A FLEXIBLE AND COLLABORATIVE APPROACH TO AIRSPACE CHANGE

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OUR STORY
TOLD IN FACTS AND FIGURES

Private, non-share capital company | One of the largest ANSPs in the world by total IFR flight hours

18 million km²
Airspace managed by NAV CANADA

3.3 million
Flights handled each year

8.4 B litres
Forecasted achievable fuel savings for our customers from 1997 to 2020

1,600
Active controller workstations using NAV CANADA developed technology world-wide

40,000
Customers, which includes airlines, air cargo operators, air charter operators, air taxis, business and general aviation, helicopter operators

5,000
NAV CANADA employees across the country

21 million tonnes
Forecasted achievable GHG emissions savings for our customers 1996-2020

$2.4 B+
Invested in enhancing and developing NAV CANADA infrastructure since 1996

330
Charities and community organizations supported in fiscal 2017

1,270
Flights in the Gander oceanic airspace daily on average

The facts and figures presented here were accurate as of 2018.
FRAMEWORK FOR OUTREACH

- Airspace Change Communications and Consultation Protocol.

- Signed by Canadian Airports Council and NAV CANADA.

- Promotes collaboration with airports on airspace change projects.

- Proactive engagement and information sharing on potential impacts.
WHEN IS CONSULTATION REQUIRED?

When is consultation required?

• Moving flight path laterally below 4,000’, over populated areas

OR

• Procedure increases volume on an existing flight path (+30%/+15%)

+ at an airport with:
more than **60,000** IFR movements
STAKEHOLDER RELATIONS CONCEPTS

- Lead with our stakeholders in mind
- Engagement is expectation
- Sequence matters
- Show that we listened
- Share the success
AIRSPACE DESIGN AND NOISE MITIGATION TOOLS

- Performance Based Navigation
  - Continuous Descent Operations (CDO)
  - Concentrate Away From People
  - Leverage Distribution with Hybrid Procedures
  - Special Procedures
- Track Over the Ground (favouring non-residential)
- Population Data
- Reduced Time In Flight (and over people)
**RECENT PROJECTS**

**TORONTO PEARSON: 6 IDEAS**

- Nighttime procedure:
  - 268,000 fewer residents overflown
  - 135,000 fewer households.

**YYC: ESTABLISHED on RNP**

- First year of operations:
  - Reduction of 250,000 nm
  - 1,400 hours less of low altitude level flight
  - -4,1M kg GHGs

**TORONTO BILLY BISHOP**

- Reduction of
  - 33,920 residents overflown @ 55 dBA
  - 16 Nautical Miles
  - 71 litres of fuel
Some fundamentals – but not one size fits all

**Components:**

- Notices and Promotion
- Web content
- Open House-style events + Webexes
- Briefing Stations
- Elected Official Briefings
- Airport Noise Management Committees
- Feedback Mechanisms

**Considerations:**

- Notice of consultation at least 3 week prior to event
- Minimum 45 day consultation period.
- Post-Consultation Reporting
- Notice prior to implementation.
NEW APPROACH

VANCOUVER AIRSPACE MODERNIZATION PROJECT
The Greater Vancouver Region and Southern Vancouver Island connects Canada to the global economy.

We have seen an increase of more than 100,000 movements across the region per annum compared to five years ago.

16% Increase in total flights
18% Increase in IFR flights
10% Increase in VFR flights

2013 vs 2018
COMPLEX AIRSPACE

VFR Arrivals

IFR Arrivals

Source: FDE, Google, RDPSR
Prepared by Operational Analysis (sf)
**Wake Turbulence**
Light VFR operating in proximity to heavier IFR traffic

**Sector Boundary Complexity**
Creates confusion, uncertainty, and delay in recognition and resolution of conflicts

**Airspace Classification Constraints**
VFR avoiding or restricted from Class C Airspace operate in increasingly congested areas with no positive control

**DRIVING SAFETY IN ANTICIPATION OF LONG-TERM GROWTH**
Series of four Stakeholder Forums

- Municipal Officials
- Commercial and Carriers
- Recreational and Flight Training
- Airport Authorities
ITERATIVE PROCESS

LAUNCH FORUM (OCT 2019)
• Briefing on Terms of Reference and Forum approach
• Initial requirements/input, feedback and plans

SECOND FORUM (MAR 2020)
• Initial concept work shared for further discussion
• Additional requirements/input

THIRD / FOURTH FORUMS
• Finalizing concepts, clarifying airspace concepts
• Public engagement plan overview
VALUE ADD/BENEFITS

MUNICIPAL OFFICIALS
- Early awareness and understanding of “why” and “how”.
- Land use designation/zoning
- Municipal perspective on aircraft concerns + areas of concern
- Feedback on designs
- Conduit to City Hall

AIRPORTS
- Key partner in public engagement
- Community stakeholder identification
- Knowledge of best outreach approaches for their communities
- Long-term growth/investment plans
- Infrastructure/survey data changes

OPERATORS
- Fleet, equipage and future operations plans
- Airspace requirements
- Greater understanding of trade-offs
- Operationalization

Increased understanding; improved management of expectations; better prepared for change;

A BETTER AIRSPACE CONCEPT FOR ALL STAKEHOLDERS
WRAP UP...

Airspace design/development and stakeholder engagement are part of the same process. Complaints are an important consideration, but having a wholistic view on mitigation can drive improvements. Engage early, but pay particular influencers who can help increase understanding.