Common European 4D
Air Traffic Management (ATM) System

iTEC collaboration **founding members**

Operating from four area control centres throughout Germany, DFS has already seen the benefits of the iTEC system and continues to contribute to the collaboration.

Spain's leader with a global vision in the provision of air navigation services from five area control centres and 22 control towers. It manages 2 million flights every year within a large airspace of more than 2 million km2.

Handling 2.3m flights in FY 2015/16 covering the UK and eastern North Atlantic, NATS provides air traffic control from two centres including Prestwick, with the largest area of responsibility in Europe and Swanwick, responsible for London Terminal Control, some of the busiest airspace in the world.

Together the iTEC collaboration founding members account for the highest traffic levels and largest areas of responsibility in Europe.

iTEC collaboration **Joining members**

Avinor is responsible for the 46 state-owned airports and air navigation services for civilian and military aviation in Norway. This network links Norway together - and links Norway to the world. Avinor is a driving force in environmental work in aviation and a driving force to reduce the combined greenhouse gas emissions from Norwegian aviation. The company has a leading role in the work on developing and delivering biofuel for aircraft. Every year Avinor contributes to safe and efficient travel for around 50 million airline passengers. Around half travel to and from Oslo Airport.

ORO NAVIGACIJA provides air navigation services in Lithuanian airspace and in airspace over the part of Baltic Sea offering its users air traffic management services, communication, navigation and surveillance services as well as an aeronautical information services. It operates one combined En-route/TMA control centre at Vilnius, 3 TMA control centres at Lithuania's international airports, each year providing safe and efficient air traffic control services to almost 230 thousands movements. It continues to maintain 0 min/flight delays level and to meet users expectations while flexibly and in cost effective way accommodating increase of the traffic up to 10%. ORO NAVIGACIJA as independent 100% State owned enterprise was founded in 1995.

iTEC collaboration **Joining members**

The 6th largest airspace in Europe, operating around 700.000 IFR flight movements per year, 15 airport control towers, 4 approach centres and 1 area control centre, structuring the Eastern out-of-area traffic.

Air Traffic Control the Netherlands (LVNL) provides air navigation services for Amsterdam Airport Schiphol, three regional airports and en-route. Each year our high professional Air Traffic Controllers handle more than 560,000 flights safely and efficiently.

iTEC in **figures**

iTEC will manage the air space under responsibility of 7 ANSPs

Over 7 million flights a year

18 control centres

It will support flights in some of the most complex airspace in Europe: UK, Germany, Spain, the Netherlands, Norway, Lithuania and Poland
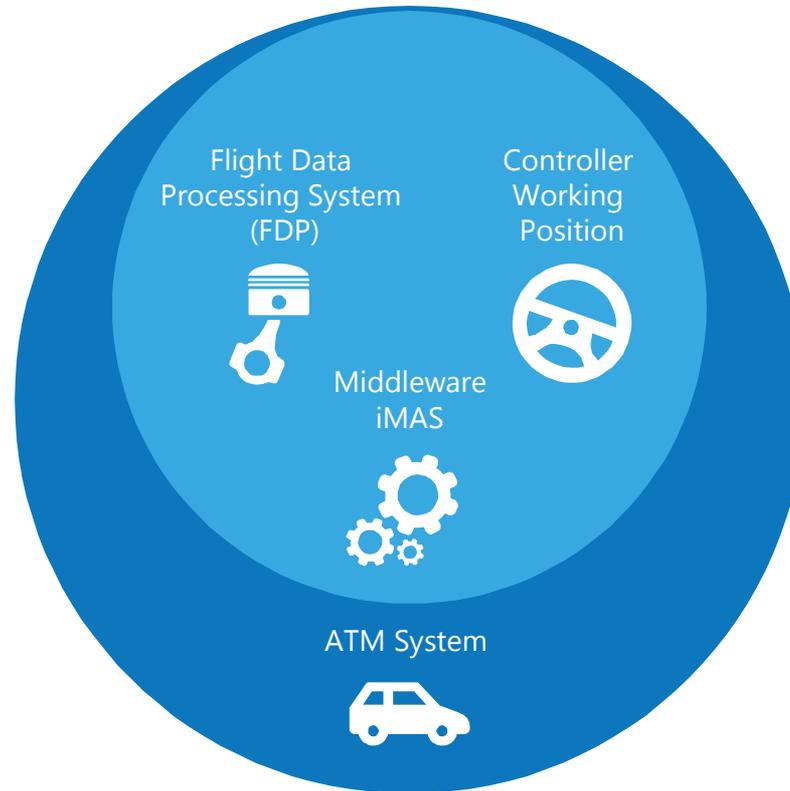
Operational Savings
Less fuel consumption
CO2 emissions reduction
Direct routes
Cost savings for airlines
Increase of air space capacity

