



Briefing to the Northern Air Transport Association

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AIR SECTOR BY THE NUMBERS

- Industry size and diversity is reflected in the numbers:
 - 36,450 Canadian registered aircraft
 - 68,546 licensed pilots
 - 2,324 air carriers (59.5% Canadian; 40.5% Foreign)
 - 15,839 aircraft maintenance engineers and 1001 approved maintenance organizations
 - 567 certified aerodromes (306 airports, 261 heliports) and 1820 non-certified aerodromes
 - 15,000,000 km² of airspace managed by the largest single Air Navigation Service provider in the world (NAV CANADA)
 - \$27.7B in annual revenues generated by the third largest aerospace sector in the world, which:
 - Exports 80% of its output
 - Employs 141,000 people in Canada (2012)
 - Contributes over \$12B to federal and provincial treasuries



AIR SECTOR IN THE NORTH

- Air transportation is crucial for community resupply, resource development, tourism, and travel as some communities are fly-in only
- 82 air facilities
 - Yukon: one international airport, two regional airports, 10 community airports, 16 aerodromes
 - NWT: one airport connecting to the south, two regional airports, and 24 community airports
 - Nunavut: two airports connecting to the south, and 24 community airports (many gravel only)
- The North uses aviation more significantly than the rest of Canada
 - In 2014, with a population of approximately 117,000 in the North, there were 1,236,464 enplaned and deplaned passengers at northern airports (**approx 11 enplaned/deplaned passengers per person in the North**)
 - In the rest of Canada in the same year, a population of approximately 35,426,000 contributed to 128,796,083 enplaned and deplaned passengers at non-northern airports (**approx 4 enplaned/deplaned passengers per person**)
- In 2014, 5 busiest airports were Yellowknife, Whitehorse, Iqaluit, Rankin Inlet and Inuvik with 935,482 passenger movements



