



EASA
European Aviation Safety Agency



Funded by the European Union and implemented by the
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ATFM Workshop Jakarta 24th – 26th September

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Operations Manager

Your safety is our mission.

An agency of the European Union 



From ATFM to ATFCM

- Key drivers for ATFCM Evolution
 - Maximise Capacity according to traffic demand
 - Ensure more collaborative approach to capacity management in order to consider the Network
 - Improve the adaptability of the ATFM plan according to new information including feedback
 - Initiate ATFM planning earlier and extend it closer to the real-time
 - Expand traffic optimization based on a global view reinforced by local decision making



From ATFM to ATFCM

➤ ATFCM - 2000

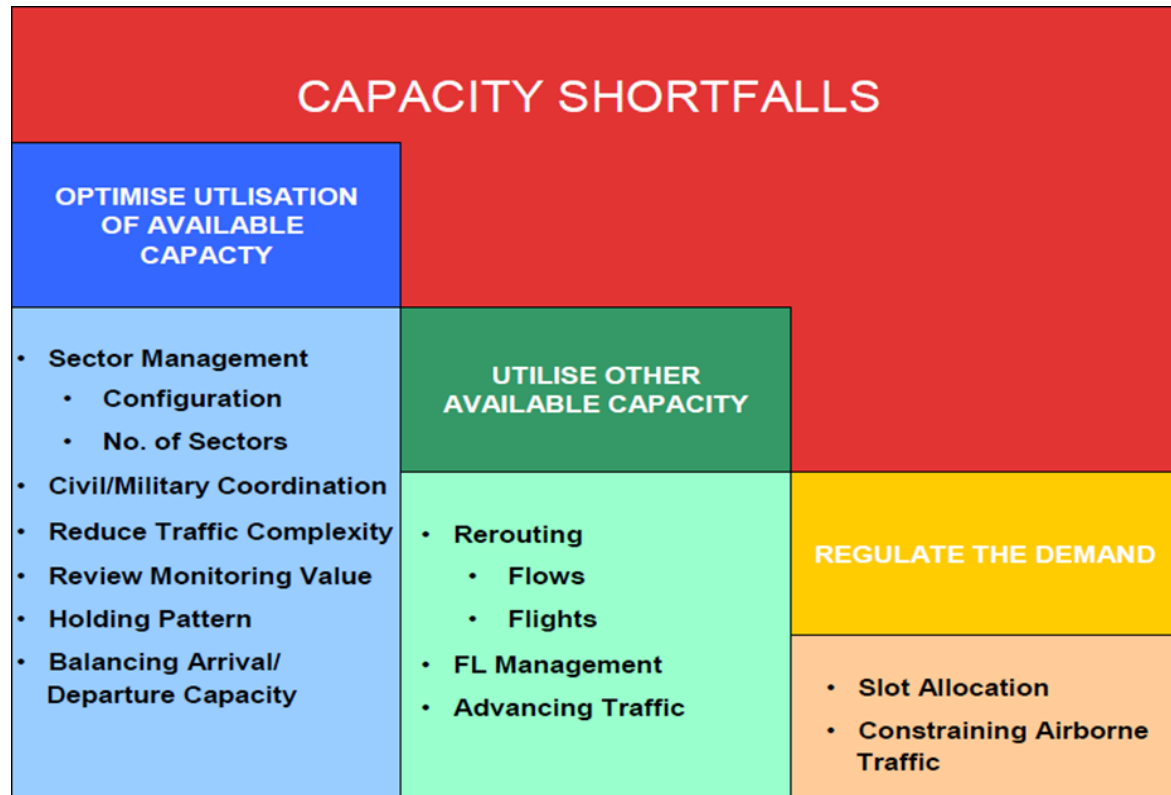
A flow
management
system
based mainly on
regulating
mechanisms

