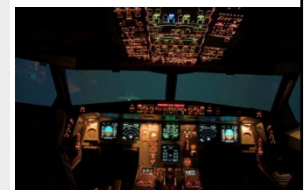
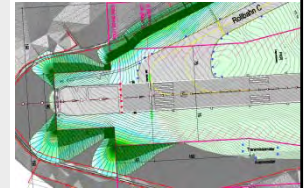


Future aerodrome safety rules

“An external perspective”

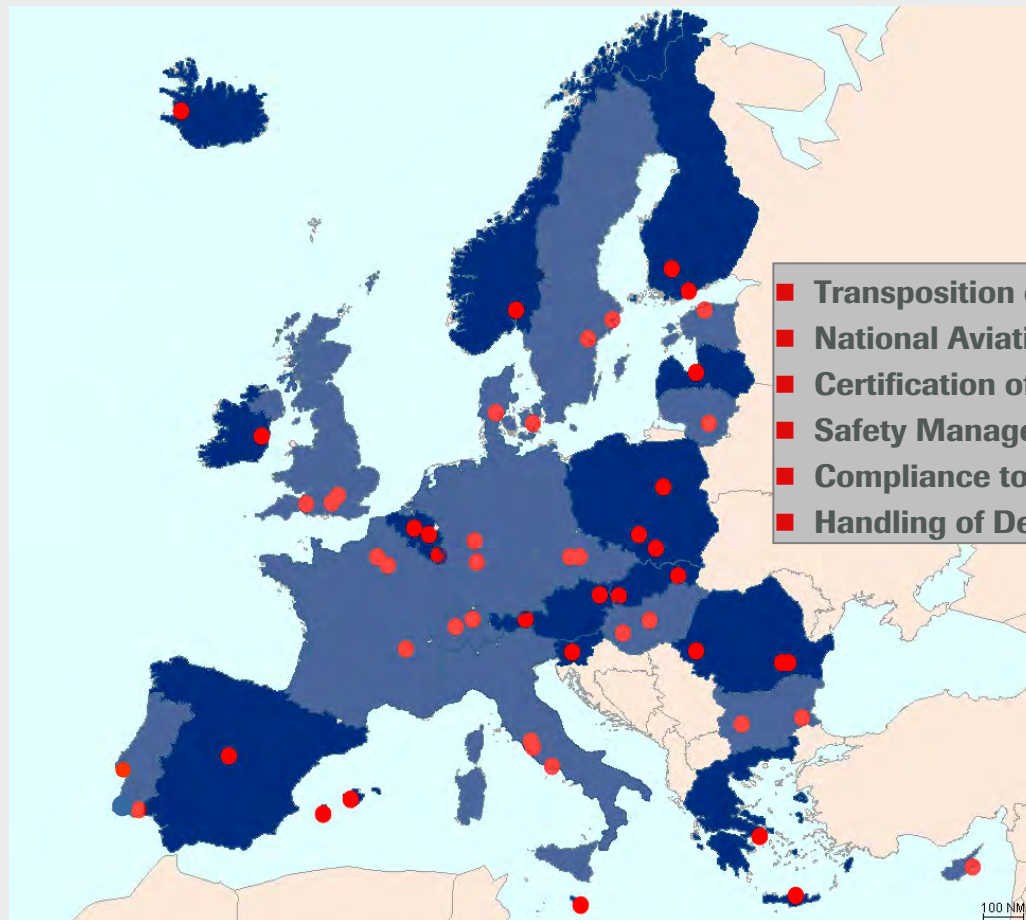
EASA conference on aerodrome safety rules / Cologne / 21–22 May 2012

