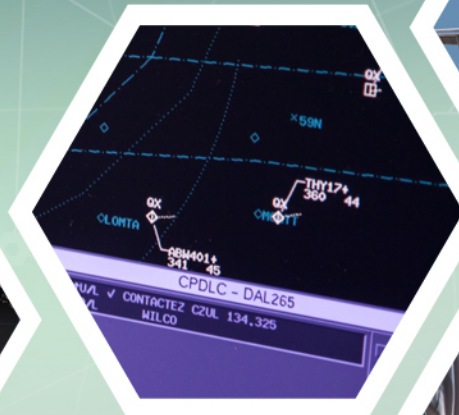


# NAV CANADA

SERVING A WORLD IN MOTION



**Rob Thurgur**

NAV CANADA

GACS

## Agenda

- Today's Existing Challenges
- Operations Road Map for Enhanced Automation
- Performance Based Navigation
- Satellite Based ADS-B Status Update





# Main Challenges

- Make a safe system safer
- Aligning ATM technology with Airline Business needs
- ANSP coordination - Management of multiple point-to-point interfaces
- Aircraft Tracking
- CDM
- Traffic Management



# Operations Roadmap for Enhanced Automation



# Key Drivers for NAV CANADA Capital Investment

- Enhance Safety Performance
- Improve Customer Efficiency
- Reduce Operating Costs

# Operational Road Map Objective

- To develop and deploy future ATM technology that:
  - features technology with a robust, flexible system design;
  - ensures the maintenance of Company-wide technology standards;
  - incorporates safety; user efficiency; and a user friendly, intuitive design;
  - offers technology to enhance service delivery, and
  - facilitates future industry-wide and NAV CANADA specific initiatives.



# Operational Road Map Direction

- Context Sensitive Role-based Displays
- Single Interface on Modern Common Platform
- Common and Authoritative Data Source
- Enhanced Safety Nets
- System-wide CDM Capabilities
- Enhanced Playback Capabilities
- Robust Back-up Strategy
- Integrated Human Factors Strategy
- Enhanced Performance Metrics (Data Capture)

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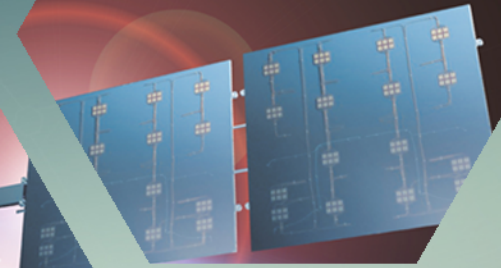
# Performance Based Navigation



# Building PBN on a Solid Foundation

- International guidance for standardization and harmonization
- State regulation that enables safe and efficient operations
- Consultative infrastructure development
- Windsor-Toronto-Montreal Project
- Airport infrastructure changes (YYC)
- Global Navigation Satellite Systems priorities and policies





