

# Impact of new regulations 2017/373 and 2018/1139

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EASA ATM/ANS Oversight TL

EGNOS Annual Workshop  
Rome, 24-25 September 2019

**Your safety is our mission.**

# Total system approach

## PBN based operations



# EASA – TOTAL SYSTEM APPROACH

CNS



EATMN (AUR Part PBN)



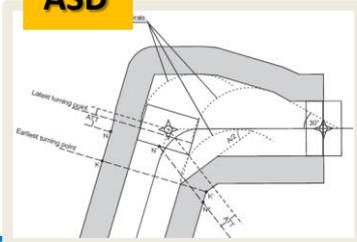
ATS



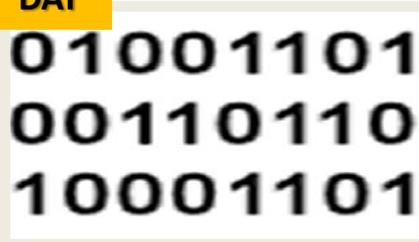
AIS



ASD



DAT



AIRCREW



AIR OPERATIONS



AD



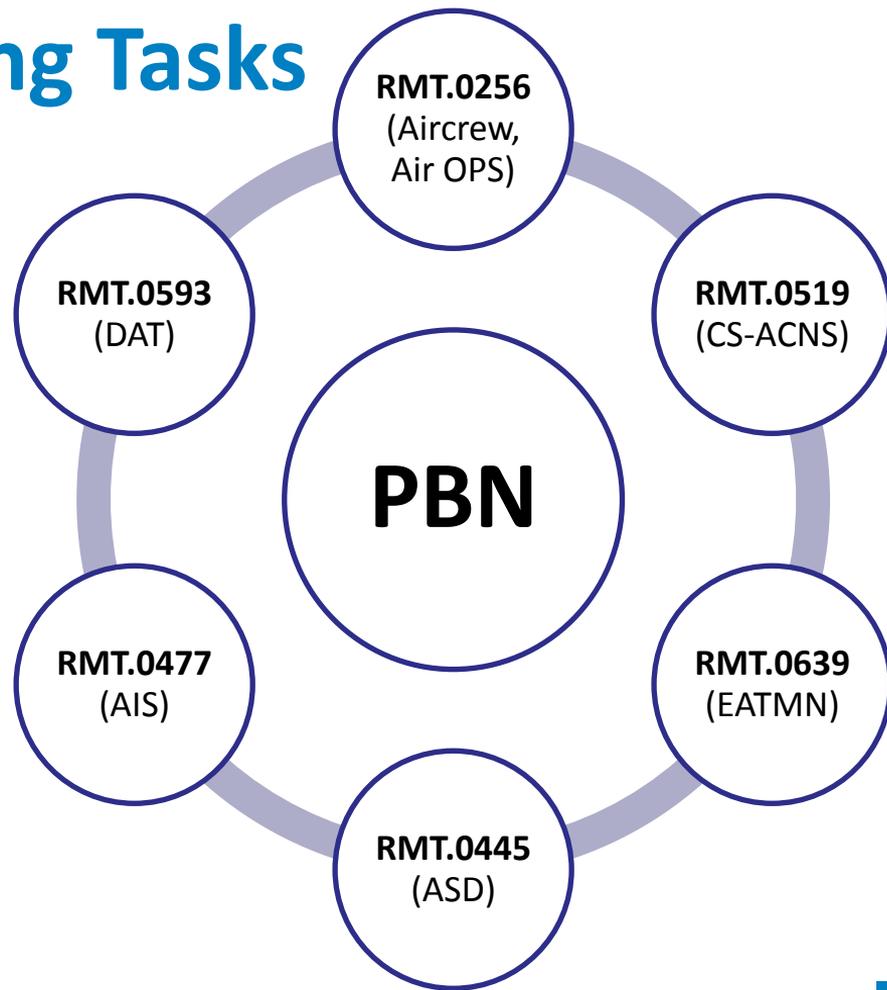
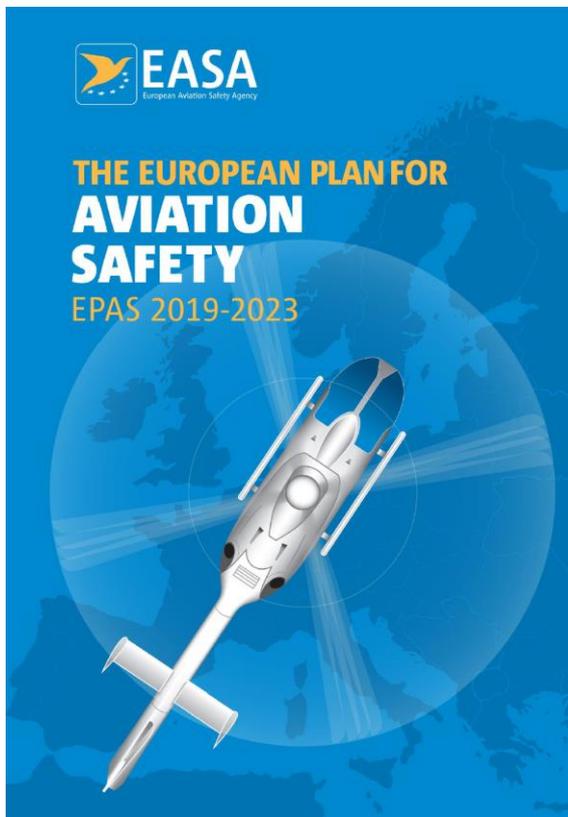
E-TSO



