



# Transport Canada Civil Aviation Transformation (TCCAT) Initiative

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# PURPOSE

To provide an overview of the  
Transport Canada Civil Aviation  
Transformation (TCCAT) initiative to the 17<sup>th</sup>  
Meeting of the COSCAP-NA Steering Committee.

May 10-12, 2017 – Busan, Republic of Korea.



# INTRODUCTION

- **The Transport Canada Civil Aviation Transformation (TCCAT) Project was established in April 2015 by the ADM Safety and Security as an integral element of establishing two Civil Aviation Directors-General.**
- **Goals:**
  - Provide capacity to react to emerging trends brought about by rapid global change and technological advancements
  - Ensure sufficient Program leadership to provide coherent strategic direction and pace of modernization
  - Better position TCCA both strategically and operationally to meet existing and future challenges



# DRIVERS

- Need to enhance agility and ability to modernize/react to emerging and rapidly changing design and operating practices in an increasingly globalized industry
- Size, complexity and the matrix management structure (Regions/Headquarters) of Transport Canada Civil Aviation (TCCA) makes it challenging for executive leadership and management of oversight and service delivery.
- Need to maintain and enhance credibility with external organizations – including international entities
- Need to ensure efficient, consistent and standardized delivery of Program



# CANADIAN CIVIL AVIATION ENVIRONMENT

- Large/diverse air transportation system:
  - 15 million km<sup>2</sup> airspace managed by NAV CANADA
  - Over 35,000 Canadian registered aircraft
  - 2,324 air carriers (59.5% Canadian; 40.5% Foreign) / 68,546 licensed pilots
  - 1001 Approved Maintenance Organizations / 15,839 aircraft maintenance engineers
  - 567 certified aerodromes (306 airports, 261 heliports) / 1,820 non-certified aerodromes
  - Airlines, airports and related services employ 140,000 Canadians – air transport jobs represent 5% of employment in northern Canada
  - Canadian aerospace sector third largest in world, generating \$27.7 Billion in annual revenue. Exports 80% of output and employs 141, 000 people.
- Significant growth and technological advance in industry :
  - 45% growth in emplaned/deplaned passengers (2005-2014)
  - 29% growth in Canada's aerospace manufacturing (2004-2014)
  - Canada now third in the World for civil aircraft production and expected to grow between 2014-2021 by 22% - twice the global rate)
  - Major technological advances in aircraft/engine design, fuel efficiency, aerodynamics composite materials, avionics. By 2036 – 90% of the World's aircraft fleet will be new generation technology
- Major restructuring within TCCA over the past 10 years:
  - Complete national organization review (2005-2013) - some units in Regions only staffed in 2015
  - Design + implementation of SMS since 2005 for 705 operators, Aerodromes and Air Navigation Service providers - significant delivery challenges
  - Changed to system-based surveillance in 2008 for all operators



## TRANSPORT CANADA CIVIL AVIATION

- Carries more than 120,000 activities per year (Licences, Approvals, AOCs, Type Certificates, Medicals, etc.)
- 1,265 personnel (as of October 2016)
- 1,073 of these personnel responsible for oversight
- Budget of approximately \$124 million
- Average inspector age over 50 years old
- Attrition – recruitment rate over 25% for the last 3 years – expected to continue at this rate for several more years



