ICAO APAC & EUR/NAT CMAC/FUA WORKSHOP

One-step forward

Bangkok, Thailand
19 – 23 January 2026

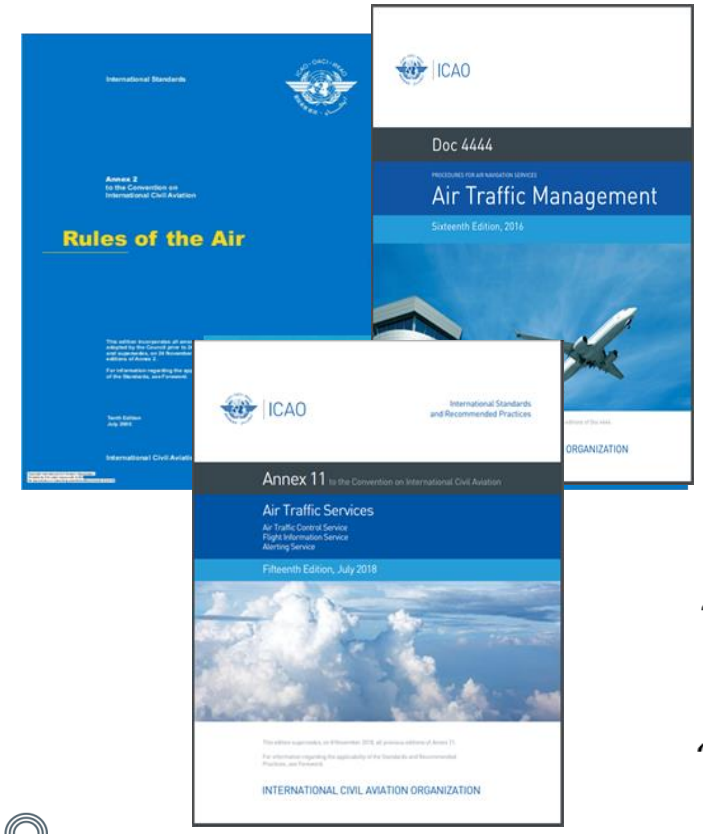
ICAO EUR/NAT Region Updates

Sven Halle

ICAO EUR/NAT Office

ICAO

Different frameworks

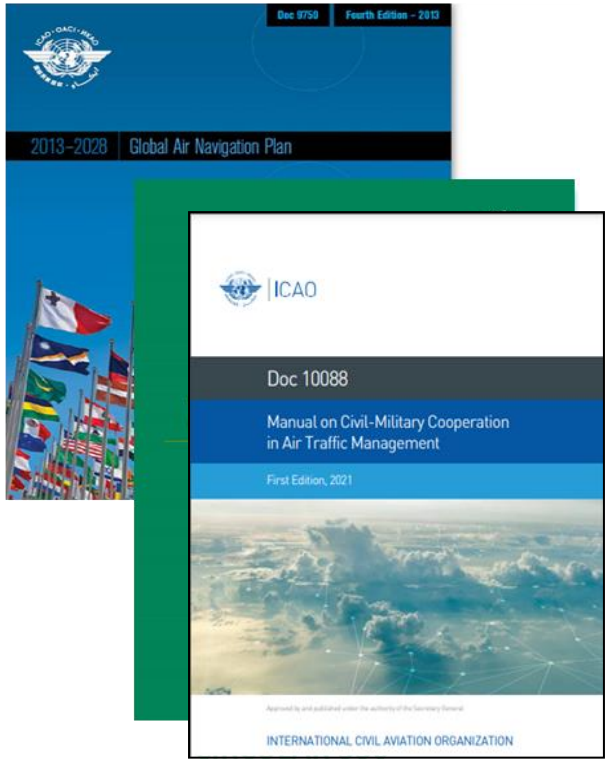


DOC 9554-AN/*932*

"Manual Concerning Safety Measures Relating to Military Activities Potentially Hazardous to Civil Aircraft Operations"

DOC 9433-AN/*926*

"Manual Concerning Interception of Civil Aircraft"



"Civil/Military Cooperation in Air Traffic Management"

