

# Driving Operational Excellence

## GTAA Operational Performance

Francine Donaldson  
May 2024  
Toronto – Canadian Aviation Get Together

- 🌀 **The Pearson Standard**
- 🌀 **GTAA Operational Performance**
- 🌀 **Who We Support**
- 🌀 **What We Measure**
- 🌀 **How We Use ANOMS and OPAS**
- 🌀 **GTAA and NAVCANADA Joint Analysis**



## Achieving world-class performance, together.

- 🌀 The Pearson Standard is a shared path toward achieving a new standard of responsibility, performance and quality that benefits us all, with passenger experience and operational excellence at its core
- 🌀 Introduced in June 2023
- 🌀 Sets operational expectations through a new set of Rules and Standards
- 🌀 Requires data sharing for purposes involved in planning, invoicing and operational performance monitoring
- 🌀 Requires compliance with **operational performance requirements** and **Service Level Standards** set by the GTAA and posted in various documents, contracts, agreements, licenses and permits
- 🌀 <https://www.torontopearson.com/en/operators-at-pearson/the-pearson-standard>

# The Pearson Standard

**Our business affects the lives of millions of people, both in the surrounding community and around the world.**

**🌀 The GTAA is accountable to our airport stakeholders to deliver strong and consistent performance in the areas within our control and influence:**

- 🌀 Baggage systems
- 🌀 IT
- 🌀 People moving devices
- 🌀 De-icing
- 🌀 Runways and Taxiways
- 🌀 Terminal Conditions
- 🌀 Accessibility
- 🌀 Official Languages
- 🌀 Support

**The Pearson Standard**

**Our business affects the lives of millions of people, both in the surrounding community and around the world.**

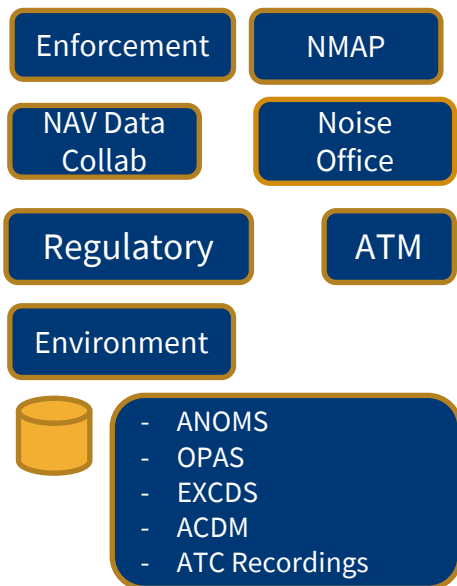
## **We are the Analytical + Data service delivery arm of Airport Operations**

**We support business owners with data to:**

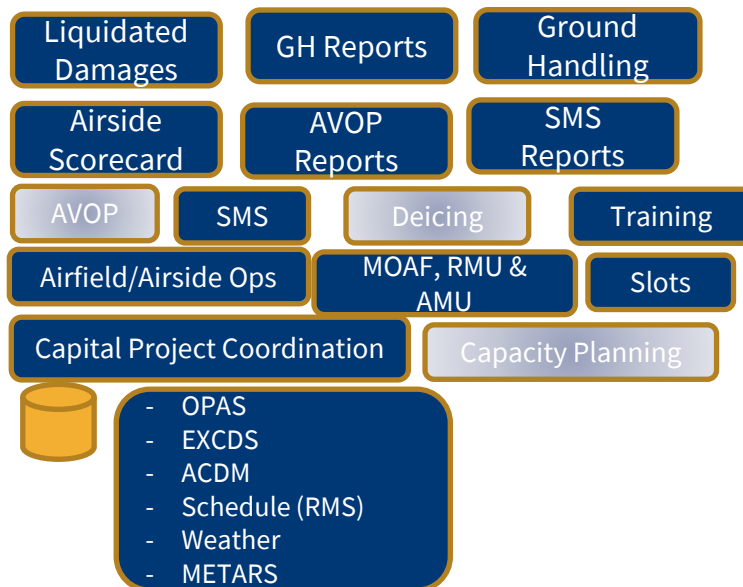
- 🌀 Make decisions
- 🌀 Develop strategies
- 🌀 Build business cases
- 🌀 Enforce agreements/regulations
- 🌀 Provide insight

# **GTAA Operational Performance**

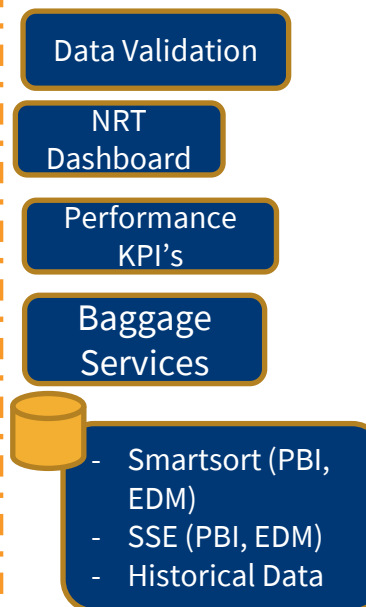
## AIRSPACE



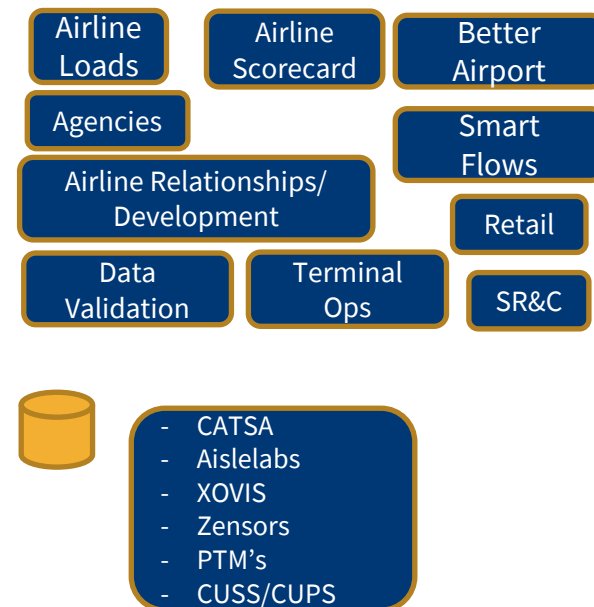
## AIRSIDE



## BAG



## TERMINALS



Operational Dashboards, Scorecard ( OEI, ET)

E-Team

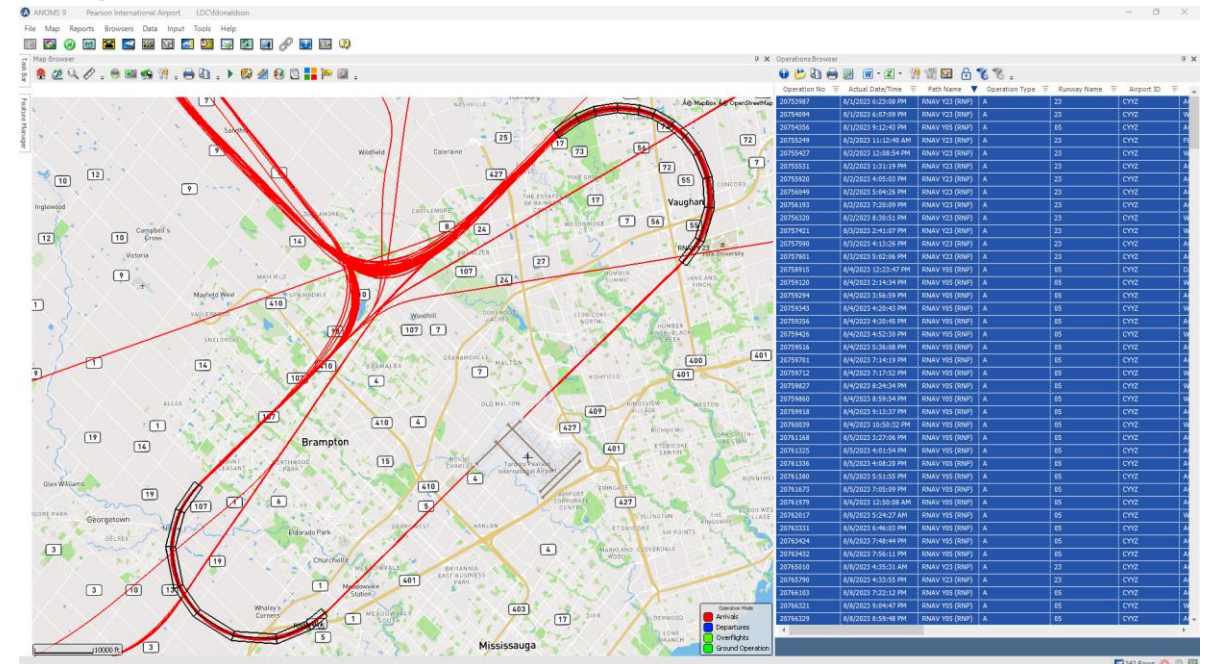
Commercial Ops

Board

# Who We Support

The GTAA uses ANOMS and OPAS to measure and report on Key Performance Indicators and Procedures that can have impacts on both passenger experience and operational efficiencies:

