

A nighttime photograph of a city skyline, likely Toronto, viewed through a large window. The city lights are visible in the distance, and the window frame is visible in the foreground. The image is used as a background for the presentation slide.

NAV CANADA

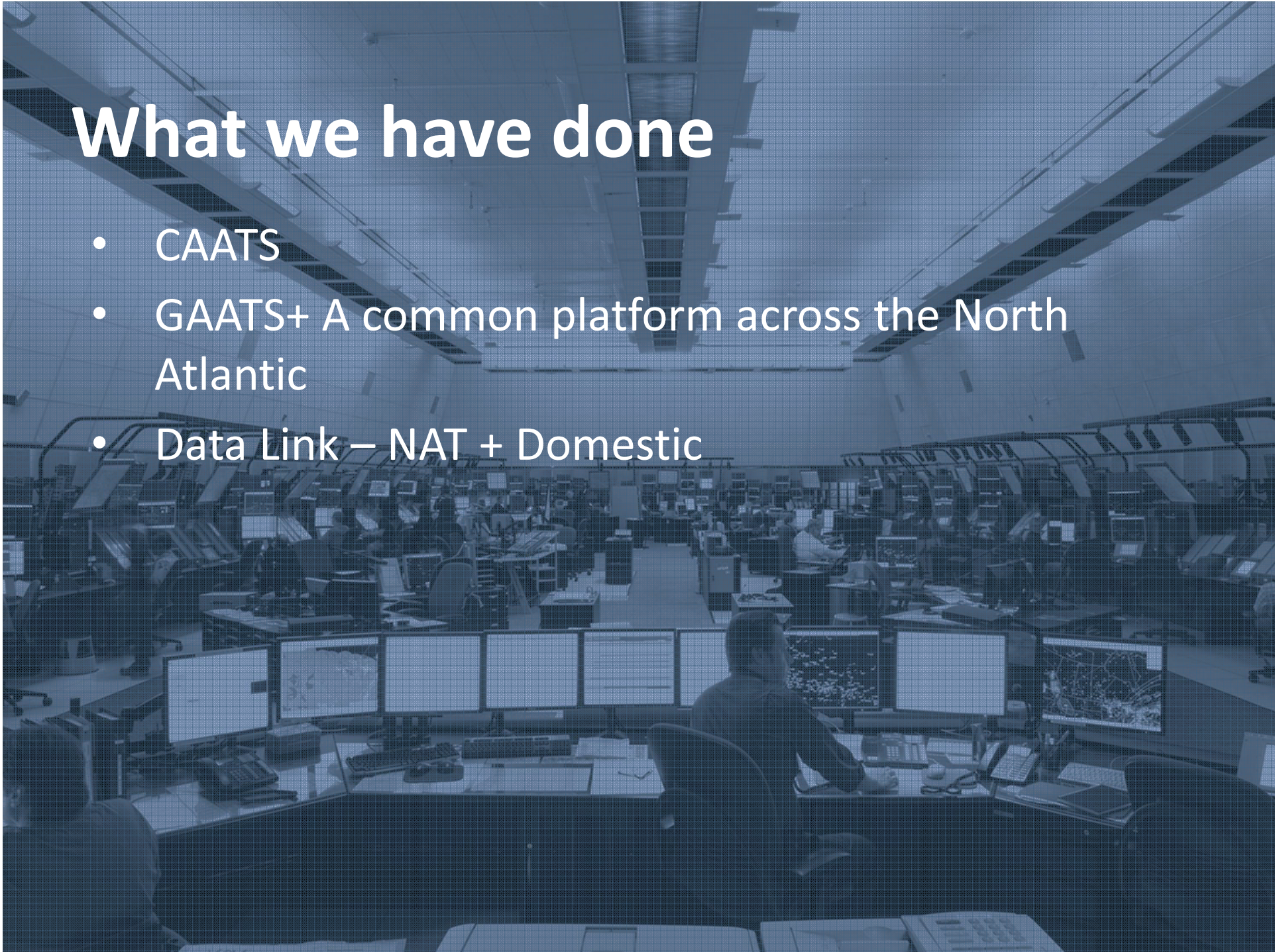
Rob Thurgur

Assistant Vice President
Operational Support

Global ATM Modernization
February 2015

What we have done

- CAATS
- GAATS+ A common platform across the North Atlantic
- Data Link – NAT + Domestic



