

EASA Workshop on the new Conformity assessment for ATM/ANS systems & ATM/ANS constituents

16 December 2022

Your safety is our mission.

An Agency of the European Union 

Welcome & Opening

Introduction to EASA Workshop

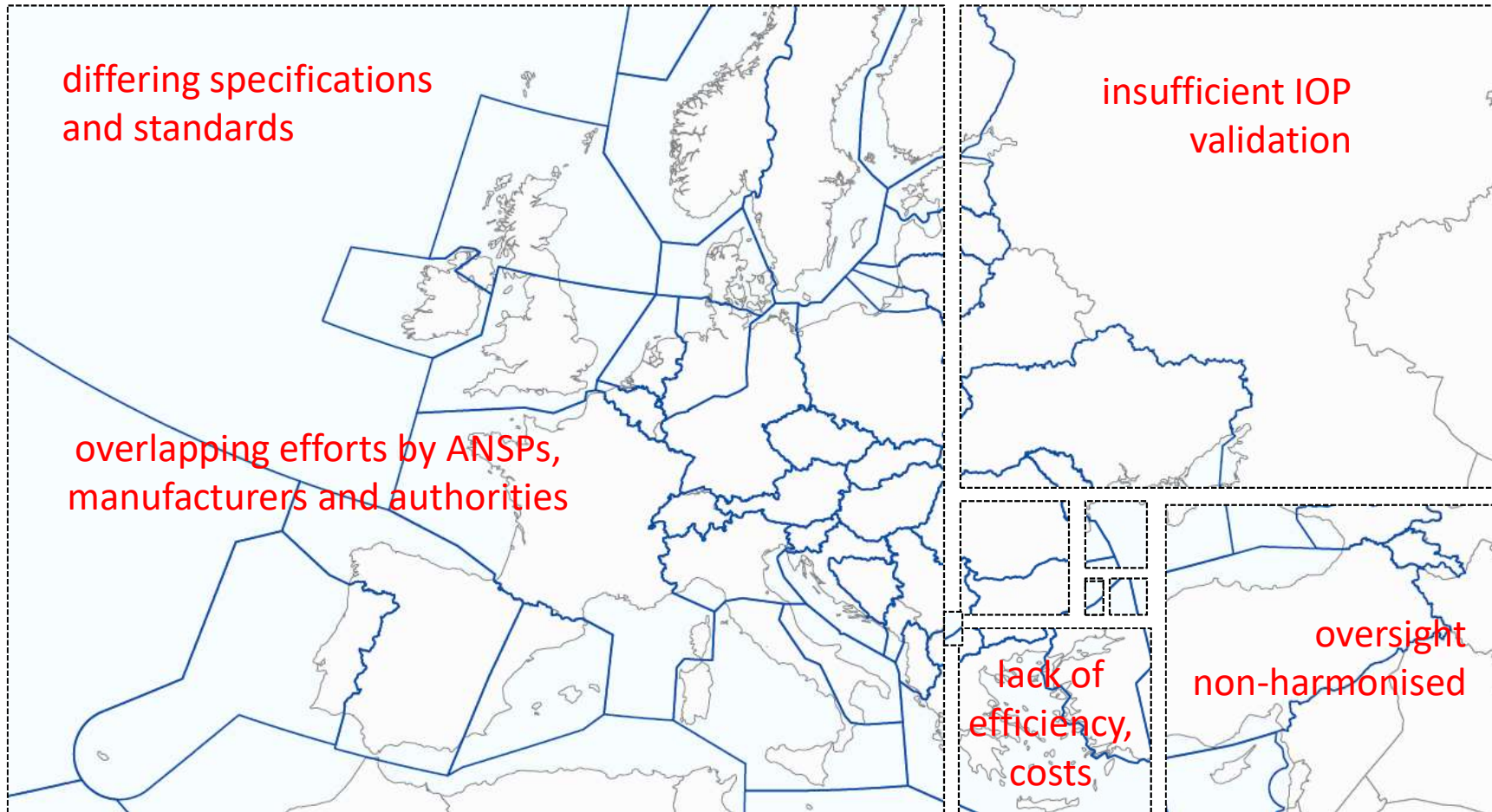


TOWARDS THE NEW EU FRAMEWORK - SETTING THE SCENE

- Introduction to the new conformity assessment framework, the benefits and the outcome of the public consultation
- Q &A session (by audience)



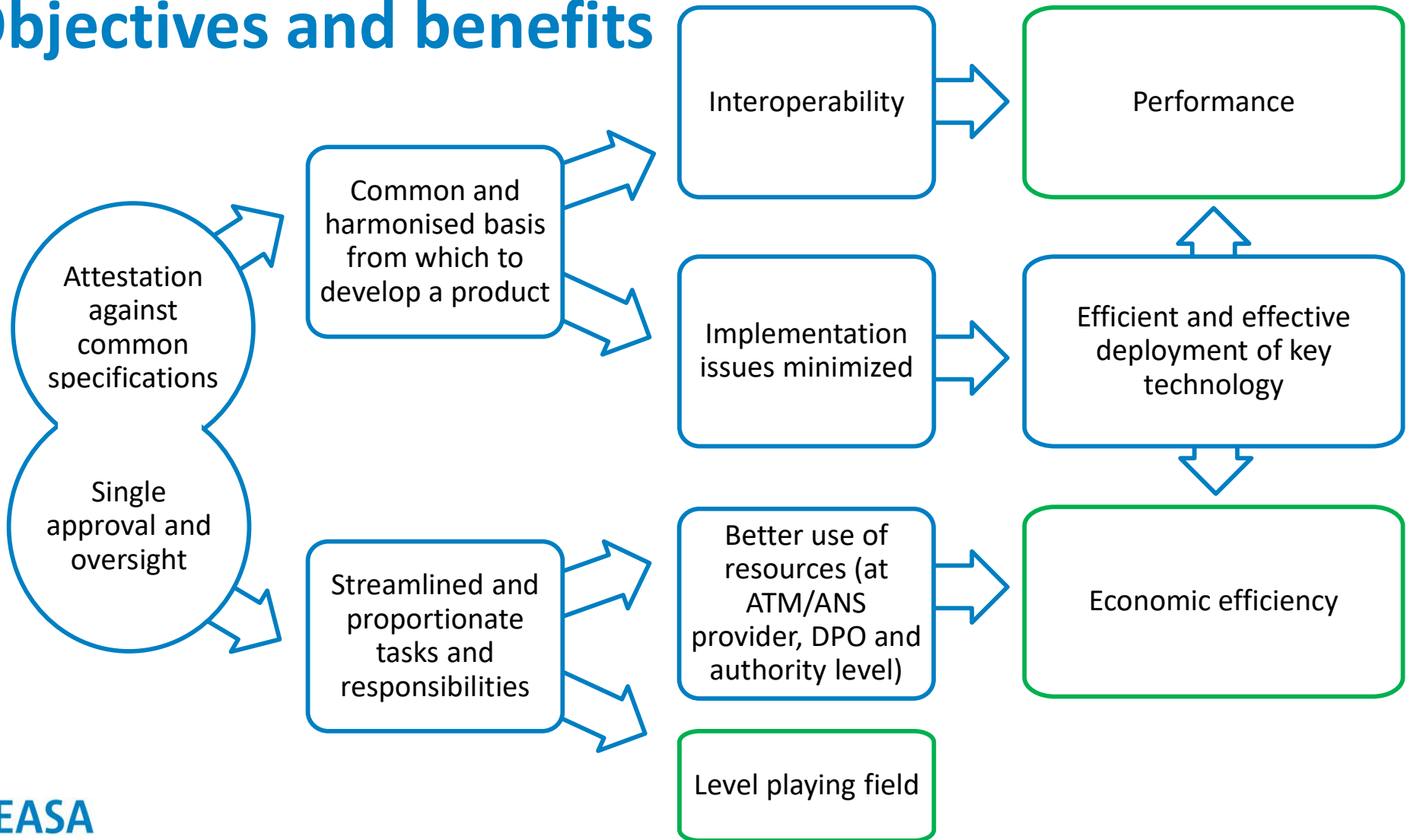
Why is a new framework for the attestation of ATM/ANS equipment needed?



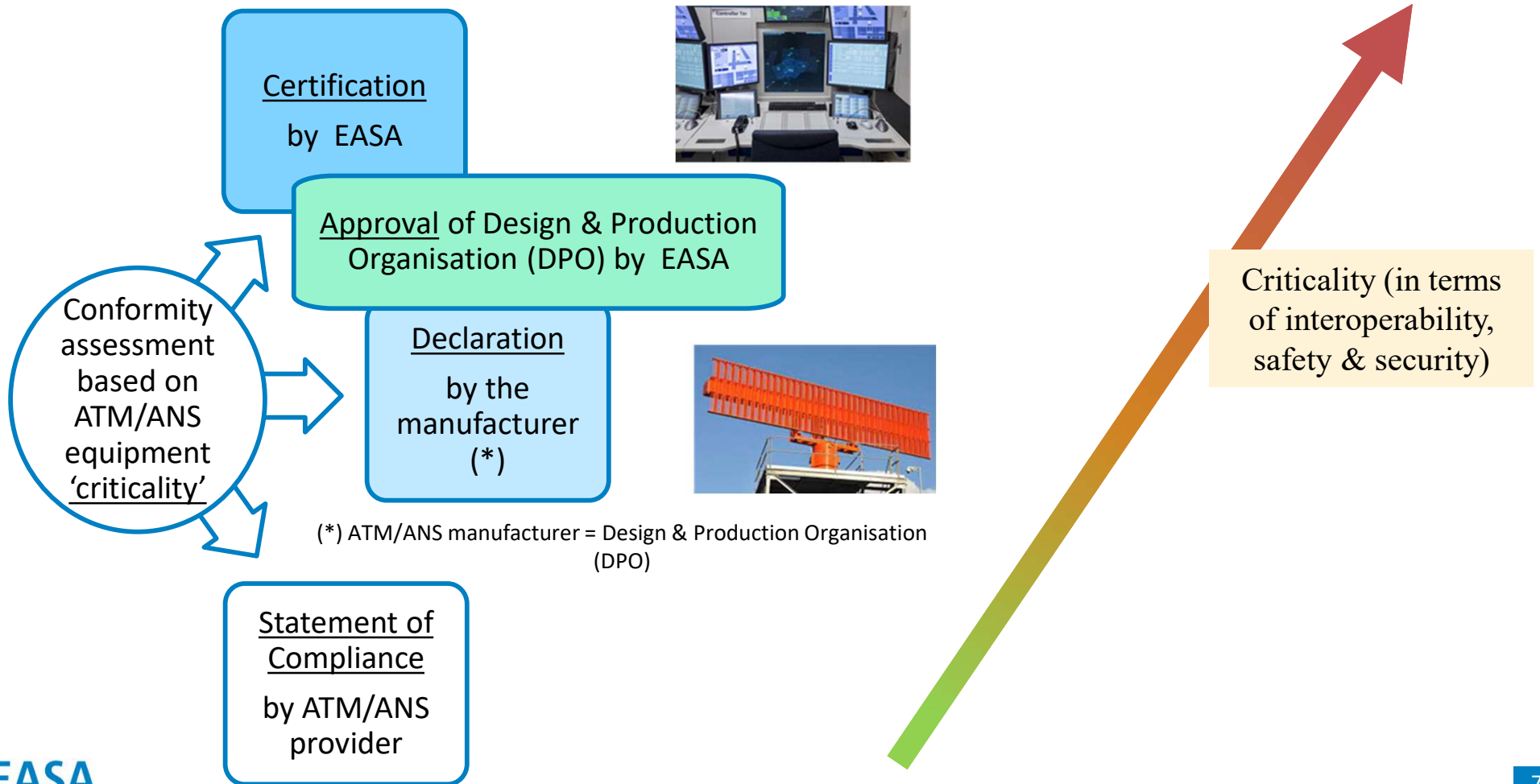
What the new framework aims to deliver?