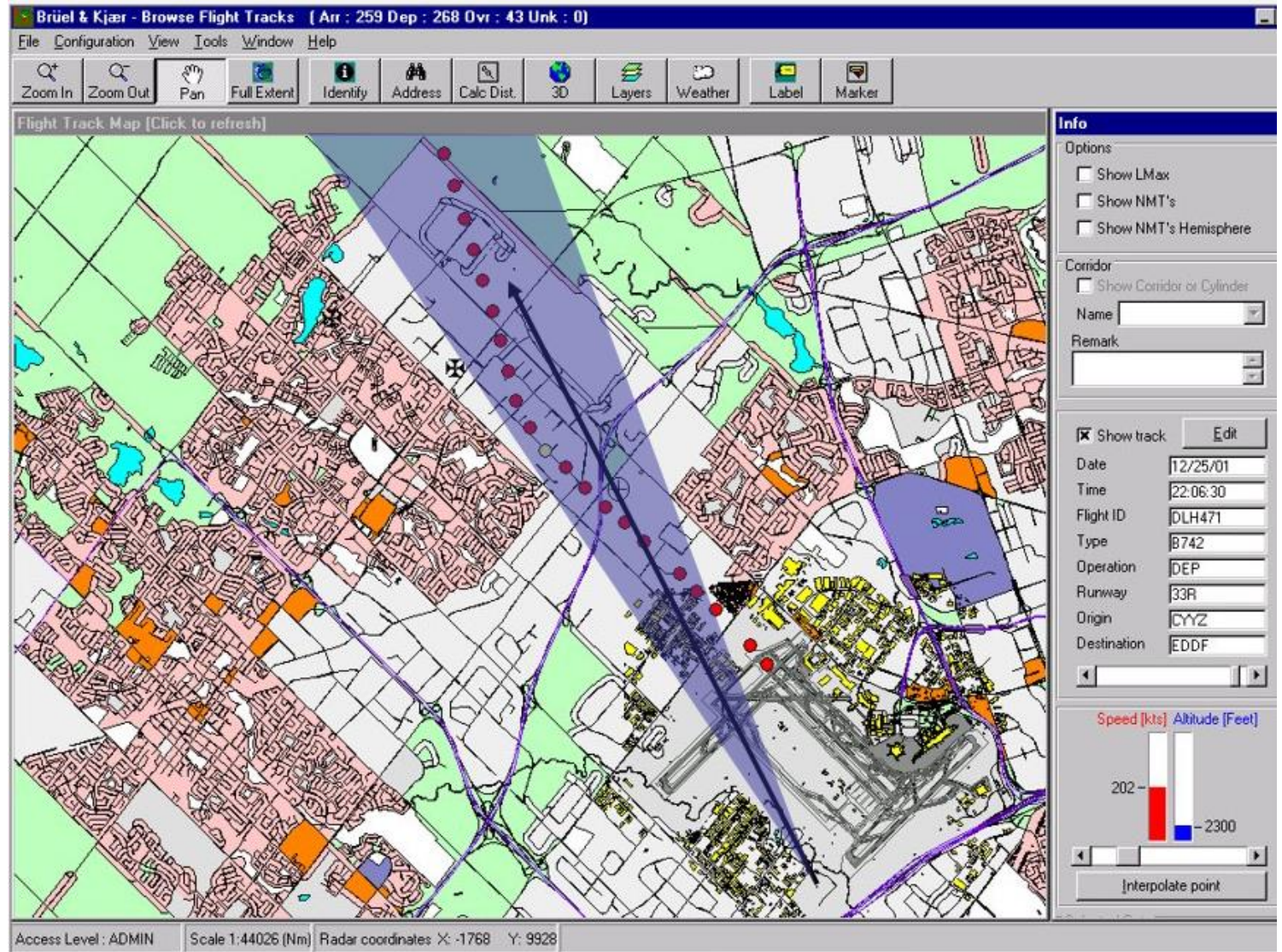
- ☼ Compliance with Arrival and Departure Noise Abatement Procedures
- ☼ Compliance with Night Flight Restriction Program
- ☼ Aircraft Stationary Times
- ☼ Aircraft Gate Arrival Times
- ☼ Ground Handler Performance
- ☼ Runway Occupancy Times
- ☼ Taxi In and Out Times
- ☼ Use of Quiet Hours Arrival Procedures
- ☼ Use of RNP AR Procedures



# Measures



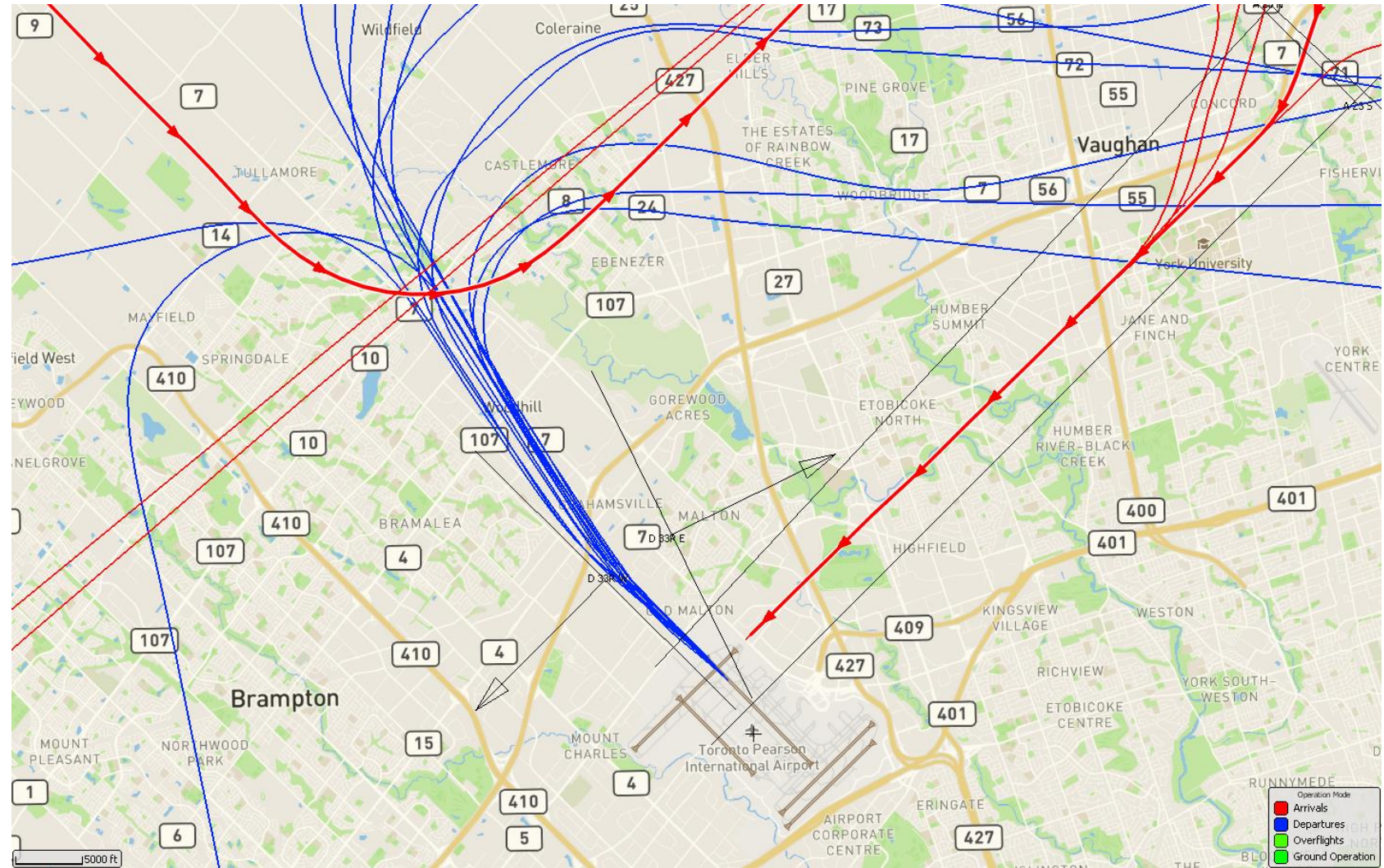
ANOMS was originally deployed to CYYZ in 2012 to replace a Lochard system that had been installed in 1999 to replace a legacy B&K system