# LATEST REGULATORY MILESTONES

- Regulation (EU) 2018/1139 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency
- Regulation (EU) 2017/373 on ATM/ANS
- Regulation (EU) 2018/1048 laying down airspace usage requirements and operating procedures concerning PBN
- ED Decision 2018/013/R, comprising AMC and GM to Regulations 1332/2011 and 2018/1048 “AMC & GM to AUR”

# PBN related Rulemaking Tasks



# PBN related Rulemaking Tasks

**RMT.0256 (Air Crew, AirOPS) → IR 2016/539 06/04/2016**

ED Decision 2016/008/R Part –FCL (PBN) 26/04/2019

developing pilot training and checking requirements

**RMT.0519 (CS-ACNS) → CS-ACNS Issue 2 26/04/2019**

developing the airworthiness rules for PBN operations

**RMT.0639 (EATMN) → IR 2018/1048 18/07/2018 AUR PBN**

containing rules addressed to ANSPs and ADR operators for the use of PBN specifications en-route, terminal area and approach

**RMT.0445 (ASD) → EASA Opinion 02/2018 IR expected for Q1 2020**

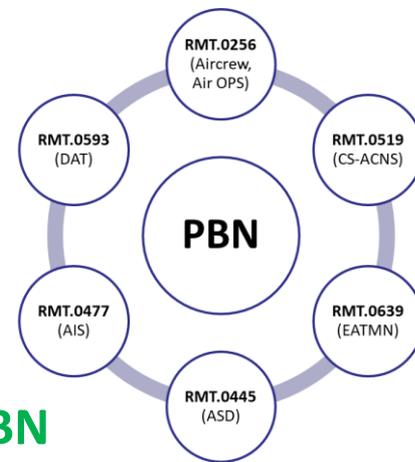
specifying PANS-OPS criteria to be used for procedure design

**RMT.0477 (AIS) → EASA Opinion 02/2018 IR expected for Q1 2020**

ensuring data quality of raw data and specifying aeronautical information products and services

**RM.0593 (DAT) → IR 2017/373 08/03/2017**

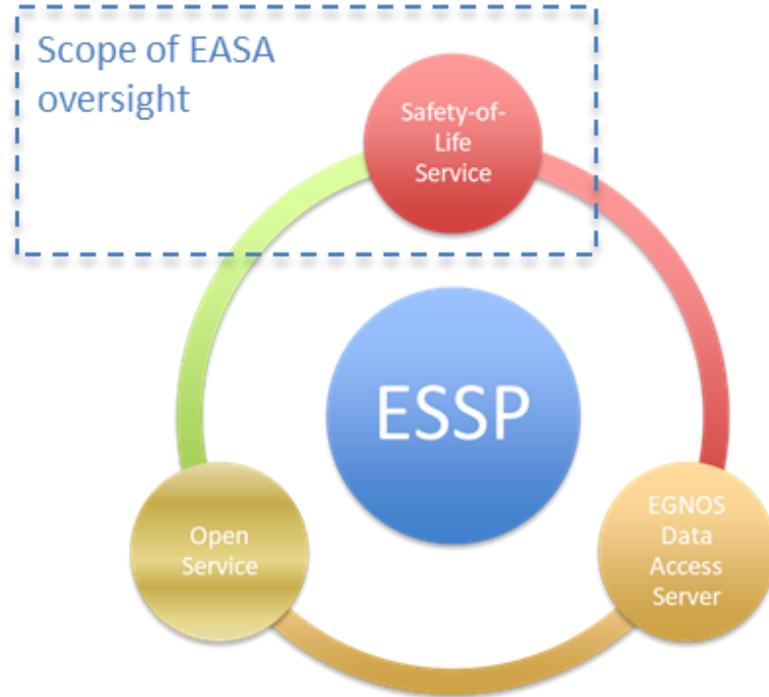
ensuring the quality of the provision of air navigation data through service providers



