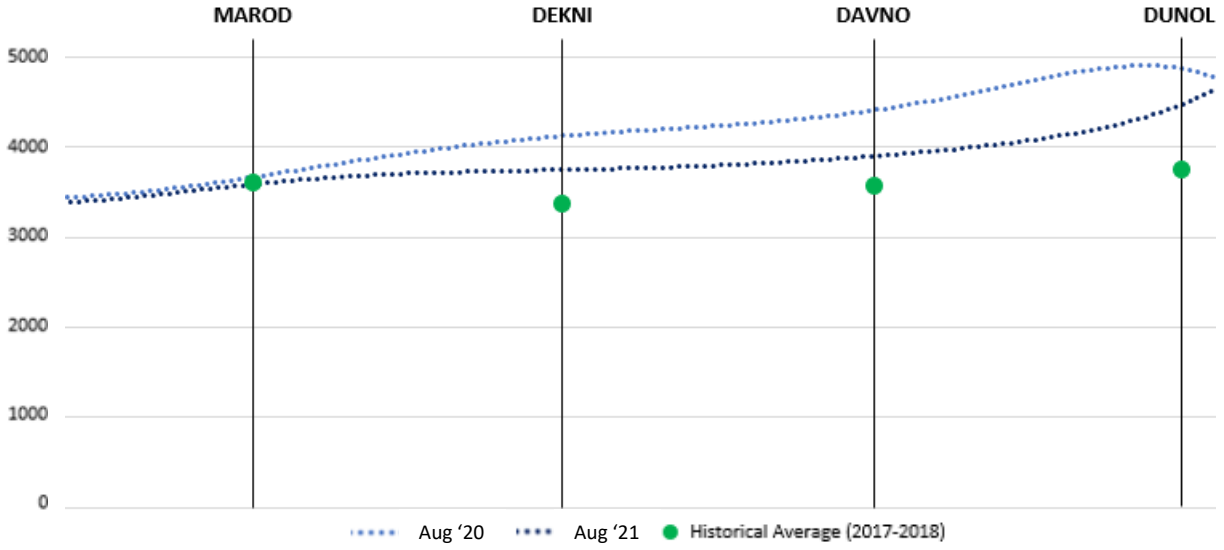
- Increasing traffic in Aug '21 resulted in aircraft flying longer average downwinds
- There was an increase in arrivals along the SE downwind in Aug '21 relative to Aug '20

Downwind Usage

Aug '20: 390 operations (12% of westerly arrivals)

Aug '21: 1,204 operations (22% of westerly arrivals)

Altitude of Base Turns



- Average altitudes along the SE downwind were lower in Aug '21 compared to Aug '20 , but still above the historical averages

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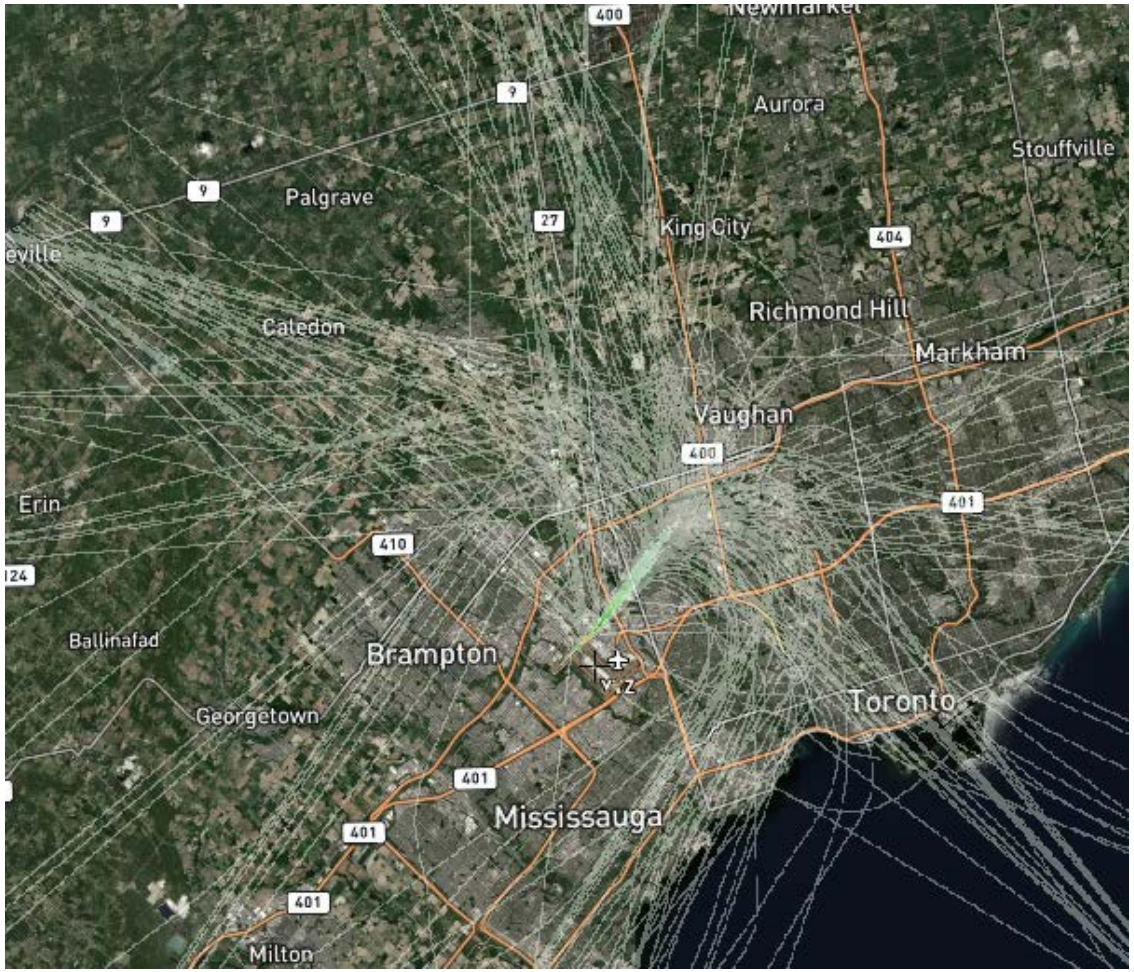
Departure Tracks

August 2020/2021

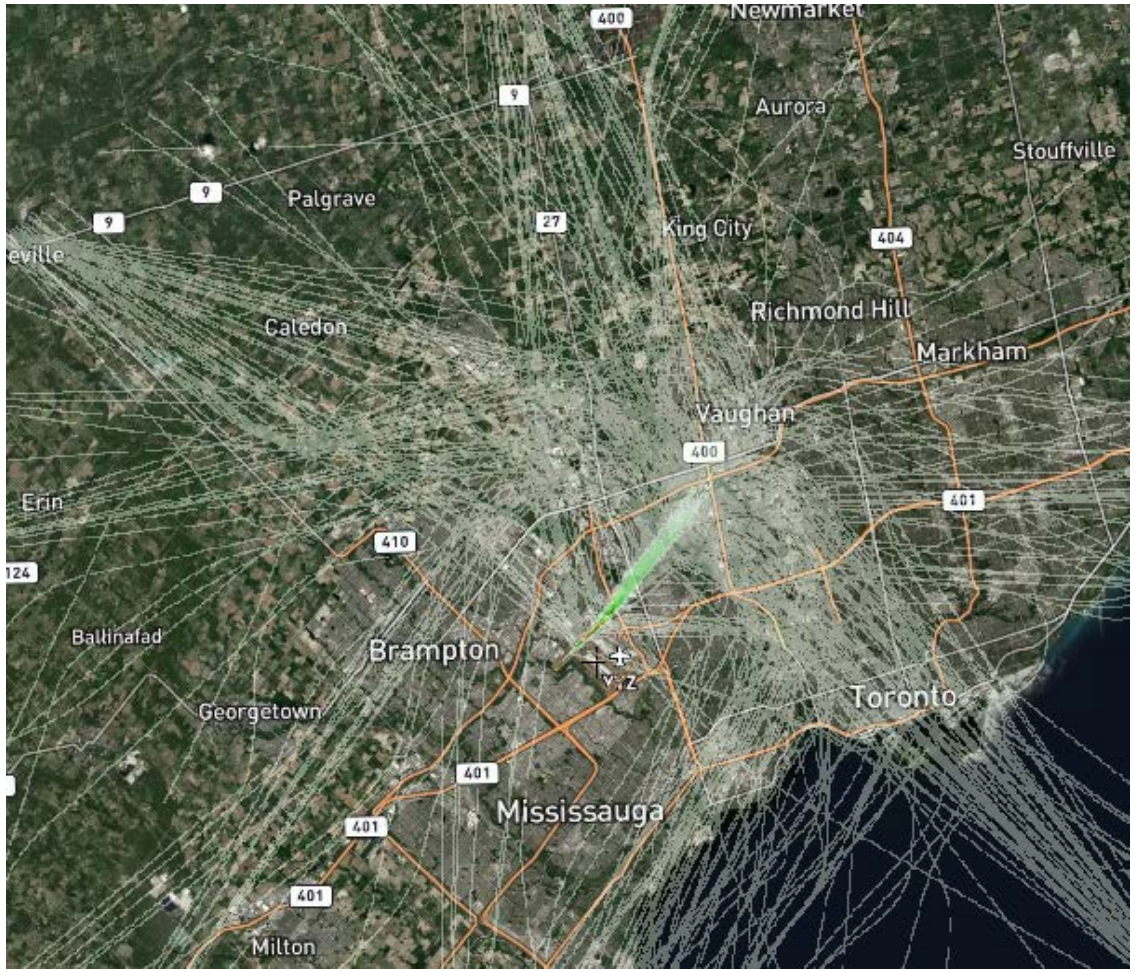
Departures Track Density – Runway 05

August 2020



Ops: 250

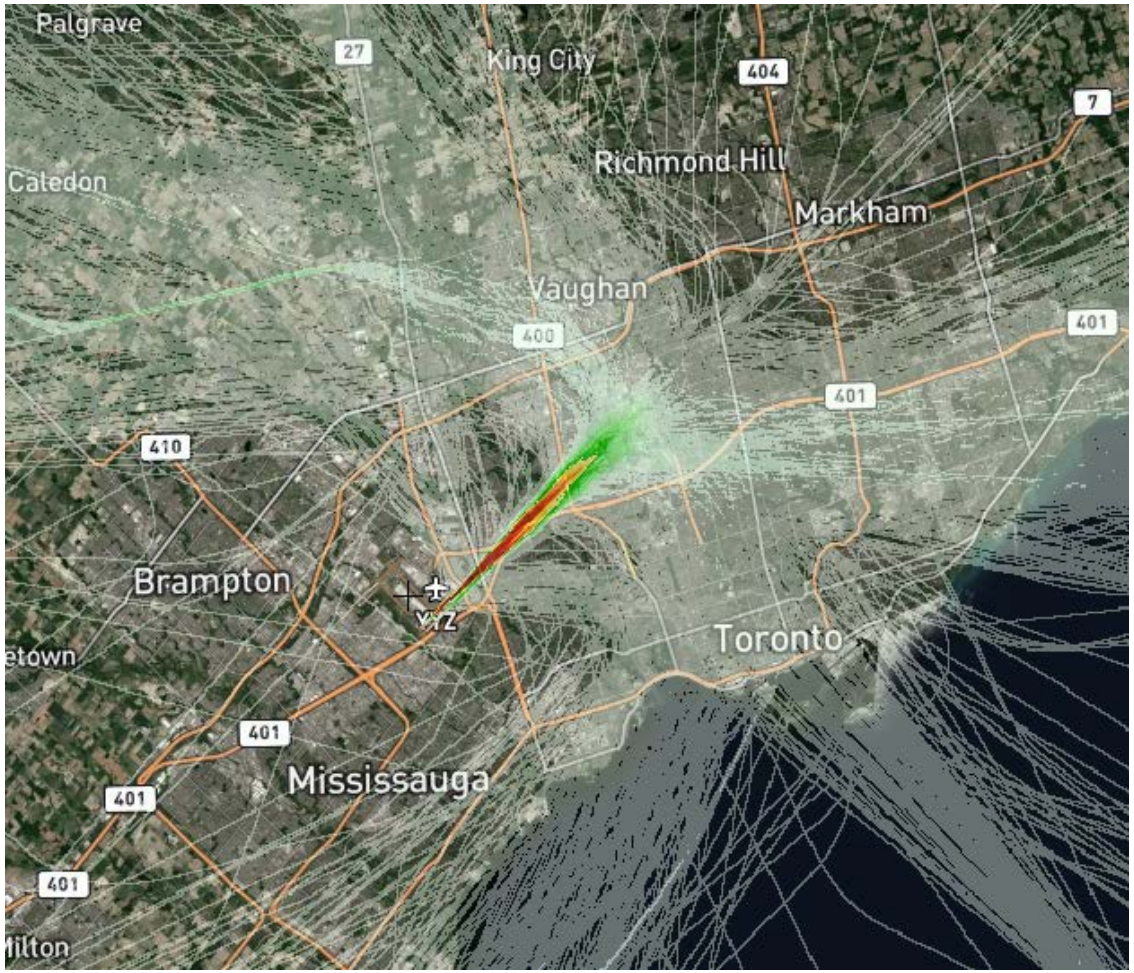
August 2021



Ops: 375

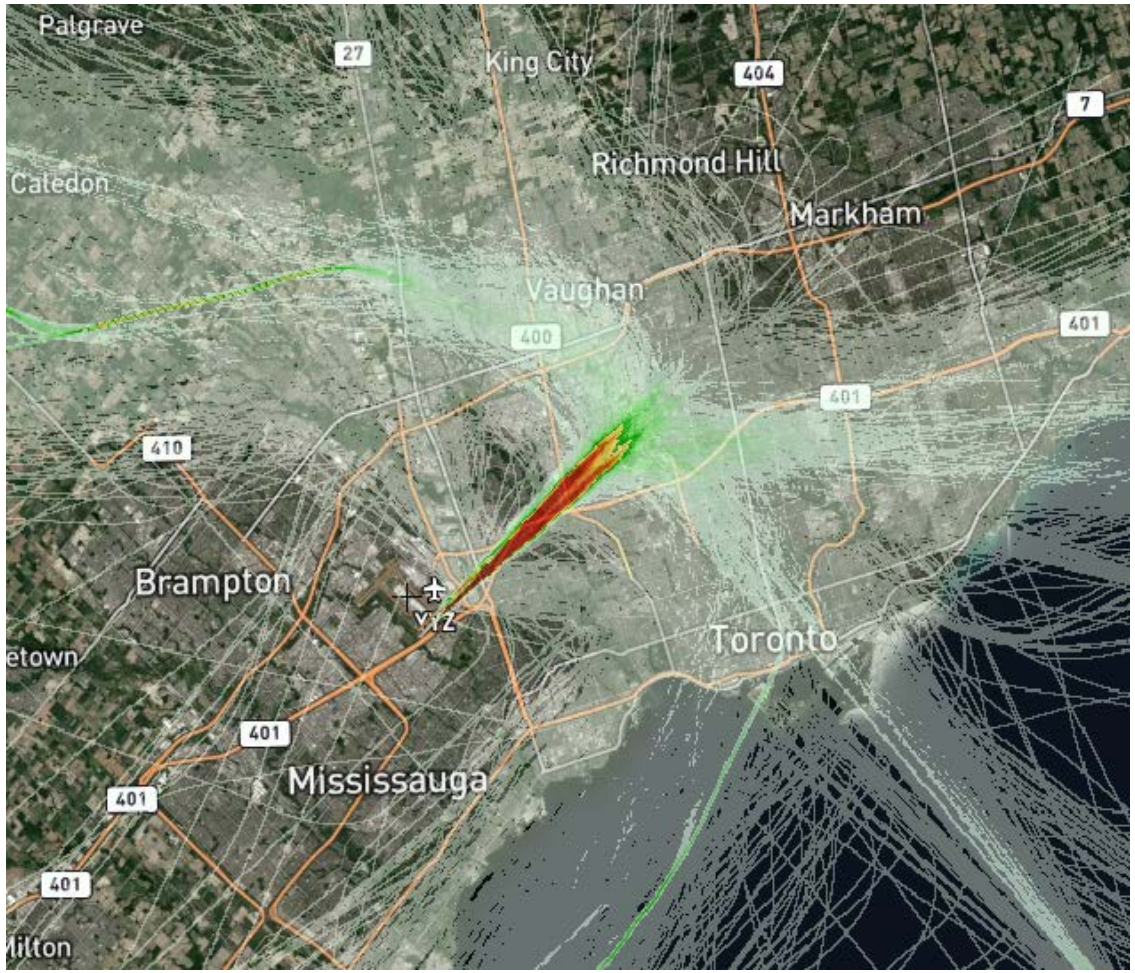
Departures Track Density – Runways 06L/R