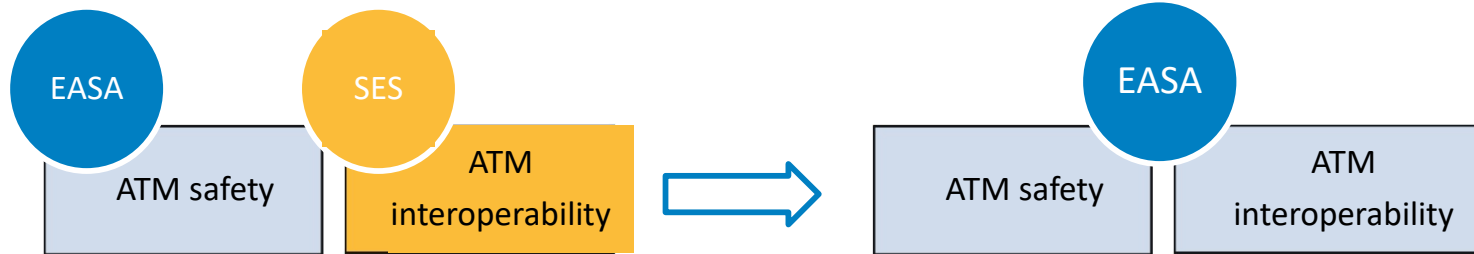


Objectives and benefits



Different attestation methods








SES today



- Essential Requirements – Interoperability
- all EATMN constituents subject to DoC/DSU by manufactures
- all EATMN systems subject to DoV by ANSP

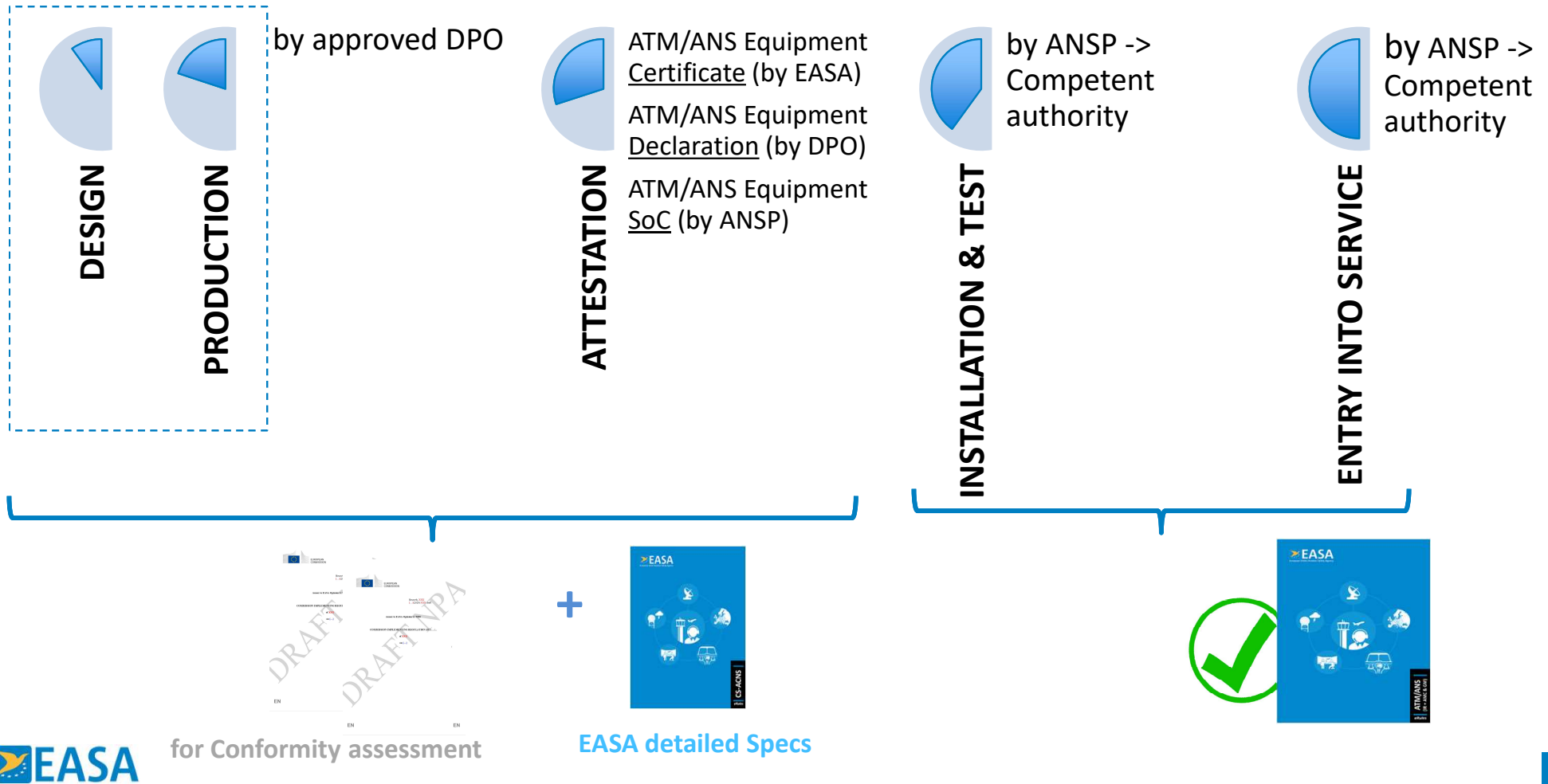
from 12/09/2023 by EASA



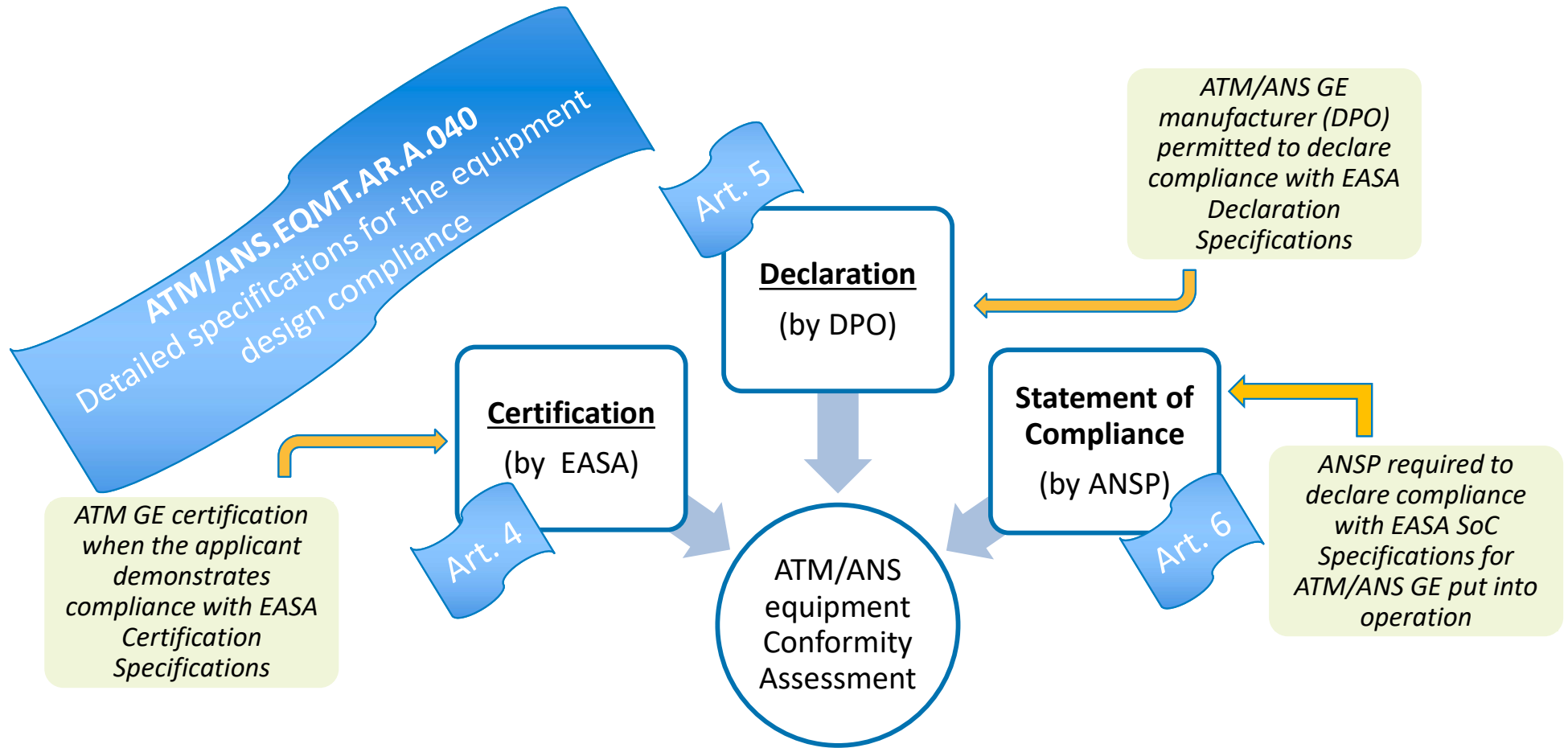
- Essential Requirements – safety & IOP 
- certain ATM/ANS equipment subject to certification by EASA 
- other certain ATM/ANS equipment subject to declaration by DPO
- Other equipment subject to Statement of compliance (SoC) by ANSP

