

Civil/Military ATM Cooperation and Flexible Use of Airspace Webinar

Online

20th-21st Nov 2024

This event is jointly organised with



Introduction on European Regulatory Framework

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☐ EUROCONTROL

☐ Network Manager – Airspace
& Capacity Division

WHO I AM

- **EUROCONTROL, Network Manager, Head of Network Strategic Projects Coordination and Implementation Unit. (2020 – on-going)**
- **ASMSG Chairman (2013 – on-going)**
- **EUROCONTROL, Network Manager, Head of ASM/ATFCM processes/procedures Section. (2013 – 2020)**
- **EUROCONTROL, Network Manager, Senior ASM/ATFCM processes/procedures expert. (2008 – 2013)**
- **EUROCONTROL, CEATS Project, Senior ASM/ATFCM processes/procedures expert. (2003 – 2008)**
- **EUROCONTROL, Italian Military Liaison Officer as ASM/ATFCM processes/procedures expert. (1999 – 2003)**
- **Italian Air Force, Head of ASM and Instrumental procedures design Section. (1997 – 1999)**
- **Italian Air Force, ASM and Instrumental procedures design Expert. (1995 – 1997)**
- **Italian Air Force, Head of ATS service in Rimini. (1990-1995)**
- **Italian Air Force, military ATCO TWR, APP, TMA, CGA. (1982 – 1990)**



