

Supporting  
European  
Aviation



# Network Manager Operations Centre

November 2021



NETWORK  
MANAGER



# EUROCONTROL

## 41 x Member States

### + Morocco and Israel



#### EUROCONTROL Office Locations

-  **BELGIUM**  
Brussels (HQ & ATM Network)
-  **NETHERLANDS**  
Maastricht (MUAC ANSP)
-  **FRANCE**  
Brétigny-sur-Orge (Research Centre)
-  **LUXEMBOURG**  
Luxembourg (Training Centre)



# EUROCONTROL's CENTRAL ROLE For European Aviation

Air Traffic Network Manager for all of Europe –  
11 million flights 2018

ATC Billing Service - €10 billion p.a.

Maastricht Air Navigation Service Provider

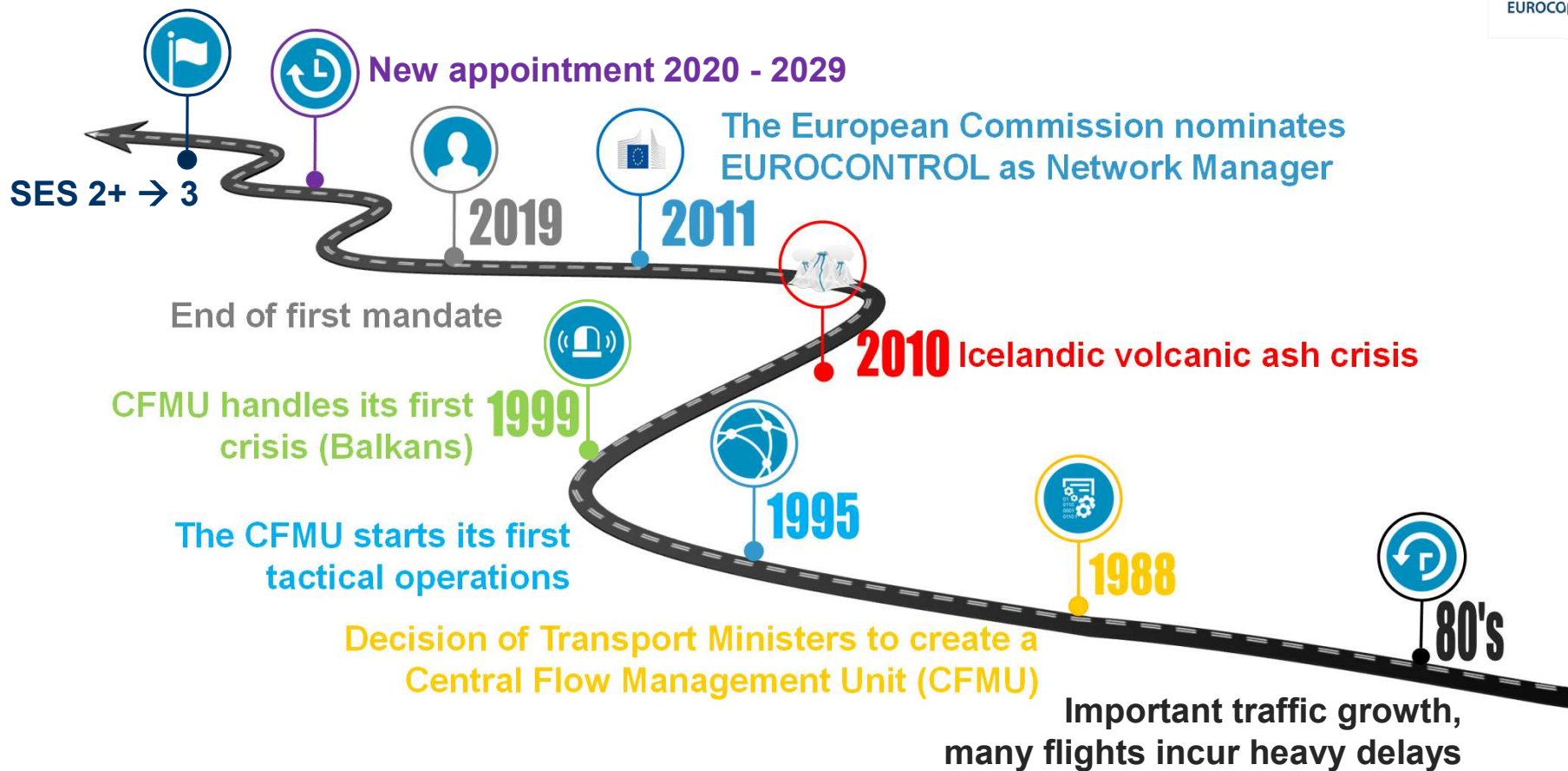
Civil-Military coordination

Air Traffic Expert support to EU bodies

Pan-European



# The story about Network Manager



# ATM Network Functions



EUROPEAN ROUTE NETWORK DESIGN FUNCTION

AIR TRAFFIC FLOW MANAGEMENT

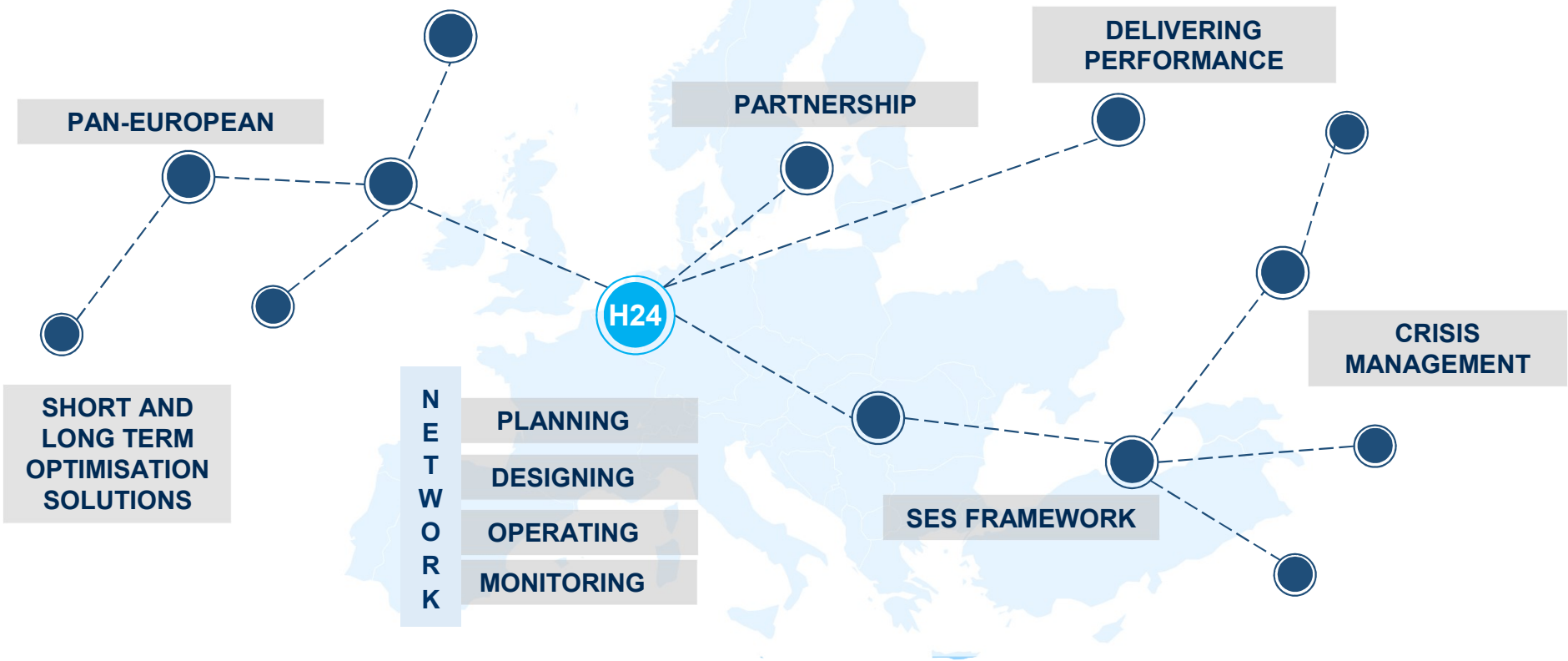


COORDINATION OF SCARCE RESOURCES

CRISIS COORDINATION