Dr.-Ing. Holger Schulz – Managing Director



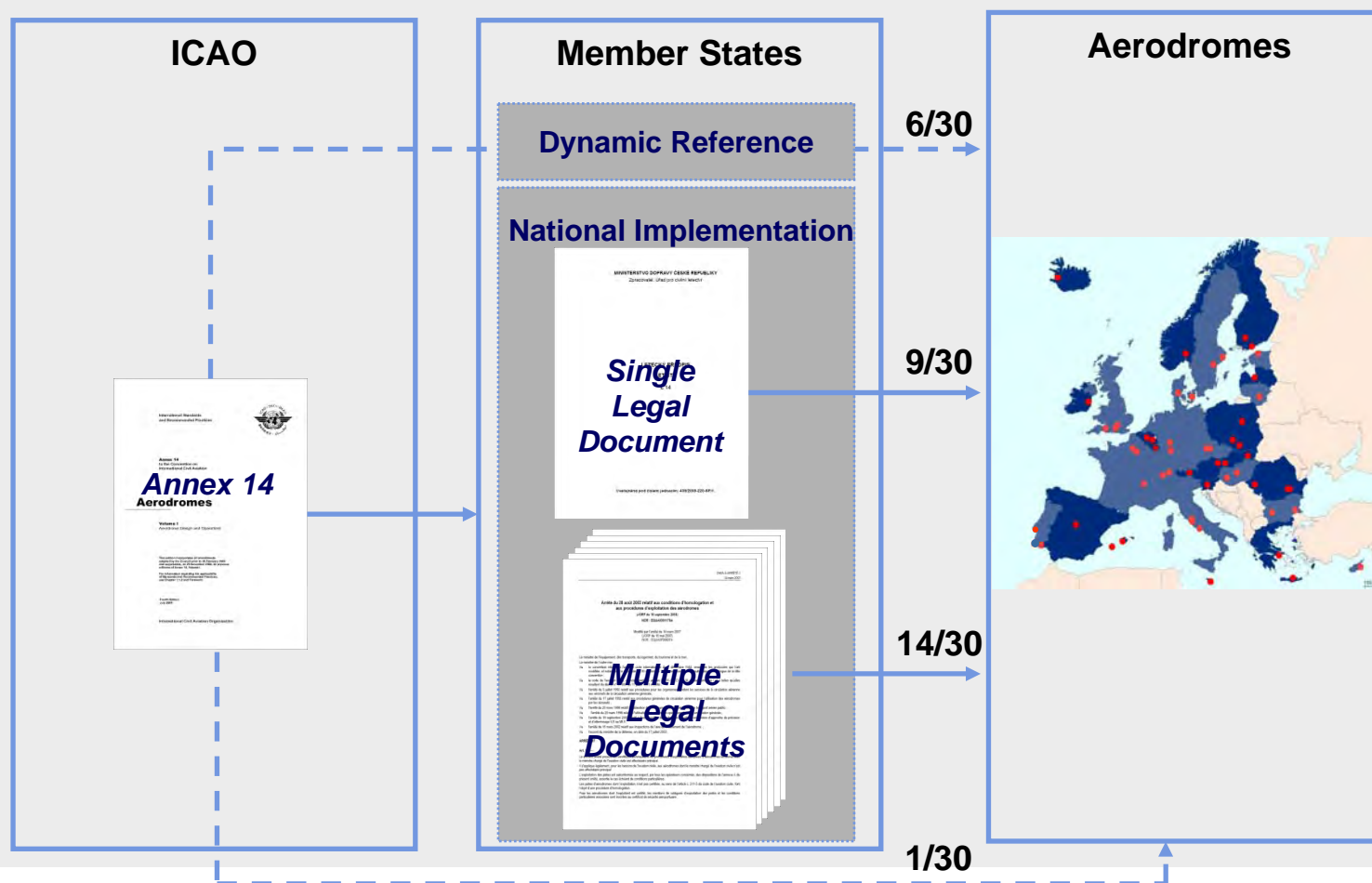
/The ICAO Annex 14 study

- In 2008: EASA → airsight / TÜV Nord
- "analyse Annex 14 implementation"
- 30 EASA Member States
- 56 Aerodromes



/Study Results – Transposition of Annex 14

- Member States transpose ICAO Annex 14 into national regulations in different ways