Giuseppe
Acampora
Head of PCI Unit

Giuseppe.acampora@eurocontrol.int
+32499981330

Overview

Introduction to European
Legislation Framework

The Single European Sky –
SES

FUA Regulation

Network Function
implementing rules

Regulatory Summary

Introduction to the EU Regulatory Framework



EU regulatory framework - Applicability

EUROCONTROL and EU

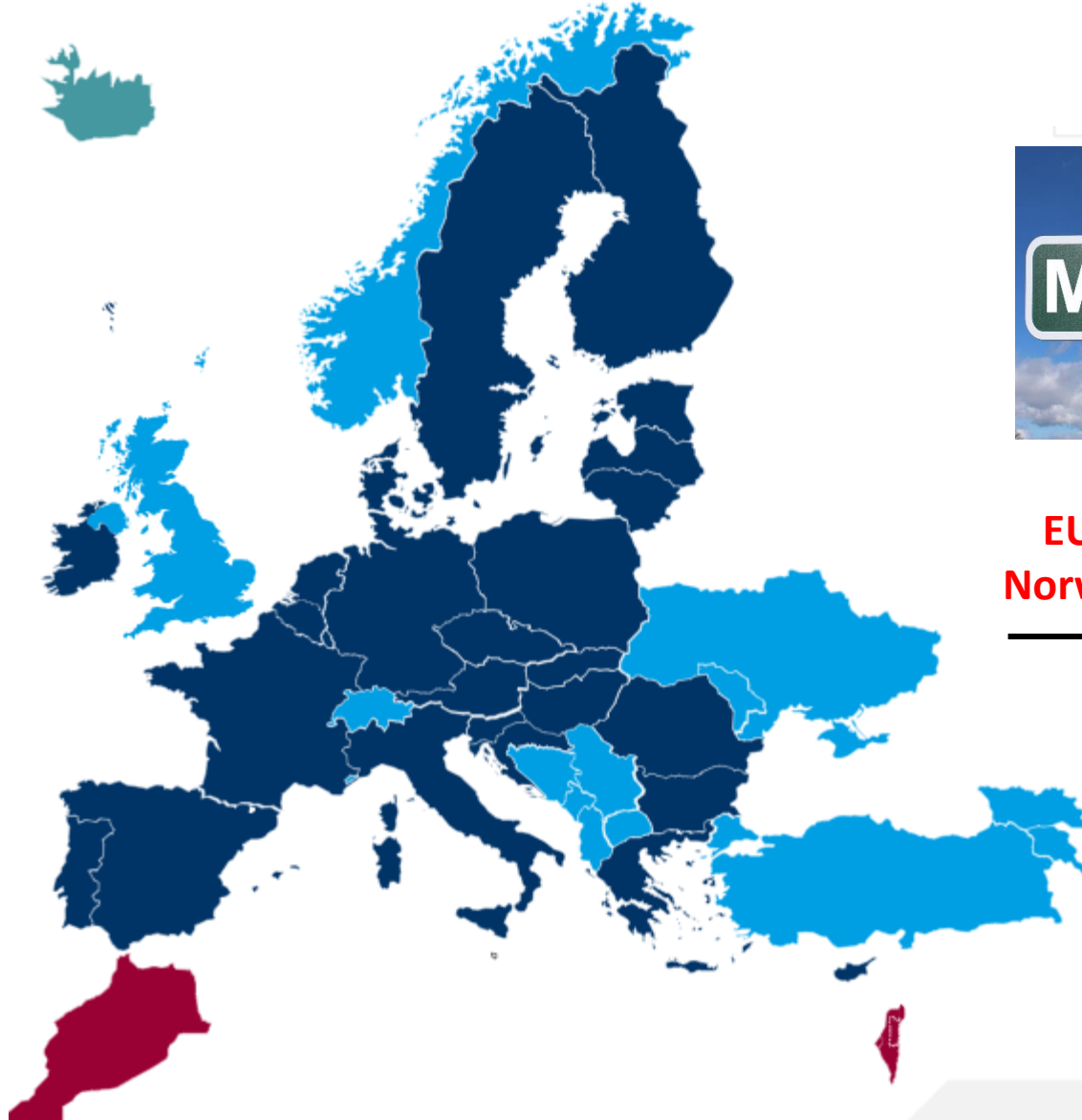
EUROCONTROL and but not EU

**Two States with
Comprehensive
agreements**

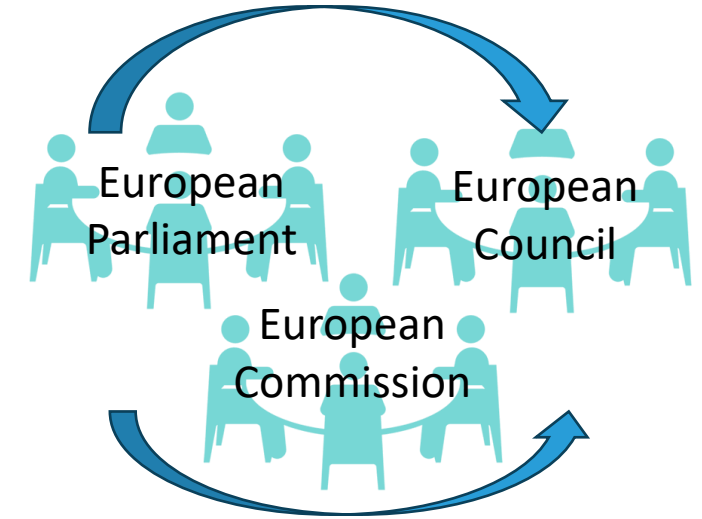
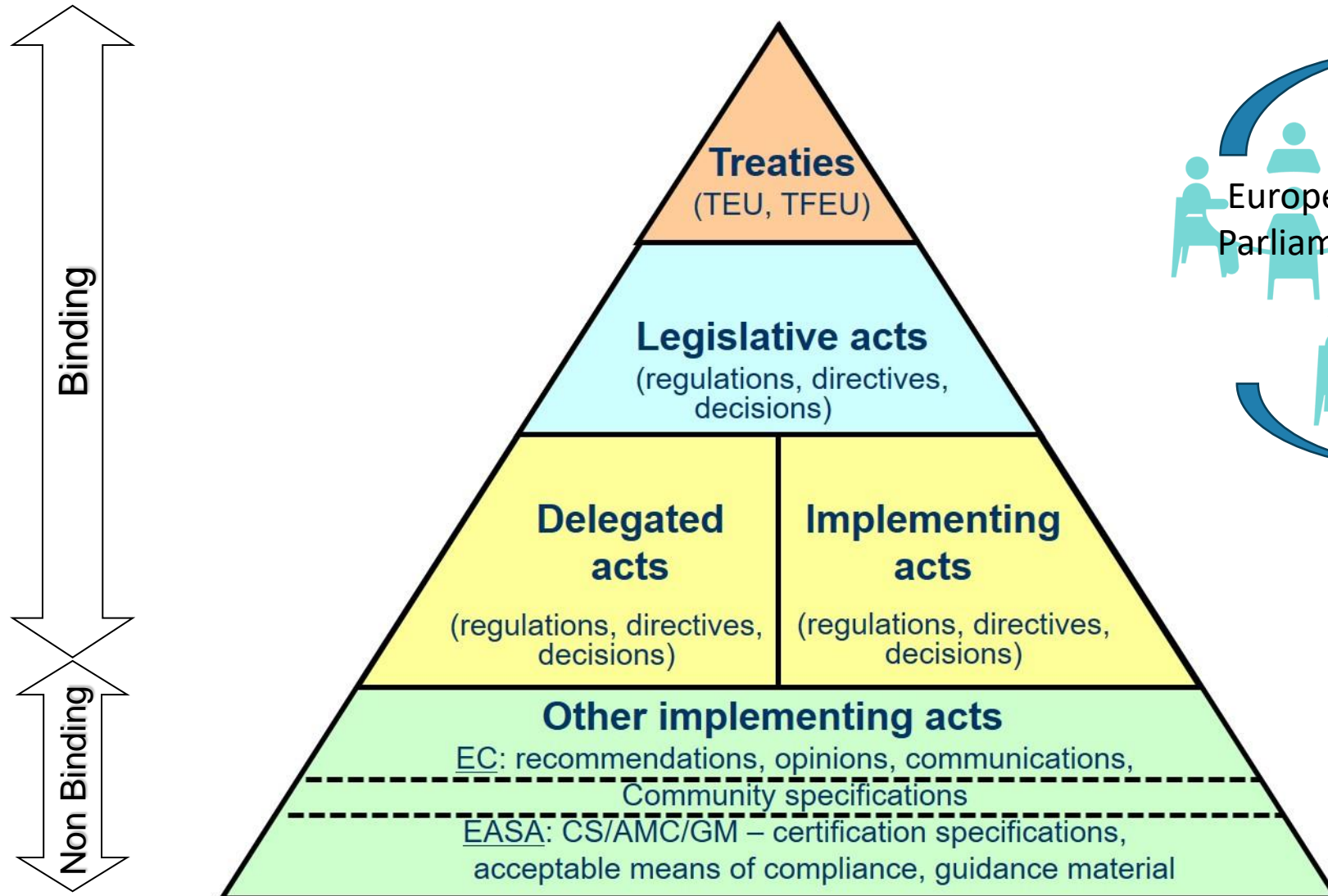
**Set to become the 42nd
member State January 2025**



