

Supporting
European
Aviation



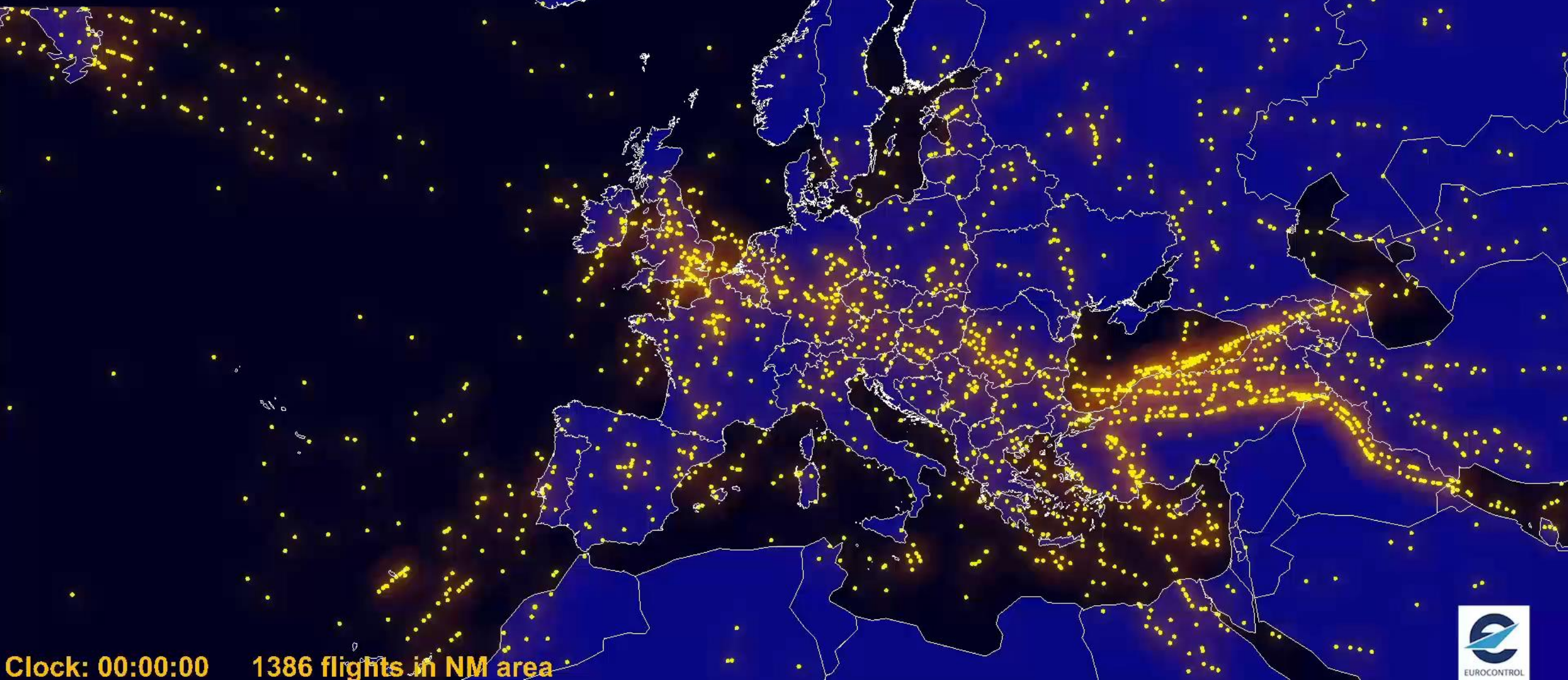
Civil-Military Cooperation Division Keynote Speech

Major General Karsten STOYE
Head of Civil-Military Cooperation Division
Military Advisor to the Director General