TO the essential
function of
collaborative
management of
capacity
and demand

CDM

Capacity Management and Optimisation

Network: From Airport to Airport





From ATFM to ATFCM

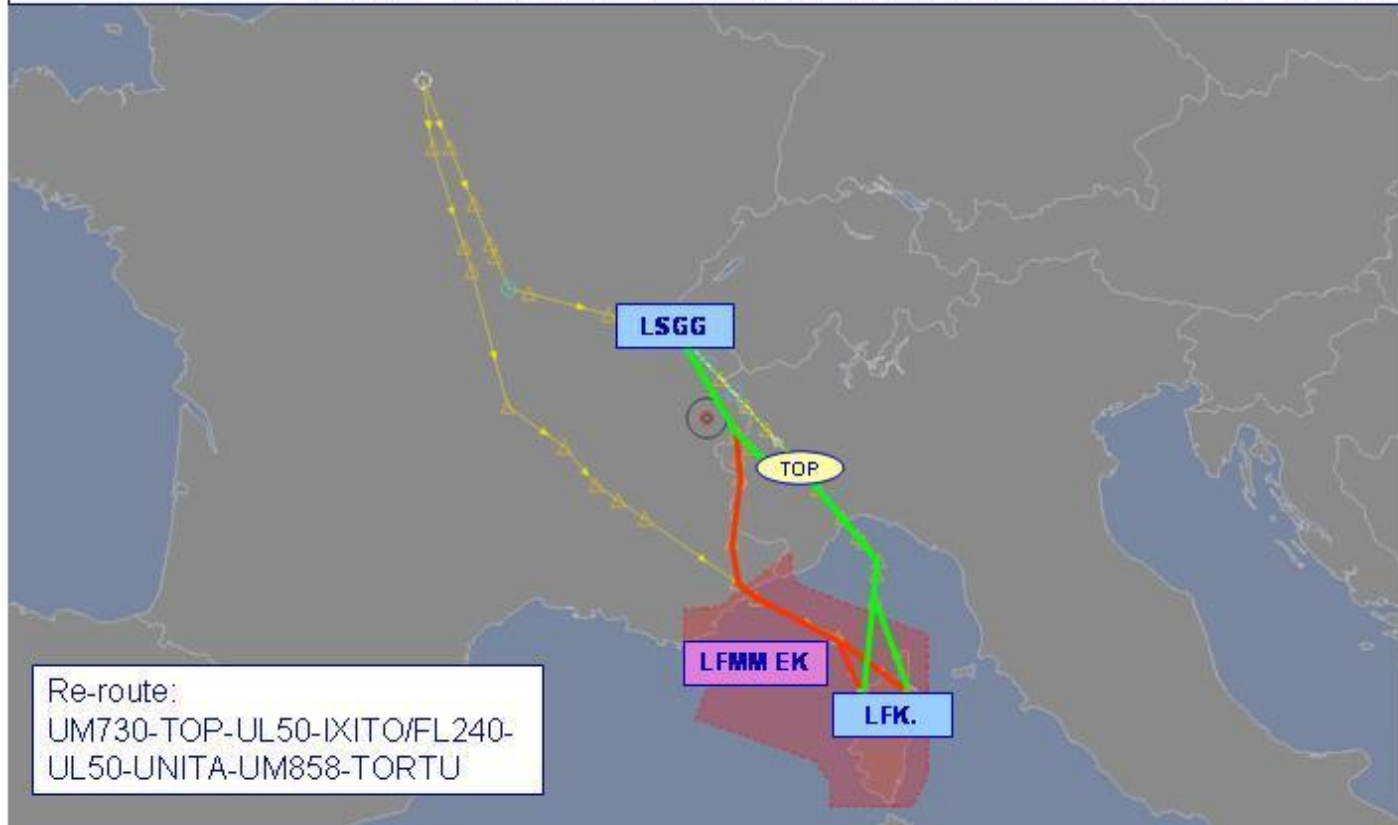
RR6MEK

Deps: LSGG

Dest: LFKB, LFKC, LFKF, LFKJ

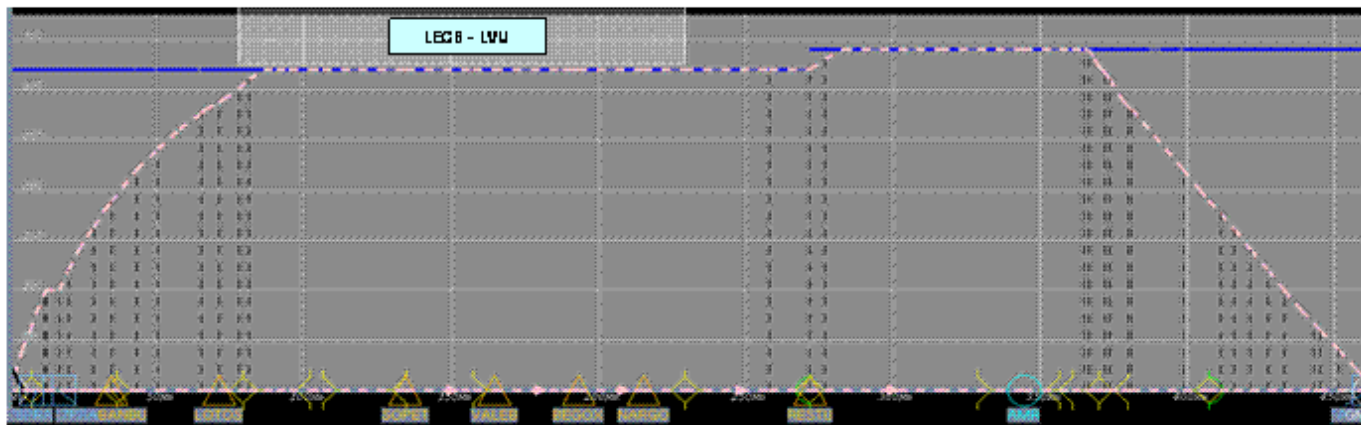
Not allowed via: LFMM EK Sector

Refile: via UM730-TOP-UL50-IXITO/FL240-UL50-UNITA-UM858-TORTU



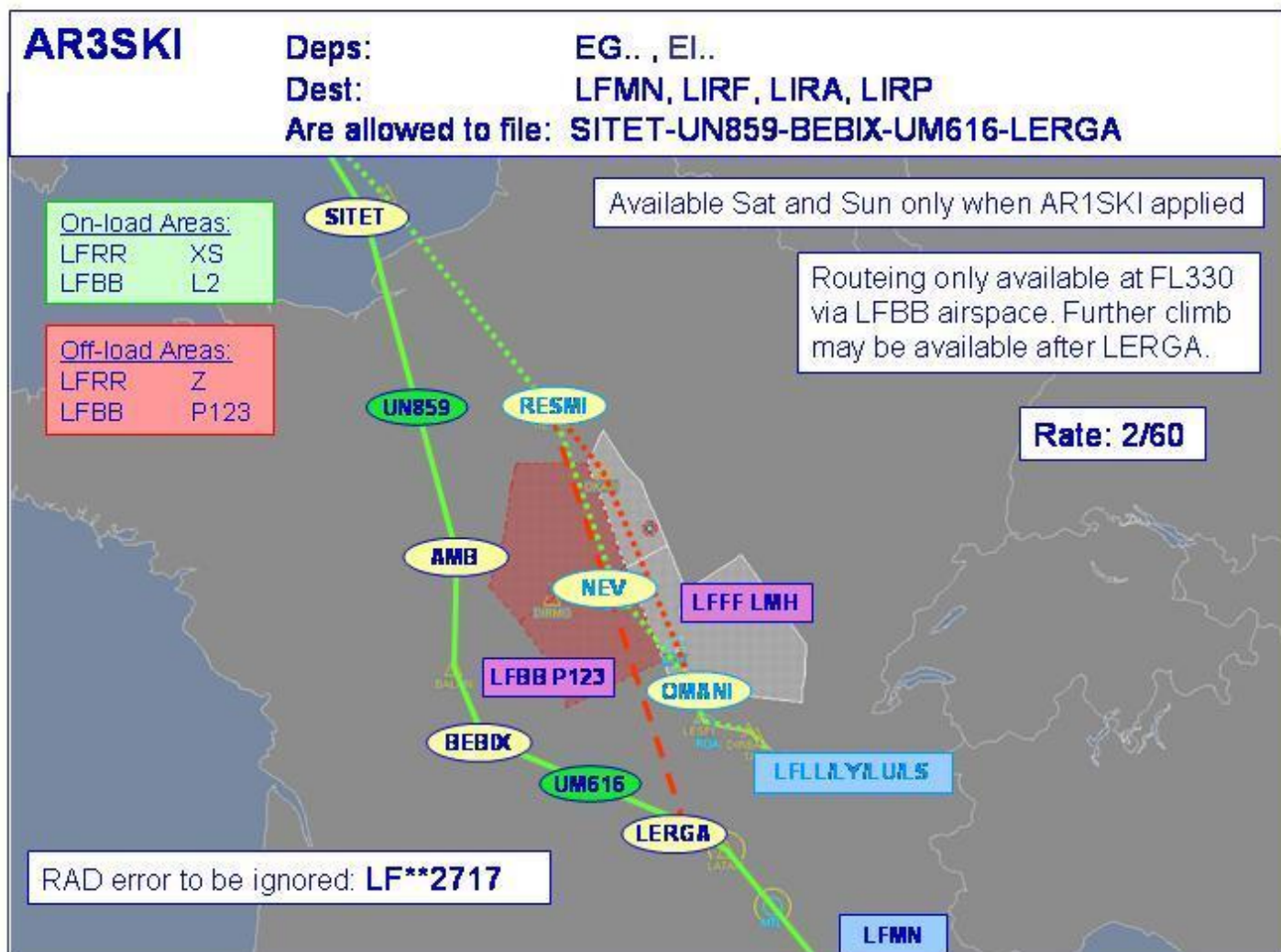


Until clear of sector.





From ATFM to ATFCM

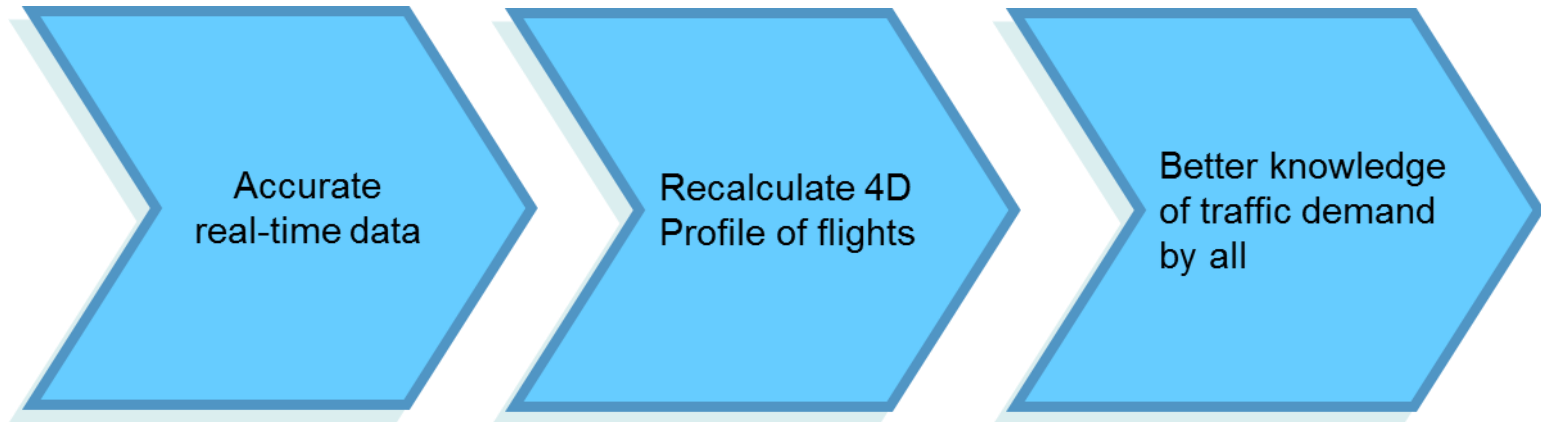




Introduction of ETFMS

➤ ETFMS – Flight data updates

- In 2002 the TACT system was replaced by the Enhanced Tactical Flow Management System – ETFMS, bringing in a new functionality :
- The update of planned info in the system using radar & AO position data every 30 seconds – including MET info (wind speed & direction)