# Operational Performance



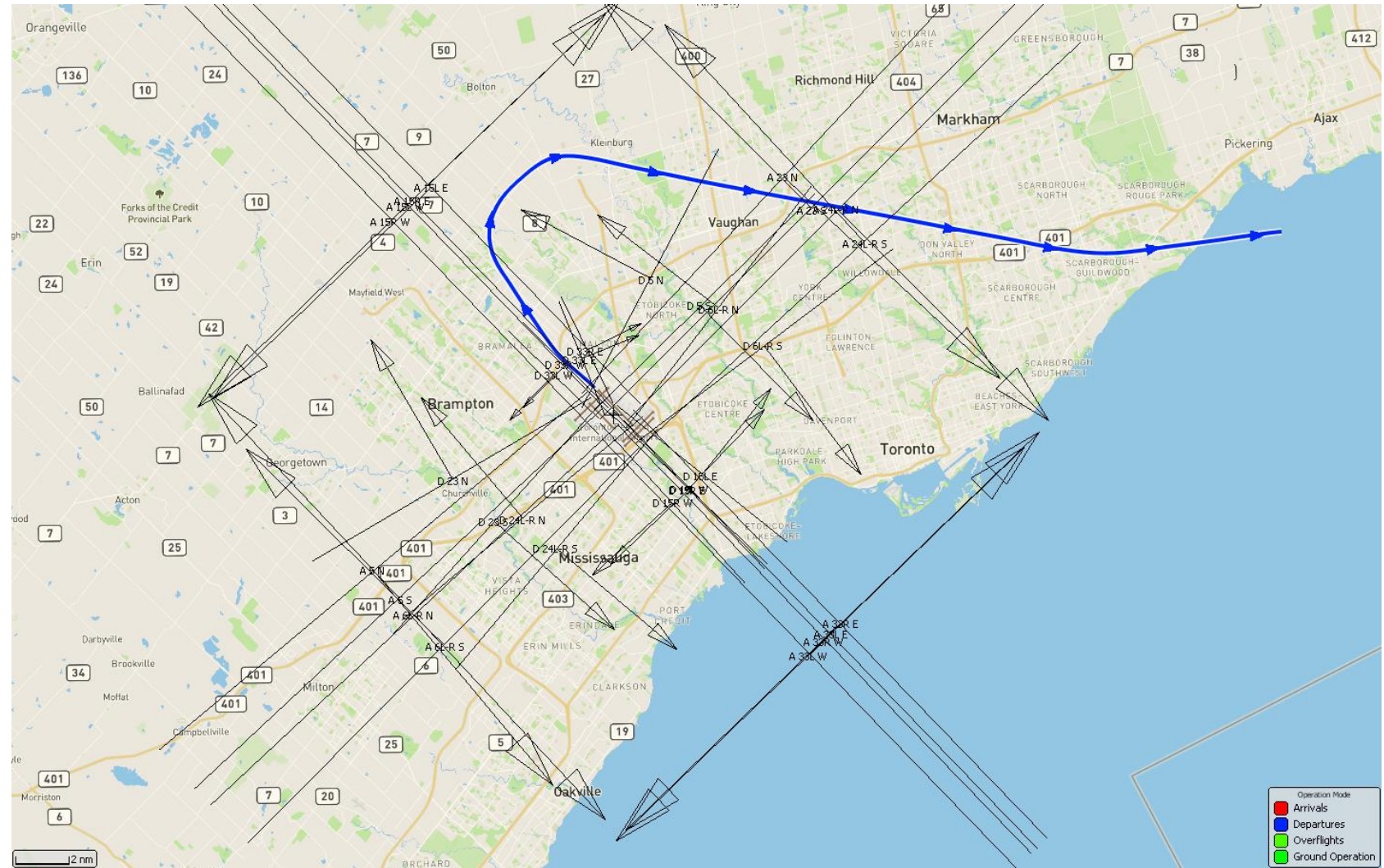
- Procedures require heading and altitude
- Use Gates calibrated to the Procedures
- Operations that intersect gates require further investigation as potential violations
- Use Violation Rules Manager to categorize and group for analysis



## ANOMS - Noise Abatement Compliance - Arrival & Departure Procedures



- All arrivals and departures at CYYZ are monitored for compliance with Noise Abatement Procedures



**ANOMS - Noise Abatement Compliance - Arrival & Departure Procedures**

## AVIATION ENFORCEMENT CASE REPORT

«OPERATIONS\_FLIGHTNUM» -  
«OPERATIONS\_TRACKSTART»  
[20-SV-XX]



Air Traffic Management and Noise Performance

Aviation Enforcement Case Report – 5/17/2024

### Synopsis

On «OPERATIONS\_TRACKSTART», «OPERATIONS\_FLIGHTNUM» departed Runway «OPERATIONS\_RUNWAYNAME» at Toronto Pearson International Airport.

Noise abatement departure procedures for operations departing Runway «OPERATIONS\_RUNWAYNAME» require aircraft to follow the Standard Instrument Departure (SID) routing 3600' ASL or as assigned by ATC.

The aircraft did not maintain the SID heading and initiated a turn at approximately [altitude]ft ASL resulting in non-compliance to the SID departure as well as a deviation from the Noise Abatement Procedures contrary to section 602.105(e) of the Canadian Aviation Regulations:

**602.105** No person shall operate an aircraft at or in the vicinity of an aerodrome except in accordance with the applicable noise abatement procedures and noise control requirements specified by the Minister in the *Canada Air Pilot* or *Canada Flight Supplement*, including the procedures and requirements relating to

(e) departure procedures

### Summary of Evidence

- «OPERATIONS\_FLIGHTNUM» Flight Track – The Flight Track printout shows the flight track for «OPERATIONS\_FLIGHTNUM» that deviated from the Departure Procedures. It clearly shows the aircraft on departure from the airport; however, the flight began turning at [altitude]ft ASL.
- Email Communication Report - The Email Communication Report identifies that the GTAA initially contacted [airline] with regards to the potential violation on [date].
- The Noise Abatement Page - The Noise Abatement Procedures for Toronto Pearson International Airport from the Canada Air Pilot describes the applicable noise operating restrictions and requirements.
- ATC Transcript – ATC Recordings and Transcript are included.

### Recommendation

«OPERATIONS\_FLIGHTNUM» did not comply with the applicable Noise Abatement Procedures on «OPERATIONS\_TRACKSTART». Section 103.08 of the *Canadian Aviation Regulations* provides for a maximum penalty of \$25,000 in this instance.

The transcripts identify that «OPERATIONS\_FLIGHTNUM» did not follow the published SID procedures. Air Traffic Control did not issue any instructions to override the noise abatement requirements. Due to these circumstances, it is recommended that a monetary penalty be assessed.