# OVERSIGHT



## ESSP re-certified in July 2018



# 2018/1139 Basic Regulation

## What changes for ATM/ANS? And for GNSS?

I

(Legislative acts)

## REGULATIONS

### REGULATION (EU) 2018/1139 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2018

on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 100(2) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee <sup>(1)</sup>,

Having regard to the opinion of the Committee of the Regions <sup>(2)</sup>,

Acting in accordance with the ordinary legislative procedure <sup>(3)</sup>,

Whereas:

- (1) A high and uniform level of civil aviation safety should be ensured at all times by the adoption of common safety rules and by measures ensuring that any goods, persons and organisations involved in civil aviation activity in the Union comply with such rules.
- (2) In addition, a high and uniform level of environmental protection should be ensured at all times by measures ensuring that any goods, persons and organisations involved in civil aviation activity in the Union comply with relevant Union law, and with international standards and recommended practices.
- (3) In addition, third-country aircraft that are operated into, within or out of the territory where the relevant provisions of the Treaty on European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU) (the Treaties) apply should be subject to appropriate oversight at Union level within the limits set by the Convention on International Civil Aviation, signed in Chicago on 7 December 1944 (the 'Chicago Convention'), to which all Member States are parties.
- (4) It would not be appropriate to subject all aircraft to common rules. In particular, in light of their limited risk to civil aviation safety, aircraft that are of simple design or operate mainly on a local basis, and those which are

<sup>(1)</sup> OJ C 75, 10.3.2017, p. 111.

<sup>(2)</sup> OJ C 38, 21.3.2017, p. 69.

<sup>(3)</sup> Position of the European Parliament of 12 June 2018 (not yet published in the Official Journal) and decision of the Council of 26 June 2018.

# Challenges ahead – Time to get ready



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# Challenges ahead – Time to get ready