MS:
Member State

/Study Results – Transposition of Annex 14

**National rulemaking
requires a lot of effort
(especially for smaller MS)**

**Differences between ICAO
and national regulations
through transposition**

**Long delays in
transposition of
Annex 14 changes**

**Vagueness of some
SARPs results in
unspecific national
regulations**

**ICAO Recommendations
are treated differently**

**In some cases, new regulations
apply only to new infrastructure**

■ Me
in

14 into national

es

Aerodromes

Dynamic Refer

National Impleme

MS:
Member State

Single
Legal

Ann
Aerodrom

Multiple
Legal
Documents

/Study Results – Future Requirements

National Aviation Authorities often

- understaffed
- focussed on large aerodromes
- need training
- not aware of aerodromes' deviations
- problems in handling of changes or identified deviations

Safety Management & Certification

- Applicability, scope, validity and implementation status differ widely
- implementation of certification procedures can lead to better structured oversight activities

Compliance and Deviations

- Almost all ADR deviate from ICAO SARPs
- Deviation from REC more frequent
- Small ADR deviate more from ICAO STD
- 90% of deviations are related to ADR DSN
- Awareness and handling of deviations very different

More specific rules for Authorities could support their needs

SMS/Certification should be crucial part of an EASA's risk based safety approach

Need for

- Flexibility
- Proportionality
- Deviations

SMS:
Safety Management System

ADR:
Aerodromes

SARPs:
Standards and Recommended Practices

STD:
Standard

REC:
Recommendations

DSN:
Design

/What has been achieved within the NPA



European Aviation Safety Agency

NOTICE OF PROPOSED AMENDMENT NPA 2011-20 (A)

RMT.0136 (ADR.001 (a)) & RMT.0137 (ADR.001 (b))
RMT.0140 (ADR.002 (a)) & RMT.0141 (ADR.002 (b))
RMT.0144 (ADR.003 (a)) & RMT.0145 (ADR.003 (b))