NAV CANADA

AU SERVICE D'UN MONDE EN MOUVEMENT

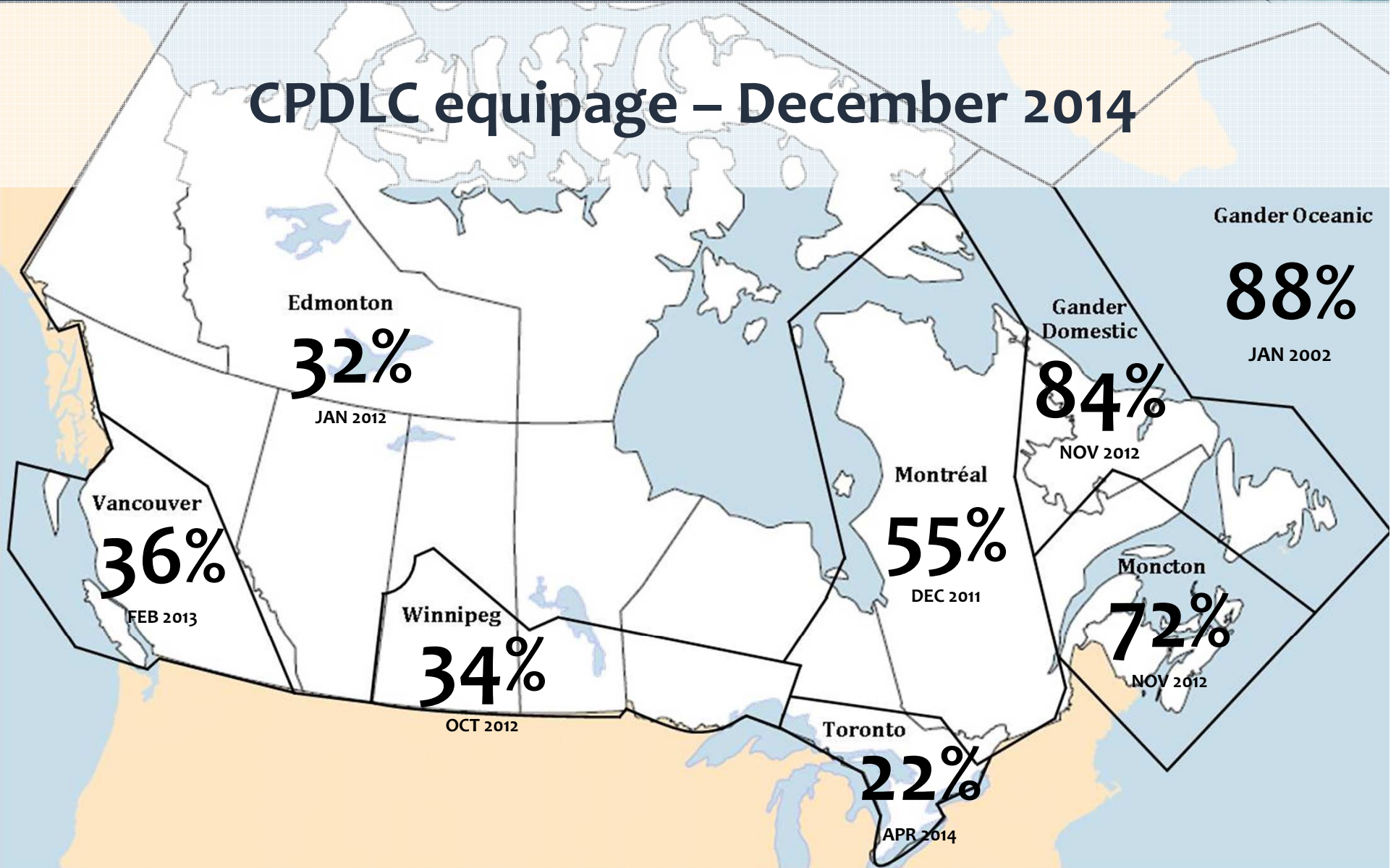


Controller Pilot Data link Communications

- operational above FL 290 throughout domestic airspace
- Increasing use