August 2020



Ops: 1,565

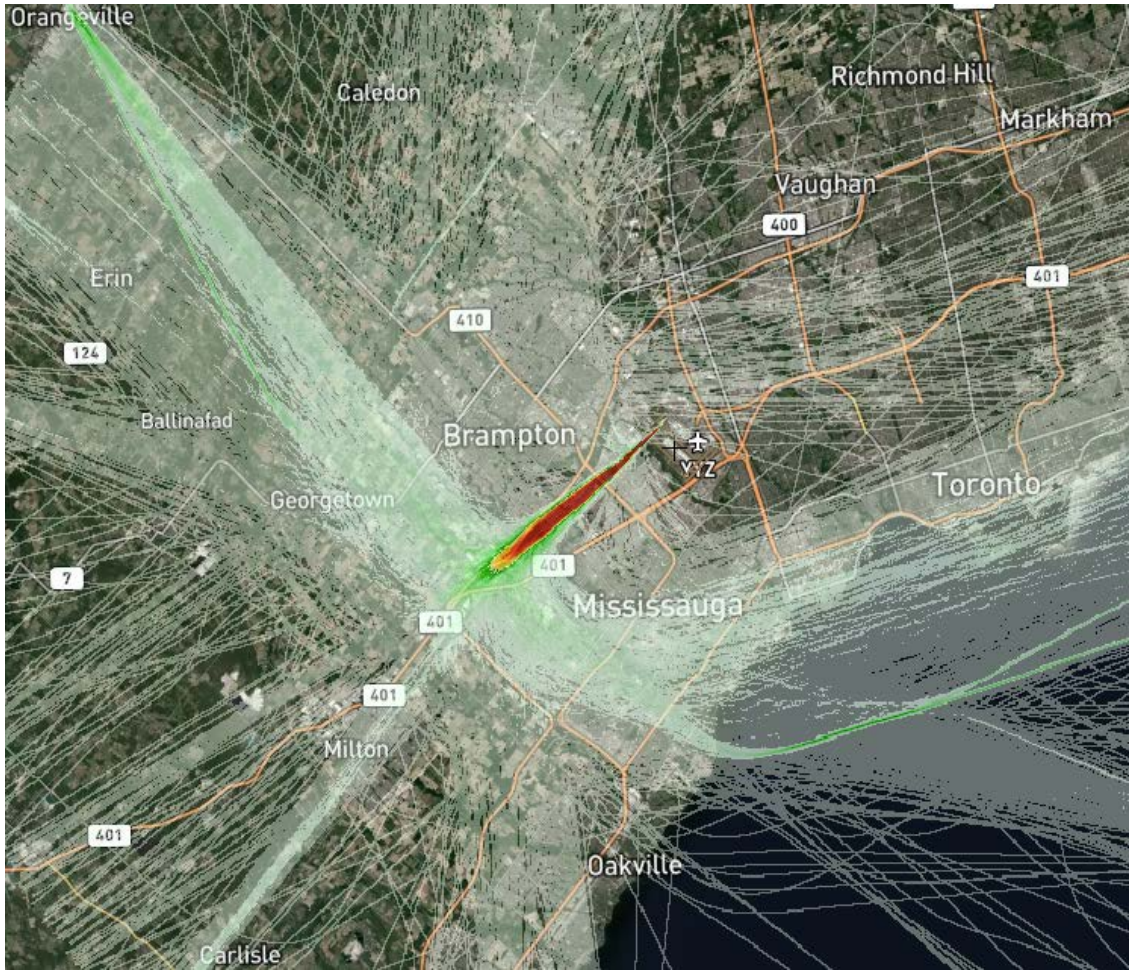
August 2021



Ops: 2,647

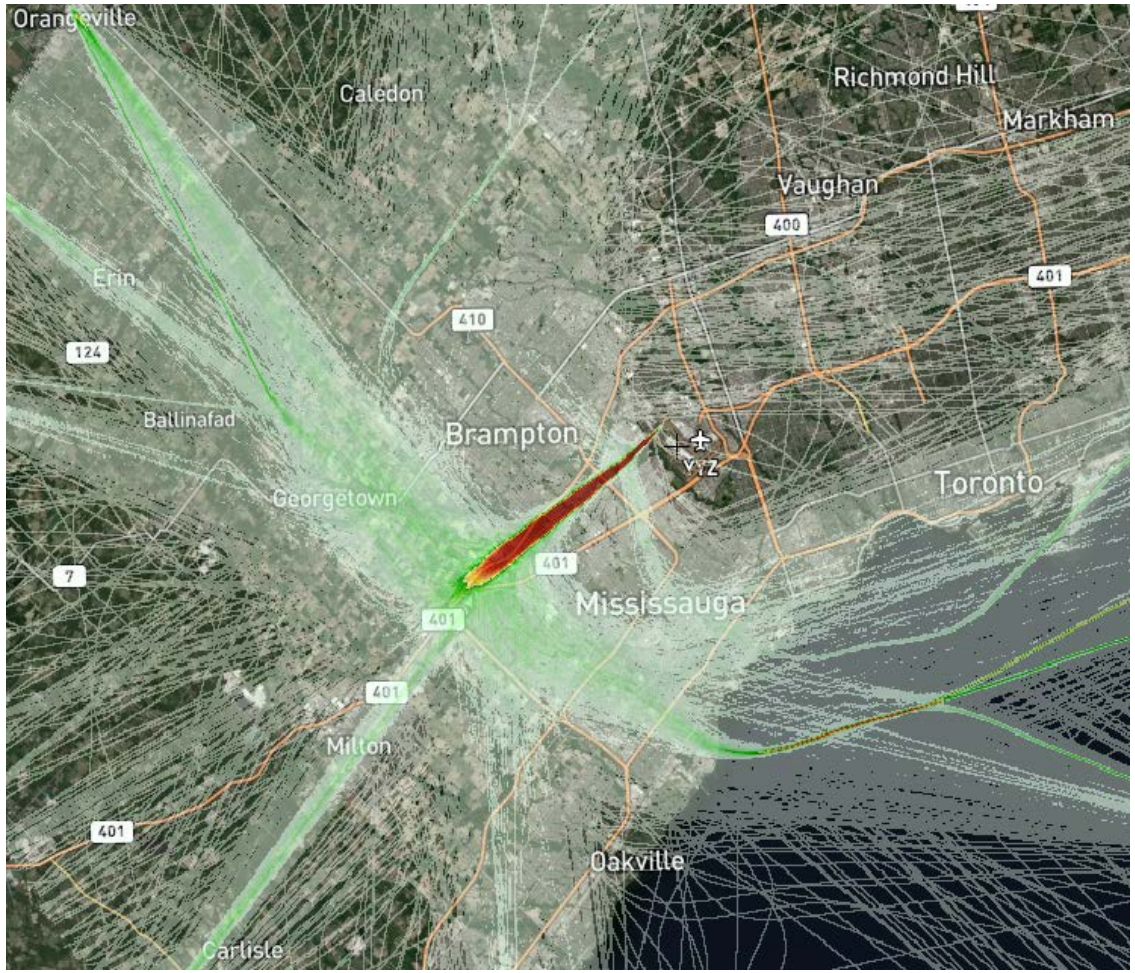
Departures Track Density – Runway 23

August 2020



Ops: 2,937

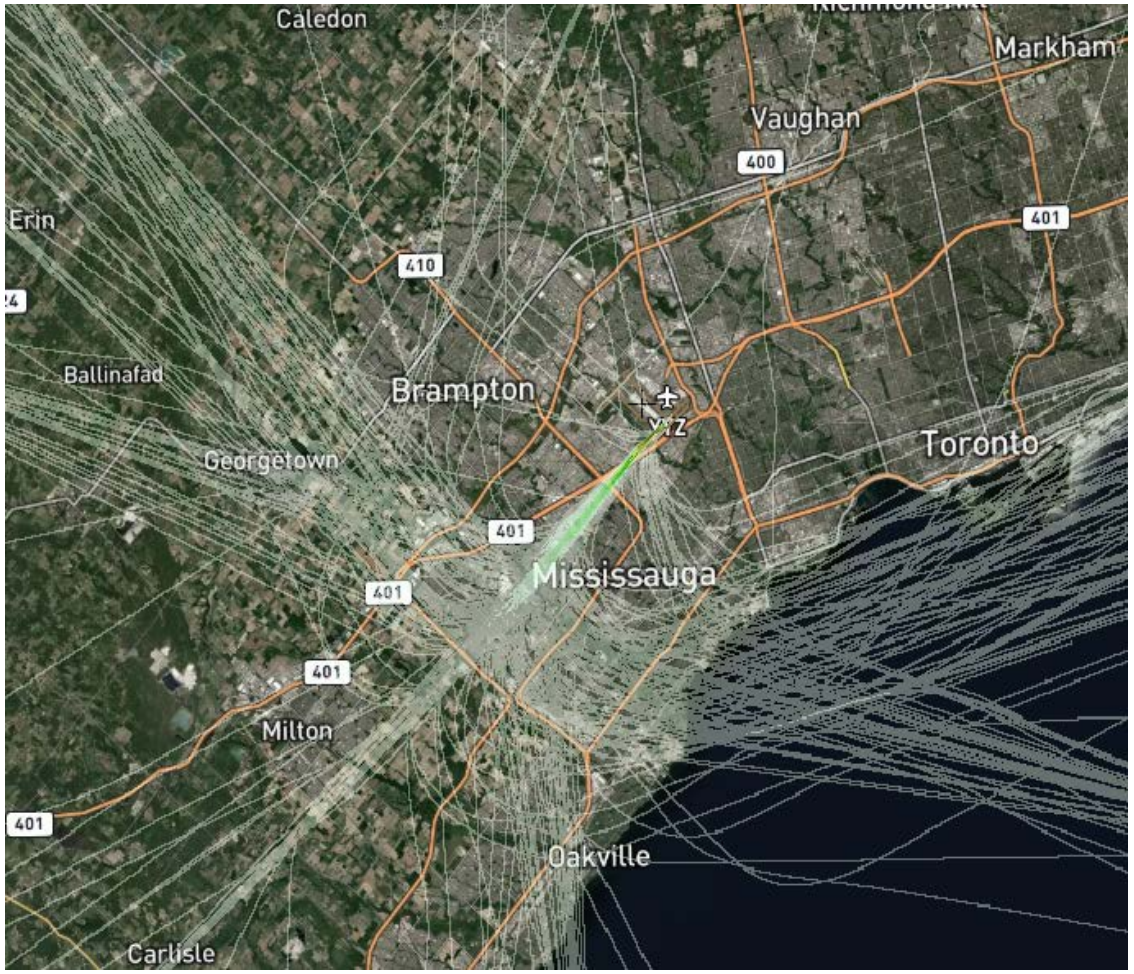
August 2021



Ops: 4,484

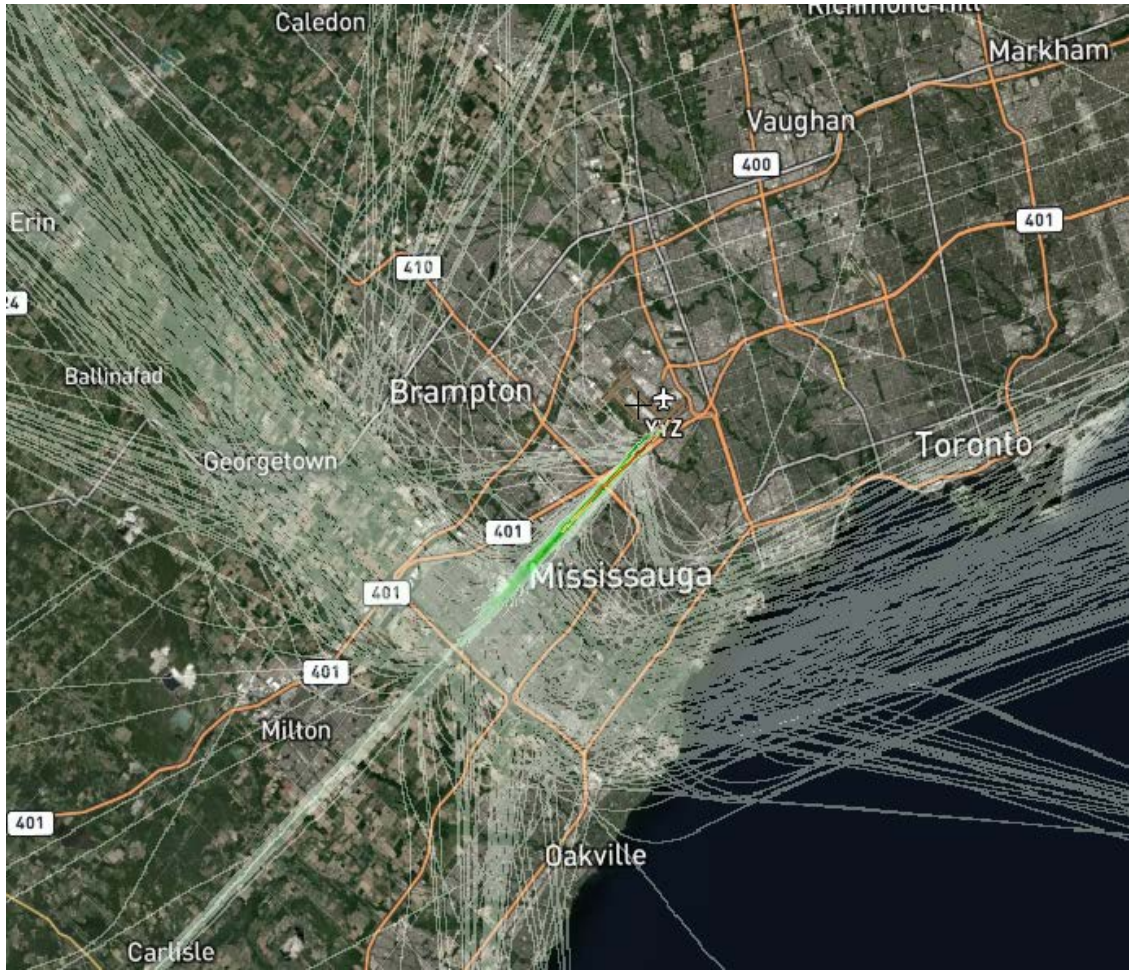
Departures Track Density – Runways 24L/R

