

Civil/Military ATM Cooperation and Flexible Use of Airspace Webinar

Online

20th-21st Nov 2024

This event is jointly organised with



Flexible use of airspace - FUA

- FUA in Poland brief introduction
- Local examples & benefits in terms of FUA implementation at the 3 levels
- FUA supporting system

Who we are?



Łukasz GODLEWSKI – ASM & AIS Management Director

Background: strategic airspace management, involved in the operational implementation of the Advanced Flexible Use of Airspace (AFUA) concept in Poland, project manager of the vertical split of the ACC sectors, Polish Free Route Airspace - POLFRA etc.), expert in a number of working groups and projects in the domain of airspace management, both at PANSO and international level (Eurocontrol & SESAR Joint Undertaking).



Jacek WYRWICH - Head of Airspace Management Centre

Background: former military air traffic controller, involved in the operational implementation of the Advanced Flexible Use of Airspace Concept (AFUA) in Poland, an expert or a leader in variety of working groups or projects related to implementation systems and procedures supporting advanced airspace management, both within PANSO and on the international level (Eurocontrol & SESAR Joint Undertaking).

Polish Air Navigation Services Agency (PANSO) is a certified entity designated by the national aviation authority i.e. the Minister competent for transport pursuant to the Aviation Law Act and EC Law to ensure air navigation services within **FIR Warszawa**. PANSO is statutorily obliged to provide air traffic services and other air navigation services (ANS), including:



AIR TRAFFIC MANAGEMENT (ATM)



COMMUNICATION, NAVIGATION AND
SURVEILLANCE SERVICES (CNS)



AERONAUTICAL INFORMATION SERVICES (AIS)

Why we have implemented the Flexible Use of Airspace concept?

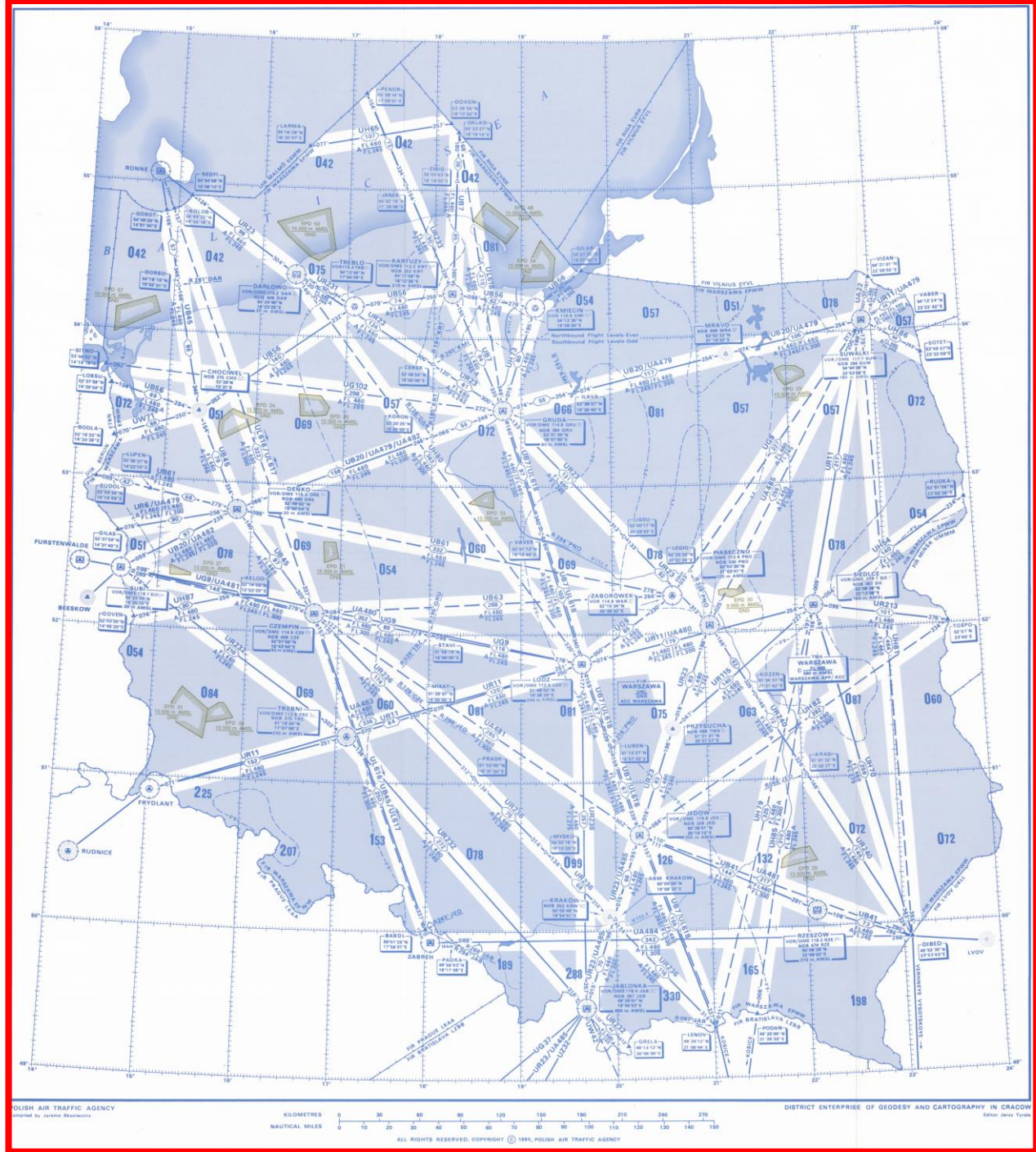
Airspace Users requirements





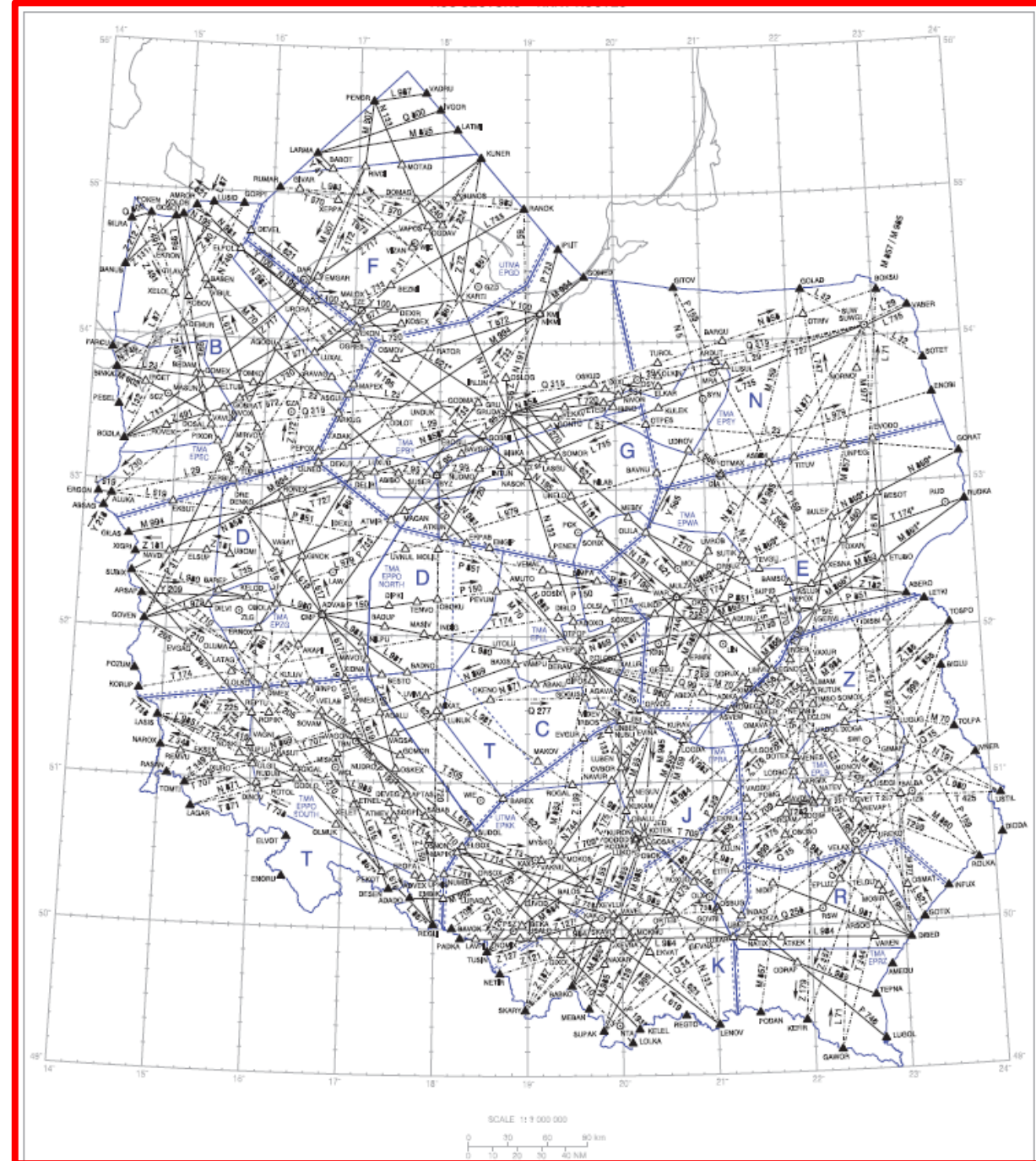
ICAO

route network
prior to FUA
(1995)



PANSN

route network after FUA implementation (2024)