Institutional and regulatory framework

Doc 10084 *Civil Aircraft Operations over or near Conflict Zones*

Military Aircraft Operations

Doc 10088 *Manual on civ mil cooperation in ATM*

Civil/Military Interoperability

Global recommendations leading to regional Implementation

- Results from the Global ATM Forum should be communicated via a global campaign to support States in the implementation of provisions relating to civil/military cooperation and coordination
  - ICAO should serve as an international platform to facilitate and enhance Civil/Military Coordination as well as to provide the necessary follow up activities
- AN-Conf/12 Recommendation 4/5 – Civil/military coordination & cooperation and sharing of airspace
- AN-Conf/13 Agenda Item 3.4 on Civil Military Cooperation with 2 Recommendations on civil-military collaboration and civil-military cooperation implementation
- ICAO Assembly Resolution A41-10, Appendix I
- AN-Conf/14 Recommendation 1.1/2 ANS Resilience

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More than 20 years of Flexible Use of Airspace

- European Commission Regulation (EC) No 2150/2005 of 23 December 2005 laying down common rules for the flexible use of airspace (FUA)
- Flexible use of airspace (FUA) is an airspace management concept described by the International Civil Aviation Organisation (ICAO) and developed by the European Organisation for the Safety of Air Navigation (EUROCONTROL), according to which airspace should not be designated as either purely civil or purely military airspace, but should rather be considered as one continuum in which all users' requirements have to be accommodated to the maximum extent possible
- Implementation (application of the flexible use of airspace) reporting requirements linked to Regulation (EC) No 551/2004 (the Airspace regulation)
- To further increase the optimum use of scarce resources and the effectiveness of European air traffic management, the Airspace regulation was amended by Regulation (EC) No 1070/2009 of 14 November 2009

Flexible Use of Airspace

- European Air Navigation Planning Group (EANPG) TF for extension of FUA concept over High Seas in 2008
- Inclusion of FUA in EUR Air Navigation Plan (ICAO Doc 7754) Vol I and Vol II since 2010

Flexible Use of Airspace

2.7 States should implement civil/military cooperation and coordination mechanisms to enhance the application of the Flexible Use of Airspace concept, which will contribute to more direct routing with a commensurate saving in fuel and associated emissions. States should arrange for close liaison and coordination between civil ATS units and relevant military operational control and/or air defence units in order to ensure integration of civil and military air traffic or its segregation, if required. Such arrangements would also contribute to increasing airspace capacity and to improving the efficiency and flexibility of aircraft operations.

Reduced Vertical Separation Minimum (RVSM)/Regional Monitoring Agencies

2.8 The RMA EUR and RMA EURASIA are the two designated Regional Monitoring Agencies (RMA) within the ICAO EUR Region responsible for monitoring the height-keeping performance and approval status of aircraft operating at these levels, in order to ensure that the continued application of RVSM meets the agreed regional safety objectives as set out by the EANPG.

3. SPECIFIC REGIONAL REQUIREMENTS

Regional airspace structure

3.1 In the ICAO EUR Region, additionally, the optimization of the air traffic flows is also performed through user preferred flight profiles (e.g. user preferred route (UPR), continuous climb operations (CCO), continuous descent operations (CDO)). Details on how the coordination of airspace structure improvements is organised in the ICAO EUR Region are provided in EUR ANP Volume II.

Civil/ military cooperation and coordination

3.2 In the EUR Region, civil/military cooperation and coordination mechanisms will also increase airspace capacity and improve the efficiency and flexibility of aircraft operations. Details on the flexible use of airspace concept in the ICAO EUR Region are provided in EUR ANP Volume II.

Air Traffic Flow Management (ATFM)

3.3 In the EUR Region, States have implemented ATFM cooperation and coordination mechanisms which have improved the overall performance of the ATM system while ensuring demand and capacity balance. Details on ATFM implementation in the ICAO EUR Region are provided in EUR ANP Volume II.