August 2020



Ops: 276

August 2021



Ops: 486

Complaints At-a-Glance

August 2020

1516 complaints
from **88** individuals

147 complaints per 1000 movements
8.5 individuals per 1000 movements

VS

August 2021

9239 complaints
from **236** individuals

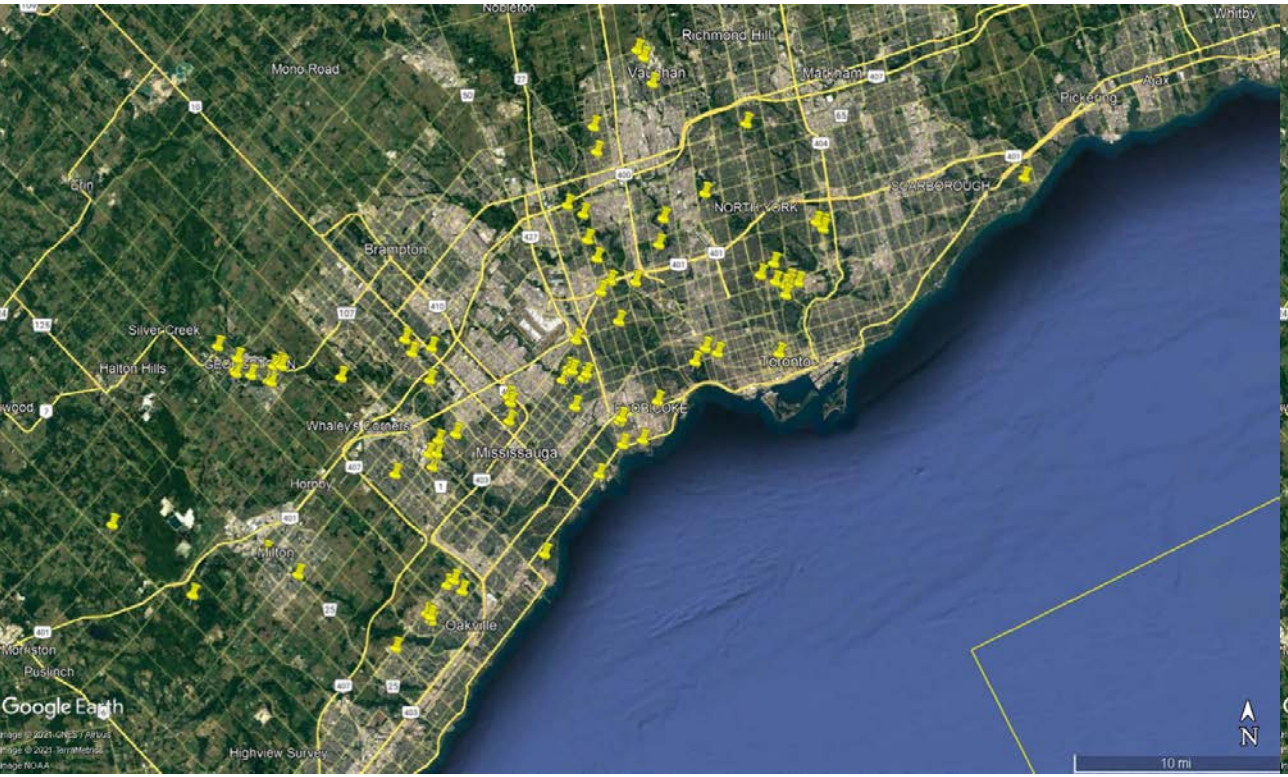
480 complaints per 1000 movements
12 individuals per 1000 movements

The increase in complaints - August 2020 vs 2021 reflects increasing traffic levels and construction related impacts:

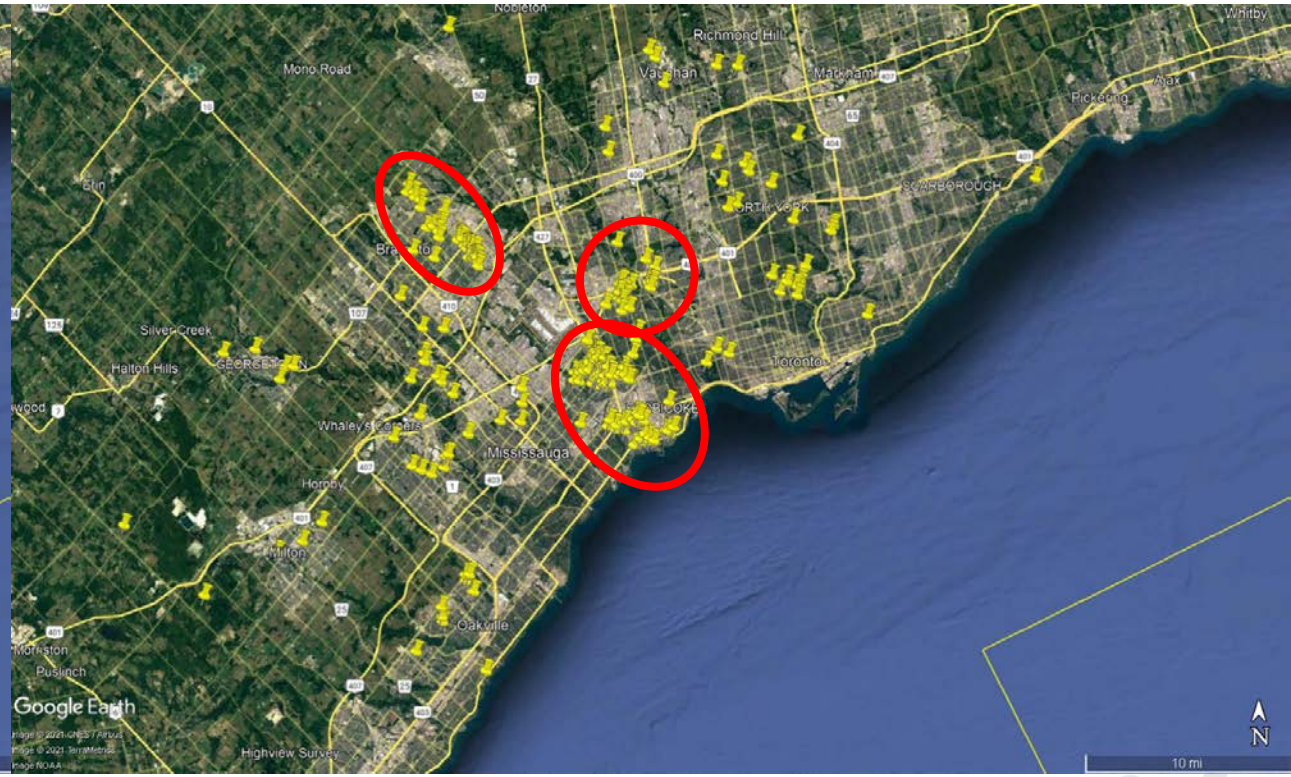
- Complaints and individuals submitting complaints are up significantly
- Approx. 65 new individuals in the month of August 2021
- The increase in complaints is more pronounced than the increase in individuals. This difference could be attributed to a small number of individuals submitting vast numbers of complaints

Complaint Distribution

August 2020: 1,516 complaints from 88 individuals

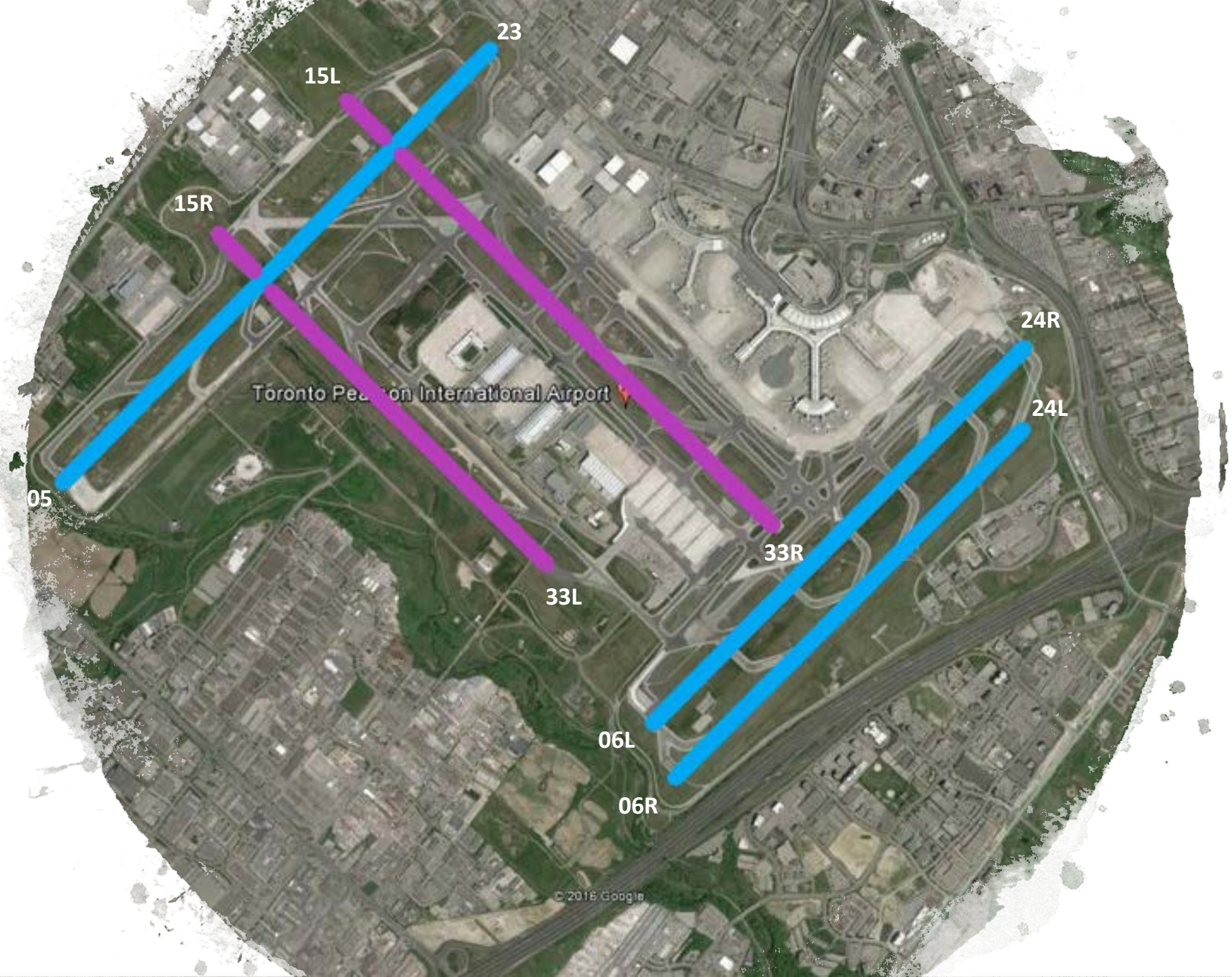


August 2021: 9,239 complaints from 236 individuals



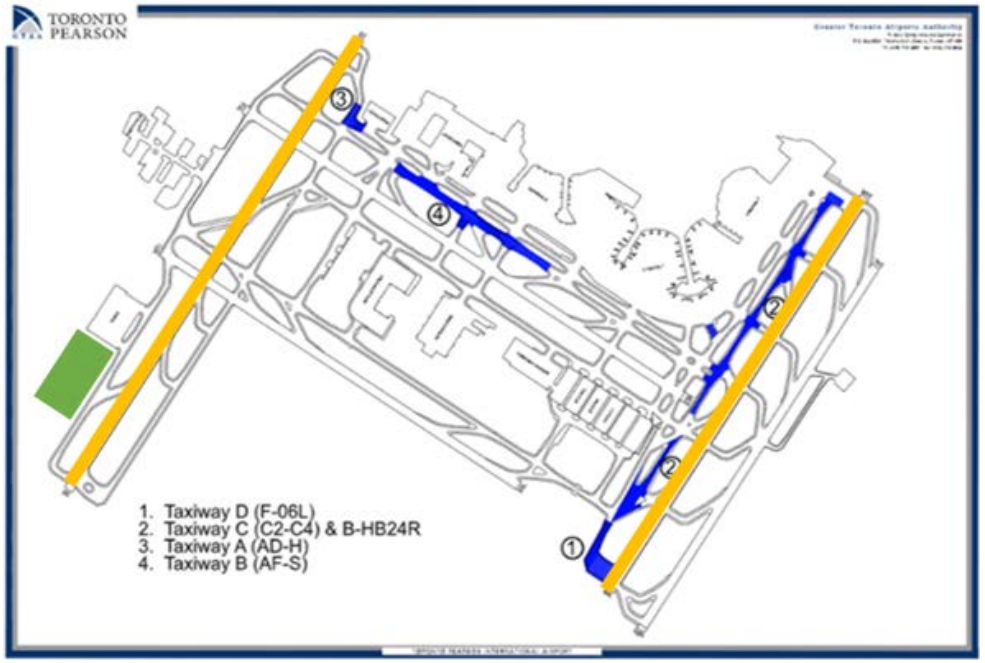
More residents submitting complaints. Most evident in areas to the north and south of the airport and the east. This is likely related to the airfield construction program and the use of the north/south runways and departures off Runway 06R.