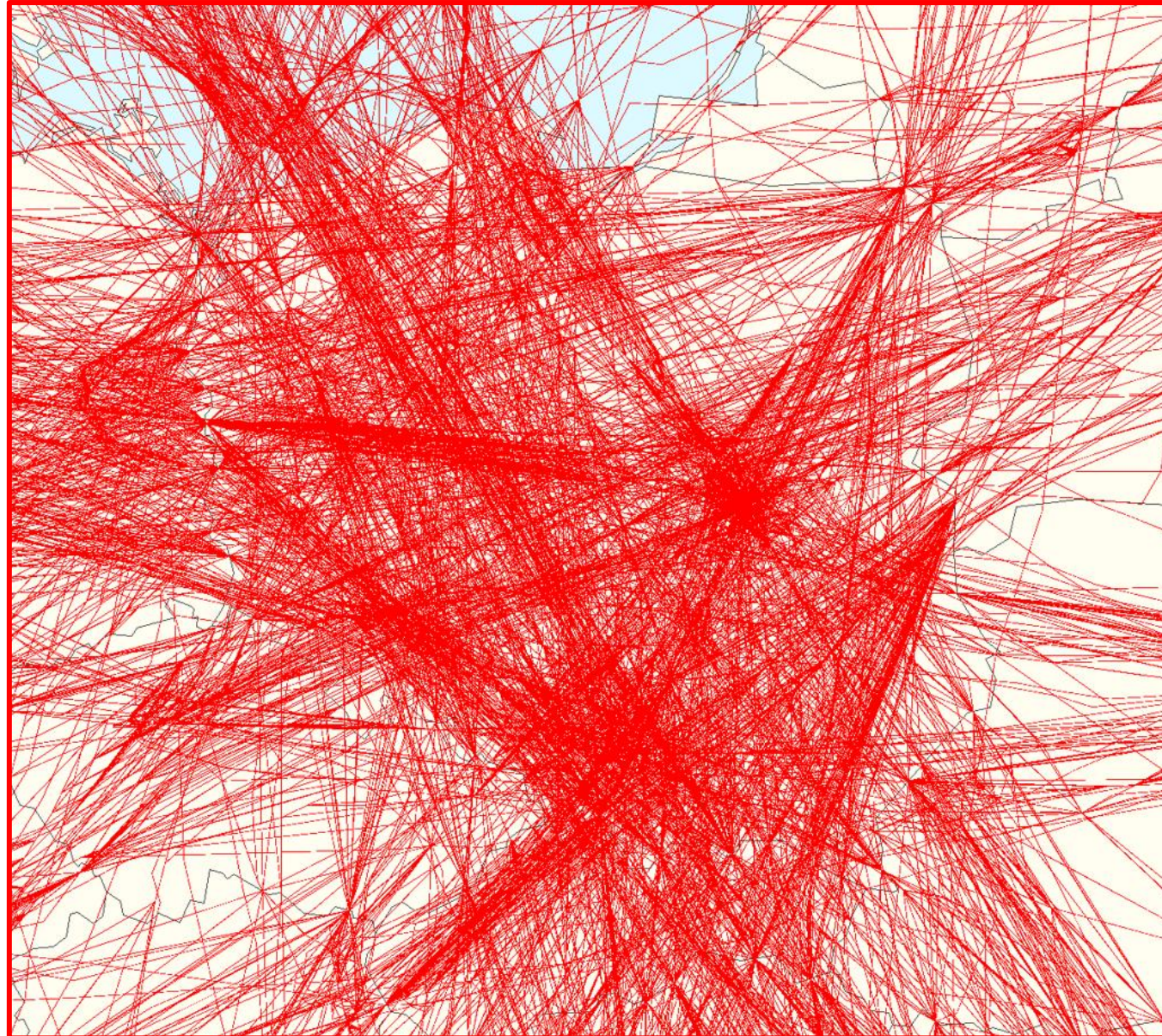


Legend:

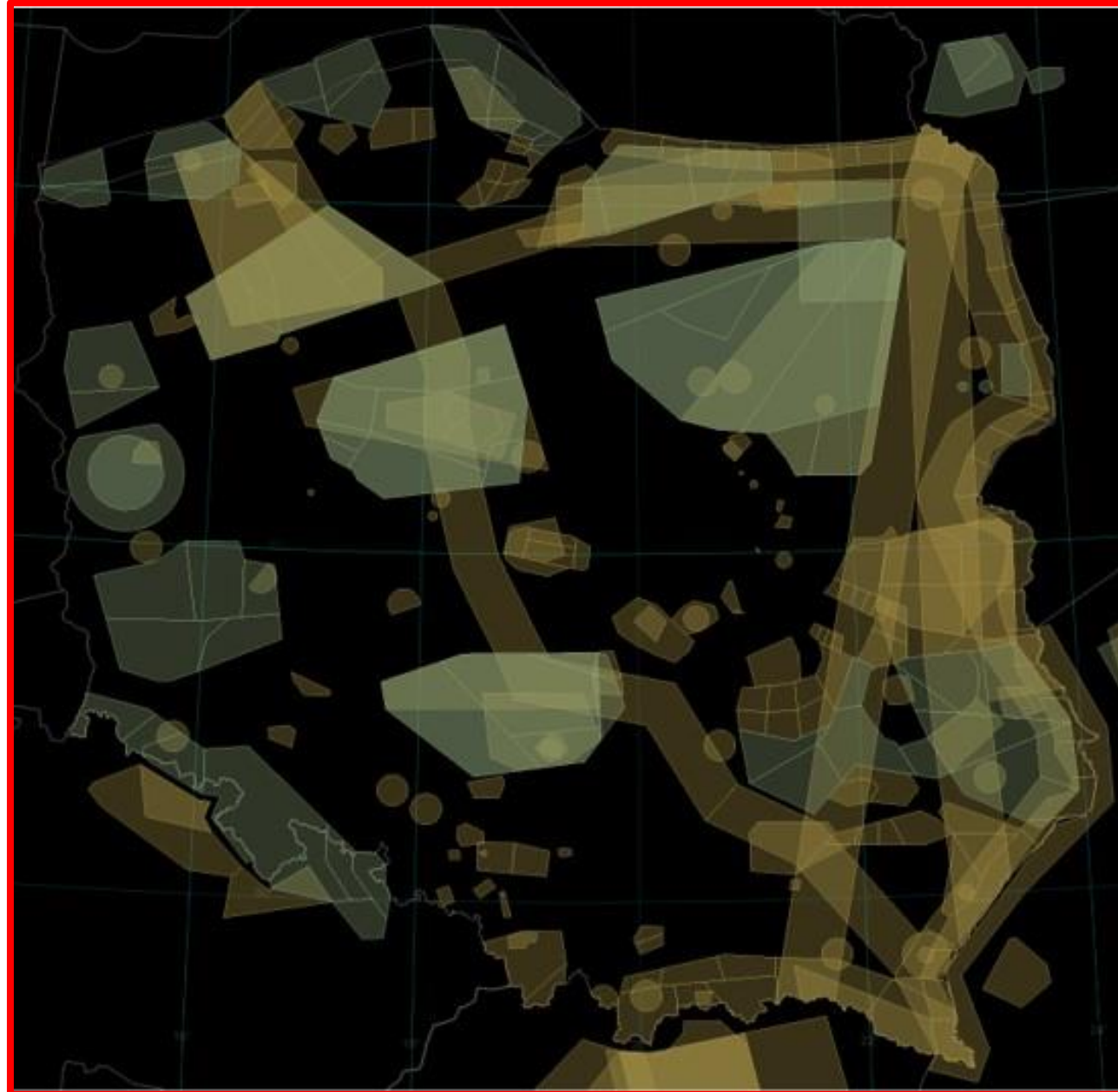
- BALTIC FRA boundary; see AIP Lithuania for BALTIC FRA definition with Vilnius FIR
- Cross-border FRA operations available between BALTIC FRA and SEE FRA
- ▨ No Planning Zone
- ▲ FRA compulsory point
- △ FRA on-request point
- (H) FRA horizontal ENTRY point
- (O) FRA horizontal EXIT point
- (I) FRA INTERMEDIATE point
- (A) FRA ARRIVAL connecting point
- (D) FRA DEPARTURE connecting point
- TMA boundary
- FIR, CTA and DELEGATION boundary

Scale: 1:4 000 000
0 40 80 120 km
0 10 20 30 40 50 60 NM

needs of the civil side
(*actual traffic flows*)

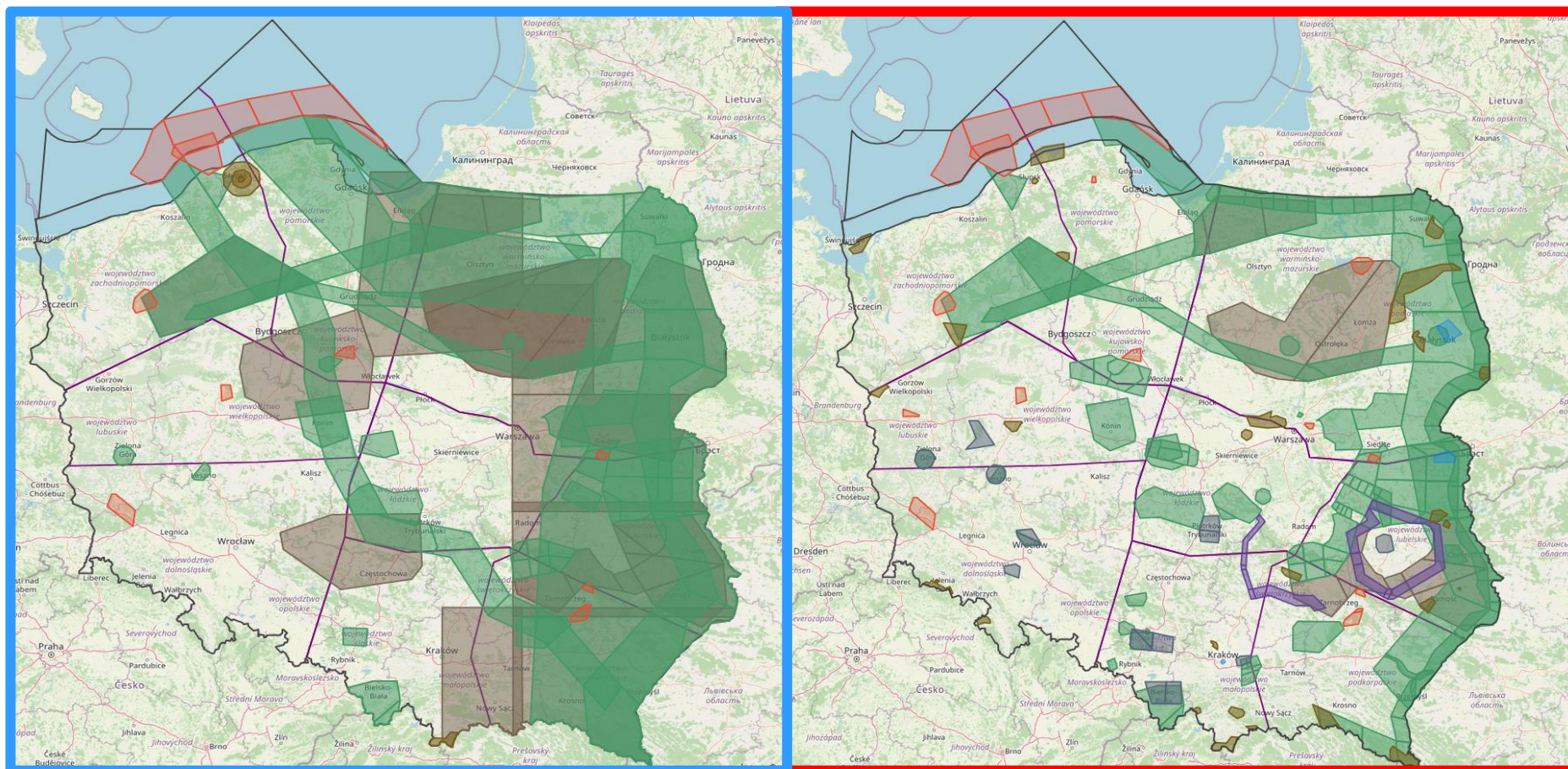


needs of the military
side
(AIP - *publication of
flexible airspace
structures*)



FUA implemented in whole FIR

airspace:
Controlled
FL95<
Uncontrolled
FL95>



Airspace Management Structure in Poland

ASM1	MoT, MoD, President of CAA	Decision body, responsible for ASM policy
	ASM Committee	Advisory body of MoT, MoD & Mo Internal Affairs & Administration
	ASM Strategic Planning Department at PANSO	Executive body, responsible for preparation of the ASM documentation
ASM2	AMC Poland/ASM2	AUP/UUP publication
ASM3	AMC Poland/ASM3	AUP/UUP utilisation

FUA implementation at strategic level (ASM 1) practical examples

Governmental Regulations



- Article 121(7) - **Regulation of the Minister of National Defence** of 13 June 2008 on the method of interaction between the air traffic service provider and the Air Force of the Polish Armed Forces;
- Article 121(4) - **Regulation of the Minister for Infrastructure** of 12 September 2008 on the Airspace Management Committee and defining its scope of action;
- Article 121(5)(1) and (2) - **Regulation of the Minister of Infrastructure** of 27 December 2018 on the structure of Polish airspace and the detailed conditions and use of that airspace;
- Article 119(4)(2) - **Regulation of the Minister of Infrastructure** of 18 January 2019 on flight restrictions for a period not exceeding 3 months;
- etc...