# Our Role for the European Network?





# THE NETWORK MANAGER

## CONNECTING THE NETWORK TO DELIVER IMPROVED PERFORMANCE



**OPERATIONAL SAFETY**  
Safety alerts, Operational Safety Hazards

**AIRSPACE DESIGN & CAPACITY PLANNING**  
European Route Network Design

**AIR TRAFFIC FLOW & CAPACITY MANAGEMENT**  
24/7 NM operations centre ATFCM

**ATM INFRASTRUCTURE MONITORING**  
Communications, Navigation and Surveillance

**AIRPORTS IN THE NETWORK**  
Full integration

**SCARCE RESOURCES**  
Radio Frequencies  
Radar transponder codes  
Radio Spectrum

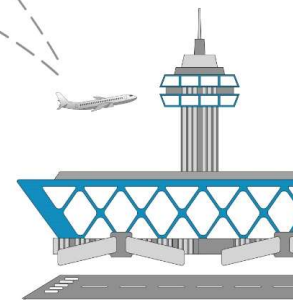
**CIVIL MILITARY COORDINATION**  
Flexible Use of Airspace

**NETWORK PLANNING**  
NSP - NPP - NOP

**ALERTING**  
Support to EU's Air Safety List

**NETWORK CRISIS MANAGEMENT**  
EACCC

**ATM DATA SHARING**  
Aeronautical services

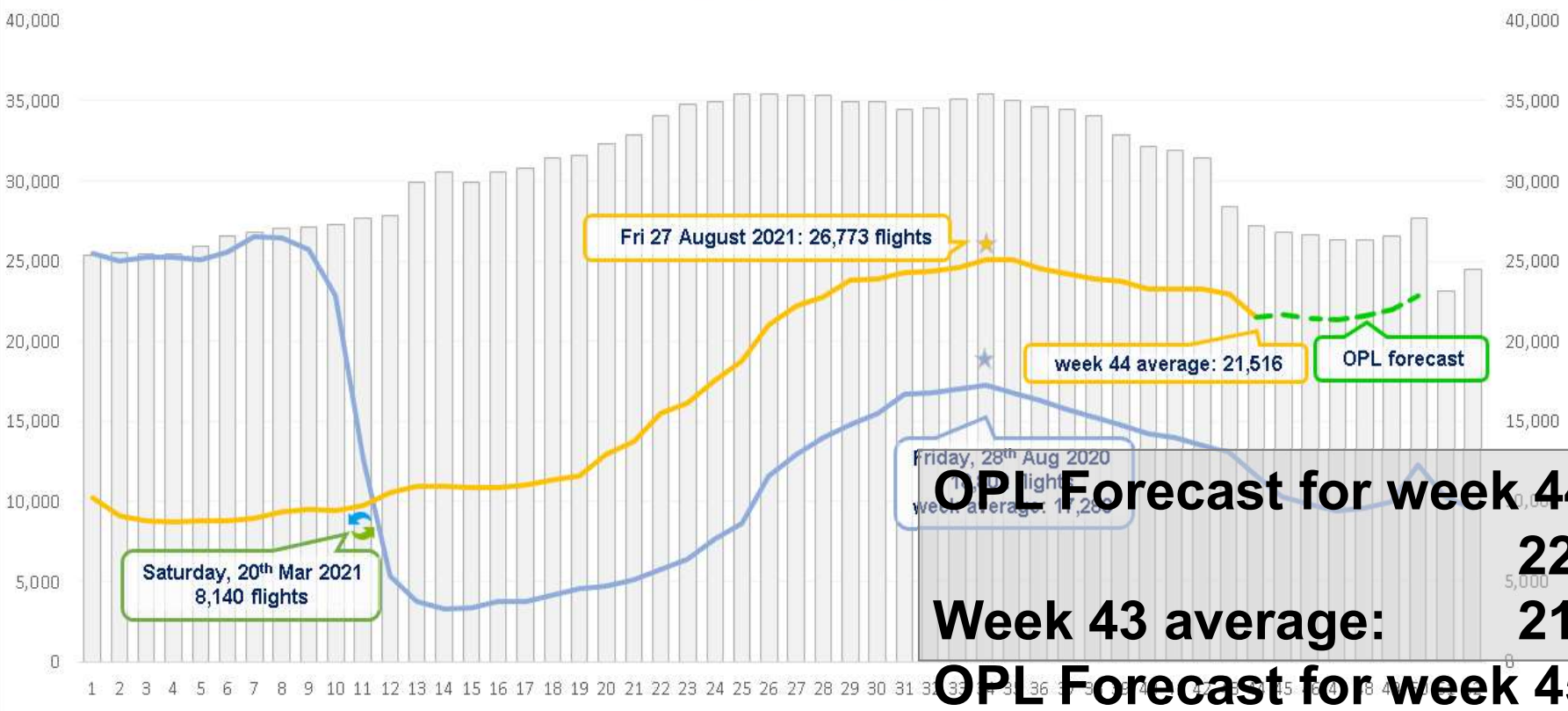








# EUROCONTROL Network Weekly Traffic Evolution: 2019 - 2020 - 2021 (average flights/day)



[Note: 2021 week numbers / traffic aligned on spring clock changes]