New generation ATM system features
4D trajectory flight system
Improved conflict detection tools
Trajectory conformance monitoring
SWIM

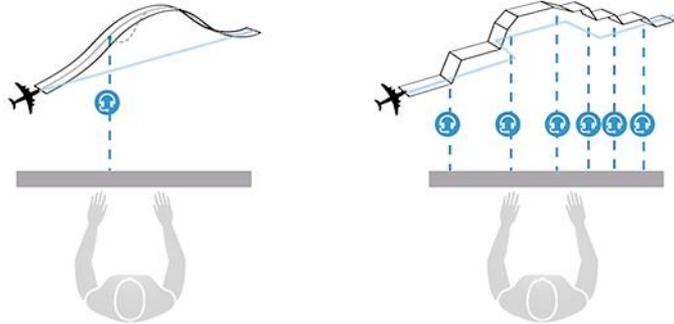iTEC

iTEC ATM system **parts**

iTEC – Benefits from **joining** the project

iTEC IS IN THE RIGHT PATH
READY TO ENTER INTO OPERATION

Risks shared by partners	Cost development reduce	Speed-up development
	Sharing of best practices	User-centered design

iTEC ATM **benefits**

- Increase in capacity by minimising routine tasks while increasing safety and productivity

- Interoperability between ATM systems using SESAR data interfaces

- Trajectory-based operations reduce flight diversions, flight time, fuel consumption and CO_2 emissions

iTEC **Vision**

Our joint ambition is to deliver improved operational performance and increased cost efficiency through the introduction of:
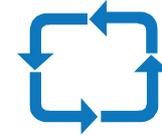
A common concept of operations based on SESAR, including 4D-trajectory management.

**A common airspace architecture** aligned with FABs and based on common airspace types.

A common system architecture that features improved interoperability via Flight Objects and SWIM.

A common ATS system with interchangeable ATS Components supported by open standards.

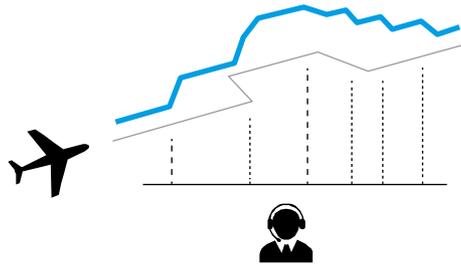Collaboration is key to generate service alignment and cost efficiencies

iTEC

ATC – past, present, future

NOT TRAJECTORY BASED
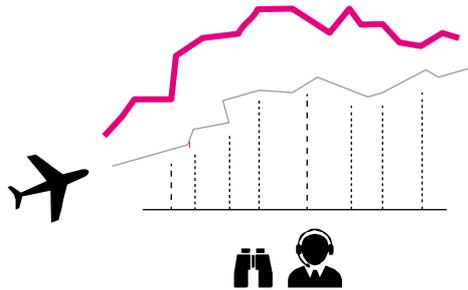
TRAJECTORY BASED

Past

ATC based on where we THOUGHT the aircraft was
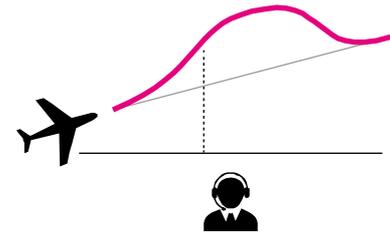
Present