Anca Amanci

Air Traffic Management and Noise Performance Specialist

Aviation Enforcement Case Report – 5/17/2024

### FLIGHT TRACK



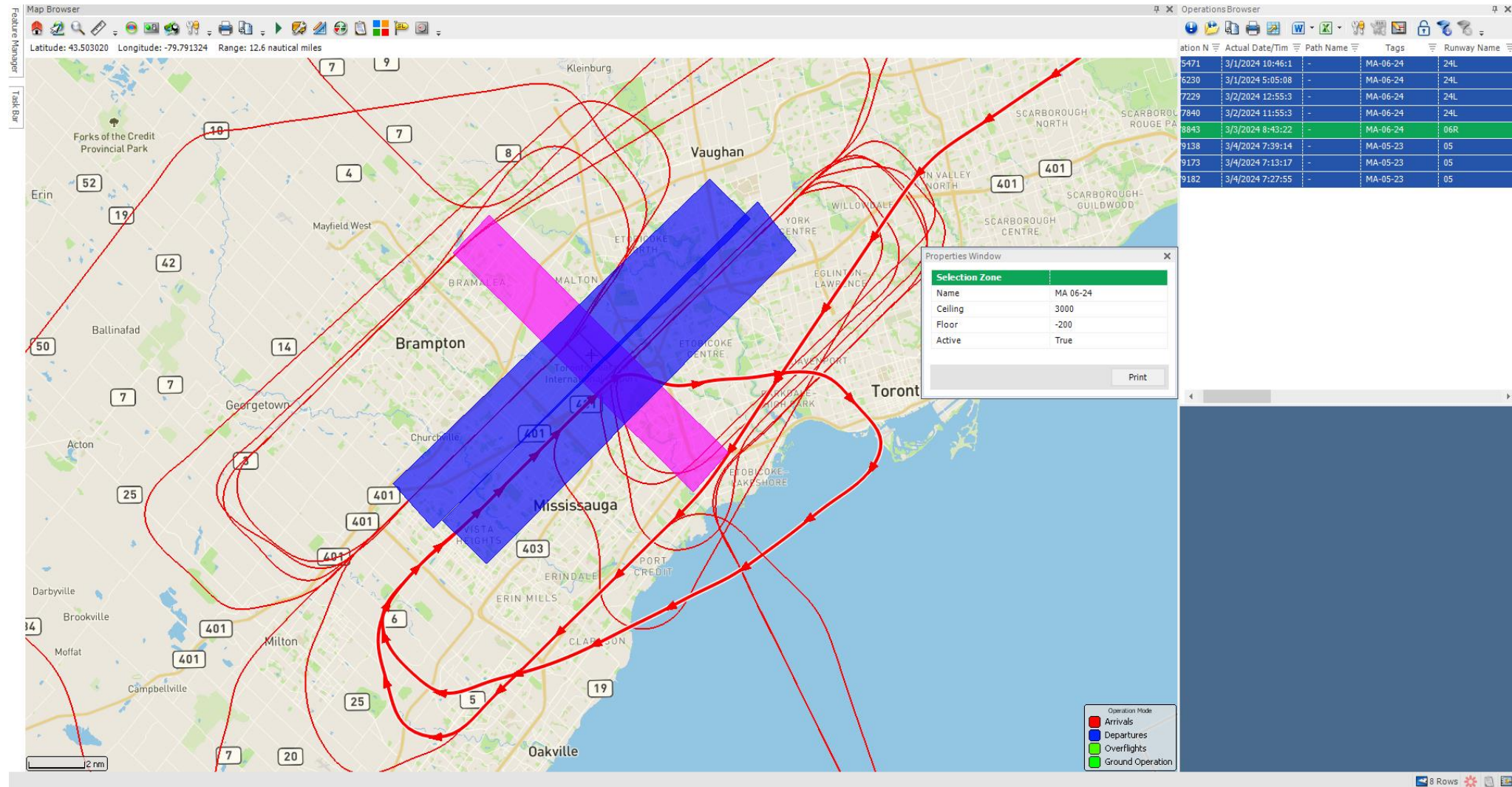
[20-SV-XX] - [DATE] - «OPERATIONS\_FLIGHTNUM» departed Runway «OPERATIONS\_RUNWAYNAME» at [TIME] local time

Aviation Enforcement Case Report – 5/17/2024

# ANOMS - Noise Abatement Compliance - Arrival & Departure Procedures

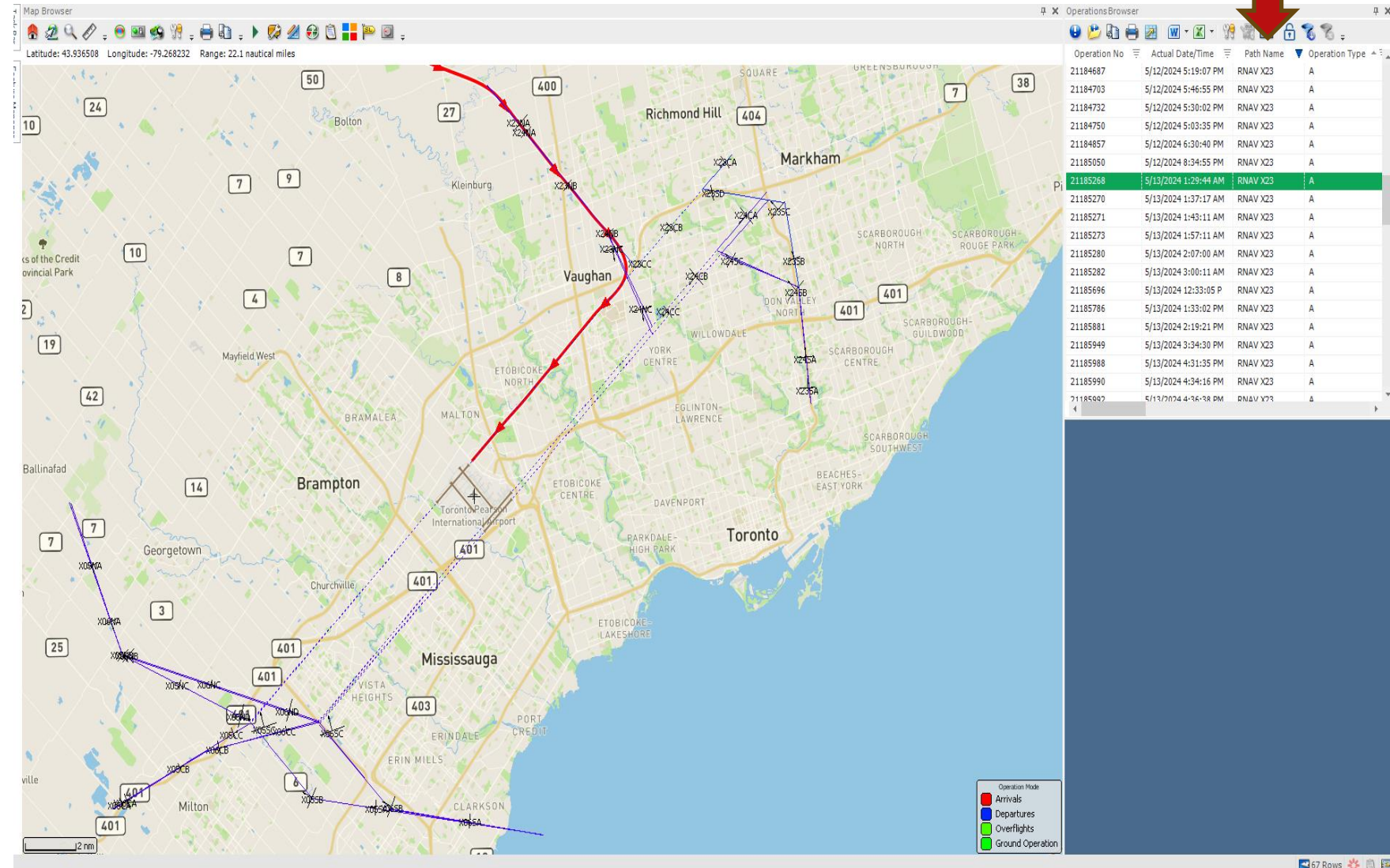


- Created zones around runway areas with rule that operations that went through would be autotagged as Missed Approach



