

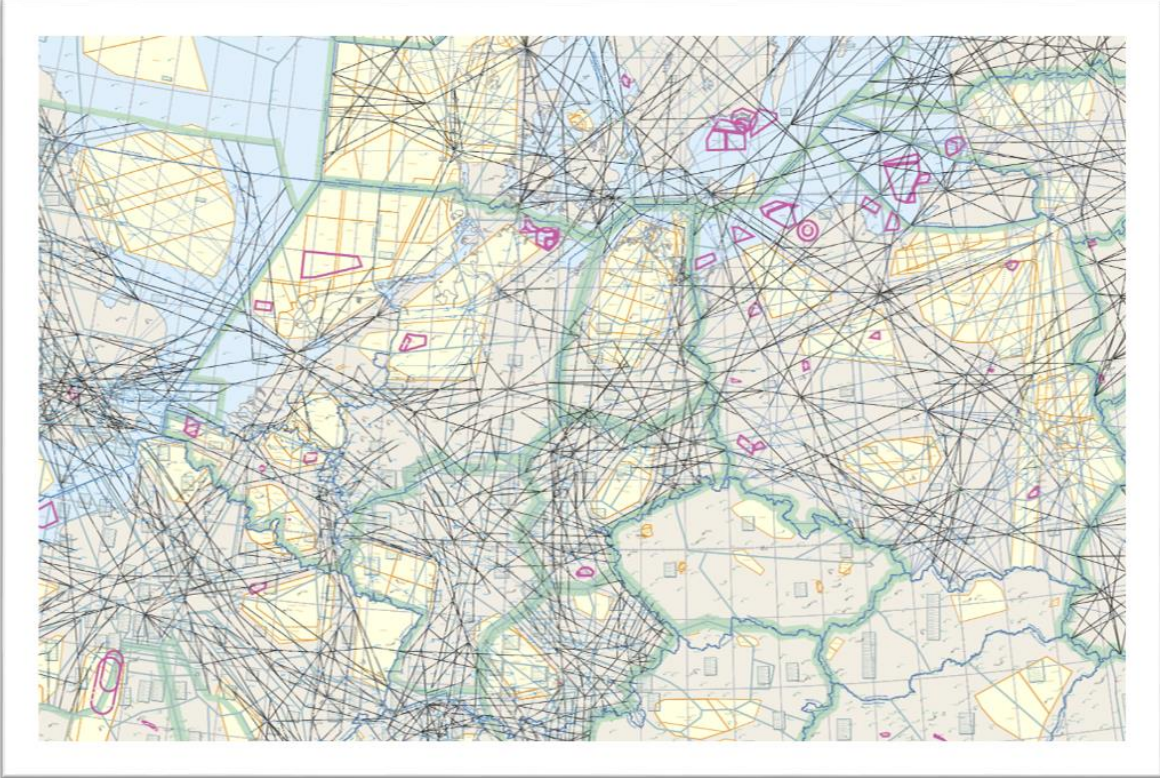


SUPPORTING
EUROPEAN
AVIATION

Civil-Military Coordination Flexible Use of Airspace and System Support



The Flexible Use of Airspace Concept (FUA)



Outline

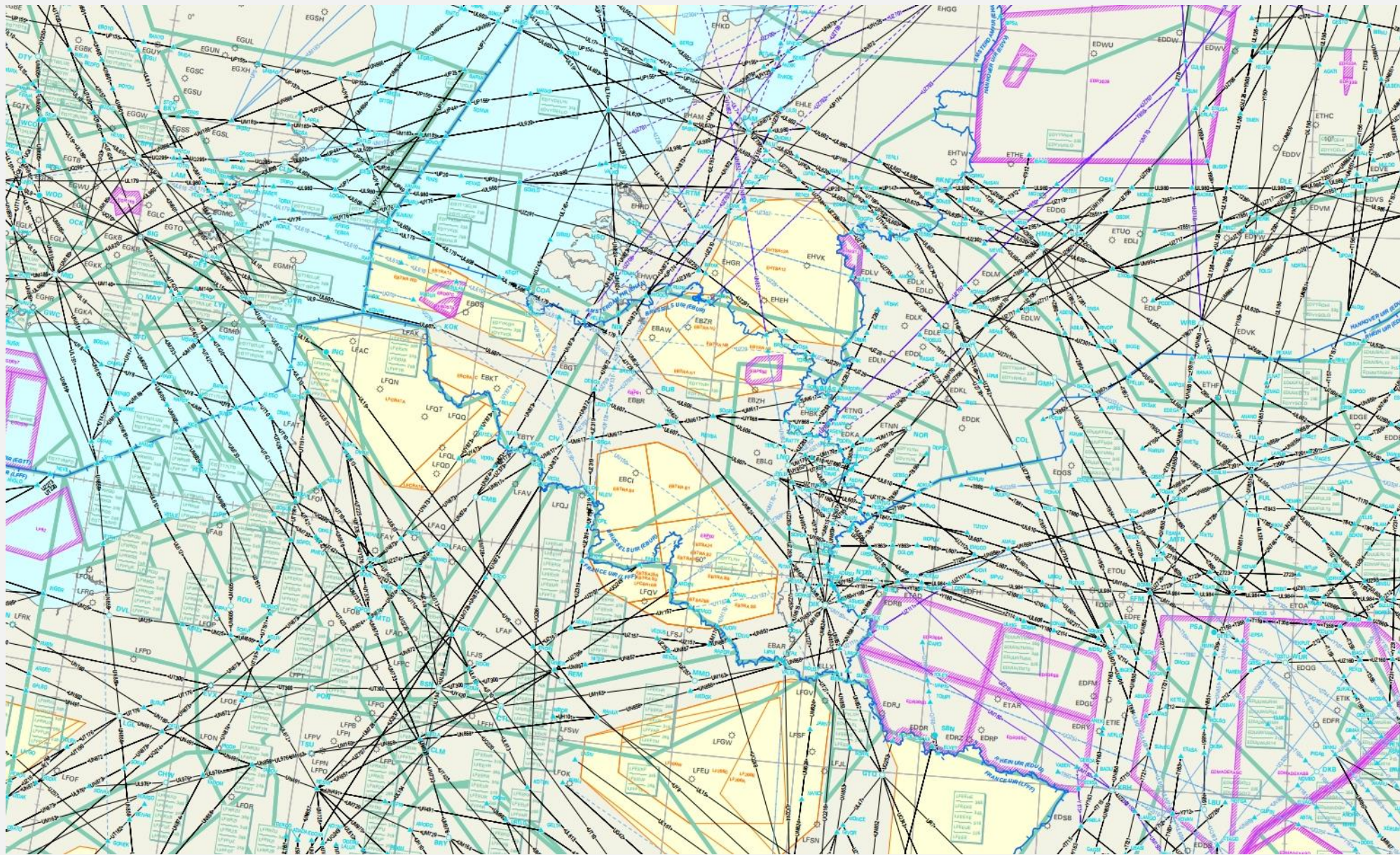
Common Awareness
Dynamic Process
New Concepts
Cross-Border Dimension
Interoperability and harmonization

Presentation and Demonstration

LARA Local and sub-Regional Airspace Management Support System

CIMACT Civil-Military ATM Coordination Tool

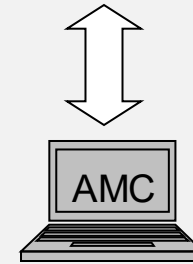
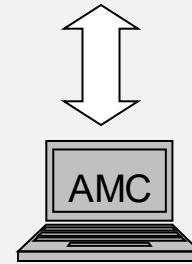
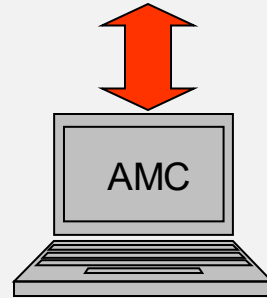
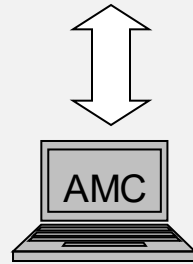
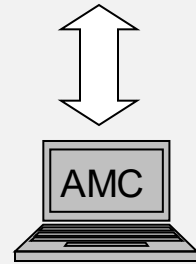
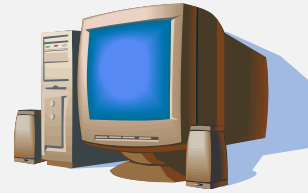
Common Awareness



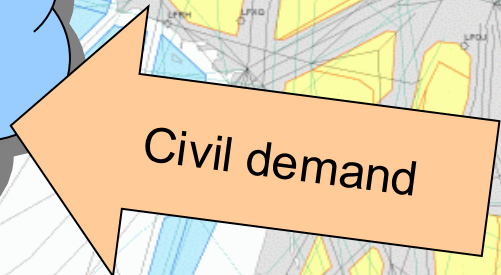
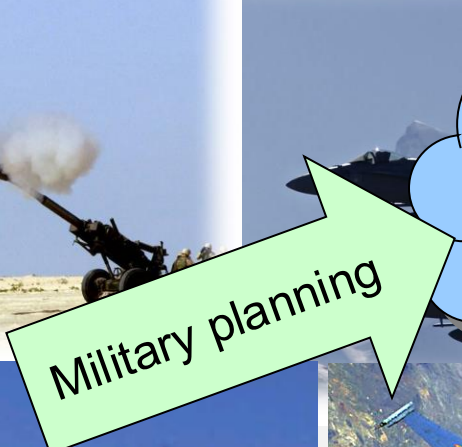
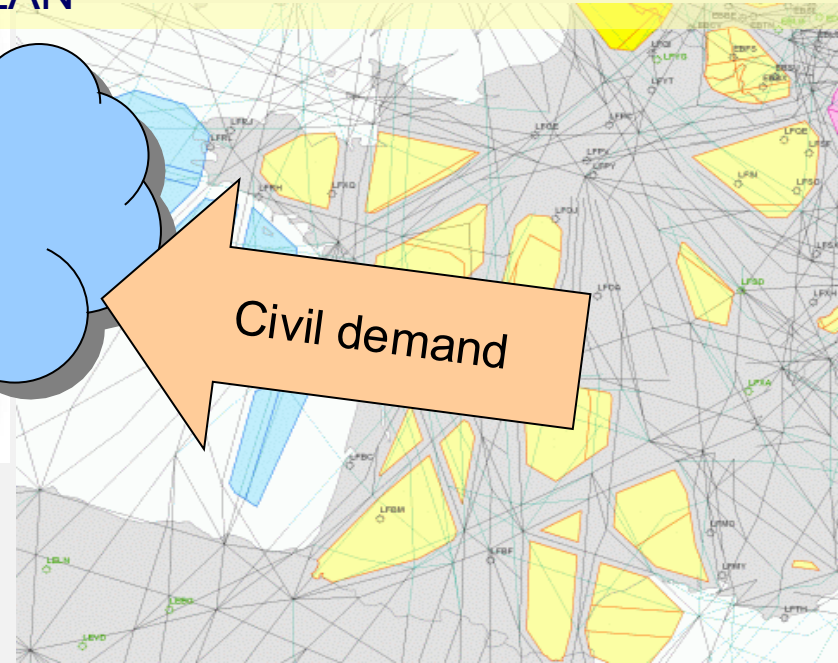