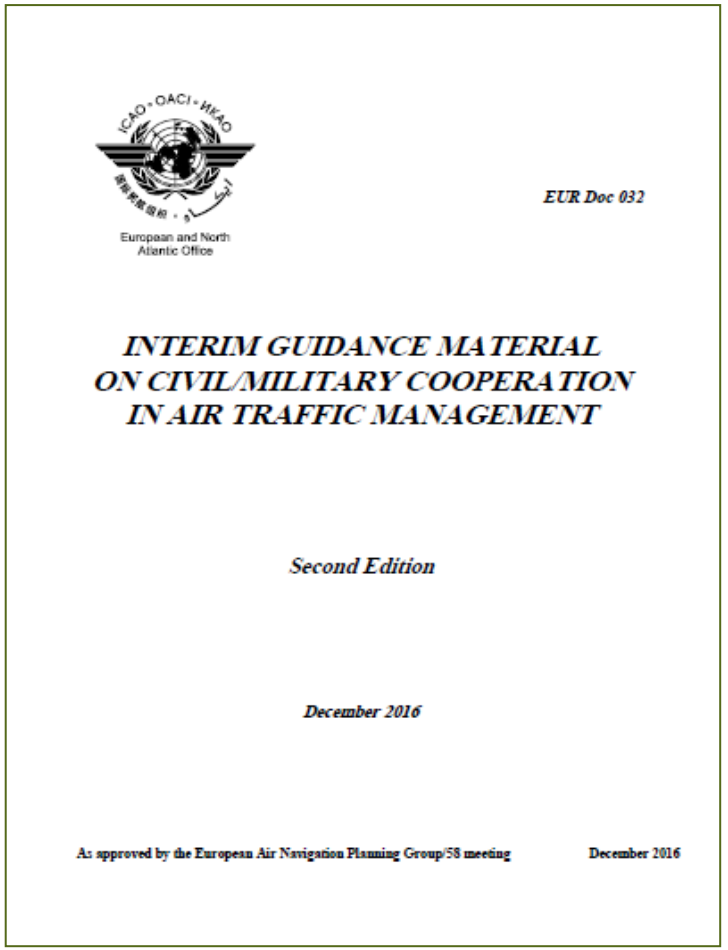
Civil Military Coordination and Flexible Use of Airspace

3.12 States should implement civil/military cooperation and coordination mechanisms in accordance with ICAO Circular 330. States should also enhance the application of the Flexible Use of Airspace concept, which will increase airspace capacity and improve the efficiency and flexibility of aircraft operations. States should arrange for close liaison and coordination between civil ATS units and relevant military operational control and/or air defense units in order to ensure integration of civil and military air traffic or its segregation, if required. In the ICAO EUR Region, there are specific arrangements (e.g. based on *EUROCONTROL ERNIP Part 3 ASM Handbook*, etc.) that enable the implementation of the FUA concept. ICAO EUR Doc 032 has been developed as interim guidance material for the implementation of the FUA concept over the high seas and will be considered in the global revision process of ICAO provisions.

ICAO EUR Doc 032

Interim Guidance Material on Civil Military Cooperation in Air Traffic Management

- Chapter 2: Flexible Use of Airspace: describes additional elements of FUA, especially on the application of FUA over the High Seas.
- Chapter 3: Operation of State aircraft under due regard: provides examples from different States and international organisations on the operation of State aircraft over the High Seas.
- Appendix A: EUROCONTROL European Route Network Improvement Plan, Airspace Management Handbook



State Aircraft Operations over the High Seas & COMLOSS

EUR OPS Bulletins

- 2015_002 - Guidelines to airspace users in order to raise their awareness on State aircraft operations especially in the High Seas airspace over the Baltic Sea
- 2017_001 - Principles and best practices in case of air encounters, especially in the High Seas airspace commonly shared by civil & military aviation over the Baltic Sea
- 2021_ 001 - Principles and best practices in case of loss of air-ground communication

EUR OPS BULLETIN

Serial Number: **2015_002** Effective: 15 December 2015

Subject: Guidelines to airspace users in order to raise their awareness on **State aircraft operations especially in the High Seas airspace over the Baltic Sea**

The practical meaning for airspace users that are operating over the High Seas

EUR OPS BULLETIN

Serial Number: **2017_001** Effective: 1 December 2017

Subject: Principles and best practices in case of air encounters, especially in the High Seas airspace commonly shared by civil & military aviation over the Baltic Sea

EUR OPS BULLETIN

Serial Number: **2021_001** Effective: 10 December 2021

Subject: Principles and best practices in case of loss of air-ground communication