# AVIATION SAFETY BY THE NUMBERS

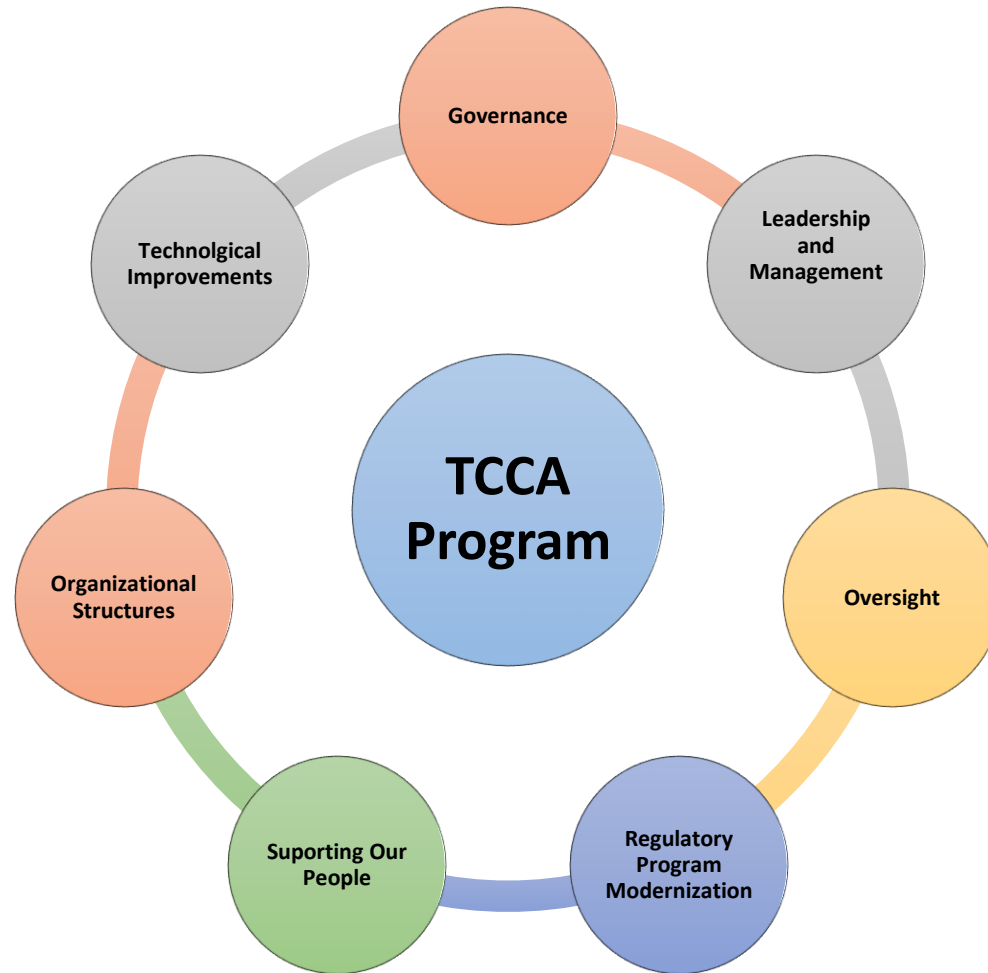
	2011	2012	2013	2014	2015	2016
<b>Canadian-registered aircraft accidents</b>	227	232	231	204	222	193
<b>Canadian-registered fatal aircraft accidents</b>	29	32	30	10	23	23
<b>*Accident Rate per 100,000 hours flown</b>	5.3	5.3	5.4	4.8	5.2	4.5

Accident Source: Transportation Safety Board of Canada

\*Source: Transport Canada 2014-2016 hours flown are estimated

Canadian-registered aircraft, excluding ultralights, balloons, gyroplanes, dirigibles, hang gliders and similar aircraft types

# TCCAT AREAS FOR ACTION







# OVERVIEW OF AREAS FOR ACTION

## **GOVERNANCE**

Five projects examining accountabilities, roles, responsibilities and interfaces in various areas of the TCCA Program.

## **LEADERSHIP AND MANAGEMENT**

Processes and tools needed to support TCCA governance structures – such as Project Management, Management Review, Performance Dash Boards.

## **OVERSIGHT**

*Establishment of a National Oversight Office* (Completed)

National accountability, consistency and standardized approaches to planning, monitoring and reporting of oversight.

*Establishment of a National Oversight Advisory Board* (Completed)

Creation of a national board to review and manage TCCA response to problematic aviation enterprises.

*Surveillance – Risk Indicators, Planning and Staff Guidance* (In Progress)

Detailed review of TCCA oversight processes to identify and implement areas for continuous improvement. Key themes include:

- Enhanced quality control and quality assurance processes;
- Scaled approaches to surveillance;
- Integration and balancing of the various oversight activities – systemic and compliance.



# OVERVIEW OF AREAS FOR ACTION (CONTINUED)

## **REGULATORY PROGRAM MODERNIZATION**

Process re-engineering (LEAN exercises) of the regulatory life-cycle approach and provision of supporting tools (policy, analysis).

## **SUPPORTING OUR PEOPLE**

Area includes projects in a wide number of areas with a focus on improving the processes and tools used by our staff.

## **ORGANIZATIONAL STRUCTURES**

Projects focusing on realigning and improving the TCCA organizational structures.

## **TECHNOLOGICAL IMPROVEMENTS**

Coordination and support for IT initiatives intended to improve service to the overall Transportation industry.



# VIEW OF THE FUTURE

- Transformation continues for the foreseeable future – driven by:
  - Globalization continues – necessitating:
    - Continuing need for multilateral agreements - BATA/Technical Arrangements
    - Supply chain modernization
  - Pace of Technological change continues to accelerate – composites, increased automation in aircraft and ANS
    - Need for global standardization to ensure and enhance interoperability – Aircraft/ANS/Aviation Services
  - Regulatory Evolution
    - System based versus end-product inspection
    - Increasing move to performance-based regulation
  - Demographics in the Aviation Industry
    - Aging demographic – shortages in personnel – need for innovative strategies to attract/train/regulate personnel



# Questions ?