2019 2020 2021

**OPL Forecast for week 44:**  
22,146/day

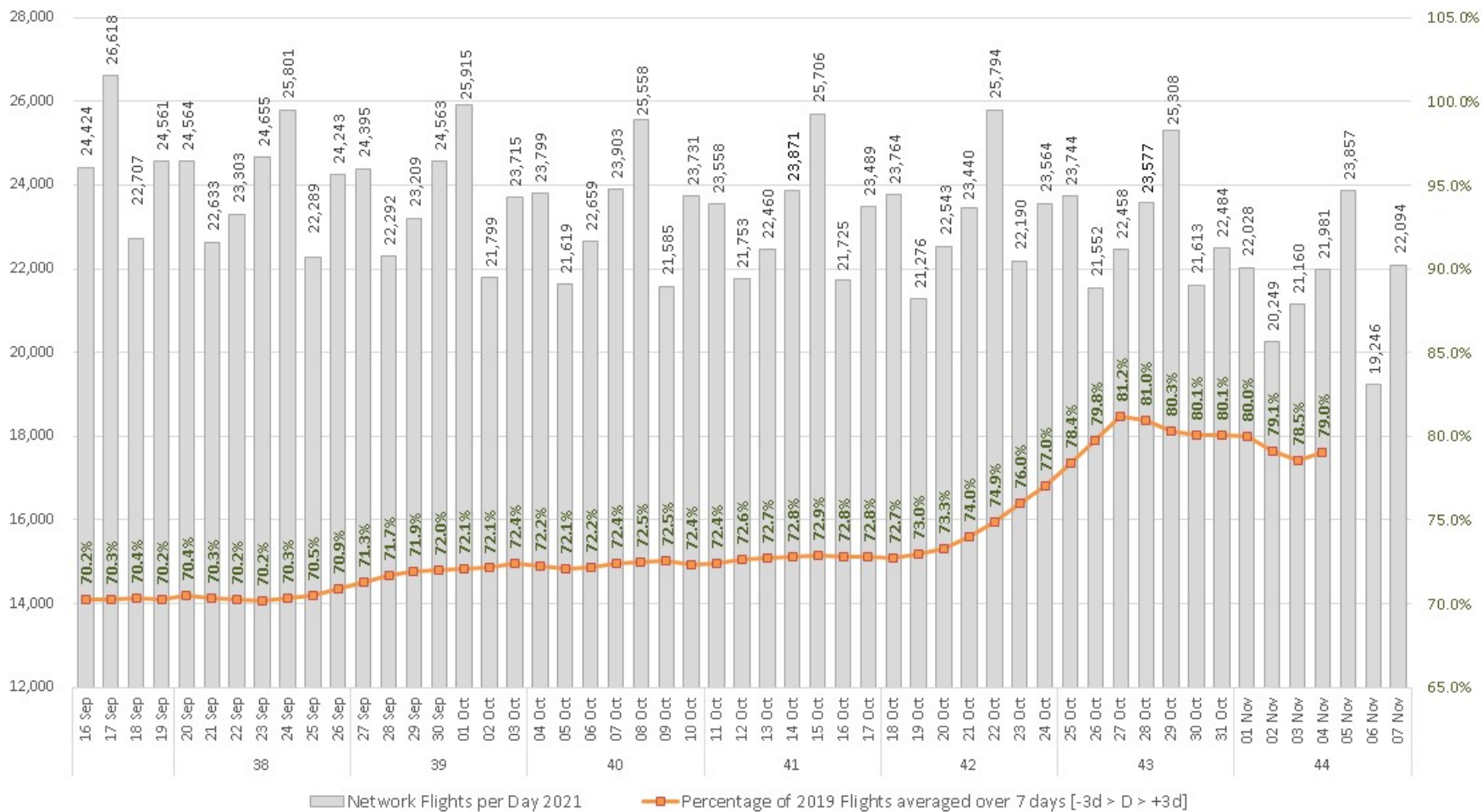
**Week 43 average:** 21,516/day

**OPL Forecast for week 45:**  
21,636/day

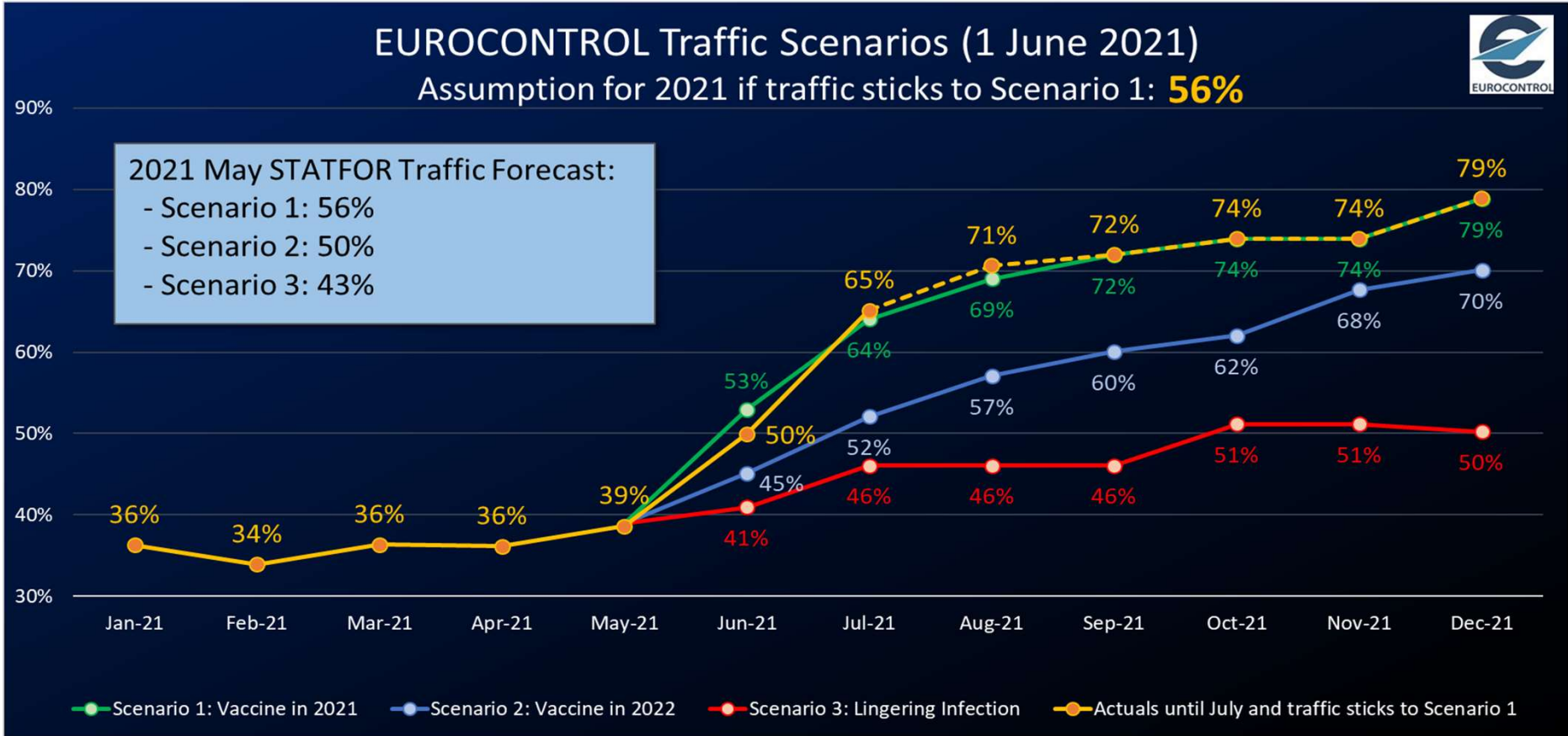


### EUROCONTROL Network

Flights per day 2021, Percentage of 2019 Traffic (averaged over 7 days)