## ANOMS - Missed Approach Procedure

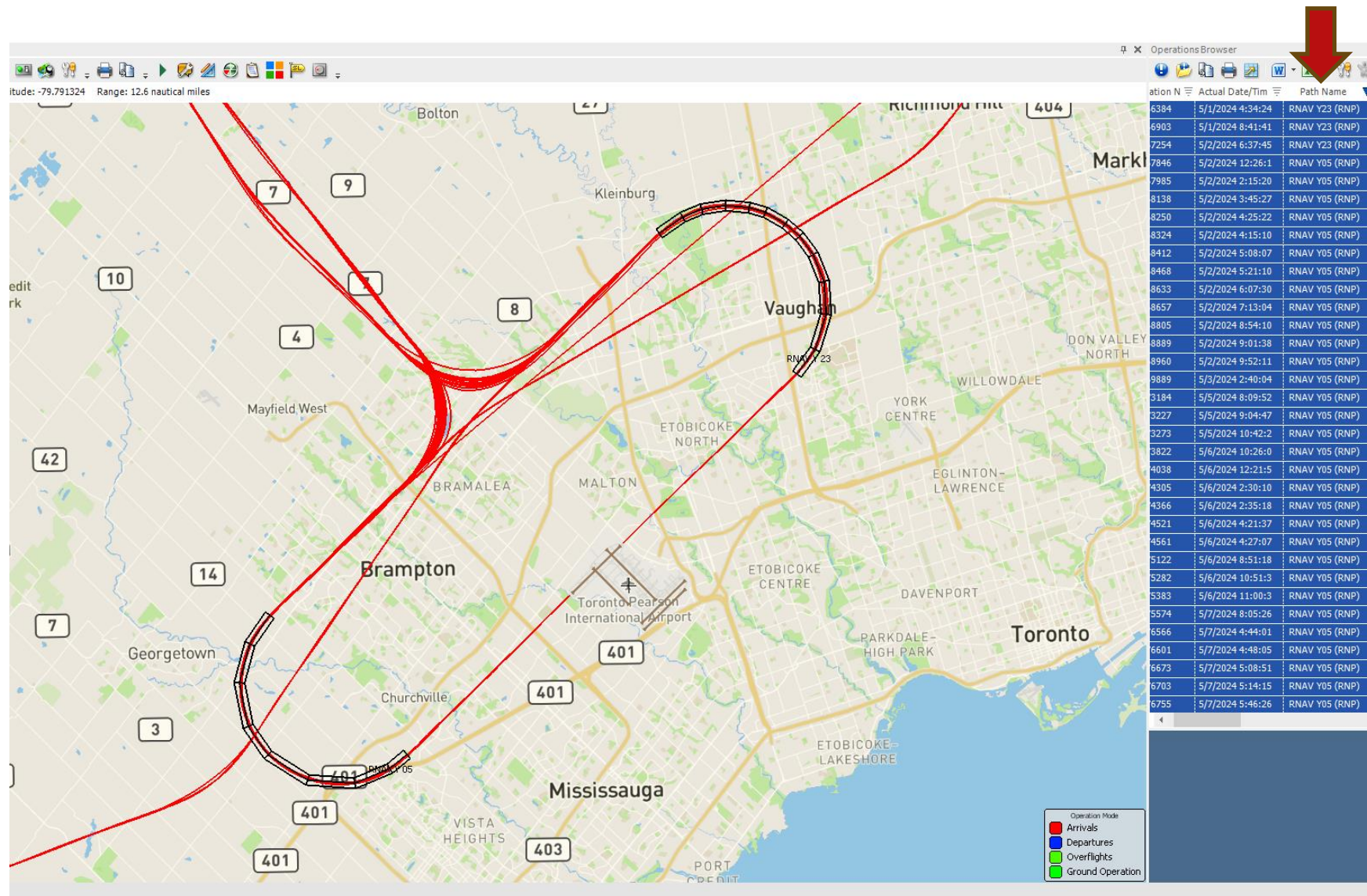
- The Quiet Hours Procedure - RNAV Xray – requires operations to fly specified routes and altitudes to minimize noise in communities at night
- Waypoints were added to ANOMS
- RNAV X **Routes** were created and gates were placed along the route at the Waypoints
- Operations intersecting through all the gates are assigned a Path Name using Rules (URM)



# ANOMS - Quiet Hour Arrival Procedures - RNAV Xray

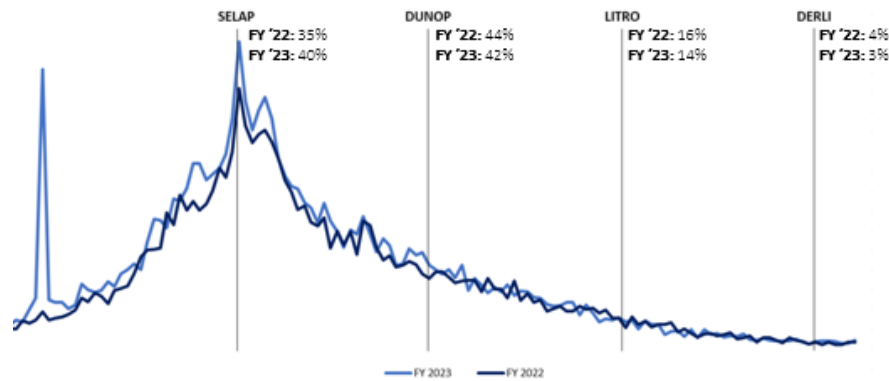


- RNP-AR Procedure - RNAV Y – requires operations to fly a continuous descent to an arced base turn to final
- Corridors were created along the curved turn
- Operations end to end through the corridors are assigned a Path Name using Rules (URM)

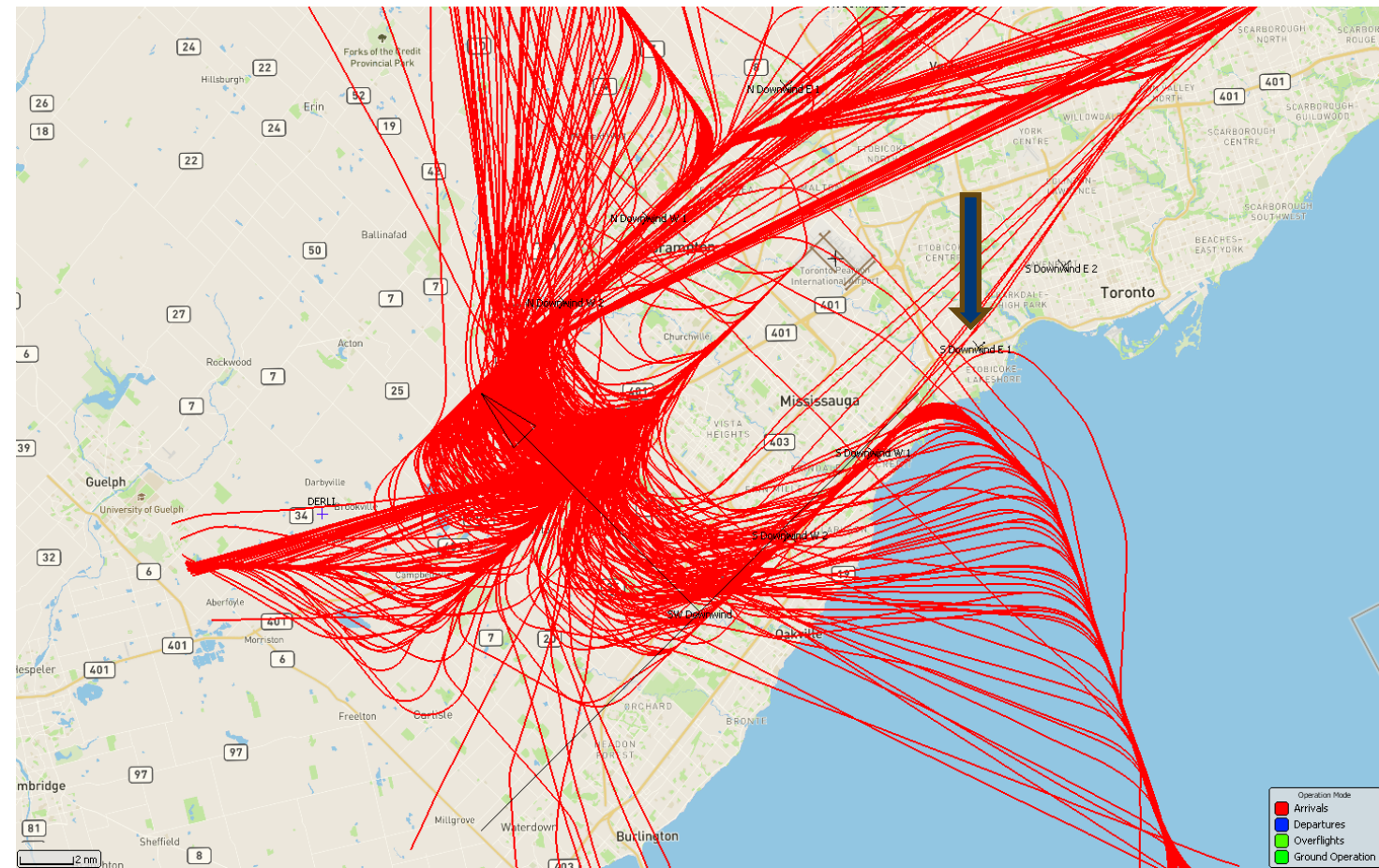
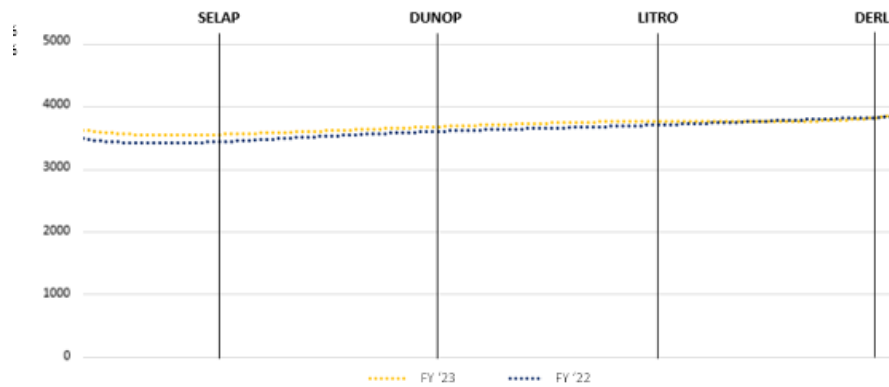