BUSINESS as USUAL

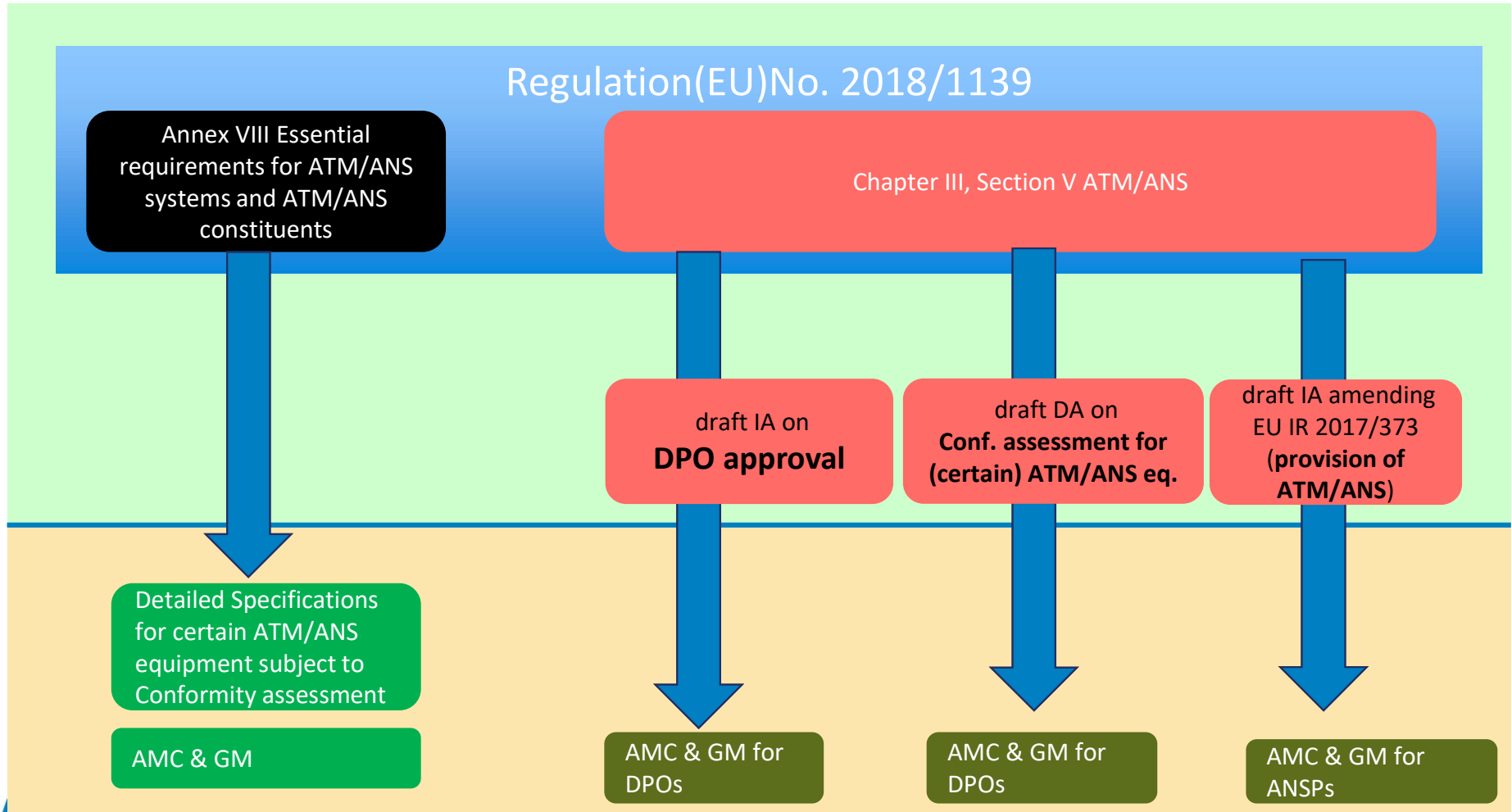
Holistic (end-to-end) approach



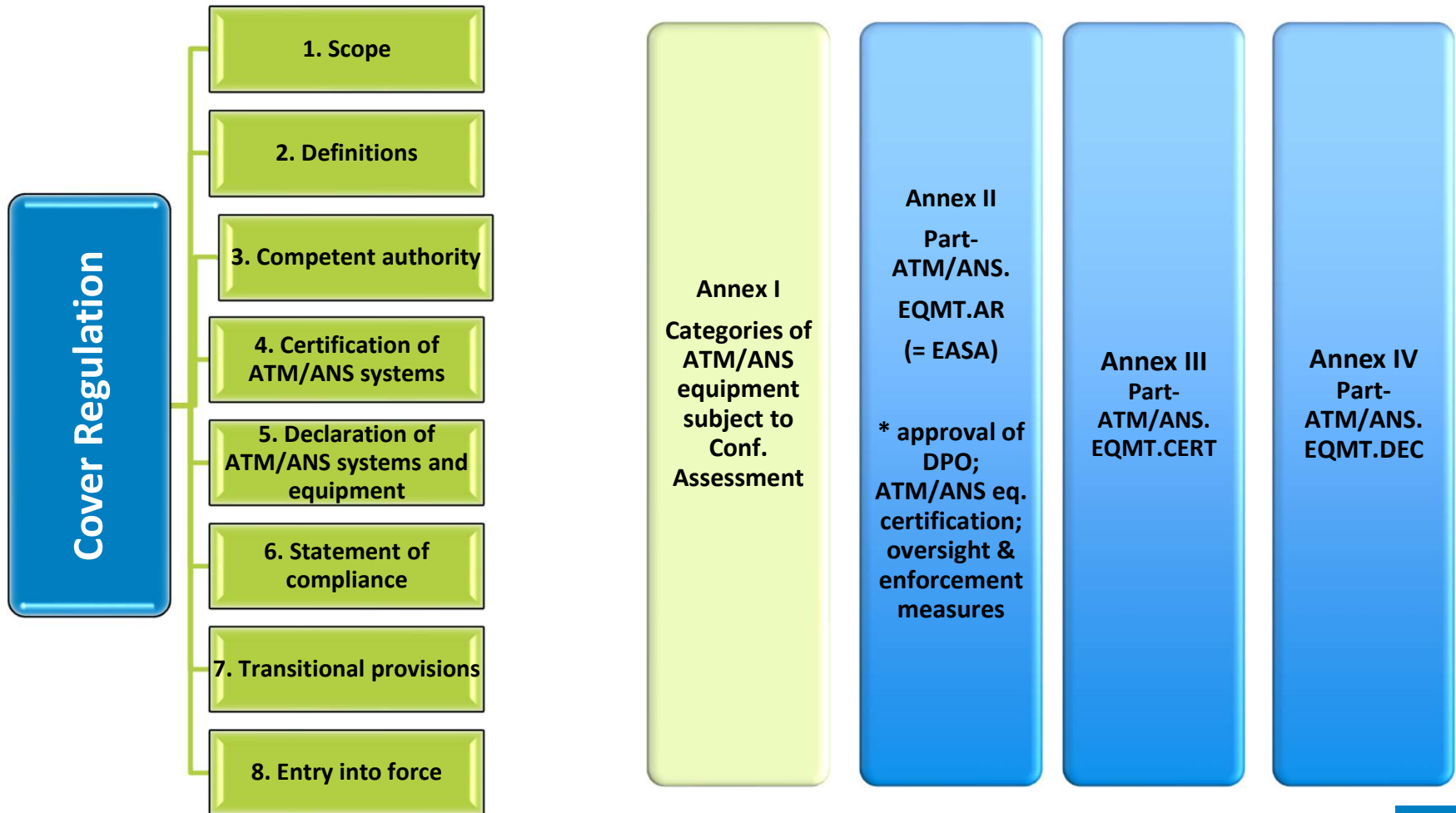
ATM/ANS Conformity assessment - Detailed Specifications