Airside Maintenance Updates



East-West
North-South

2021 Ongoing Airside Maintenance Work



1. Work on the airfield, restricting usage of some runways:

- Closure of Runway 06L/24R (work on Taxiway C) – 6:30AM to 6PM Mon-Fri
  - Late April to October 15
- Threshold work on Runway 05/23
  - September 7 to 30 (piggybacking on Bombardier nighttime closure)
  - October 3 to 7, full 24hour closure to repaint

2. Bombardier is constructing a new facility (green box on the map)

Nighttime closures of Runway 05/23 – 9PM to 7AM Mon-Fri

- August until December
- Moved to nighttime in August to accommodate traffic demand

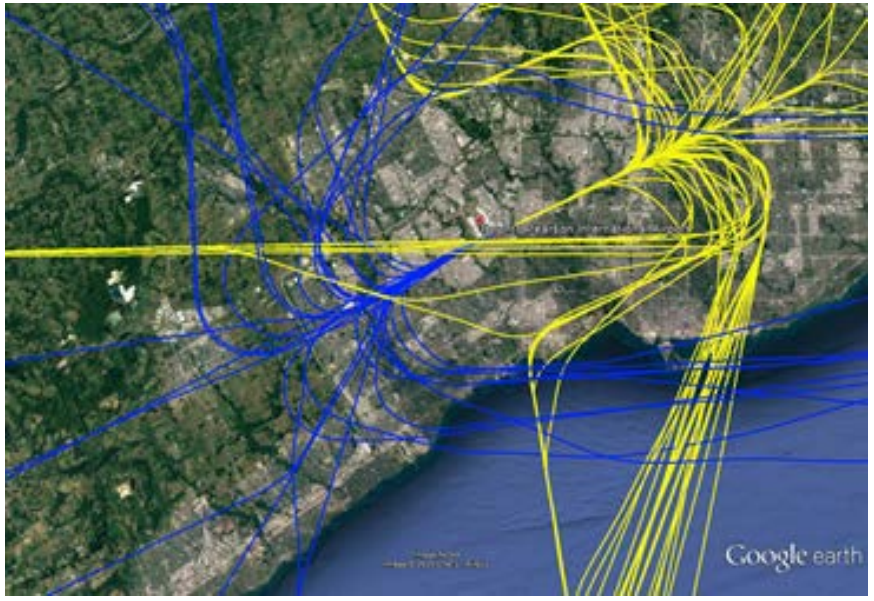
3. Routine maintenance and **offsite crane operations**

- Routine maintenance affecting runway availability can lead to configurations using available runways

Possible Community Impact

Increased use of the parallel east/west Runways 06L/24R and 06R/24L

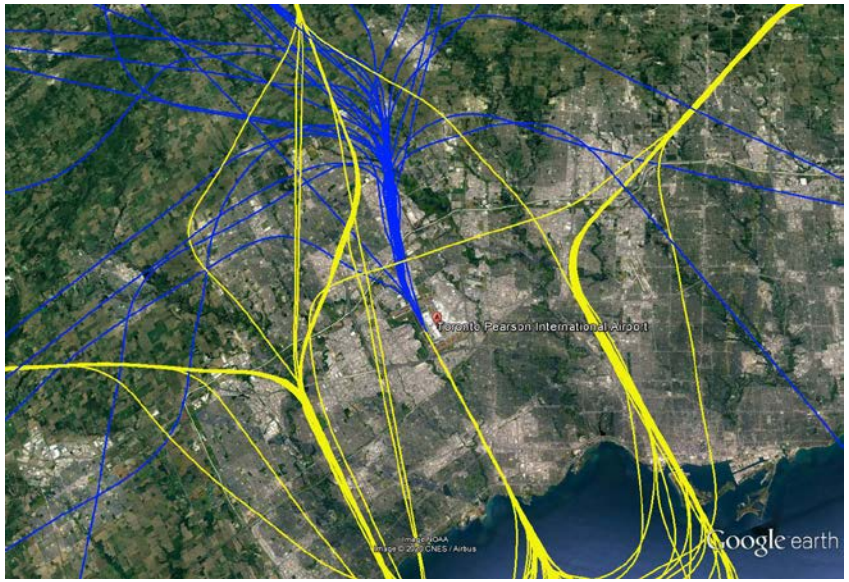
- When Runway 05/23 is closed for Bombardier work 9:00pm – 7:00am through to December (evening and early morning)

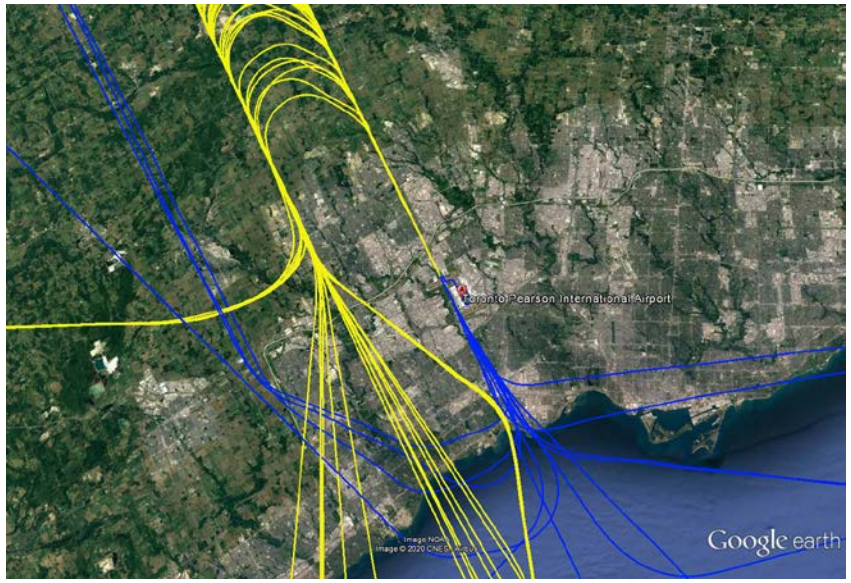


Increased use of Runway 06R/24L which is slightly further south than 06L/24R and is closer to communities

- When Runway 06L/24R is closed- through to mid-October (daytime)

Possible Community Impact

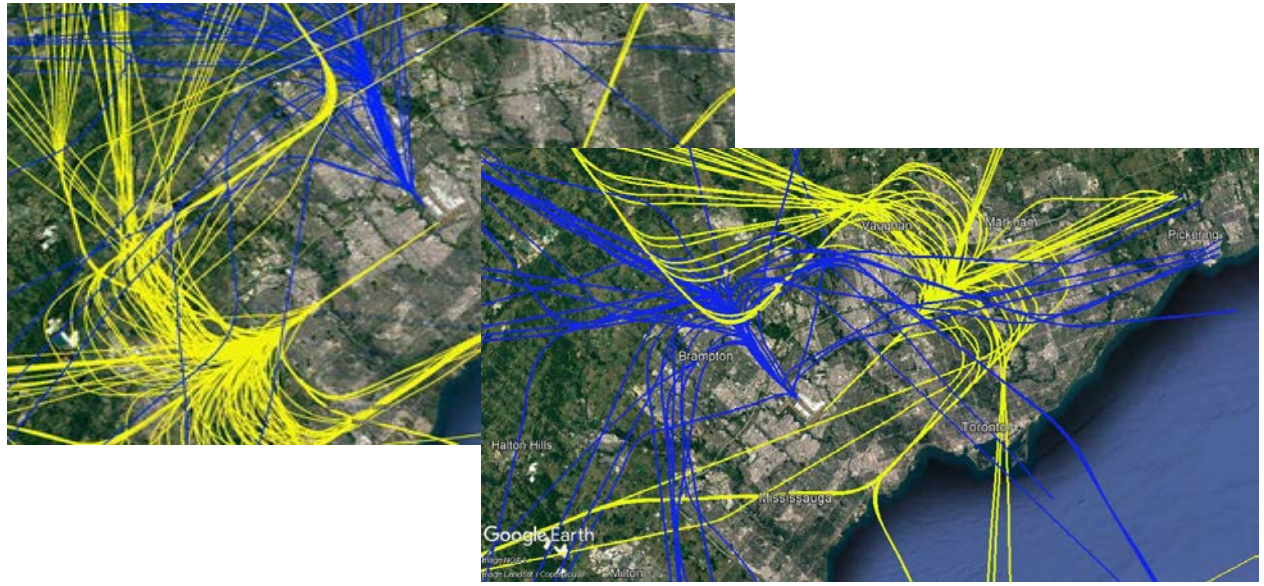


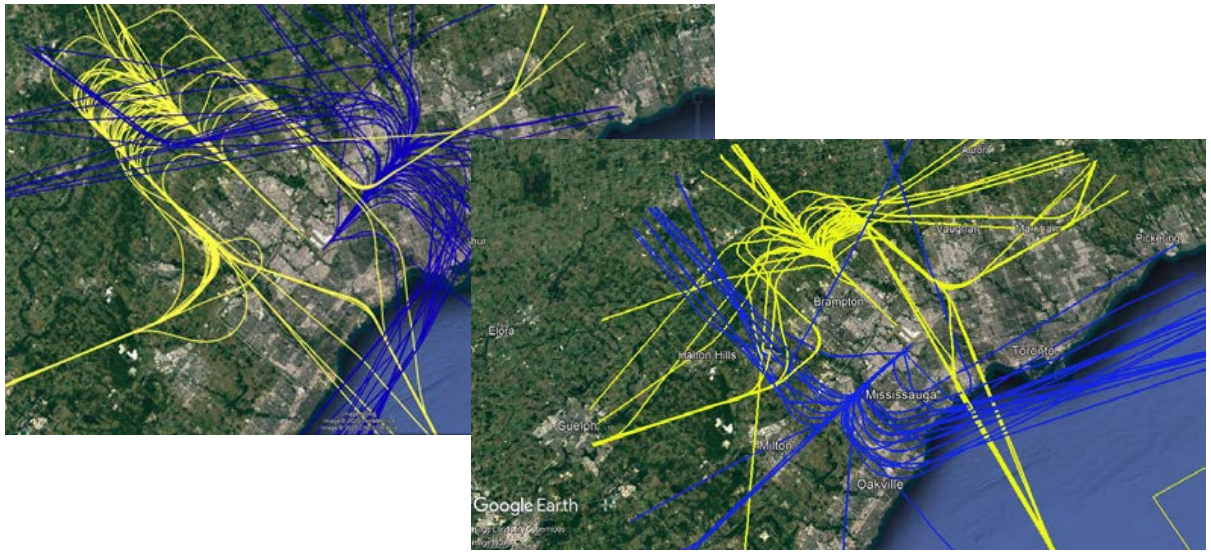


Increased north/south operations - arrive Runway 33L/R and depart Runway 33R or arrive Runways 15L/R and depart Runway 15L/R

- When Runway 05/23 is closed for Bombardier work 9:00pm – 7:00am through to December and demand cannot be handled on available east/west runway (evening and early morning)
- When Runway 05/23 is closed for 5-days for threshold work October 3-7 (daytime)

Possible Community Impact





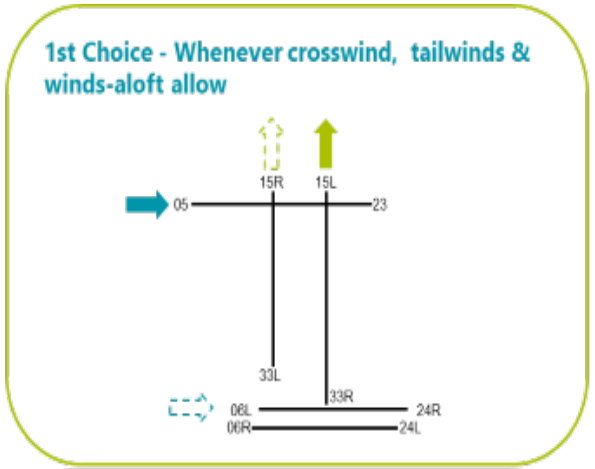
Two directional configurations - Depart Runway 33R/L and arrive Runway 06L/R or 24L/R or Arrive Runways 15L/R and depart Runway 24L/R or 06L/R

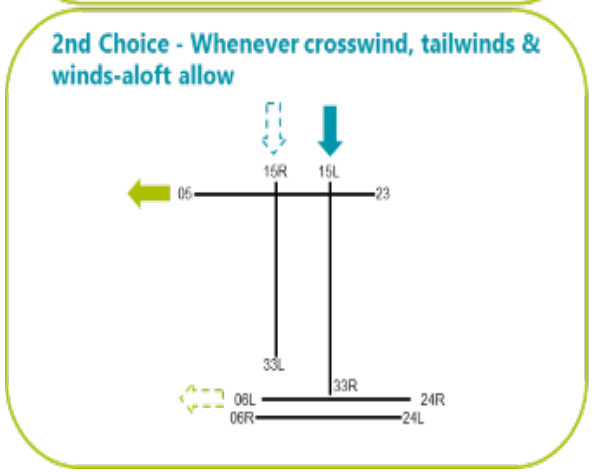
- When Runway 05/23 is closed for Bombardier work 9:00pm – 7:00am through to December (evening and early morning)
- When Runway 05/23 is closed for 5-days for threshold work October 3-7 (daytime)

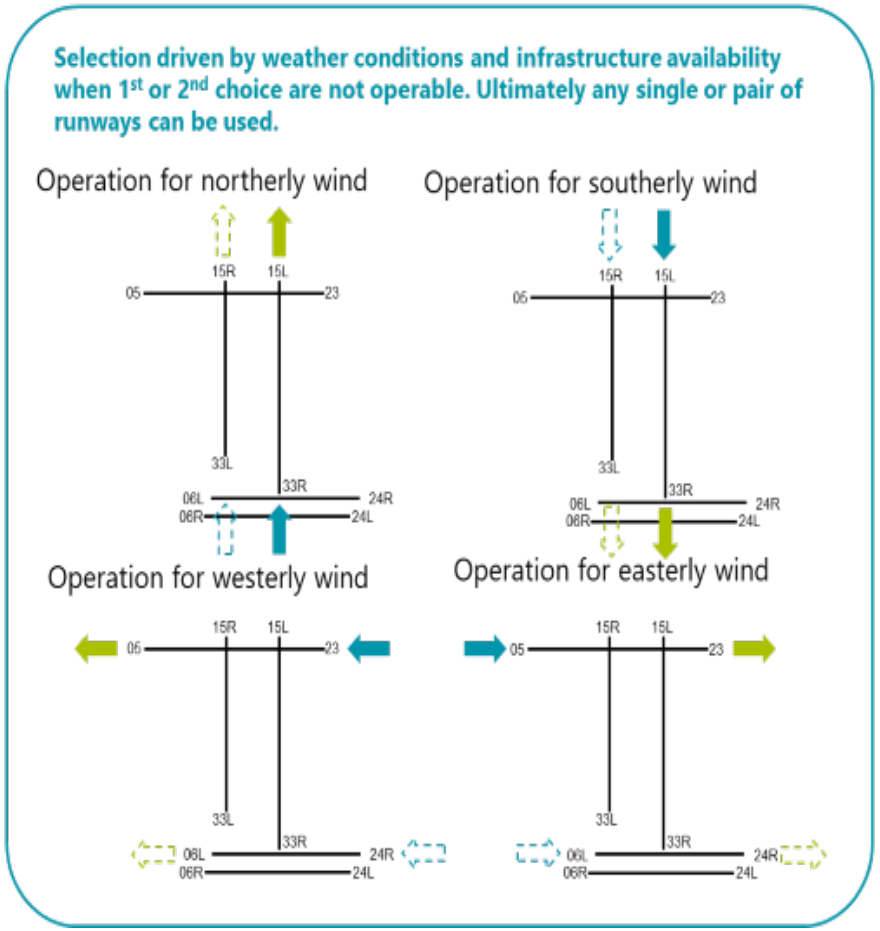
Possible Nighttime Impact

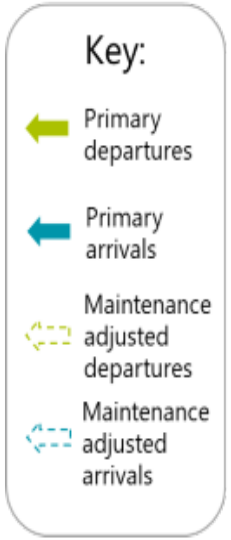
Maintenance adjusted preferential runways will be used during preferential hours (12:00am – 6:30am) when work is affecting the availability of primary preferential runways.