Flight Congestion

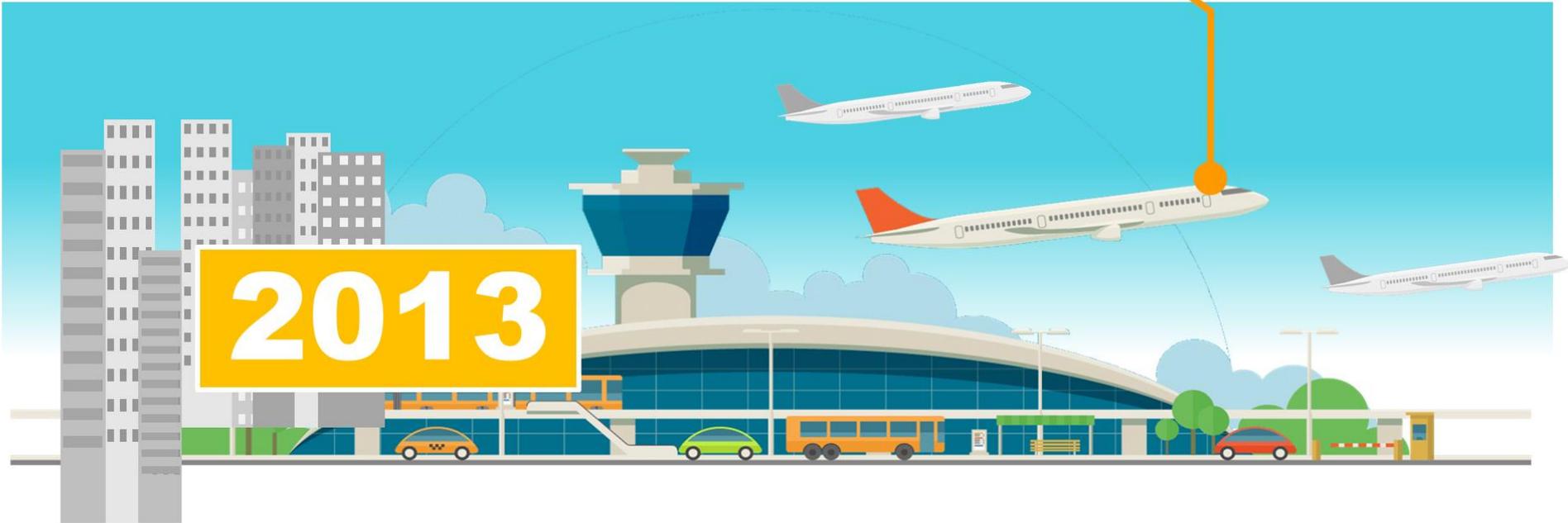
2012



# Challenges ahead – Time to get ready

Flight Congestion

2013



# Challenges ahead – Time to get ready

Environmental Concerns

Flight Congestion

2014



# Challenges ahead – Time to get ready

Environmental  
Concerns

Flight Congestion

2015



# Challenges ahead – Time to get ready

Environmental Concerns

Flight Congestion

2016

SWIM

Inter-Organisation  
Connectivity



# Challenges ahead – Time to get ready



# Challenges ahead – Time to get ready

RPAs Operations

Environmental Concerns

Flight Congestion

2018

SWIM

Inter-Organisation  
Connectivity



# Challenges ahead – Time to get ready

RPAs Operations

Environmental Concerns

Flight Congestion

2019

SWIM

Inter-Organisation  
Connectivity



# Challenges ahead – Time to get ready

RPAs Operations

Environmental Concerns

Flight Congestion

2020

SWIM

Inter-Organisation  
Connectivity



# Challenges ahead – Time to get ready

RPA Operations

Environmental Concerns

Flight Congestion

2021

SWIM

Inter-Organisation  
Connectivity



# Challenges ahead – Time to get ready

RPAs Operations

Environmental Concerns

Flight Congestion

2022

SWIM

Inter-Organisation  
Connectivity



# Challenges ahead – Time to get ready

RPAs Operations

Environmental Concerns

Flight Congestion

2023

SWIM

Inter-Organisation  
Connectivity

Autonomous  
Transport



# Challenges ahead – Time to get ready

RPAs Operations

Environmental Concerns

Flight Congestion

2024

SWIM

Inter-Organisation  
Connectivity

Autonomous  
Transport