THE BUSIEST DAY IN THE EUROCONTROL NETWORK

37,228 flights

Friday 28 June 2019



Clock: 00:00:00

1386 flights in NM area

EUROCONTROL



1960s

1980s

1990s

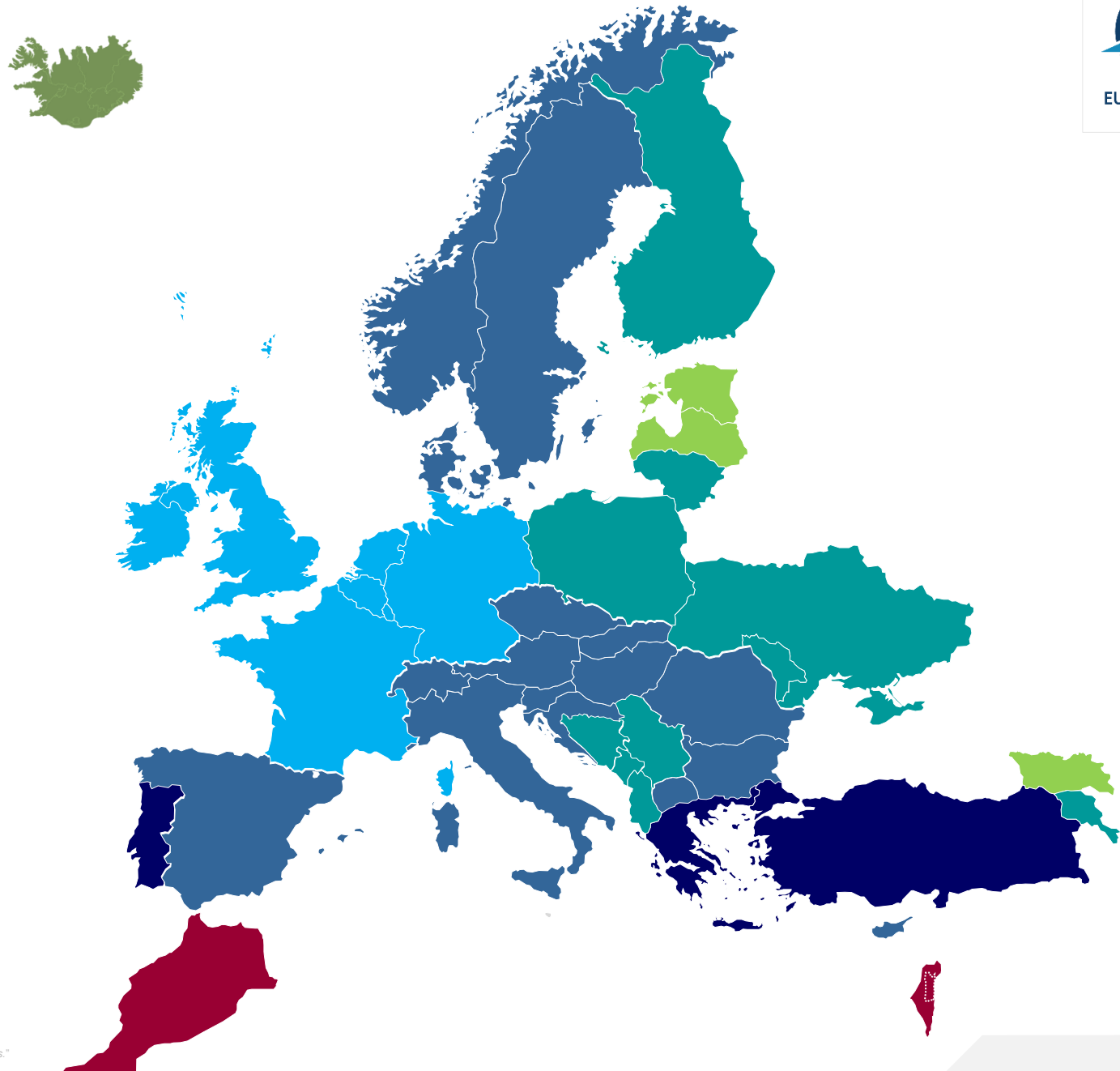
2000s

2010s

2020s

42 Member States &
the European Union

2 'Comprehensive Agreement'
States: Morocco & Israel



The designations employed and the presentation of the material on maps in this presentation do not imply the expression of any opinion whatsoever on the part of EUROCONTROL concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

EUROCONTROL



Brétigny

A green semi-circular graphic containing a black silhouette of a human head in profile, with a green brain icon inside. The word 'Brétigny' is written in white text below the icon.

Brussels

A blue semi-circular graphic containing a black silhouette of a multi-story building. The word 'Brussels' is written in white text below the icon.

Luxembourg

A grey semi-circular graphic containing a black silhouette of a person standing at a whiteboard, pointing at it, with three smaller black silhouettes of people sitting in front of the board. The word 'Luxembourg' is written in white text above the icon.

Maastricht

A red semi-circular graphic containing a black silhouette of a pilot wearing a cap and a uniform. The word 'Maastricht' is written in white text above the icon.

EUROCONTROL

Organization for the Safety of Air Navigation in Europe



Harmonize



Integrate



Unify

**Air Navigation Services
+
Air Traffic Management
Systems**



Safe



Orderly



Expeditious



Economic

Traffic Flow

EUROCONTROL's Tasks

Maastricht Air Navigation Service provider



Innovation Hub



ATC billing service up to €10 billion p.a.

Air Traffic Network Manager for all of Europe



Aviation Learning Centre

Civil-Military Coordination



Pan-European expert support including on data and sustainability

MANAGING ONE SINGLE FLOW MANAGEMENT SYSTEM OVER EUROPE

NETWORK OPERATIONS

44

States

~1,900

Sectors – 68 en-route centres

5,500+

Connected end-users

525

Airports

6,664

Airspace users

60

Flow management positions

11 million

Flights per year (2019)

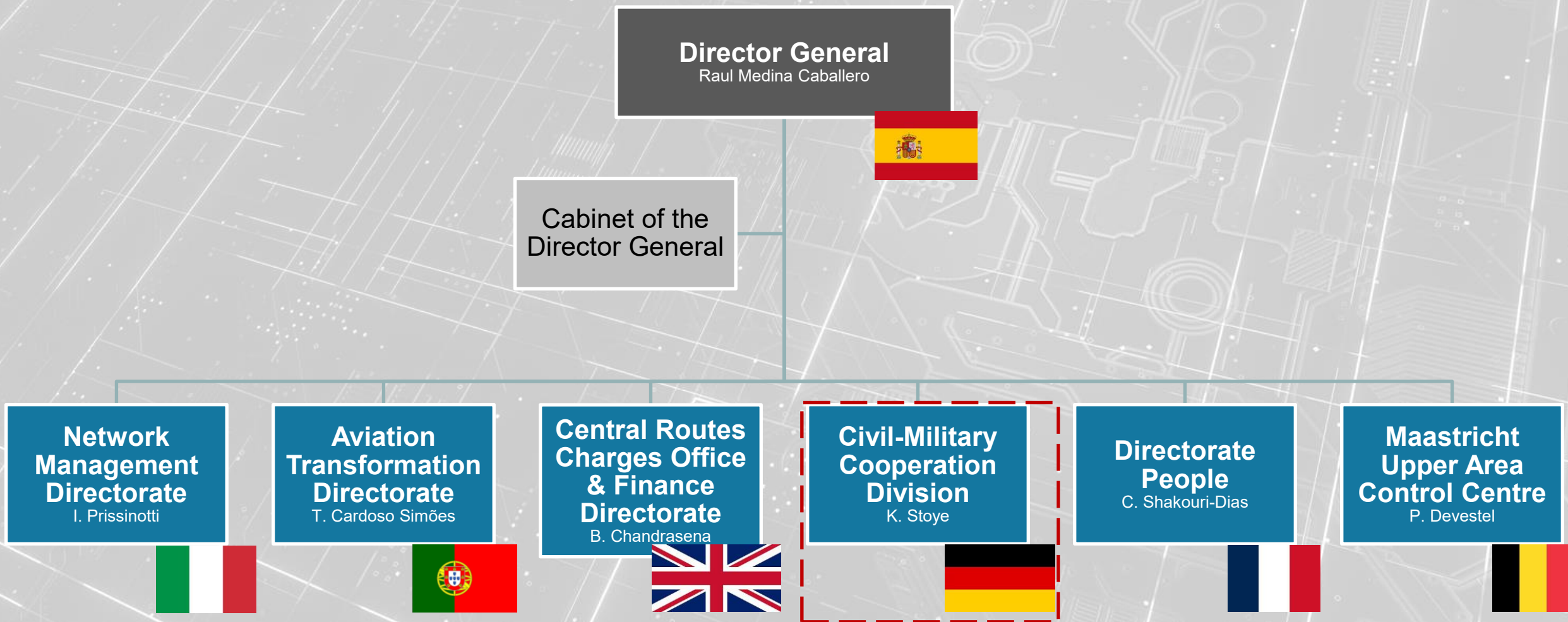
Peak

37,000

Flights per day (2019)



The EUROCONTROL Agency Structure



TRAJECTORY 2030 STRATEGY



MISSION

Advancing the highest standards of civil and military aviation across the pan-European network.