Aviation Community

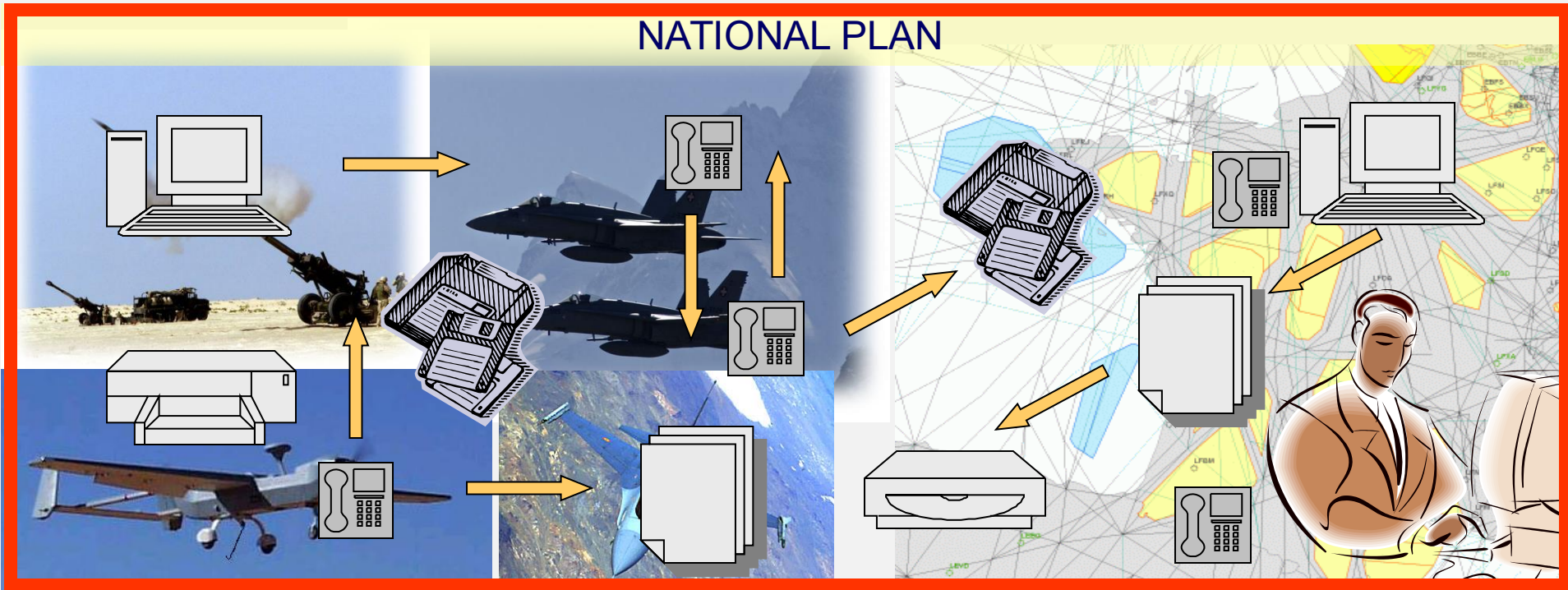
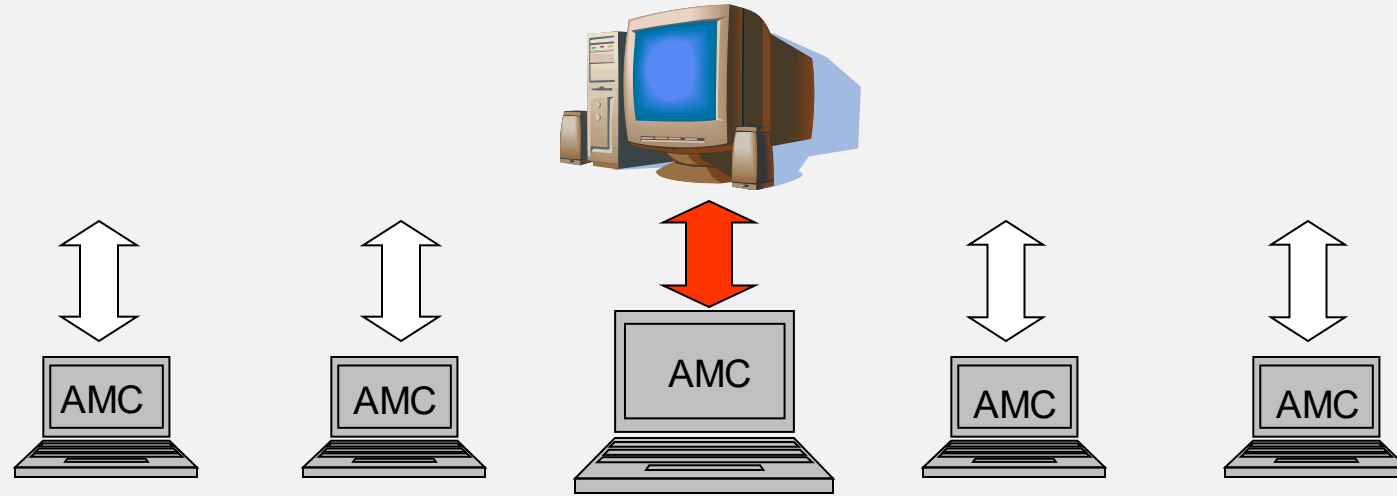
N M S Y S T E M S