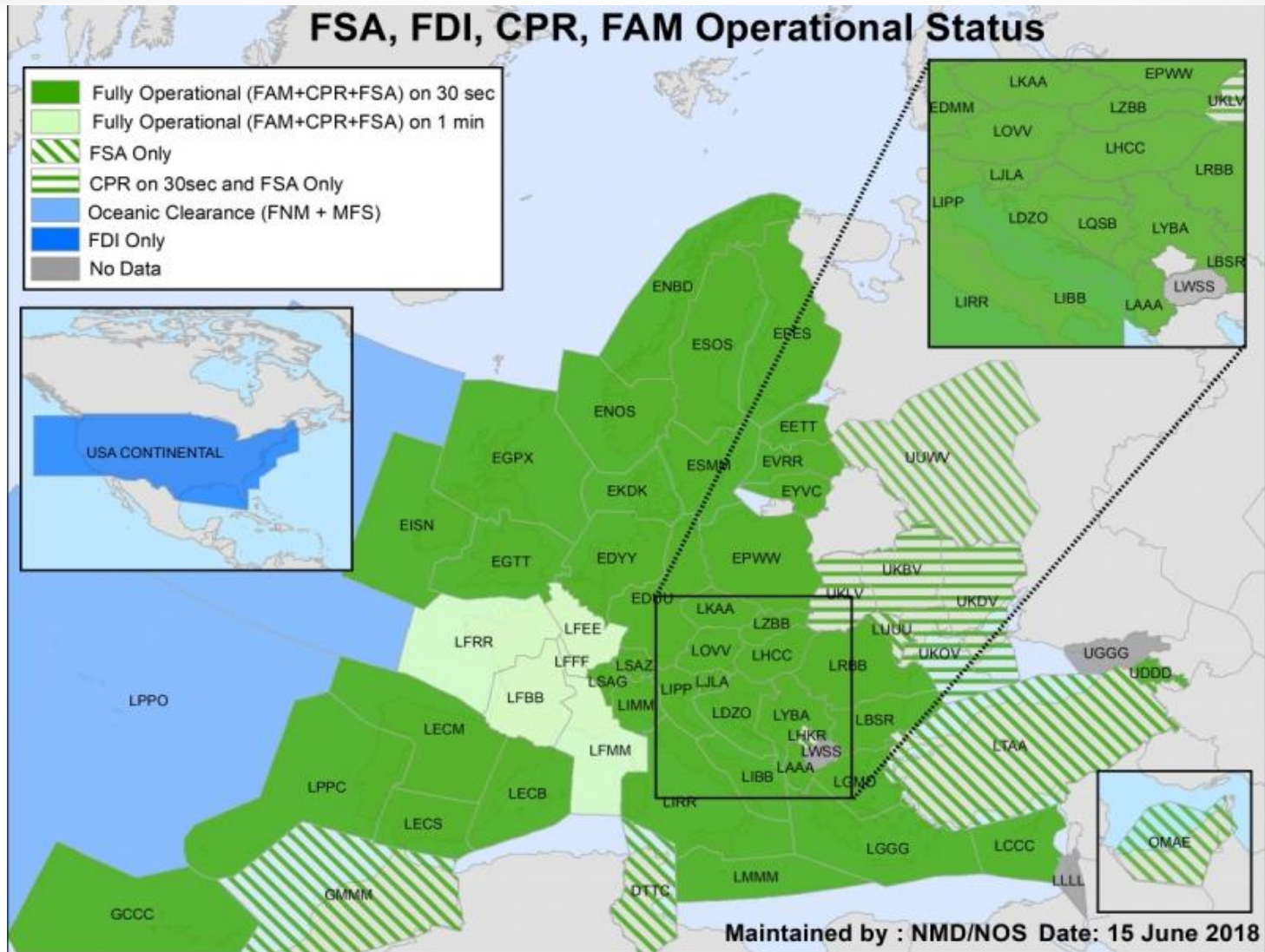




- **Benefits of real-time ATM data exchange**
 - Safer ATM operations by giving an accurate picture of the real-time traffic situation across a region
 - Increase Predictability by closing of the gap between ATFM and ATC
 - **Optimized use of sector configurations**
 - **Decreasing Uncertainty** by provide a single trajectory that can be shared between all ATM actors
 - Enable the full **integration of the airports** and network operations
 - **Allowing new ATFM technics**
 - **Enables new tools to be developed**



Introduction of ETFMS





➤ Flight Data Collection and Redistribution

- The Data Distribution service aims at sharing in real-time the Network Manager's enhanced flight data with ANSPs, Airports and AO's.
- CPR, FSA, FUM, EFD, DPI, etc.
 - Give an accurate picture of the real-time traffic situation across a region
 - Provide a single trajectory that can be shared between all ATM actors
 - Enable the closing of the gap between ATFM and ATC
 - Enable the full integration of the airports and network operations
 - Allows developing of the local tools
- The NM B2B and data distribution services allow airspace users and ANSPs to obtain all available real-time ATFM data (flight profiles, measures, etc.) via the web services.



Introduction of ETFMS

- NM B2B Web Services
 - Flight services
 - Airspace services
 - Flow services
 - General information services (ATFM information messages, NM B2B web services info)
 - Publish/Subscribe services



➤ Flight Data Collection and Redistribution

➤ With ANSPs

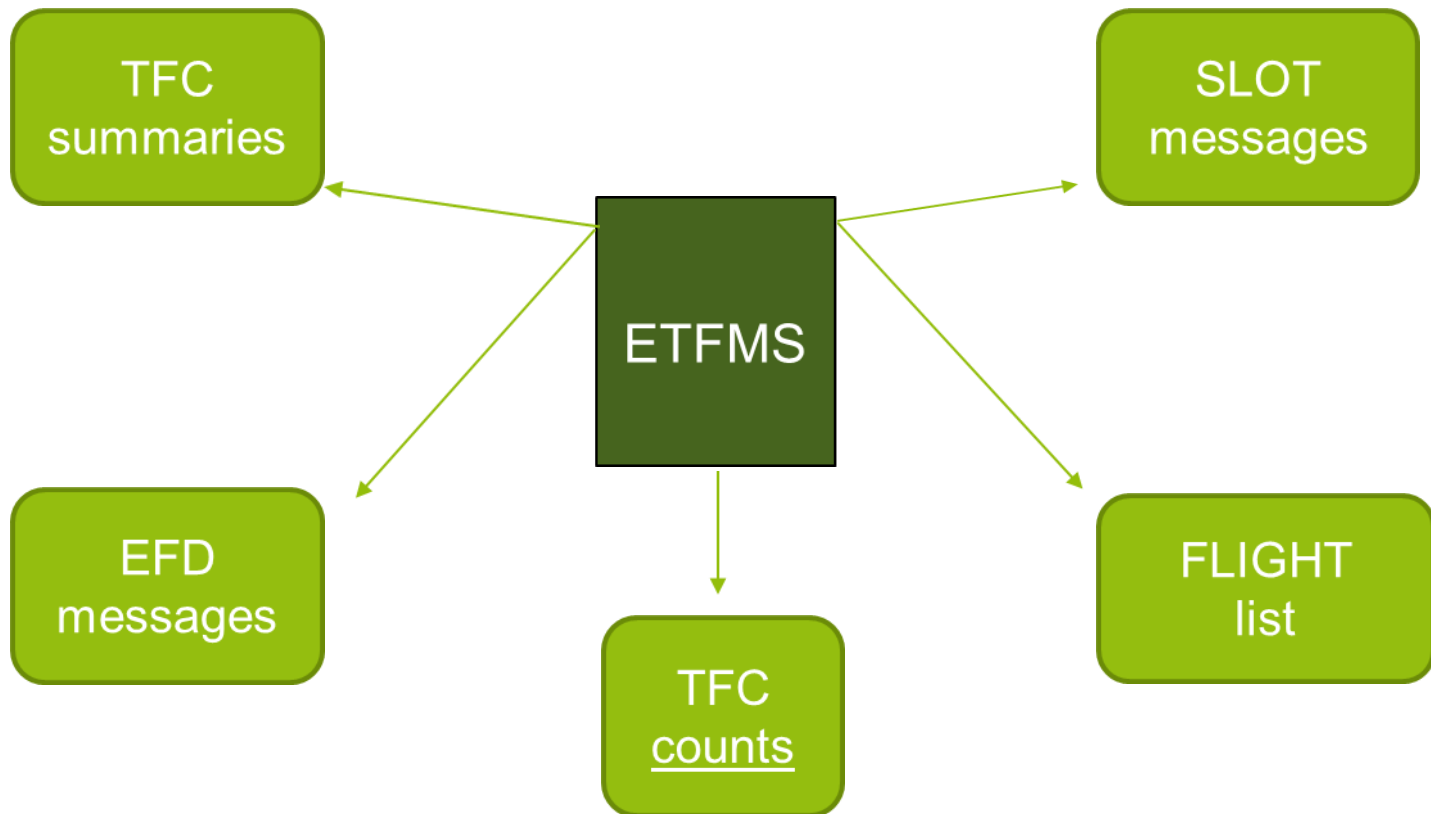
- Improve the common view on flight data between the ANSPs and the Network Manager Operations Centre
- Improve the quality and accuracy of the local traffic load monitoring data
- Support Collaborative Decision Making (CDM) on ATFCM operations