VISION

Reinforcing partnerships, innovation and fostering progress by being a reliable and respected partner with a high level of expertise and performance capabilities.



VALUES

Collaborating as a high-performing team committed to excellence and innovation that values integrity, diversity and transparency, with a strong sense of duty.

TRAJECTORY 2030 STRATEGY



1. Focus on Member States
2. Strengthen EU relations
3. Maintain key international partnerships
4. Expand global partnerships
5. Reinforce EUROCONTROL's operational role
6. Deliver core business services efficiently
7. Leverage technology
8. Optimise governance
9. Modernise people management
10. Ensure financial sustainability

CIVIL-MILITARY STRATEGY & PRIORITIES 2024+



*DG EUROCONTROL, Raul Medina CABALLERO on the right
Head of CMC Division, Maj Gen Karsten STOYE on the left*



CMC's Tasks and Priorities

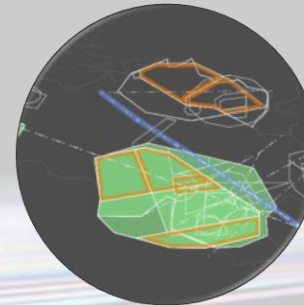
**Stakeholder Cooperation
and Support**



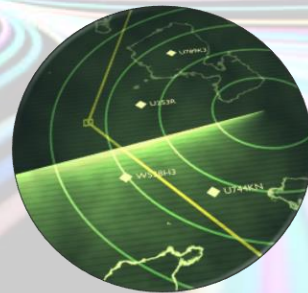
ATM (Cyber) Security



**LARA
CIMACT
PRISMIL**



**Communications,
Navigation and
Surveillance**



Flexible Use of Airspace



Data Sharing / SWIM



**Military Network
Requirements**



Global Civil Military Cooperation



ICAO Air Navigation Commission

European Space Agency

Airspace Integration Week

NATO

European Defense Agency (EDA)

Air Chief's of Member States



CIVIL-MILITARY AVIATION SUMMIT 2025



Civil-Military Cooperation in the spotlight

*We live in a world with ongoing wars and crisis. That means **increased military activity**, new demands on airspace, and intensified training. These all underscore the critical need for close **coordination** and **cooperation** between civil and military aviation actors*



The Challenge Ahead for Sustainable Growth



New Normal

- NATO enhanced Vigilance Activities
- Additional military training areas
- Further rising conflicts!?



New Entrants

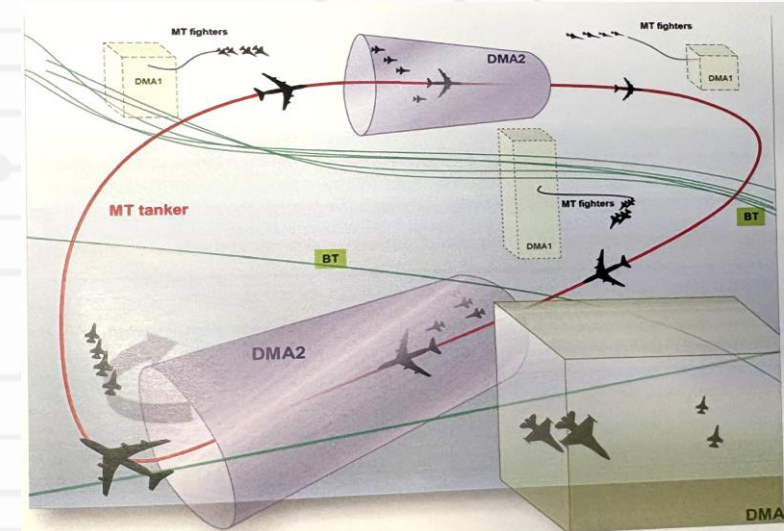
- Unmanned Aircraft Systems (UAS)
- Space Launches + Re-entries
- Hypersonic Flights
- Balloons