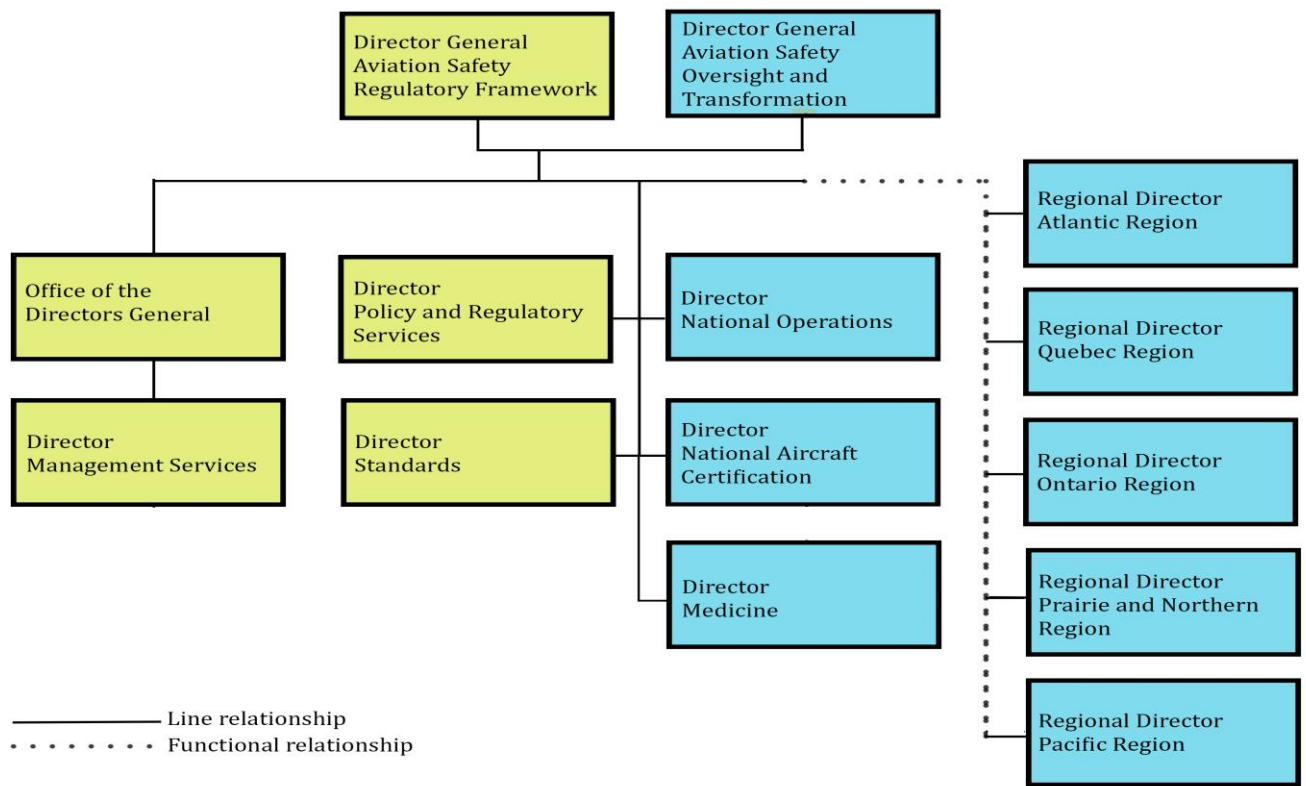
AVIATION SAFETY BY THE NUMBERS

- 1348 FTEs (as of Nov 1, 2015)
- 1053 FTEs responsible for oversight
- Approximately \$130M budget
- Attrition rate 1% per month
- Average Inspector age is 50 years old
- Changed nearly 20% of the inspectorate in the last 18 months



ORGANIZATIONAL CHART

- Civil Aviation still one national aviation safety team, but with increased leadership capacity
- Organic approach to developing organization
 - Files may overlap between Regulatory Framework and Oversight





RISK MANAGEMENT – KEY ACTIONS TO DATE

Civil Aviation is striving for a nimble and agile program that strengthens aviation safety, supports a vibrant aerospace industry, while maintaining public confidence in the system.

- **Oversight program improvements** to modernize and update the civil aviation oversight system to continuously improve services provided to the aviation industry, surveillance of the aviation system and overall safety of air sector for travelling public.
- **Civil Aviation Transformation project** to modernize and respond to emerging trends and ensure national consistency in delivery of program and work.
- **Regulatory prioritization** to achieve Transport Canada's safety, economic and environmental objectives; establish international harmonization and bilateral aviation safety agreements to achieve aviation safety and trade objectives.



OVERSIGHT PROGRAM IMPROVEMENTS

- Transport Canada has taken steps to modernize and update the civil aviation oversight system in an effort to continuously improve services provided to the aviation industry, surveillance of the aviation system and the overall safety of the air sector for the travelling public.
- The approach to oversight has evolved to include:
 - Appointment of a Director General, Civil Aviation dedicated to oversight
 - An Oversight Advisory Board
 - A National Oversight Office
 - Updated surveillance tools, guidance materials and documentation
 - A risk indicator database and surveillance planning tool
 - A formal process to ensure appropriate management review and sign off of surveillance reports
 - A standard approach for document collection and retention for surveillance activities
 - A formal process for identifying and managing high risk operators
 - A five-year quality assurance plan to review adherence to surveillance policies and to evaluate effectiveness of the program



NATIONAL OVERSIGHT PLAN (NOP)

- The NOP provides a comprehensive overview of oversight activities. While planned surveillance provides a rigorous review of regulatory compliance on a risk base interval, it is complemented with numerous other aviation oversight activities.
- A robust oversight system must rely on multiple inputs to identify, monitor and where necessary mitigate risk. For example, where a region identifies a shortfall in resources to accomplish planned surveillance other mechanisms could be used, such as resource sharing and alternate forms of surveillance, such as process inspections.
- Implementation and effectiveness of the NOP is monitored through technical program evaluations, which provide the information necessary to determine how well programs are functioning and provide information necessary to make program improvements.
- Civil Aviation regularly reviews NOP performance to build process efficiencies and improve the planning process. These actions enable us to address shortfalls, manage risk and continually improve oversight of the aviation system.



CIVIL AVIATION TRANSFORMATION PROJECT

Project Drivers:

- To modernize and respond to emerging trends
- Ensure national consistency in delivery of program and work that we do





REGULATORY PRIORITIZATION

- Focus on mitigating system-level safety risks through regulatory and non-regulatory action:
 1. **Pilot Fatigue:** introduce new regulations that would align Canadian requirements with current science, ICAO's Standards and Recommended Practices and other international partners (FAA and EASA)
 2. **Approach and Landing:** assessing potential regulatory changes, including approach ban requirements, enhancements to runway end safety areas, and increase education and awareness
 3. **Unmanned Air Vehicles:** implementing a more rigorous regulatory framework to strengthen safety, while providing the regulatory conditions to support economic growth in the sector
 4. **Loss of Control In-Flight:** Support international efforts to reduce accidents by focusing primarily on enhancing pilot training
 5. **TSB Watchlist Action Plan:** Stabilize approaches and approach ban.
- Advance key international engagement efforts, with a focus on ICAO Assembly, strengthening bi-lateral relationships with existing partners (FAA and EASA) and emerging partners (China, India and Brazil).
- Develop and implement strategies to better support the Canadian aerospace sector's ability to compete in the international market (e.g. modernized cost recovery framework).
- The system level risk we have identified is "Human Performance Factors" - the regulatory initiatives that are addressing that risk (today) is "Flight and Duty Time and FRMS" and "Crew Resource Management."