**EU member States +
Norway and Switzerland**



Types of legal Acts



Regulations

A "regulation" is a binding legislative act. It must be applied in its entirety across the EU.

Directives

A "directive" is a legislative act that sets out a goal that EU countries must achieve. However, it is up to the individual countries to devise their own laws on how to reach these goals.

Decisions

A "decision" is binding on those to whom it is addressed (e.g. an EU country or an individual company) and is directly applicable. The decision related to the country only.

Recommendations

A "recommendation" is not binding. A recommendation allows the institutions to make their views known and to suggest a line of action without imposing any legal obligation on those to whom it is addressed.

Community Specification

Community specification means a European standard within the meaning of Article 1 of Directive 98/34/EC of the European Parliament and of the Council³⁹ or a Eurocontrol technical specification whose references have been published in the Official Journal of the European Communities. It has to be considered a means of compliance to demonstrate the achieved implementation of the regulatory requirements

Introduction to the Single European Sky (SES) Regulatory Framework



Communication from the Commission in December 1999 highlighting the congestion of the European airspace COM (1999) 614;

Suggestions from the High Level Group

- Strong Community regulator
- Airspace managed as a common resource
- Synergy between EU's regulatory authorities and the expertise within Eurocontrol
- Military participation to the decision making process
- New systems improving safety and interoperability
- Involvement of industry



Background

- Create **capacity**
- Improve **safety**
- Use **synergies** with EUROCONTROL
- Improve **co-operation with military users** of the airspace
- Create **transparency** and **improve efficiency**
- Reach **harmonisation**
- Open ATC to **competition**
- Air Traffic Control organisation should follow **traffic flows**
and no longer national boundaries (FAB)

SES Objectives



Regulatory Package

REGULATION (EU) 2024/2803 OF THE
EUROPEAN PARLIAMENT AND OF THE
COUNCIL
of 23 October 2024
on the implementation of the Single
European Sky
(recast)

1 General Statement

➤ **Statement by the Member States on Military issues**



Regulatory Package

Statement on military issues

Member states declare that they will:

Take into account military requirements

Ensure that **interest of military** users will be represented in the decision making process

Ensure, where appropriate, that **Military will be involved** in the work undertaken by the National Supervisory Authorities

Take into account the fundamental role of **EUROCONTROL**

Enhance civil / military cooperation and cooperation between their armed forces

Art 2 - Definition

(12) ‘**airspace management**’ means a **planning and monitoring function** with the primary objective of **optimising the utilisation of available airspace** by dynamic time-sharing and, at times, the segregation of airspace among various categories of airspace users **on the basis of short-term needs**;

.....