Authority, Organisation and Operations Requirements for Aerodromes

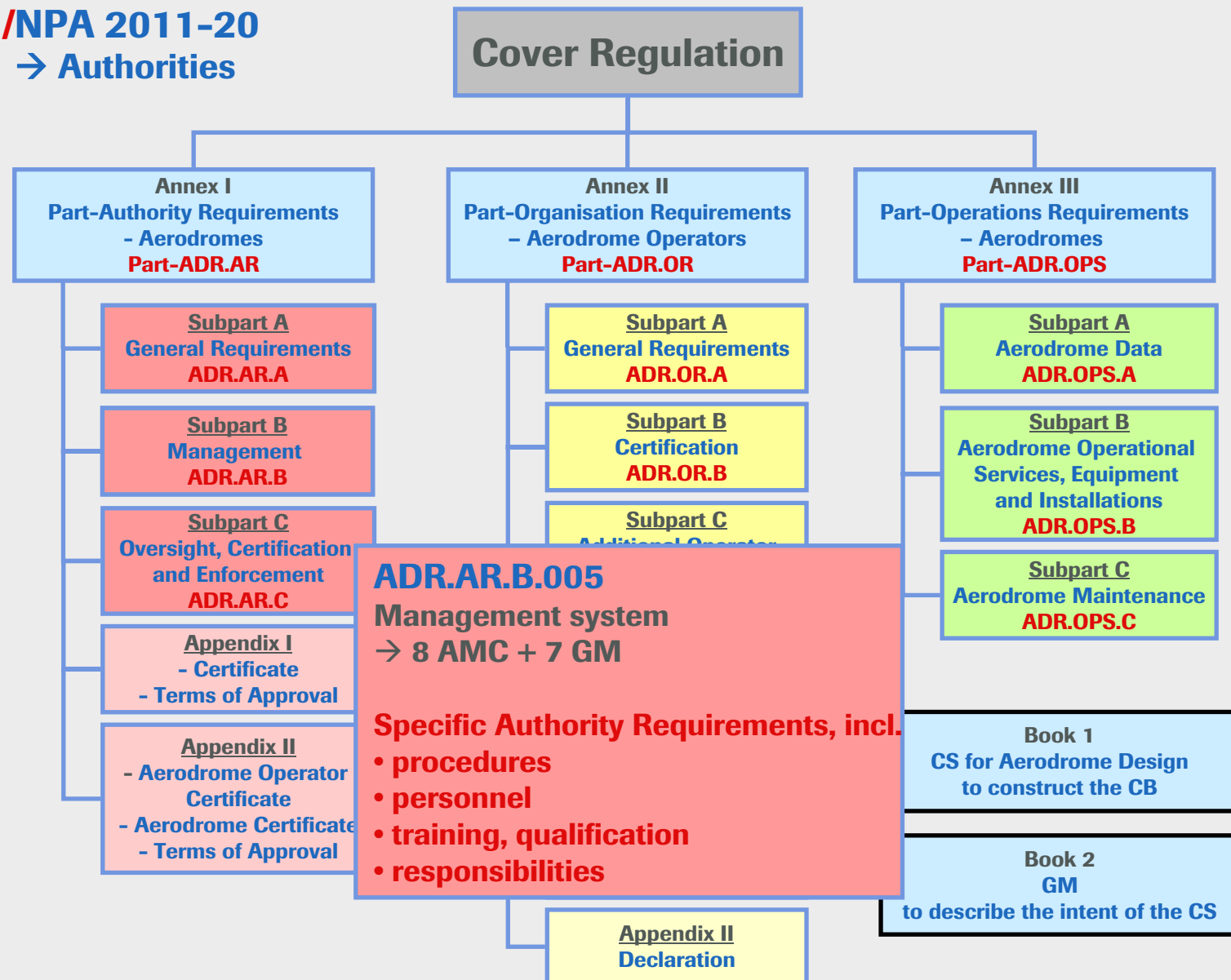
NPA 2011-20 (A) — Explanatory Note

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Page 1 of 22



/NPA 2011-20 → Authorities



ADR:

Aerodromes

CB:

Certification Basis

CS:

Certification
Specifications

AMC:

Acceptable Means of
Compliance

GM:

Guidance Material

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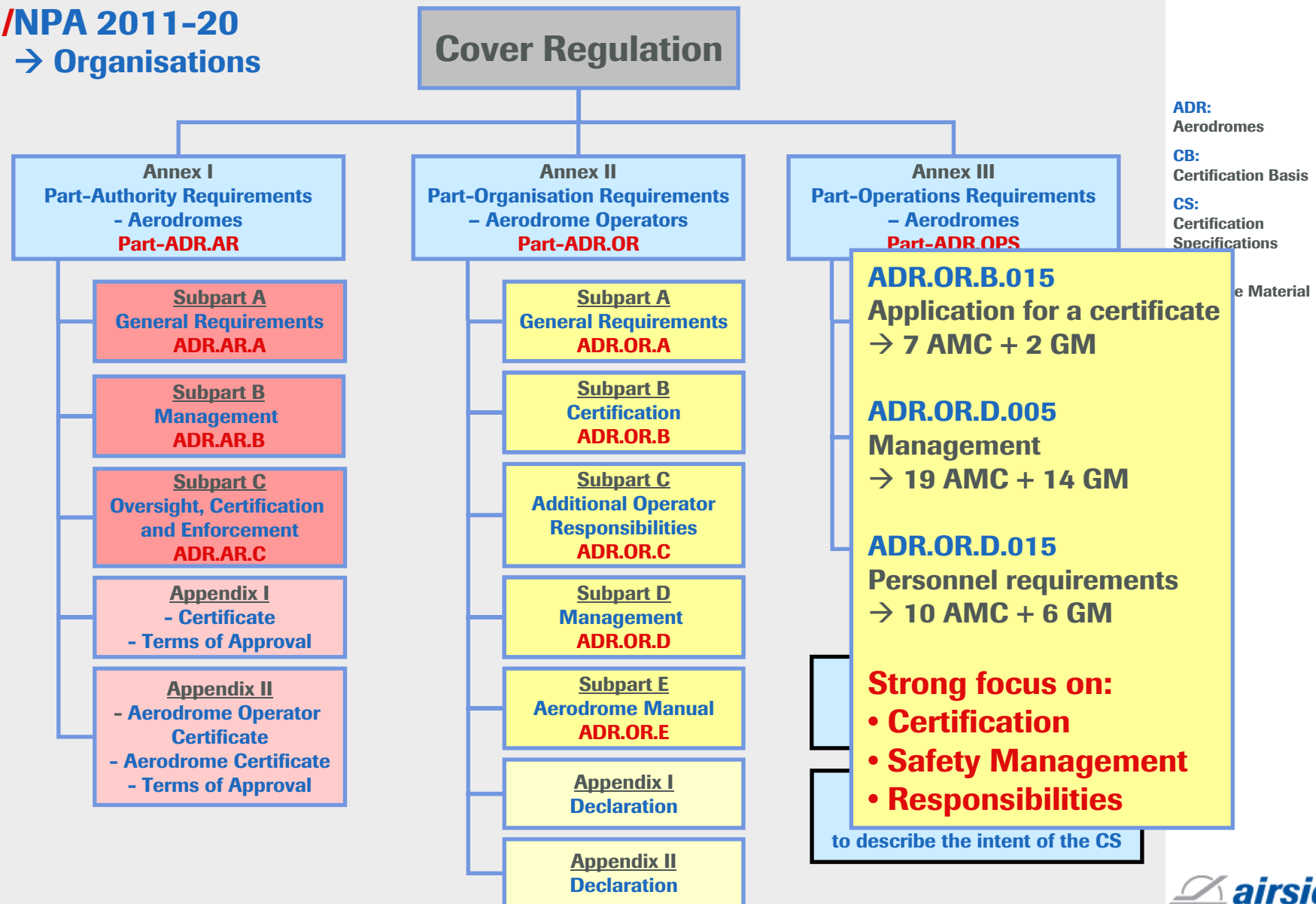
SMS/Certification should be crucial part of an EASA's risk based safety approach