Letters of Agreements

ASM LoA of co-operation between PANSAT and ATS Military Office of Polish Armed Forces:

- ✓ implementation and modification of airspace structures;
- ✓ prioritisation of the use of airspace structures;
- ✓ defining the rules of pre-tactical and tactical airspace allocation;
- ✓ planning large scale military exercises.



Operational Documentation



Operational Manual of AMC Poland:

- ✓ Rules of cooperation civil-military operational personel for pre-tactical and tactical airspace allocation

International LoAs with neighbouring states:

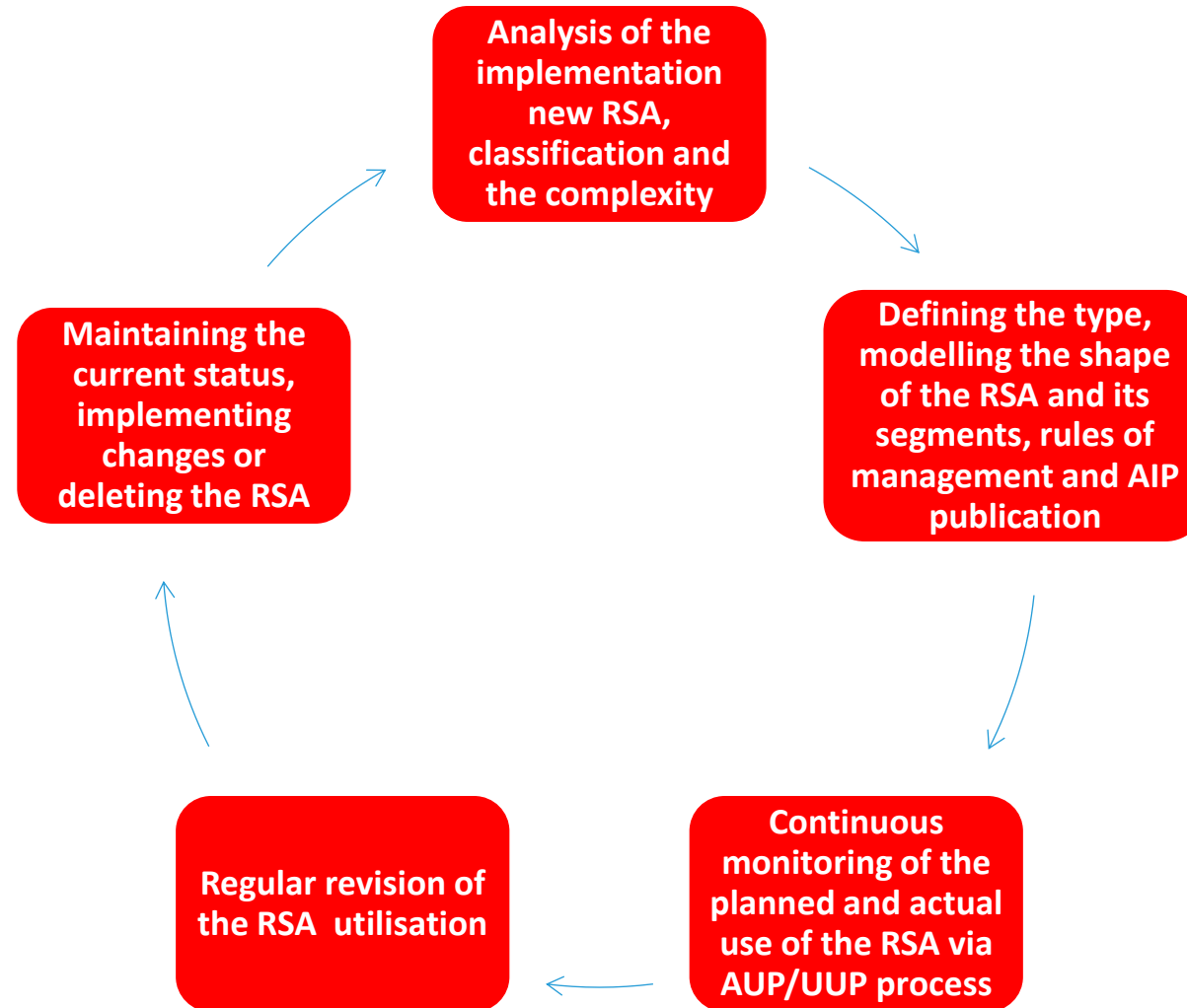
- ✓ Rules of cooperation/information exchange with the Airspace Management Cells of neighbouring ANSPs



Preparation of large-scale military exercises general rules (CDM proces)

- ✓ close coordination at all levels between civil and military stakeholders;
- ✓ planning conferences;
 - airspace structures design (dates, geographical area, initial daily operations plan)
 - initial impact assessment
- ✓ publication of AIP Supplement (NOTAMs if necessary);
- ✓ production of local ATC procedures, Operational Instructions, LoAs;
- ✓ briefing of local Staff;
- ✓ collection of data and post-ops analysis;
- ✓ use the lessons learned to improve the current practices and procedures for further application in the coordination of large-scale military exercises;

Restricted Area (RSA) life cycle in Poland



Analysis of the implementation the new RSA, classification and the complexity



Airspace user request of RSA
implementation

Analysis the location, impact
on other
structures/procedures/traffic
flows

Defining the class and the
complexity of the RSA

willingness to cooperate



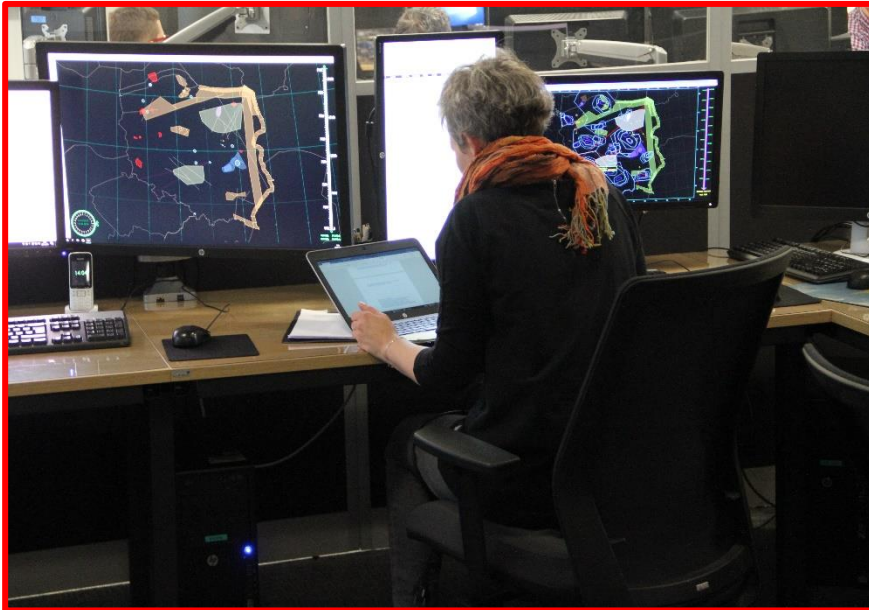
Joint civil-military ASM Unit (AMC Poland) responsible for collaborative airspace management at pre-tactical and tactical level



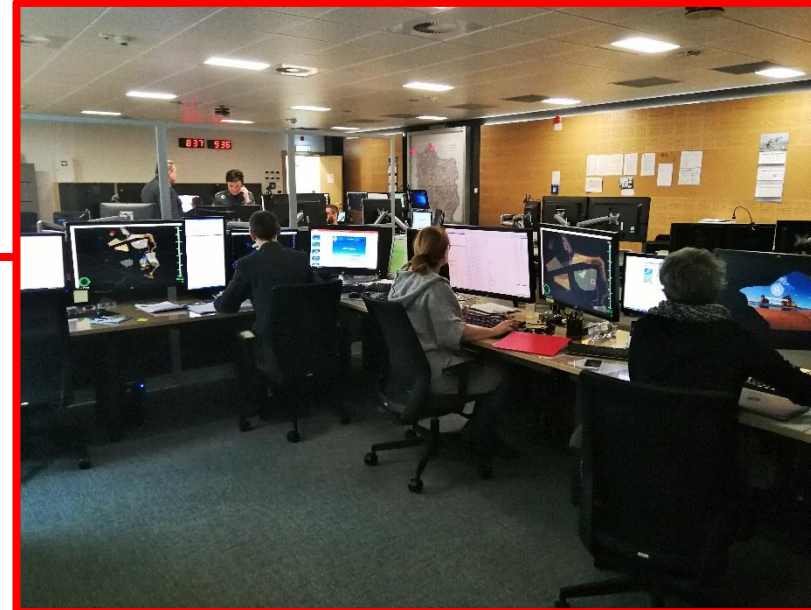
FUA implementation at pre-tactical level (ASM 2) practical examples

AMC/ASM2 Pre-tactical working positions

Airspace reservations



Airspace Use Plan (AUP) publication



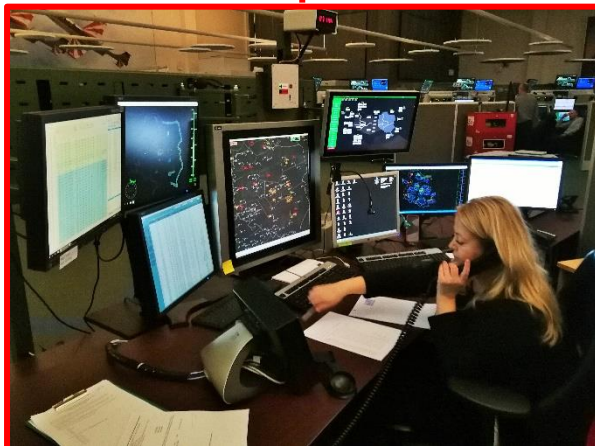
ASM Level 2 Pre-tact main procedures

- ✓ All restricted areas (RSA) published in AIP as AMC manageable – flexible parameters of activity available via daily Airspace Use Plan (AUP);
- ✓ Airspace request for usage a specific RSA must be sent to AMC D-1;
- ✓ Deconfliction according to priority rules agreed at ASM1 level;
- ✓ AUP distributed immediately after consolidation to all interested stakeholders and published on the website: www.airspace.pansa.pl