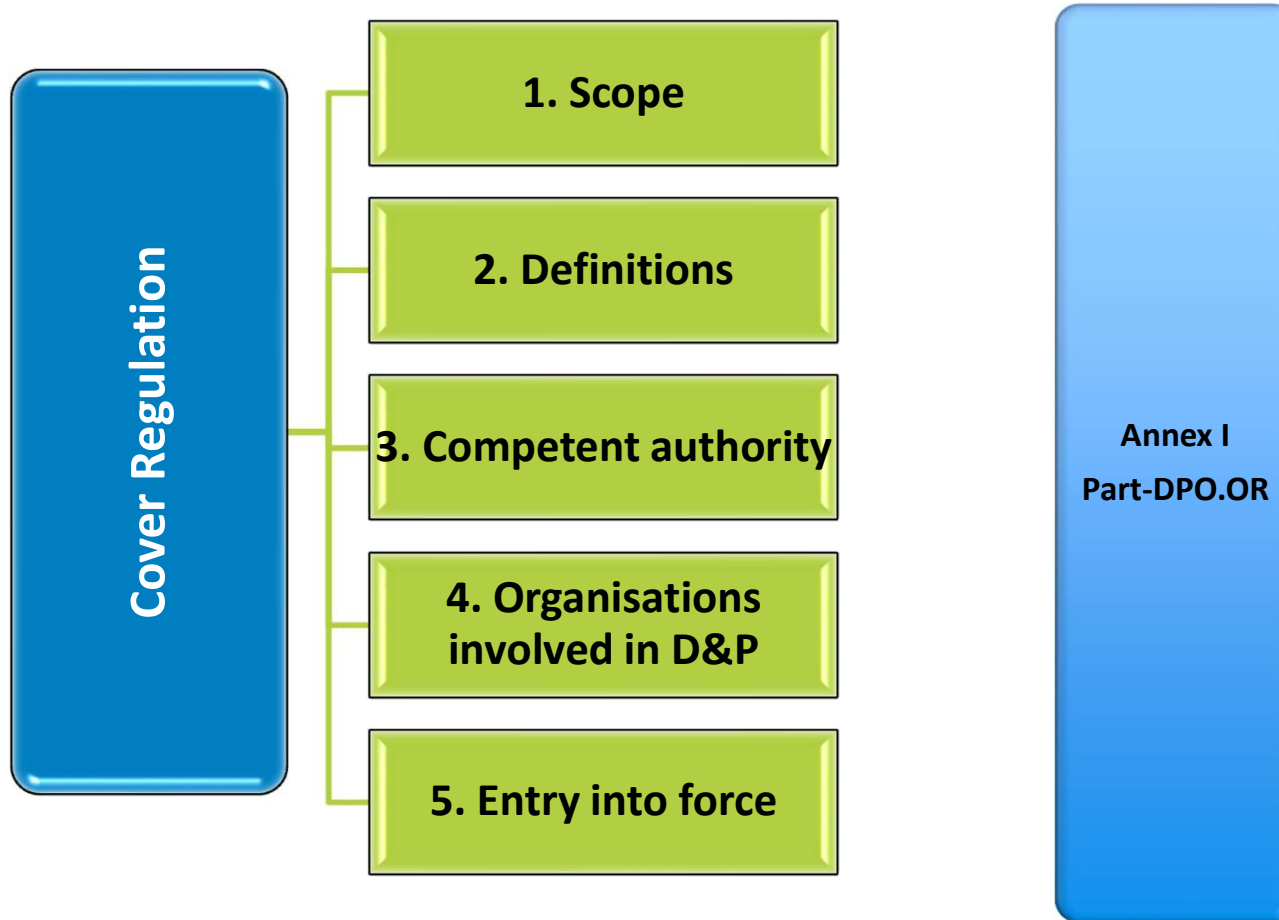
Regulatory Framework



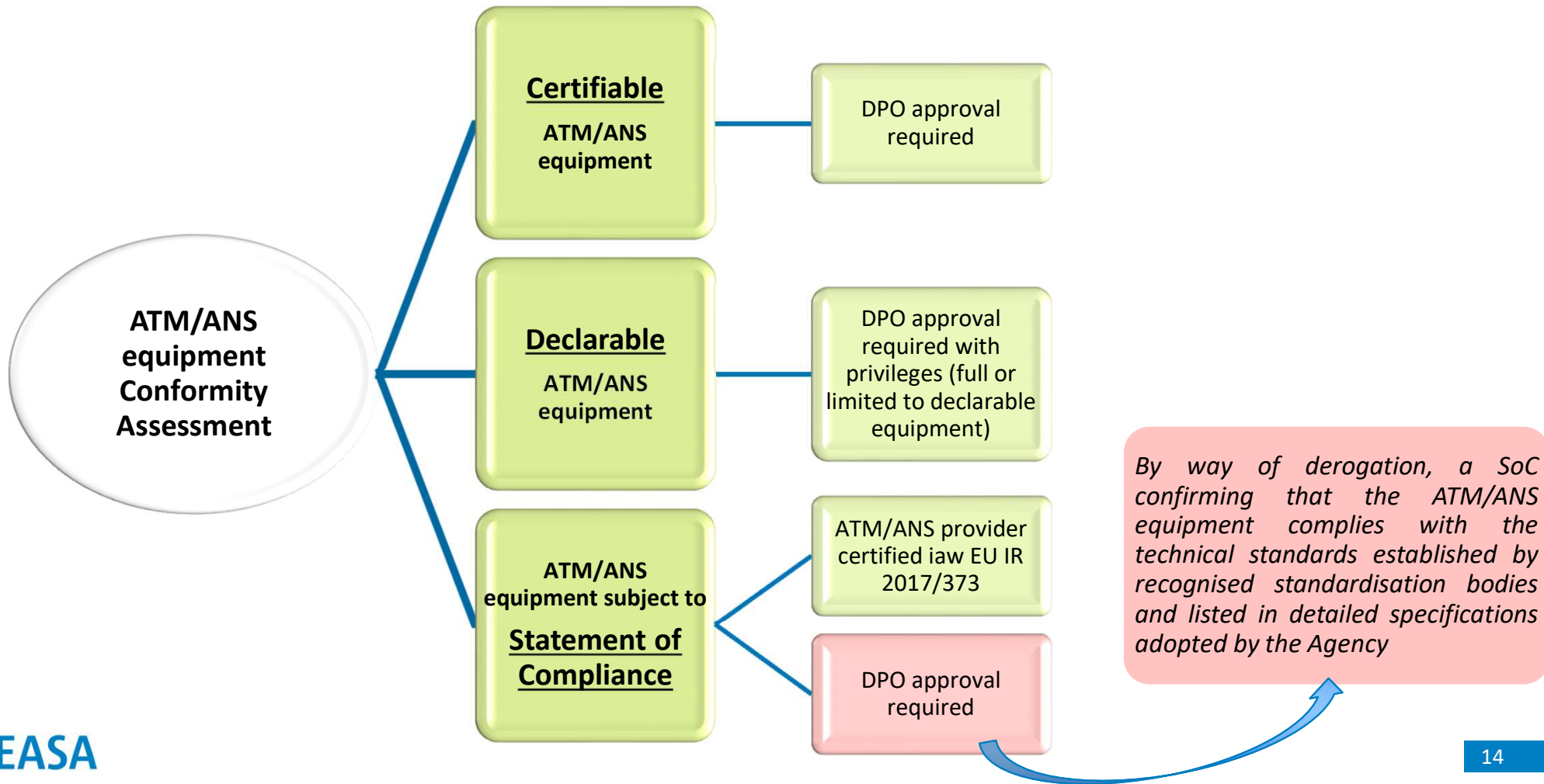
Delegated Act on conformity assessment (= certification/declaration) of ATM/ANS equipment