Need for

- Flexibility
- Proportionality
- Deviations



/NPA 2011-20 → Organisations



/Study Results – Future Requirements

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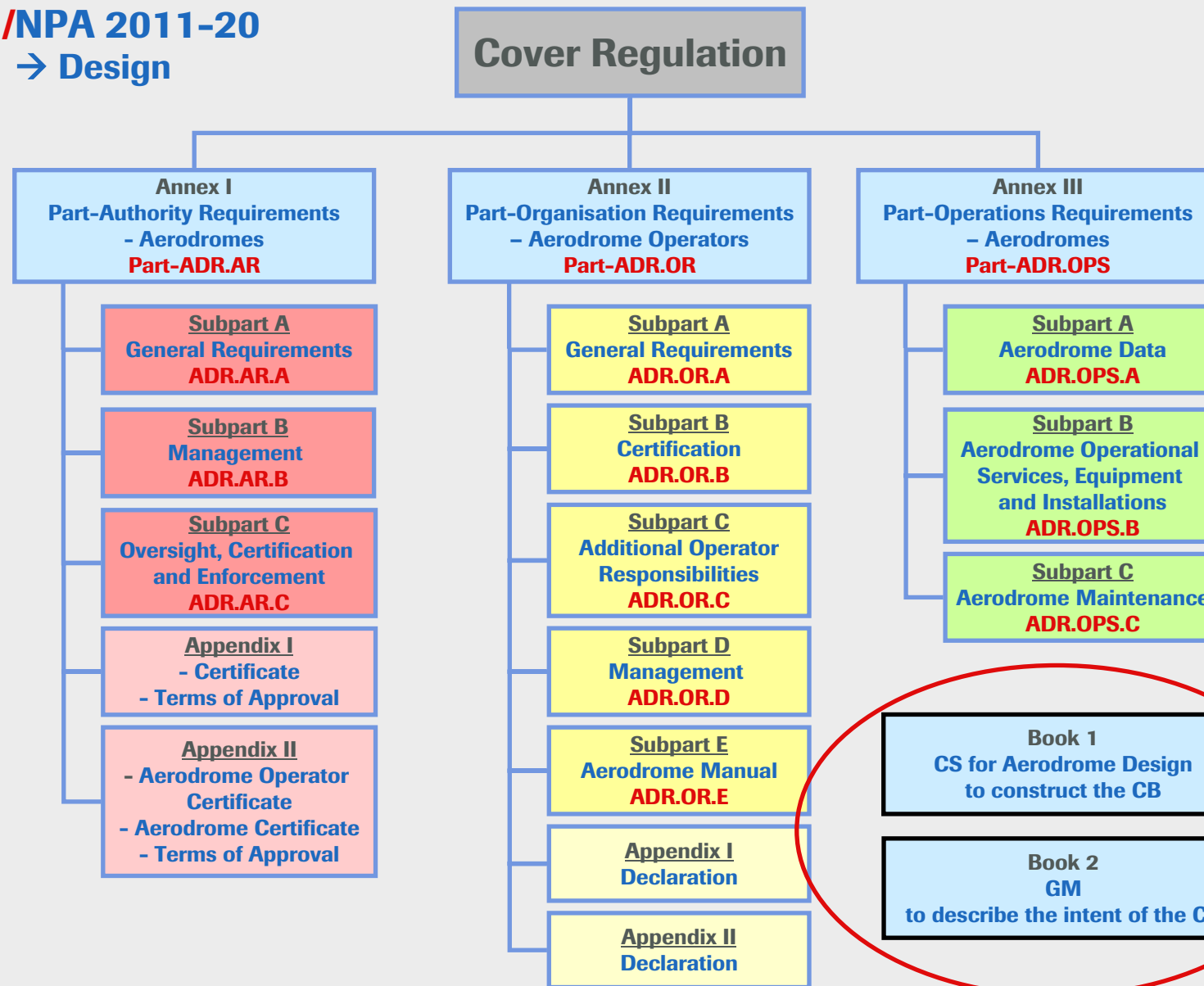
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- Flexibility
- Proportionality
- Deviations

/NPA 2011-20
→ Design



ADR:
Aerodromes

CB:
Certification Basis

CS:
Certification Specifications

GM:
Guidance Material

/NPA 2011-20 Books

- **CS ADR DSN**
 - **Certification Specifications for Aerodrome Design**
 - **"transposed ICAO Annex 14"**

BOOK 2	205
BOOK 1	4
CHAPTER A — GENERAL	4
CHAPTER B — RUNWAYS	11
CHAPTER C — RUNWAY END SAFETY AREA	22
CHAPTER D — TAXIWAYS	24
CHAPTER E — APRONS	32
CHAPTER F — ISOLATED AIRCRAFT PARKING POSITION	34
CHAPTER G — DE-ICING/ANTI-ICING FACILITIES	35
CHAPTER H — OBSTACLE LIMITATION SURFACES	37
CHAPTER J — OBSTACLE LIMITATION REQUIREMENTS	45
CHAPTER K — VISUAL AIDS FOR NAVIGATION (INDICATORS AND SIGNALLING DEVICES) ...	50
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CHAPTER M — VISUAL AIDS FOR NAVIGATION (LIGHTS)	78
CHAPTER N — VISUAL AIDS FOR NAVIGATION (SIGNS)	126
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CHAPTER Q — VISUAL AIDS FOR DENOTING OBSTACLES	146
CHAPTER R — VISUAL AIDS FOR DENOTING RESTRICTED USE AREAS	157
CHAPTER S — ELECTRICAL SYSTEMS	160
CHAPTER T — AERODROME OPERATIONAL SERVICES, EQUIPMENT AND INSTALLATION	167
CHAPTER U — COLOURS FOR AERONAUTICAL GROUND LIGHTS, MARKINGS, SIGNS AND PANELS	170