Flexible Use of Airspace - FUA

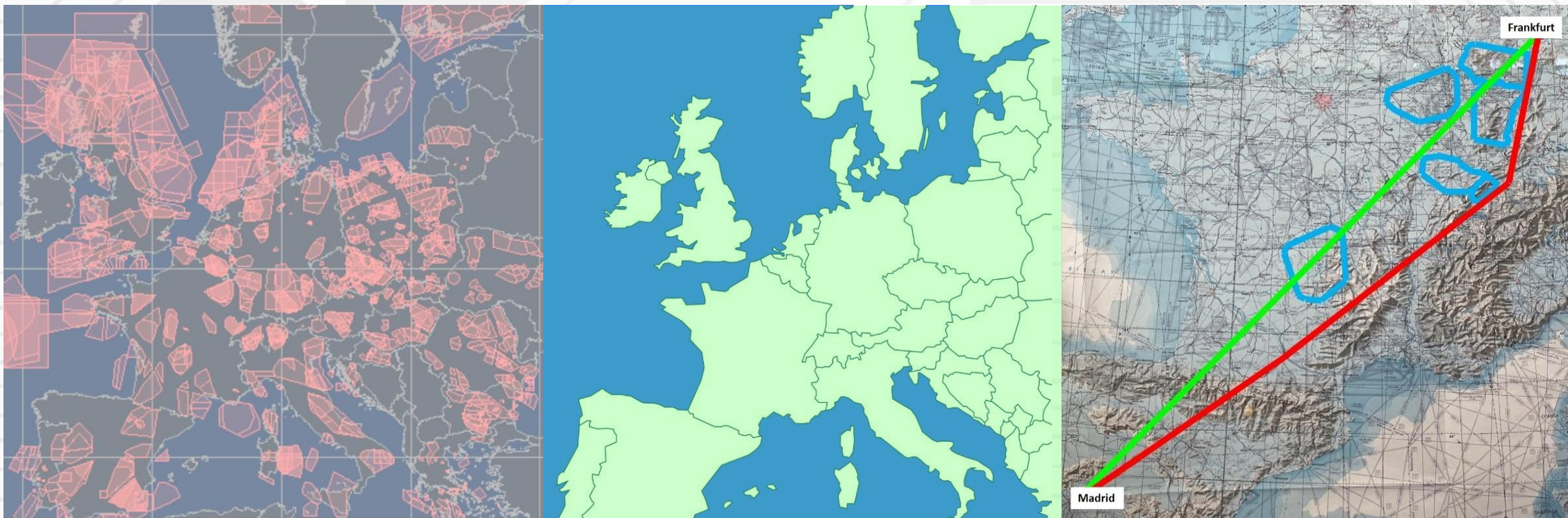
The Regulation (EU) 2150/2005

- Establishes common rules for **ASM** in the European Union
- Cooperation between civil and military entities for effective ASM
- Establishment of coordination procedures and airspace management structures by EU member states
- Cross-Border coordination



**CMC enables and supports the implementation of
FUA from planning to execution!**

Flexible Use of Airspace - FUA



When airspace that can be reserved for the military...

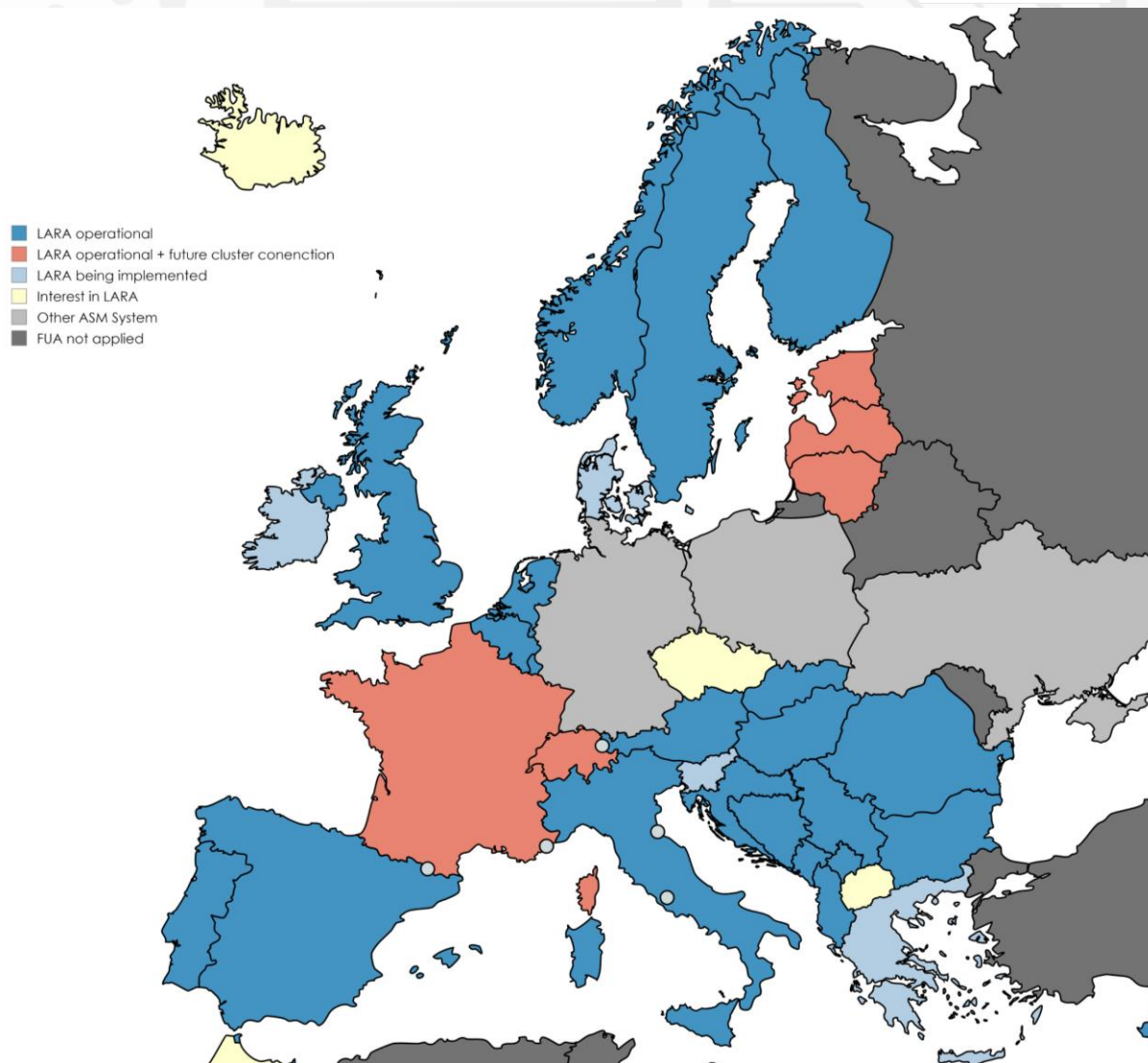
...is fully available for civil use on Saturdays and Sundays...

...why are airlines circumnavigating this airspace?