Introduction and scope

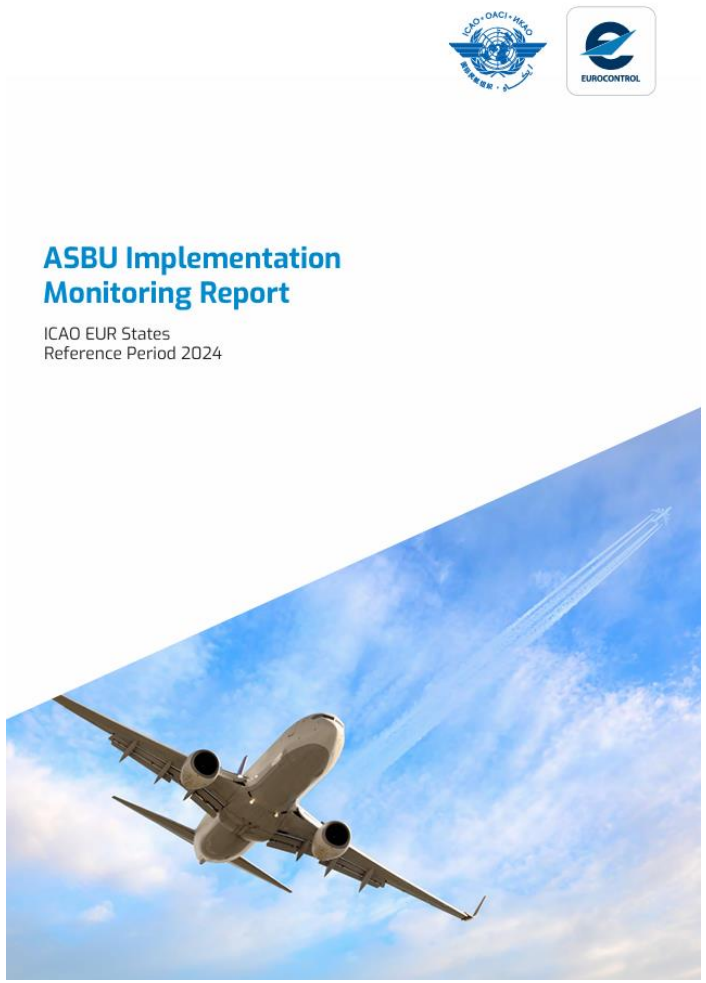
National security and defence considerations

Regulatory framework

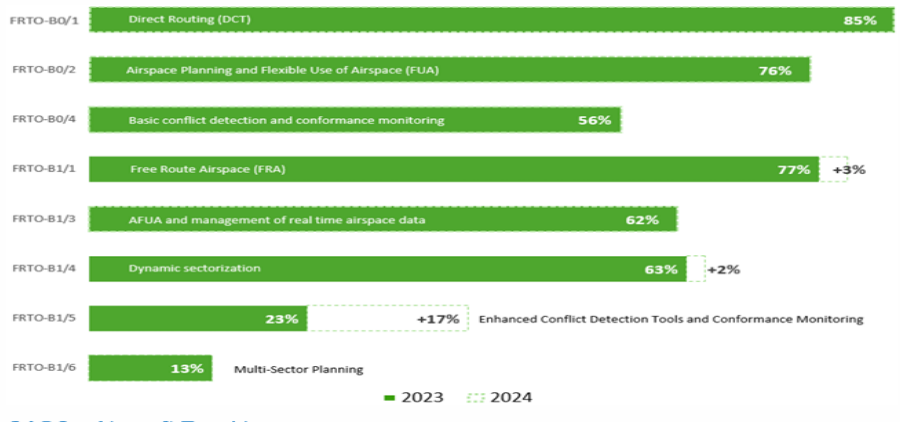
General considerations

Regular regional events

FUA implementation as part of FRTO



FRTO	FRTO-B0/1	Direct routing (DCT)	AOM21.1	LSSIP + questionnaire
	FRTO-B0/2	Airspace planning and Flexible Use of Airspace (FUA)	AOM19.5-ASP01 AOM19.5-ASP02	LSSIP + questionnaire
	FRTO-B0/4	Basic conflict detection and conformance monitoring	ATC12.1.1 ATC12.1.4	LSSIP + questionnaire
	FRTO-B1/1	Free Route Airspace (FRA)	AOM21.2	LSSIP + questionnaire
	FRTO-B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data	AOM19.5-ASP09	LSSIP + questionnaire
	FRTO-B1/4	Dynamic sectorization	AOM19.4	LSSIP + questionnaire
	FRTO-B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring	ATC12.1.1 ATC12.1.2 ATC12.1.3 ATC12.1.4	LSSIP + questionnaire
	FRTO-B1/6	Multi-Sector Planning	ATC18	LSSIP + questionnaire