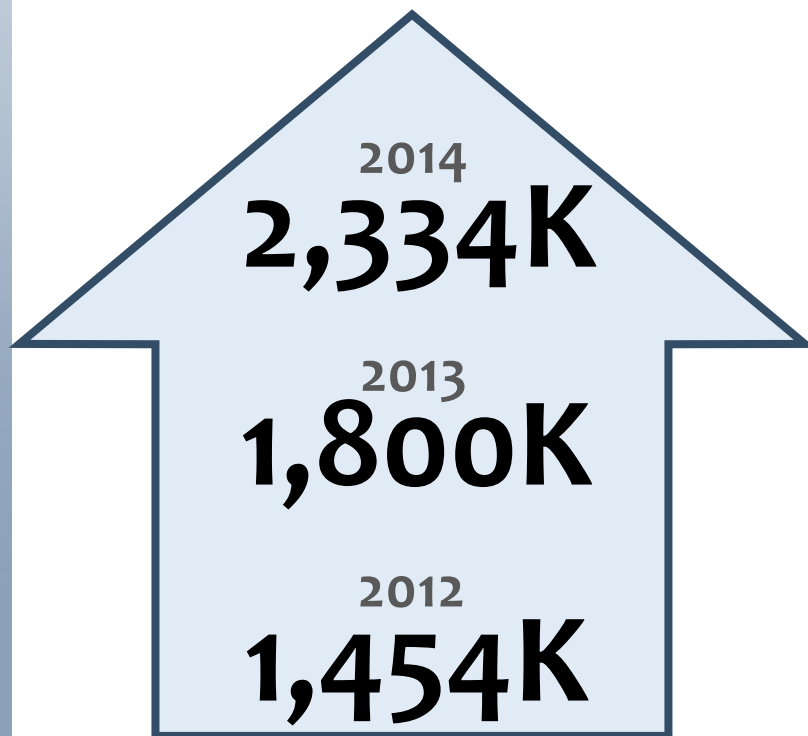
CPDLC equipage – December 2014



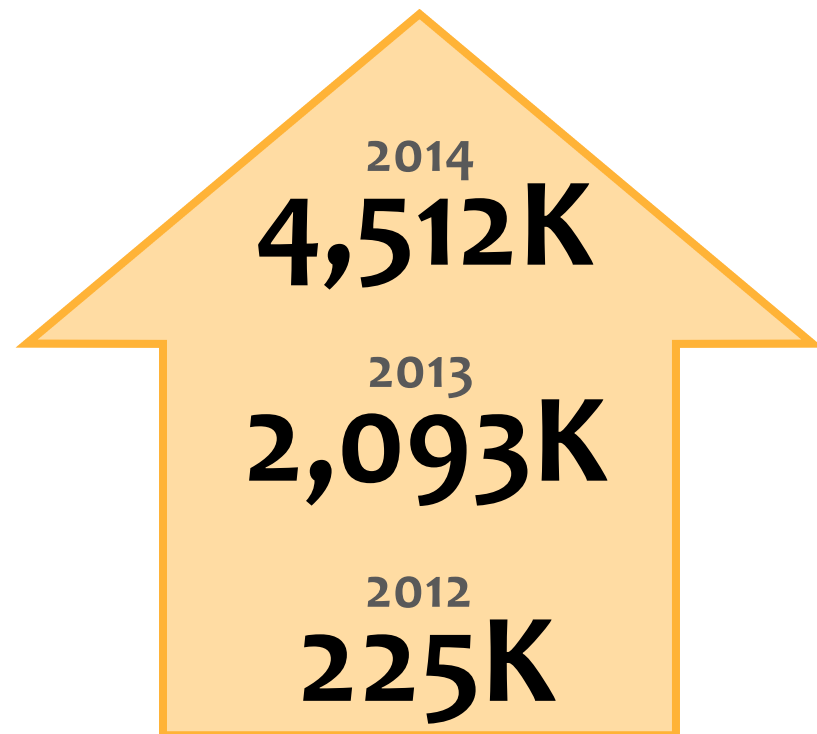


CPDLC Messages

Oceanic



Domestic



Excluding System and Automated Messages



What's next?