- When Runway 05/23 is closed for Bombardier work through to December









How we're Communicating

- Noise Management Forums
  - Elected Officials briefing
  - Neighbourhood Table meeting
  - Public meeting
- Emails to Elected Officials
- Checking In – community monthly e-newsletter
- Social media
- Residents can find the most up-to-date information on the Noise Advisory webpage

Member Raised Updates

Matter Raised

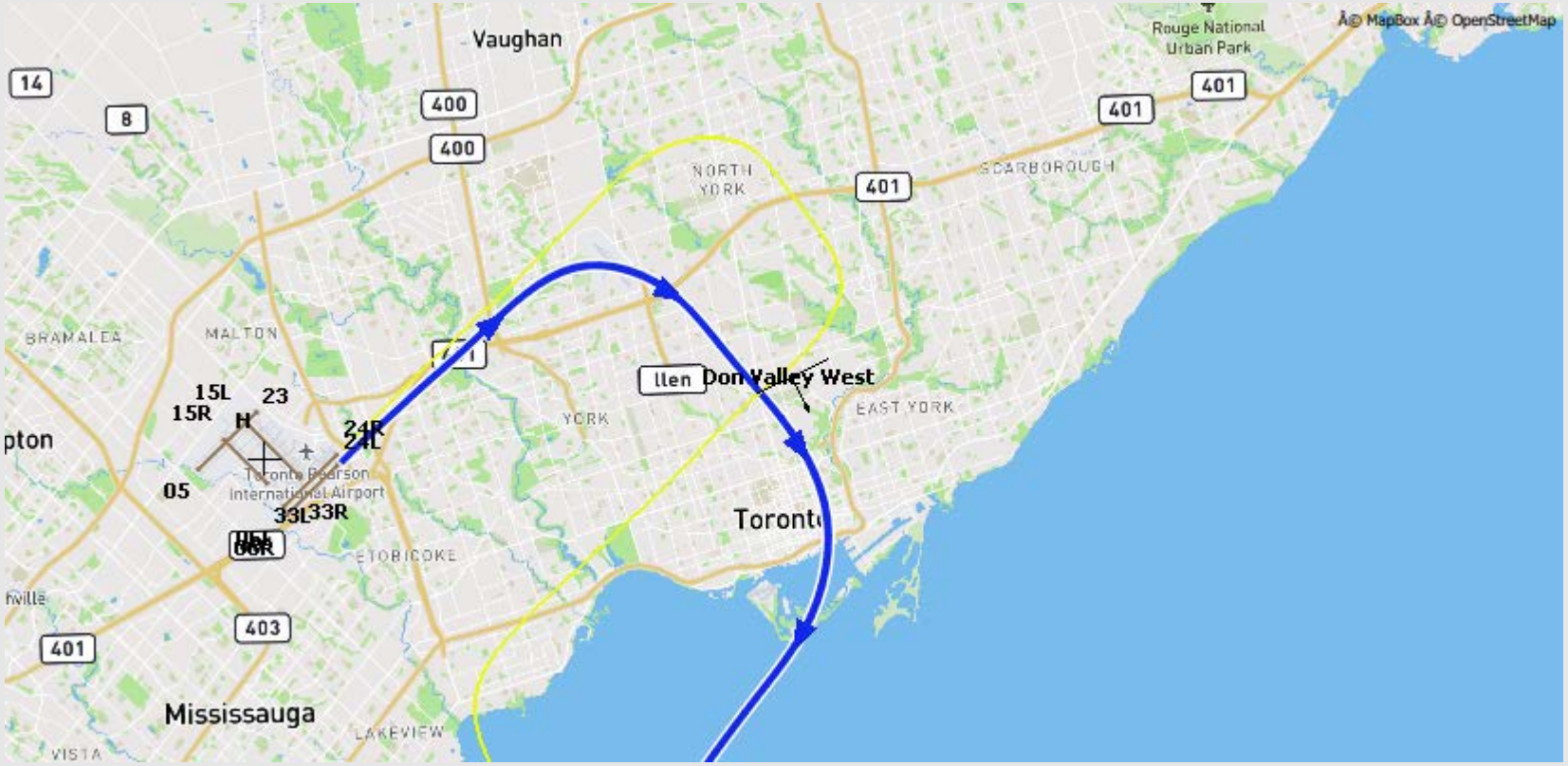
Question posed about changes affecting Don Valley West

- increased volumes have resulted in noise that is equal to or worse than pre-2019 levels of noise, especially afternoons and evenings

- What is being done to alleviate the increased volume of traffic and resulting noise to minimize the impact over residents of Don Valley West?

Methodology

Analyzed gate penetration data for August 2019, 2020, 2021 and July 2021 for both arrivals and departures



Findings

- Average altitude of arrivals penetrating gate have remained stable (+-100ft)
- Average altitude of departures penetrating gate is higher in Aug 2021 than 2019
- Overall number of flights through the gate are lower in Aug 2021 than 2019, but considerably higher than in the same period of 2020 or previous month.
  - August ‘21 traffic was **144%** higher than July ‘21 traffic

Don Valley West Gate data					
	# Operations	# Arrivals	# Departures	Average Arrival Altitude (ft)	Average Departure Altitude (ft)
Aug ‘19	1691	1367	324	4150	6752
Aug ‘20	438	366	72	3967	8718
Jul ‘21	527	418	109	4119	9420
Aug ‘21	1286	1063	223	4075	7490

- Traffic levels increasing in response to easing of government restrictions on air travel
- Along with overall increase traffic, there is greater use of the downwind to accommodate the greater number of arrivals queuing for the runway.
- Traffic will continue to increase, however 2019 levels not expected for years.

Examples of Noise Management measures relevant to Don Valley West

Noise at Source – Aircraft certification - Noise Management Program/Transport Canada

All Canadian aircraft must comply with international standards set by the International Civil Aviation Organization (ICAO) . These standards are included in the *Canadian Aviation Regulations*. Transport Canada ensures compliance with the standards through its aircraft certification process.

Noise Abatement procedures - Noise Management Program

Noise abatement procedures are designed to minimize noise impact over residential areas mainly through altitude restrictions:

Arrivals - Aircraft must remain at 2,400 feet above ground level (AGL) prior to lining up with the runway.

Departures - Pilots must reach 3,000 feet above ground level (AGL) before making their first turn en-route to their destination.

The GTAA Enforcement office monitors all aircraft for their compliance to the Noise Abatement procedures and forwards cases of suspected non-compliance are forwarded to Transport Canada for investigation and potential enforcement action.

Night Flight Restriction Program - Noise Management Program

The night flight restriction program limits the number of movements between 12:30 am am 6:29 am to an annual 'budget'. The GTAA monitors all aircraft for compliance to the Night Flight Restriction Program. Cases of suspected non-compliance are forwarded to Transport Canada for investigation and potential enforcement action

Quieter Fleet Incentive Program - A320 retrofit program Noise Management Action Plan

First phase - A320 family retrofit program encourages airlines to retrofit A320 family aircraft to reduce noise and eliminate s a high-pitch whining sound on approach caused by small vents on the aircraft's wings designed to help equalize and mitigate over-pressurization. Increasing proportion of operations by retrofitted aircraft - 94% of A320 family movements in August 2021 were performed by retrofitted aircraft compared to 57% in Q4 '2020

Required Navigation Procedures

Areas under south downwind and base turn will benefit from the introduction of Required Navigation procedures for Runways 23 and 05. Reduces the need for the high low procedure for separation, therefore aircraft can be at higher altitudes on south side.

NAV CANADA Update

September 2021

NAV CANADA UPDATE

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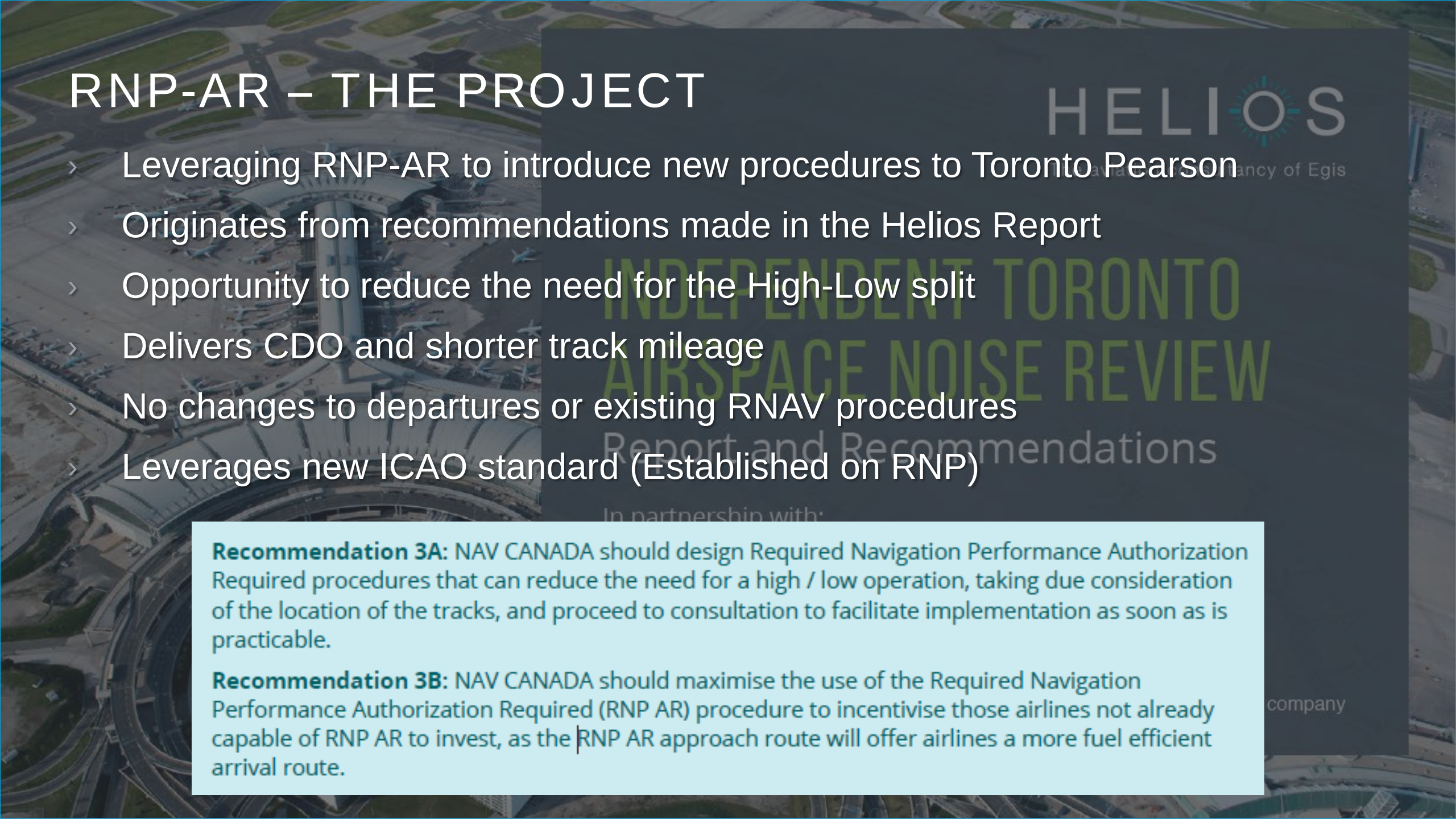
NAV CANADA

OVERVIEW

- Currently focused on preparations for public consultation of RNP-AR approaches
- Working with the GTAA on technical analysis
- Consultation plan being developed subject to prevalent public health conditions
- Combined with new ICAO standard to deliver noise benefits
- Designed only on the north side

RNP-AR – THE PROJECT

- Leveraging RNP-AR to introduce new procedures to Toronto Pearson
- Originates from recommendations made in the Helios Report
- Opportunity to reduce the need for the High-Low split
- Delivers CDO and shorter track mileage
- No changes to departures or existing RNAV procedures
- Leverages new ICAO standard (Established on RNP)



Recommendation 3A: NAV CANADA should design Required Navigation Performance Authorization Required procedures that can reduce the need for a high / low operation, taking due consideration of the location of the tracks, and proceed to consultation to facilitate implementation as soon as is practicable.

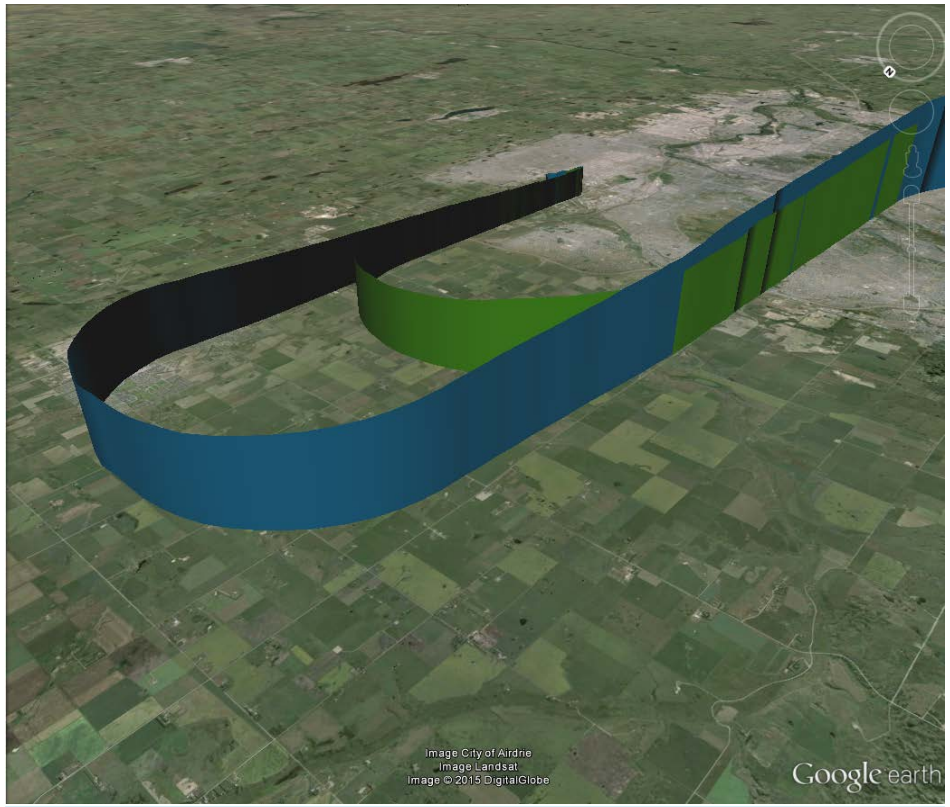
Recommendation 3B: NAV CANADA should maximise the use of the Required Navigation Performance Authorization Required (RNP AR) procedure to incentivise those airlines not already capable of RNP AR to invest, as the RNP AR approach route will offer airlines a more fuel efficient arrival route.