Implementing Act on approval of ATM/ANS equipment manufacturers



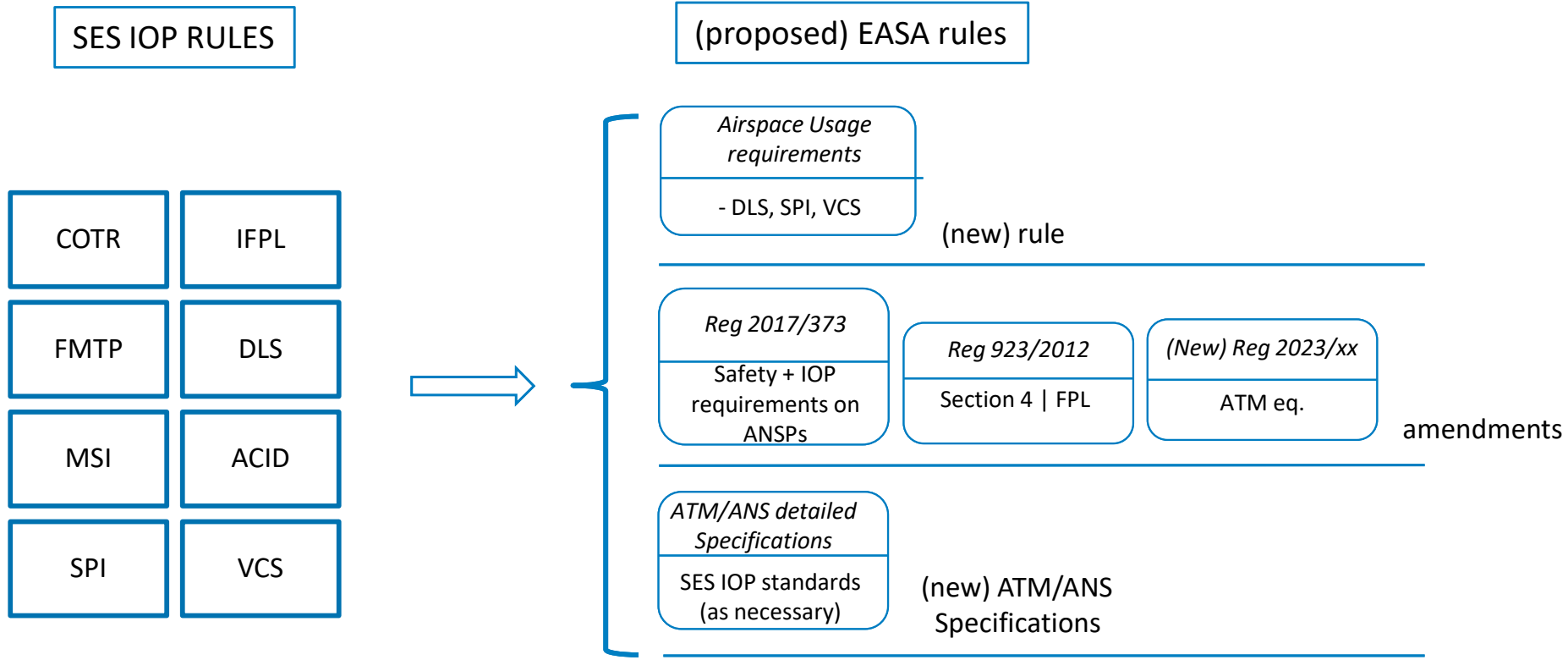
Minimum capability



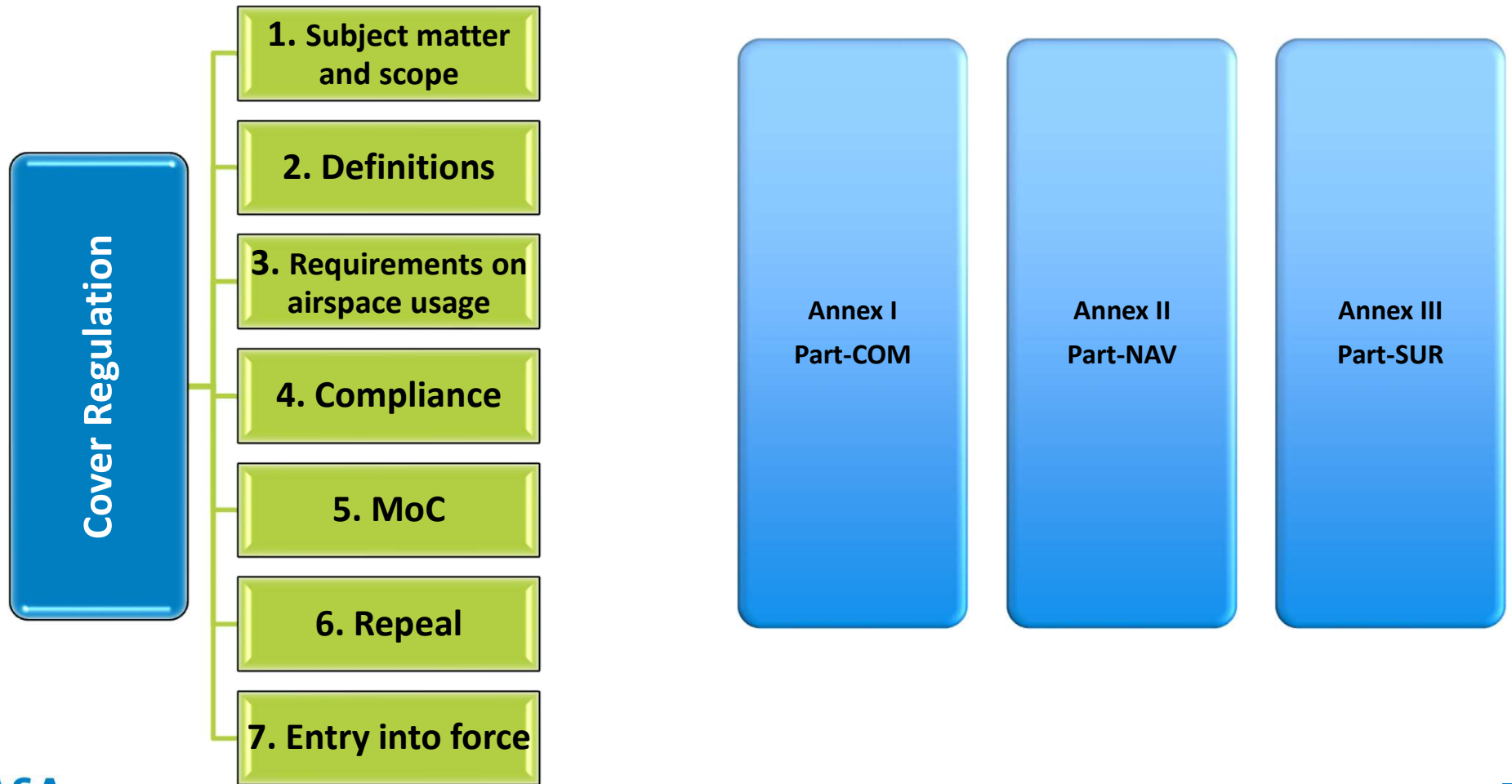
SES IOP rules

Regulation (EC) No 1032/2006 [COTR]	laying down requirements for <u>automatic systems for the exchange of flight data</u> for the purpose of notification, coordination and transfer of flights between ATC units
Regulation (EC) No 1033/2006 [IFPL]	laying down the requirements on <u>procedures for flight plans</u> in the pre-flight phase for the single European sky
Regulation (EC) No 633/2007 [FMTP]	laying down requirements for the application of a <u>flight message transfer protocol</u> used for the purpose of notification, coordination and transfer of flights between air traffic control units
Regulation (EC) No 29/2009 [DLS]	laying down requirements on <u>data link services</u> for the single European sky
Regulation (EC) No 262/2009 [MSI]	laying down requirements for the coordinated <u>allocation and use of Mode S interrogator codes</u> for the single European sky
Regulation (EC) No 1206/2011 [ACID]	laying down requirements on <u>aircraft identification for surveillance</u> for the single European sky
Regulation (EC) No 1207/2011 [SPI]	laying down requirements for the <u>performance and the interoperability of surveillance</u> for the single European sky
Regulation (EC) No 1079/2012 [VCS]	laying down requirements for <u>voice channels spacing</u> for the single European sky

SES IOP rules → Regulatory structure



Implementing Act on Airspace Usage Requirements (AUR)



Implementing Act on Airspace Usage Requirements (AUR) (2)

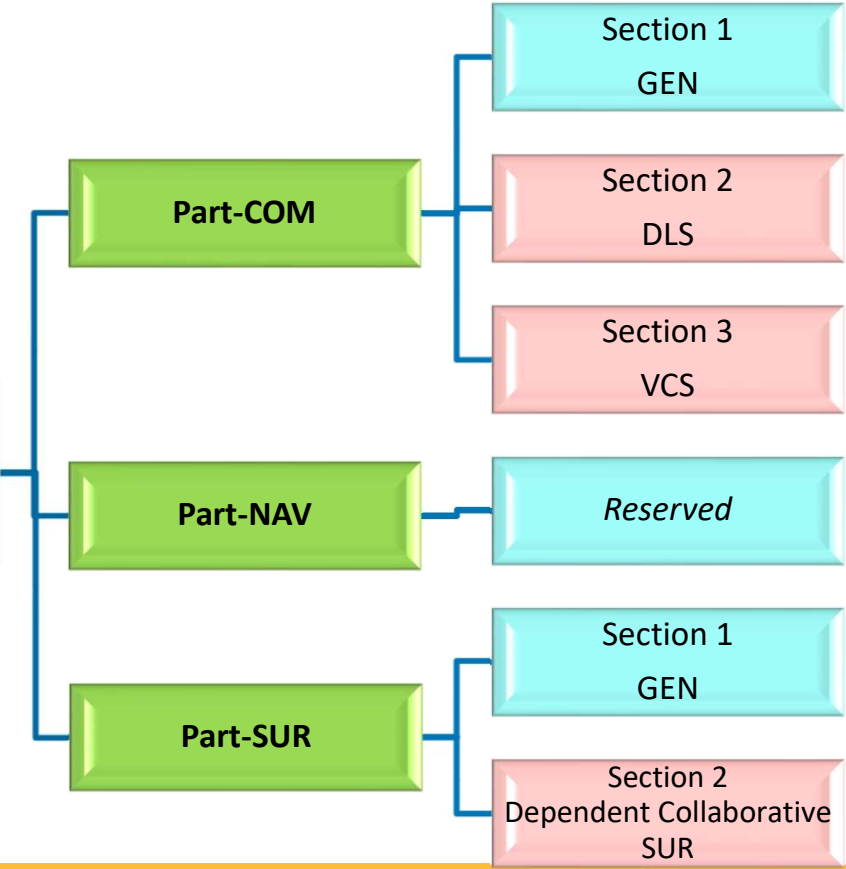
SES IOP RULES

Airspace Usage requirements
DLS, SPI, VCS

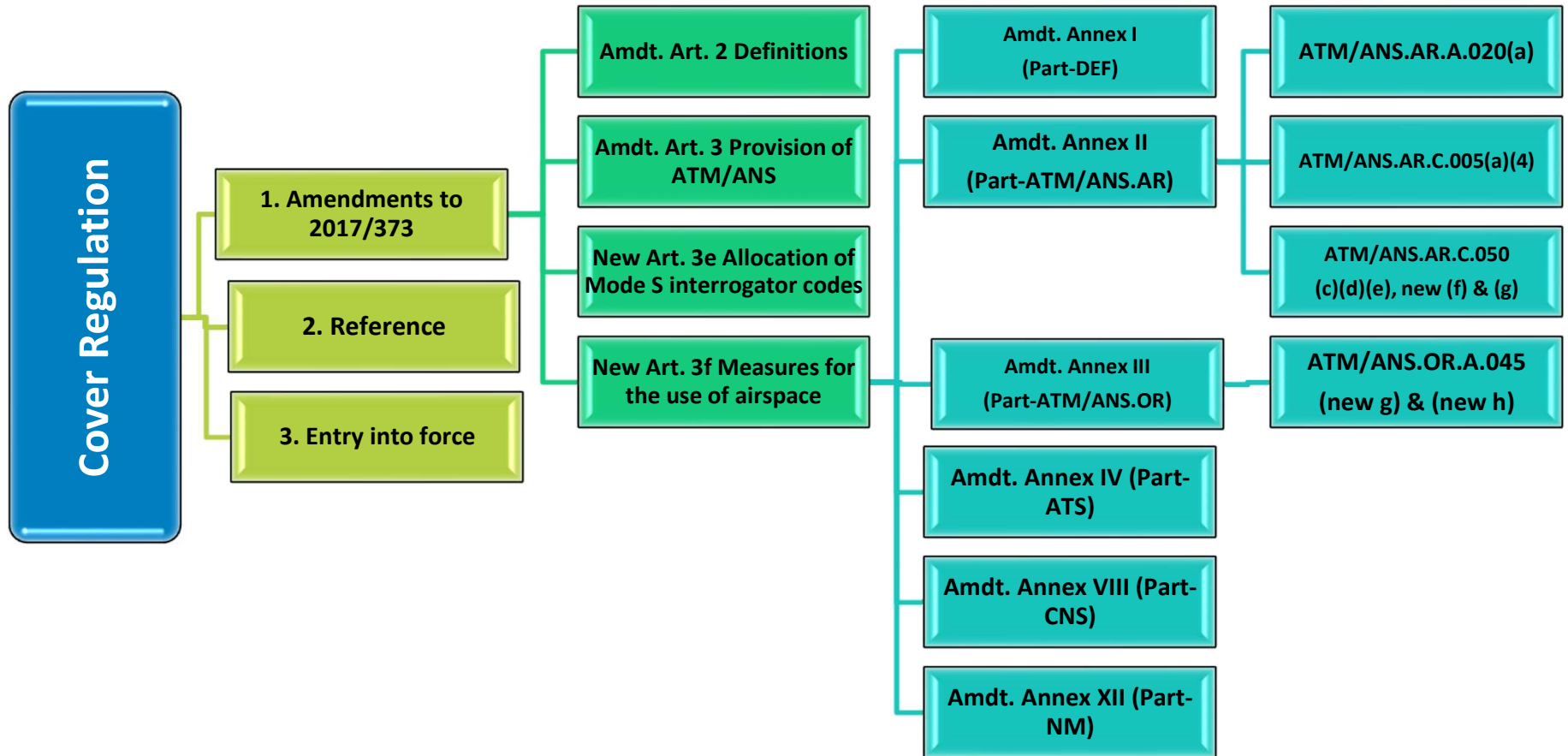
COTR	IFPL
FMTF	DLS
MSI	ACID
SPI	VCS



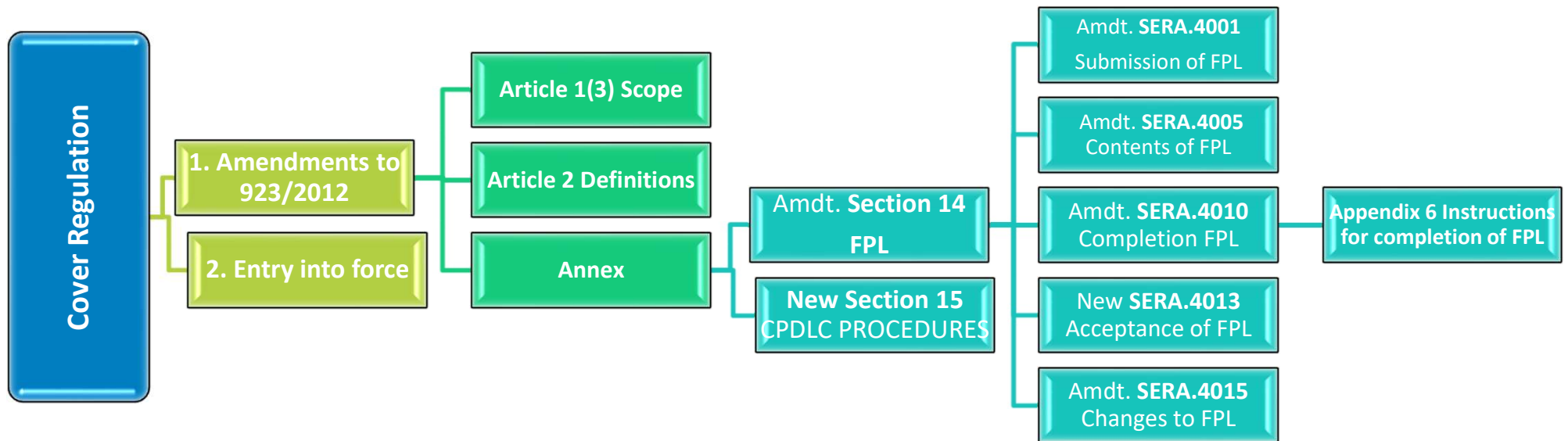
AUR IR



Implementing Act amending EU IR 2017/373



Implementing Act amending EU IR 923/2012 (the SERA Regulation)