# DOWN 30% = 10,000 FLIGHTS DAILY





# NETWORK OVERVIEW FOR WEEK 44



Date

Total Number of Flights  
**150,615**  
 Difference from 2019  
**-40,055**

% of 2019 Traffic  
 **79.0%**

Traffic %  
 WoW  
**-6.3%**

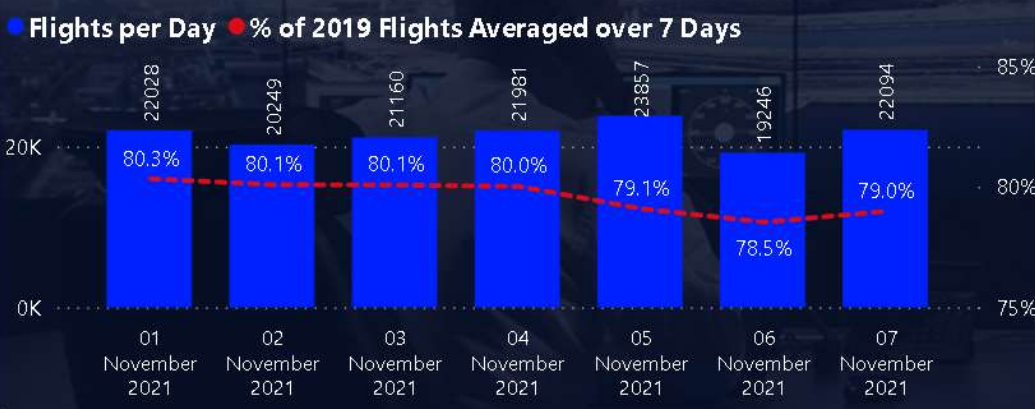
Average Daily  
 Number of Flights  
**21,516**

Average Daily Number  
 of Additional Flights  
**-1,446**

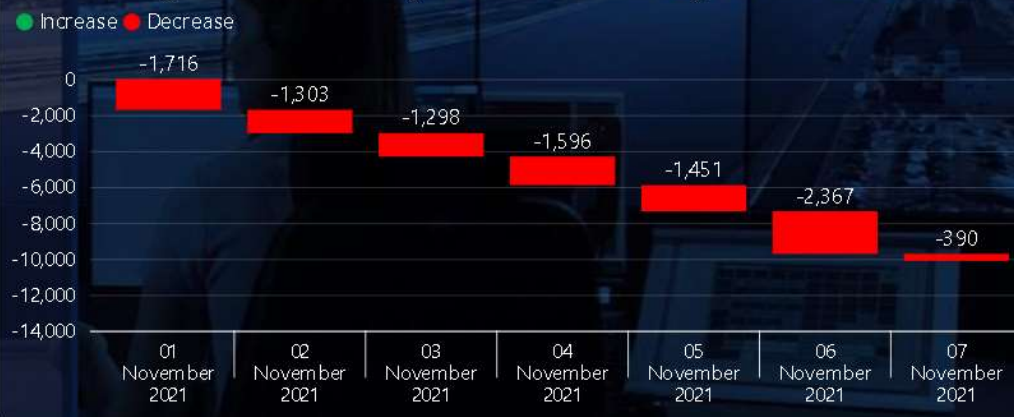
Total Network  
 Delay  
**59,061**

Average  
 Daily Delay  
**8,437**

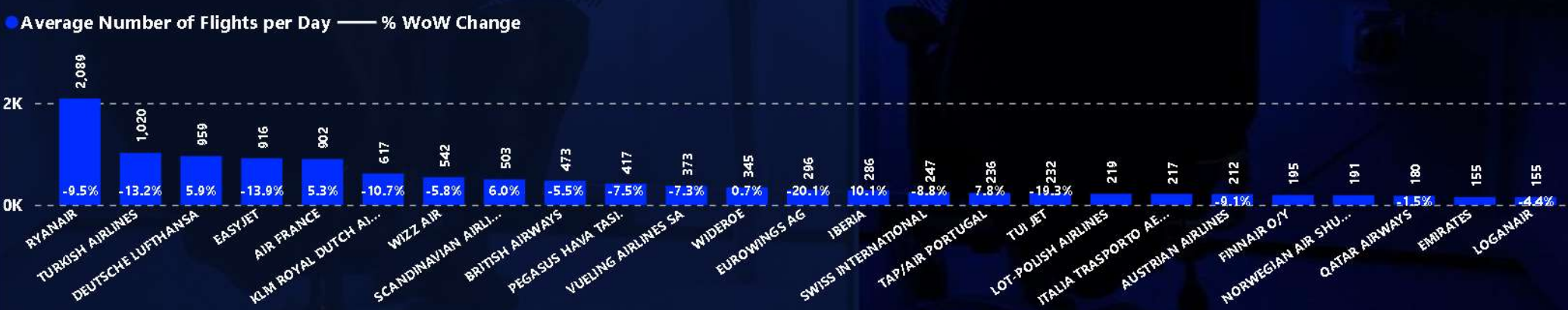
Flights by Day 2021, Percentage of 2019 Traffic (averaged over 7 days)



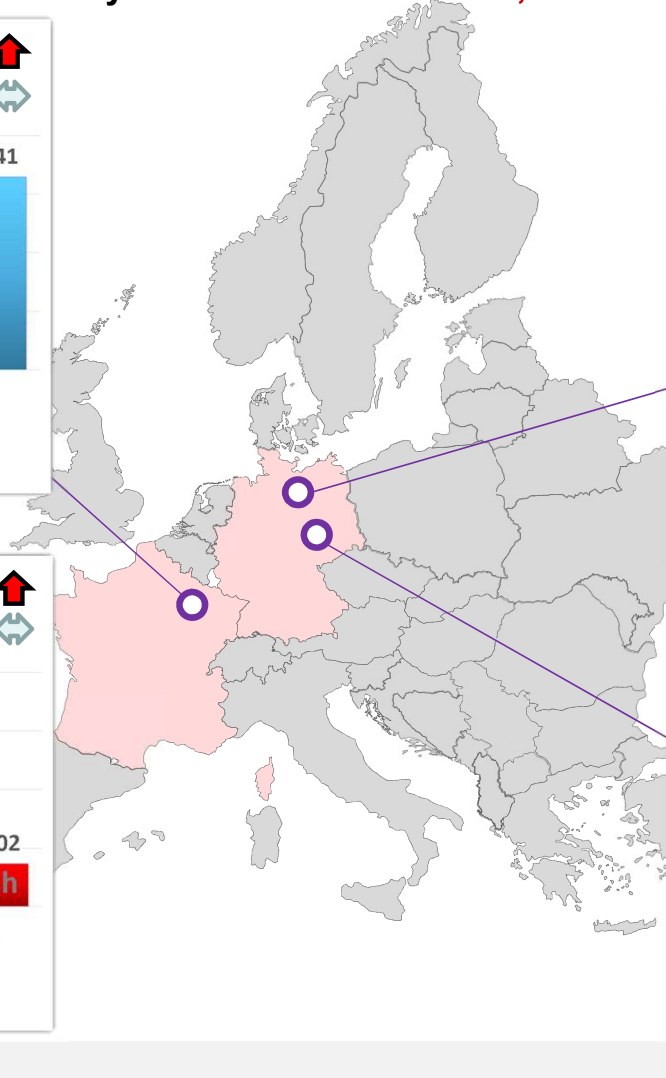
Change in Number of Flights from the Same Day the Previous Week