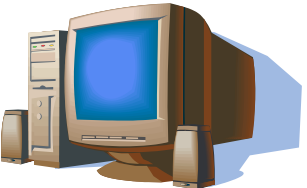


NATIONAL PLAN

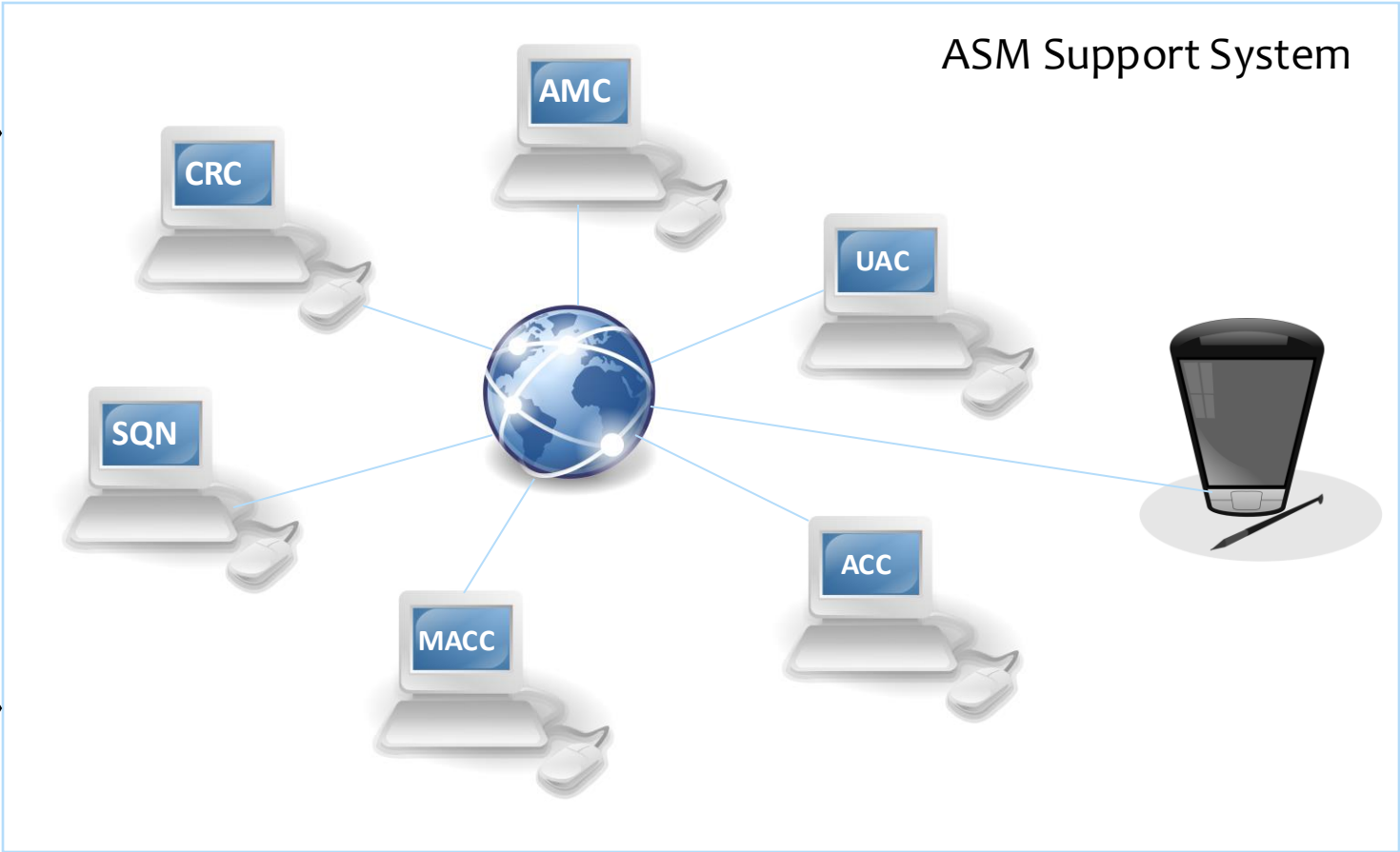


N M S Y S T E M S

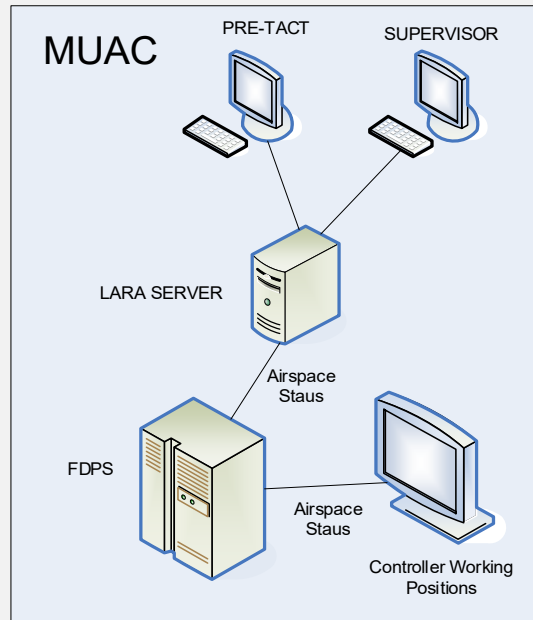
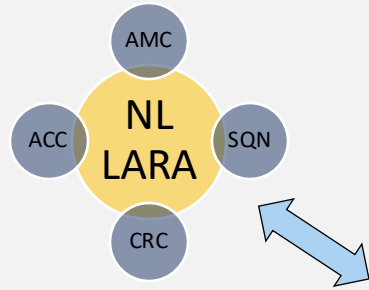




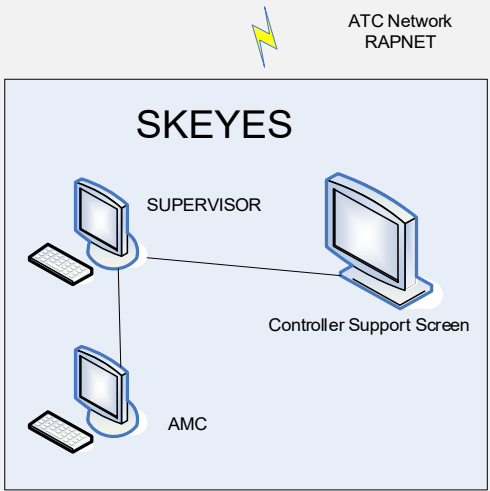
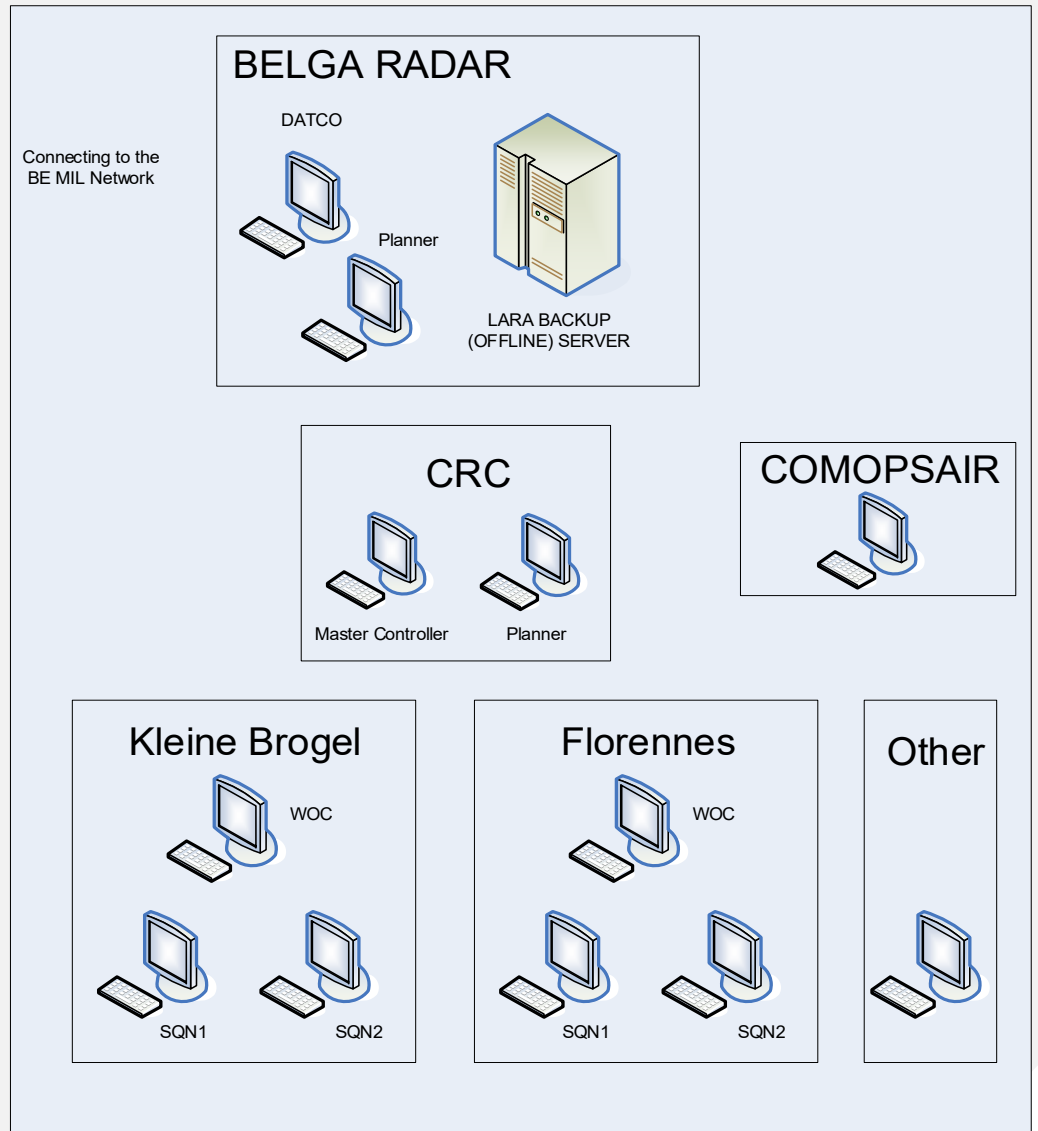
N M S Y S T E M S



LARA Deployment Example Belgium



ATC Network
RAPNET



LARA Airspace Planning

LARA Booking Tool - AFMU
 Coordinated Universal Time: Friday 16/July/2021 09:24:45

Airspace Planning Display Airspace Status Display Planning Prediction Tool AUP Prediction Tool

Scale: 12 Hours Options (Unnamed preferences)

Mon 19/Jul/2021 09:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00

Events

Exercise FRISIAN FLAG

ID	Cluster	Start	End	Airspace	Confirmation	Lower	Upper	Callsign	Mission	Res. Status	NOTAM	Creator	Resp. Agency
19304	CLUSTER_EH	19/07/21 09:00 (...)	19/07/21 11:00 (...)	EHD03 EHD04 EH...	Dynamic	145	345	TIGER		APPROVED		SQN	BANDBOX
19323	CLUSTER_EH	19/07/21 13:00 (...)	19/07/21 15:00 (...)	EHD07 EHD06 EH...	Automatic	055	660	HAWK		MIL REQUEST		SQN	BANDBOX

Filters View

Network: 0.0388 RTU Connected: FULLY Server: 192.168.8.1 NM Connection: NONE LARA V3.2.0.11 / Powered by Grafica SDK Super User Mode

Scale: 51'2036" N 003'31'12" E

LARA Notifications: AFMU

- Reservation Action: 1
- Reservation Cancellation: 0
- Available Reservation: 0
- NAM Action: 0
- NAM Warning: 0
- Chat Message: 0
- NM AUP Warning: 0
- AUP Warning: 0