SOME BACKGROUND ON RNP

WHAT IS RNP?

- Required Navigation Performance (RNP) is a form of Area Navigation (RNAV)
- Uses the aircraft's flight management system and satellite positioning to fly a precise three-dimensional path in the sky.
- RNP makes it easier to design safe efficient, predictable routes.
- It is being used to update approach paths to airports for appropriately equipped aircraft and certified crews.
- Currently implemented at 29 Canadian airports.

WHY IMPLEMENT RNP?



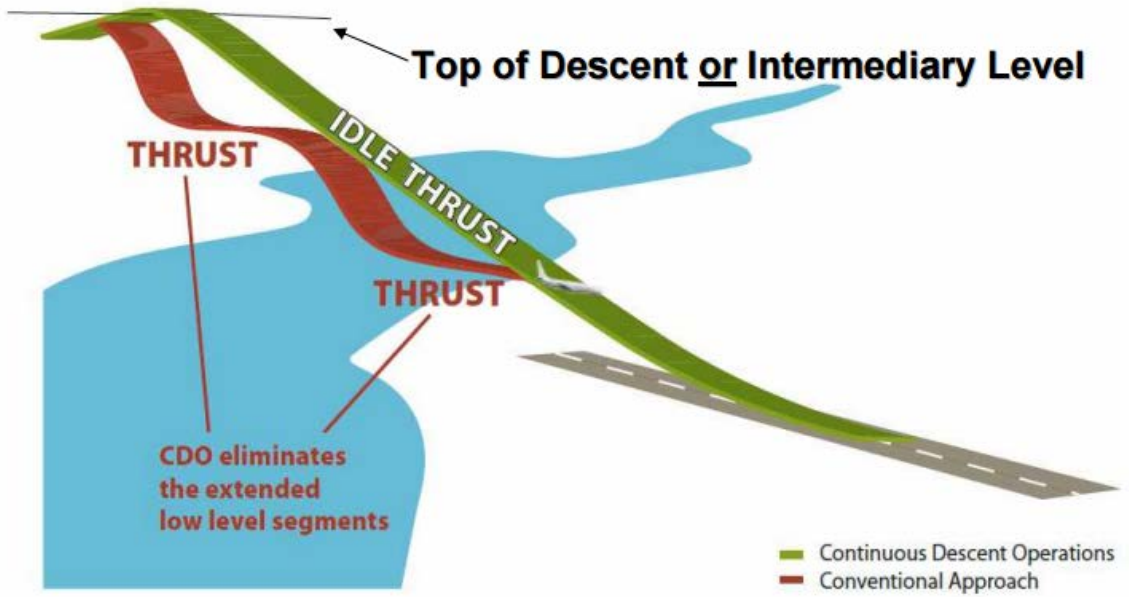
Teal: Conventional RNAV flight path
Green: Shorter RNP approach path

- Reduces track miles for arriving flights.
- Allows for a continuous descent.
- Reduces flight time, fuel burn and related greenhouse gas emissions.
- Reduces radio frequency congestion.

WHAT DOES IT MEAN FOR COMMUNITIES?

Outcomes can include:

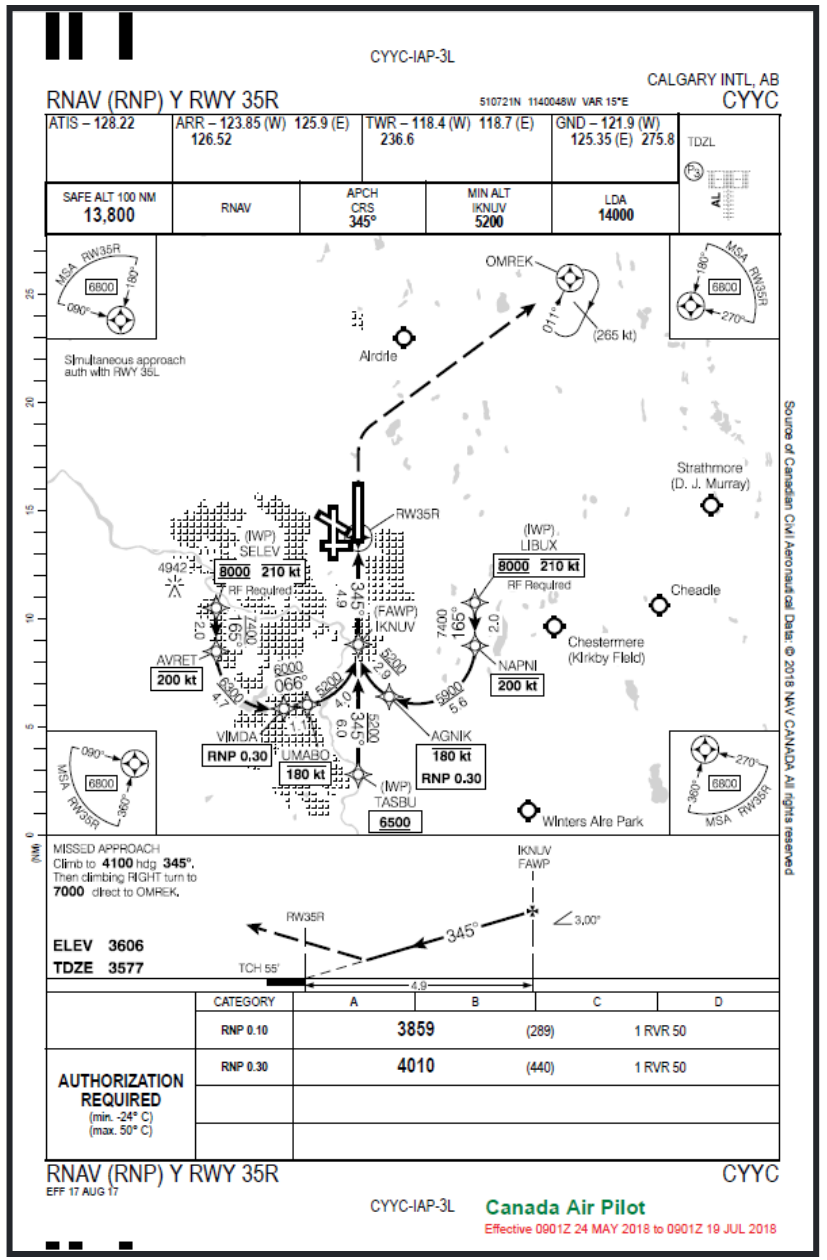
- Less variability of flight path location for those aircraft that are equipped to use RNP.
- Better avoidance of populated areas in some instances (though it is often not possible to entirely avoid populated areas).
- A “cleaner” aircraft profile (less increases or decreases in throttle, reduced flap use) compared to other approaches.



ESTABLISHED ON RNP-AR (EoR)

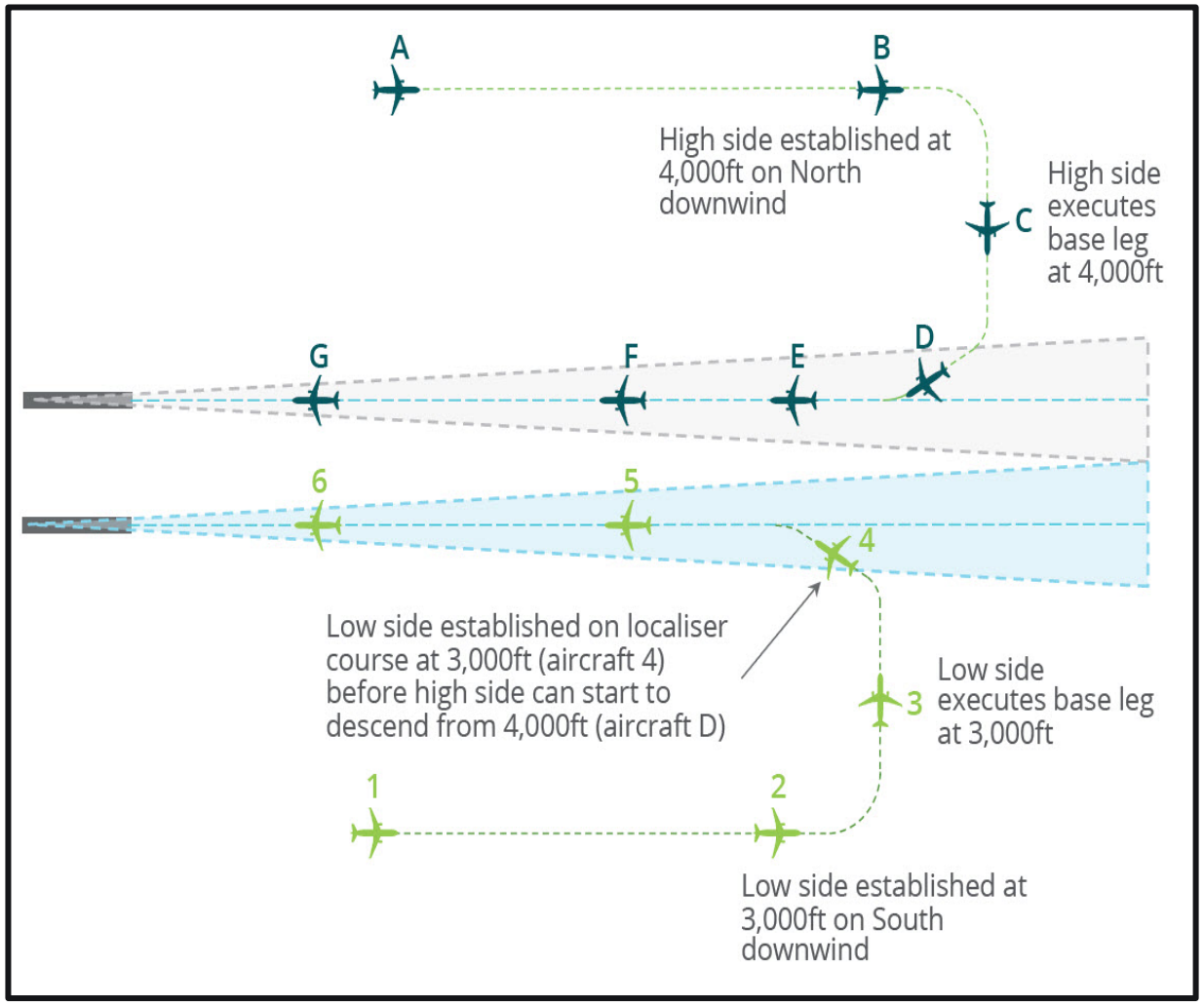
EoR – WHAT IS IT?

- New ICAO standard for use in Simultaneous Independent Parallel Operations
- Allows integration of RNP-AR operations into busy parallel runway operations
- Leverages the accuracy of RNP-AR approaches to reduce the requirement for a ‘high side’ and ‘low side’.



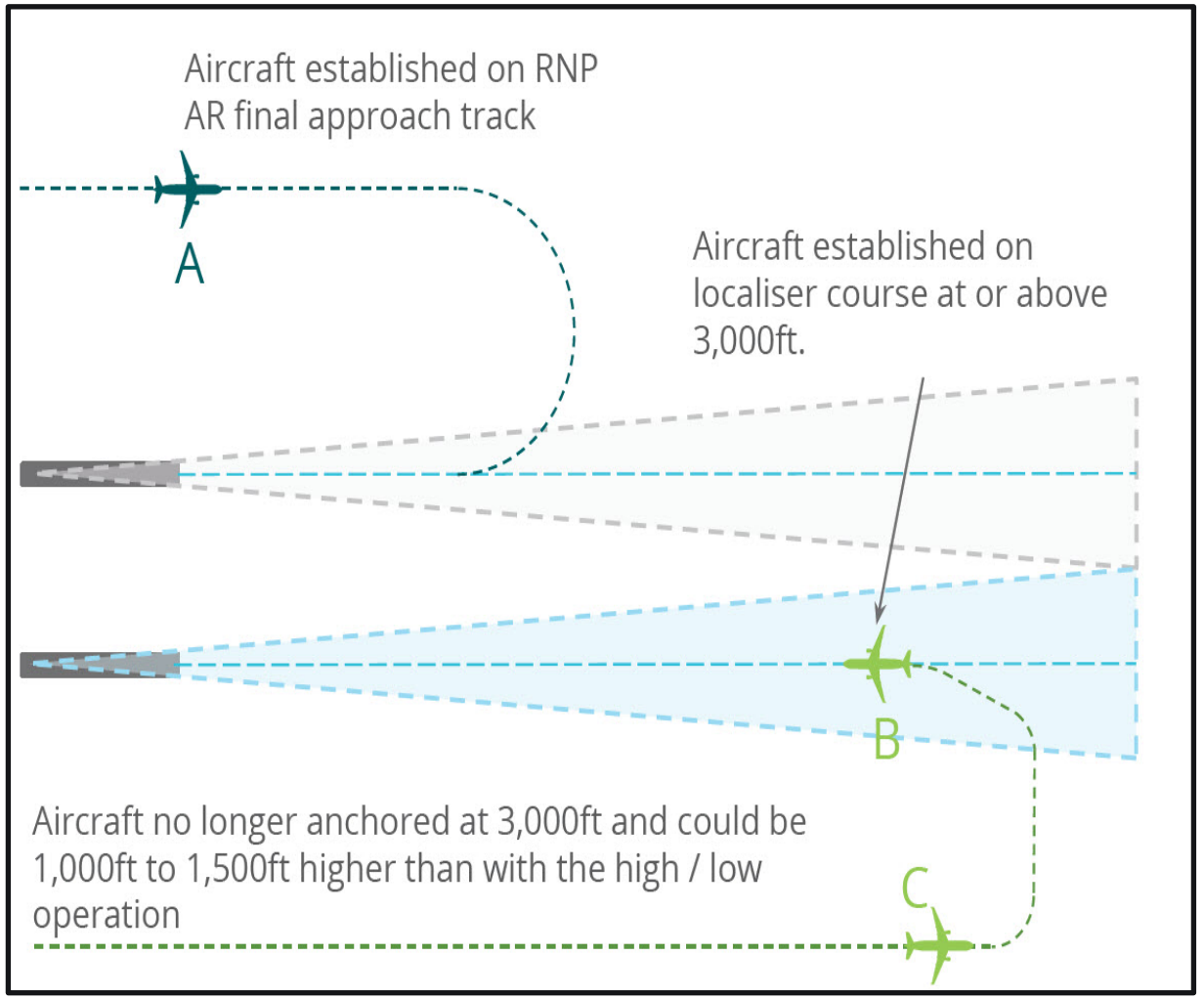
CURRENT PARALLEL OPERATIONS

- 1000 feet or 3 nautical miles separation applied until aircraft are established on the straight in portion of the approach
- “Low” side arrivals required to level off, increasing noise at low altitudes
- Longer downwind required in “High – Low” ops (20-25nm final common)



EOR PARALLEL OPERATIONS

- RNP-AR arrivals considered “Established” when they commence the procedure
- No “High – Low” requirement between EoR and parallel runway leading to noise benefits for “Low side” downwind
- Significant reduction in mileage, fuel burn and GHG emissions



WHY ARE WE DOING THIS?