Top Airlines by Average Daily Number of Flights

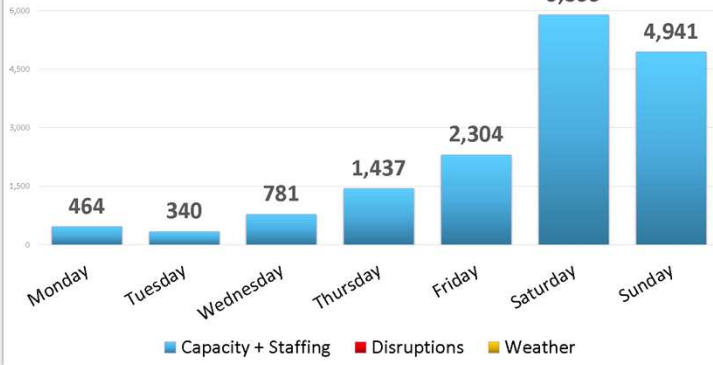


**Week 43 (25<sup>th</sup> - 31<sup>st</sup> Oct 2021): En Route Delays – all ATFM causes: 50,115 min (36,608 min week 42)**



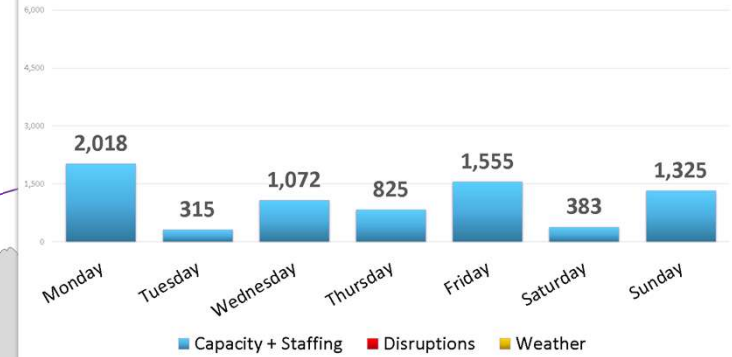
**Reims ACC: 16,166 min**  
(previous week: 10,634 wx 0)

Cap + Staffing:   
Weather:



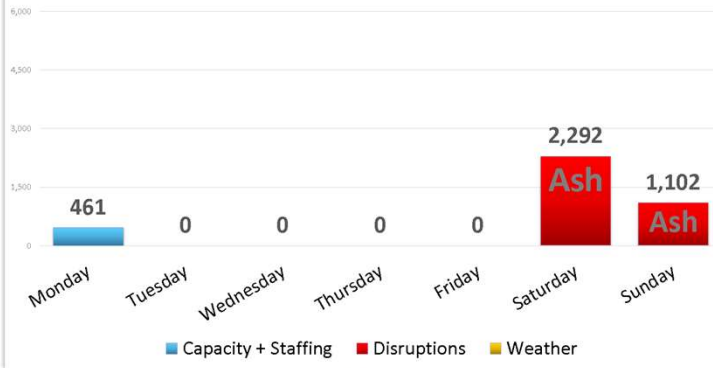
**Bremen ACC: 7,293 min**  
(previous week: 2,874 wx 0)

Cap + Staffing:   
Weather:



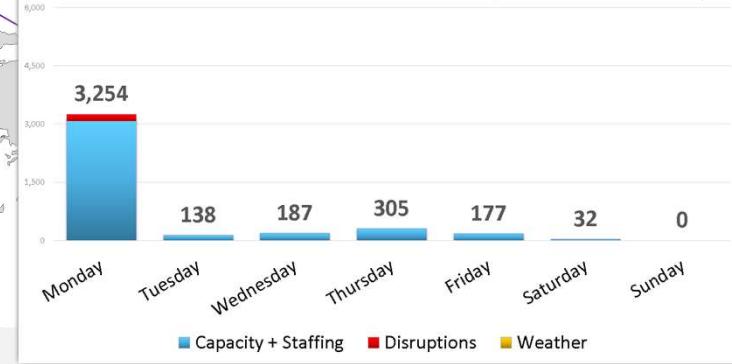
**Canarias ACC: 3,855 min**  
(previous week: 2,507 wx 0)

Cap + Staffing:   
Weather:

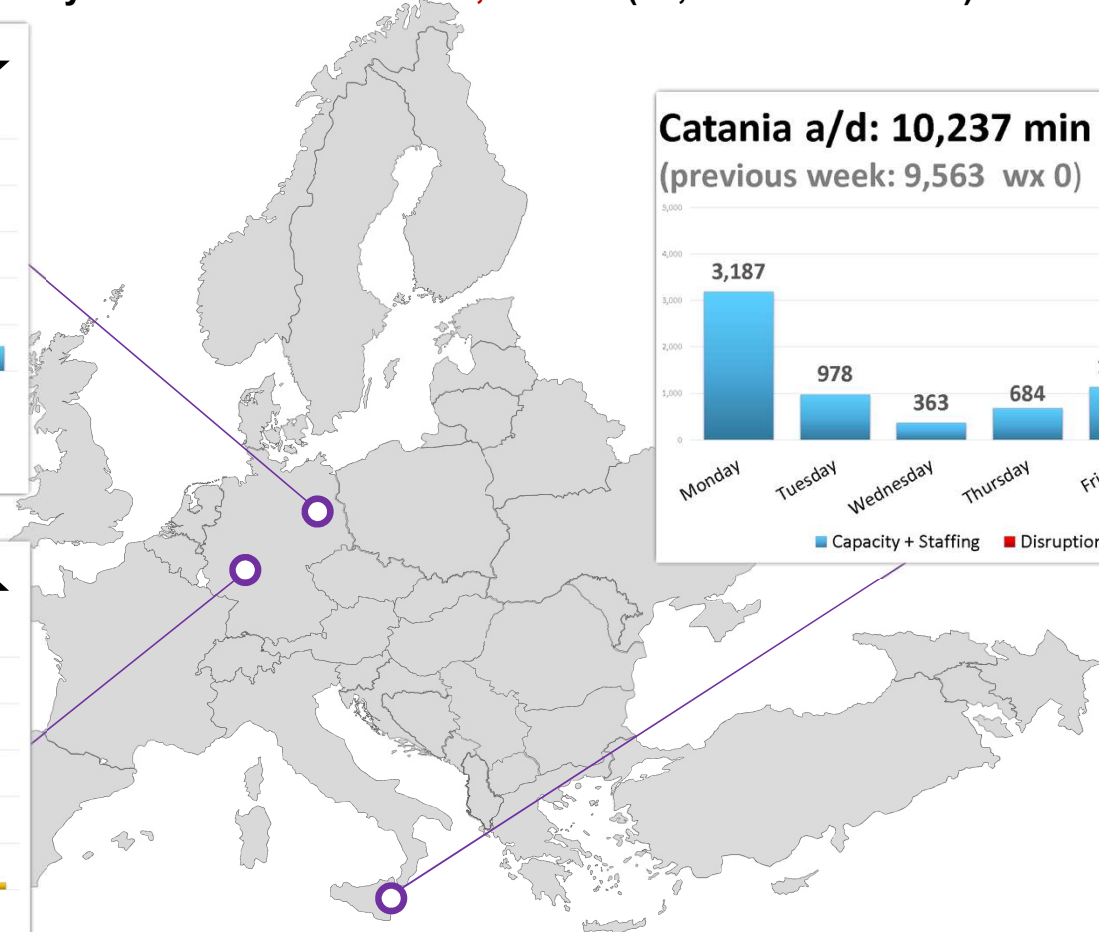


**Karlsruhe UAC: 4,093 min**  
(previous week: 9,783 wx 1,173)

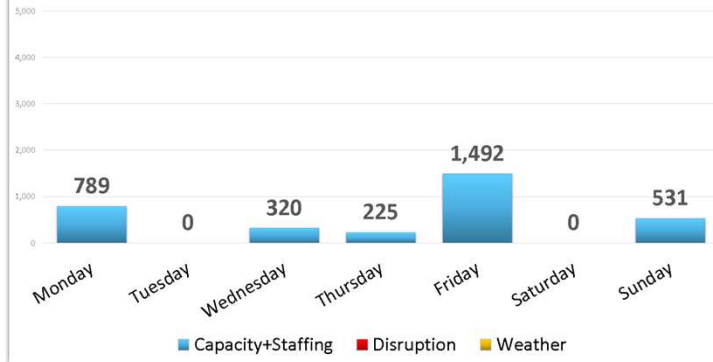
Cap + Staffing:   
Weather:



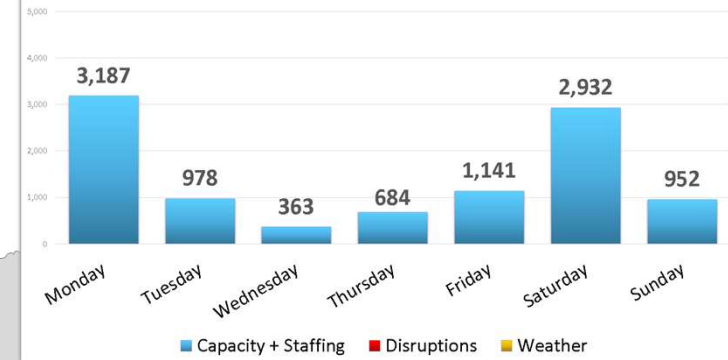
**Week 43 (25<sup>th</sup> – 31<sup>st</sup> Oct 2021): Airport Delays – all ATFM causes: 37,081 min (60,459 min week 42)**



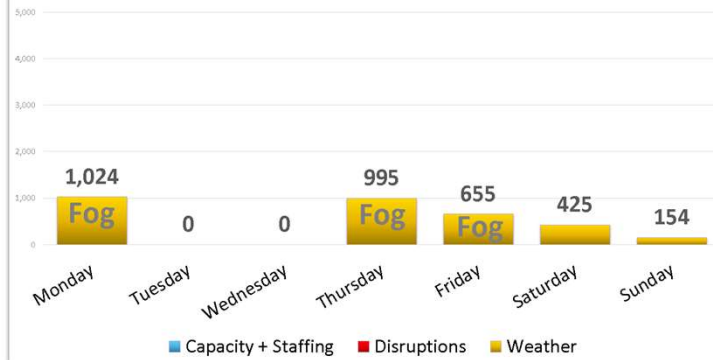
**Berlin a/d: 3,357 min**  
(previous week: 4,626 wx 0) ↓