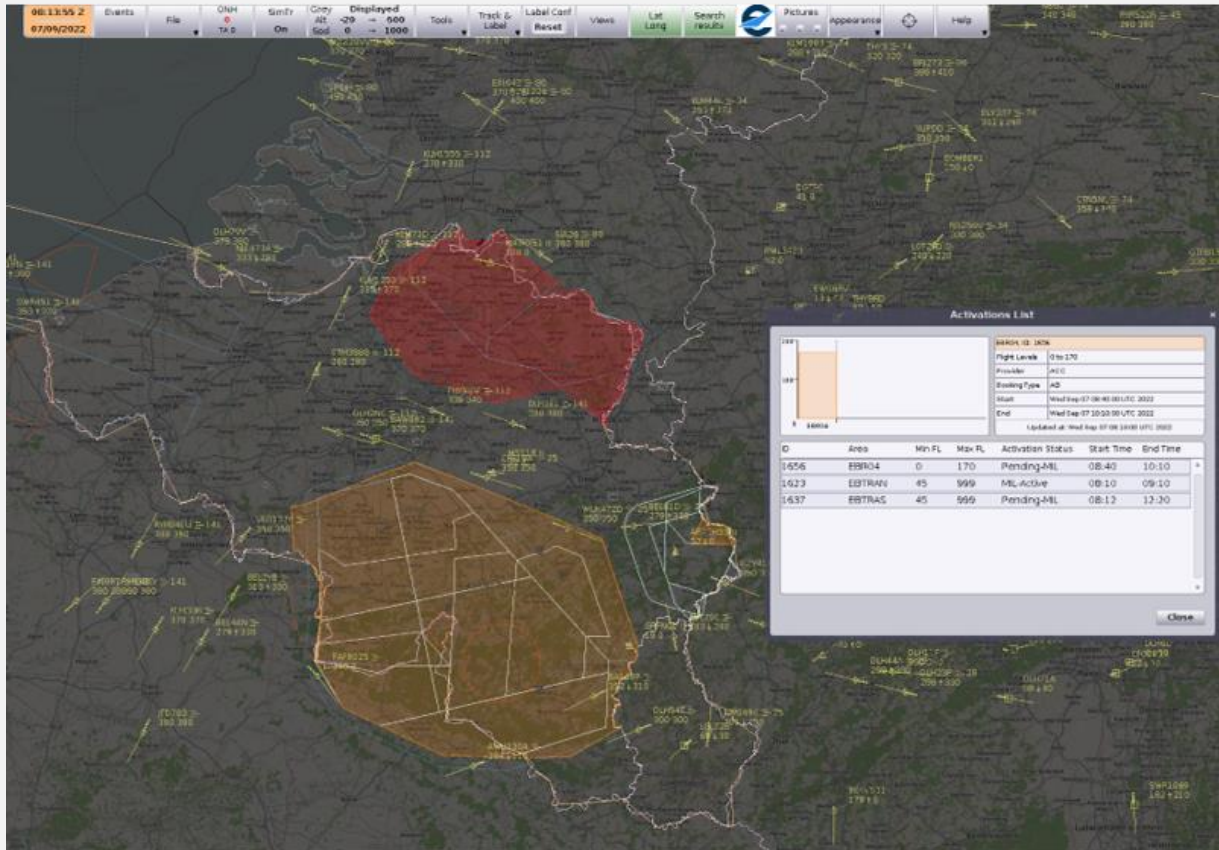


Tactical Airspace Management

- Pending and Active Airspaces are provided from LARA to the ATC System and displayed on the Controller Working Position (see image on the left)
- Controllers / Supervisors have access to a LARA Client and activation and deactivation of airspace structures is handled via the system.
 - No phone coordination required
 - Full situational awareness
 - Avoid any ambiguity on airspace status

ATC Interface - CIMACT

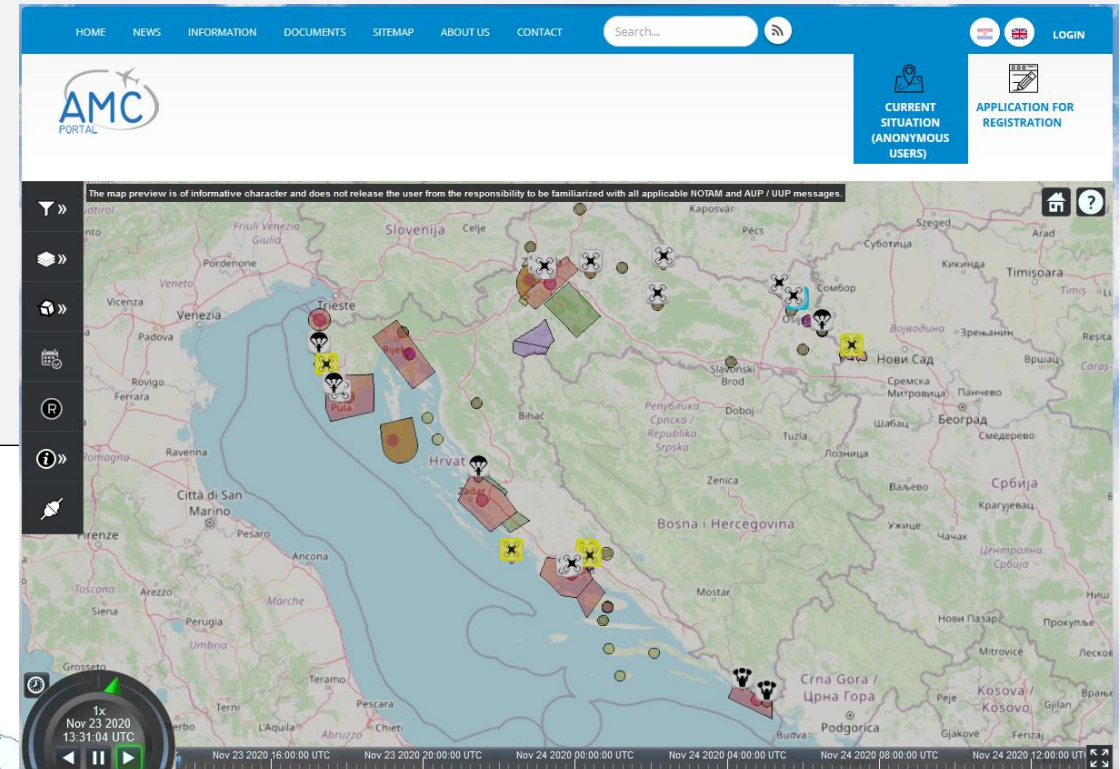
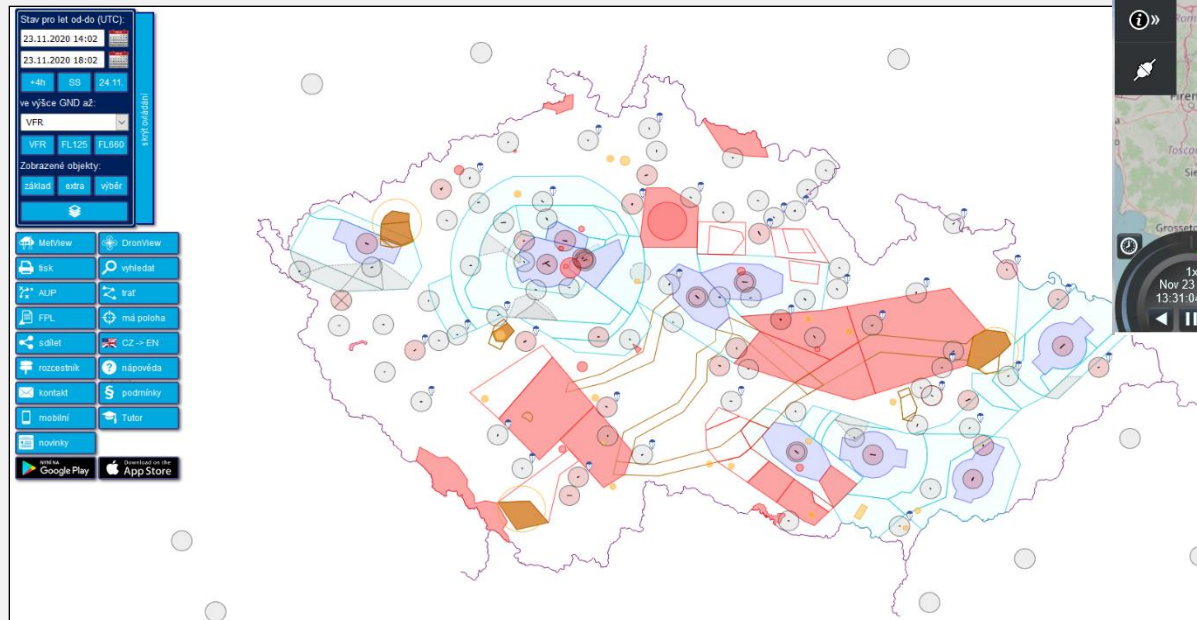
Civil-Military Air Traffic Management Coordination Tool



- 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)

National ASM web portals

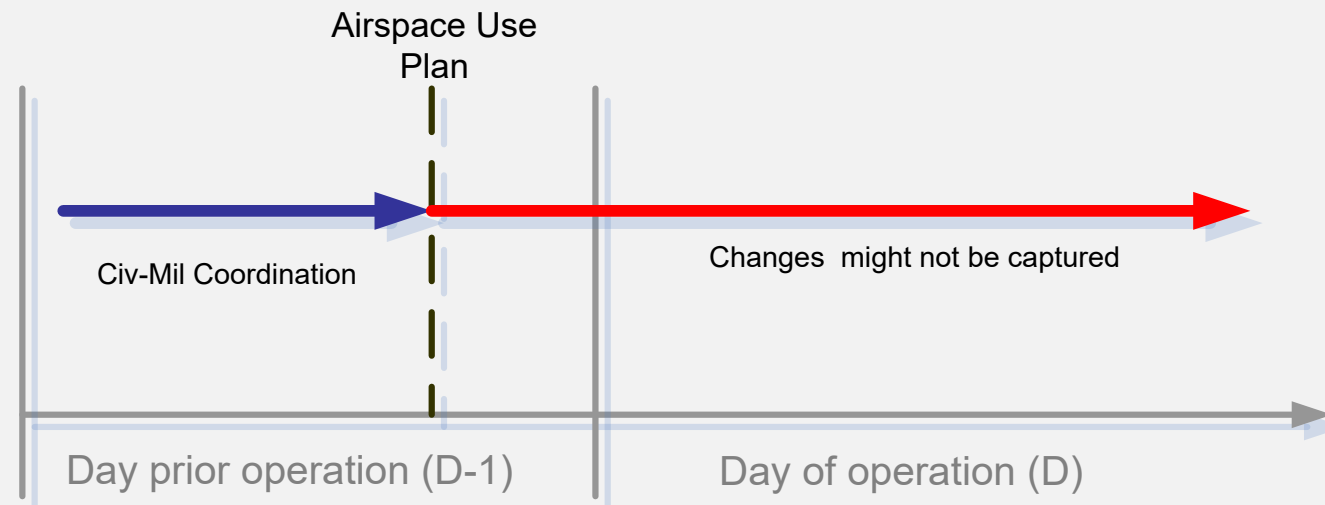
National Web Portals consolidate ASM, WX, NOTAM and other related information, and make it available to General Aviation and other interested parties.