EASA Opinion XX/2023

- “Establishment of Conf. assessment framework for ATM/ANS equipment towards interoperable and seamless EATMN”
 - DA on **Conf. Assessment of ATM/ANS equipment**;
 - IA on **approval of ATM/ANS equipment manufacturers**
 - IA on **AUR**
 - IA **amending EU IR 2017/373** (provision of ATM/ANS)
 - IA **amending EU IR 923/2012** (SERA)

IMPACT ASSESSMENT: applied methodology

Multi-criteria analysis (MCA):

- *Establishing criteria for comparing the options*
- *Scoring how well each option meets the criteria; the scoring are relative to the baseline scenario (Option 0)*
- *Ranking the options by combining their scores (scale per criteria of –10 to +10)*

MCA allows a comparison of impacts which cannot be measured in the same unit

IMPACT ASSESSMENT: input from stakeholders

- *Feedback collected via interviews and surveys from RMG Members*
- *Main purpose of the data collection: to gather quantitative/qualitative input to estimate economic impact*
- *The input received was considered in the NPA/Opinion, taking into account that:*
 - *the proposal was modified compared to the baseline considered in the survey*
 - *there were few/there was lack of replies for some elements*

NPA 2022-09 | Consultation

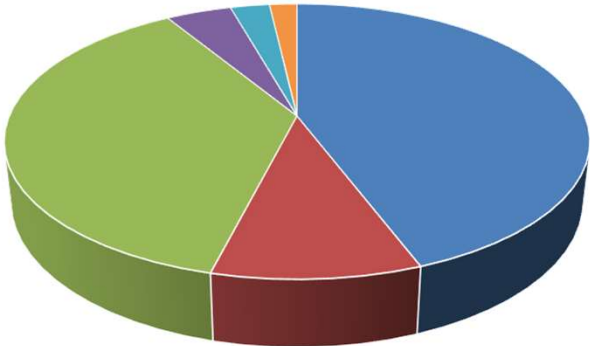
- The deadline for the submission of comments: **07 Oct 2022**
- **50+** stakeholders commented
- **1160** comments received
- Most comments received from ANSPs, ATM/ANS equipment manufacturers and NSAs

NPA 2022-107 | Consultation

- The deadline for the submission of comments: **14 Dec 2022**
- **10+** stakeholders commented
- **450+** comments received
- comments received from a/c operators associations, ANSPs, competent authorities

NPA 2022-09 | Summary of feedback received

Number of Comments

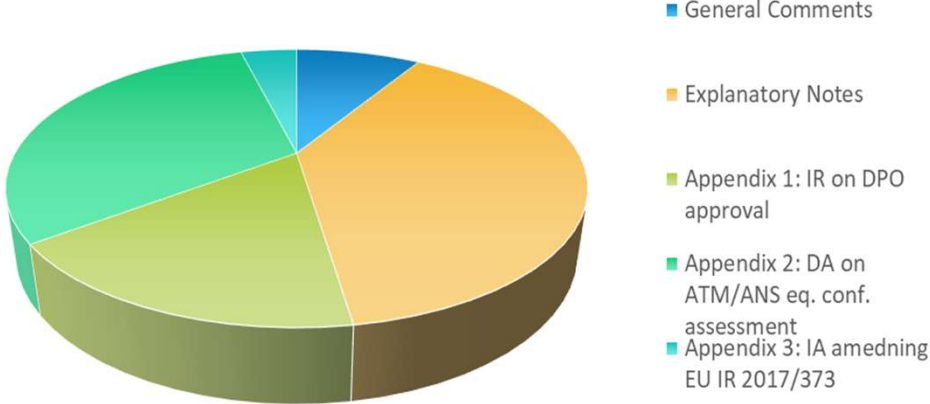


- ANSPs
- ATM/ANS Equipment Manufacturer
- Authority
- Individuals
- Other Industry
- Others

Stakeholders group	Number of Comments
ANSPs	513
ATM/ANS Equipment Manufacturer	113
Authority	433
Individuals	50
Other Industry	30
Others	21
TOTAL	1160

NPA 2022-09 Sections	Number of Comments
General Comments	102
Explanatory Notes	450
Appendix 1: IR on DPO approval	200
Appendix 2: DA on ATM/ANS eq. conf. assessment	362
Appendix 3: IA amedning EU IR 2017/373	46
Total	1160

Number of Comments per NPA sections



NPA 2022-09 Summary of feedback received

Positive in general

Harmonisation of interoperability, security, performance and safety requirements

Introduction of the real **'level paying field'** for ATM/ANS manufacturers and **'clear allocation of responsibilities'** of ANSPs and ATM/ANS manufacturers

Streamlined/more efficient processes for the introduction of equipment into service, addressing the inefficiencies and fragmentation of the previous interoperability framework

Facilitation of industrial cooperation at EU level

Require clarifications

Appropriate transition mechanism with a balanced approach to legacy equipment and oversight by NSAs

Clarity on the **scope of the ATM/ANS equipment** subject to the different attestation mechanisms

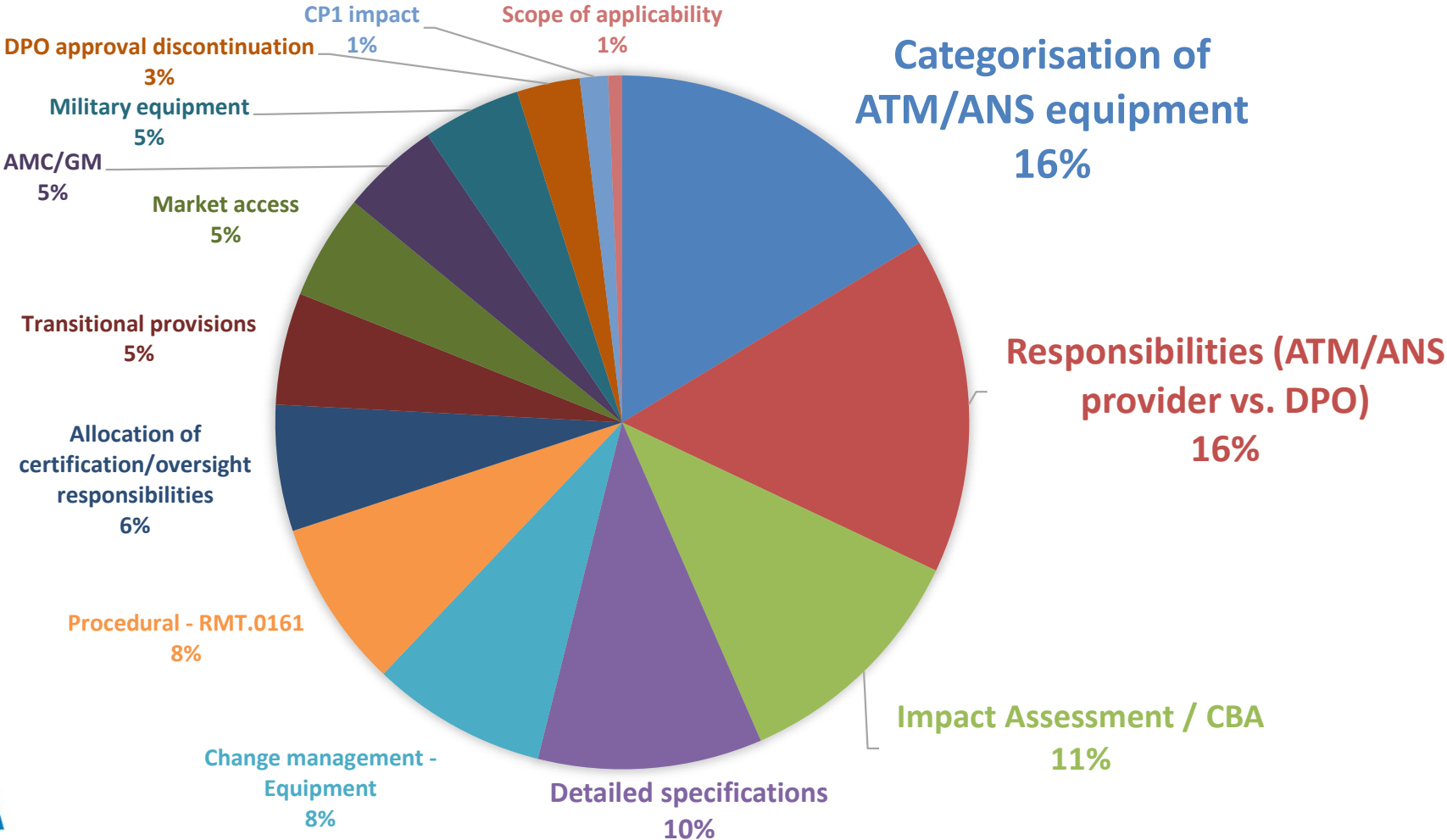
Mechanisms to ensure continuity of service for ANSPs in case of discontinuation of DPO approval

Market access for small manufacturers/new entrants

Availability of the **detailed specifications and AMC/GM**

Level of details of the impact assessment

NPA 2022-09 | Topics addressed in the comments (General and Explanatory note)