**Catania a/d: 10,237 min**  
(previous week: 9,563 wx 0) ↑

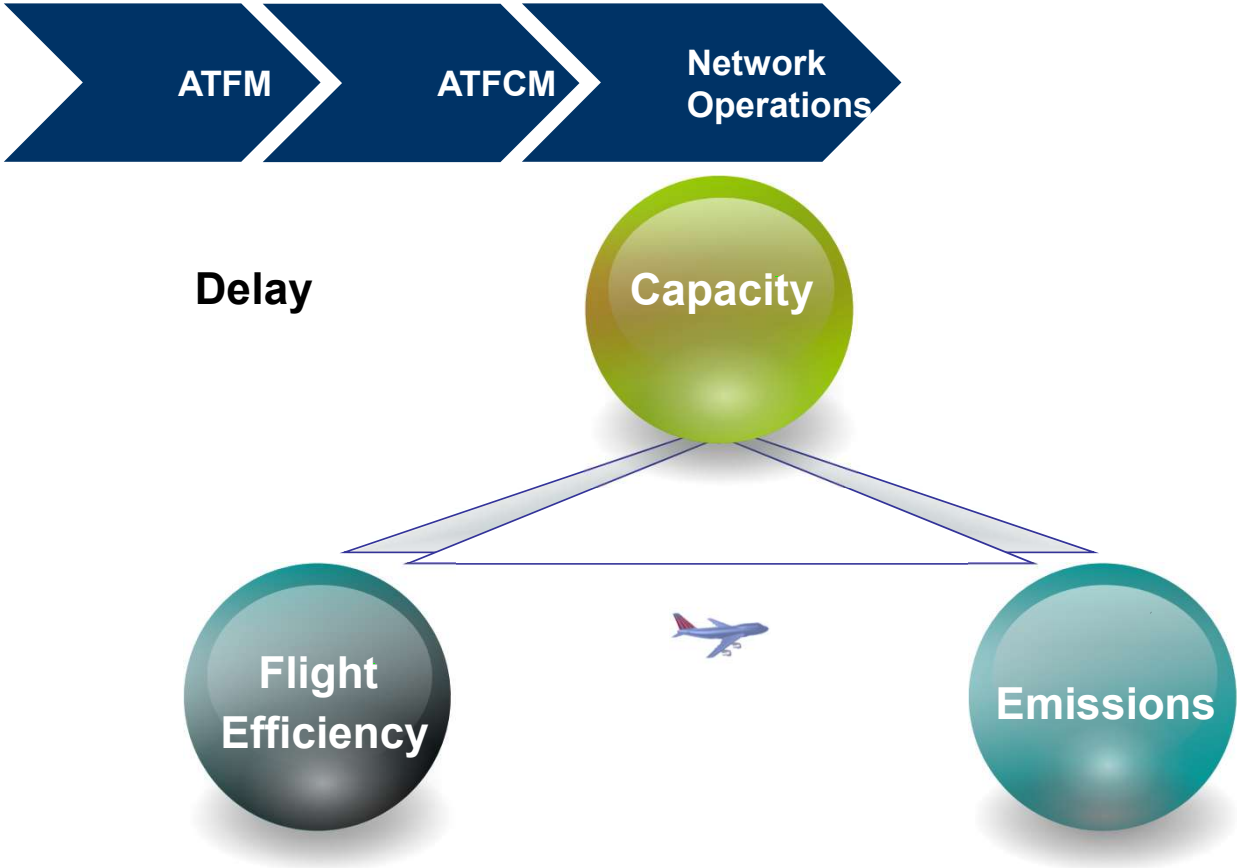


**Frankfurt a/d: 3,253 min**  
(previous week: 1,670 wx 1,670) ↑





# Network Operations



# The Network Manager Operations Centre





# EUROCONTROL ROUTE NETWORK CHART (ERN Chart)

**UPPER AIRSPACE**  
29 April 2020

**AIRSPACES**

- FIR/IR boundary
- FRA - HQ
- FRA - Night
- AMC-Managed Area
- Non-AMC-Managed Area

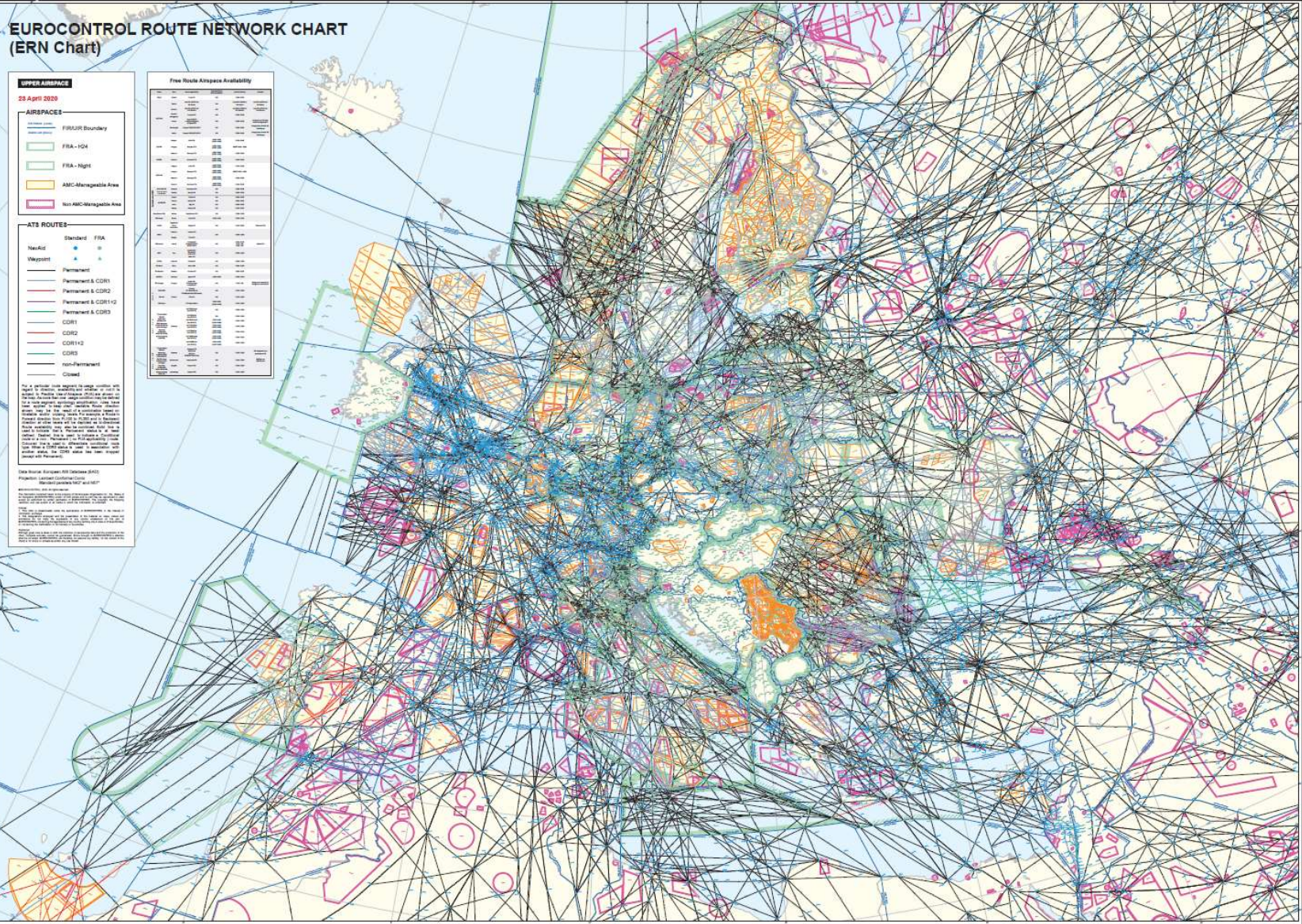
**ATS ROUTES**

- Standard FRA
- Waypoint
- Permanent
- Permanent & CDR1
- Permanent & CDR2
- Permanent & CDR1+2
- Permanent & CDR3
- CDR1
- CDR2
- CDR1+2
- CDR3
- non-Permanent
- Closed

For a detailed description of the chart, refer to the EUROCONTROL website. The chart is subject to change without notice. The chart is not intended for use in the vicinity of airports. The chart is not intended for use in the vicinity of airports. The chart is not intended for use in the vicinity of airports.

**Free Route Airspace Availability**

Area	Availability
Area 1	Available
Area 2	Available
Area 3	Available
Area 4	Available
Area 5	Available
Area 6	Available
Area 7	Available
Area 8	Available
Area 9	Available
Area 10	Available
Area 11	Available
Area 12	Available
Area 13	Available
Area 14	Available
Area 15	Available
Area 16	Available
Area 17	Available
Area 18	Available
Area 19	Available
Area 20	Available
Area 21	Available
Area 22	Available
Area 23	Available
Area 24	Available
Area 25	Available
Area 26	Available
Area 27	Available
Area 28	Available
Area 29	Available
Area 30	Available
Area 31	Available
Area 32	Available
Area 33	Available
Area 34	Available
Area 35	Available
Area 36	Available
Area 37	Available
Area 38	Available
Area 39	Available
Area 40	Available
Area 41	Available
Area 42	Available
Area 43	Available
Area 44	Available
Area 45	Available
Area 46	Available
Area 47	Available
Area 48	Available
Area 49	Available
Area 50	Available