Dynamic Process

Dynamic Process

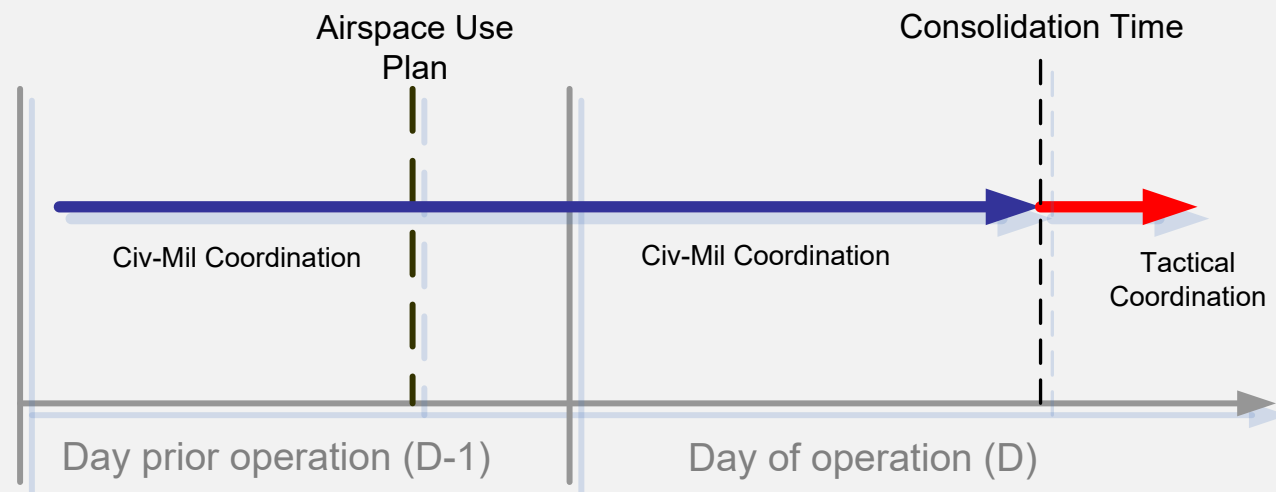
- ❑ Airspace Management Process used in the previous exercises stopped coordination at D-1 with the publication of an Airspace Use Plan.
- ❑ Changes after publication might not be captured, e.g. weather changes, cancellations of missions etc, which can lead to a waste of resources
- ❑ Static process:





Dynamic Process

- ❑ Processes can be more dynamic and flexible if information is shared and decisions are taken collaboratively compared to a static exchange of information (Airspace Use Plan etc)
- ❑ Continue coordination until closer to the time of operation for more accurate data, increased benefit, leading to a better utilization of resources, while maintaining full flexibility for military ops.
- ❑ Dynamic Process:

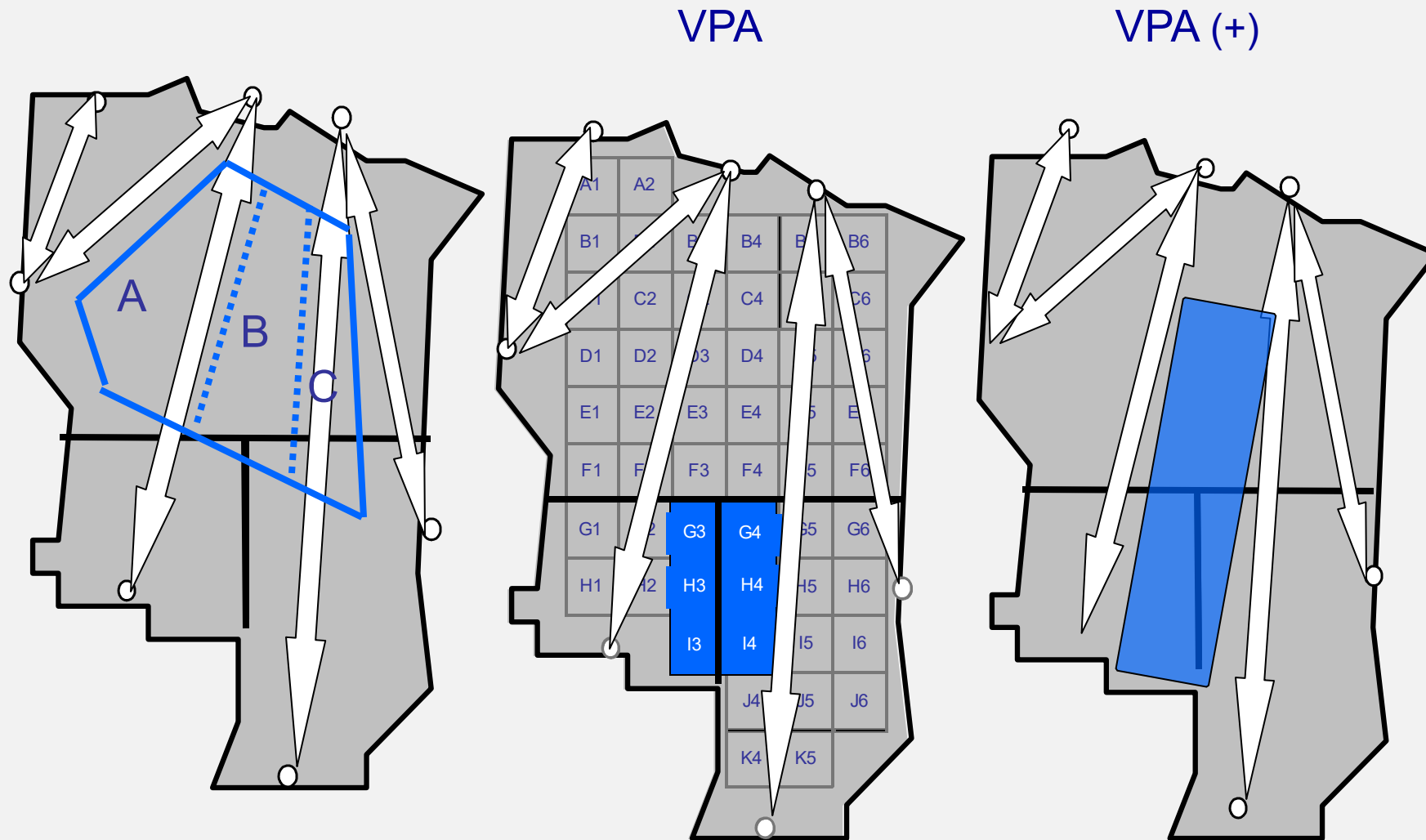


New concepts

**Variable and Dynamic Areas
Free Route**

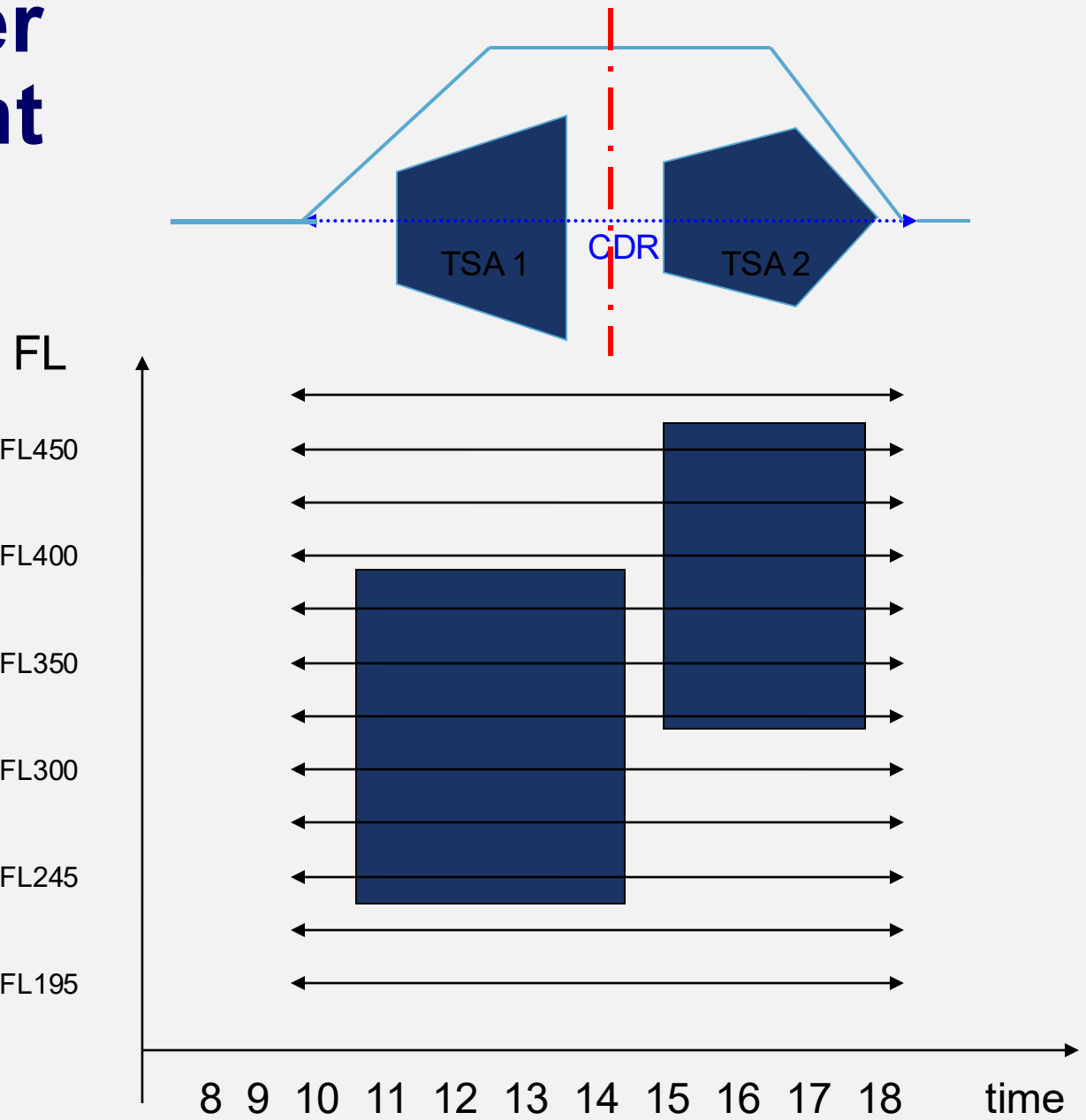
...