(37) ‘**flexible use of airspace**’ means an **airspace management concept**, as **described by ICAO**, based on the **fundamental principle that airspace should not be designated as either pure civil or military airspace**, but should rather be considered as a continuum in which all user requirements have to be accommodated to the extent possible;

Article 55 Safeguards (1)

This Regulation **shall not prevent the application of measures by a Member State** to the extent to which these are needed **to safeguard essential security or defence policy interests**.

Such measures are in particular those which are imperative:

- for the surveillance of airspace that is under its responsibility in accordance with ICAO Regional Air Navigation agreements, including the capability to detect, identify and evaluate all aircraft using such airspace, with a view to seeking to safeguard safety of flights and to take action to ensure security and defence needs,

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Article 55 Safeguards (2)

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- in the event of **serious internal disturbances affecting the maintenance of law and order,**
- in the event of **war or serious international tension constituting a threat of war,** — for the fulfilment of a Member State's international obligations in relation to the maintenance of peace and international security,
- in order to **conduct military operations and training, including the necessary possibilities for exercises.**

Article 45 Flexible use of airspace (1)

- 1. Taking into account** the characteristics and nature of military activity in each Member State as well as the organisation of military matters under their responsibility, Member States shall **ensure the application** within the Single European Sky of the concept of the **flexible use of airspace**, in order to facilitate airspace management and air traffic management in the context of the common transport policy and, where appropriate, in consistency with the European ATM Master Plan.
- 2. Member States shall report annually to the Commission on the application**, in the context of the common transport policy, of the concept of the flexible use of airspace in respect of the airspace under their responsibility.

Article 45 Flexible use of airspace (2)

3. Where, in particular **in the light of the reports submitted by Member States, uniform conditions** for the application of the concept of the flexible use of airspace within the Single European Sky **are needed**, the Commission shall,**adopt implementing acts** laying down such uniform conditions.
4. In cases of significant **operational difficulties in the application of this Article** impairing the safeguard of essential security or defence policy interests, **Member States may temporarily suspend such application** on condition that they inform without delay the Commission and the other Member States thereof. The **temporary suspension** and any such adjustments **shall be lifted** when those operational difficulties cease

FUA Regulation 2150/2005



General	1. Subject-matter 2. Definitions 3. Principles
Functional Arrangements	4. Strategic airspace management (level 1) 5. Pre-tactical airspace management (level 2) 6. Tactical airspace management (level 3)
Monitoring of Application	7. Safety assessment 8. Reporting 9. Compliance monitoring
Final Provisions	10. Entry into force
Annex	LIST OF REQUIRED ELEMENTS FOR THE ANNUAL REPORT ON THE APPLICATION OF THE FLEXIBLE USE OF AIRSPACE

Article 1 Subject-matter

This Regulation **reinforces and harmonises the application**, within the Single European Sky, of the **concept of the flexible use of airspace as defined in Article 2, point (22) of Regulation (EC) No 549/2004**, in order to facilitate airspace management and air traffic management within the limits of the common transport policy.