The LARA Tool

Local and sub-regional ATM Support system

- supports and enhances the airspace management process
- according to advance flexible use of airspace (AFUA) principles
- enables collaborative decision-making
- provides live situational awareness to civil and military partners
- from strategic planning to actual airspace activation processes



The LARA Tool

Local and sub-regional ATM Support system

Interest in LARA beyond Europe

Signed Agreement:

- Australia

Countries showing interest:

- Japan
- South Korea
- Indonesia
- Singapore
- Canada

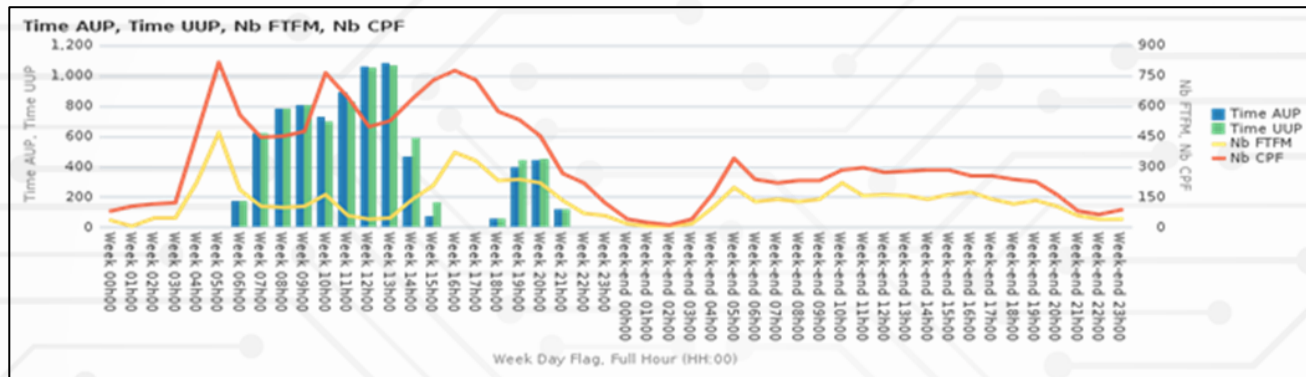
Global interest drives further development and innovation of FUA!



The PRISMIL Tool

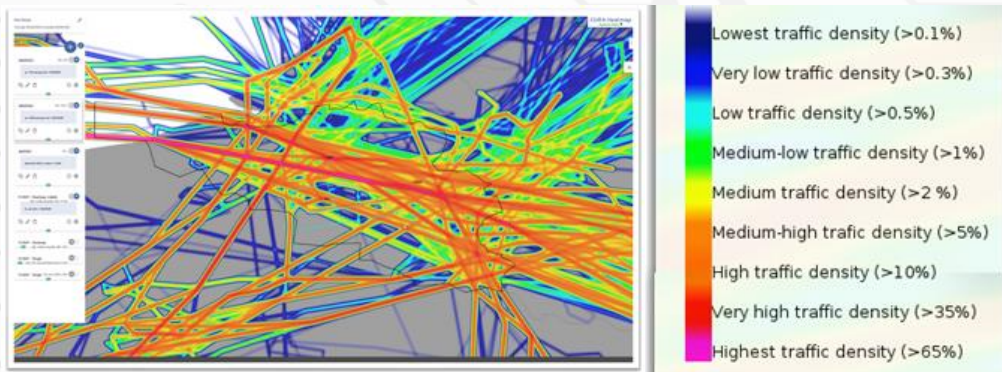
Pan-European Repository of Information Supporting Military & Civil Performance Monitoring Tool

1. CURA – Performance measurement tool

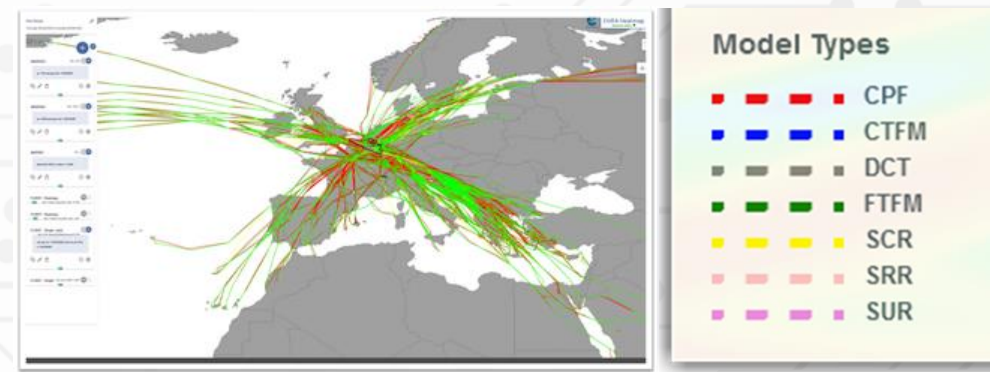


2. CURA HEATMAPS : Interactive data visualization tool on maps

"Heatmap" layer for Traffic Density (colors)

