

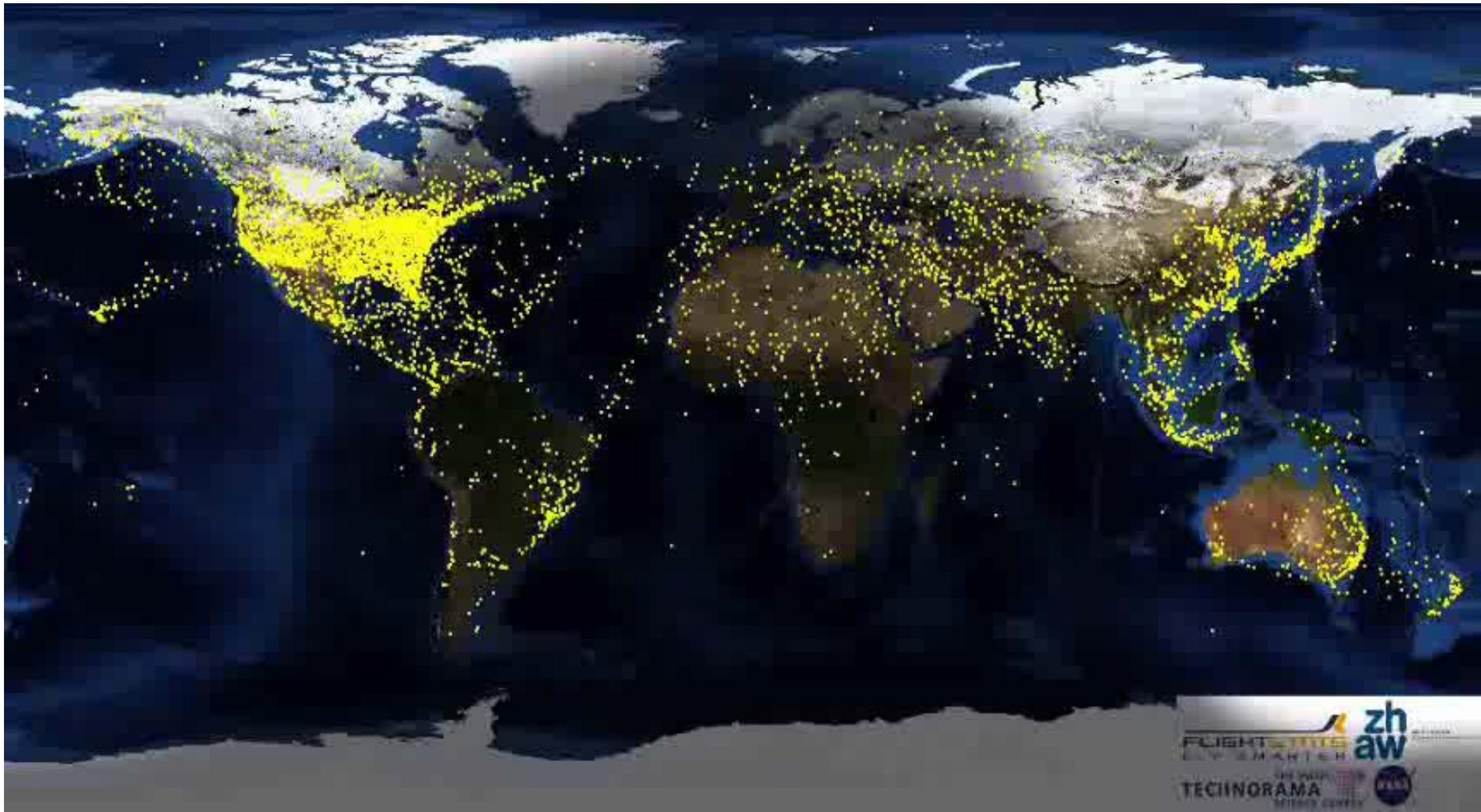


EUROCONTROL

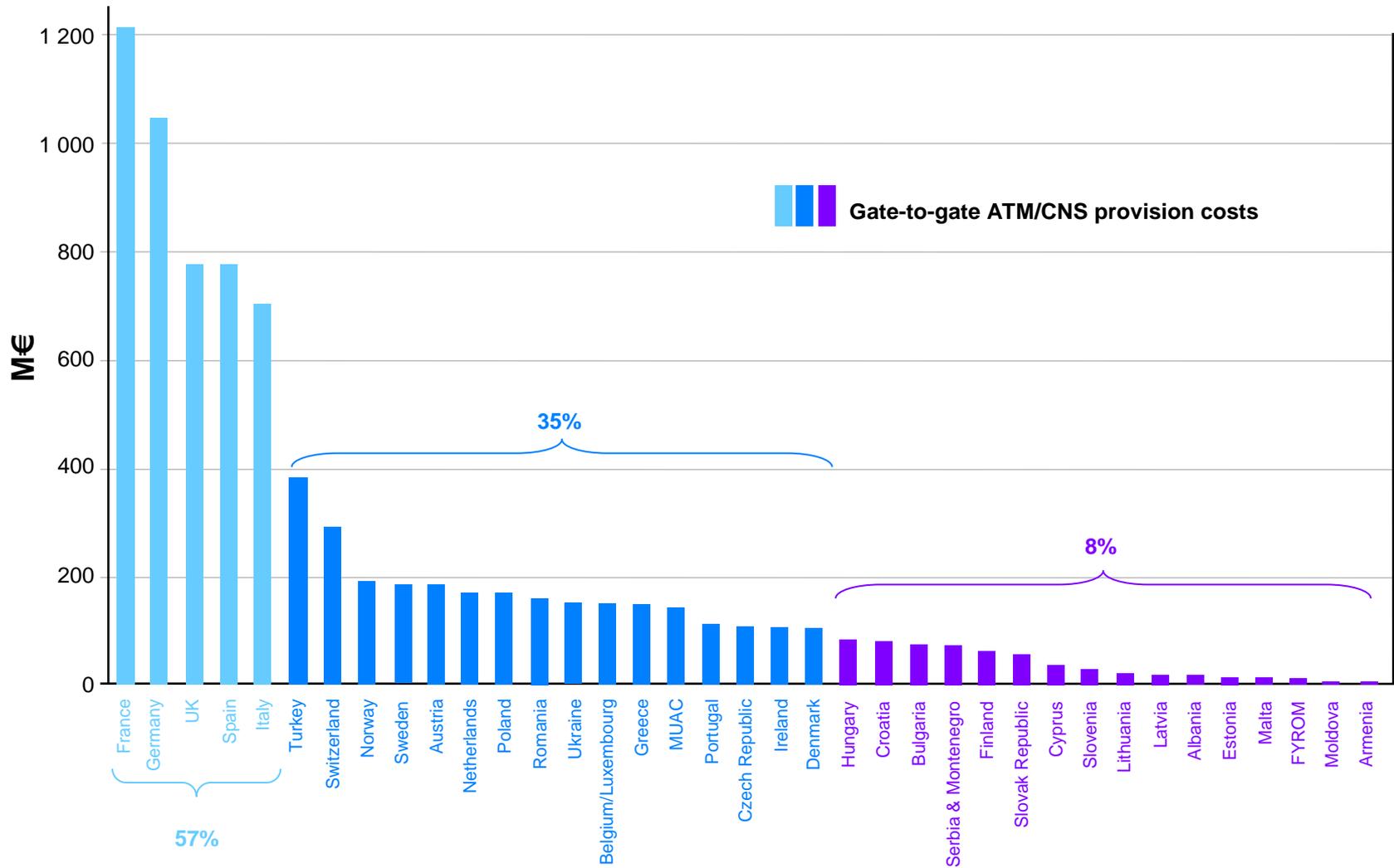
General Presentation

Eamonn Brennan
Director General EUROCONTROL

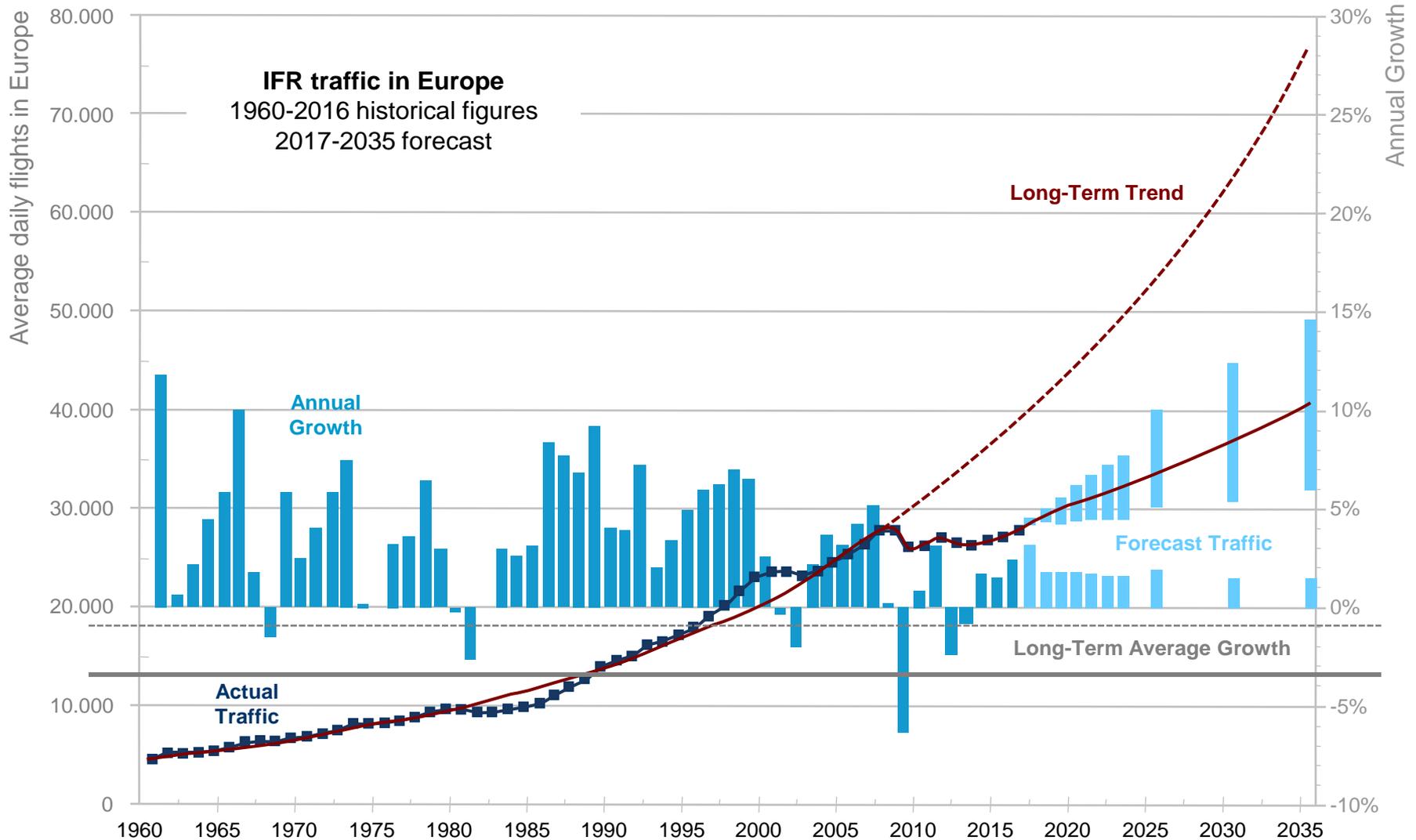
One day's traffic



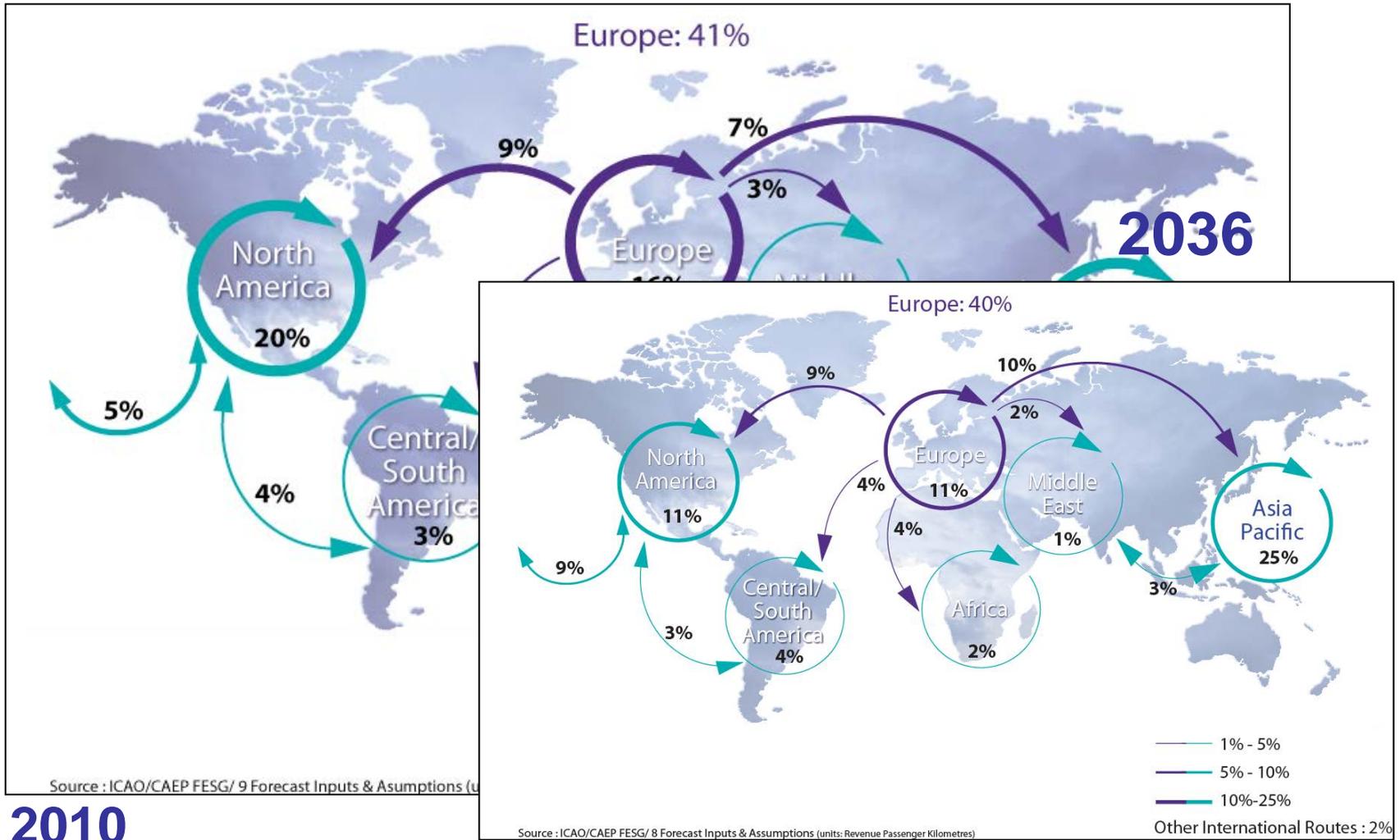
Concentration of costs



Traffic in Europe



Europe in World Traffic 2010/2036



SES II - 'Pillars'

1. Regulating Performance

- Performance Scheme
- Functional Airspace Blocks
- Network Manager

2. A Single Safety Framework

3. New Technologies

4. Managing Capacity on the Ground

Performance Scheme

- **Main feature**

- Key Performance Areas (KPA) and Indicators
 - On safety, the environment, capacity and cost-efficiency
- European targets
- National/FAB Performance Plans
- Periodic review, monitoring and benchmarking
- Performance Review Body to assist the EC