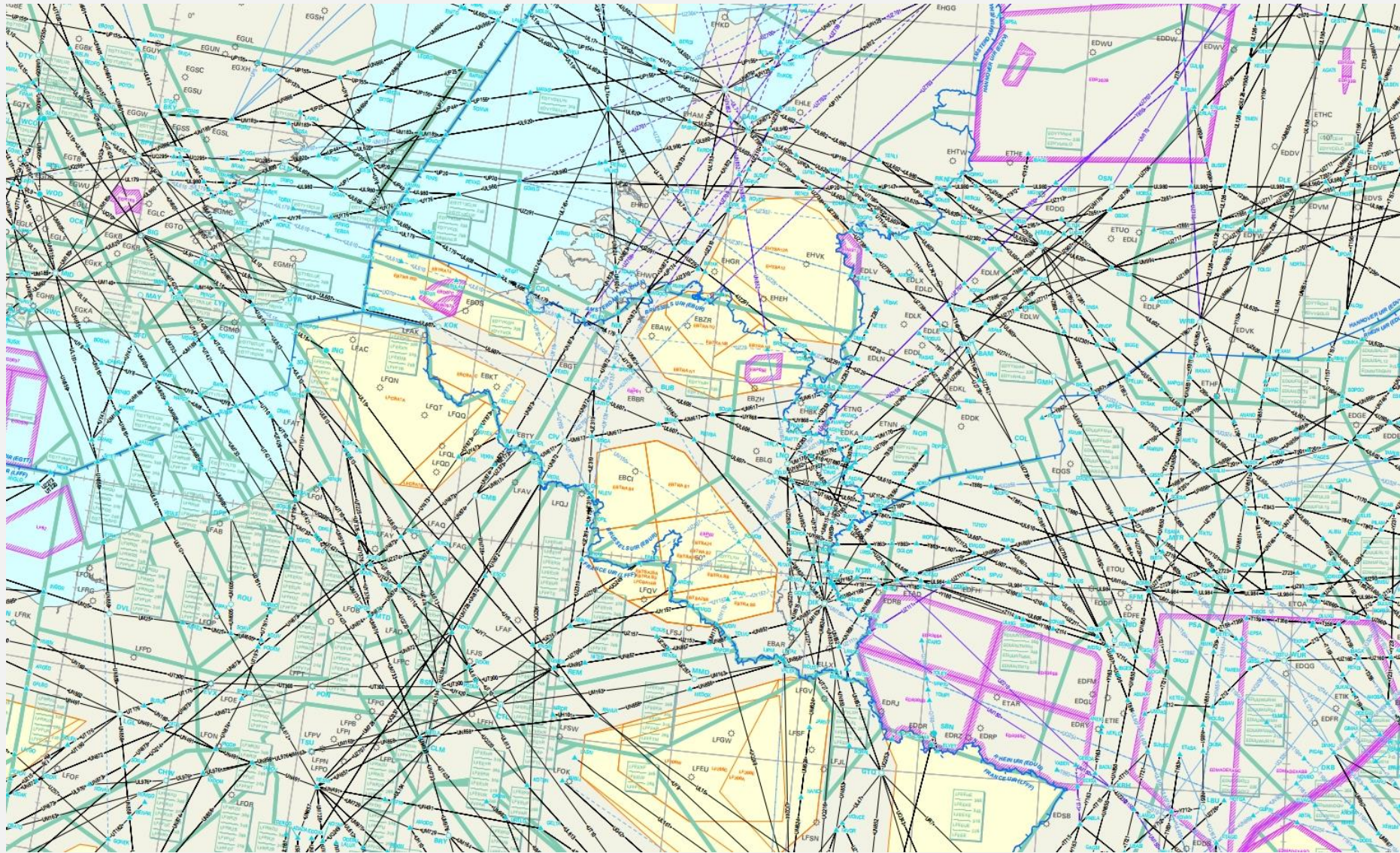
Variable and Dynamic Areas



Cross-Border Dimension

Cross Border Alignment





LARA Foreign Cluster and MILO Functionality

LARA Booking Tool - MILO

File View Options Tools Help

Coordinated Universal Time: Friday 19/September/2025 09:25:07

Airspace Planning Display X Airspace Status Display X Planning Prediction Tool X

Scale: 12 Hours Options (Unnamed preferences)

Fri 19/Sept/2025 00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18

Vertical Profile: EVTRA19 (JURMALCIEMS2)

Activities NAM Activities Areas CDR Segments

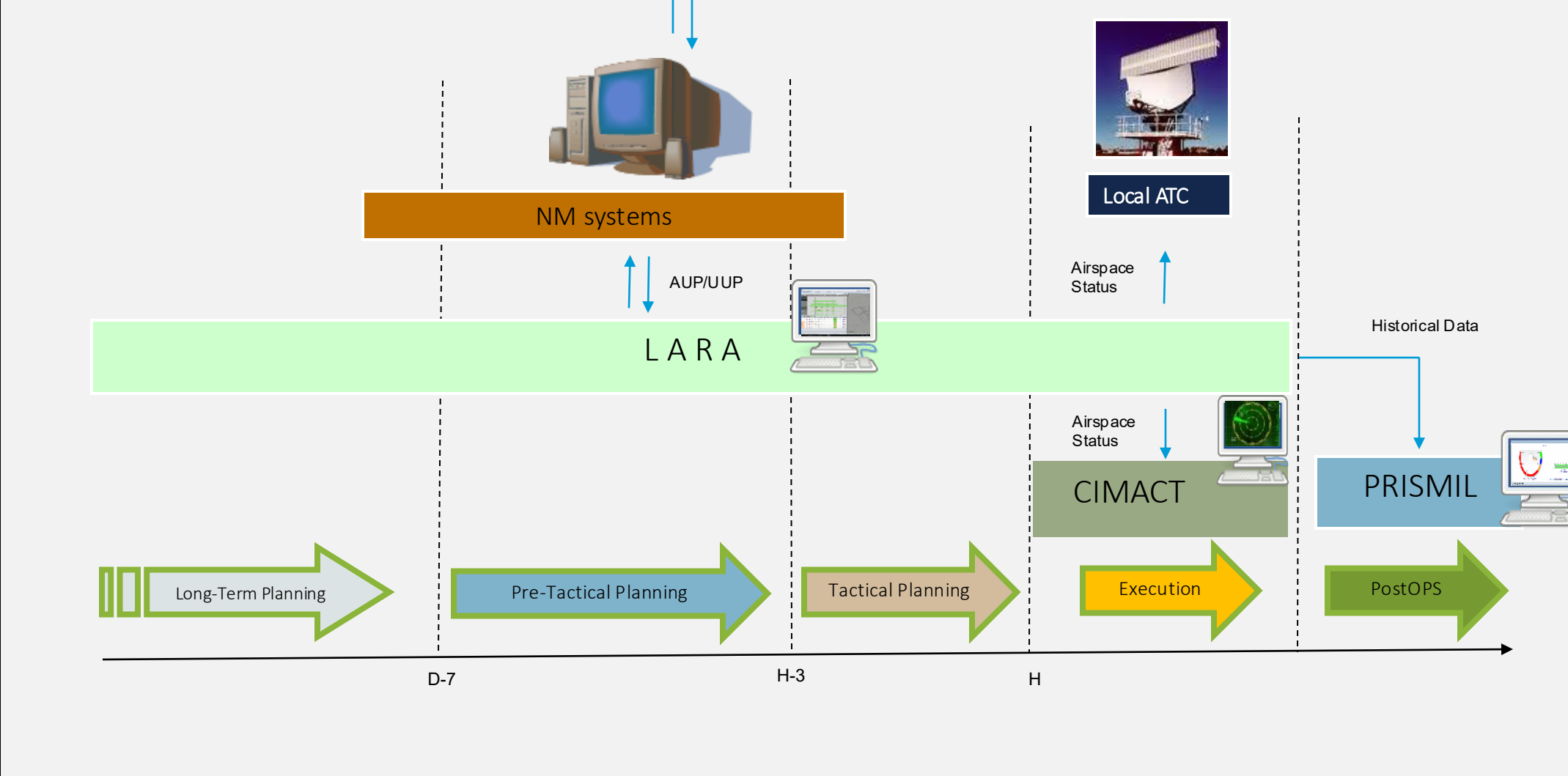
Name	Cluster	Type	Confirmation	Activation Status
EVRS1 (KADAGA1)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR304 (LIEPAJA PART 2)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR370 (LIMBA)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR368 (MEADOW)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR45 (SELONIA1)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR316 (LIEPAJA2)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR41 (ROBO1)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVD301 (EVD301 OPEL)	CLUSTER_EV	D	Automatic	FULLY_ACTIVATED
EVTRA19 (JURMALCIEMS2)	CLUSTER_EV	TRA	Automatic	FULLY_ACTIVATED
EVR15A (ZALENIEKI)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVR369 (SHORE)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EVRSANL	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EETSA19E (TSA19E)	CLUSTER_EE	TSA	Automatic	FULLY_ACTIVATED
EVD300 (EVD300 ALUDI)	CLUSTER_EV	D	Automatic	FULLY_ACTIVATED
EVD334 (LIEPAJA2)	CLUSTER_EV	D	Automatic	FULLY_ACTIVATED
EVD333 (LIEPAJA1)	CLUSTER_EV	D	Automatic	FULLY_ACTIVATED
EVR303 (LIEPAJA PART 1)	CLUSTER_EV	R	Automatic	FULLY_ACTIVATED
EETSA4 (TSA4)	CLUSTER_EE	TSA	Automatic	FULLY_ACTIVATED

