

# Viasat + Inmarsat Update

## Informal Pacific ATS Coordinating Group

26 September 2023

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# Introduction

- > Inmarsat was acquired by Viasat on 30th May 2023.
- > This brings together spectrum, satellite, and terrestrial assets, including 19 satellites in space spanning Ku-, Ka-, L- and S- bands.
- > Our combined global satellite constellation offers a high-capacity network to deliver a consistent, reliable connectivity experience from cockpit to cabin, which includes: passenger experience, safety services and operations for commercial and business aviation, and advanced air mobility.
- > Our operating model for aviation safety services remains unchanged, i.e., provided through our Distribution Partners: SITA, Collins, CTTIC.
- > Our satellite systems are widely deployed on Commercial Air Transport, Business & General Aviation, government aircraft, e.g. more than 12,000 Classic Aero terminals operating on the world's wide-bodied fleet, providing FANS ACARS, CPDLC and ADS-C.
- > SwiftBroadband Safety (SB-S) is now linefit on major airframes and represents the foundation supporting air traffic growth.

# I-6 Satellite Capabilities

- Dual payload ELERA (L-band) and GX (Ka-band)
- Supports standard and extended L-band
  - 1518-1559 MHz
  - 1626.5-1660.5 MHz and 1668-1675 MHz
- End-to-end security, wholly redundant
- Dynamic beam forming to match demand on a second-by-second basis
- Backwards-compatible with existing ELERA and Global Xpress (GX) terminals



**70%**  
more power

**50%**  
more capacity  
per beam

**99.95%**  
availability

# I6 Status and Fleet Rearrangement

## I-6 F1

- I-6 F1 launched in December 2021
- In orbit 36,000km (22,000 miles) over the Indian Ocean
- L-band service transition completed
  - BGAN services transition from I-4 F2 Jul-Aug 2023
  - Classic Aero services transition from I-4 F2 19 Sep 2023

## I-4 F2

- All services moved from I-4 F2 to I6 F1 19 Sep 2023
- I4 F2 to move to APAC in October with service initiation planned for December

## I-6 F2

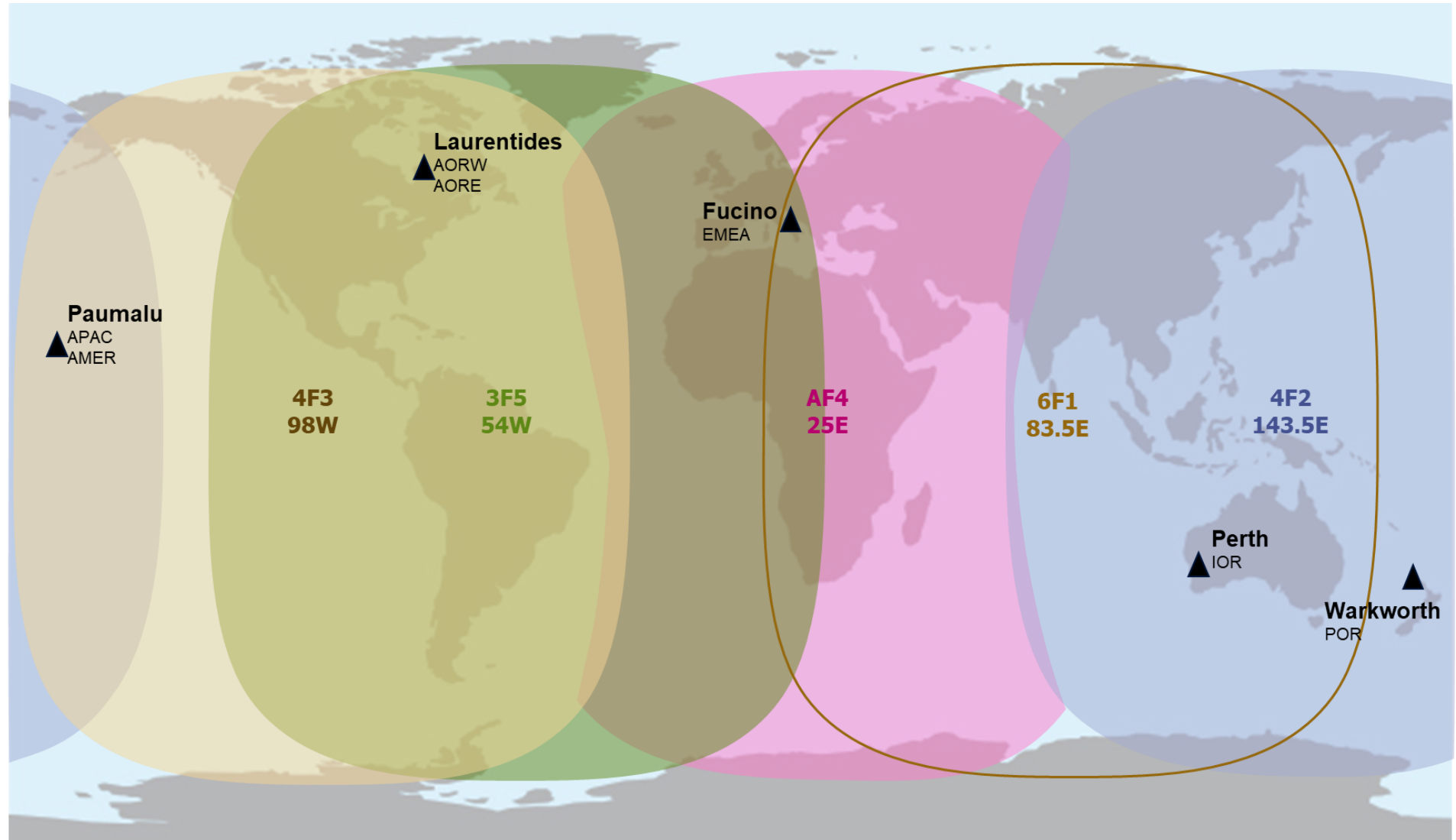
- Issue encountered during orbit-raising phase being investigated





