



R E L I A B L E · C R I T I C A L · L I F E L I N E S

# Iridium<sup>®</sup> Aviation Philosophy

To enhance aviation operations and safety through reliable communications.

What Connectivity?

Data, voice, CPDLC, ATS Safety Voice, black box streamlining, etc

How to achieve?

Low profile antenna, lower cost system, low cost service, global coverage, etc.



### **Unique Network - Unparalleled Capabilities**

- 66 cross-linked, low earth orbit (LEO) satellites
- Only *fully global* voice and data provider
- Messages are routed from satellite to satellite and grounded at teleports around the world
- Aircraft connectivity is seamless
- Added redundancy and exceptional network availability

#### Iridium constellation with 100% global service area



- 6 orbital planes of 11 satellites each
- North bound on one side of earth and south bound on other
- 780 km altitude, 86.4° inclination, 100 minute orbital period

### Service Continuity & Network Longevity

- Committed to supporting aviation customers and all services
- Deploying a second generation satellite constellation - IRIDIUM CERTUS<sup>SM</sup>
- Extends constellation service life beyond 2030
- Backward compatibility



# Iridium Subscriber Growth

### **Iridium Aviation Subscribers**



## Iridium Safety Services (FANS 1/A) Adoption

- The adoption of Iridium continues to gain momentum
- FOI flights increased more than 25% in 2014
- The number of aircraft using Iridium for CPDLC increased more than 25% in 2014
- New OEM deliveries and service bulletins are accelerating Iridium equipage



Iridium AMS(R)S Equipped Aircraft



Data supplied by FAA

### Iridium ATS Safety Voice Service - (AMS(R)S Voice)

- Enhanced calling platform for ATC voice communications
- Compliant with ICAO SATCOM Voice guidance material and AC 20-150B
- Unique ATS SIM cards required
- Iridium ATS service has been in production since August 2013
- Iridium ATS Operator Guide available for partners since August 2013 and updated regularly



## Iridium ATS Safety Voice Service Details

- Caller Authentication
- Call Priority
  - -Dynamic priority dialing for any call
- Call Preemption
  - -Ruthless preemption of lower priority calls
- Caller ID
  - -Identification for all AtG and GtA calls
- Call Camp Feature
  - one call held until line open



## Iridium ATS Safety Voice Service Adoption

#### Service Status:

- Currently 170+ Iridium ATS service subscribers
  - 14 aircraft operators
- Six ANSPs (supporting 18 FIRs) are actively supporting the service and more are looking to add support for the service
  - United States (FAA)
  - Canada (NAV CANADA)
  - Ireland (IAA)
  - Iceland (Isavia)
  - New Zealand (ANCZ)
  - United Kingdom (NATS)

#### **Operational Evaluation:**

- ARINC has begun collecting ATS call performance metrics to report to the FAA PARC CWG
- ATS Tiger Team lead by Tony Rios from Avionica



### Iridium ATS Safety Voice Service - Management

ARINC and SITA are primary service providers for Iridium ATS.

### Iridium manages:

- Setup of FIRs
- Setup of airlines in SPNET
- User ID and PIN setup
- Set of short codes as needed for operators

Email Group: <u>ATSAdmin@iridium.com</u> Response time within 24hrs.



## IRIDIUM CERTUS<sup>SM</sup> UPDATE

# Iridium Certus

### Comprehensive ~\$3 billion plan that supports our success for many years

- Fully replaces the current constellation of 66 LEO satellite
- Modernized ground earth stations with new features and capabilities
- Will include 6 in-orbit spares and 9 ground spares
- Scheduled deployment between Q2 2015 and end of 2017
- Seven launches using SpaceX Falcon 9 Heavy rockets and Dnepr launches
- Significant advantages
  - Significantly increased network capacity
  - Much greater data speed capabilities
- Fully backward compatible



Note: The Company estimates the aggregate costs associated with the design, build and launch of Iridium NEXT and related infrastructure upgrades through 2017 to be approximately \$3 billion. Our business plan includes utilizing the substantial majority of our COFACE financing agreement, cash on hand, and internally generated cash flows, including potential revenue from our Aireon hosted payload and Iridium PRIME. The remaining portion of the COFACE facility will be utilized for capitalized interest and COFACE insurance premiums.