Network: 0326 RTU Connected: FULLY Server: 192.168.0.1 NM Connection: NONE

LARA V5.0.2.15 / Powered by GRAFFICA SDK

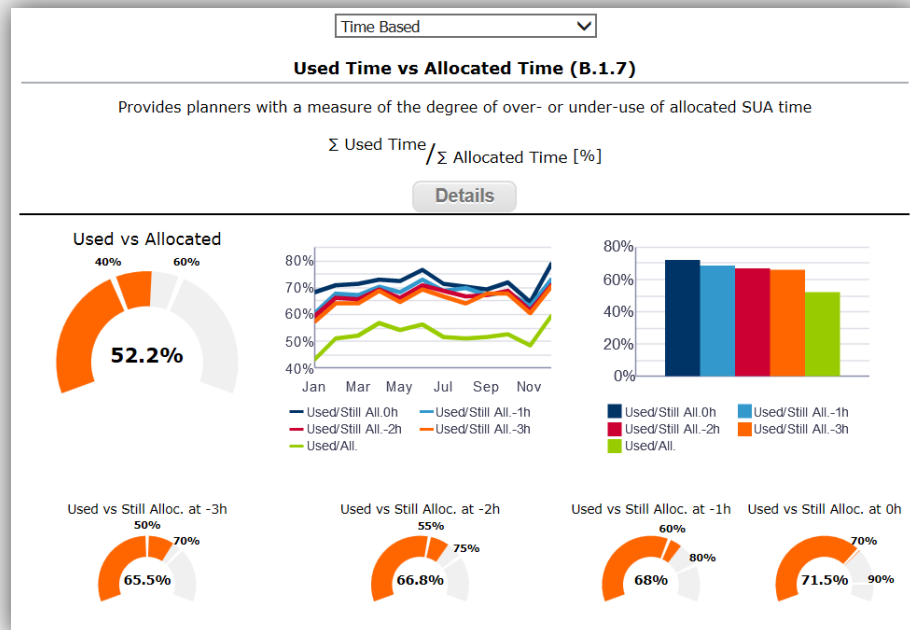


Civil-Military Support Tools provided by CMC



PRISMIL

Civil-military post-operational interactive reporting dashboard Heatmaps

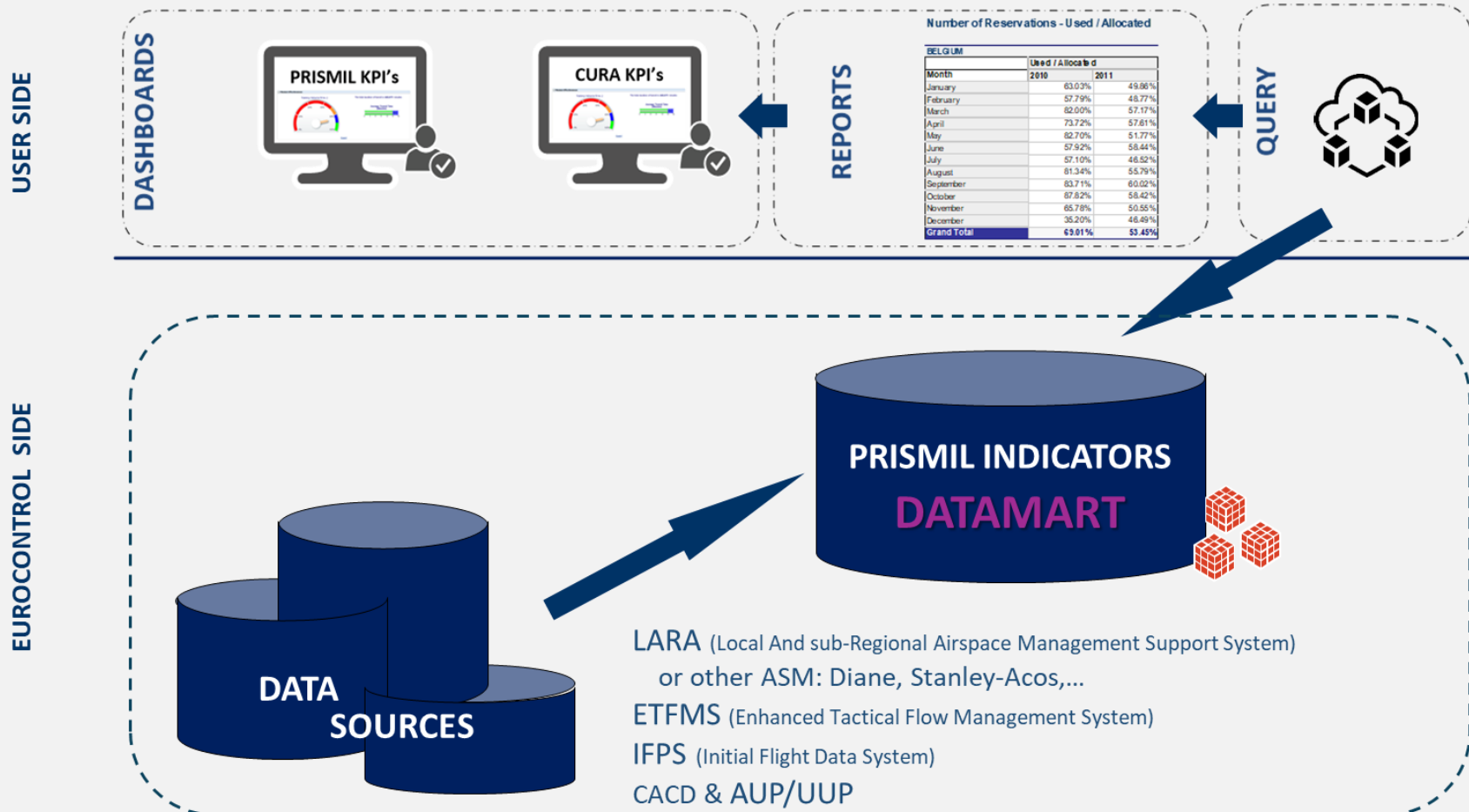


- Combines data from National sources and Network Manager, supporting the development of multi-layered reports
- Custom queries enable KPIs on: military demand and use of airspace volumes, impact on civil traffic, mission effectiveness
- Allows visualization of trajectories and density of trajectories
- Supports a collaborative civil-military data-driven decision-making

PRISMIL

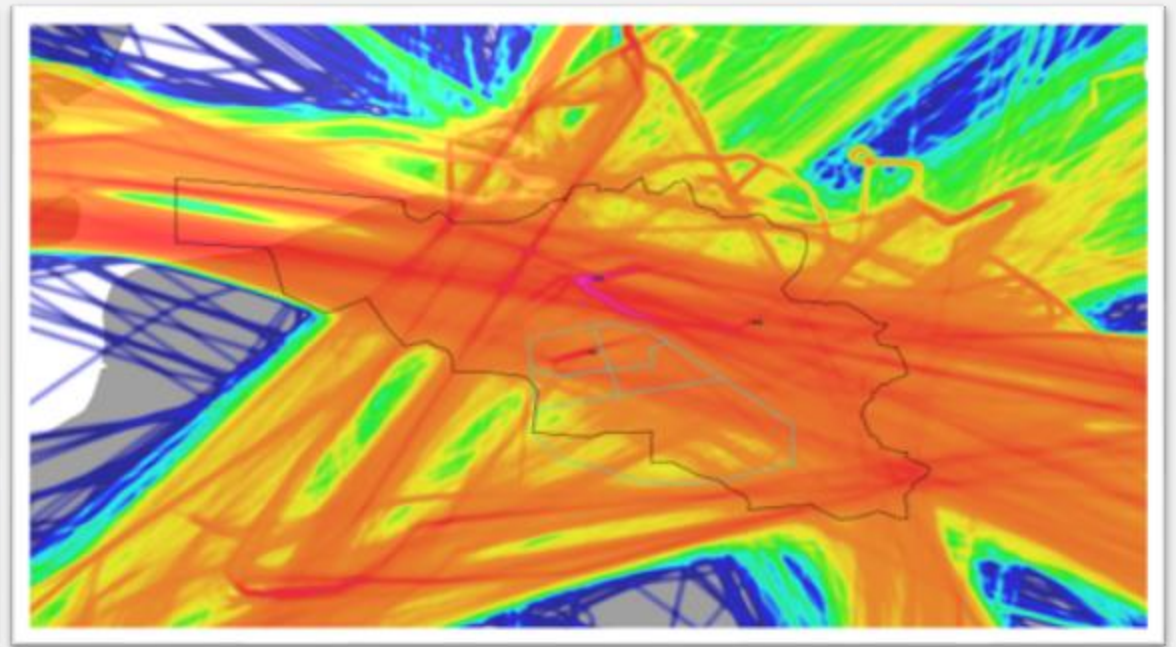
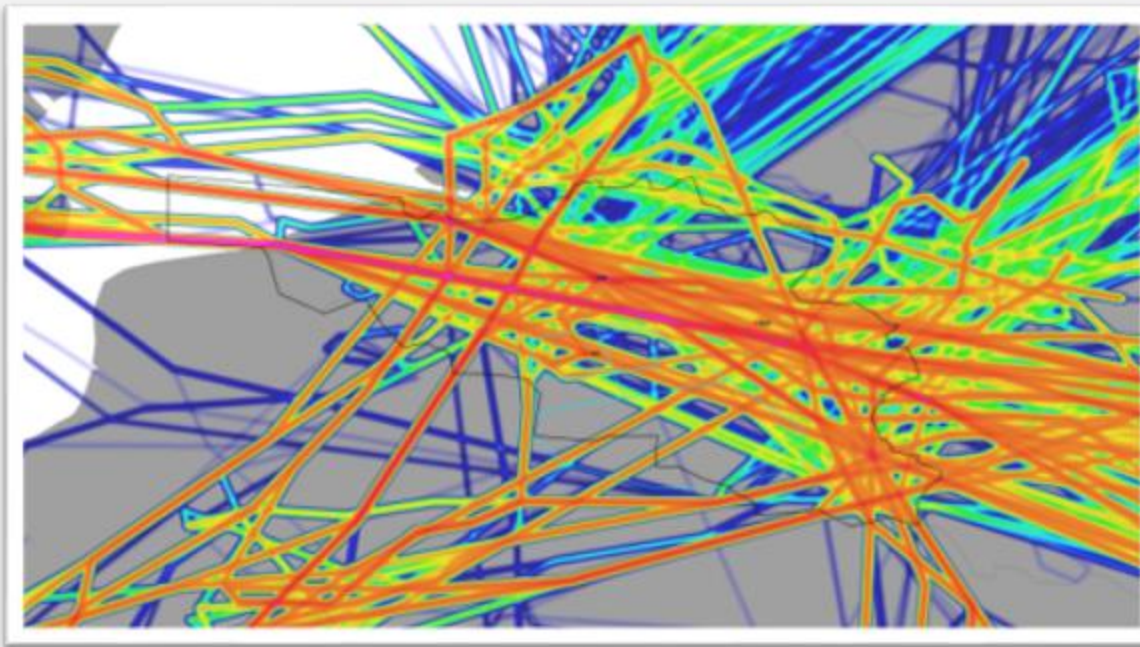
Civil-military post-operational interactive reporting dashboard