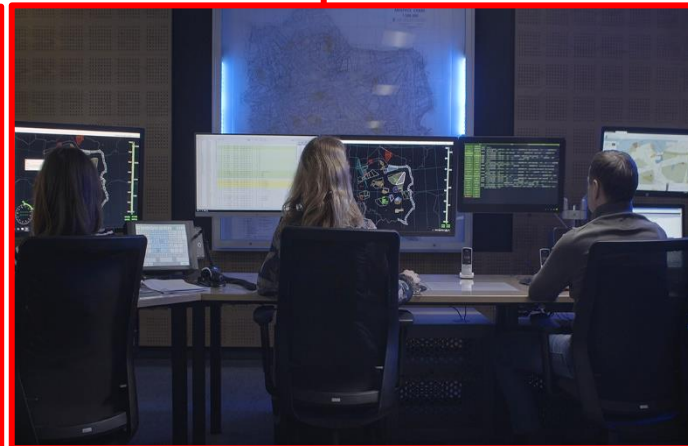
FUA implementation at tactical level (ASM 3) practical examples

AMC-ASM3 tactical working positions

AMC Supervisor



ATM system update



Airspace
utilisation/monitoring



Airspace users info centre

ASM level 3 tactical main procedures

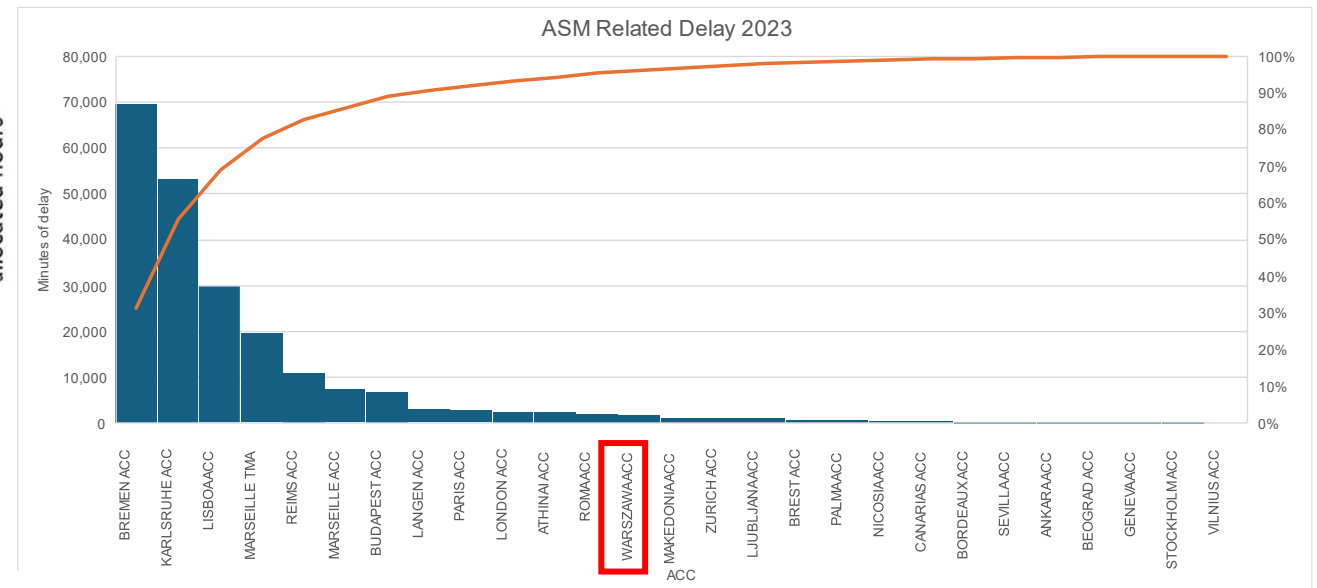
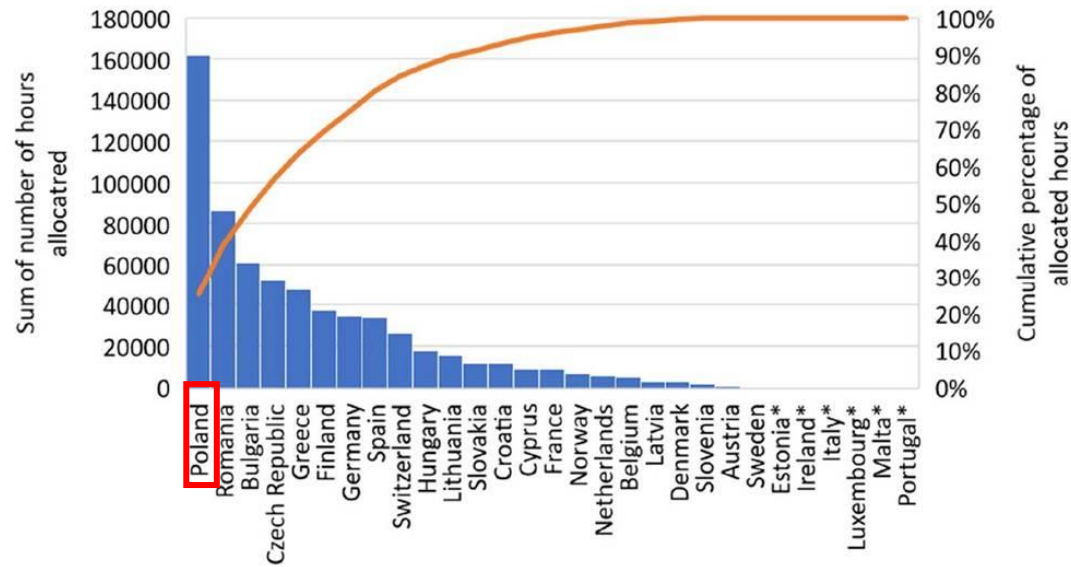
- ✓ At least 30 minutes before planned activation of the RSA (according to AUP) & immediately after deactivation, users are obliged to inform AMC;
- ✓ AMC Staff continuously monitor an AUP utilisation and update the situation in relevant systems (ASM/ATC) in real time;
- ✓ If users do not activate the area within 30 minutes (according to AUP), permission for the usage of the RSA terminates automatically;
- ✓ Restrictions in uncontrolled airspace published in AUP/UUP can only be decreased.

Main benefits

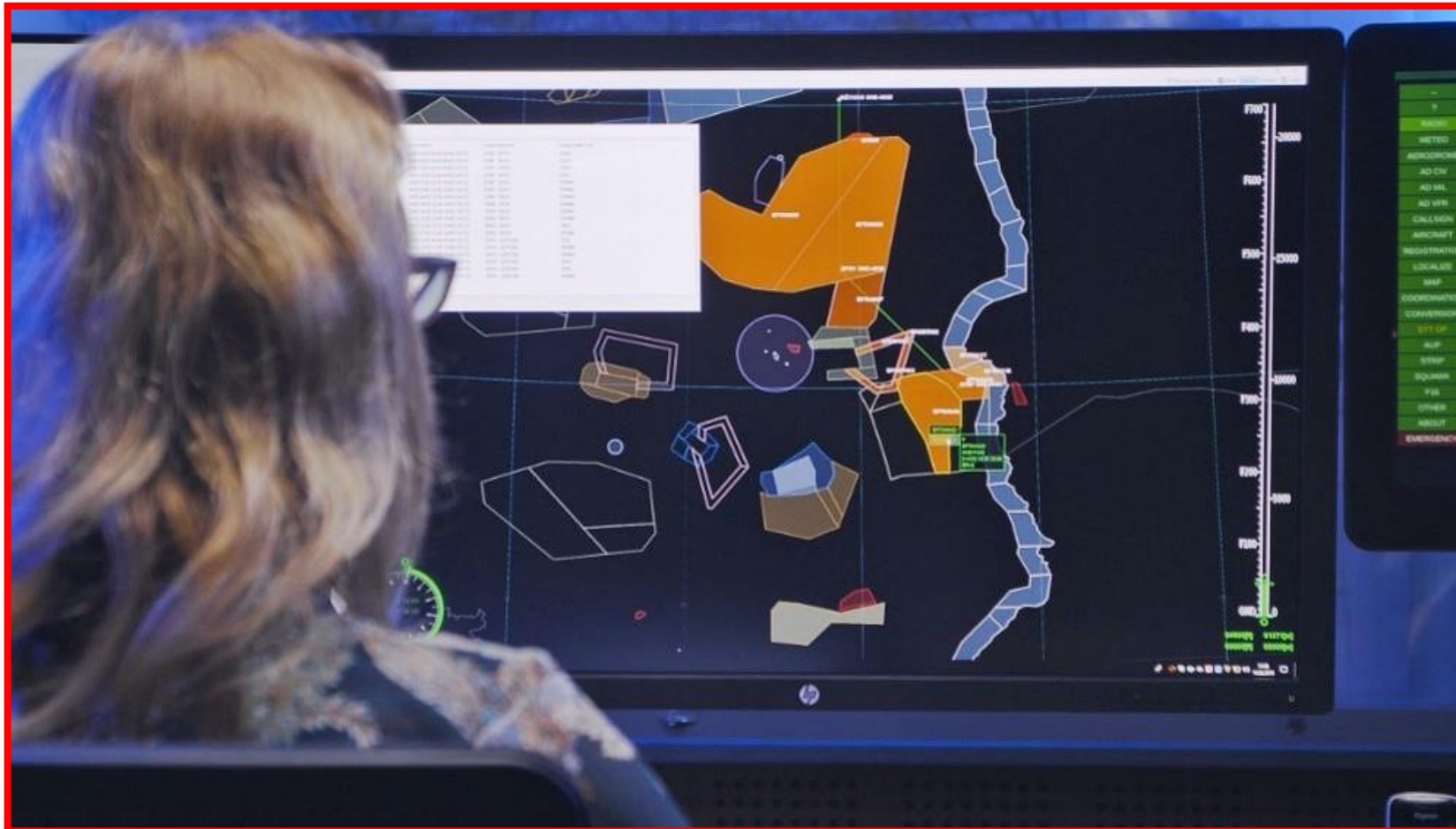
- ✓ A formalised process of civil-military cooperation at all levels of airspace management includes the needs of both sides and facilitates satisfactory compromises;
- ✓ All restrictions available in one place – AUP instead AIP/SUP/NOTAM;
- ✓ Less restrictions in airspace, informing via AUP is more flexible/effective than via AIP/NOTAMs with fixed times of activity;
- ✓ Airspace users get in advance detailed information on airspace restrictions in controlled/uncontrolled airspace;
- ✓ Increased and satisfactory availability of airspace for ALL users;
- ✓ Safety improved.