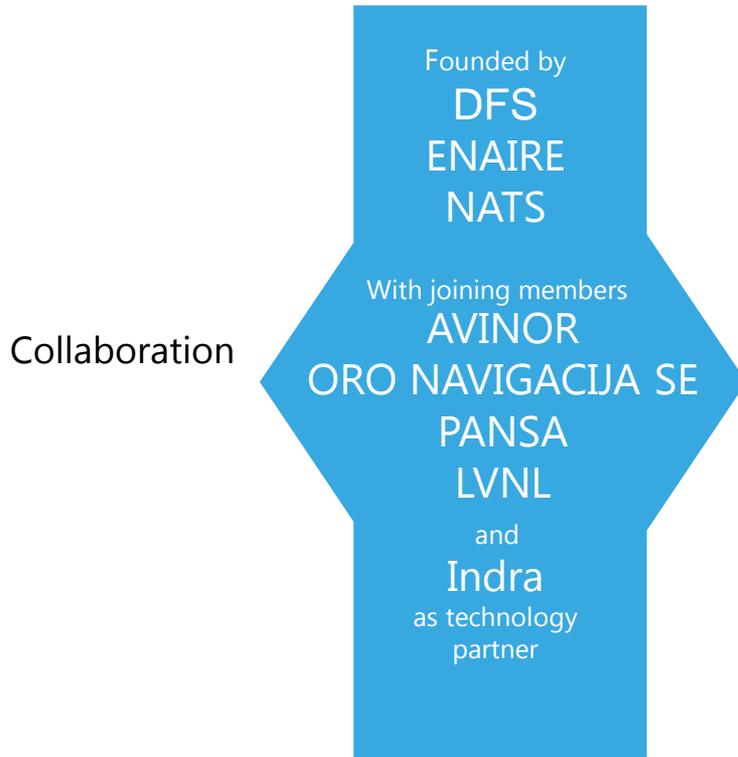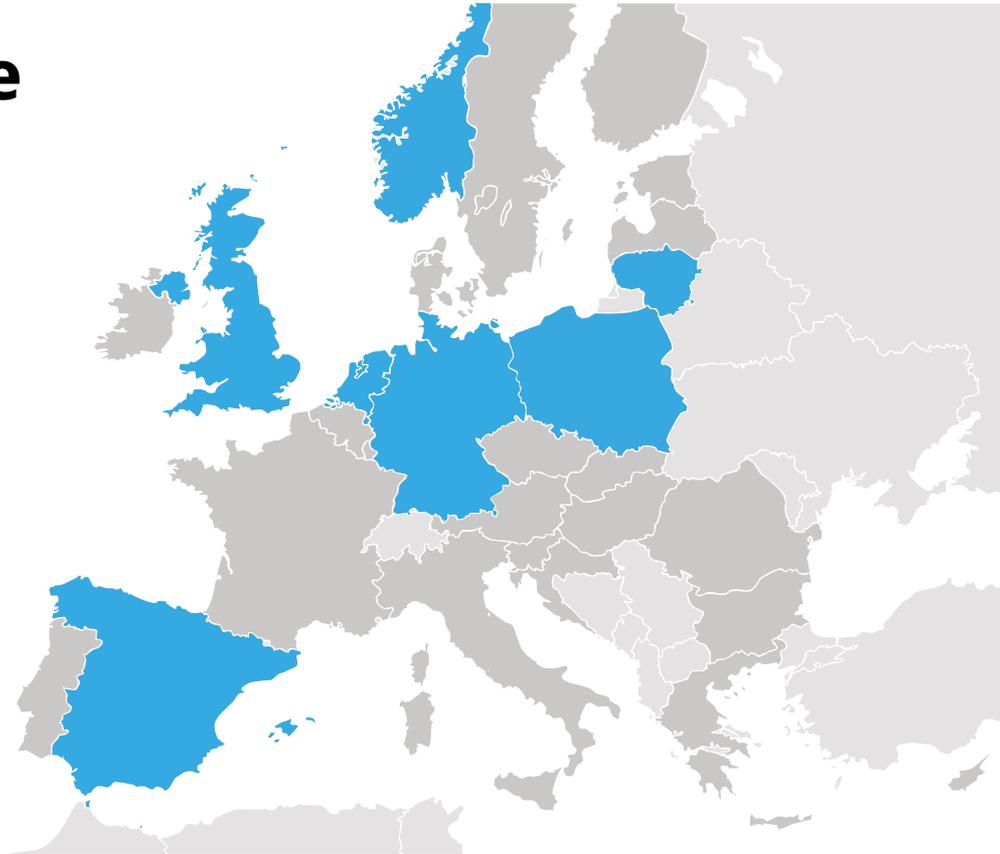ATC based on where we KNOW the aircraft is, with limited prediction

Future

ATC based on where we KNOW the aircraft will be along its entire trajectory

iTEC

iTEC – interoperability Through European Collaboration

Collaboration

Founded by
DFS
ENAIRE
NATS

With joining members
AVINOR
ORO NAVIGACIJA SE
PANSA
LVNL
and
Indra
as technology partner

New generation
common ATM system to improve air traffic management

Supports and enables the
Single European Sky
through harmonisation of the ATM System

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iTEC in **Europe**