➤ With Airports

- Support Airport CDM (A-CDM)
- Contribute to improve the predictability of the landing time for inbound flights
- To improve the planning processes at the airport

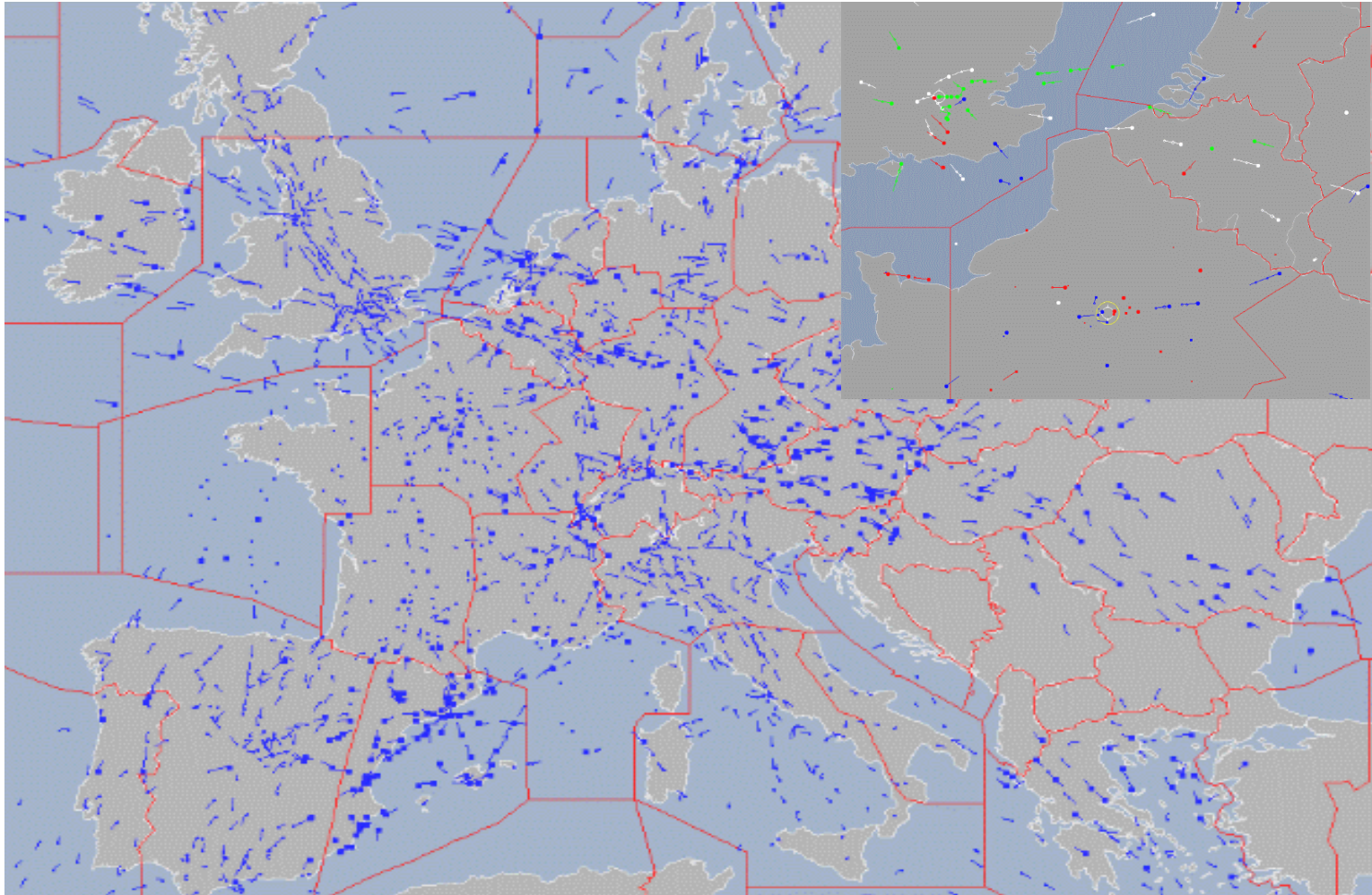


Introduction of ETFMS Messages Output





Introduction of ETFMS





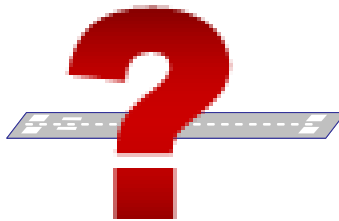
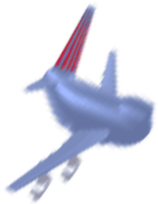
- Collaborative Management of Flight Updates
- Today, NMOC needs optimal traffic demand picture (EOBT+ Default Taxi Time)
- To avoid unnecessary restrictions applied
- Wasted ATFM slots
- Overload and traffic bunching



