Faster cockpit connectivity will transform the horizons of economy and profitability for airlines. Exchanging detailed real-time information between aircraft and the ground unlocks new levels of intelligence to drive decision-making and optimise fleet performance.

The aviation industry is increasingly data-oriented and information-hungry. Always-on broadband for the flight deck evolves the role of satellite communications from a safety utility to a key source of strategic value. Airlines with eyes on the big picture are seeking innovative ways to achieve efficiency gains and dynamically manage their fleets.

**AGILE MANAGEMENT OF FLIGHT ROUTES**

Better positional awareness and IP-based pilot communications allow aircraft to take more direct routes over oceans, removing the need to fly further to stay within radio range of land-based navigation and air traffic management services. In addition, cockpit broadband allows instantaneous updating of the flight crew’s flight routes and charts, meaning faster and more efficient resolutions if the plane needs to switch destination mid-flight.

**EMPOWERING PILOTS WITH REAL-TIME DATA**

Higher bandwidth allows pilots to access data-heavy information in real time, assisting better in-the-air decisions and fuel savings. Take the example of real-time graphical weather via an Electronic Flight Bag (EFB) – the pilot can see areas of bad weather or strong winds and make route adjustments to avoid these, burning less fuel and keeping passengers comfortable.

**SWIFTBROADBAND-SAFETY**

- Fly safer and more efficiently with high-speed surveillance and communications over IP
- Global flight tracking
- Optimise flights to reduce fuel burn, saving the environment from unnecessary emissions
- Call quality as clear as using a mobile phone or landline
- Ready to power next generation air traffic modernisation programmes: Iris, SESAR, and NextGen

**TRACKING INFIGHT AIRCRAFT PERFORMANCE LEADS TO SMARTER MAINTENANCE**

Reliable, seamless coverage enables constant communication between aircraft systems and the ground. Today’s aircraft can generate up to a half terabyte of data per flight, an unprecedented volume and variety of data seen in few other industries. Transmission of airframe and engine data brings crucial insight to predictive maintenance processes, as performance can be shared straight away with the ADC and engineering teams. Faults can be detected inflight and interrogated remotely, minimising turnaround time when the plane lands.
ALWAYS ON, ALWAYS SECURE BROADBAND FOR THE FLIGHT DECK

SwiftBroadband-Safety (SB-S) is Inmarsat’s next generation platform offering global, high-speed, secure, IP connectivity for the cockpit. SB-S will enable everything from safer operations and better communications to improved fuel efficiency and optimised fleet performance. With its added capacity SB-S also means a lower cost per bit of data, all delivered through smaller and lighter avionics.

HIGH-SPEED CONNECTIVITY DRIVES NEW STANDARDS OF SAFETY

Air Traffic Services communications and surveillance applications are faster, stronger, and more reliable on SB-S. This helps ensure that safety-critical information is secure and available on-demand for the pilot, the airline, and air traffic control. Air traffic controllers can allow more aircraft to fly on the same routes concurrently, helping keep pace with global passenger demand and driving revenue.

BETTER INFORMATION WHEN IT’S NEEDED

SB-S brings global flight tracking for near real-time reporting of aircraft latitude, longitude, true heading, and groundspeed. Paired with rapid notification of distress conditions to airlines and rescue coordination authorities, a significantly larger amount of information is available in an emergency. Higher throughput will also allow implementation of the ‘black box in the cloud,’ as SB-S can be used to stream Flight Data Recorder and Cockpit Voice Recorder information off the aircraft in real time.

THE HIGHEST LEVELS OF SECURITY

Only Inmarsat can prioritise broadband data to the cockpit, providing segregation between regulated safety services and cabin communications, creating a virtual ‘fortress door’. While offering a robust level of encryption and security, it also maximises the integrity and availability of safety data.

FROM THE WORLD’S MOST TRUSTED CONNECTIVITY PARTNER

As a technology leader, we have been at the forefront of aviation connectivity for over 25 years. Our services are on board over 11,000 aircraft flying today, giving us a deep understanding of airlines’ requirements and making us the prime authority on cockpit communications. We use our unique expertise to advise regulators on future applications of satellite communications that will drive global standards forward.

INTELLIGENT HANDLING OF ESSENTIAL DATA AND COMMUNICATIONS

SwiftBroadband-Safety provides three types of connections:

- **Aircraft Communications Addressing and Reporting System (ACARS)** – Automatic Dependent Surveillance - Contract (ADS-C) global flight tracking and Controller Pilot Data Link Communications (CPDLC) applications
- **IP channel** – voice and data communication channel for use of Airline Administrative Control (AAC) and AOC applications
- **Prioritised IP channel** – a connection that provides additional availability and assurance on IP data throughput for voice and data Air Traffic Safety (ATS) and Airline Operations Centre (AOC) applications.

WORLDWIDE COVERAGE WITH SWIFTBROADBAND-SAFETY

This map depicts Inmarsat’s expectations of coverage, but does not represent a guarantee of service. The availability of service at the edge of coverage areas fluctuates depending on various conditions.

AVAILABLE FROM OUR TRUSTED PARTNERS

Inmarsat operations solutions terminals are available as line and retrofit options with major aircraft manufacturers. Our global network of distribution partners offers tailored service plans to meet varied bandwidth demands, as well as advanced cockpit applications and value-added services to help optimise benefit from your investment. SwiftBroadband-Safety is available for initial retrofit installation on existing aircraft today and is scheduled to become a standard option on new aircraft deliveries from 2018.

FOR FURTHER INFORMATION ABOUT SAFETY AND OPERATIONS SERVICES PLEASE CONTACT:

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For contact details of avionics manufacturers and service providers, see the ‘Partner search’ section at Inmarsat.com/aviation