# Challenges ahead – Time to get ready

RPAs Operations

2.5 MIL  
Drones

Environmental  
Concerns

- 50 %  
CO<sub>2</sub> NO<sub>x</sub>

Flight Congestion

+ 21 %  
Traffic

2025

SWIM

Inter-Organisation  
Connectivity



Autonomous  
Transport

# Basic Regulation enlarged scope

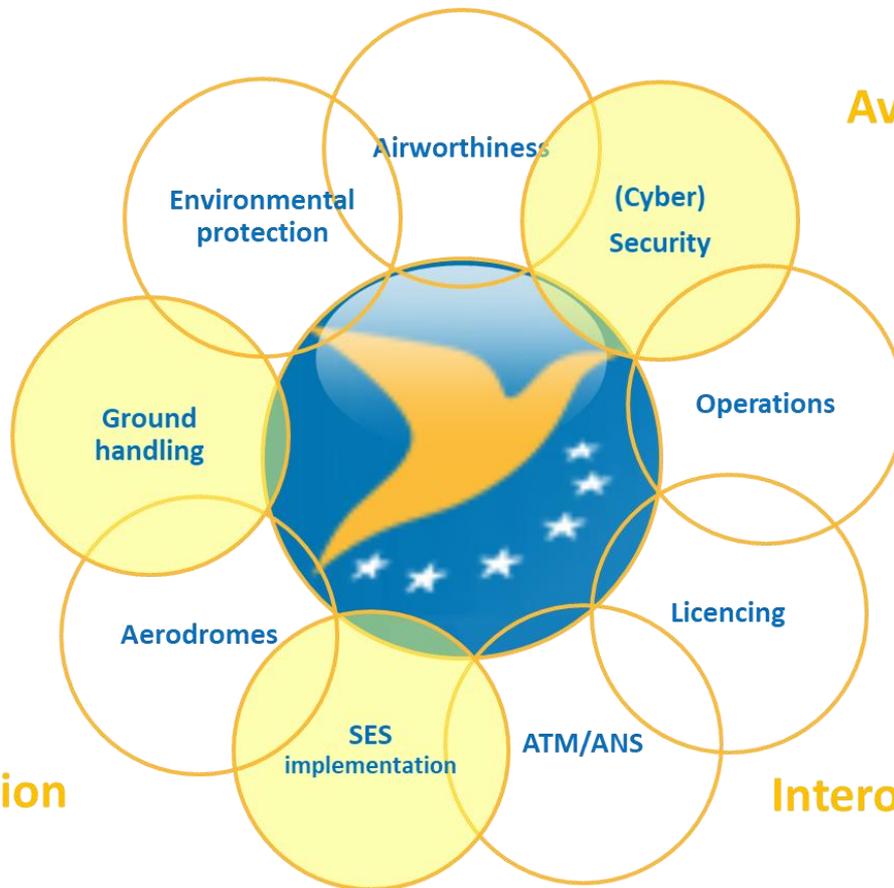
Safety

Aviation protection

Drones

Digital transformation

Interoperability



# ATM/ANS (Chapter III, Section V + Article 139(2))

- ATM/ANS systems and constituents
  - Terminology
  - Repeal of Regulation (EC) No 552/2004
  - Organisations (design, manufacture and maintenance)
- Core constellations of GNSS and augmentation systems

# ATM/ANS EASA competences (Article 43 and 80)

- Acts as the competent authority for (Article 80):
- ✓ ATM/ANS providers located in third countries (*existing*);
  - ✓ ATM/ANS providers providing pan-European services (*existing*);
  - ✓ organisations designing, producing and maintaining ATM/ANS systems and constituents used in the provision of pan-European services (***new***);
  - ✓ ATM/ANS systems and constituents used by providers under oversight of EASA (***new***);
  - ✓ ATM/ANS systems and constituents subject to certification or declaration (***evolved***);

# ATM/ANS Essential requirements (Annex VIII)

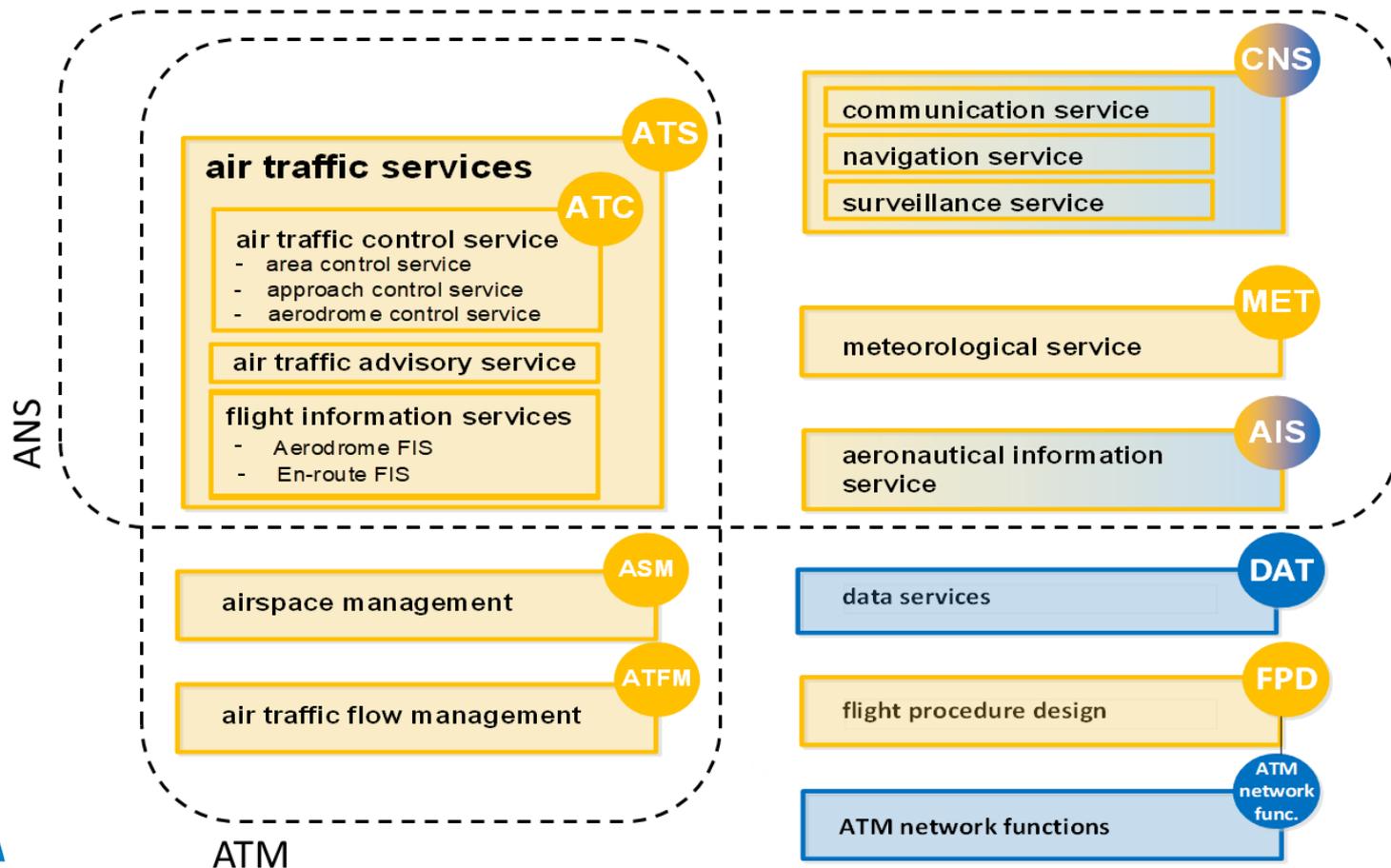
- Annexes can be amended by Delegated Acts
- New Essential Requirements on ATM/ANS related cybersecurity
- Amended essential requirements on:
  - ✓ ATM/ANS systems and constituents (based on Regulation (EC) No 552/2004)
  - ✓ Air Traffic Flow Management
  - ✓ Airspace management