PREDICTABILITY



► Predictability missing link



ELDT

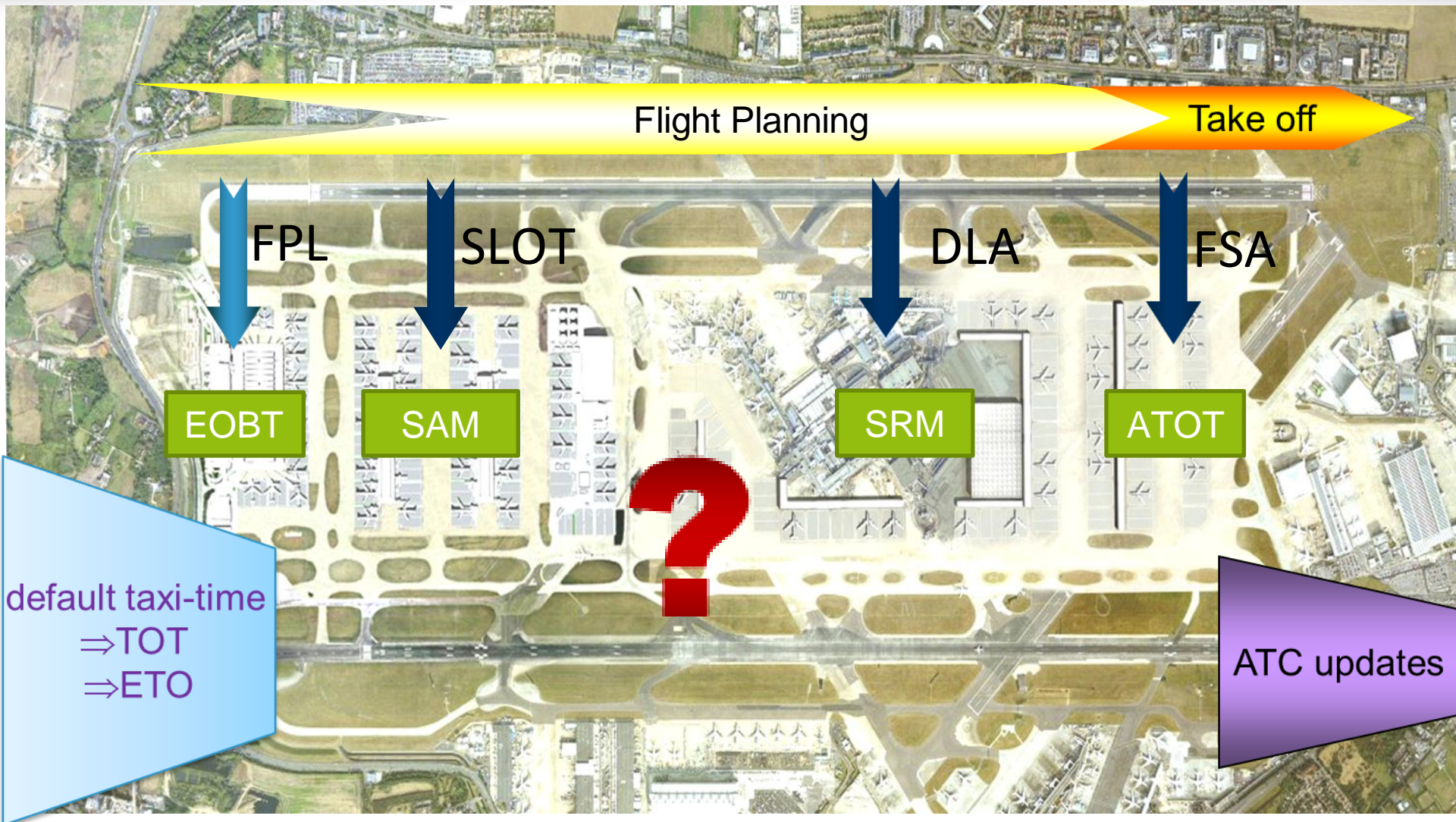
ATOT



- DPI (Departure Planning Information)
- The purpose of DPI is to provide ETFMS with the most up to date flight data currently available which cannot be sent via IFPS.
- DPI messages can be triggered by ATC (TWR) systems, by sequencing tools (e.g. DMAN) or by Collaborative Decision Making (CDM) systems at airports.
- The main data to be received via the DPI message are:
 - An accurate estimation of the take-off time (TTOT)
 - The individual taxi-time (EXOT)
 - The SID