- **European and local targets set for three to five years**

- Reference Period 1: 2012-2014
- Reference Period 2: 2015-2019

KPIs for EU-wide targets in RP1

Key Performance Area	Key Performance Indicator for EU-wide target setting
Safety	No EU target in RP1 Safety ensured through EASA Monitoring of performance indicators
Environment	Horizontal en route flight-efficiency (% additional distance)
Capacity	En route ATFM delay (Minutes per flight)
Cost-efficiency	Unit price (Average determined en-route unit rate)

EU-wide performance targets for RP2

Key Performance Area	Key Performance Indicator for EU-wide target setting												
Safety	<ul style="list-style-type: none"> All NSAs and ANSPs to achieve EoSM levels C/D (respectively) by 2019 All NSAs and ANSPs to adopt the RAT methodology by 2019 												
Environment	By 2019, average horizontal en-route flight efficiency: Of last filed flight plan (KEP): 4.1% Of the actual trajectory (KEA): 2.6%												
Capacity	Annual average en-route ATFM delay (all causes) of 0.5 minutes per flight, to be reached for each year												
Cost-efficiency	Determined unit rate for en-route air navigation services (expressed in real terms €2009): <table border="1" data-bbox="799 1082 1657 1196"> <thead> <tr> <th>Year</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> </tr> </thead> <tbody> <tr> <td>Rate</td> <td>€56.64</td> <td>€54.95</td> <td>€52.98</td> <td>€51.00</td> <td>€49.10</td> </tr> </tbody> </table>	Year	2015	2016	2017	2018	2019	Rate	€56.64	€54.95	€52.98	€51.00	€49.10
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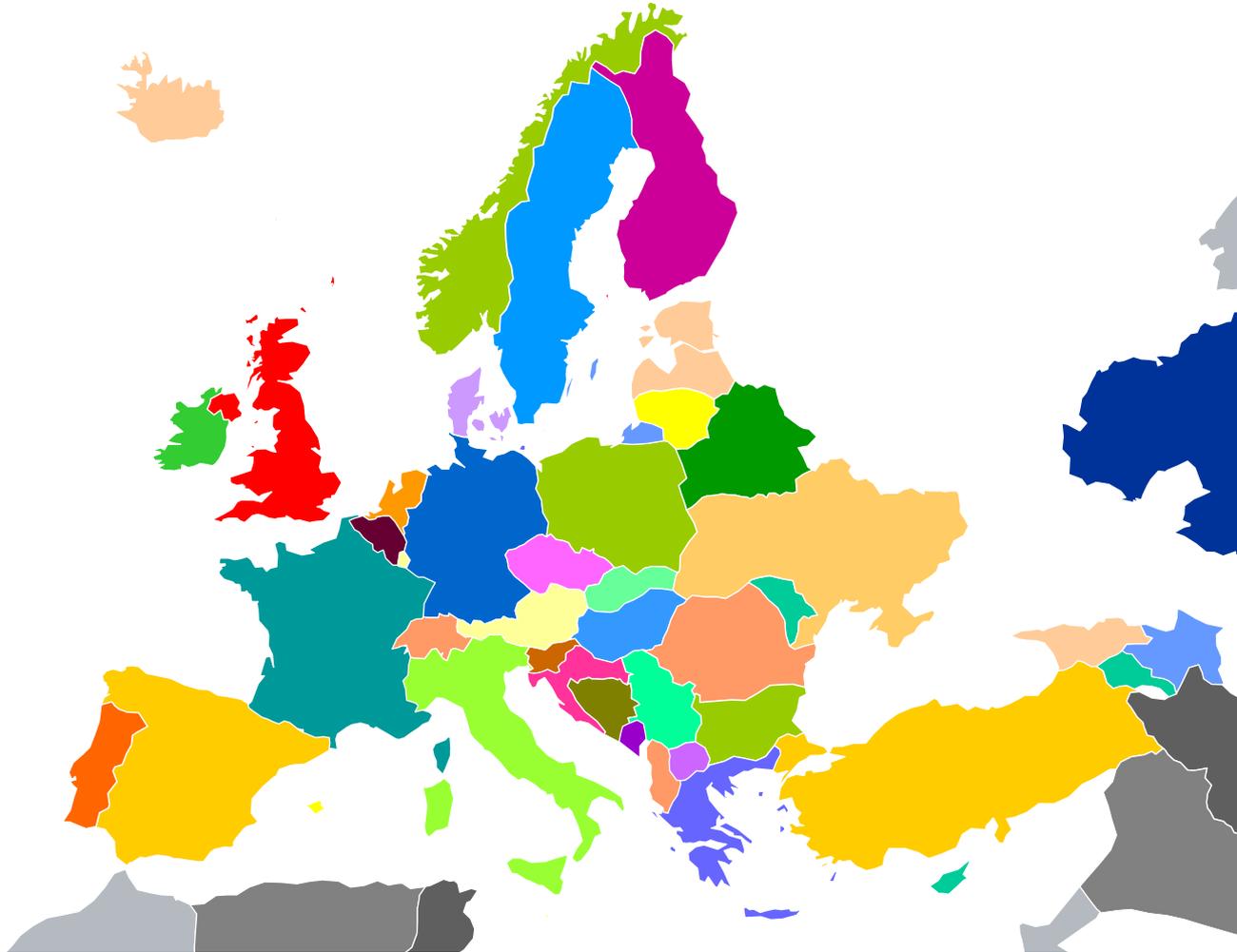
Performance Scheme