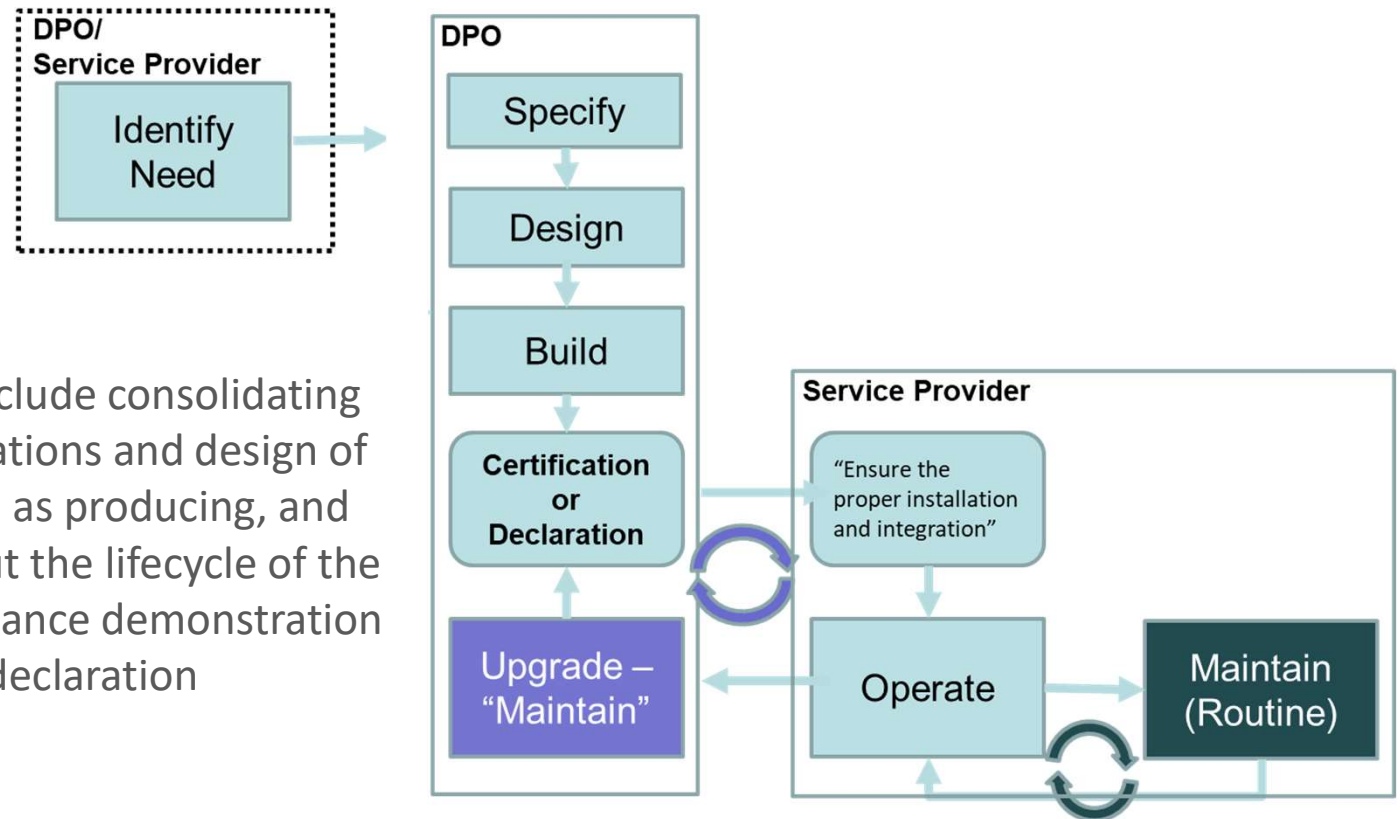
TOPIC: Categorisation of ATM/ANS equipment (Annex I)

#	Point 3 to Annex VIII ER EASA BR (EU) 2018/1139	Article 4 <u>Certifiable</u> ATM/ANS Eq.	Article 5 <u>Declarable</u> ATM/ANS Eq.	Article 6 <u>SoC</u> ATM/ANS Eq.
	The equipment shall include in particular those required to support the following functions and services:			
1.	Airspace management (=ASM)			X
2.	Air traffic flow management (=ATFM)			X
3.	Air traffic services (ATS), in particular flight data processing systems, surveillance data processing systems and human-machine interface systems;	X		
4.	Communications (=COM) including ground-to-ground/space, air-to-ground and air-to-air/space communications			
	<i>4a. Ground-to-ground communications</i>		X	
	<i>4b. Air-to-ground communications</i>	X		
5.	Navigation (=NAV)		X	
6.	Surveillance (=SUR)		X	
7.	Aeronautical Information services (=AIS)			X
8.	Meteorological services (=MET)			X



TOPIC: roles and responsibilities of the different actors

- A considerable number of comments to the NPA require further clarification/explanation about the split of responsibilities between the DPO and the ATM/ANS Provider.

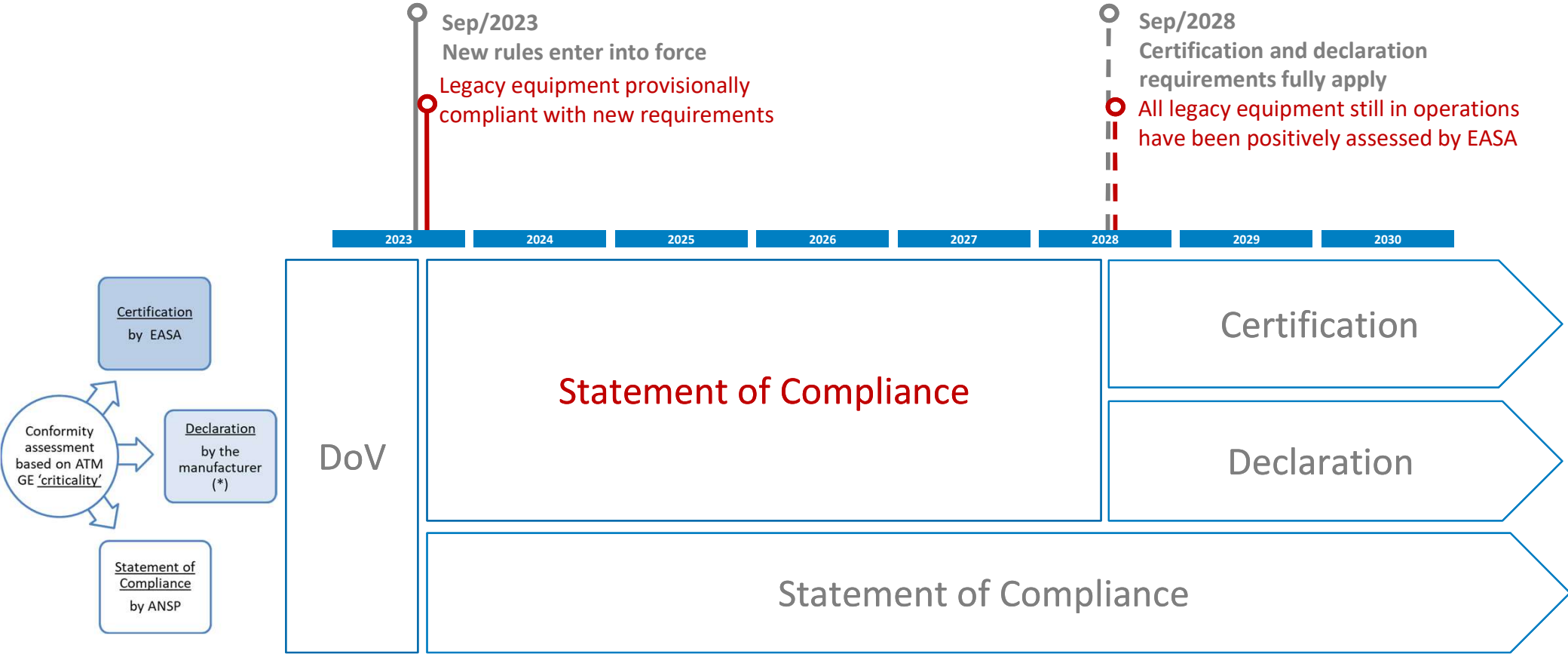


- DPO responsibilities include consolidating the functional specifications and design of the equipment, as well as producing, and maintaining throughout the lifecycle of the equipment, the compliance demonstration with the certification/declaration specifications.

TOPIC: Impact assessment

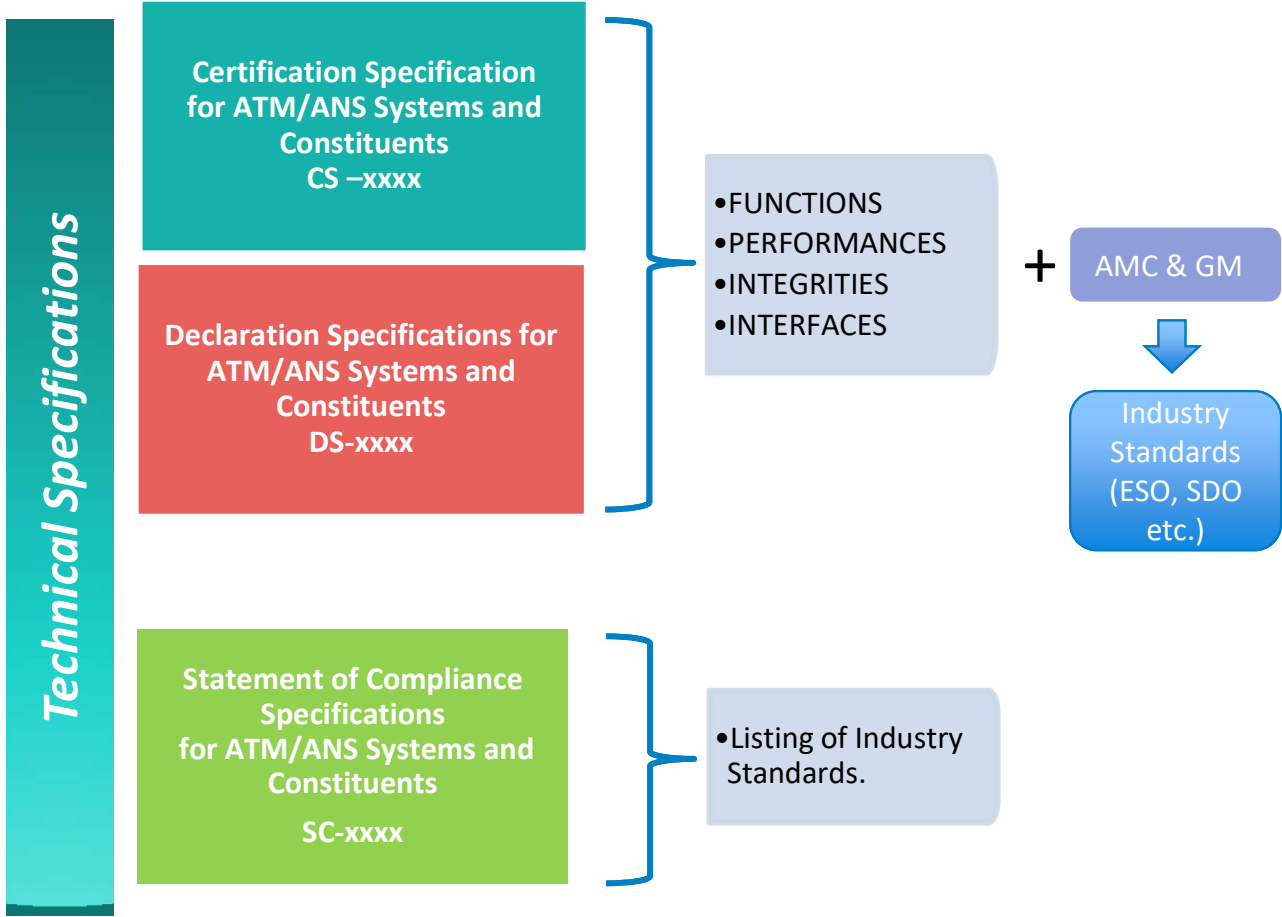
Certification costs and impacts on the market	<ul style="list-style-type: none">• Increase of the costs in the short term is acknowledged• Gradual reduction of costs, thanks to detailed specifications, harmonised processes and clarification of the roles/responsibilities• Increase of EASA resources is noted
Comments on the level of benefits of the proposal	<ul style="list-style-type: none">• Harmonised attestation processes: less fragmented process across EU and avoiding inefficiency• Fostering innovation: clear process for new products in the market
Specification details	<ul style="list-style-type: none">• Common detailed specifications will be provided
Proportionality of the proposal	<ul style="list-style-type: none">• The ATM equipment conformity assessment framework introduces three attestation methods depending on the criticality of the systems/constituents
Definition of scores and comparison with option 0	<ul style="list-style-type: none">• The option 0 is defined as the baseline for all criteria• Option 1 is validated against that baseline• If no action is taken, there would be a regulatory gap leading to an increasingly complex and less integrated ATM/ANS environment