Exchange of data/information between Airports and Network Manager





► Milestones for the Network



Flight is scheduled/FPL is filed: SOBT



Estimated Landing Time (FUM): TOBT



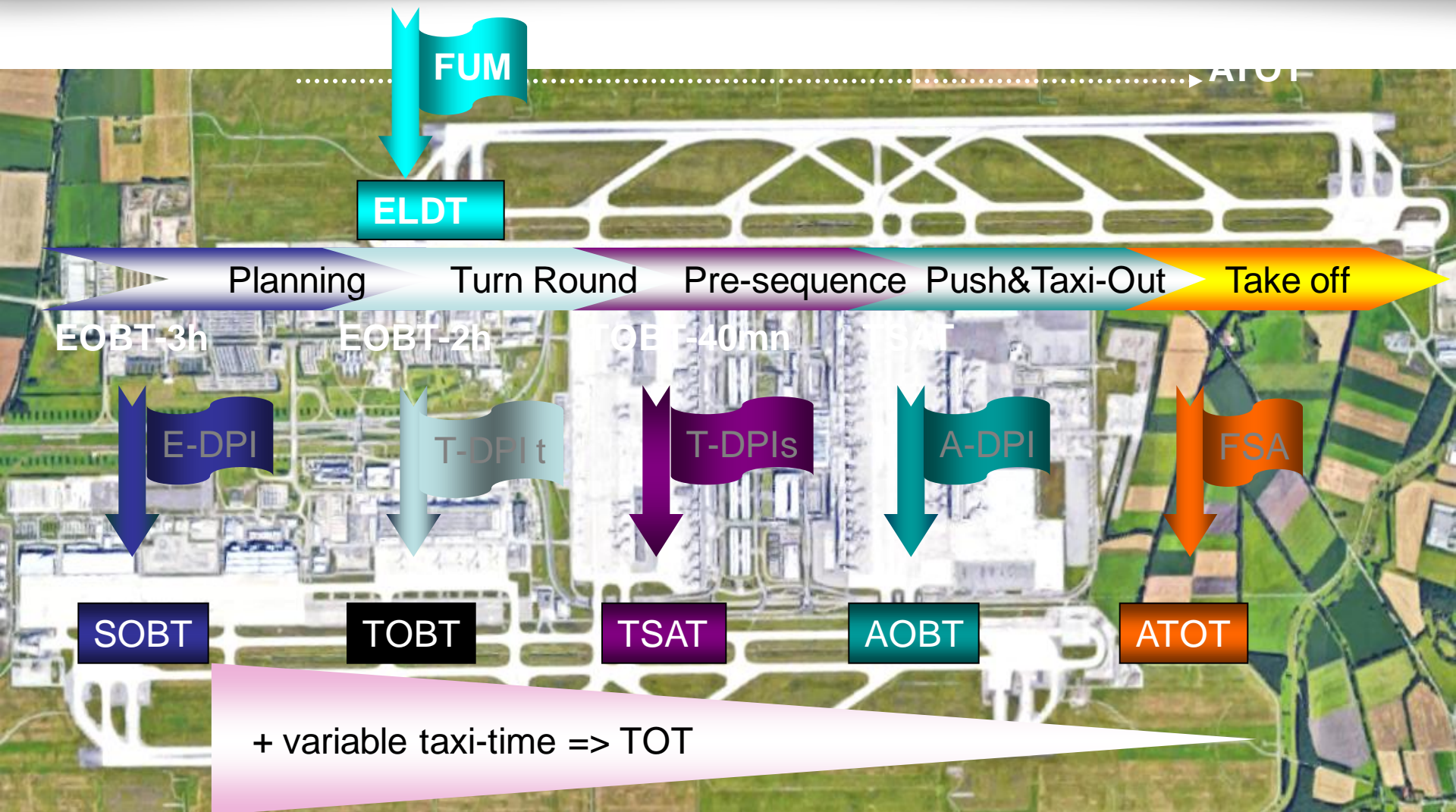
Start up Clearance: TSAT



Aircraft Off Block Time: AOBT

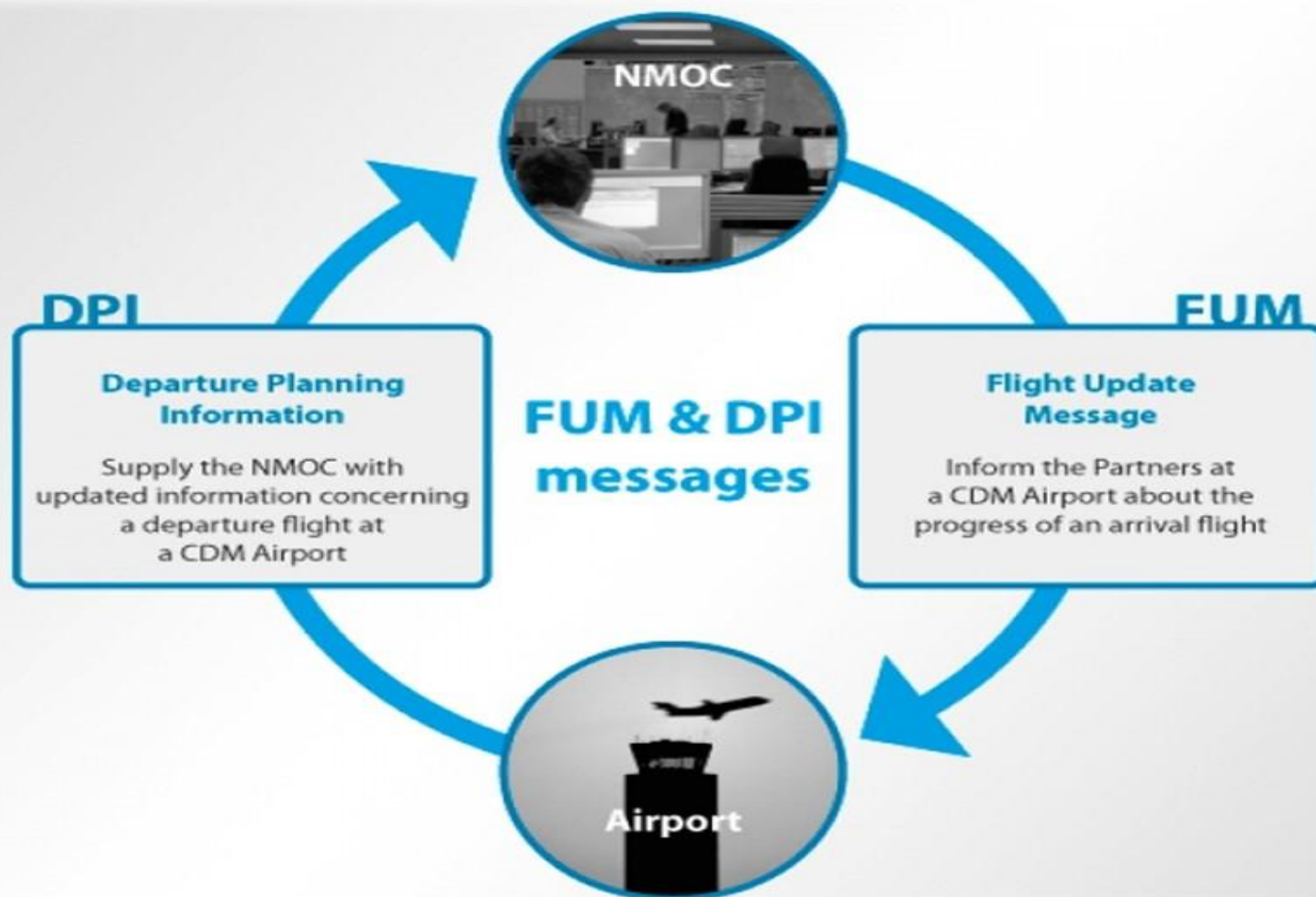


NM data updates with Airport CDM connection



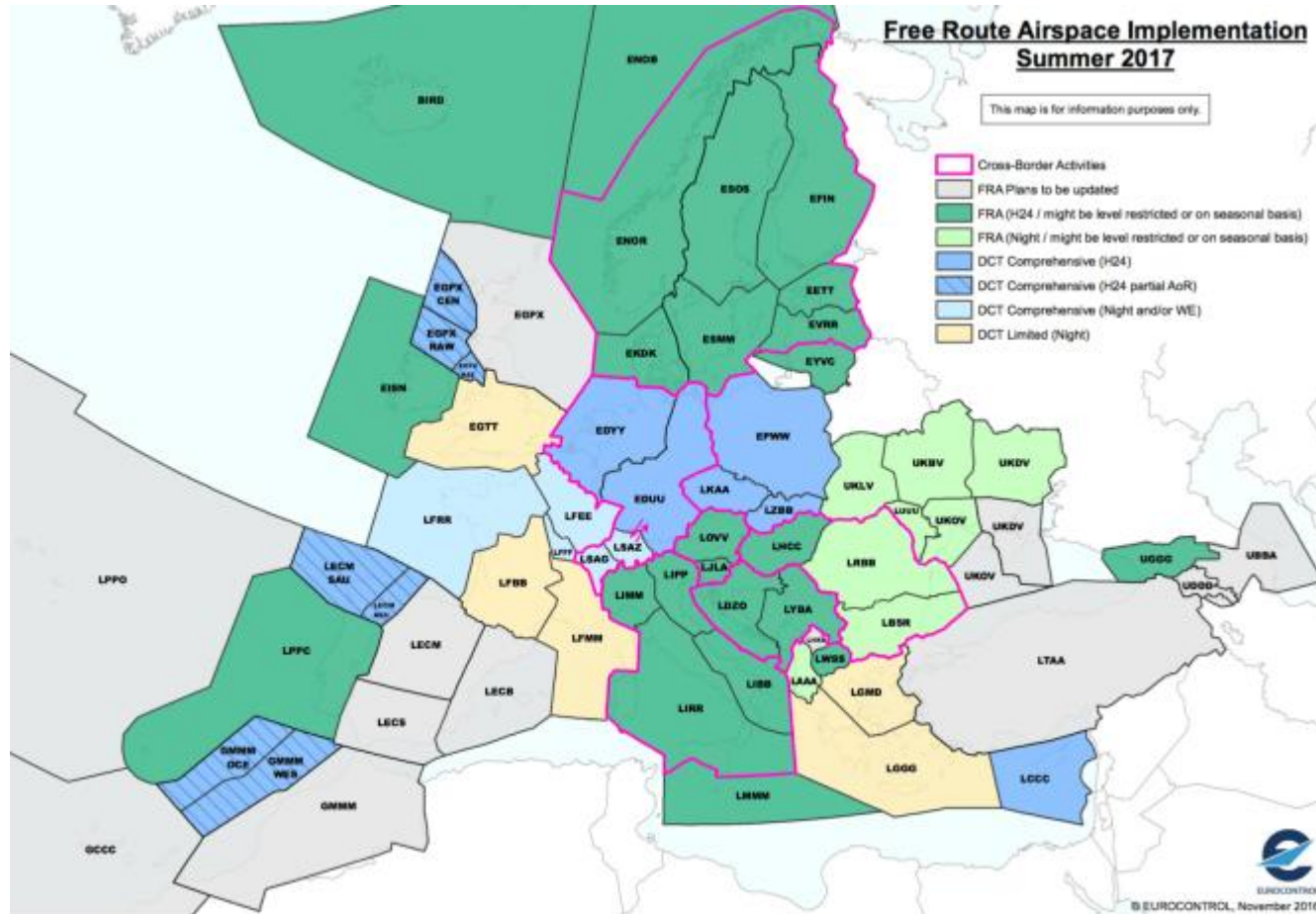


Exchange of data/information between Airports and Network Manager



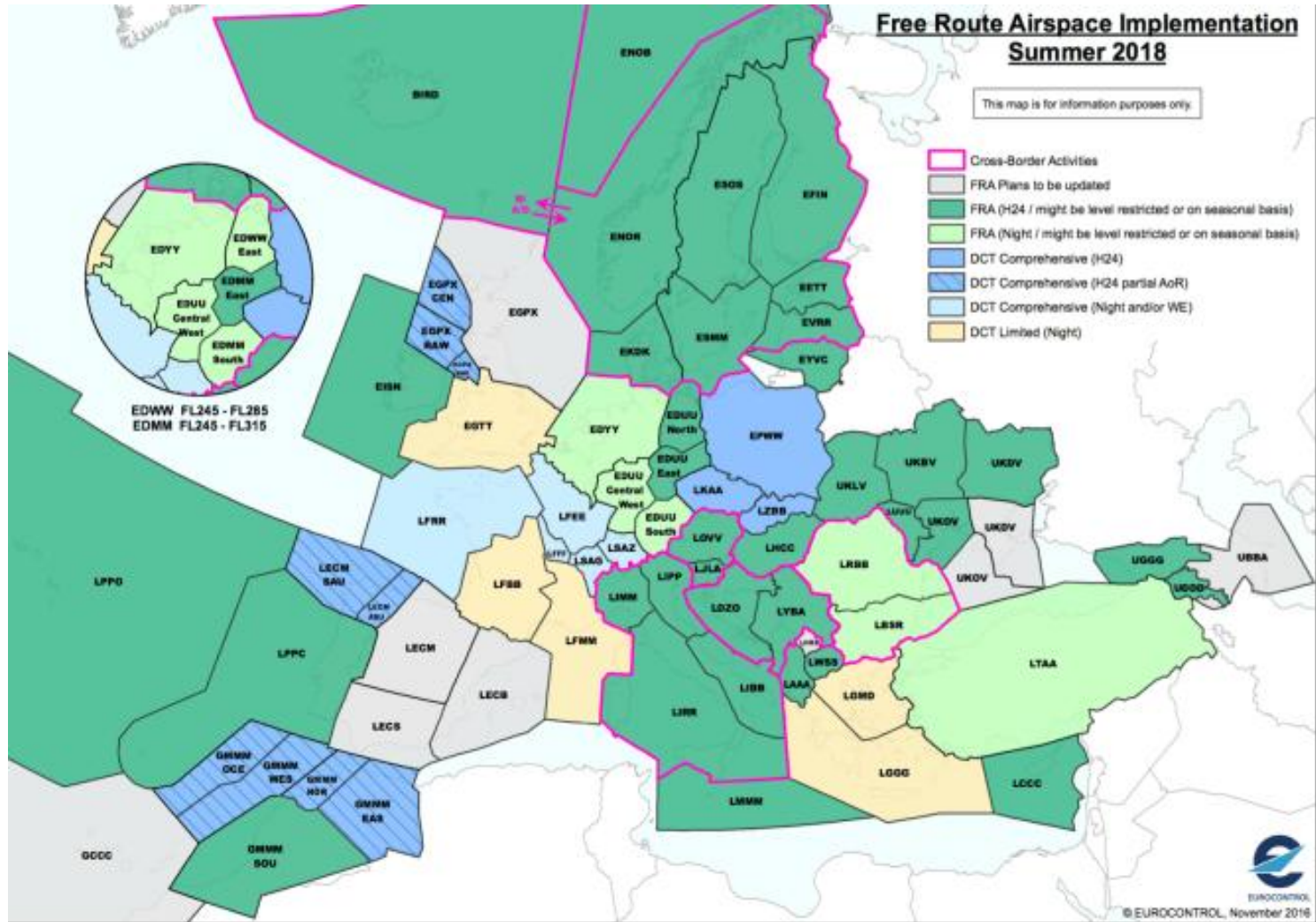


Free Route Airspace

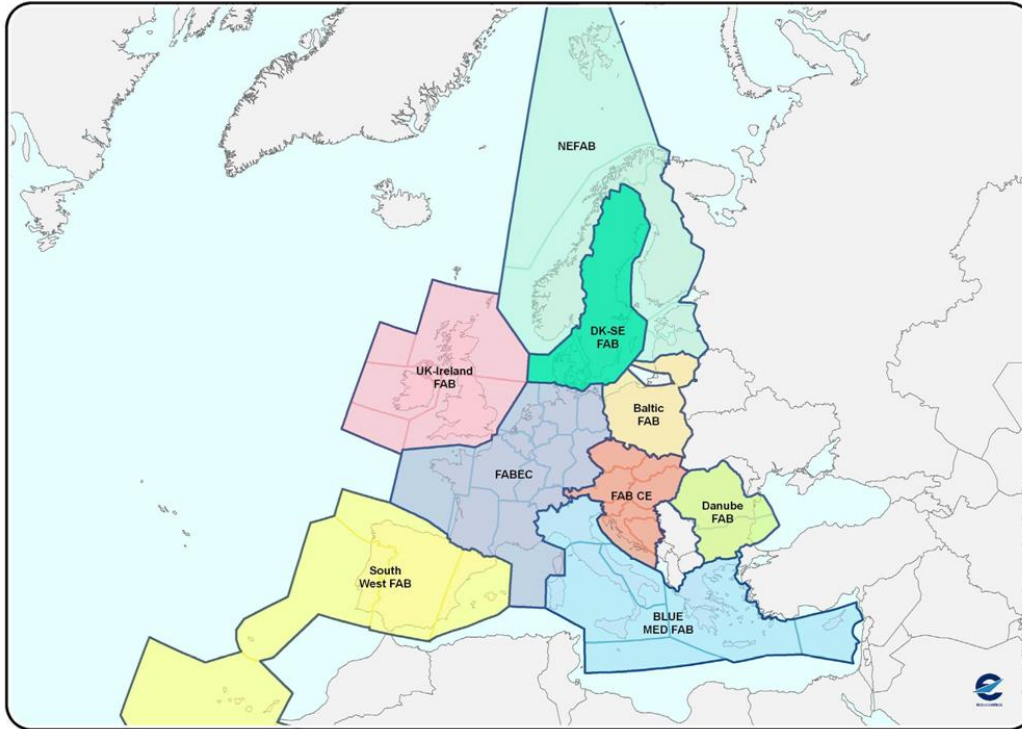




Free Route Airspace







FAB Common Objectives


- **Safety:** ensure an improved safety level
- **Capacity:** meet the demand and Forecast
- **Cost-effectiveness:** balance the costs
- **Flight efficiency:** better routes, profiles and distances
- **Environment:** reduce the impact on the environment through F.Eff.
- **Military mission effectiveness:** improve military mission effectiveness

Functional Airspace Block (FAB) = airspace block based on operational requirements and established regardless of State boundaries, where the provision of air navigation services and related functions are performance-driven and optimized





NOP – One stop Shop

**NOP**
Network Operations Portal

15/09/2018
14:02 51 UTC