Functional Airspace
Blocks

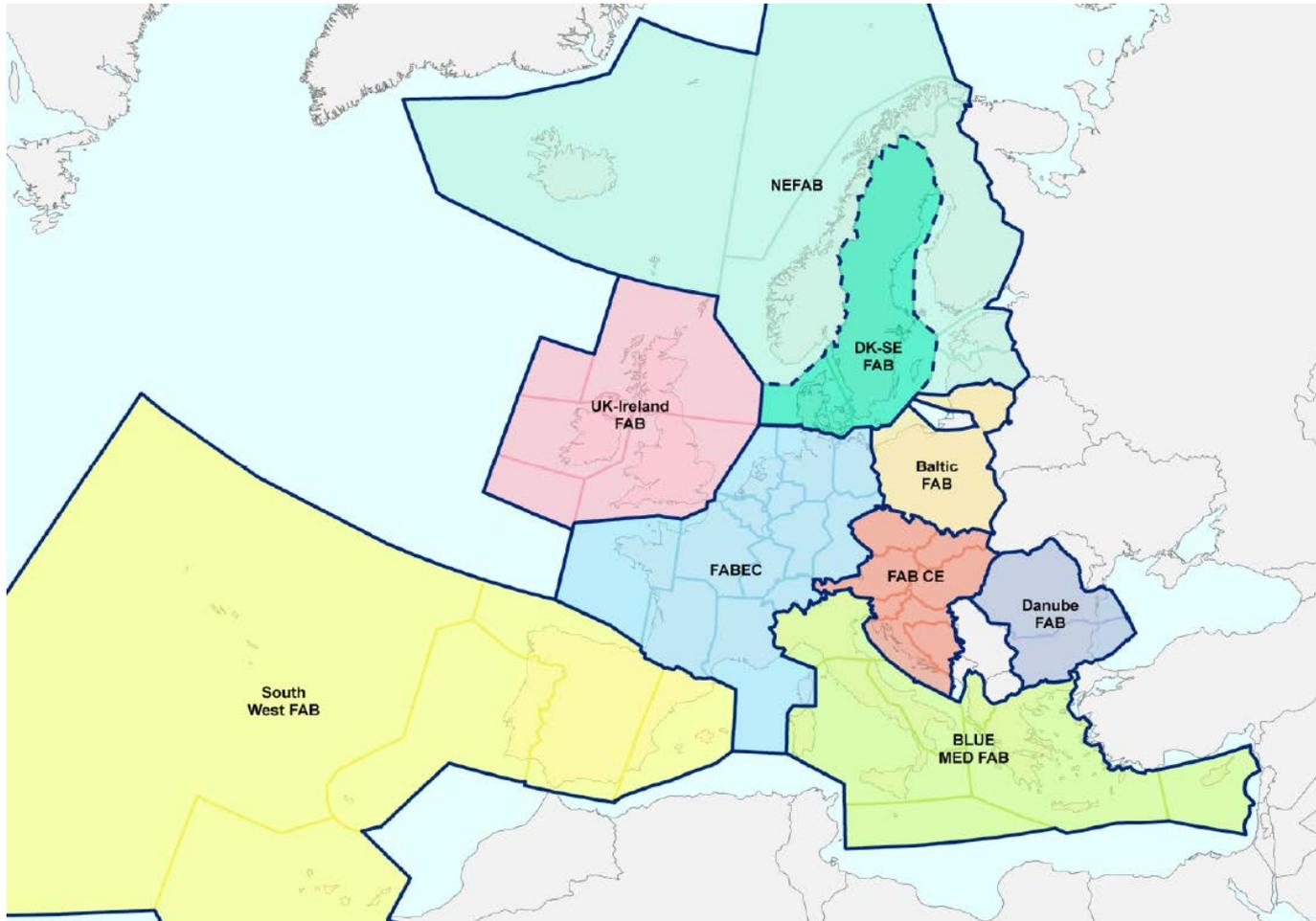
SESAR &
the SJU

Network
Manager

Fragmentation

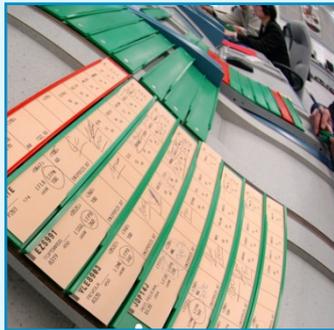


Defragmentation – FABs



SESAR Concept of Operations is a Paradigm Shift for ATC

Past



Procedural Control

the current and planned a/c positions

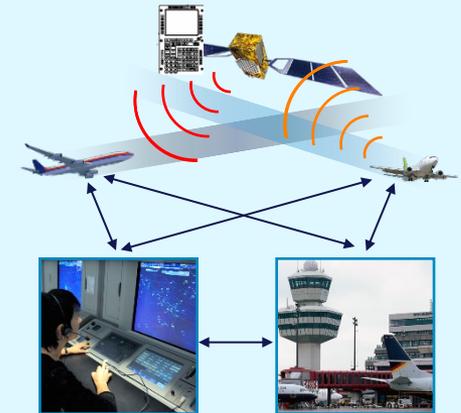
Today



Radar Control

Know the current and **estimate** planned a/c positions

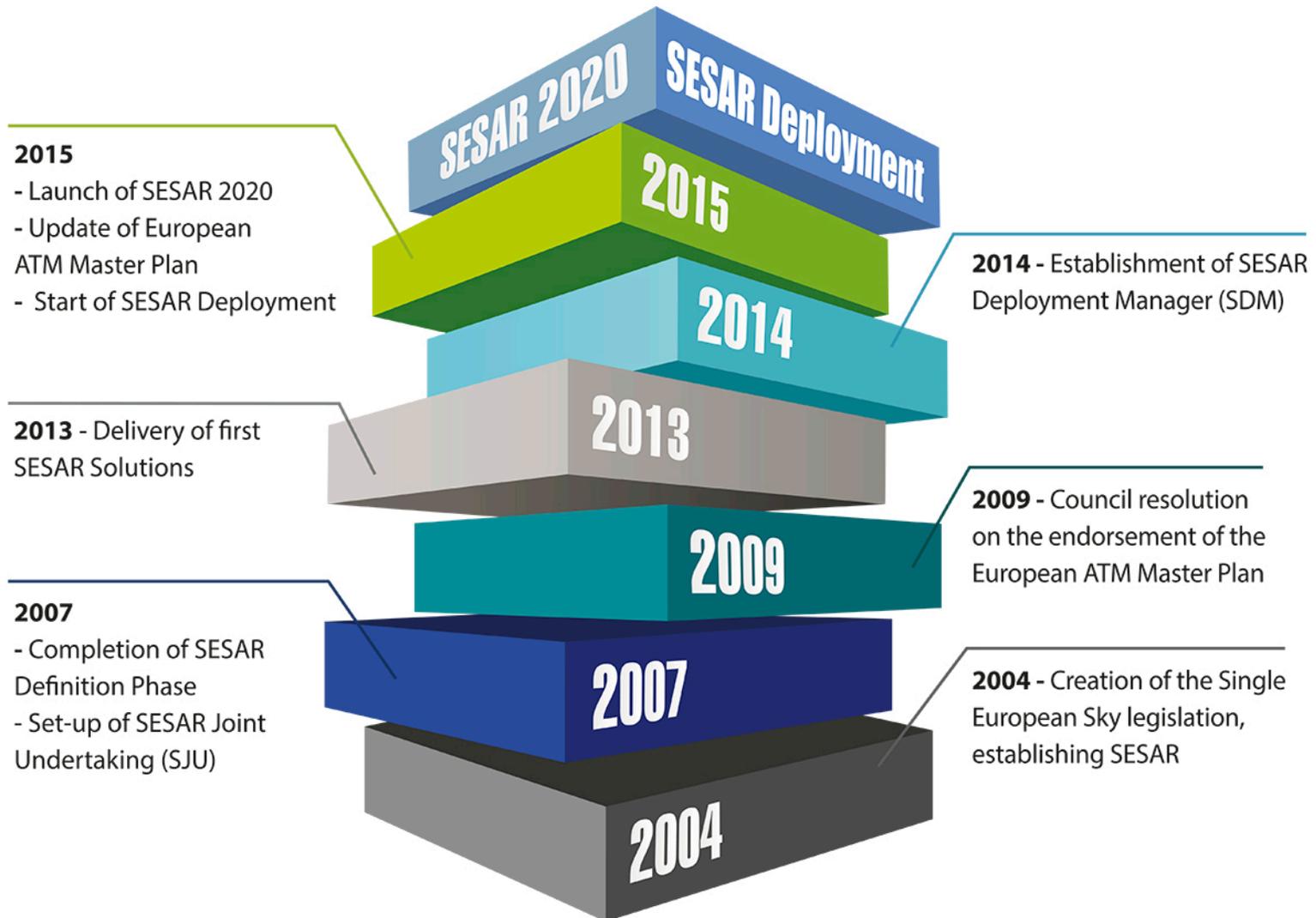
Future



Trajectory Management

Know & share the current & planned a/c positions

SESAR milestones



SESAR Joint Undertaking

- **Public-private partnership** to manage the SESAR Development Phase
 - Execute the European ATM Master Plan
 - Work with the Deployment Manager on the Deployment phase
 - One single ATM R&D programme in Europe
 - Innovation from private sector
 - Public financial stability & enforcement power

- **Founding members:**



- **Industry members:**



- **As part of SESAR 2020**, being extended until 2024 with revised membership

Network Manager

One single Flow Management System over Europe

43 States

1750 Sectors – 68 en-route centres

520 Airports

1940 Aircraft Operators

61 FMPs

Network Operations

6,700+ connected end-users

Peak traffic – 35,937 flights in one day

10,600,000+ flights a year

Network Manager Main tasks

Improve network operations, contributing to EU-wide performance targets

FUNCTIONS

- Develop an integrated Route Network design
- Provide a central function for radio frequencies
- Coordinate improvement of SSR code allocation
- Manage the operations of ATFM

MANAGER

- Develop, maintain and implement Network Strategic Plan and Network Operations Plan
- Consolidated approach to all planning and operational phases
- Coordination with other regions and countries
- Coordinate management of the response to network crises (EACCC)