## Satellite-based ADS-B



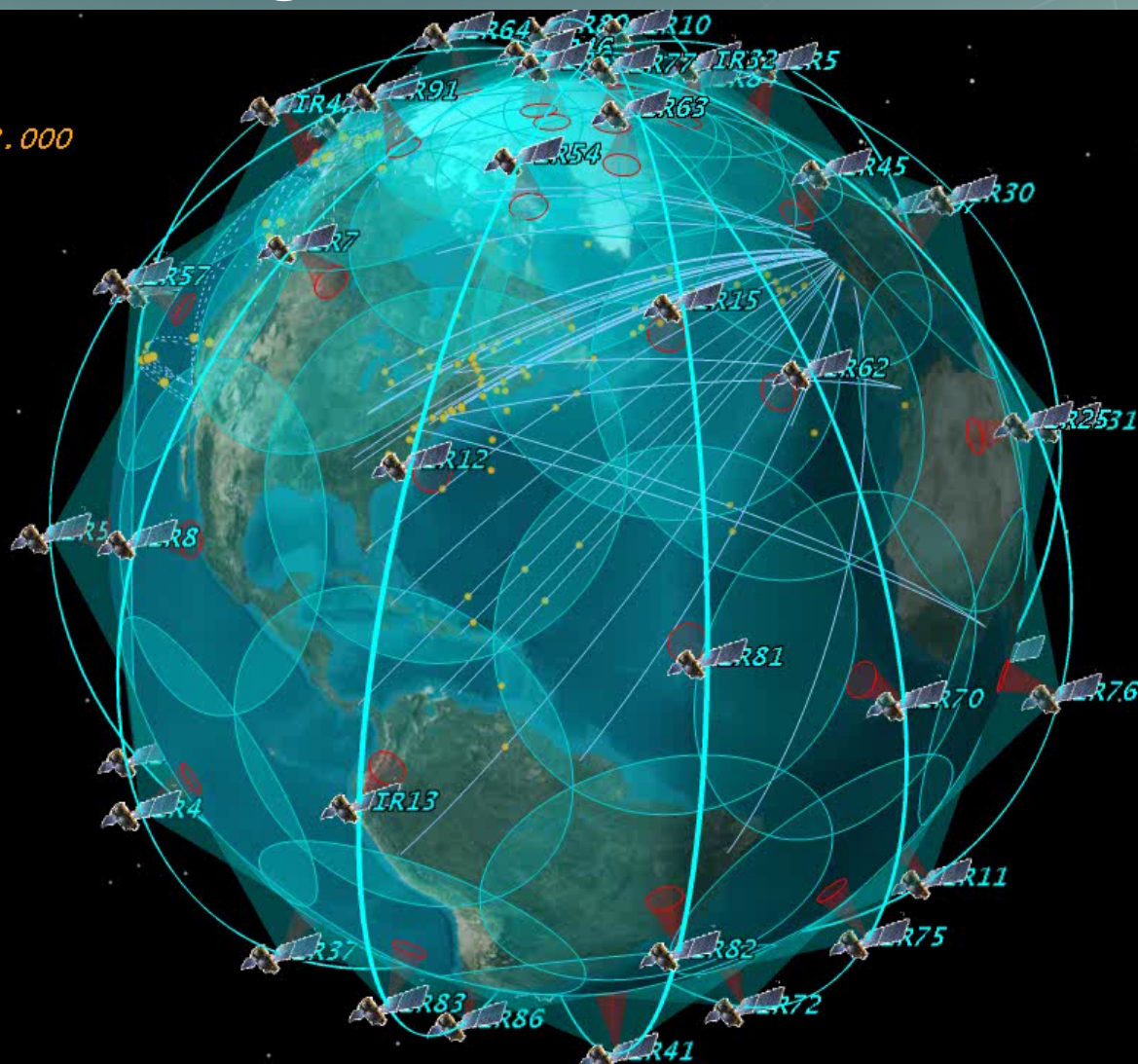


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# Global Coverage with Satellite-based ADS-B

21 Jul 2011 20:36:02.000



Earth Inertial Axes

## At Aireon, work Progressing Well

- Manufacturing of ADS-B hosted payload well underway.
- ADS-B receiver has successfully completed qualification testing for operation in the harsh environment of space.
- Launches beginning 2015
- CONOPS





From here ...



## Different Sets of Solutions

Air Traffic Management



Navigation



Surveillance



Communications





# Working Together

**Air Traffic  
Management**



**Navigation**



**Surveillance**



**Communications**



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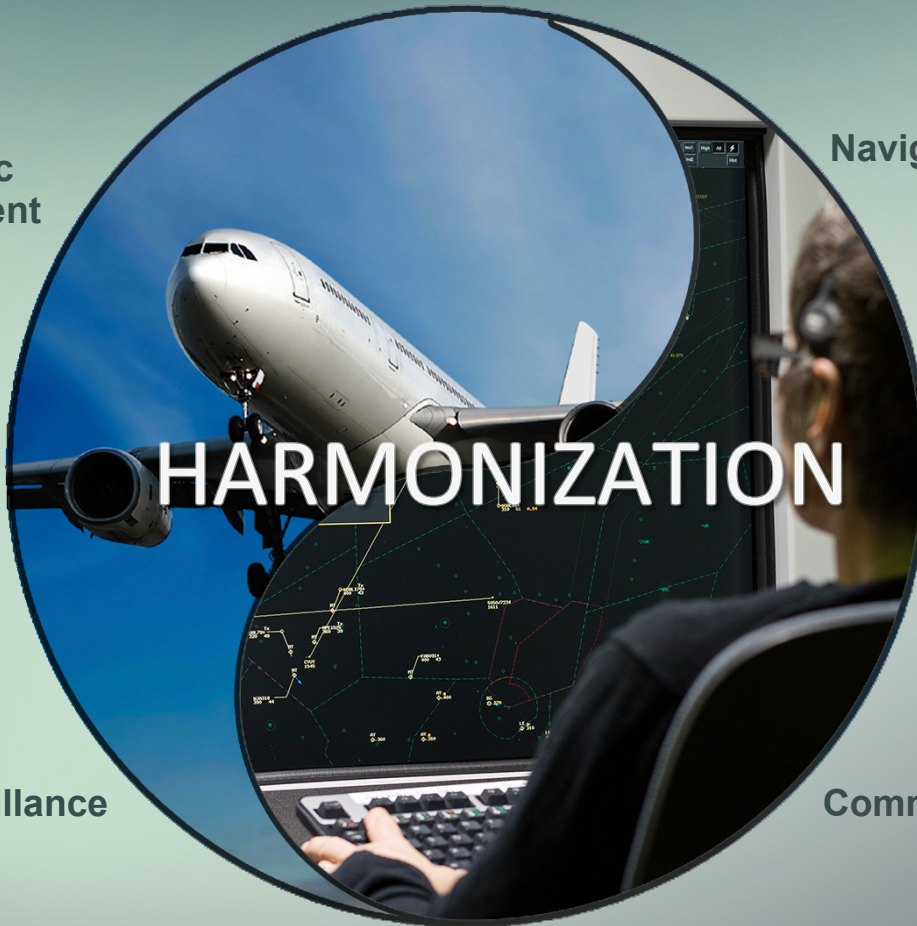
Air Traffic  
Management

Navigation

# HARMONIZATION

Surveillance

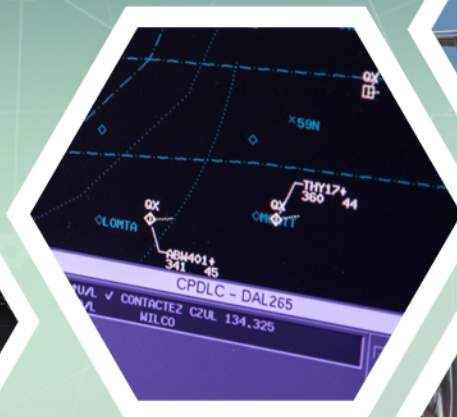
Communications





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## Thank you