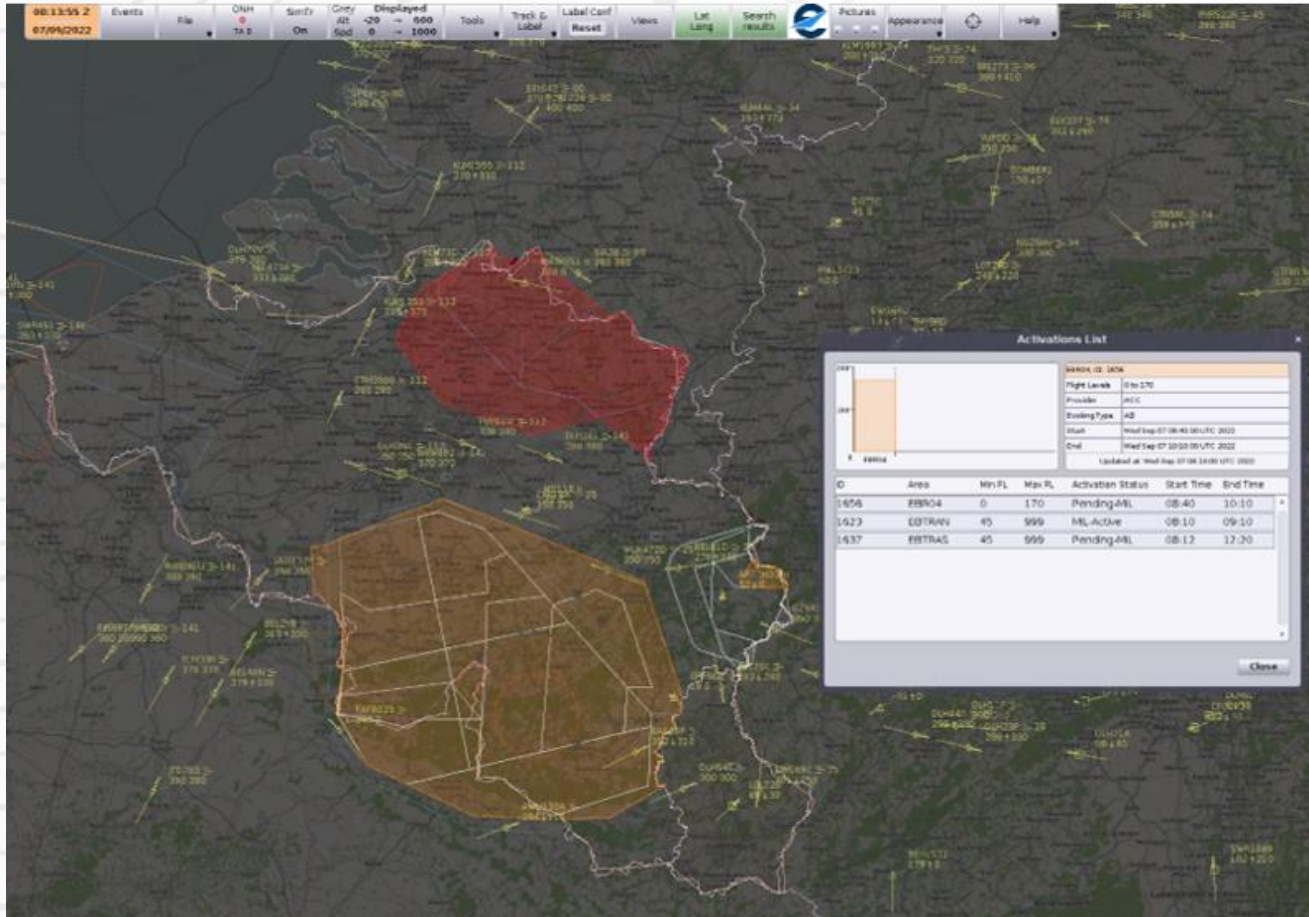


"Single" layer for Traffic Trajectory (models)



The CIMACT Tool

Civil-Military Air Traffic Management Coordination Tool



- **Coordination system** to exchange real-time traffic information between civil and military users for common situational awareness to improve safety and efficiency
- **Tactical coordination** between civil and military controllers during activation and use of areas for military training activities
- **ATM security** – Airspace Security Incident Management System, used as part of the NATO Regional Airspace Security Program (RASP)

The CIMA CT Tool

Civil-Military Air Traffic Management Coordination Tool

- ATM data display system, processing a variety of surveillance and flight plan data provided by civil and/or military sources
- Enhancing **Cross-Border** Interoperability by sharing data via SWIM and other ATM standards
- Providing coordination facilities with the possibility to highlight and forward tracks and geographical pointers to other users and systems
- Capable to run on „commercial-off-the-shelf hardware“ and communicate via IP networks
- Includes simulation and training capabilities



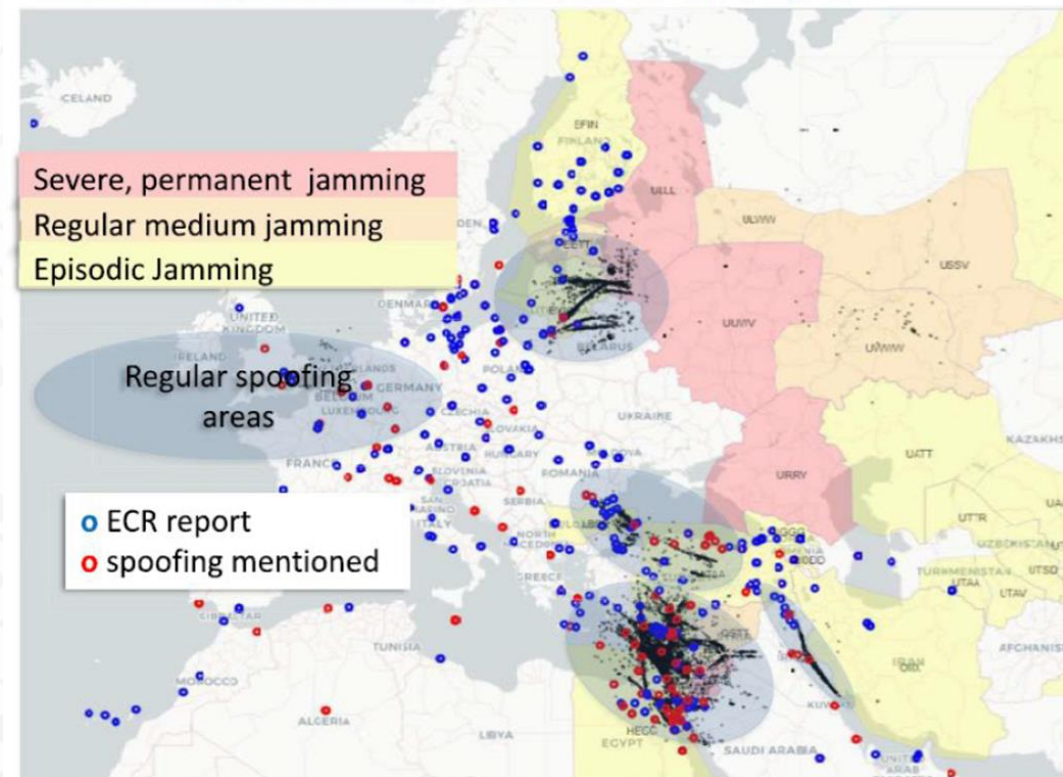
Overview of GNSS interference

Since February 2022 - increase in GNSS jamming and spoofing, particularly in regions surrounding conflict zones

- **Jamming:**
This intentional radio frequency interference prevents GNSS receivers from locking onto satellite signals, rendering the system ineffective or degraded.
- **Spoofing:**
This involves broadcasting counterfeit satellite signals to deceive GNSS receivers, causing incorrect position, navigation, and timing data.