TARGET DATE: 15/09/2018
15/09/2018 SET
D (TACTICAL)

Username: guest SEARCH

Resources & ServicesPost-OperationsTacticalPreTacticalStrategic

Initial Network Plan

Network Plan

Headline News

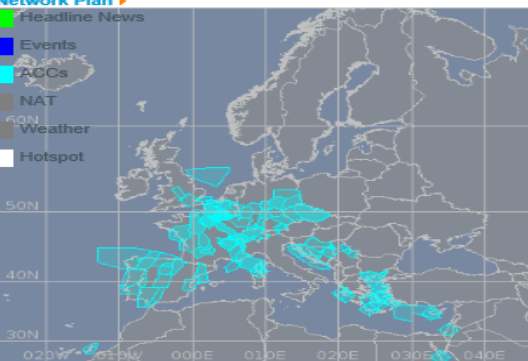
Events

ACCs

NAT

Weather

Hotspot




Network Static Map

Network Static Map (IE7/8)

ATFCM Measures (Scenarios)

Scenarios aim at the optimisation of capacity across the European Network of ACCs. Network Operations NMC works actively to minimise the number of ATFM regulations, consistent with the protection of ATC sectors



Scenario List

Network Axis Management

Involvement of ACCs in the axes processes

The following links provide information on the Axes for the Summer 2018 Season:
[South East Axis Summer 2018](#)
[South West Axis Summer 2018](#)
[Read the NM Axes Meetings Terms of Reference.](#)

Axis Weekly Management

SouthWest Axis statistics [Week 36 \(Fri 07 Sep - Sun 09 Sep\)](#)

SW plan for **Saturday 15 and Sunday 16 September.**

When announced, join the [SouthWest WebEx conference](#) (on Thursdays; not earlier than 1015 UTC)

SouthEast Axis statistics [Week 36 \(Mon 03 Sep - Sun 09 Sep\)](#)

When announced, join the Tuesday [SouthEast WebEx](#) conference (not earlier than 1145 UTC)

Contingency

The status of the Network Manager operations is **NORMAL**.