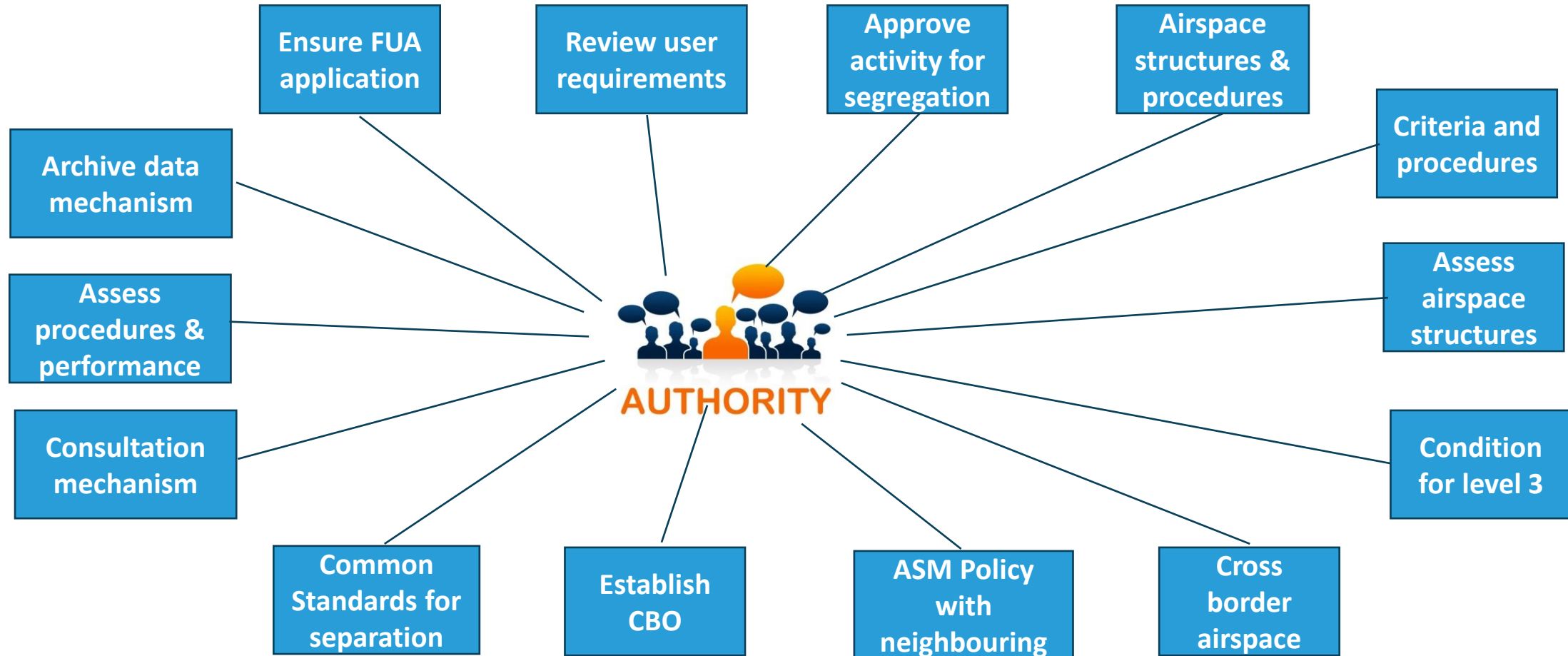
Article 3 Principles

The concept of 'flexible use of airspace' shall be governed by the **following principles**:

- (a) **coordination between civil and military authorities** shall be organised at the **strategic, pre-tactical and tactical levels** of airspace management through the **establishment of agreements and procedures**
- (b) **consistency between airspace management, air traffic flow management and air traffic services** shall be **established and maintained** at the three levels of airspace management enumerated in point (a).....
- (c) the airspace reservationshall be of a **temporary nature**, applied only during **limited periods of time based on actual use** and released as soon as the activity having caused its **establishment ceases**;
- (d) Member States **shall develop cooperation** for the efficient and consistent application of the concept of flexible use of airspace **across national borders**;

FUA Regulation 2150/2005

Article 4 Strategic management (level 1)



Article 5 Pre-tactical airspace management (level 2)

1. Member States shall appoint or **establish an airspace management cell** to allocate airspace in accordance with the conditions and procedures defined in Article 4(1). In those Member States where **both civil and military authorities are responsible for or involved in airspace management**, this cell shall take the form of a **joint civil military cell**.
2. Two or more Member States **may establish a joint airspace management cell**.
3. Member States shall ensure that adequate **supporting systems** are put in place to enable the airspace management cell **to manage airspace allocation**

Article 6 Tactical airspace management (level 3)

1. Member States shall ensure the establishment of **civil/military coordination procedures and communication facilities** between appropriate air traffic service units and controlling military unitsto allow the **real-time activation, deactivation or reallocation** of the airspace allocated at pre-tactical level.
2. Member States shall ensure that the **relevant controlling military units and air traffic services units exchange any modification** of the planned activation of airspace in a timely and effective manner and notify to all affected users the current status of the airspace.
3. Member States shall ensure the establishment of **coordination procedures and the establishment of supporting systems** between air traffic service units and controlling military units in order to ensure safety when **managing interactions between civil and military flights**.