FUA implementation

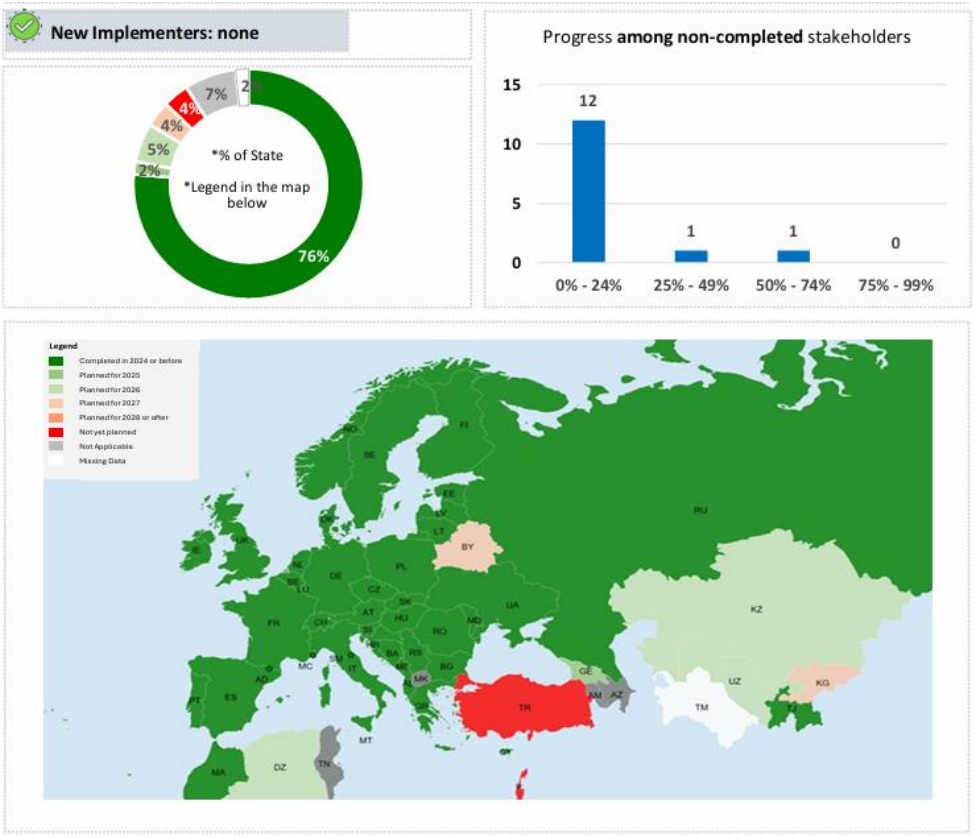
FRTO-B0/2	Airspace planning and Flexible Use of Airspace (FUA)

Description:

This Element addresses strategic/long term airspace management, pre-tactical planning and tactical operations. Automated ASM support systems improve airspace management processes and flexible airspace planning including time horizon specifications in all flight phases (strategic, pre-tactical and tactical time horizon) by providing mutual visibility on civil and military requirements. They also support flexible airspace planning according to civil and military ANSPs and airspace user requirements, including permit cross border and use of segregated areas operations regardless of national boundaries.

Implementation Summary (end 2024):

- The Element has already been implemented by 42 States with no implementers during the reporting cycle.
- Among the implementers, 26 States have implemented both a local tool (e.g., EUROCONTROL's LARA, Local and sub-regional airspace management support system, or equivalent) as well as a centrally provided system (e.g., CIAM also provided by the EUROCONTROL Network Manager), one system in backup of the other.
- Outside the LSSIP area, the Element is already deployed by RU and TJ while DZ, KG and UZ have implementation plans for 2026, to be followed by BY and KZ in 2027.
- Note: for improved granularity, for the LSSIP area, the analysis is conducted by tracking the progress of Stakeholder Lines of Action AOM19.5-ASP01, "Deployment of automated ASM support systems (LARA or its equivalent)," or AOM19.5-ASP02, "Adoption of the NM system (CIAM) for ASM capabilities".