RECENT ACCOMPLISHMENTS

- Offshore Helicopter Operations
- Flight Attendant Regulations
- TP 312 5th Edition
- Advisory Circular: AC SUR-004
- Responsible Aerodromes
- RESA Risk Assessment
- Miscellaneous Amendment NPA
- CAR 521 NPA
- Level of Service Improvements



REGULATORY PLAN

Regulatory File	Fall 2016	2017
Winter Maintenance	N/A	Canada Gazette Part II
Seaplane Safety	N/A	Canada Gazette Part II
Cockpit Voice Recorders	N/A	Canada Gazette Part II
UAVs	Canada Gazette Part I	Canada Gazette Part II
RESA	Canada Gazette Part I	Canada Gazette Part II
Crew Resource Management	Standards	N/A
Emergency Locator Transmitters	Canada Gazette Part I	Canada Gazette Part II
Flight Deck Occupancy	TBD	TBD
Flight and Duty Time	Canada Gazette Part I	Canada Gazette Part II



SAFETY MANAGEMENT SYSTEMS (SMS)

- Implemented 10 years ago
 - Gaining maturity, but takes time to get there
- Surveillance results demonstrate stable accident rate in certificate holders subject to SMS
 - 91 percent of aviation accidents occur in enterprises not subject to an SMS
- Common areas of concern:
 - Quality Assurance (QA)
 - Maturity of the SMS program
 - Pilot Training (say what you do, do what you say)
 - Categorizing of risk
- Progressive approach to enforcement



ENFORCEMENT ACTIVITIES

1. Post Oversight Follow Up:

- Undertaken by all surveillance inspectors
- **Safety-Related Certificate Action** (i.e. suspension / cancellation of Canadian Aviation Document (CAD))
- Corrective action plans and follow ups
- Enhanced monitoring and oral counselling
- Follow up inspections (including unannounced)
- Changes to risk profile (decreased inspection intervals)

2. Punitive Administrative Action (Enforcement):

- Undertaken by enforcement officers
- Administrative Monetary Penalty
- Punitive CAD suspension



ENFORCEMENT DATA

2014/15:

- 2812 complaints received and assessed
- 589 investigations completed
- Action taken by enforcement investigators:
 - Monetary penalty assessed: 111
 - CAD punitive Suspension: 11
 - Prosecution: 0
 - Oral Counselling: 113

2015/16:

- 3042 complaints received and assessed
- 699 investigations completed
- Action taken by enforcement investigators:
 - Monetary penalty assessed: 166
 - CAD punitive Suspension: 19
 - Prosecution: 0
 - Oral Counselling: 206



NATIONAL SERVICE PERFORMANCE – AVERAGE WORKING DAYS

Apr 1 – Mar 31	14-15		15-16		Net Days
	Volume	Days	Volume	Days	
Private, Glider, Balloon, Ultralight, Gyrop, Rec. Licence / Permit Issue	2,980	22.6	3,209	19.6	- 3.0
Commercial, Flight Engineer Licence	1,299	25.2	1,339	18.5	- 6.7
Airline Transport Pilot Licence	783	27.6	574	25.6	- 2.0
Flight Crew Rating Initial Issue	8,057	20.6	7,981	16.2	- 4.4
Manual Amendment	2,344	40.8	2,104	26.4	-14.4
Issue Continuing C of R	2,999	16.9	3,145	23.0	+ 6.1



RESOLUTION FROM THE 39TH NATA AGM FOR CIVIL AVIATION AND QUESTIONS

List of Resolutions

1. GPS Approvals
2. *Northern Air Carrier Economic Issues – issue for TC Policy*
3. *Funding for Northern Airports – issue for TC Policy*
4. Airport certification versus Registration
5. Chip Seal Runways
6. Manual Amendments

List of Questions

1. CADORS
2. Advisory Circular – M1-M2 re SFAR 41 Aircraft
3. Level of Service
4. SMS
5. RESA
6. DHC-6 max performance take off ops specifications
7. TP 312
8. CAR 705.226 emergency exits in single aisle aircraft
9. Medical issues: CAMEs for NWT, Fees/suspensions
10. CRM Regulations