# 2017/373 ATM/ANS Rules

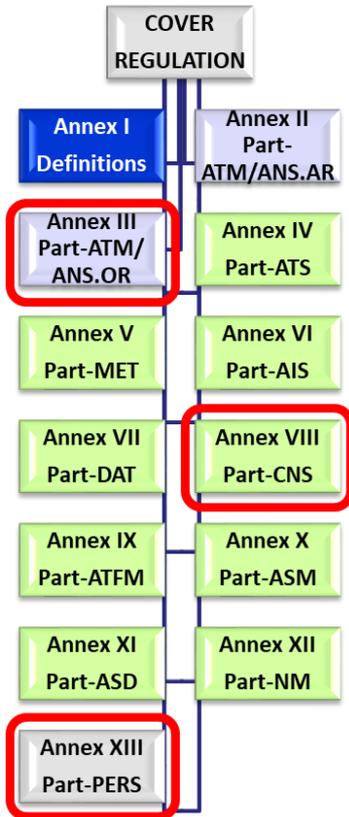
## What are the main changes?



# ATM/ANS scope



# Evolution of the requirements for CNS (NAV)



→ Applicable from 02/01/2020

→ For the provision of CNS/Navigation services, the main changes are:

## → Annex III General requirements

- ✓ Change management
- ✓ Contracted activities
- ✓ Occurrence reporting
- ✓ Safety Support Assessment vs. Safety Assessment

## → Annex XIII ATSEP requirements

→ No relevant changes yet in Annex VIII  
Part-CNS

# Thank you

[easa.europa.eu/connect](https://easa.europa.eu/connect)



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An Agency of the European Union 

# PBN – What must be implemented?

By 3 DECEMBER  
2020

- RNP APCH or RNP AR to all IREs without PA, except at those airports listed in point 1.2.1 of the PCP Regulation, plus RF where required
- RNAV 5 for all ATS routes at or above FL150

By 25 JANUARY  
2024

- RNP APCH or RNP AR to all IREs, plus RF where required
- For all IRE, RNAV 1 or RNP 1(+) for at least one established SID/STAR
- For all IRE, RNP 0.3 or RNP 1 or RNAV 1 for at least one established SID/STAR for rotorcraft operations
- RNAV 5 for ATS routes established below FL150
- RNP 0.3 or RNP 1 or RNAV 1 for ATS routes established below FL150 for rotorcraft operations

By 6 JUNE 2030

- RNAV 1 or RNP 1(+) applicable to all SIDs/STARs when established
- RNP 0.3 or RNP 1 or RNAV 1 applicable to all SIDs/STARs for rotorcraft operations when established

# PBN – What must be implemented?

## Preparation of transition plans

Non-compliant ATS routes and procedures are allowed during the transition to PBN

consistent with Common Projects and ATM Master Plan

consulted with affected stakeholders

approved by the competent authority

## Development of contingency measures

provision of services after PBN-related failure modes

back-up CNS infrastructure in support of contingency modes

special attention is given to a contingency modes based on non-GNSS technologies