## ANOMS - RNP-AR Arrival Procedure

## Location of Base Turns



## Altitude of Base Turns



- Gate along and inside downwind to identify location and altitude of aircraft turning Base
- Gates at the downwind waypoints to capture altitudes and along the downwind

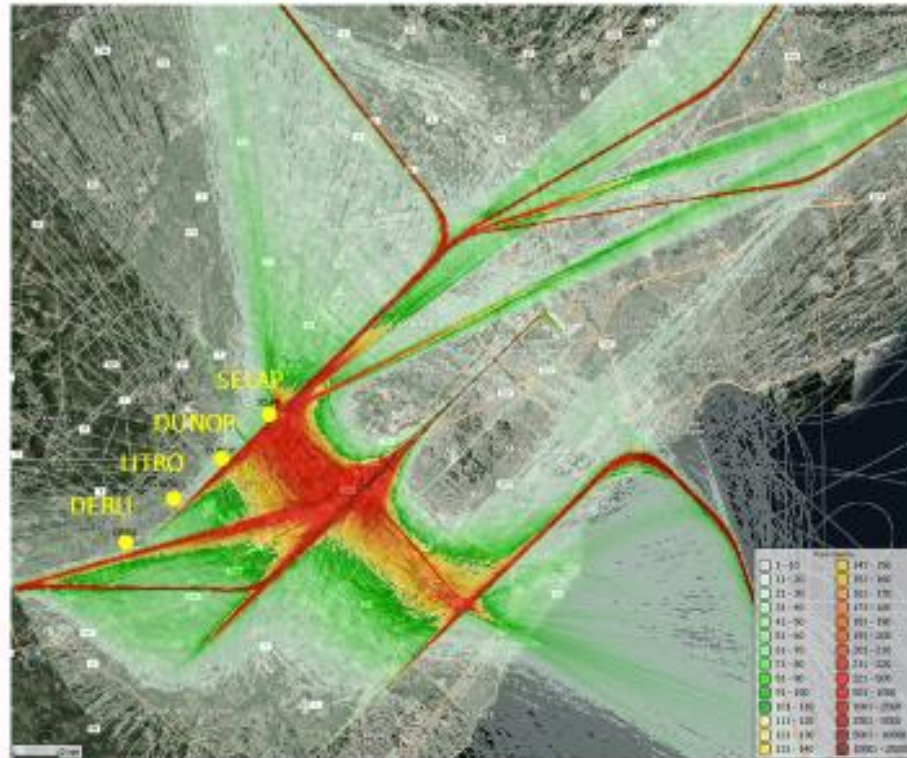
# ANOMS - Community Impacts - Downwind Usage