Allocated hours of RSAs activity published in AUP &

Distribution of ASM delays per ACC in 2023

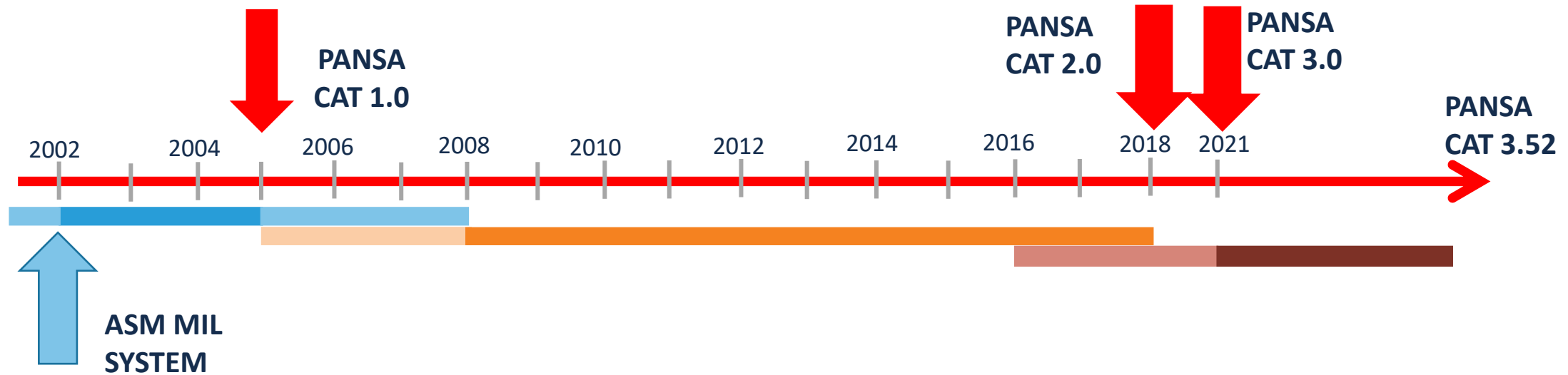


FUA system support National tool for airspace management

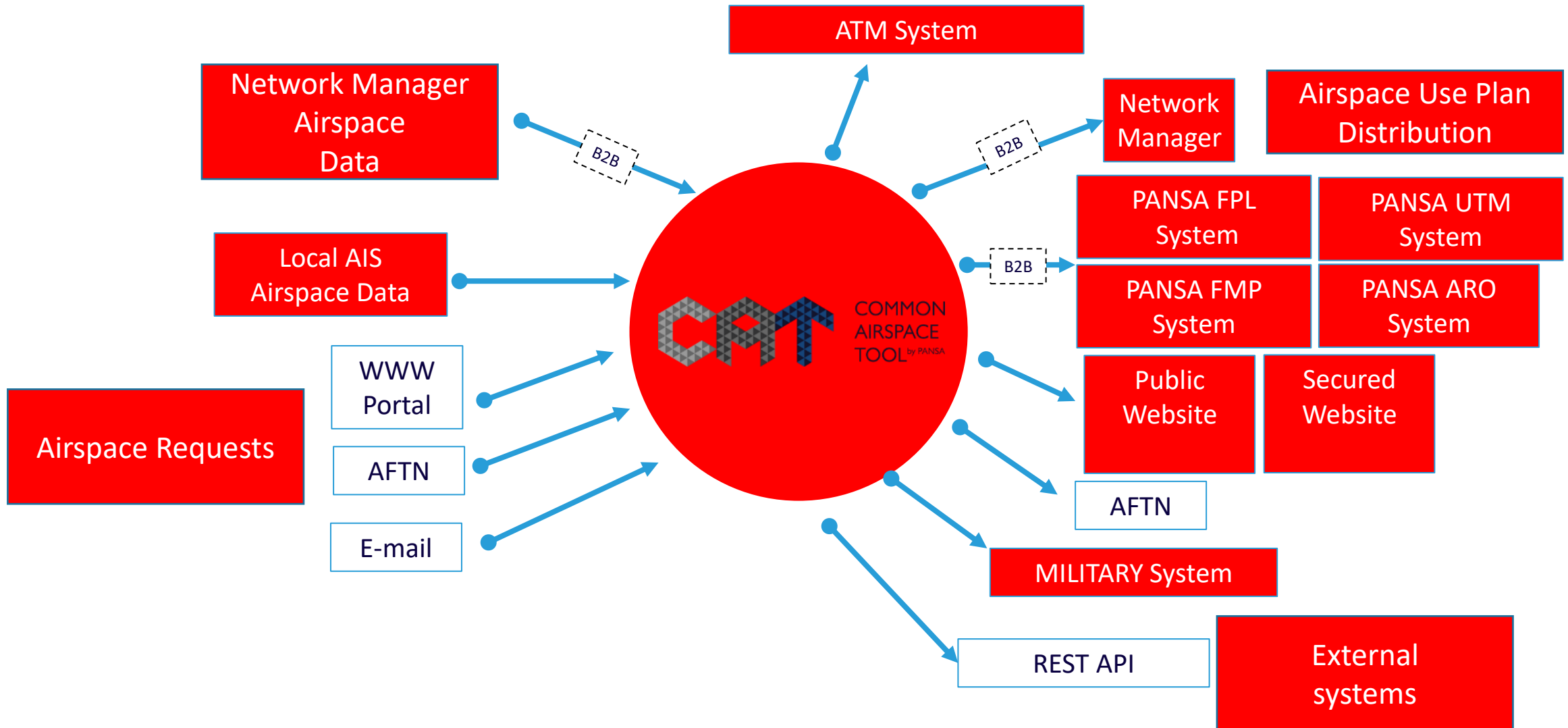


COMMON
AIRSPACE
TOOL by PANSA

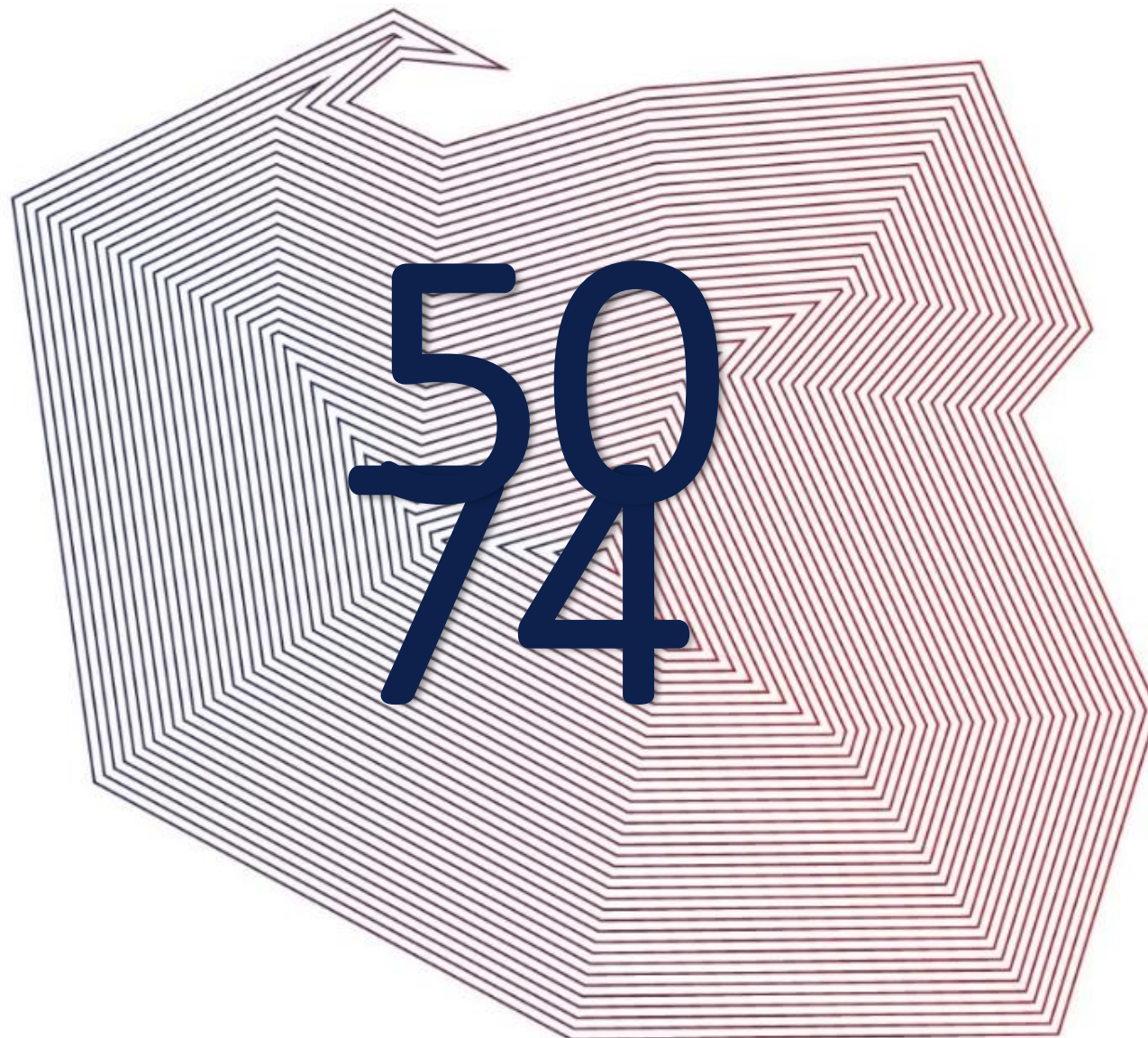
Constant development of local ASM systems support