- Expansion of CPDLC use and improvements to performance
- New controller tools e.g. wake turbulence
- Expansion of PBN
- Rationalization of ground based nav aids

- **Satellite ADS-B**



Satellite based ADS-B out

Seamless global coverage

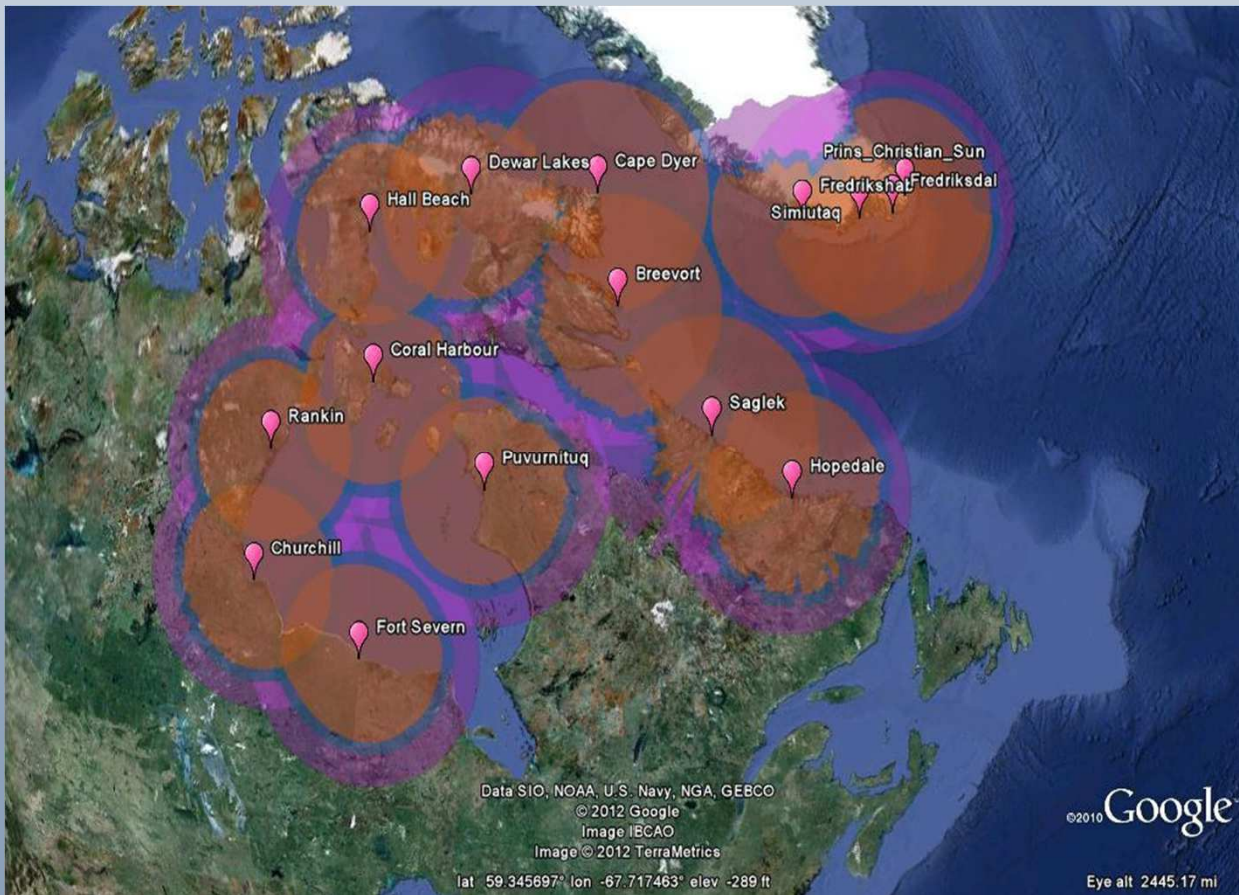
Real benefits

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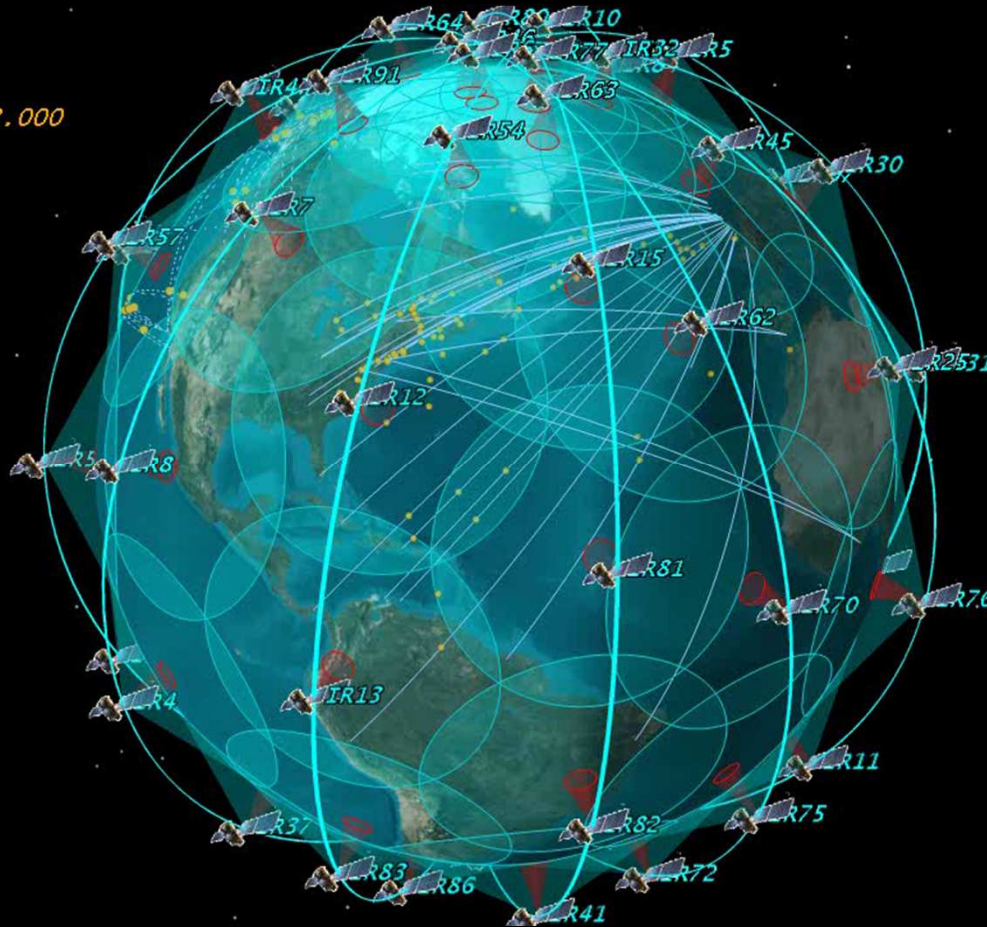