# Arrivals

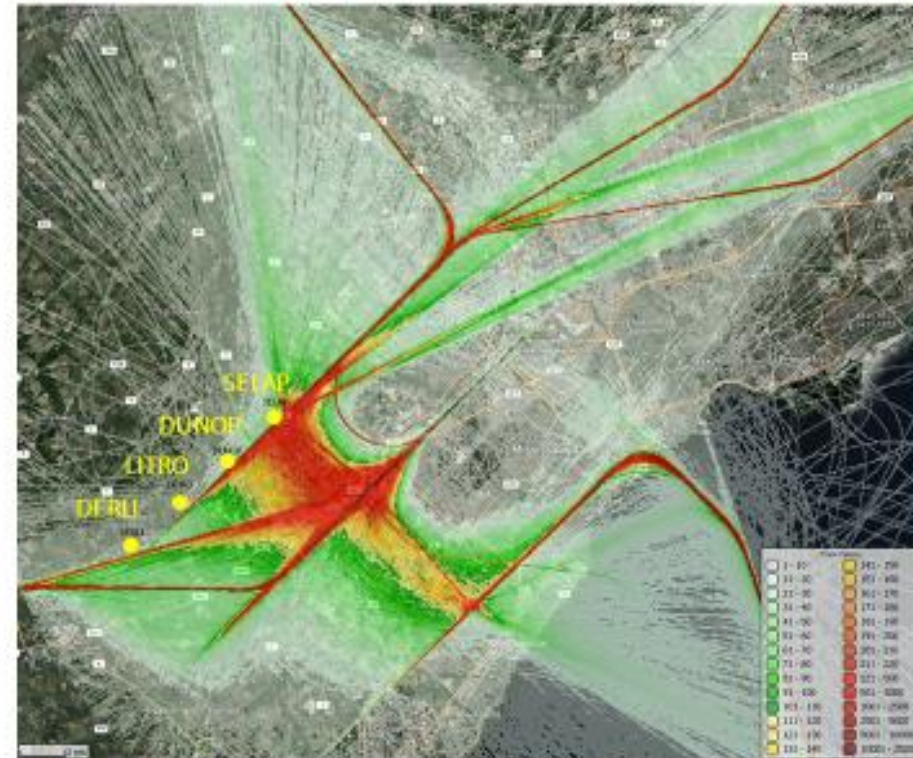
## Track Density – Runway 05

2022



Ops: 34,599

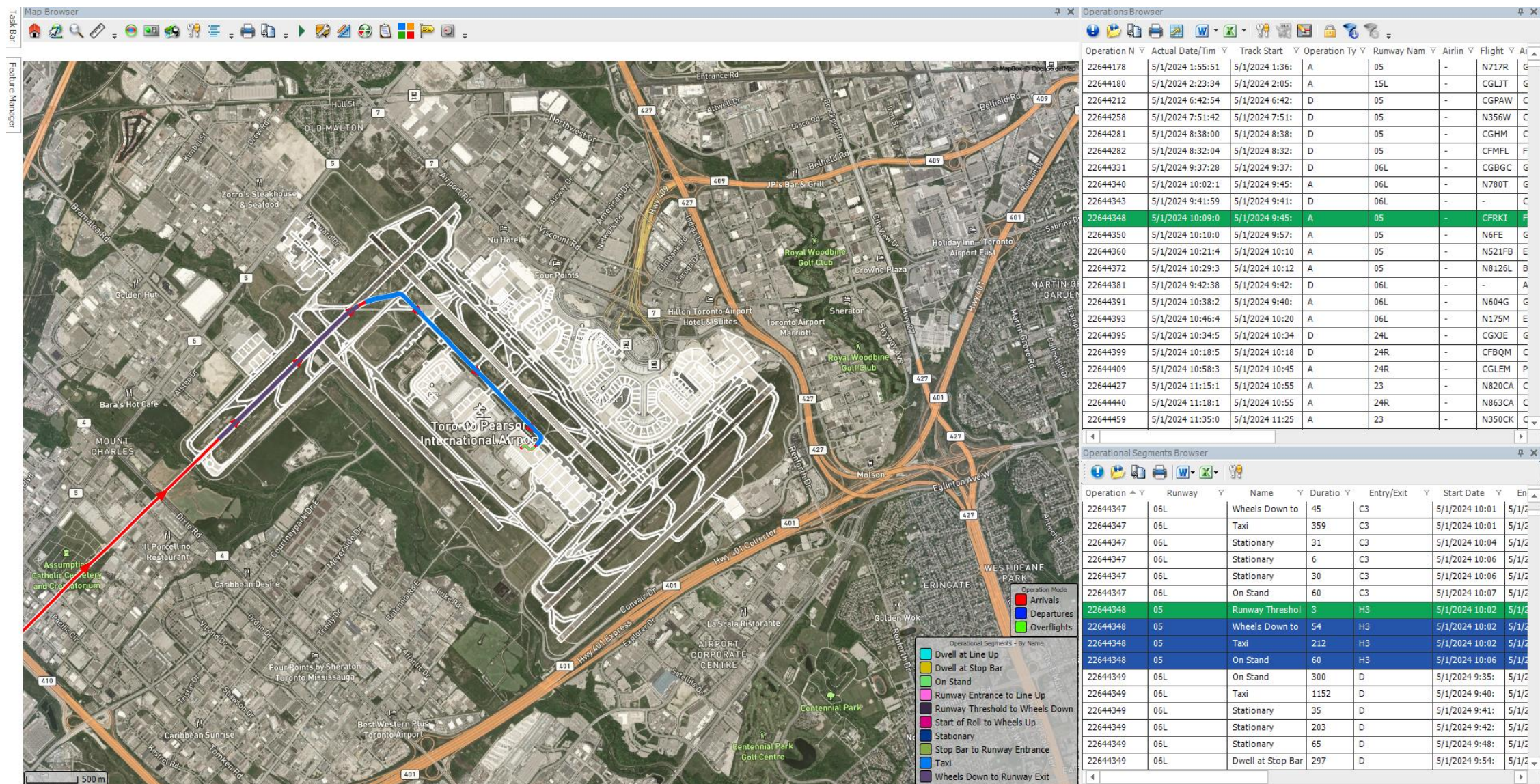
2023



Ops: 30,840

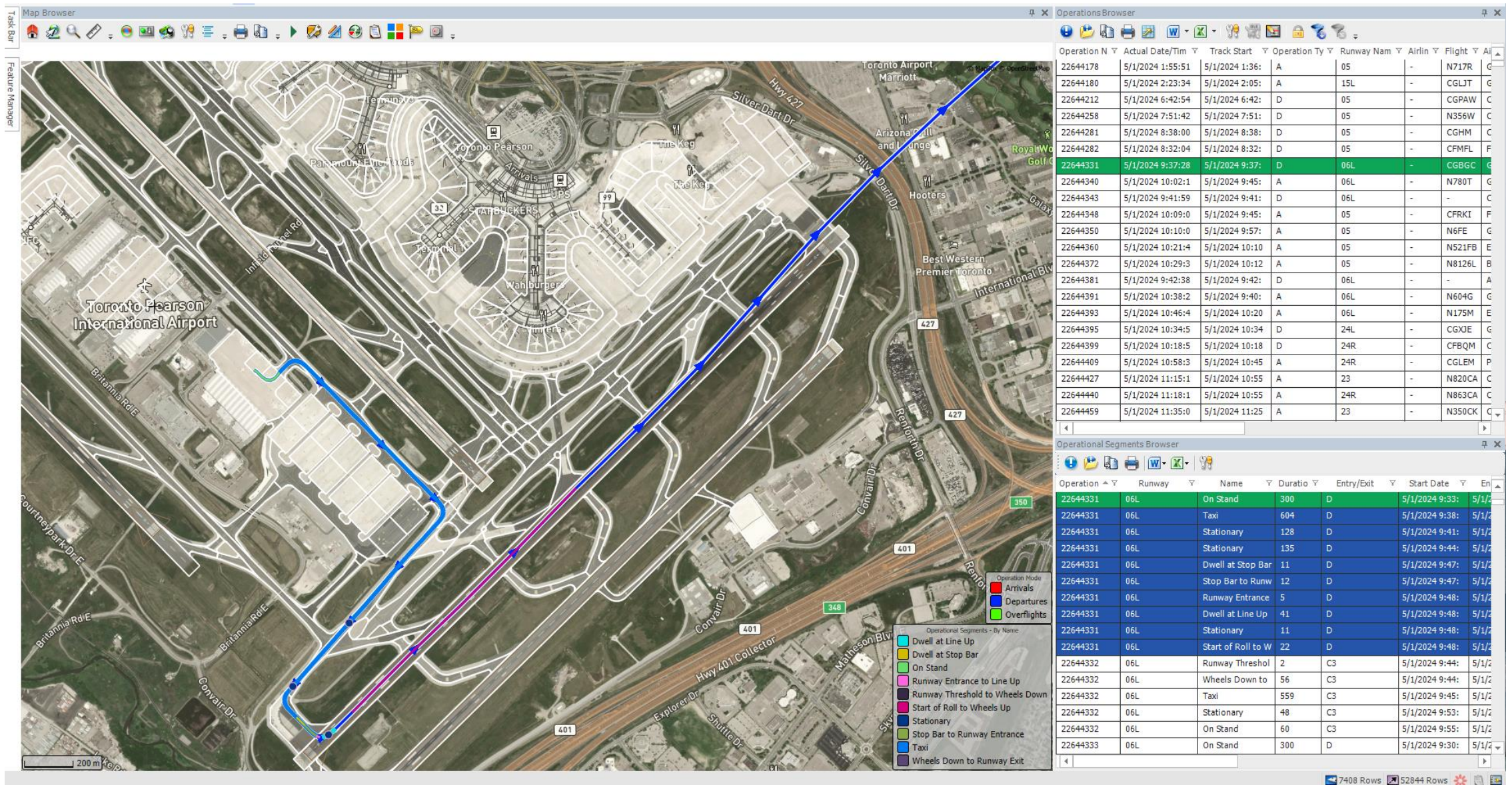
ANOMS - Community Impacts – Arrival Heatmaps





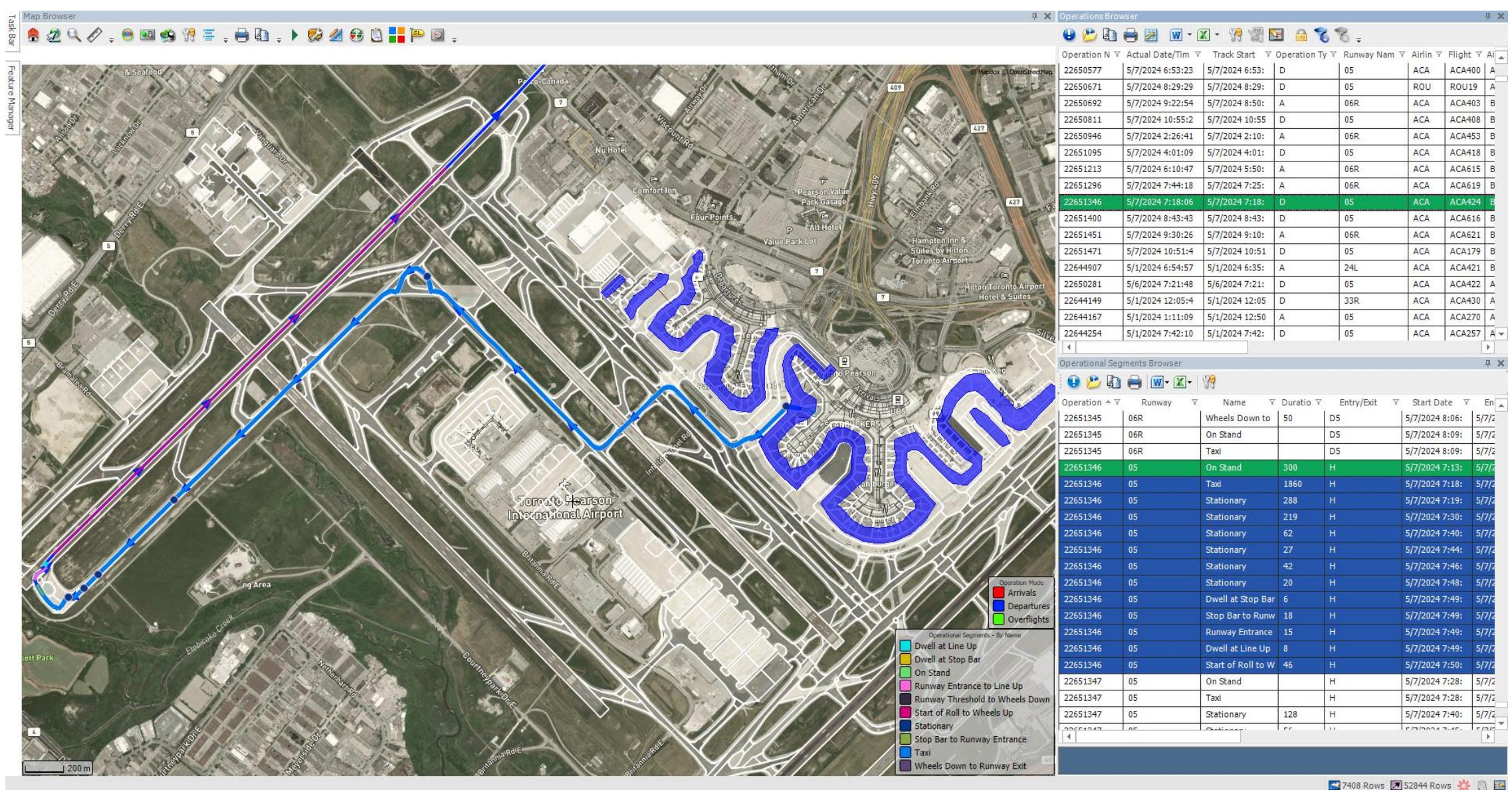
# OPAS – Operations Performance Analysis System