# Coverage after 4F2 Move

- Targeted Dec 2023
- Subject to change
- Coverage map for illustration purposes only.



# Network and System Updates

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## > Satellite network:

- SWISSto12 selected to develop three I-8 satellites for launch in 2026
  - Provides crucial safety services and added network resilience
  - Service life extension beyond 2040

## > System upgrades:

- Expanding Classic Aero and SB-S data logging, and performance assessment support tools available to DPs
- Improvements implemented in the Classic Aero GES gateways to limit Classic Aero uplink transmission delays
- Continuing to enhance Classic Aero and SB-S cyber protection tools

# Iris

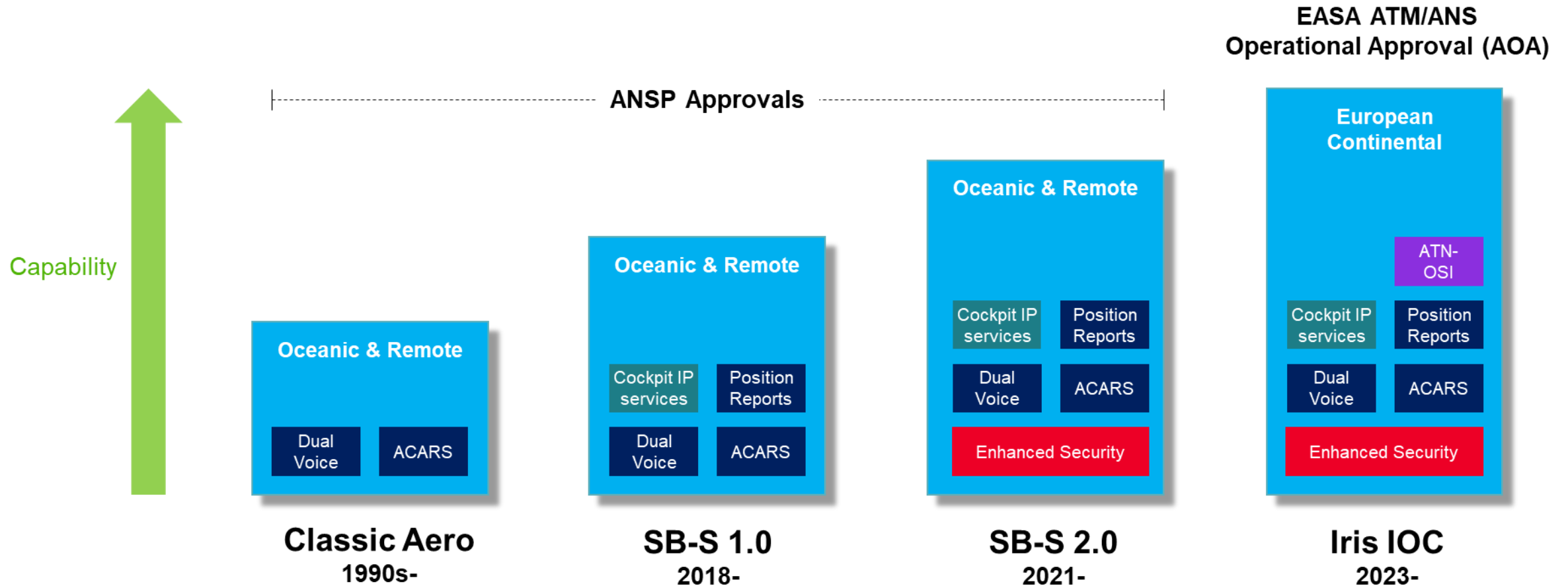
Satellite Data Link for ATM in continental areas