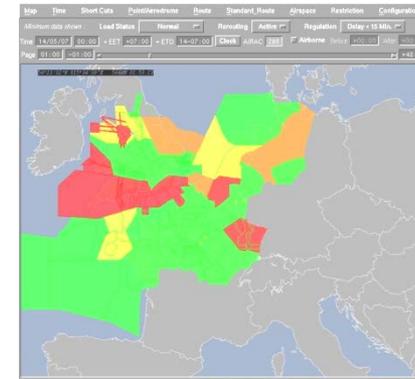
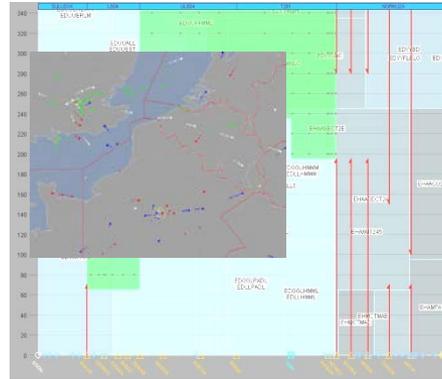
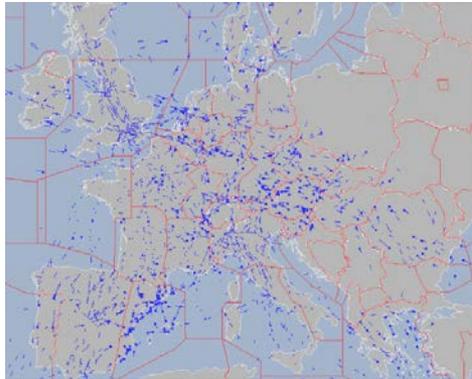
SUPPORT

- Support operational stakeholders in deploying ATM/ANS systems/procedures and SESAR
- Support accident and incident investigations

Contribute to the implementation of the Performance scheme

Operational stakeholders: the civil and military airspace users, civil and military air navigation service providers, Functional Airspace Blocks (FABs), airport operators, airport slot co-ordinators and operating organisations and any additional stakeholder groups considered relevant for the individual functions

Main tasks of Network Manager

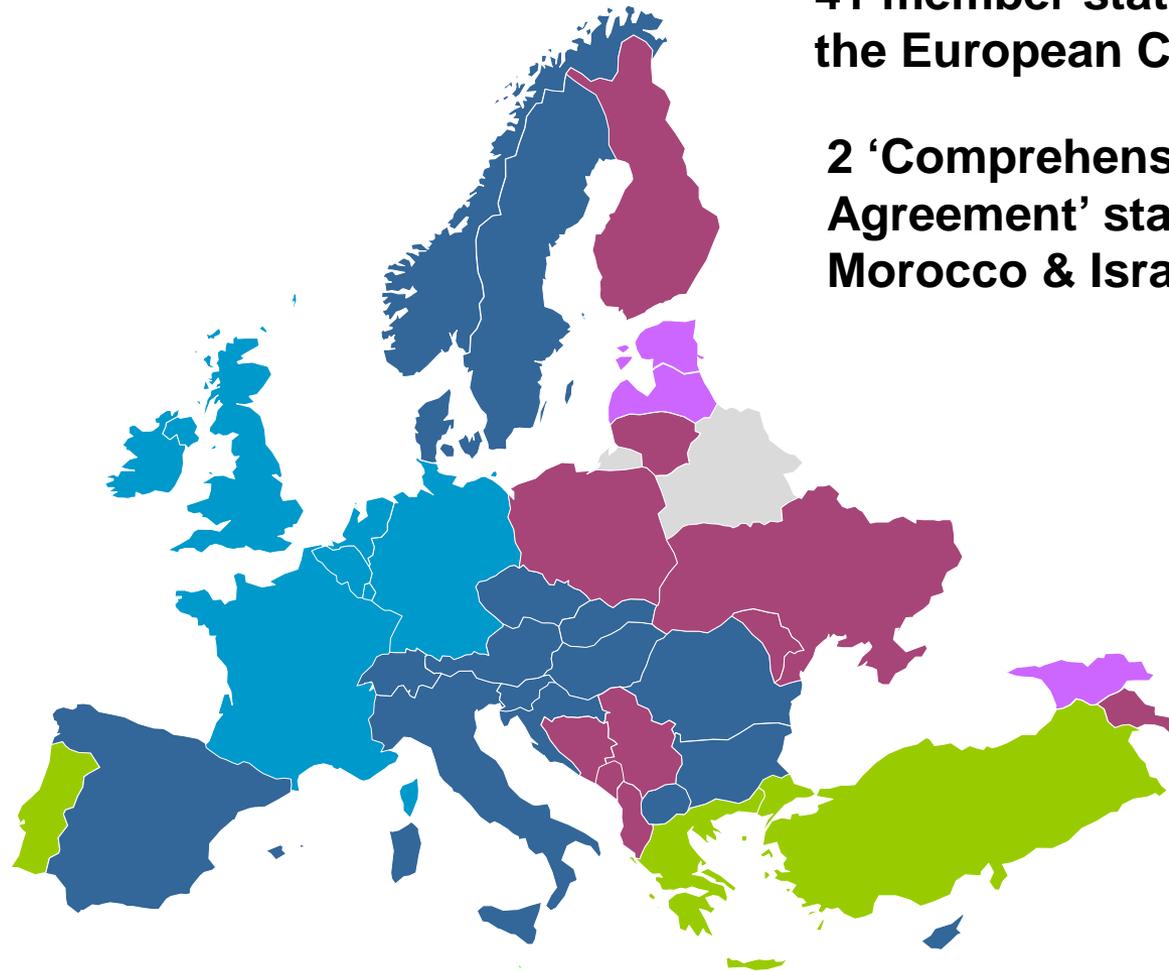
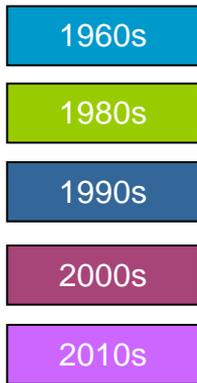


EUROCONTROL was nominated as the SES Network Manager in July 2011

Its main role is to:

- optimise European ATM Network's operations with ANSPs and airports;
- ensure that European ATM meets its performance targets
- provide a consolidated and coordinated approach to all planning and operational activities of the Network through defined functions and services