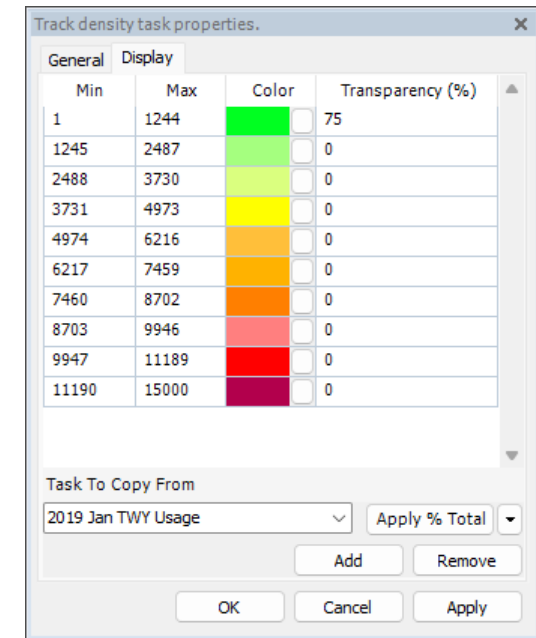
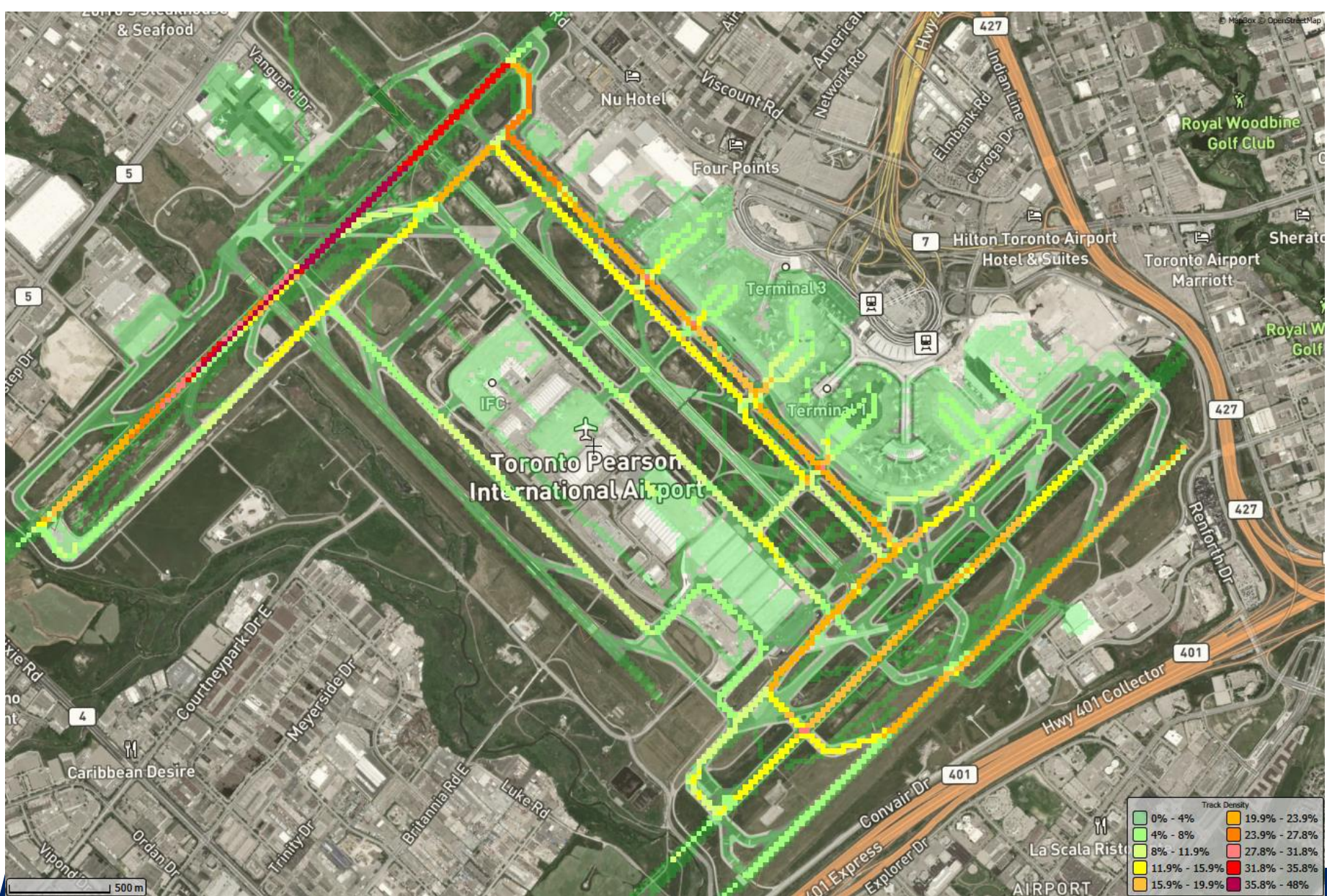
# OPAS – Runway Occupancy Time





# OPAS – Gate Arrivals (Ground Handler KPIs)





- 31,254 Operations
- Max Density 14,774

# OPAS – Taxiway Usage Heatmaps

- Aircraft Stationary Times
- Engine Ice Shedding Procedure
- Ground Handler Performance – No Crew, Gate Holds
- High Speed Exit Utilization
- ROT of Snow Teams – *ongoing*
- Automated reporting – daily data delivery - *ongoing*



**Work collaboratively to understand the current operation and challenges, support efficiency and throughput, and foster sustainable growth**



## GOALS

- 🌀 Produce joint performance metrics & analysis
- 🌀 Strengthen existing relationships
- 🌀 Exchange knowledge, tools & data
- 🌀 Develop actionable insights to share with the entire airport ecosystem



## IMPACT

- 🌀 Consistent Metrics and Analysis
- 🌀 Transparent Working Relationships
- 🌀 Enhanced Industry Perspective
- 🌀 Provide actionable insights

# GTAA & NAV CANADA Collaboration



## Measuring Performance

- ⌘ Continue to identify priority focus areas to mitigate delay
- ⌘ Incorporate cross-organizational expertise to deepen understanding
- ⌘ Develop actionable insights to share with the entire airport ecosystem



## Understanding Context

- ⌘ Reflect the changing aviation landscape
- ⌘ Explore impacts to the environment, communities, and system resilience



## Building Connections

- ⌘ Partner with organizations across the industry
- ⌘ Build common ground to collaboratively analyze system-wide issues

# GTAA & NAV CANADA Collaboration Next Steps





# Questions?