Advanced FUA implementation

FRTO-B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data

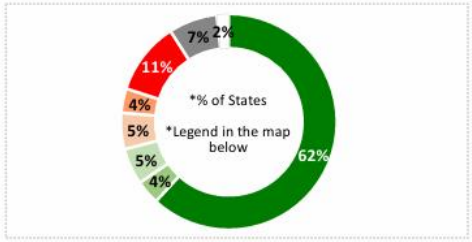
Description:

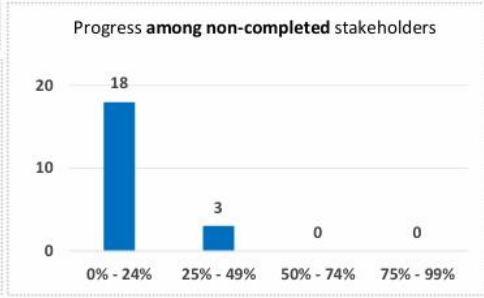
This Element enhances Airspace Management (ASM) by automated data exchange services during the pre-tactical and tactical execution phases continuously in real time. ASM information is shared between ASM systems and ATS units/systems and communicated to the ATM network function in the tactical and execution phases.
Such data, consisting of pre-notification of activation, notification of activation, de-activation, modification and release are collected, saved and processed. Furthermore, data needs to be exchanged between ASM stakeholders and made available to other actors and relevant airspace users not involved in ASM processes.

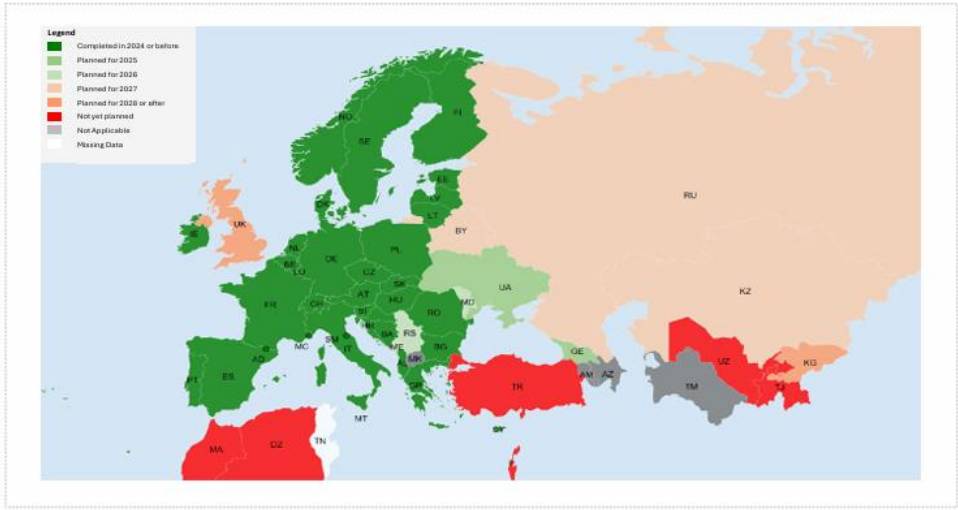
Implementation Summary (end 2024):

- The Element is reported as completed by 34 States, mainly driven by the obligations imposed by the CP1 Regulation (EU 116/2021 -Sub-AF 3.1 on ASM and Advanced FUA) on the EU Member States.
- Among the non-LSSIP States, implementations are expected in 2027 (BY, KZ, RU) and 2028 (KG) with the other States not having deployment plans yet, in particular due to the lack of operational needs.
- For BE, LU and NL the Element has also been deployed in the airspace where the service is provided by the Maastricht Upper Area Centre.
- Note: for improved granularity, for the LSSIP area, the analysis is conducted based on the Stakeholder Line of Action AOM19.5-ASP09 " Adapt ASM and ATC systems for automatic ASM data exchanges".

New Implementers: none







Free Route Airspace implementation

FRTO-B1/1	Free Route Airspace (FRA)

Description:

The Free Route Airspace (FRA) is a specified volume of airspace within which users may freely plan a route between a defined entry point and a defined exit point, with the possibility to route via intermediate (published or unpublished) waypoints, without reference to the ATS route network, subject to airspace availability. Within this airspace, flights remain subject to air traffic control.

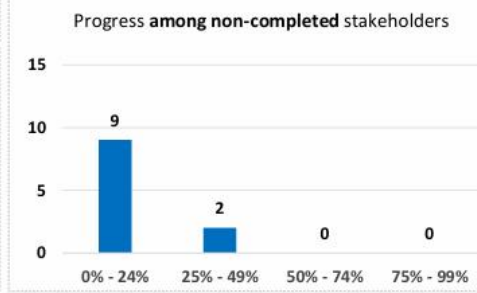
FRA implementation can be customized for instance: laterally and vertically; during specific periods; with a set of entry/exit conditions; with initial system upgrades. The extension of FRA within and across the FIR boundaries also requires upgrades of the ATM network function system and the ANSPs ground system for airspace management and flight data processing.