Sherlock's GRID Nav Monitoring App – GNSS Radio Frequency Interference Detector (Browser-based Data-Platform)

2024 events in one chart



GNSS Radio Frequency Interference (RFI)

Jamming and Spoofing

Operational Challenges

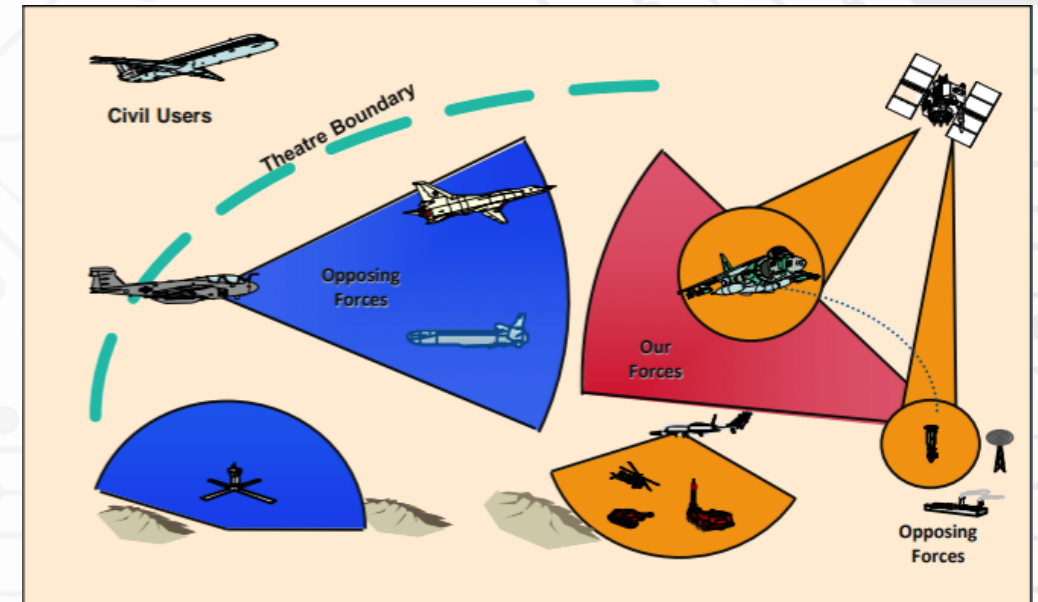
- Disruption of key avionics: terrain awareness, ADS-B, NAV procedures
- Increased cockpit workload & ATC deviations
- Shift between Standard and Special OPS phases
- Tactical fallback: TACAN remains relevant

CIV-MIL Resilience

- Use of secured waveforms & MIL-grade receivers
- Strategic approach: **Protect – Preserve – Prevent**

Procedural & Training Initiatives

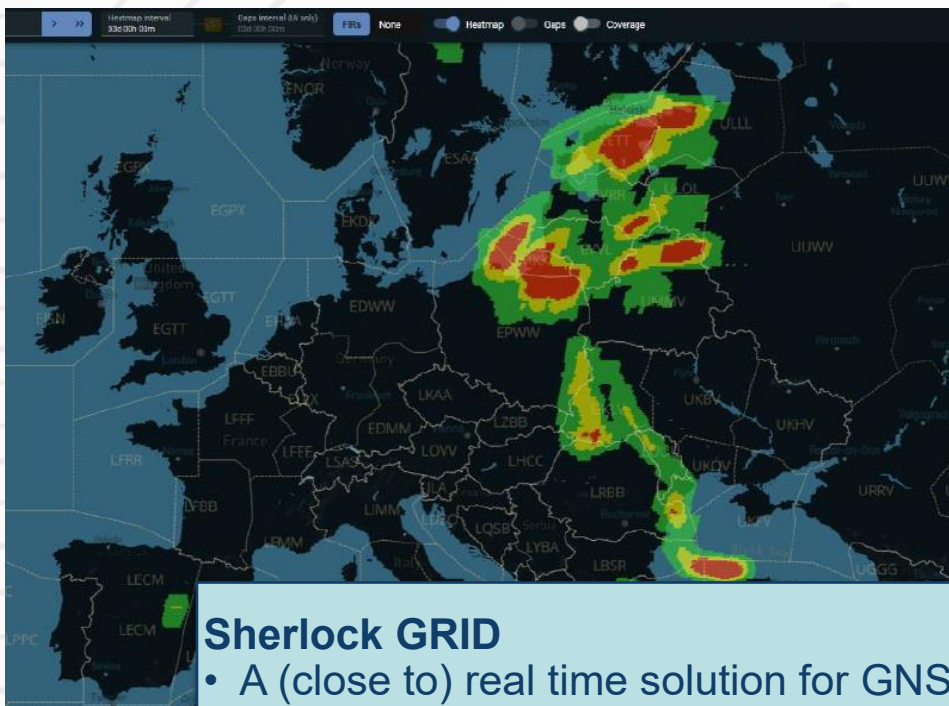
- Update PBN Handbook No. 6 via NETOPS
- EACCC GNSS RFI Exercise (19–20 March 2025)



GNSS Radio Frequency Interference (RFI)