Interoperability of the system constant distribution of airspace data

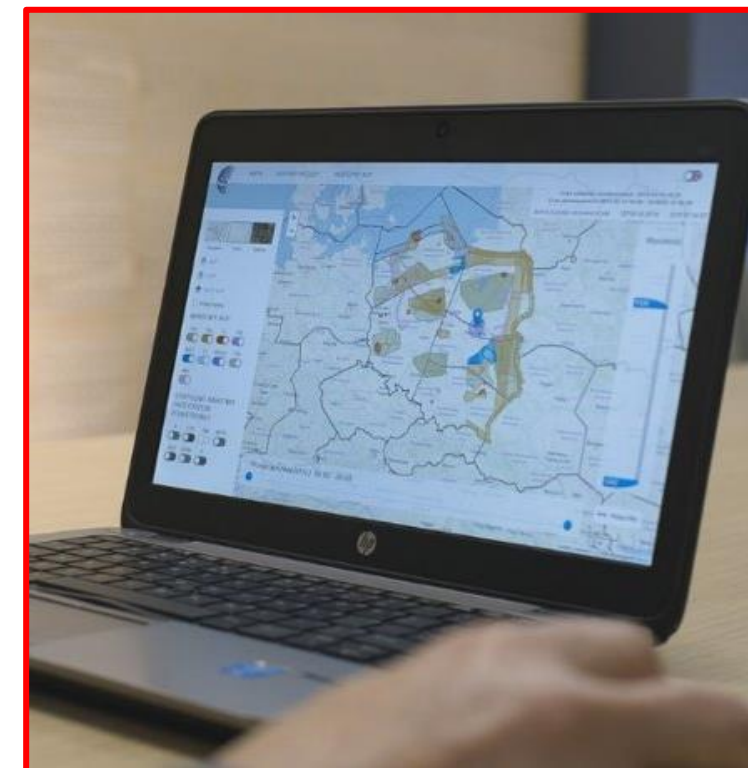
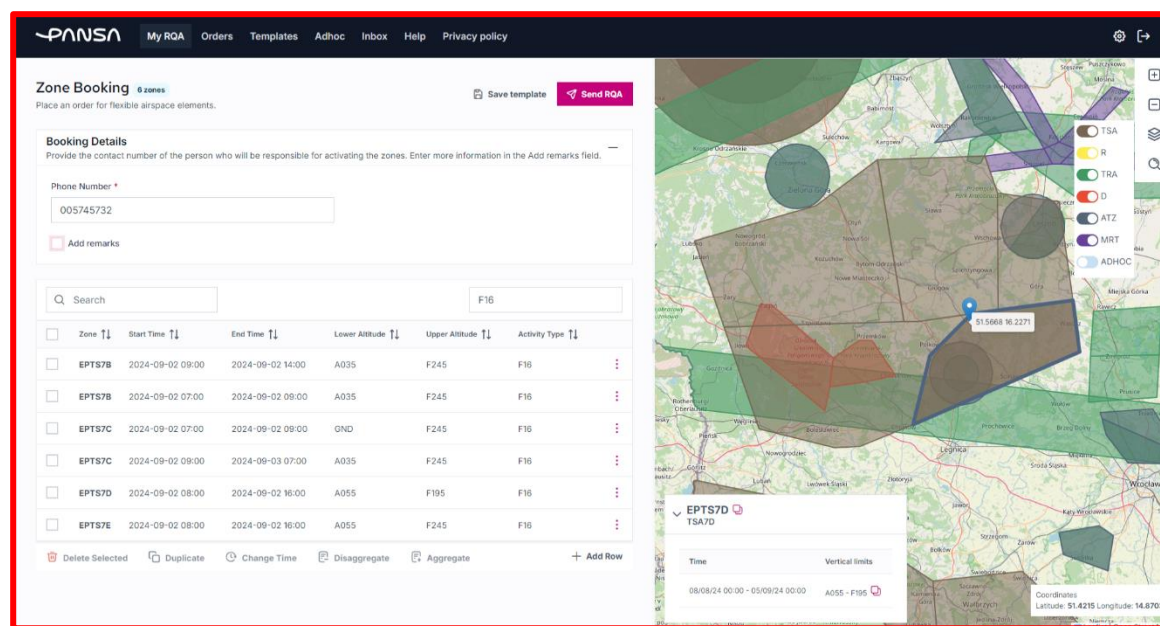
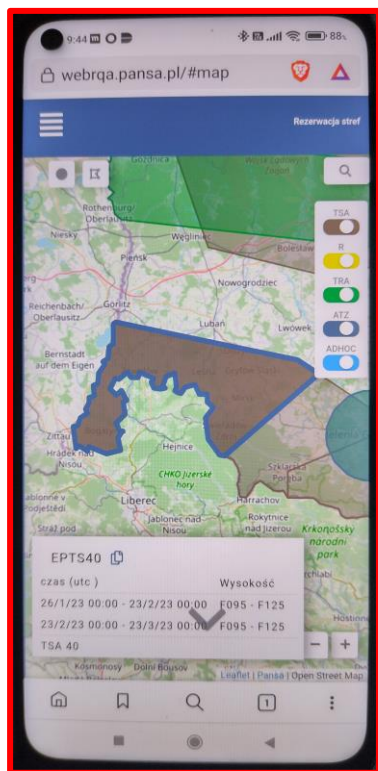


locations




military

Web Portal – airspace reservations



AA registration – different users profiles: CIV/MIL/FMP



Sign in to your account

Enter your login or email and password.

Username or email

Password

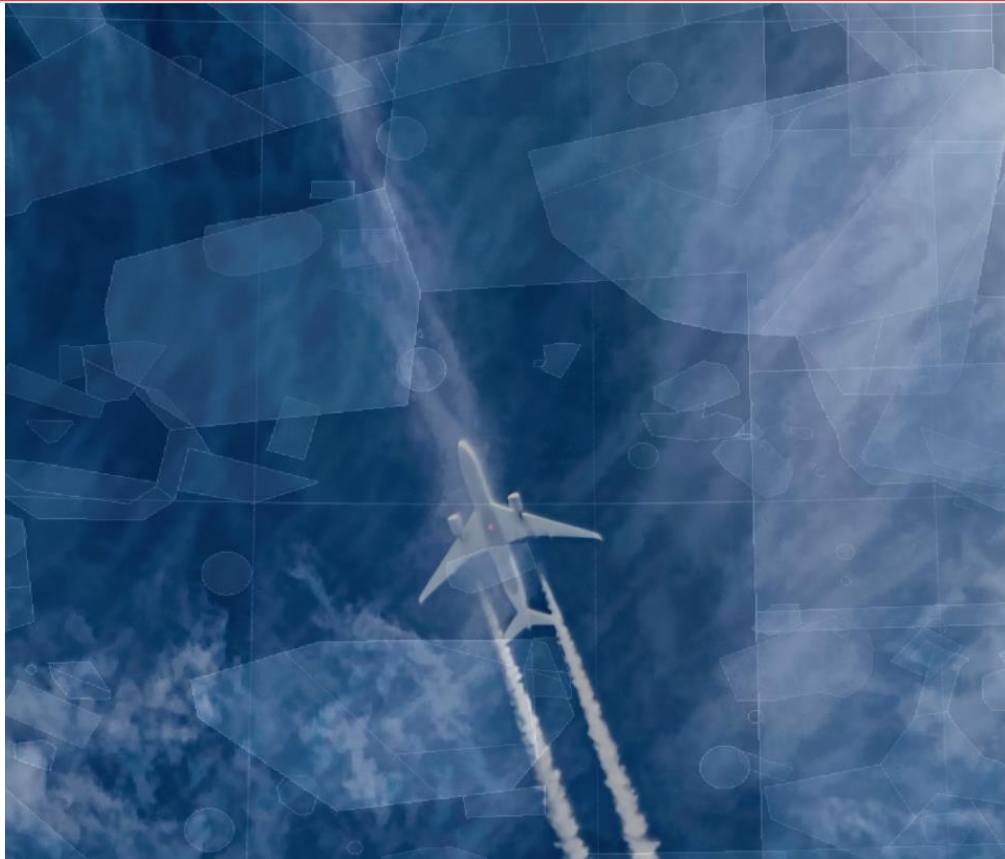
[Forgot Password?](#)

Sign In

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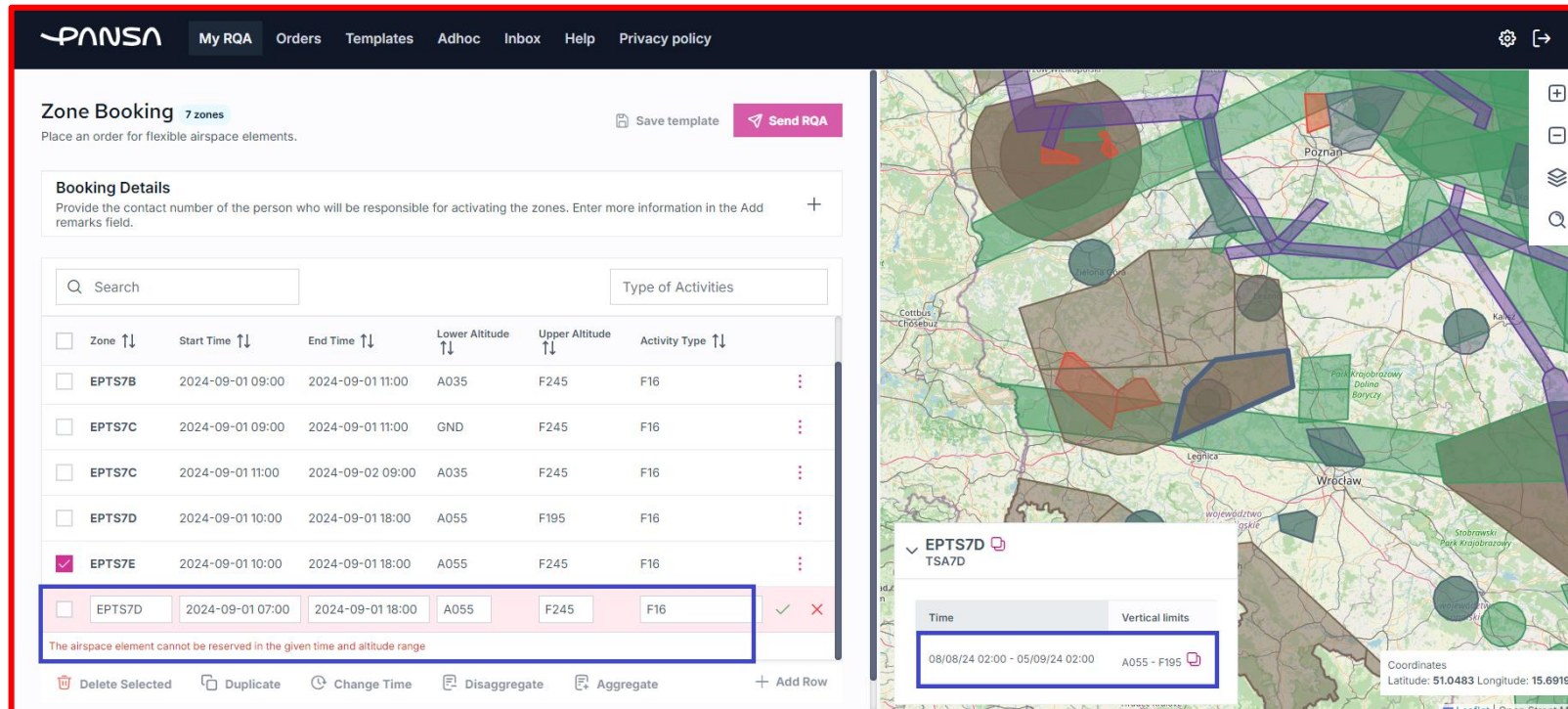
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English ▼



Benefits for Users

- User friendly interface
- Direct access to the system airspace data
- Preview of sent reservations
- Cancellation of the reservations without additional coordination with AMC
- Automatic confirmation of sent reservations



Zone Booking 7 zones

Place an order for flexible airspace elements.

[Save template](#) [Send RQA](#)

Booking Details
Provide the contact number of the person who will be responsible for activating the zones. Enter more information in the Add remarks field.