## The elementary sectors (potential max Network capacity)



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# Operations in Pandemic

## Crisis management

Slavi Stoyanov  
Operations Manager



NETWORK  
MANAGER



## 24/7 work during pandemic, different challenge







## Ensure Ops staff health

- Split rosters applied to reduce the risk of infections.
- Less interaction for food and breaks
- A few infections, but no risk across the room
- Operations never in danger
- Many supporting activities
- Plenty of administrative tasks in coordination with senior management, HR, MS.
- Not always clear what to do, **no one was prepared for worldwide pandemic**

## Hazards remain

Volcano in Geldingadalur on March 25, 2021, on Iceland's Reykjanes Peninsula. After 900Y eruption was expected

## We remember 2010



## OPS prepare for the event







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## Local crisis. Etna eruptions





## Local crisis leading to NM crisis (EGLL 2010)





# Political crisis. Sunday 23 May, FR4978



## Athens to Vilnius flight diverted over Belarus

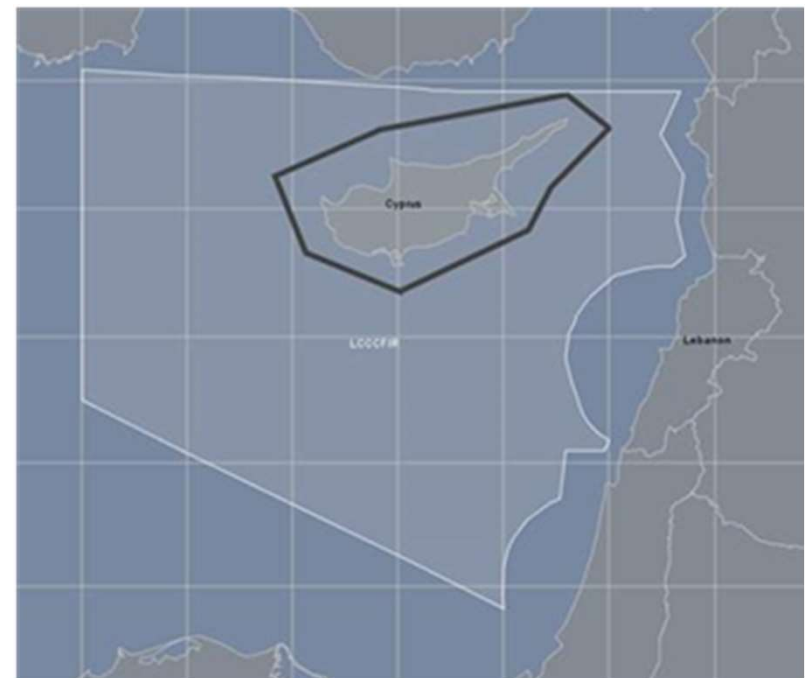


Note: All times GMT

Source: Flightradar24

BBC

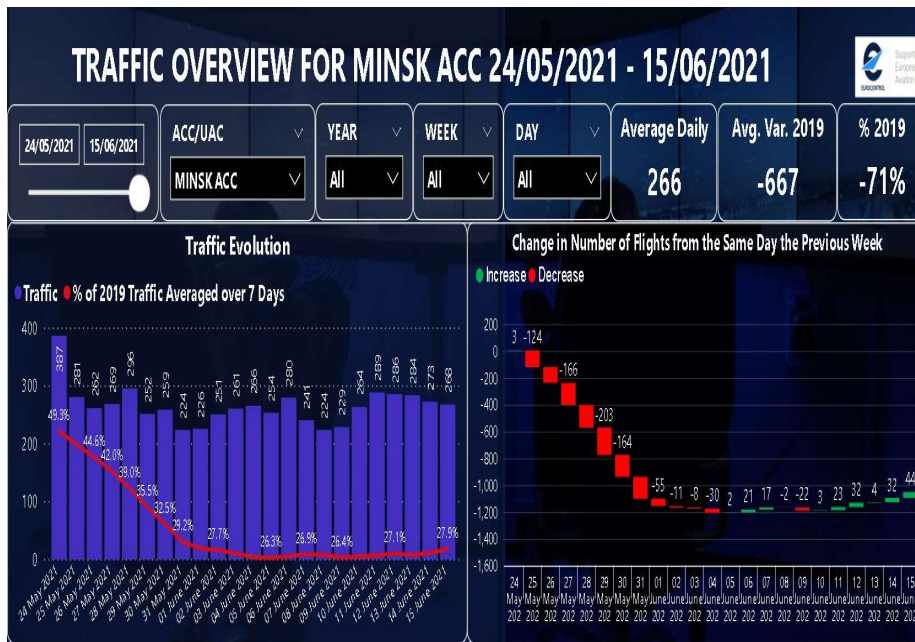
All Belarusian registered A/C cannot overly territory of EU



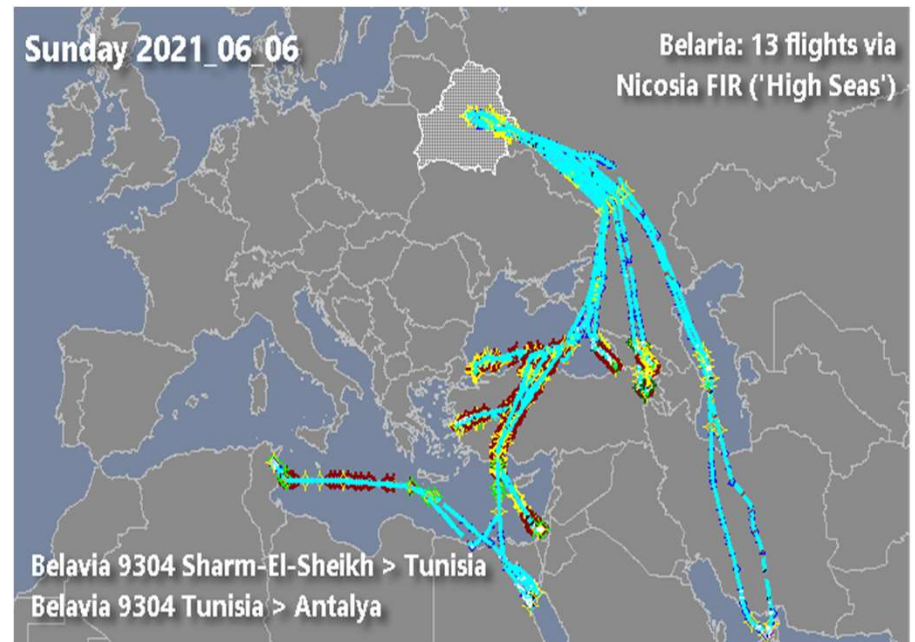
# OPA Support



## EASA safety Information bulletin



## EU council decision



# CRISIS



## **Network crisis**

- Most of the time triggered by operations
- Senior management is informed
- Process known
- Systems prepared

## **Political crisis**

- Most of the time information form senior management or external communication to the ops.
- Different needs, process not at 100%
- Systems need improvement
- Accurate and timely communication

**What next:** Operational staff challenges after long period with low traffic demand. ANSPs, AOs, A/Ds and NM in similar situation.





Ops colleagues wish you busy summer!!!