Network Function Implementing Regulation 123/2019

11.1.2019 EN Official Journal of the European Union L 28/1

II

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2019/123

of 24 January 2019

laying down detailed rules for the implementation of air traffic management (ATM) network functions and repealing Commission Regulation (EU) No 677/2011

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 551/2004 of the European Parliament and of the Council of 10 March 2004 on the organisation and use of the airspace in the single European sky (the airspace Regulation)⁽¹⁾, and in particular Articles 6(4) and 6(7) thereof,

Whereas:

- (1) The network functions should be a service of general interest exercised for/within the context of the European air traffic management network (EATMN, hereafter referred to as 'the network'). They should contribute to the sustainable development of the air transport system by ensuring the required level of performance, interoperability, compatibility and coordination of activities including those to ensure the optimal use of scarce resources.
- (2) The design of the European route network, the management of the network capacity and air traffic flows and the coordination of scarce resources, as provided for in Regulation (EC) No 551/2004, should be without prejudice to Member States' sovereignty over their airspace and to their responsibilities relating to public order, public security and defence matters as provided for in Regulation (EC) No 549/2004 of the European Parliament and of the Council⁽²⁾.
- (3) The network should include all physical and operational components that determine the performance of aircraft, in particular their punctuality and flight efficiency, operated in the airspace within the International Civil Aviation Organisation (ICAO) EIR region where Member States are responsible for the provision of air traffic services.
- (4) The European route network should be designed to improve the efficiency of the routings from a gate-to-gate perspective in all phases of flight taking particular account of flight efficiency and environmental aspects.
- (5) Operational actions to develop efficient airspace structures and manage the available capacity are required to ensure the continuous improvement of the network operations in the single European sky and contribute to the Europe-wide performance targets. Those operational actions should allow for efficient use of airspace and ensure that airspace users can operate preferred trajectories.

⁽¹⁾ OJ L 96, 31.3.2004, p. 20.

⁽²⁾ Regulation (EC) No 549/2004 of the European Parliament and of the Council of 10 March 2004 laying down the framework for the creation of the single European sky (the framework Regulation) (OJ L 96, 31.3.2004, p. 1.)

Art.1 – Network Functions

2. The network functions subject to this Regulation shall be the following:

(a) the European Route Network Design (ERND);

.....

Art.7 – Network Manager tasks

.....

(c) develop, organise and provide an integrated European Route Network Design function as set out in Annex I;

ANNEX I

Objectives

- a) develop and implement a **European Route Network Improvement Plan** for the safe and efficient operation of air traffic, taking due account of the environmental impact;

.....

Airspace design content:

- 4. The **European Route Network Improvement Plan** shall include:

- (a) common general principles complemented by technical specifications for airspace design;
- (b) **military requirements for use of airspace;**

.....

- (f) **procedures for airspace management;**

Network Function Regulation 123/2019

European Route Network Plan



- 1 SECTION 1 - INTRODUCTION
- 2 SECTION 2 – THE CONCEPT OF FLEXIBLE USE OF AIRSPACE
- 3 SECTION 3 : STRATEGIC AIRSPACE MANAGEMENT (ASM LEVEL 1)
- 4 SECTION 4 - PRE-TACTICAL AIRSPACE MANAGEMENT (ASM LEVEL 2)
- 5 SECTION 5 – TACTICAL MANAGEMENT FUNCTIONS (ASM LEVEL 3)
- 6 SECTION 6 – PUBLICATION OF ASM INFORMATION
- 7 SECTION 7 – PERFORMANCE REQUIREMENTS