Search Type of Activities

<input type="checkbox"/> Zone ↑↓	Start Time ↑↓	End Time ↑↓	Lower Altitude ↑↓	Upper Altitude ↑↓	Activity Type ↑↓	
<input type="checkbox"/> EPTS7B	2024-09-01 09:00	2024-09-01 11:00	A035	F245	F16	⋮
<input type="checkbox"/> EPTS7C	2024-09-01 09:00	2024-09-01 11:00	GND	F245	F16	⋮
<input type="checkbox"/> EPTS7C	2024-09-01 11:00	2024-09-02 09:00	A035	F245	F16	⋮
<input type="checkbox"/> EPTS7D	2024-09-01 10:00	2024-09-01 18:00	A055	F195	F16	⋮
<input checked="" type="checkbox"/> EPTS7E	2024-09-01 10:00	2024-09-01 18:00	A055	F245	F16	⋮
<input type="checkbox"/> EPTS7D	2024-09-01 07:00	2024-09-01 18:00	A055	F245	F16	⋮

The airspace element cannot be reserved in the given time and altitude range

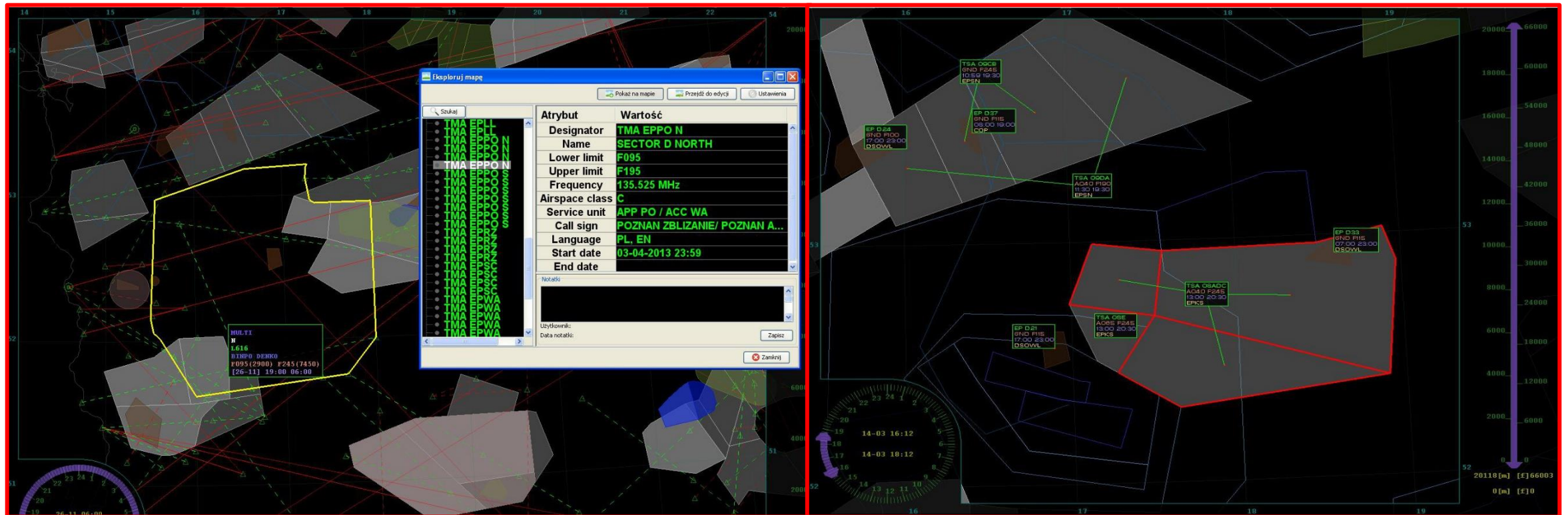
[Delete Selected](#) [Duplicate](#) [Change Time](#) [Disaggregate](#) [Aggregate](#) [Add Row](#)

Map View: EPTS7D TSA7D

Time: 08/08/24 02:00 - 05/09/24 02:00 | Vertical limits: A055 - F195

Coordinates: Latitude: 51.0483 Longitude: 15.6919

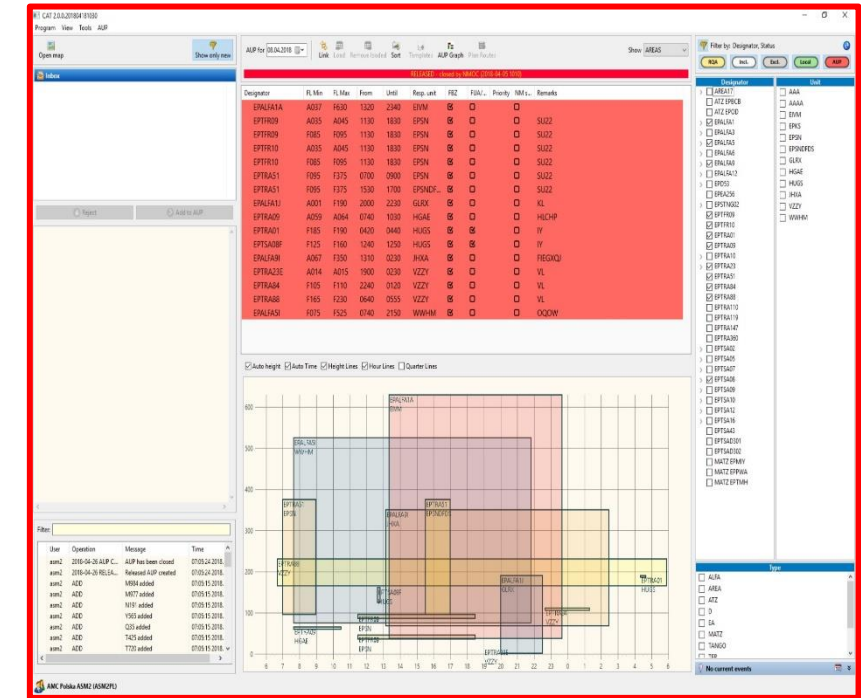
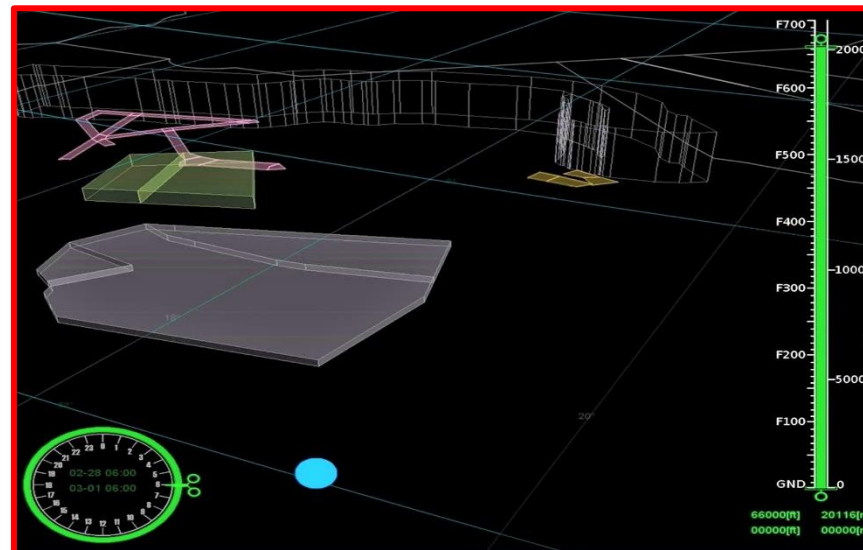
Static airspace database updated whenever necessary including ad-hoc areas



