

ATM Evolution Introduction

ESTEC 18/05/2018
Antonio Garutti

ESA UNCLASSIFIED - For Official Use



Satellite Communications for the innovation of the European Air Traffic Management System

A great opportunity for the **European Space industry** to contribute to the future of aviation safety with EC, SESAR, EASA



The Iris Programme

Air traffic management is under pressure

+50%



Expected increase in the number of flights in European skies over the next 20 years



1.5B

Approximate number of passengers that will pass through Europe's more than 440 airports in 2035



+42km

Average distance aircraft fly longer than necessary in Europe due to fragmentation of airspace

How it works . . .



Controller-pilot communications will increasingly become digital, improving accuracy



Delivering unprecedented security, utilising VPN and security gateways



IP broadband allows more information to be uploaded to the aircraft (e.g. live weather maps)

Who benefits from Iris?



Airlines access data that enable improved operations and fuel savings



Enabling more environmentally friendly air transport



Air navigation service providers can rely on a certified, efficient and sustainable datalink to increase ATM efficiency



Iris is our Programme in support to the European Commission's initiative

Single European Sky (SES)

- **The Digitalization of the Sky, the pillar of the future ATM and beyond**
- **Iris, a cost-efficient component of the European and global systems offering advanced data communication**
- **Satellite services , can be the answer to the growing need of real-time services based on a more efficient and faster sharing of data**
- **Not only airplanes: potentially hundreds of thousands of highly connected and automated (air) vehicles (e.g. HAPS, UAV, Drones)**

Thank YOU

antonio.garutti@esa.int