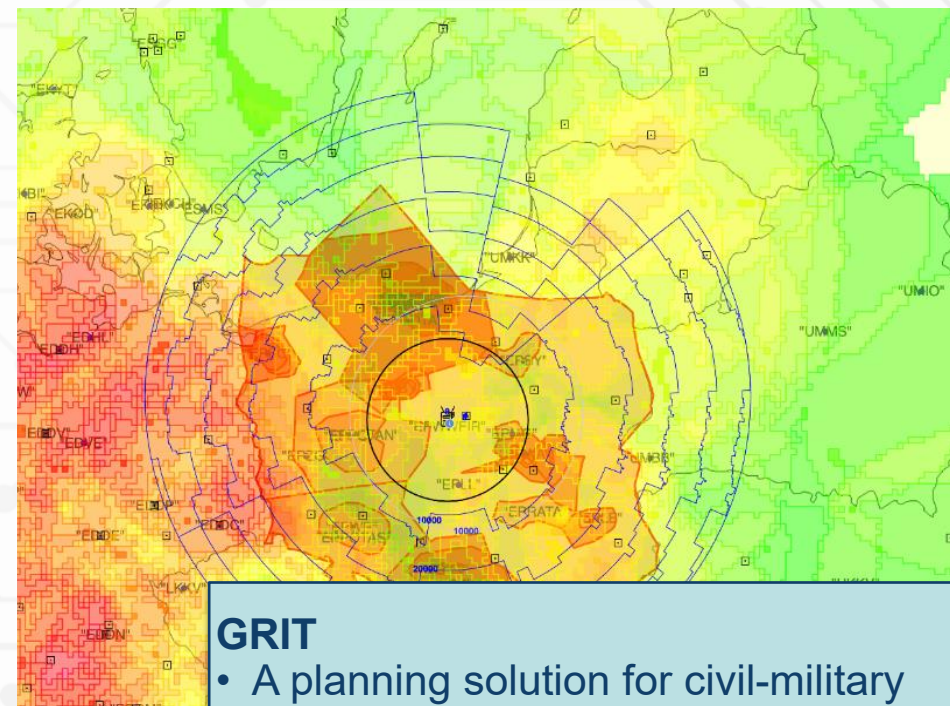
Jamming and Spoofing

Civil & Military – Hand in Hand



Sherlock GRID

- A (close to) real time solution for GNSS Interference detection



GRIT

- A planning solution for civil-military coordination of GNSS RFI events

Note: GRID stands for GNSS Radio Frequency Interference Detector; GRIT stands for GNSS Radio Frequency Interference Testing tool

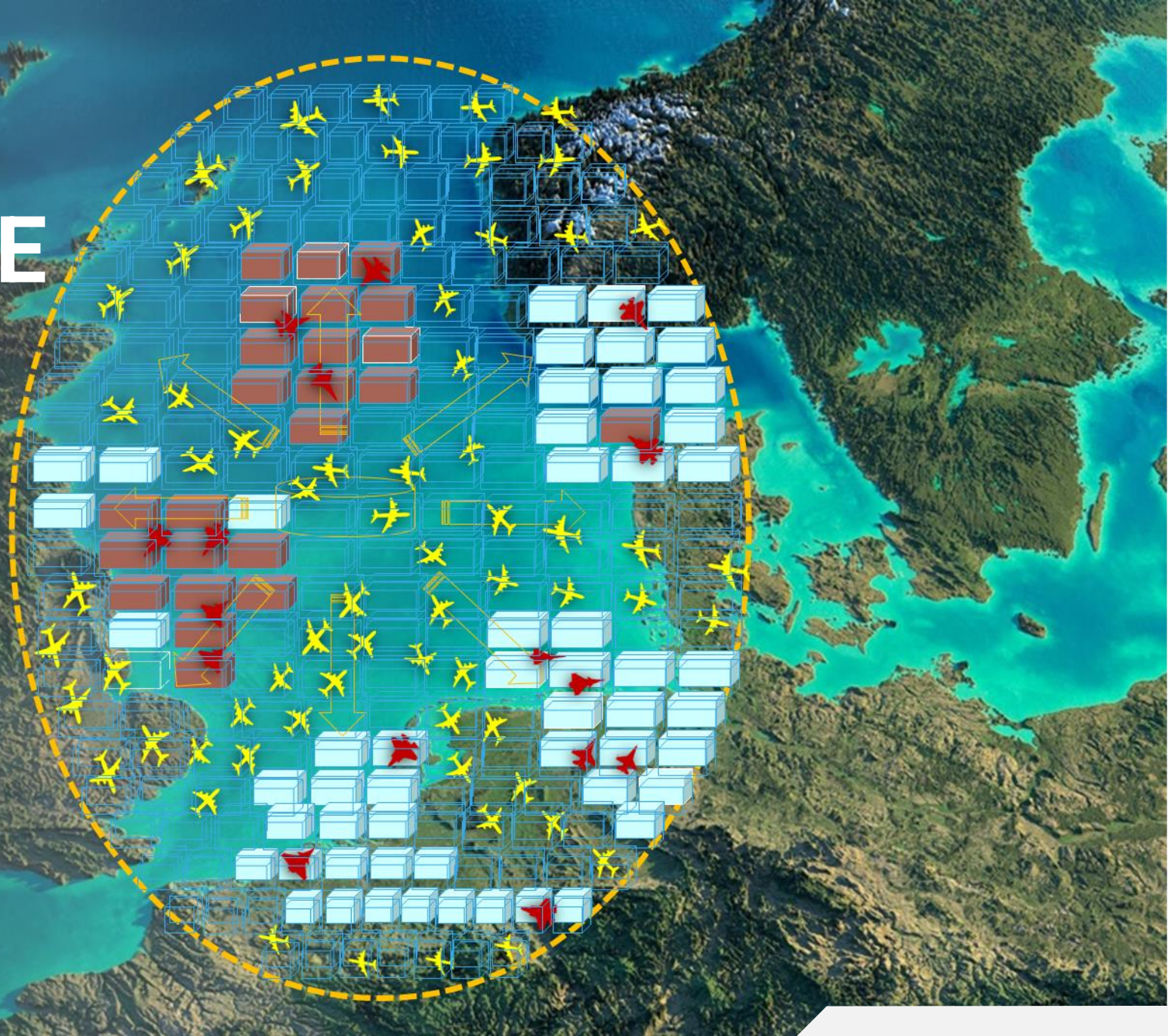
NORTH SEA AREA INITIATIVE

Defining a geographic perimeter
of modular design application
over land and sea

Applying modular design
over land and sea

Defining airspace volumes
for training needs

Distributing airspace resources
between civil and military
airspace users



SUPPORTING EUROPEAN AVIATION