Support to fixed ATS Route Network and Free Route Airspace



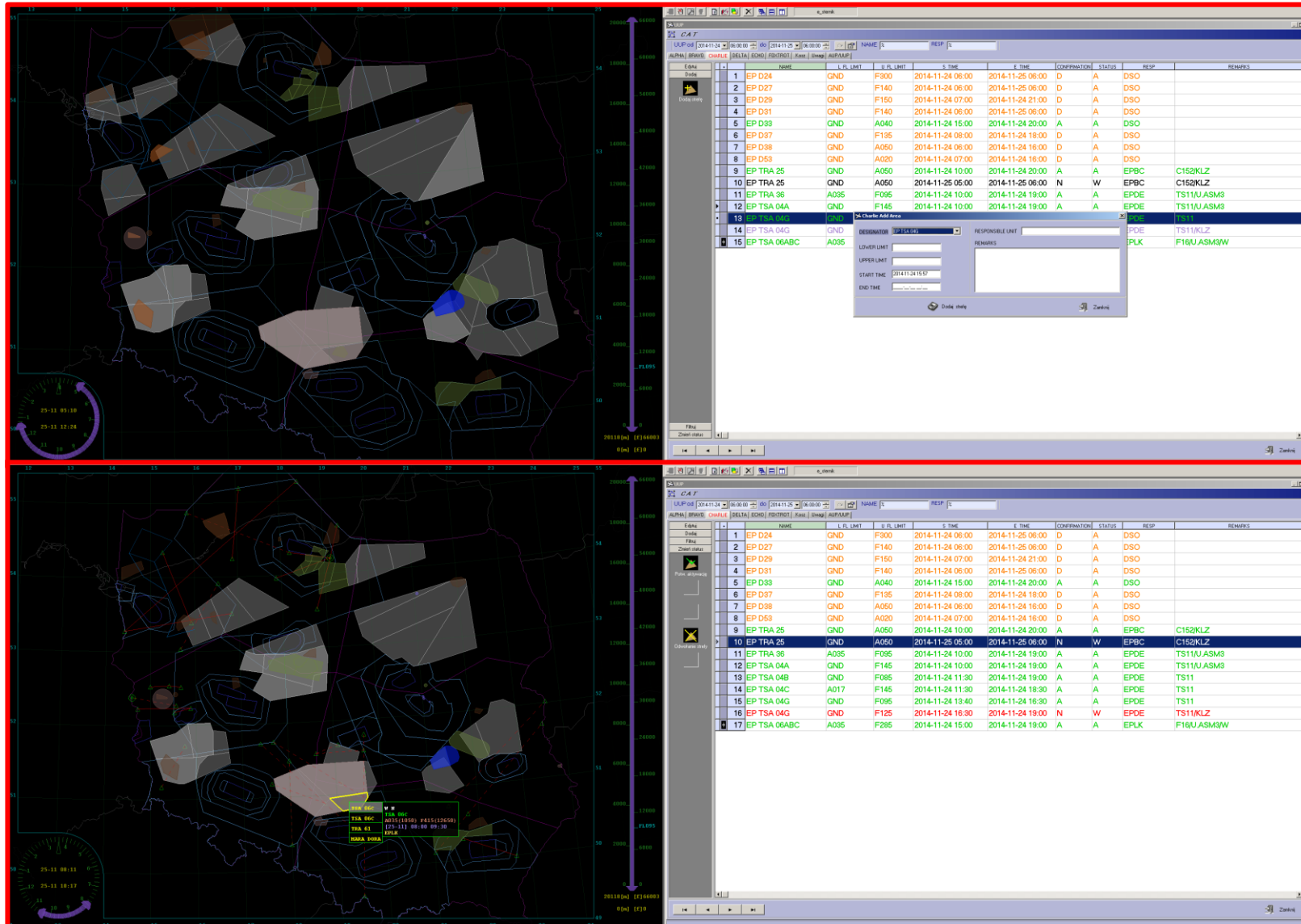
RSA/FBZ/FUA restriction



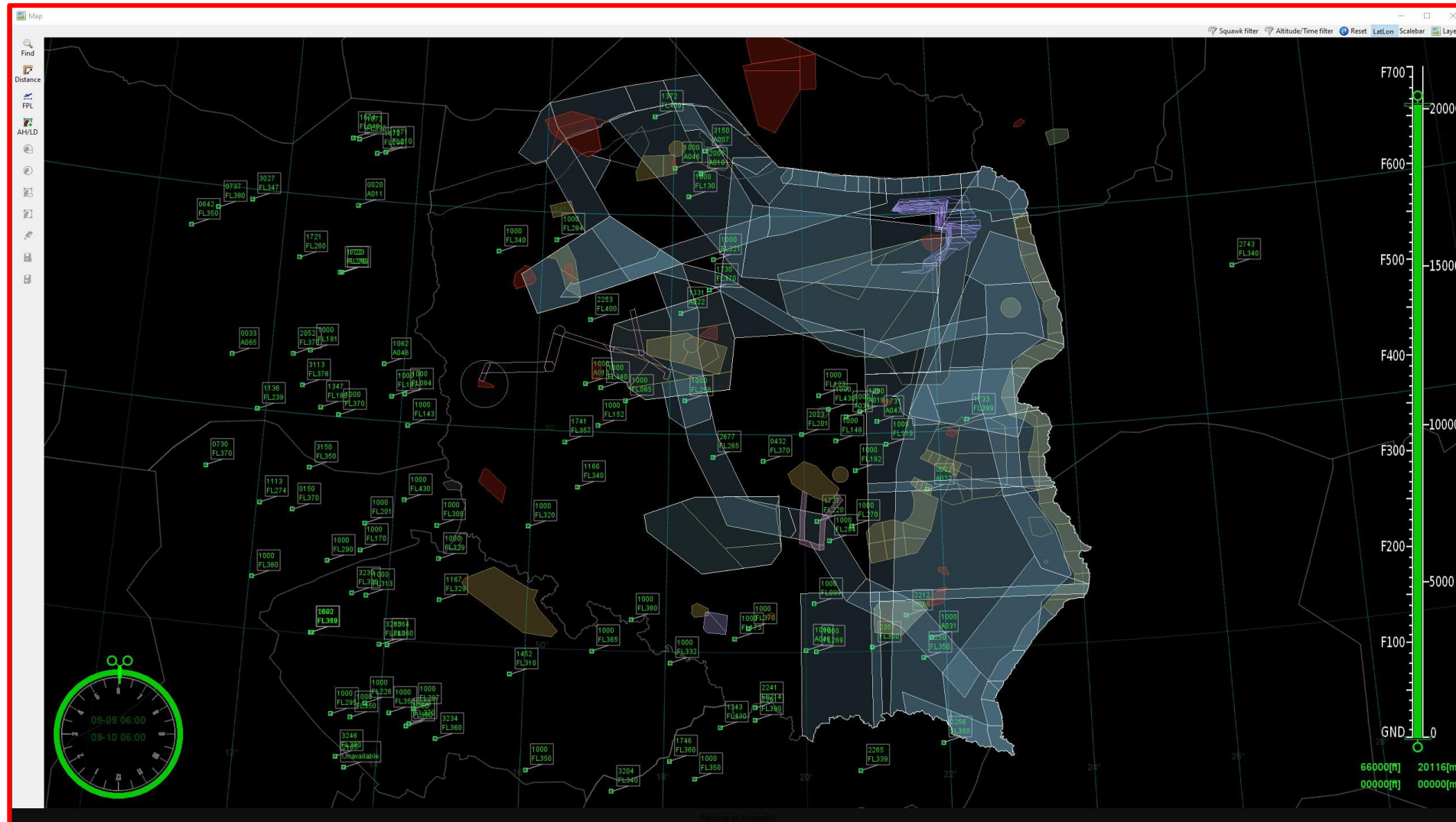
Trajectory vs RSAs - conflict report



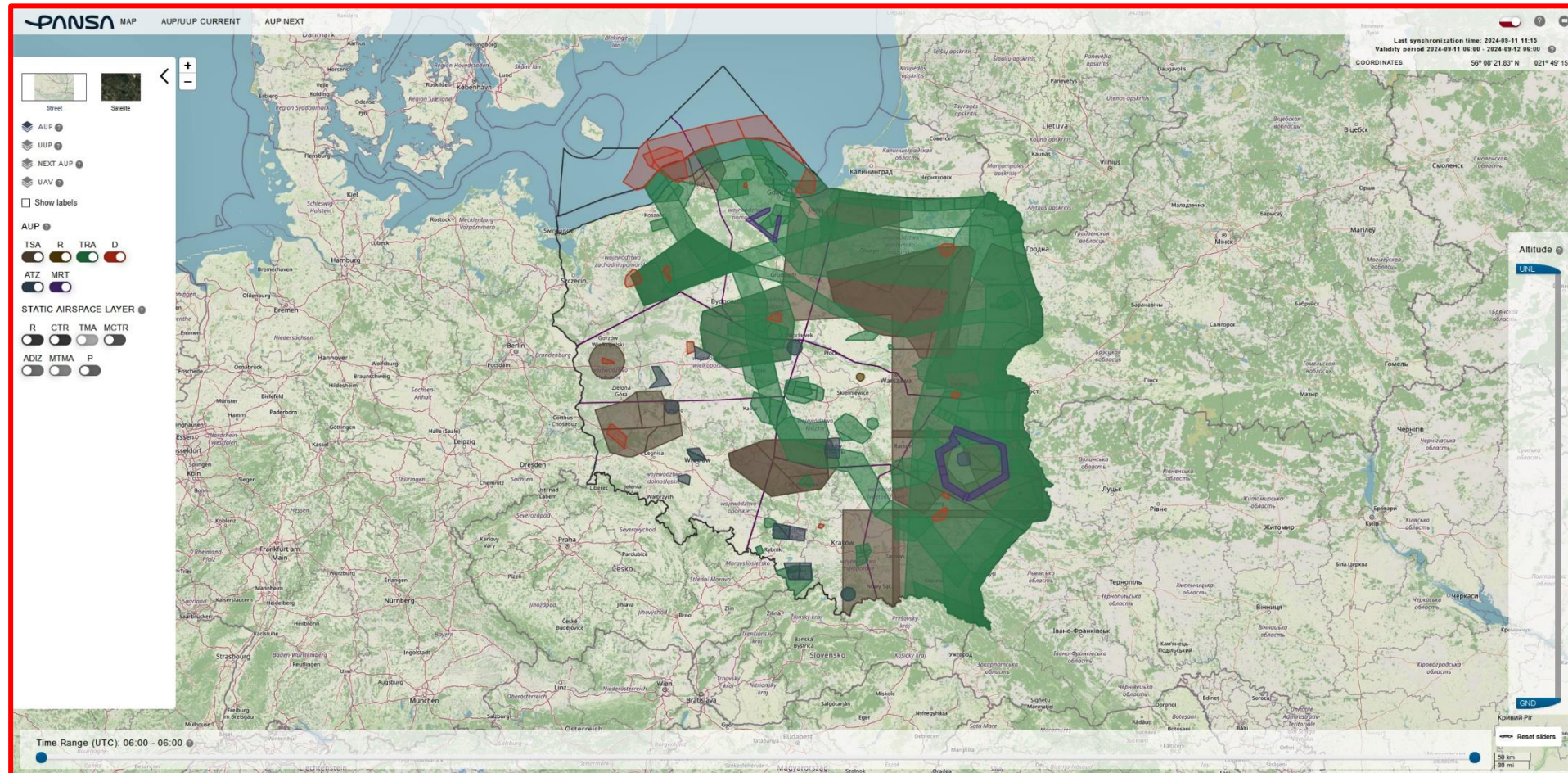
Real time RSA activation/deactivation



Improved RSA monitoring – track data/alerting

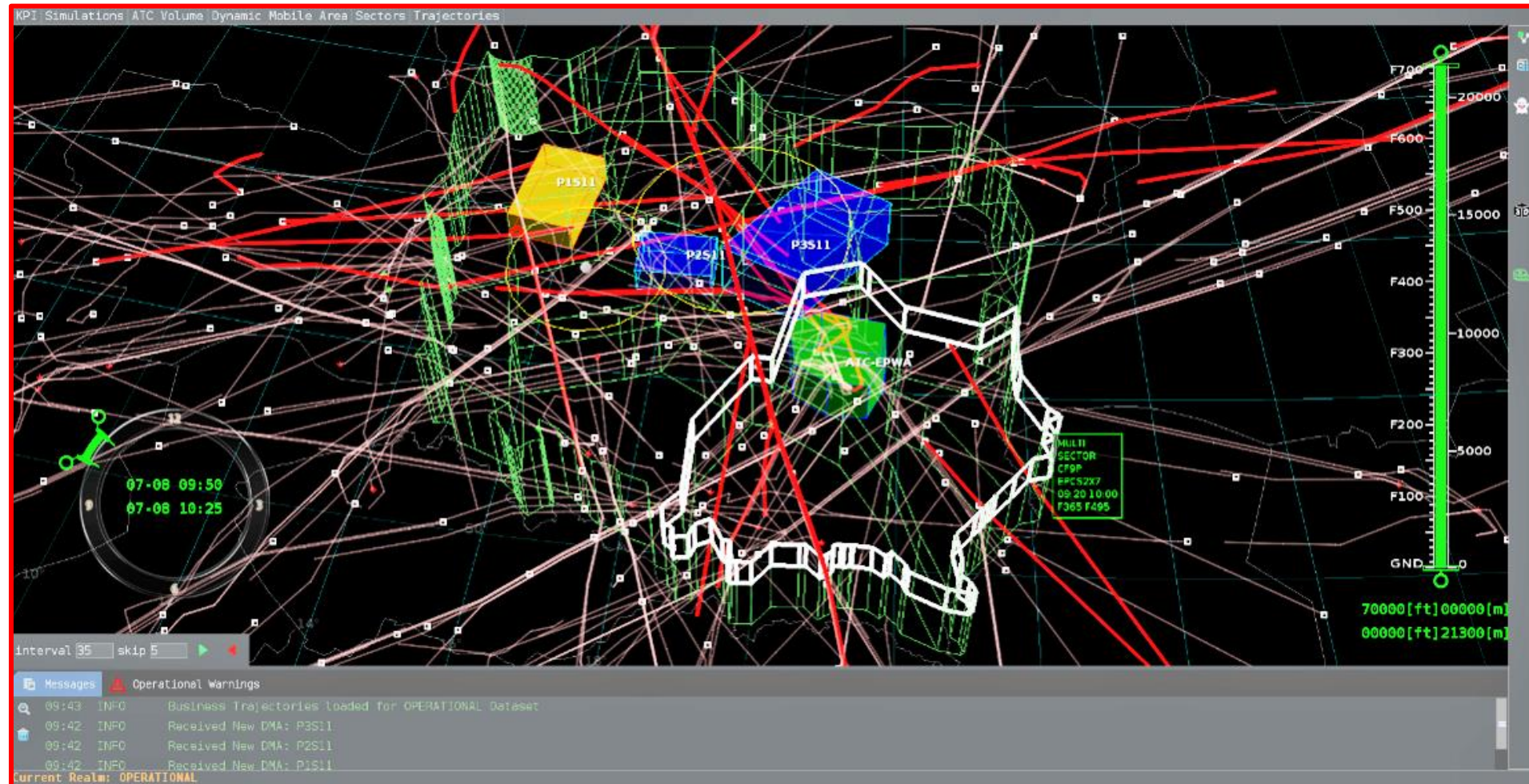


On-line airspace utilisation – dynamic service



<https://airspace.pansa.pl/>

Future developments supporting ASM/ATFCM CDM Process





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Thank You

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