# What is Iris?

- > Iris is the next evolution of Inmarsat aeronautical safety services delivering voice and data services into the cockpit for use by pilots and flight crew
- > Highly reliable satellite complement to VDL Mode 2, with significantly higher data capacity
- > Capacity for global operations / compliant with global standards supporting both ATN/ OSI and ATN/IPS
- > ATN OSI service available across Europe and other global geography as soon as it is operational (Q3 2023), ATN IPS service planned 2027
- > Enabler for Trajectory Based Operations (i4D/Full 4D) and more data hungry ATS services
- > All datalink and voice services in one airborne terminal (FANS/ATN/AOC/IP)
- > **Iris Global** (Phase 3) ESA project launched in June 2022
  - International development & demonstrations for Iris-based services provide opportunity for key Aviation/ATM stakeholders to benefit from funding for Iris demonstrations
  - Opportunity to be a pioneer/early adopter of IRIS in the region
  - Future-proof for global ATC and AOC services, as part of fleet renewal

# Iris Evolution from SB-S



# Iris Growing User Base

7

European airlines



72

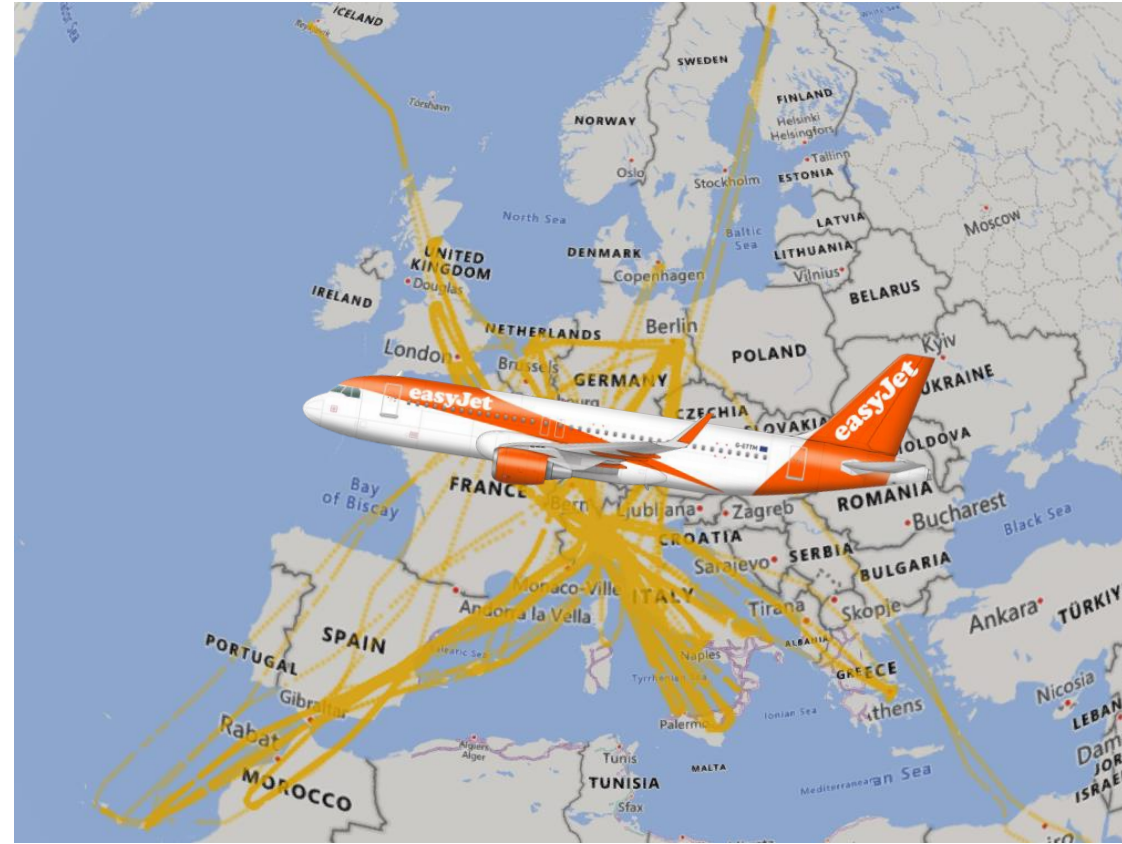
72 deliveries for  
2023-2024

~220

orders booked for  
2023-2028

# Iris Status

- Two Iris projects currently running, at Viasat, **Iris IOC** and **Iris Global**, both funded through ESA programmes – and supporting development of the same Iris service with global capability
- **Viasat + Inmarsat has:**
  - Completed the Iris network and infrastructure implementation and testing/validation
  - Completed all required audits with EASA and ESSP, with the AOA approval now received from EASA
- We plan to **start providing the Iris service to 5 EasyJet aircraft from mid-October**, ramping up to 6 EasyJet aircraft by the end of 2023 and 11 by end of March 2024, with other airlines planned to join during the coming year



# Questions?