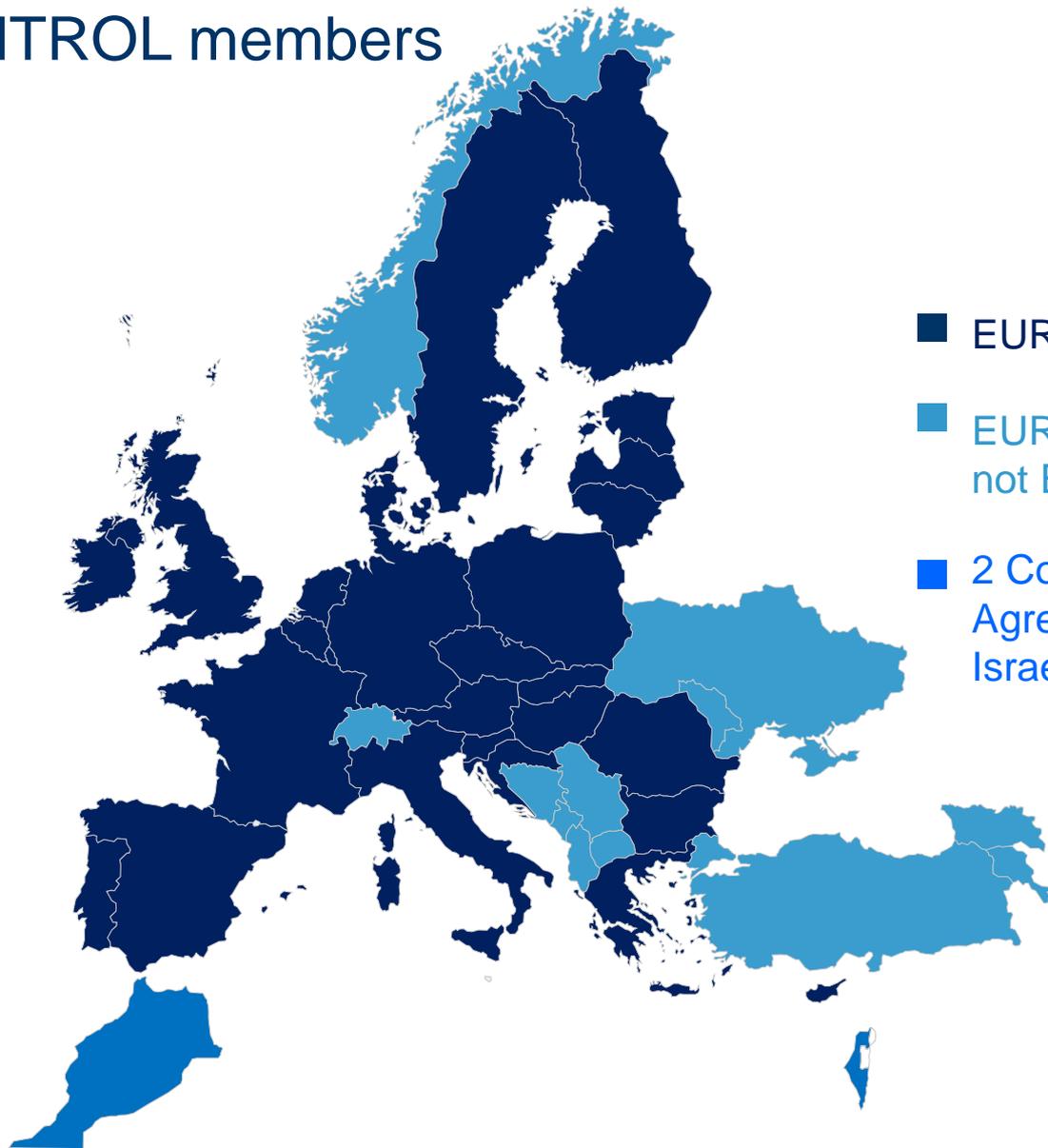
EUROCONTROL – History



41 member states & the European Community

2 'Comprehensive Agreement' states – Morocco & Israel

EUROCONTROL members



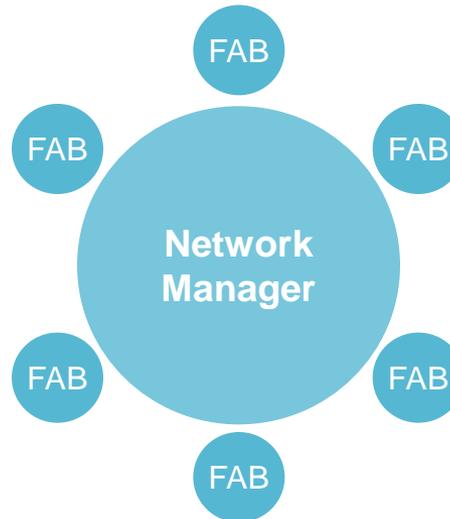
- EUROCONTROL & EU
- EUROCONTROL but not EU
- 2 Comprehensive Agreement States: Israel and Morocco

ATM in Europe – looking forward

Regulate



Operate/Coordinate



Research



EUROCONTROL
role

Technical support
Performance review

Network management
Deployment coordination
Route charges

Founding member
Major contributor
Longer term research

EUROCONTROL – Structure

Pan-European
Single Sky

Network
Manager

ATM

Route Charges

Maastricht Upper Area Centre

Corporate Functions

Central Route Charges Office

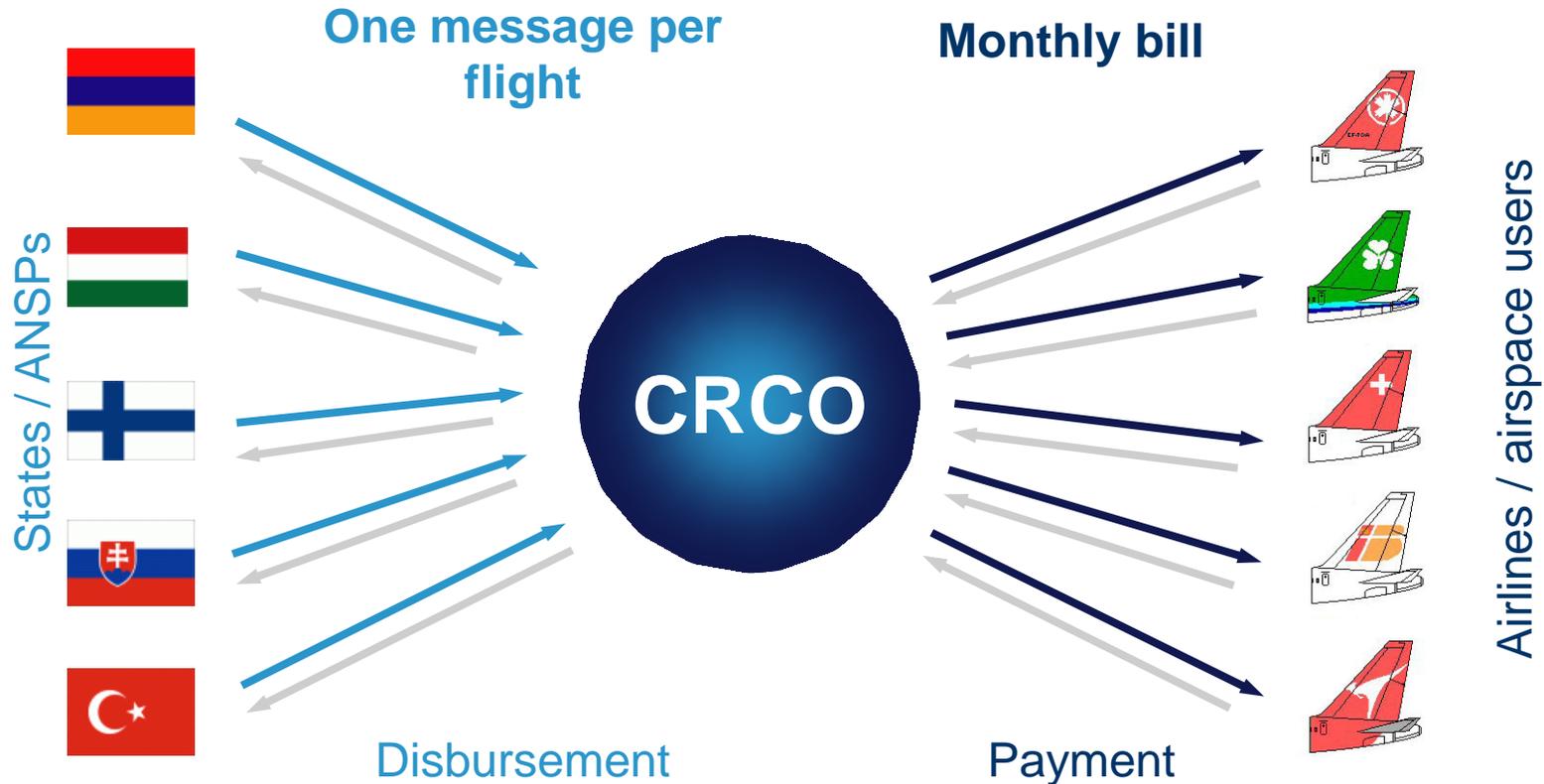
- Collects air navigation charges on behalf of States across Europe
 - En-route
 - Terminal
 - Communication

- Pan-European service
 - Simple, equitable and transparent for airspace users
 - Quick, efficient and cost-effective for States/ANSPs

- Over 7,1 billion € collected annually

- Collection cost of less than 0.3% of amounts billed

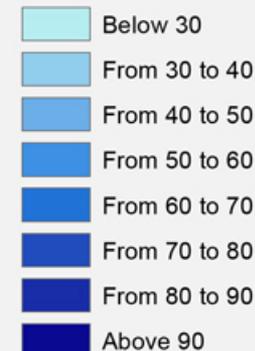
The Route Charges System



Global Unit Rates 2017*



Global Unit Rates



* As endorsed by the Enlarged Committee at the 107th session and to be approved by the Permanent Commission.