TOPIC: Transitional provisions



TOPIC: Certification/declaration specifications

#	Point 3 to Annex VIII ER
1.	Airspace management
2.	Air traffic flow management
3.	Air traffic services - in particular flight data processing systems, surveillance data processing systems and human-machine interface systems
4.	Communications - including ground-to-ground/space, air-to-ground and air-to-air/space communications
5.	Navigation
6.	Surveillance
7.	Aeronautical Information services
8.	Meteorological services



TOPIC: Changes to ATM/ANS equipment

1. Preventive and corrective maintenance

- In principle, all these activities are performed within the boundaries of the certification basis as defined by the DPO and therefore do not require recertification
- If a non-conformance of the equipment with its specification is detected, it is communicated to the DPO and trigger a DPO process of management of non-conformities

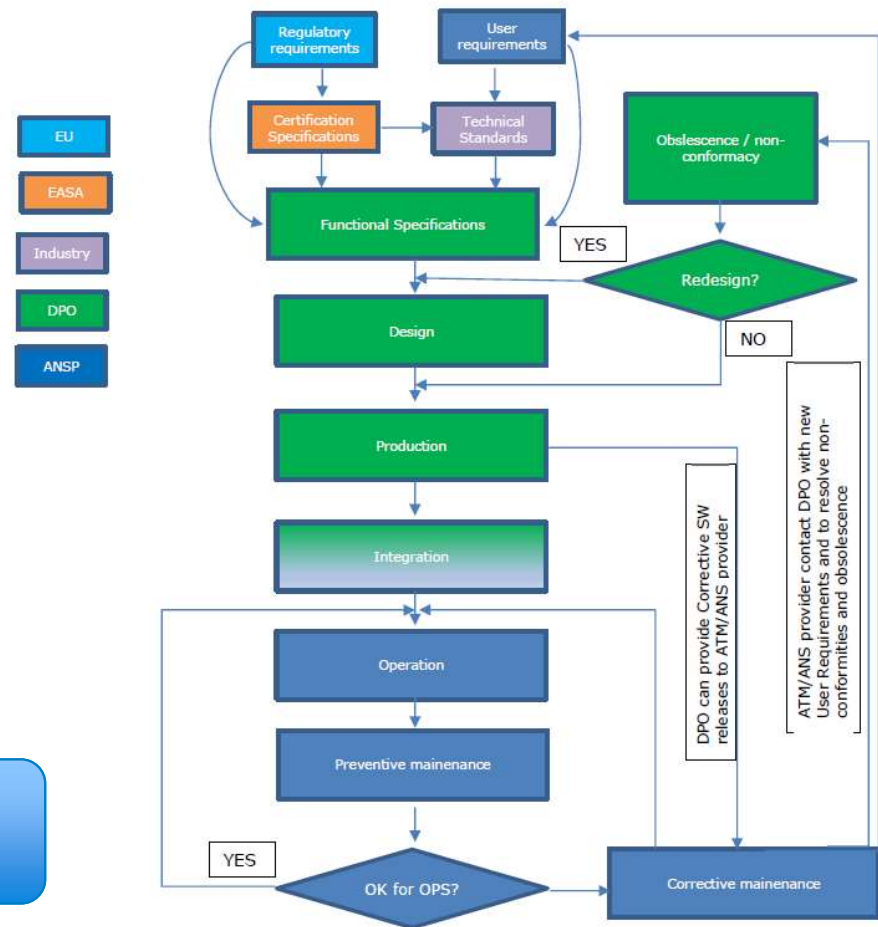
2. Obsolescence management

- Replacement of a HW or SW constituent without an architecture modification typically does not require re-certification

3. Evolution / upgrades

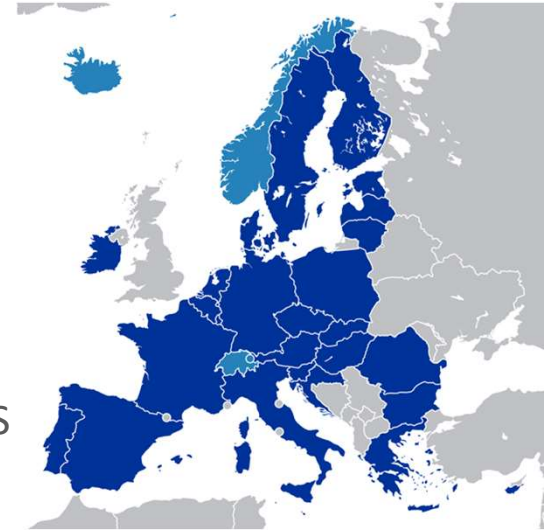
- If an upgrade affects SW or HW components designed in compliance with Regulatory Requirements or Certification Specifications, re-certification might be necessary
- If an upgrade implements only user requirements and no-interference with regulatory requirements or Certification Specifications is demonstrated (by DPO) the re-certification is not required

The DPO change management process determines how to manage a particular change (including when re-certification process is to be launched).



TOPIC: Access to the market

- The design and production of ATM/ANS equipment (subject to certification/declaration a the DPO) for its use in the EU market requires compliance with the BR and its implementing rules.
- Third country organisations intending to sell equipment in the EU market will need to comply also with the relevant requirements (to ensure both that the essential requirements are met and that a level playing field is achieved).
- The proposal is considered as achieving a good balance between the need to ensure the necessary integrity, performance and reliability of critical ATM/ANS equipment and the flexibility to drive innovation and effective deployment of new technologies/functionalities.
- In particular, DPO requirements are commensurate to the privileges to declare the compliance of equipment with the applicable declaration specifications, and consist mainly on the demonstration of the availability of a management system with the relevant processes to perform the design and production activities.



TOPIC: Ceasing of DPO activities

- A few questions/comments to the NPA refer to the situation where a DPO ceases operations or its approval would be suspended or revoked, and the potential impact for the equipment in operations in the EU.
- This situation is not unique to this domain and EASA has concluded that the flexibility provisions in the Basic Regulation are adequate to deal also with this potential situation, without a need to introduce any dedicated mechanism in the delegated and implemented acts.

TOPIC: EASA acting as competent authorities for all DPOs

- Some Member States raised a comment within the NPA 2022-09 that Art. 80 (1) c) of Reg. (EU) 2018/1139 is referring to the previous paragraph (b) stating that the competency of EASA for approving design and production organisations to systems and constituents for “pan-European ATM/ANS”, like services such as those used by pan-EU providers e.g. the Network Manager.
- In this context, it should be highlighted that:
 - most of the ATM/ANS equipment is actually being designed to be placed on the EU market, as defined in Art. 2 (4) of Reg. (EU) 2017/373., i.e. those ATM/ANS systems and ATM/ANS constituents could not be categorised into pan-European or local use. Hence, all ATM/ANS systems and ATM/ANS constituents would be placed on the EU market and potentially support pan-European services.
 - The perspective of the ATM/ANS interoperability established already with the repealed Regulation (EC) No 552/2004, was always the pan-European ATM and at that time labelled as the **EATMN**. Furthermore, additionally for ATM/ANS systems and ATM/ANS constituents, the interoperability Regulation was always aiming at opening the European market for goods of the ATM sector.
- **In conclusion**, the pan-European ATM/ANS referred to in Art. 80 (1) b) should be understood to all those ATM/ANS systems and ATM/ANS constituents that require a specific interoperability approach at European level and that could be used in the entire EU market. That would be most ATM/ANS equipment by definition (FDPS, SDPS, data communication etc.).

WORKING TOGETHER

Panel Discussion

- Civil-military coordination
- ATM/ANS equipment manufacturers
- EUROCAE
- ANSPs
- NSAs
- SJU
- EASA



CONFORMITY ASSESSMENT

Panel Discussion



OVERSIGHT and CERTIFICATION

Panel discussion

NSAs & EASA



WRAP-UP & CONCLUSIONS

Way forward

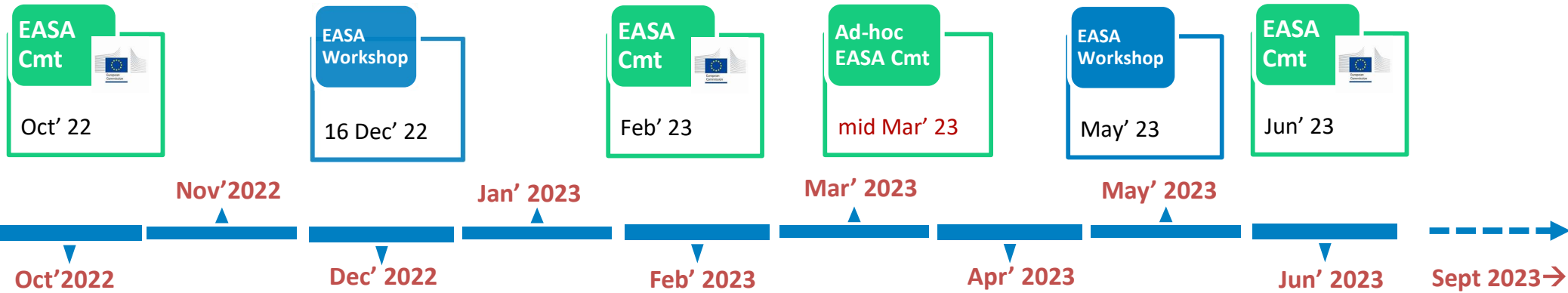


EXCHANGE & SHARING

EASA team available after the closure of the event for informal on-site discussion



RMT.0161 – Time plan for consultation



Opinion XX/2023

- DA on ATM/ANS equipment certification/declaration/SoC
- IA on DPO approval
- IA on AUR
- IA amending IR 2017/373 (provision of ATM/ANS)
- IA amending SERA IR 923/2012

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Any Questions?

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