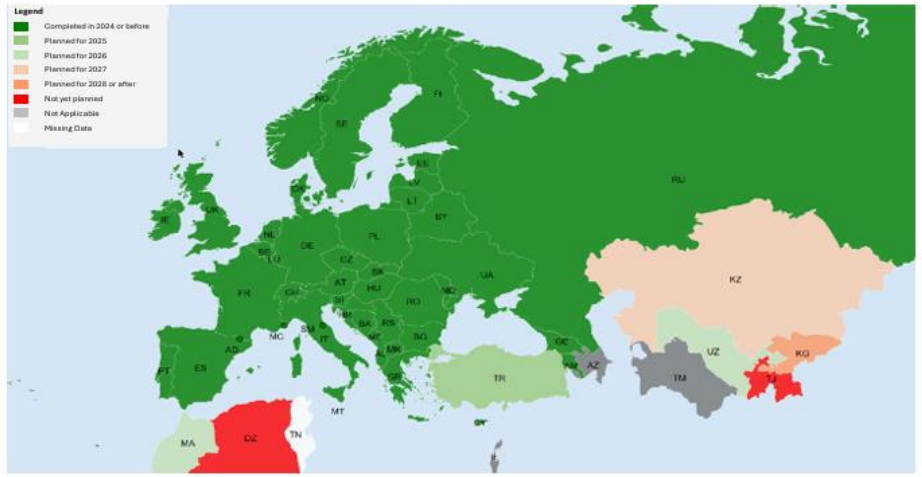
FRA concept brings significant flight efficiency benefits and a choice of user preferred routes to airspace users.

Implementation Summary (end 2024):

- Overall, at EUR Region level, the Element is deployed in 44 States, 1 other (TR) expecting completion by end 2025.
- In very many instances the implementation goes beyond the national FIRs as FRA is deployed more and more cross-border which is a very positive development from the perspective of maximising the FRA benefits.
- Among non-LSSIP States, the Element is already deployed in BY and RU, to be followed by UZ (2026), KZ (2027) and KG (2028).

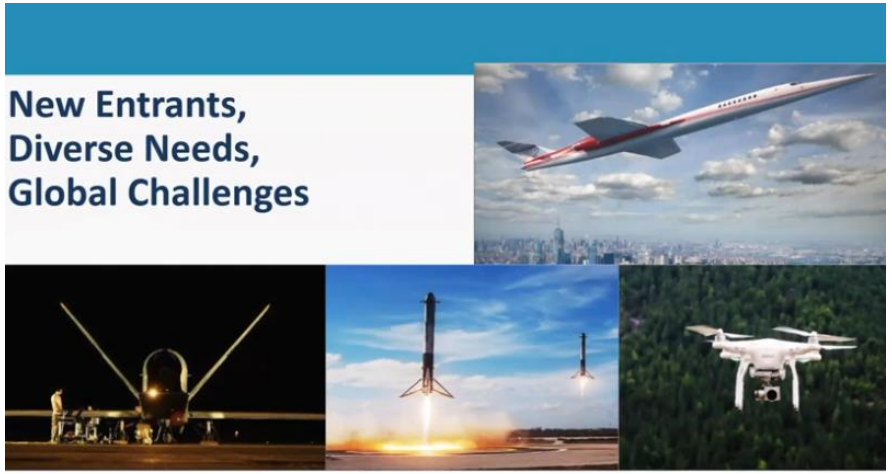
New Implementers: none





Same ASM concept …… different airspace users

- LARGE scale military exercises involving multiple FIRs
- Flights of UAS (State aircraft) in sovereign airspaces and/or the High Seas
- Space Transport Operations
- New entrants including HAO



In Summary

- Civil-Military cooperation is not a MISSION:IMPOSSIBLE, if there is a clear political will to engage in technical and operational discussions

- Trust, the 3 Cs (**coordination, collaboration, communication**) and mutual respect/understanding of all user requirements are key essential components for a successful implementation

- Especially in civil-military cooperation, the implementation must be seen as scalable and based on the operational context

ICAO has a special role as in the implementation support. As a UN organization we can engage (global, regional workshops or specific TFs) with aviation stakeholders to address the specific aspects of civil-military cooperation, raising the understanding, sharing best practices, publishing guidance, and in some cases implementing concrete measures to enhance the safety of flights for all civil and military (State aircraft) airspace users

Thank You!

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