THE BENEFITS

- Environmental benefits
  - Reduces the requirement for low altitude level segments on downwind
  - Overall community noise benefit
  - Significant reduction in GHG
  - Improved operations
  - Reduction in track miles
  - Reduced time in system and fuel savings
- RNP AR approach track containment
  - No risk to safety
  - Reduces use of parallel visual approaches

RNP-AR Usage at Calgary International Airport (CYYC)

- Since EoR – over 3000 approaches per month
- Approx. 35,000 track miles saved per month
  - Roughly equates to a reduction of 140 hours of low altitude, power on flight in populated areas per month

WHY NOW?

- Continuing to advance Helios work and noise mitigation
- Aligns with environmental goals
- Supports airline recovery through efficiency
- Overall benefits to ANS, operators, the airport, and the community

PUBLIC CONSULTATION

CONSULTATION GOALS

- To accurately communicate and seek feedback on expected impacts and benefits to affected areas, as per the Airspace Change Communications and Consultation Protocol.

- To share overall environmental benefits of EoR, both in terms of GHGs and Continuous Descent Operations, while proactively communicating potential changes to the soundscape.

CONSULTATION PLANNING

- Focused on virtual channels due to COVID-19 public health measures
- Provide multiple avenues to providing input
- NAV CANADA is the proponent with GTAA supporting
- Content to be developed in collaboration with GTAA
- Draws on work by GTAA Community Relations

PRE-CONSULTATION ENGAGEMENT

Community & Elected Officials

- Noise Forums
  - Noise Accountability Board
  - Political Briefing
  - Neighbourhood Table
  - Public Forum
- Advance Elected Official Briefings

Industry

- Industry Noise Management Board
- Targeted operator engagement

HIGH LEVEL STEPS

- Pre-Briefing of Noise Accountability Board and Noise Management Forums
- Outreach to elected officials prior to consultation
- Consultation – minimum 45 days
- Post-Consultation Report
- Implementation – Subject to Consultation
- Post-Implementation Reporting

THANK YOU

GTAA Noise Management Program Updates

Returning Traffic

Preparing for Increasing Traffic

Since the start of the pandemic, air traffic in Canada has been at low levels not seen since 1970.

As government restrictions on air travel are eased in a measured and health-focused way, Canadians are beginning to think about air travel again.

As volumes slowly begin to increase, residents may begin to again notice some of the aircraft noise they heard in the past, though traffic won't reach pre-pandemic levels for some time.

We continuously promote ways to understand operations overhead:

- Noise Forums
- Checking In newsletter
- Website
- InsightFull
- WebTrak
- Elected official briefings
- One on one conversations between residents and Noise Office staff

Noise Management Action Plan

2021 NMAP Workplan at a Glance

2021 NMAP mid-year update available under Action Plan updates on the NMAP webpage

- Six Ideas - Trial extension continues for Idea 6: Review of the Preferential Runway System with quarterly reports. ***Propose that process for concluding the Trial begins given the easing of travel restrictions.***
- Completion of the School HVAC Pilot Program – ***project nearing completion***
- Launch Community-Proposal Review Process – ***launched, received first submissions***
- Work with major operators to complete status update of the A320 family aircraft operating at Toronto Pearson and continue to monitor operations of retrofitted vs non retrofitted aircraft. *Updated database, reports now indicate that 94% of A320 series aircraft are performed by retrofitted aircraft*. Reports available under A320 Retrofit program usage reports
- Identify aircraft operating at Toronto Pearson by Noise certification 'chapter' and determine Phase 2 of Quieter Fleet Incentive Program. - ***By fleet type complete, by chapter underway***
- Develop metrics and engage with industry and community stakeholders for the Fly Quieter and Greener Reporting Program. - ***underway***
- Continue to publish noise data and enhance content on InsightFull. ***InsightFull reporting and enhancements continue.***

Preferential Runway System Trial: What Next?

- Where we were in April?

- One year Trial in its 14th month
- *Extensive travel restrictions were in place* – non-essential travel was restricted
- Traffic Levels – 7,250 movements in April
- Compliance – 98.8%
- Traffic levels are not expected to return to 2019 levels for years

- Where we are in September?

- One year Trial in its 19th month
- *Travel restrictions reduced*– discretionary travel permitted for double vaccinated passengers (CAD, US and Int'l) with proof of negative COVID test and testing on arrival.
- Traffic Levels - 19,238 movements in August
- Compliance – 95.2% for August
- Traffic levels are not expected to return to 2019 levels for years

Discussion:

- Is it time to conclude the Trial given our current circumstances – travel restrictions reduced, traffic levels higher, adherence levels remain high (borders open/restrictions removed/timeframe)?
- Usage reports can be found under Nighttime Preferential Runway Usage reports here

NT Check-in and Feedback

- We are now in the 3rd year of the Noise Management Forums
- Over this time, we have had changes in attendance, meeting format and communications
- The check-ins were an opportunity to have a conversation about what is and isn't working and how to improve engagement.
- We met with 11 members in May and June to discuss what members thought what is and isn't working
- Captured some common themes and recommendations to improve the Neighbourhood Table

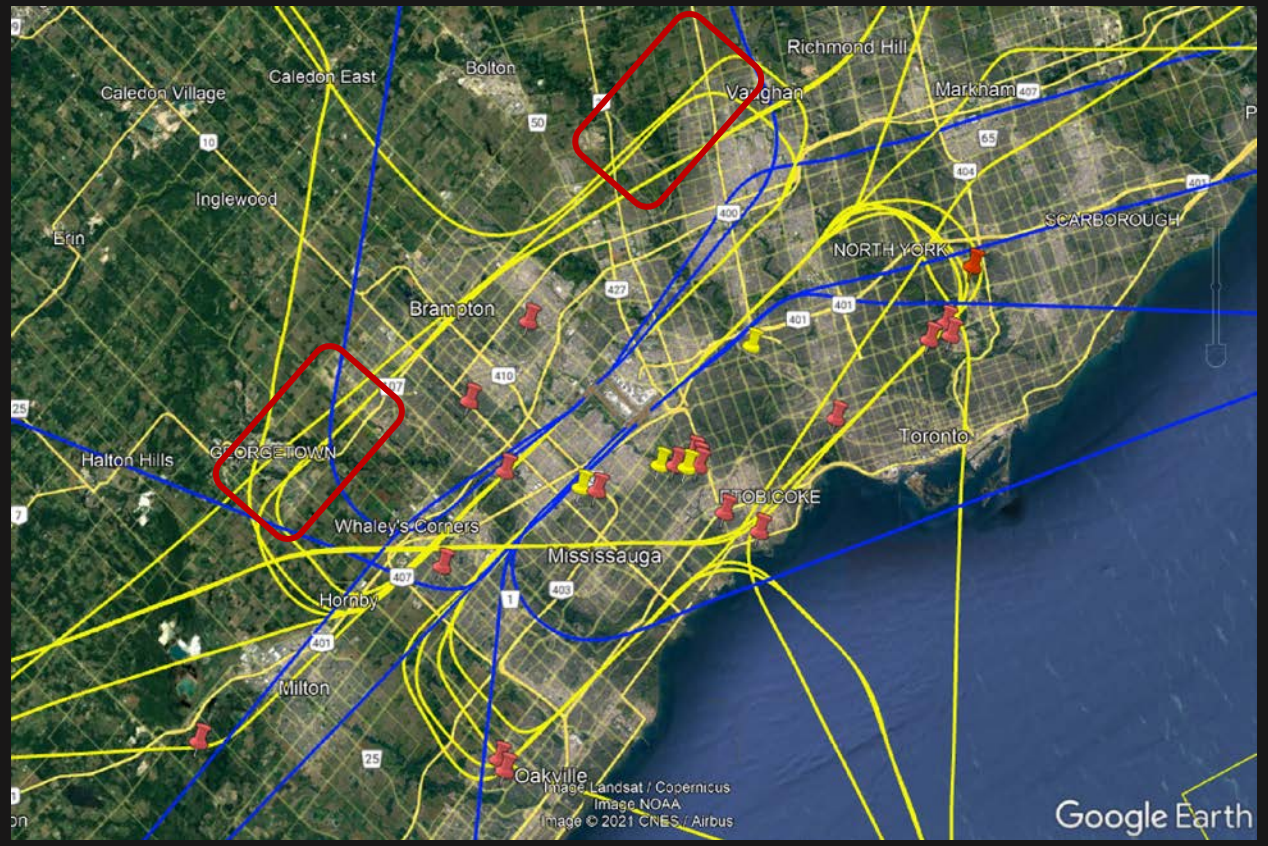
Neighbourhood Table Check In: Feedback

Item	Feedback	Recommended Actions
Meetings: Format Frequency Content	Format • Virtual meetings convenient, no need to travel. Miss some of the advantages of in person meetings ie face time, easier to determine opportunity to speak, cookies. Frequency • Some felt that there should be more meetings and/or more evenly spaced across the year; others felt that 3x per year is adequate • Ad hoc, working group, education sessions appreciated by those that attended. Content • Can be too much content. • Some content too resident specific - need to balance time spent on one person or issue • Request for previous meeting recap, earlier Agenda Topics of interest • fleet, more operational information ie procedures, greater analysis of complaints, more detail from NAV CANADA, how the GTAA works with other associations like Airports Council International, best practices,	Format • Virtual meetings will continue Frequency • Continue with existing schedule – and schedule ad hoc as required. Content • Content challenge also be addressed by providing more information using the monthly updates or emails • Provide stats in advance of meeting for review • Monthly updates include meeting recaps and agenda Topics of Interest • Will incorporate topics of interest put forward into future meeting materials and/or monthly updates

Neighbourhood Table Check In: Feedback

Item	Feedback	Recommended Actions
Monthly Updates	• Appreciation for the monthly updates, particularly the news items	• Continue to expand content of monthly updates.
Knowledge Level	• Most members commented on the varying levels of airport/operational knowledge within the group	• Some understanding necessary –how runways are used, GTA flightpaths, Noise Management Program, Action Plan, noise studies, familiarity with online materials such as InsightFull and Noise Management webpages. Discussion • How we can we help reduce the gap?
Membership Composition	• Concern that the membership could become too large if more people are added but recognize that geographical representation is important. • See maps for membership distribution versus operations.	Discussion • Recruitment for underrepresented areas without current representation Potential new members will be subject to the Terms of Reference • Gaps in areas of Halton Hills and Vaughan • Possible criteria for new members ie support of their elected officials and/or community, will liaise between the community and NT
Noise Management committees	• Members would like more information on other noise forum committees and the INMB	• Continue to provide updates from the INMB and add updates on the NAB
Other	• Communication with Members - Members want to be kept in loop on Noise forum related communication	• Continue to provide items raised by members in Member Raised Updates

Representation vs Operations



East and West Flows

North and South Flows

CPRP Process & Criteria

Phase 1: Resident

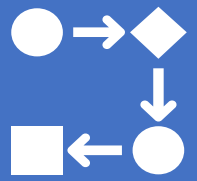
- Residents submitting ideas are responsible to complete the application questions
- Residents may be required to present on, or answer questions related to idea
- Must be a new concept and meet guidelines set by the Resident Reference Panel for noise mitigation

Phase 2: GTAA and NAV CANADA

- GTAA is responsible to administer the process and communicate with residents
- GTAA conducts first review of submissions and reviews those that pass with NAV CANADA
- NAV CANADA conducts second review. If in agreeance, submission goes forward to phase 3

Phase 3: Noise Accountability Board & Neighbourhood Table

- The GTAA will advise NAB and NT of submissions proceeding to phase 4
- Members may request additional information



Phase 4: INMB Assessment

- INMB has technical expertise to assess procedural or other technical ideas
- High level feasibility assessment - operational, safety, financial, potential effectiveness
- Incorporation into workplan of ideas passing the assessment above for further consideration
- NOTE – a pass in this phase does not necessarily mean implementation

Phase 5: Report Back

- The GTAA will report back to the proponent with the decision and details
- Included in INMB update at NAB & Neighbourhood Table meetings

CPRP Submission

Since the launch of the CPRP process, two community members have submitted proposals. One of the submissions will proceed to Phases 3 and 4; note that Phase 2 GTAA & NAV CANADA review is an initial screening to determine if proposal meets criteria to proceed, it is not an endorsement of an idea. The other submissions did not meet the criteria as the ideas had either already been studied and/or responded to in previous communications and are not feasible.