Ground based ADS-B Out



Now space based ADS-B out

21 Jul 2011 20:36:02.000



Earth Inertial Axes

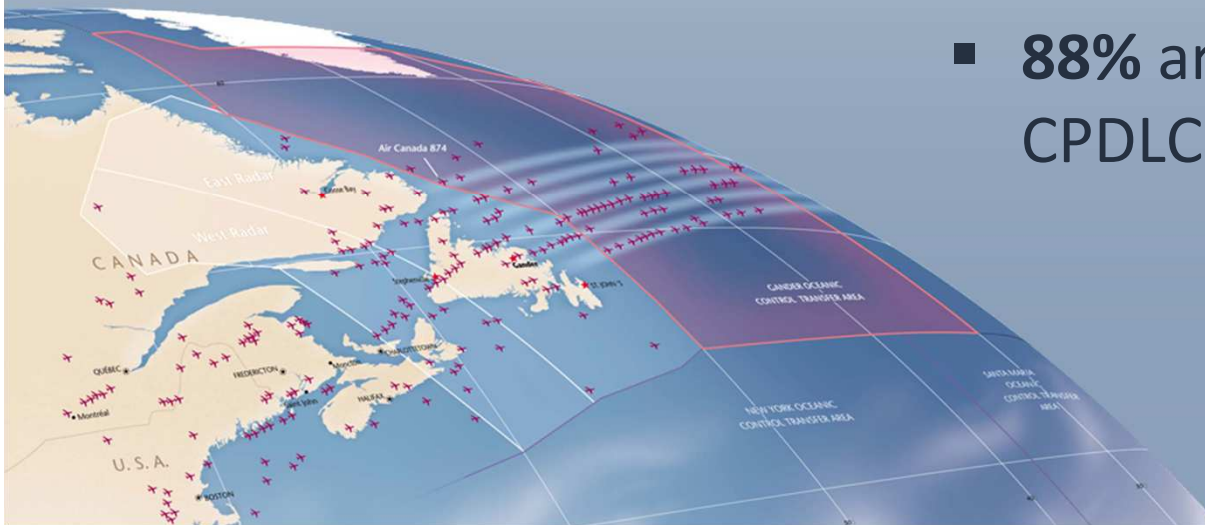




Implementation plan

Focus first on procedural separation in the NAT

- **1,000 – 1,300** flights per day
- Over **400,000** flights per year
- **92%** are already ADS-B equipped
- **86%** are FANS 1/A equipped
- **88%** are capable and use CPDLC



After satellite based ADS-B

- 15 NM longitudinal between aircraft on the OTS



After satellite based ADS-B

- 15 NM longitudinal expanded to aircraft operating off the OTS



After satellite based ADS-B

- Aircraft allowed to operate on all tracks which do not intersect (still RLatSM)



After satellite based ADS-B

- 15 NM lateral between aircraft operating on non-intersecting tracks



After satellite based ADS-B

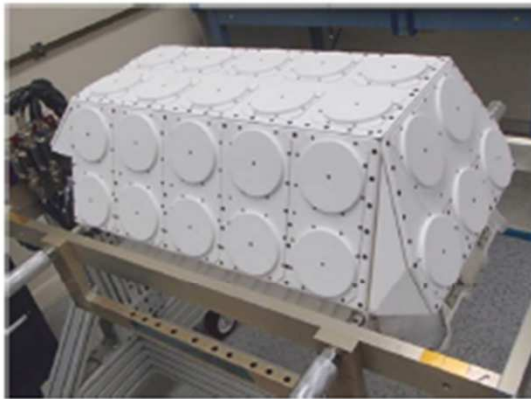
**Early 2019 – Full 15 NM separation between
surveillance-identified aircraft**



We are well underway

Qualification testing of payload complete

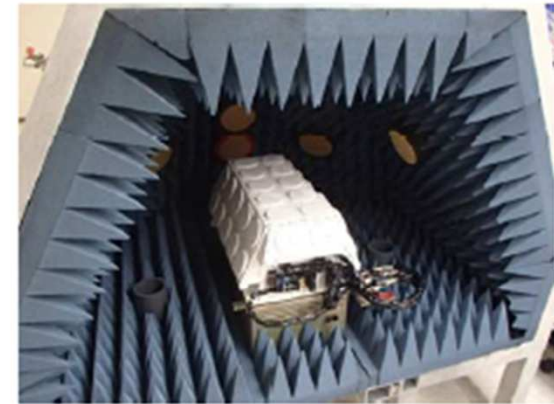
Qualification Payload



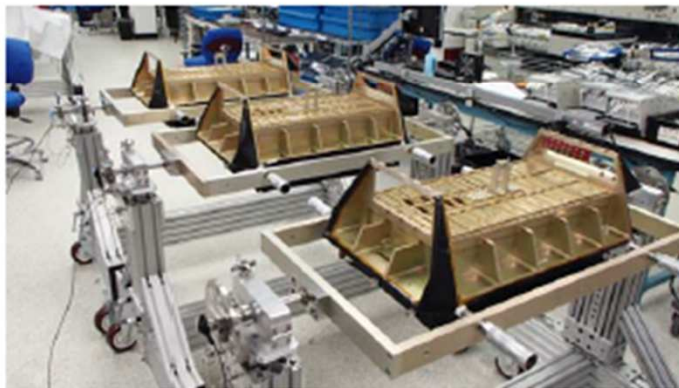
Thermal Vacuum



Antenna Testing



Production of flight payloads underway. First flight units shipped.





An aerial night view of an airport terminal building, seen through a large glass window. The terminal is illuminated with blue and white lights. Several aircraft are parked at gates in the foreground. In the background, the city lights of a large metropolitan area are visible under a dark sky. A semi-transparent blue banner with a grid pattern is overlaid across the middle of the image, containing the text "Thank you" in white.

Thank you