LIST OF ANNEXES

REFERENCES

DEFINITIONS

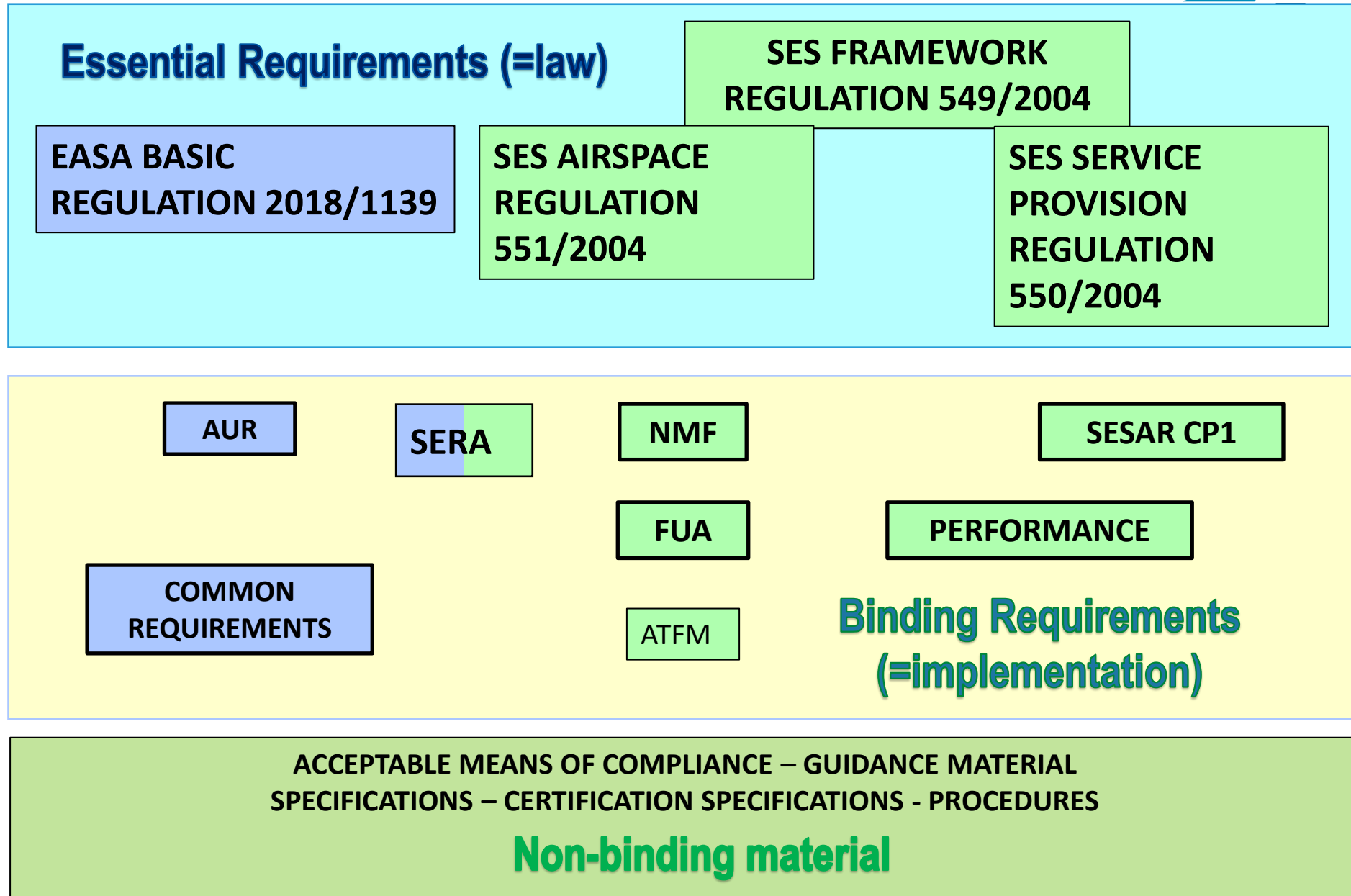
ACRONYMS

THE CONCEPT OF FLEXIBLE USE OF AIRSPACE

- General Introduction
- The basis of the FUA Concept
- Application of the FUA concept
- **THE THREE ASM LEVELS**
- ASM Level 1 - National and International Airspace Policy
- ASM Level 2 - Day-to-Day Allocation of Airspace
- ASM Level 3 - Real Time Use of Airspace
- **FLEXIBLE AIRSPACE STRUCTURES AND PROCEDURES**
- Conditional Routes
- Temporary Airspace Restriction and Reservation
- Cross-Border Areas
- Prior/Reduced Coordination Airspace Procedures

PARTICULAR APPLICATION OF THE FUA CONCEPT

- ATS Routes
- Airspace Restrictions - R, D, P Ar
- Free Route Airspace
- Controlled Airspace
- Uncontrolled Airspace
- **TRANSITION TO THE FUA CONCEPT**
- **ATS/ASM/ATFCM RELATIONSHIP**
- ASM/ATFCM Relationship at Strategic Level - ASM Level 1
- ASM/ATFCM Relationship at Pre-Tactical Level - ASM Level 2
- ATC/ASM/ATFCM Relationship at Tactical Level - ASM Level 3





Thank You