Summary of Proposal	Criteria*	Next Steps
• "Departing flights during the restricted hours should follow the routings as shown in Idea 2 until they are above 10,000 ft." • "It is proposed that for nighttime departures, North-and West-bound departures off 23/24 be routed west of Georgetown. Departures travelling South and East should not be turned off the initial heading until west of the 403."	✓ Noise management materials and previous studies reviewed ✓ New idea – has not already been considered (builds on existing procedure) ✓ Potential to reduce noise at or below 7000' ✓ Goal is not to move noise from one community to another	GTAA and NAV CANADA forward submission to Industry Noise Management Board for further assessment

Quieter Fleet Incentive Program

- Many airports incentivize airlines to use the quietest aircraft in their fleet or expedite purchase of quieter aircraft.
- The GTAA committed to the implementation of a new Quieter Fleet Incentive Program

Phase 1 – A320 series retrofit program

- Phase 1 involved the implementation of the A320 series retrofit program.
- Airlines were encouraged to retrofit or replace these aircraft
- Considerable progress has been made since implementation in 2020
  Operations by retrofitted A320 series aircraft increased from 52% in Q4 2020 to 94% in Q3 2021

Phase 2 – Explore further options for the Quieter Fleet Incentive Program

- Phase 2 of the QFIP expands to other aircraft types operating at Toronto Pearson
- This phase begins with an understanding recent and upcoming fleet changes and associated noise implications

Phase 1 - A320 Series Retrofit Program

June 2021			
Airline	Total A320 Movements	Retrofitted	% Compliant
Azores Airlines	20	20	100%
Air Portugal	8	8	100%
Air Canada	324	307	95%
American Airlines	8	4	50%
Avianca	17	0	0%
Delta Airlines	2	0	0%
TOTAL	**379**	**339**	**89%**

July 2021			
Airline	Total A320 Movements	Retrofitted	% Compliant
Azores Airlines	30	30	100%
Air Portugal	42	42	100%
Air Canada	791	774	98%
Avianca	22	0	0%
TOTAL	**885**	**846**	**96%**

August 2021			
Airline	Total A320 Movements	Retrofitted	% Compliant
Azores Airlines	32	32	100%
Air Portugal	26	26	100%
United Airlines	4	4	100%
Air Transat	47	46	98%
Air Canada	1,077	1,032	96%
Avianca	28	0	0%
TOTAL	**1,214**	**1,140**	**94%**

- A320 movements increased from 379 in June to 1,214 in August (+220%)
- In Q2 2021, 78% of A320 series movements were performed by retrofitted aircraft

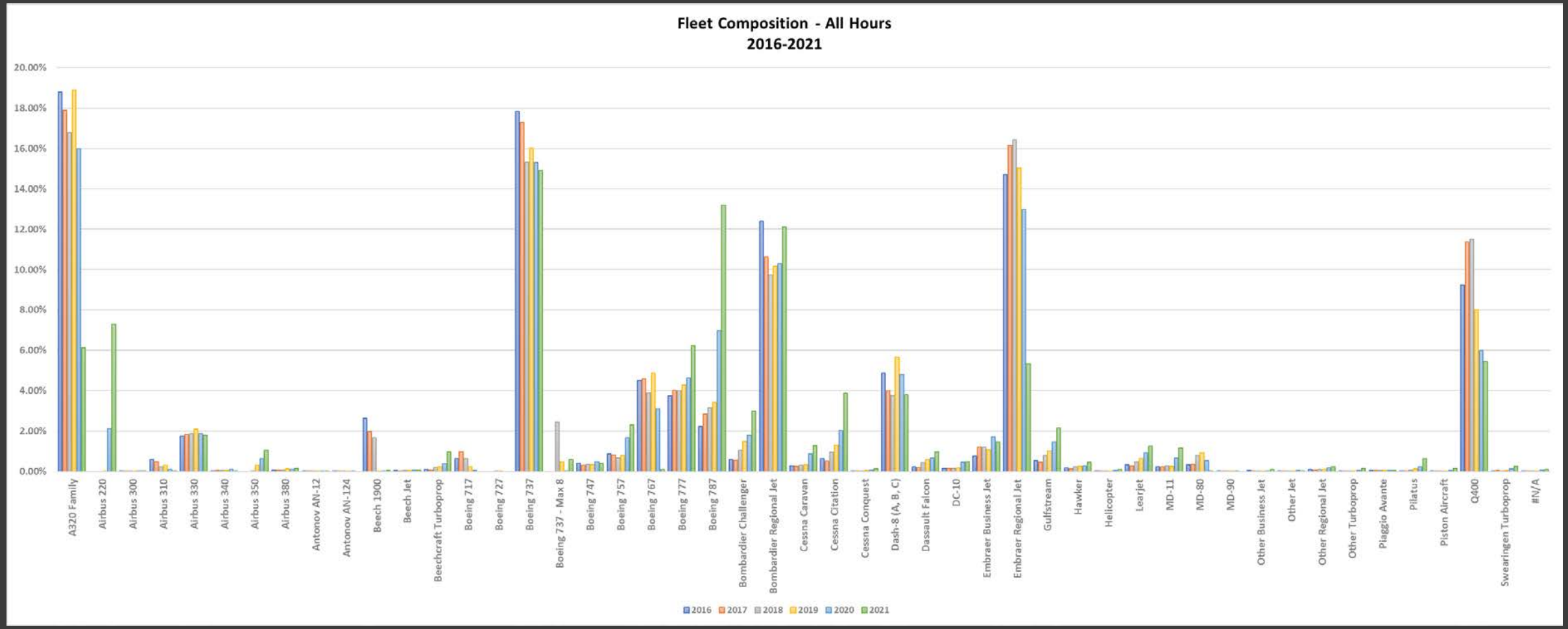
Over the most recent three-month period, 94% of A320 series movements were performed by retrofitted aircraft

Phase 2 – Exploring Further Options

Phase 2 of the Quieter Fleet Incentive Program will start with an understanding of Toronto Pearson's fleet including recent and upcoming fleet changes and associated noise implications

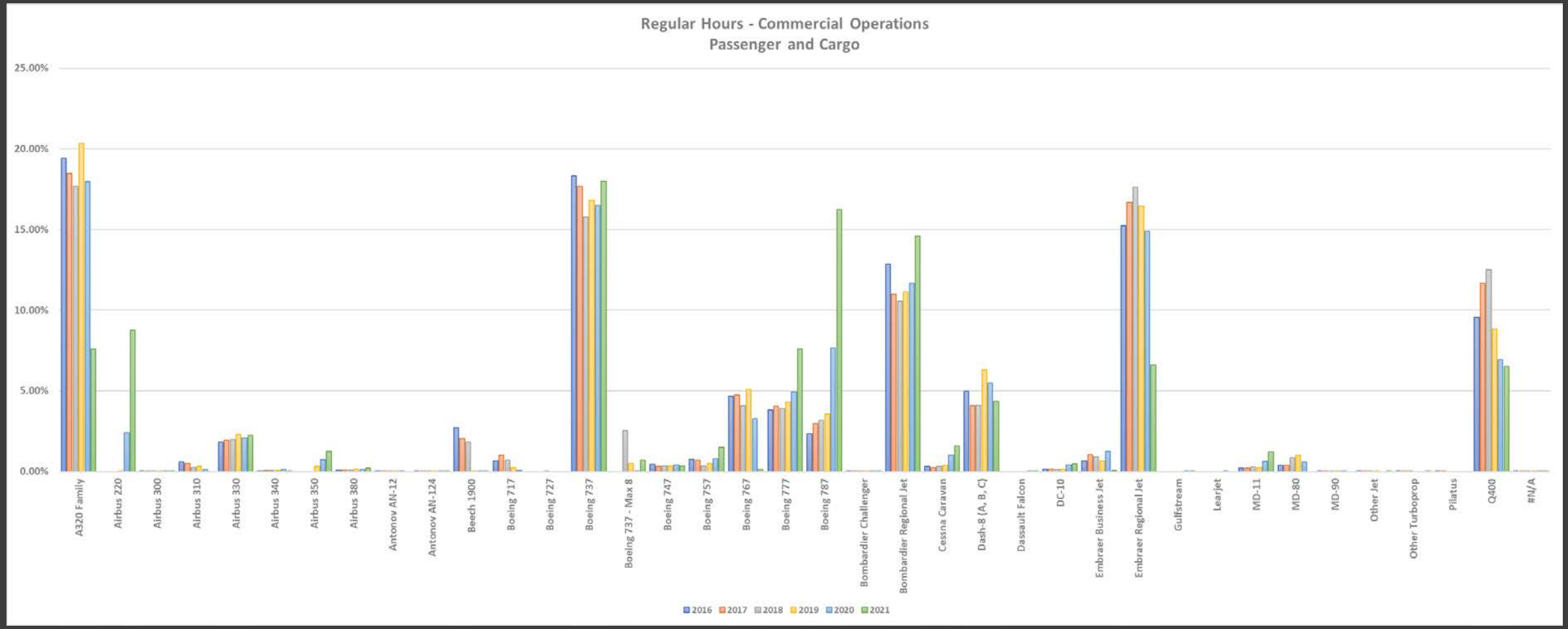
The following slides include:

- Comparison of Aviation Fleet composition at Toronto Pearson
- Compared aircraft types from 2016-2021 (YTD)
- Separated by Regular Hours and Restricted Hours and by Commercial Operations (Cargo and Passenger) and Business Aviation



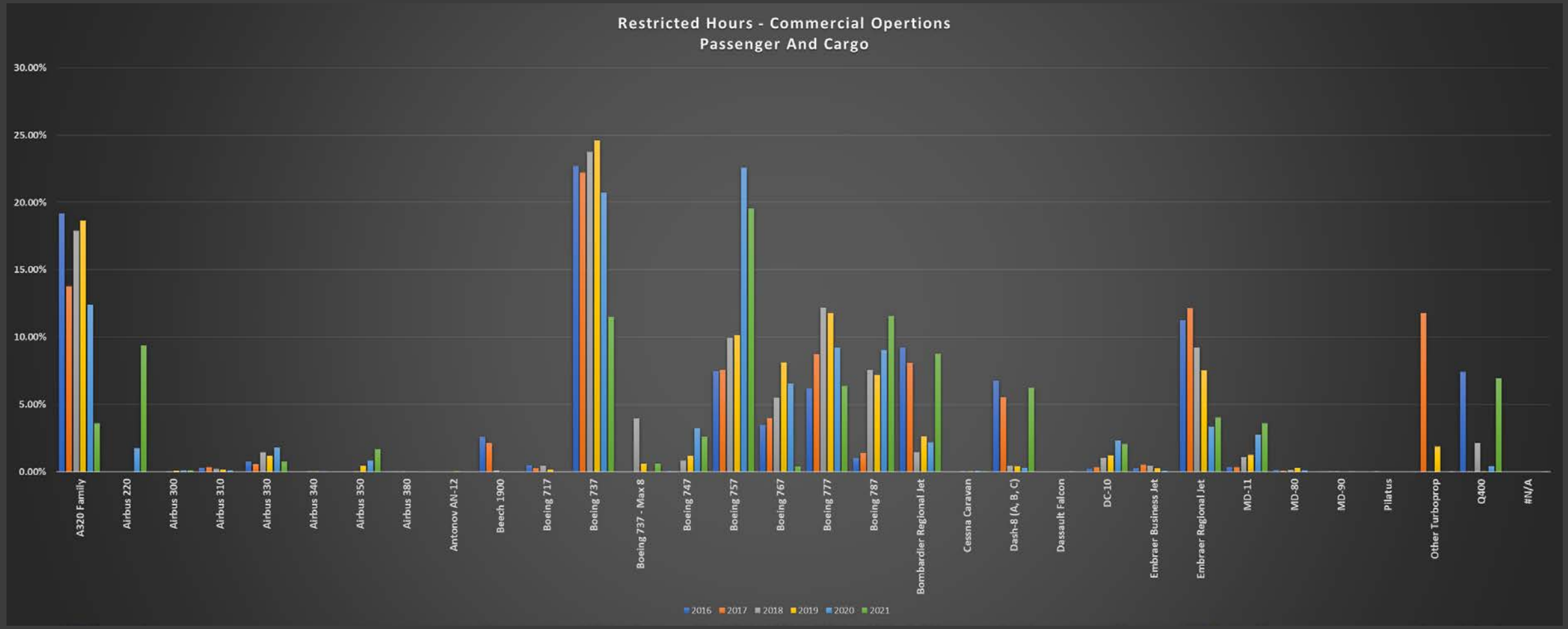
All Traffic

- Year over year comparison of aviation fleet composition as a percentage of total yearly operations
- Largest overall reductions seen in A320 family and Embraer Regional Jet groups



Commercial Aviation

- Overall decrease in A320 family and Q400 operations
- Increased use of A220 and B787 aircraft as well as Bombardier Regional Jets
- DC-10 and MD-11 operations account for less than 2% of all operations and 2020/2021 increases attributed to Cargo operations due to COVID

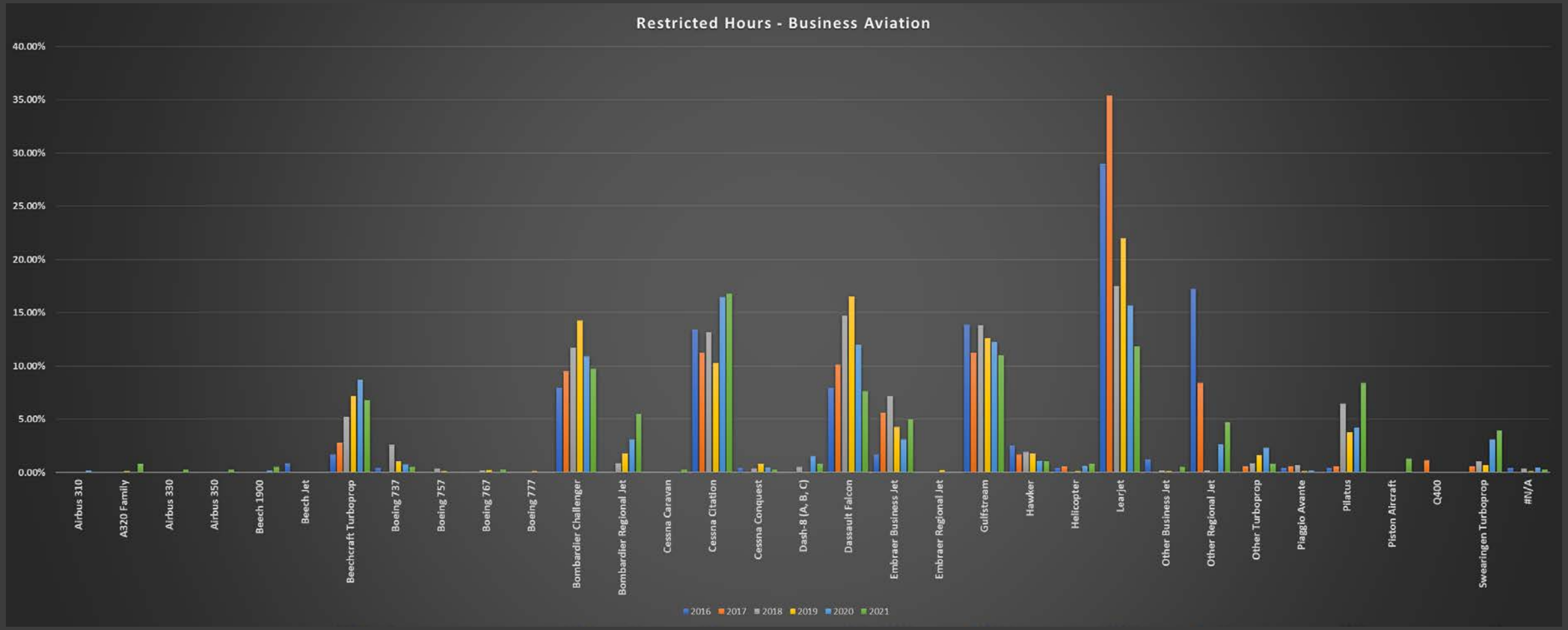


Commercial Aviation

- B757, DC-10 and MD-11 operations increased as a percentage of overall traffic in 2020 and 2021 due to reduced overall traffic and increased cargo operations
- DC-10 and MD-11 still less than 10% of overall nighttime traffic

Business Aviation

- Fleet composition dependent upon regular CYYZ based operations with some adhoc operators added to the mix
- Fairly consistent year over year with the most common types



Business Aviation

- Restricted Hour Business Aviation primarily limited to CYYZ based operators and air ambulance flights with some few adhoc requests approved based on circumstances

Summary

- Airline trends year over year have been toward retiring older aircraft in the fleet (ie B727, B767, A320 family) and replacing them with newer, quieter, greener more technologically advanced aircraft (ie A220, B737-Max, B787)
- Business Aviation fleet composition consistent due to local aircraft operators with some adhoc flights changing the composition year over year
- Decreased traffic due to COVID skews percentages due to increases in Cargo operations and decreases in passenger flights

Next Steps

- Undertake further analysis of Toronto Pearson fleet by Noise Chapter certification

Discussion + Roundtable

Thank You

Next Meeting: December 1, 2021