** Estonia will be technically integrated in the Route Charges System as from 1 April 2017

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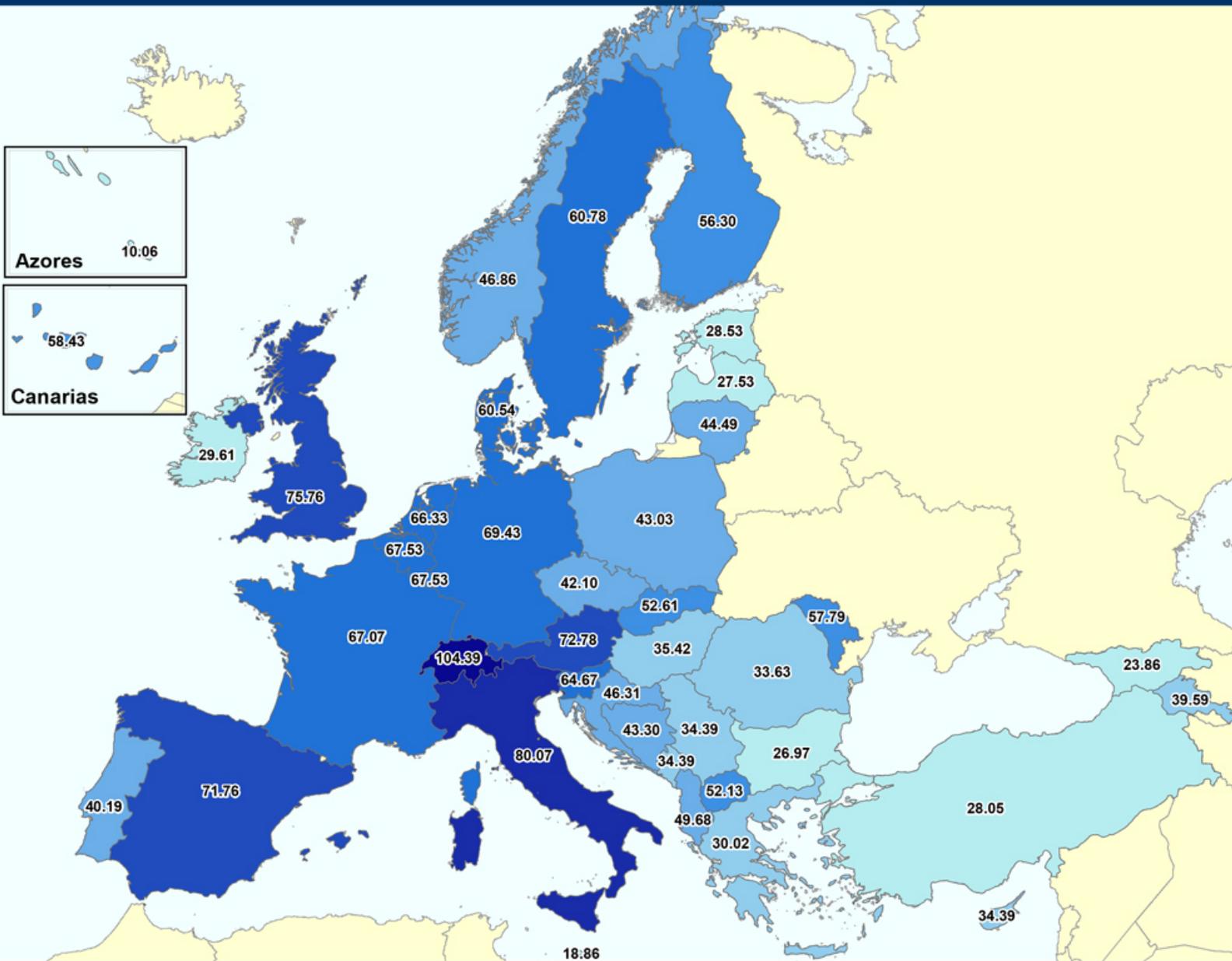
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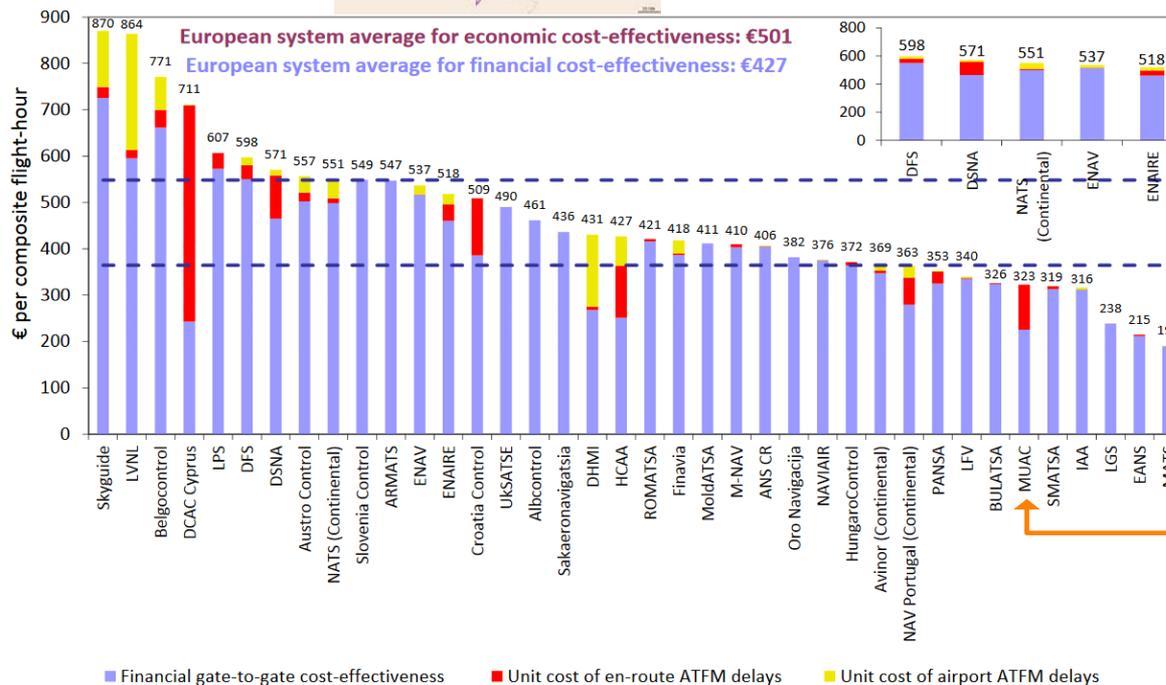
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Maastricht Upper Area Control Centre



- 260,000 km² extending over Belgium, the Netherlands, Luxembourg and North-West Germany
- More than 1.7 million flights controlled (2016)
- Annual costs (2016): € 143 M



- 3rd largest control centre in Europe
- 6th largest ANSP in Europe
- Highest controller productivity in Europe