Access to EUROCONTROL ONESKY Online service PRISMIL: <https://extranet.eurocontrol.int/PRISMIL>



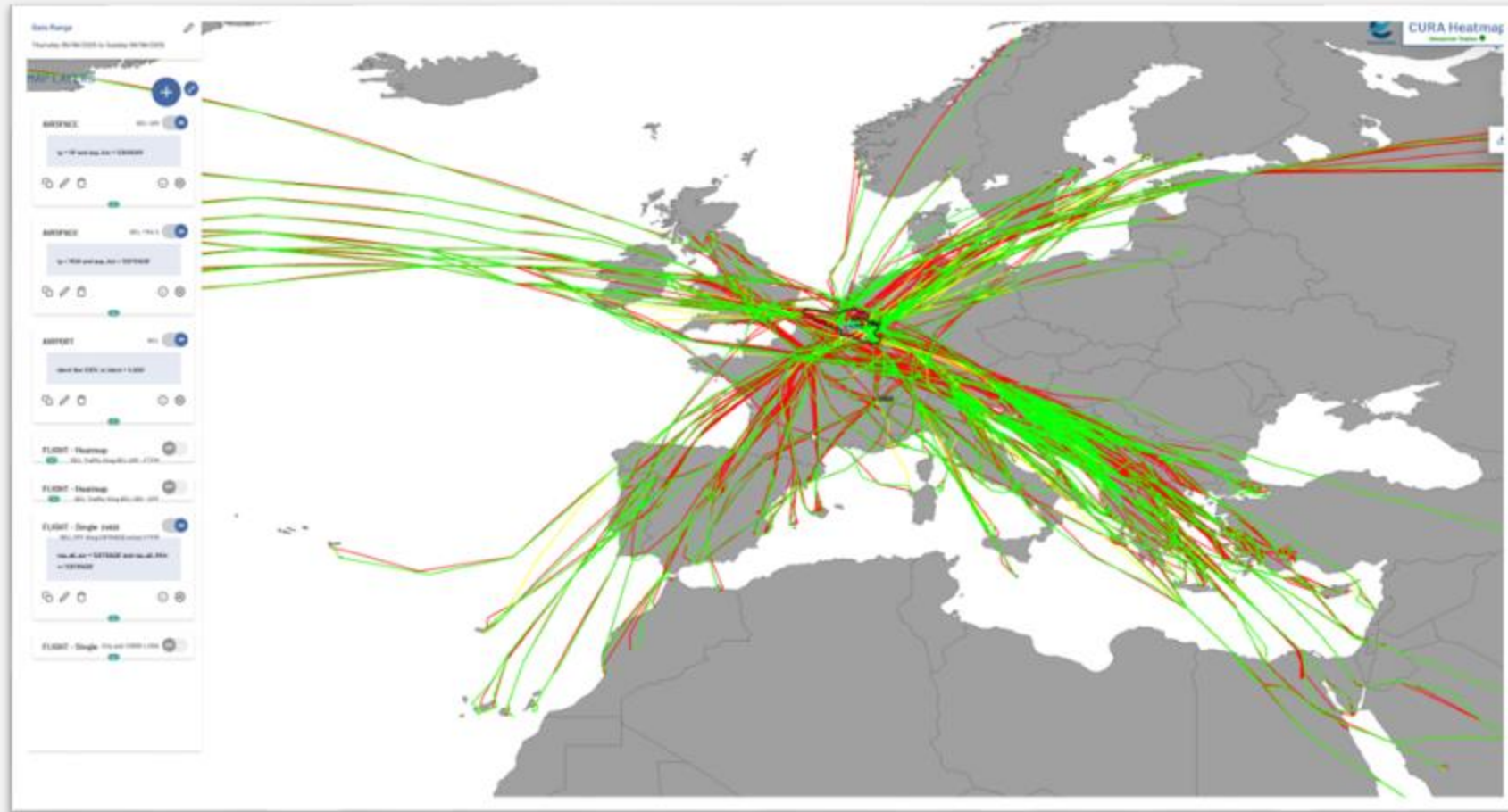
HEATMAPS

- Identification of behavior of traffic flows from planning to actual flights
- Interaction between airspace availability and traffic

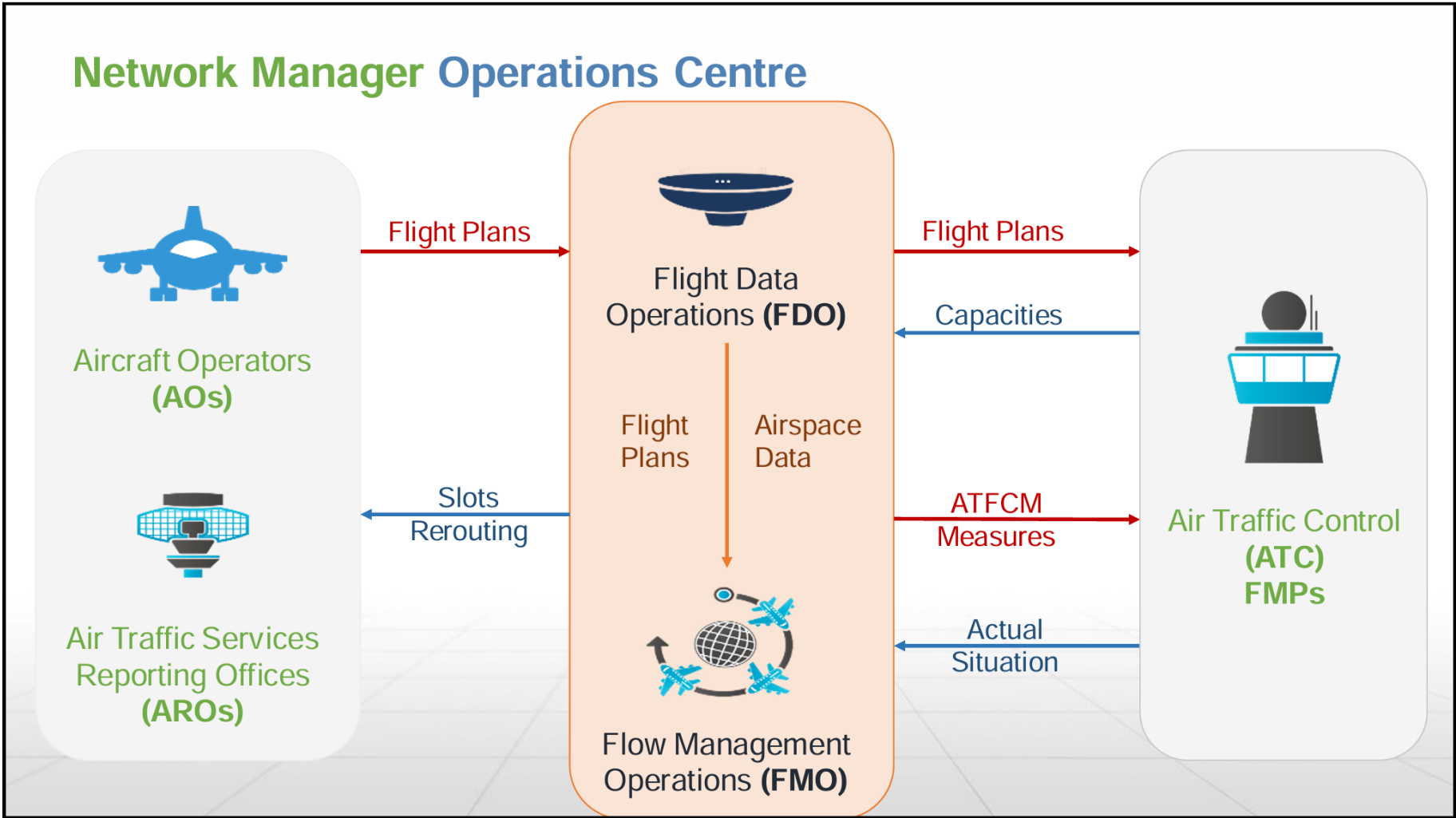


HEATMAPS

Single Layers



NETWORK MANAGER



Interoperability and Harmonization

- Provision of interoperable systems to aid civil-military cooperation
- Key enabler to enhance harmonization
- Efficient cross border operations
- SWIM Interfaces
- Secure data exchange / data gateways
- ...

CMC Lab

Objectives

- Stakeholders' support
- Improving interoperability between CMC products, and supporting implementation of new concepts, including mission trajectory
- Improving efficiency on training provision and systems support, including validation

Use Cases

- Cross border operations
- Efficiency of airspace use
- Post ops analysis
- Simulation of impact of military activities
- Potential crisis impacting ATM





SUPPORTING
EUROPEAN
AVIATION

Thank you!

jan.scholz@eurocontrol.int

www.eurocontrol.int

