Innovating for the future now How do RPAS affect the aviation system as a whole?





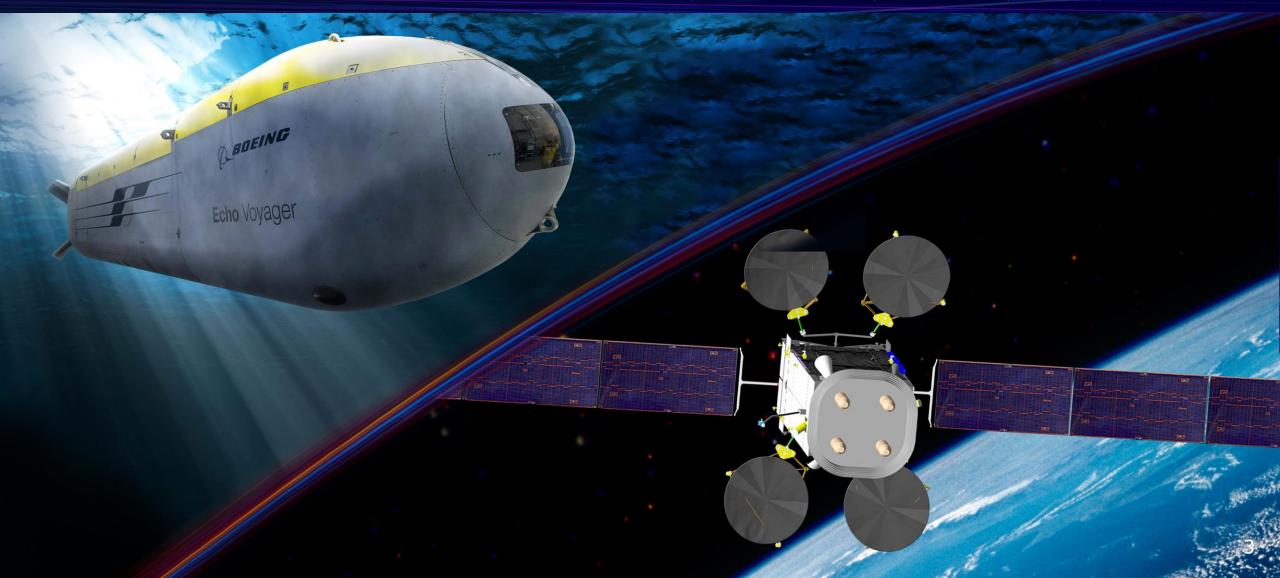
Larry Ley

Portfolio Manager Integrated Airspace & Operational Efficiency Programs Boeing Research & Technology ICAO Headquarters, Montreal, Canada 21 September, 2017

Increased presence of autonomy



Seabed to space capabilities



How autonomous are airplanes of today?

- **Current Capabilities:**
- Auto flight
- Auto land
- Thrust management
- Navigation
- Systems management
- Airplane health monitoring and reporting

Technology challenges

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Ground Operations

- Push back and engine start
- Taxi
- Take off roll

Flight Operations

- Sense and avoid
- Flight path optimization
- Contingency planning

Infrastructure and Environment

- Integration into airspace
- Cooperative trajectory management
- Conflict management
 Airplane health management

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- Propulsion Advancements
- Advanced Materials
- Efficient Flight Operations

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Freighter of the future