One of the most cost-effective ANSPs



EUROCONTROL

General Presentation

Eamonn Brennan
Director General EUROCONTROL

Inter-institutional relationships



European Economic and Social Committee



European Parliament



European Commission

DGs MOVE, GROW,
RTD, ENV, CLIMA,
CNECT



EUROCONTROL

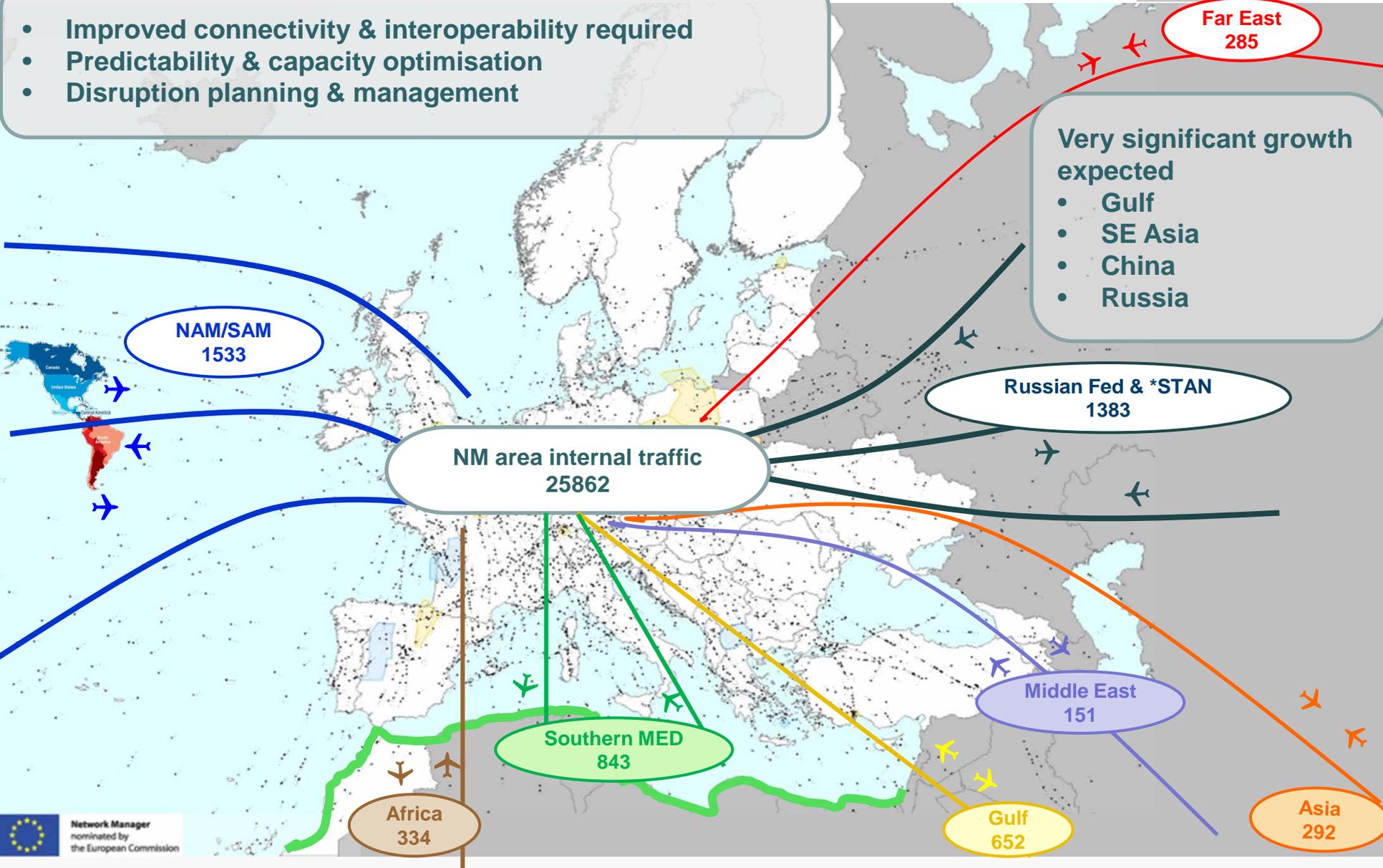


European Council



2015 - Daily Flights in European NM Area

- Improved connectivity & interoperability required
- Predictability & capacity optimisation
- Disruption planning & management



Very significant growth expected

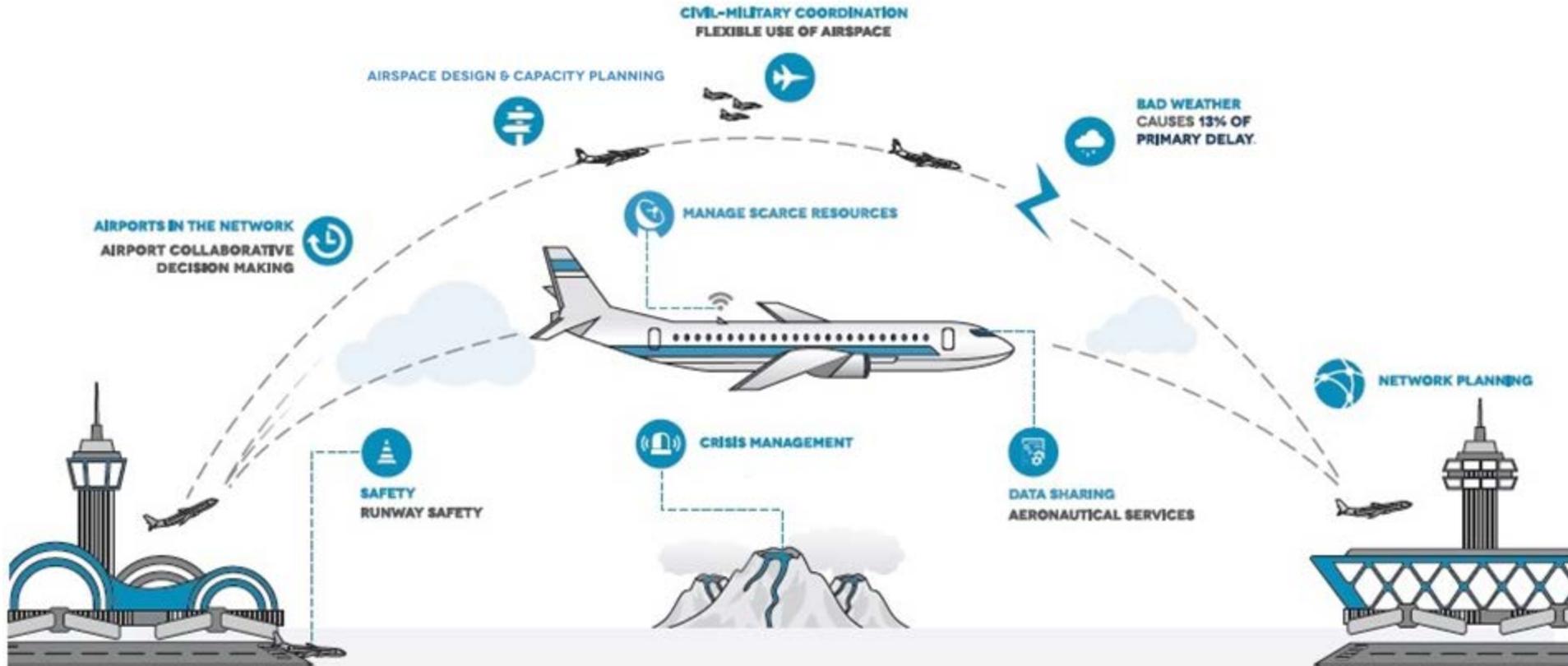
- Gulf
- SE Asia
- China
- Russia

Network Manager



The Network Manager

Connecting the Network to deliver Improved Performance



FLOW MANAGEMENT SINCE 1995

FLIGHT EFFICIENCY INITIATIVE
LAUNCHED IN 2013

EUROCONTROL Headquarters Brussels

The **European Organisation for the Safety of Air Navigation (EUROCONTROL)** is an intergovernmental organisation for the central coordination of air traffic control in Europe. The headquarters of EUROCONTROL are in Brussels.



MUAC, Maastricht



IANS, Luxembourg



EUROCONTROL

Experimental Centre Paris Brétigny