Network Headline News

Latest News Ongoing News

15SEP 13:32 ▶ **Tactical Update**

13SEP 07:29 ▶ **NM22.5 release postponement**

[more](#)

Network Events

Saturday, 15 September 2018

Month Day

☐ Show only starting events

Select Types

EGPXUIR, EGPXFIR, EGTTUIR, EGTTFIR
Military Exercise COBRA WARRIOR 18-1
04/09/2018 09:00 - 21/09/2018 12:00
LECMUIR, LECBUIR, LECMFIR, LECBFIR
Military Exercise TLP 2018-3
10/09/2018 00:00 - 05/10/2018 23:59
LHBP
ILS replacement LHBP/BUD airport 13L
15/09/2018 00:00 - 31/10/2018 23:59
EFHK
Apron renovation
08/04/2018 00:00 - 29/09/2018 23:59

Search

Tele/WebEx conferences [List](#)

Tele/WebEx conferences

Customers will be invited via AIM or Headline News to join a Tactical Briefing targeted towards adhoc situations as they occur.

These conferences may be in the form of a web conference via WebEx or a teleconference via InterCall.

* For the WebEx conference click [here](#)

* For the teleconference dial +32 2891 0103. The required PIN will be published via AIM and/or Headline News.

Claims

Central Claim Management System (CCMS) Log in

CCMS allows users to raise claims at the Network Manager: operational problem reports, user requirements or general requests. The preferred media is the CCMS-Web secured application. Alternatively, a web form is available.

[CCMS Web](#)

[More info on CCMS](#)

Contacts

Depending on the nature of your enquiry you can get direct contact with the NM or make a search on the Agency Contacts page

Network Operations & NM - All Contacts

EUROCONTROL Contacts

Portal Assistance

If you have an urgent Operational request in relation to a flight,

Current Network Situation

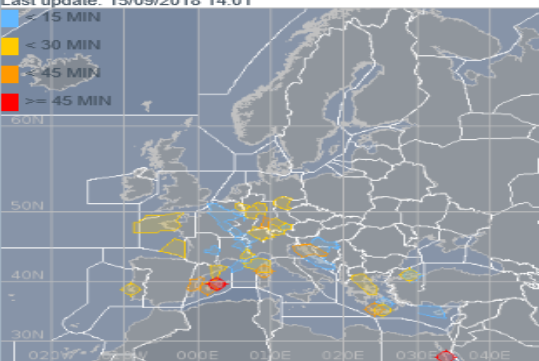
Last update: 15/09/2018 14:01

15 MIN

< 30 MIN

< 45 MIN

>= 45 MIN



Static Map

Static Map (IE7/8)

ATFCM Network Situation Data

Last update 15/09/2018 13:52

Flights

Total	29,368
Landed	14,327 (49%)
Airborne	5,458 (19%)
Expected	9,583 (33%)

Delays (in minutes)

Cumulated	89,236.0
Average/Flight	3.0
En-route	57,303 (64%)
Airport	31,933 (36%)
>= 30 min	717

Delay Causes

Reason	Delay	Delay (%)
ATC Capacity	42104	47%
Weather	25373	28%
ATC Staffing	14812	17%
Aerodrome Capacity	4796	5%
Environmental Issues	921	1%
Others	343	0%
Ind Action non-ATC	341	0%
Airspace Management	315	0%
Special Event	231	0%
Accident / Incident	0	0%
No delay	0	0%

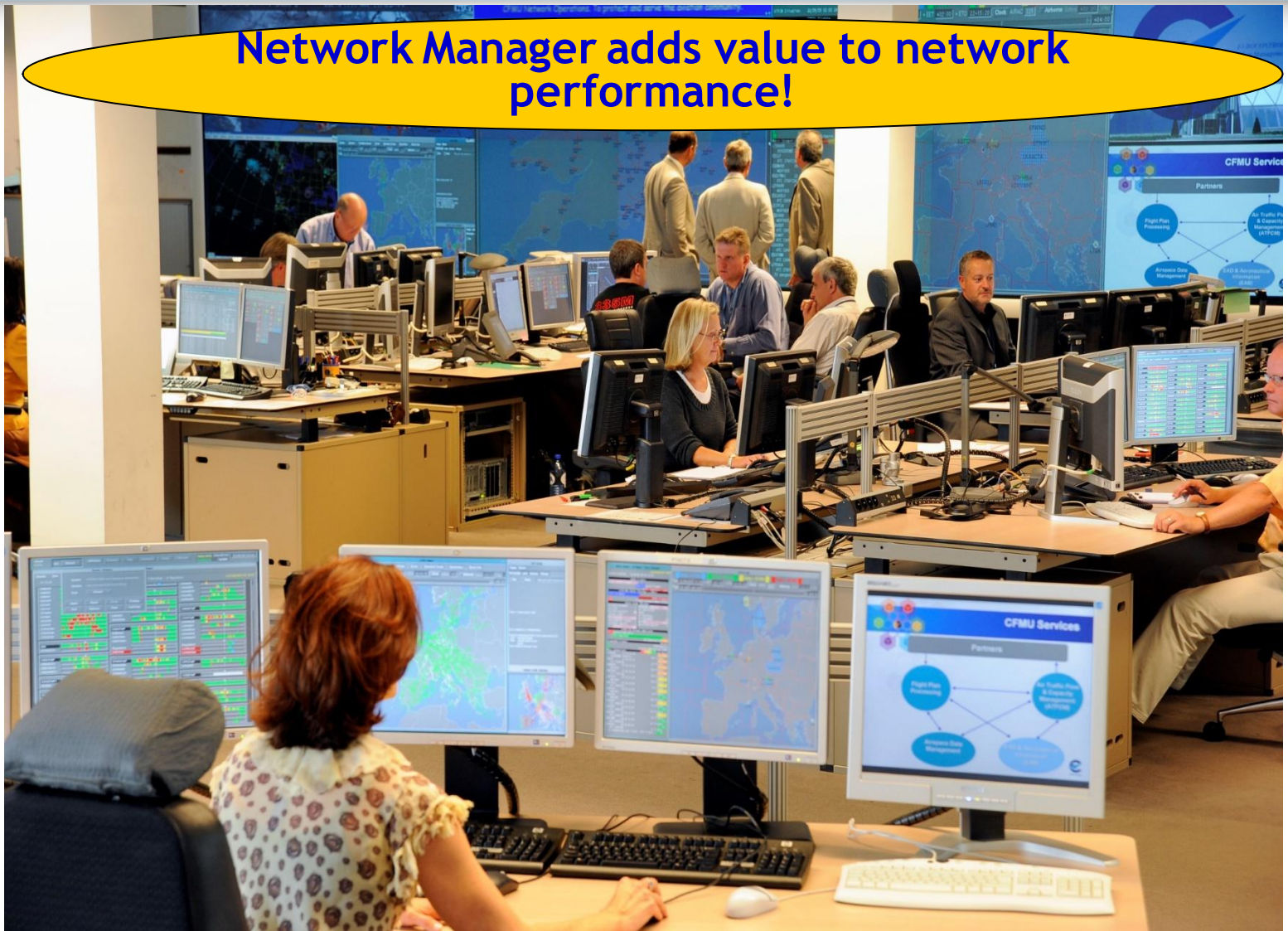
[more](#)

Network Operations Weather Assessment

Network Operations Weather Assessment objective



Network Manager adds value to network performance!





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Funded by the European Union and implemented by the
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Thank you for your attention!

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