ADR:
Aerodromes

DSN:
Design

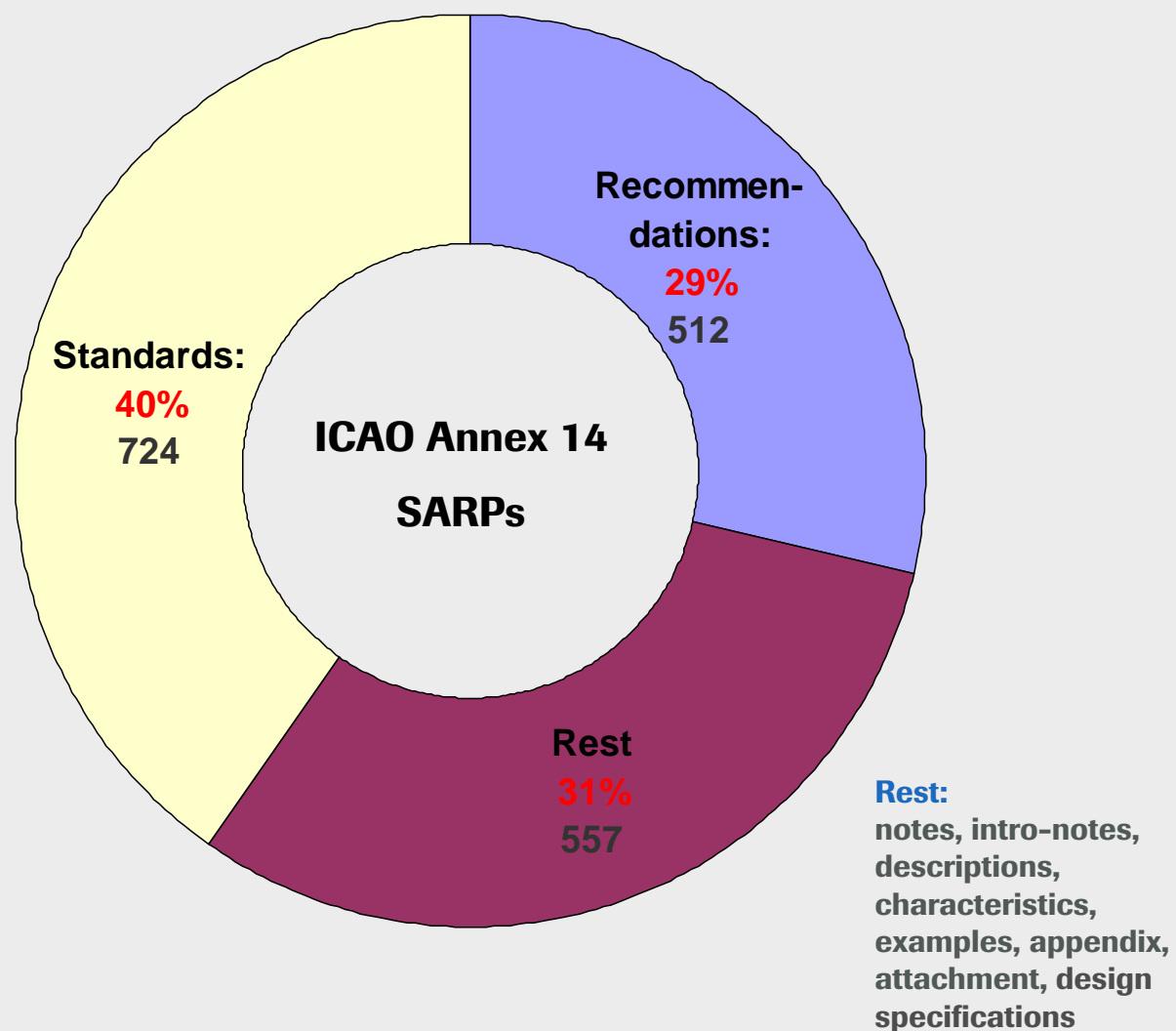
CS:
Certification
Specifications

GM:
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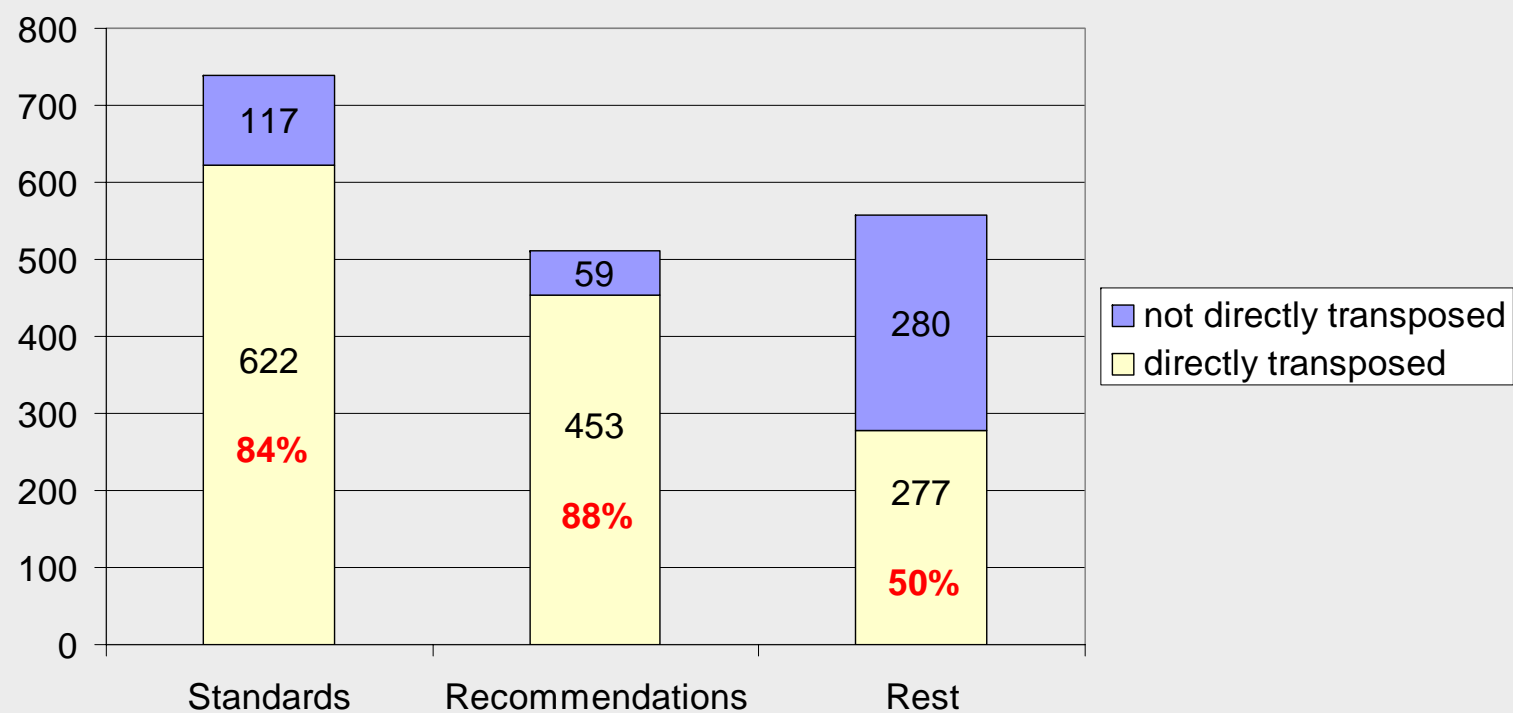
Book 1:
Design Specifications

Book 2:
Guidance Material

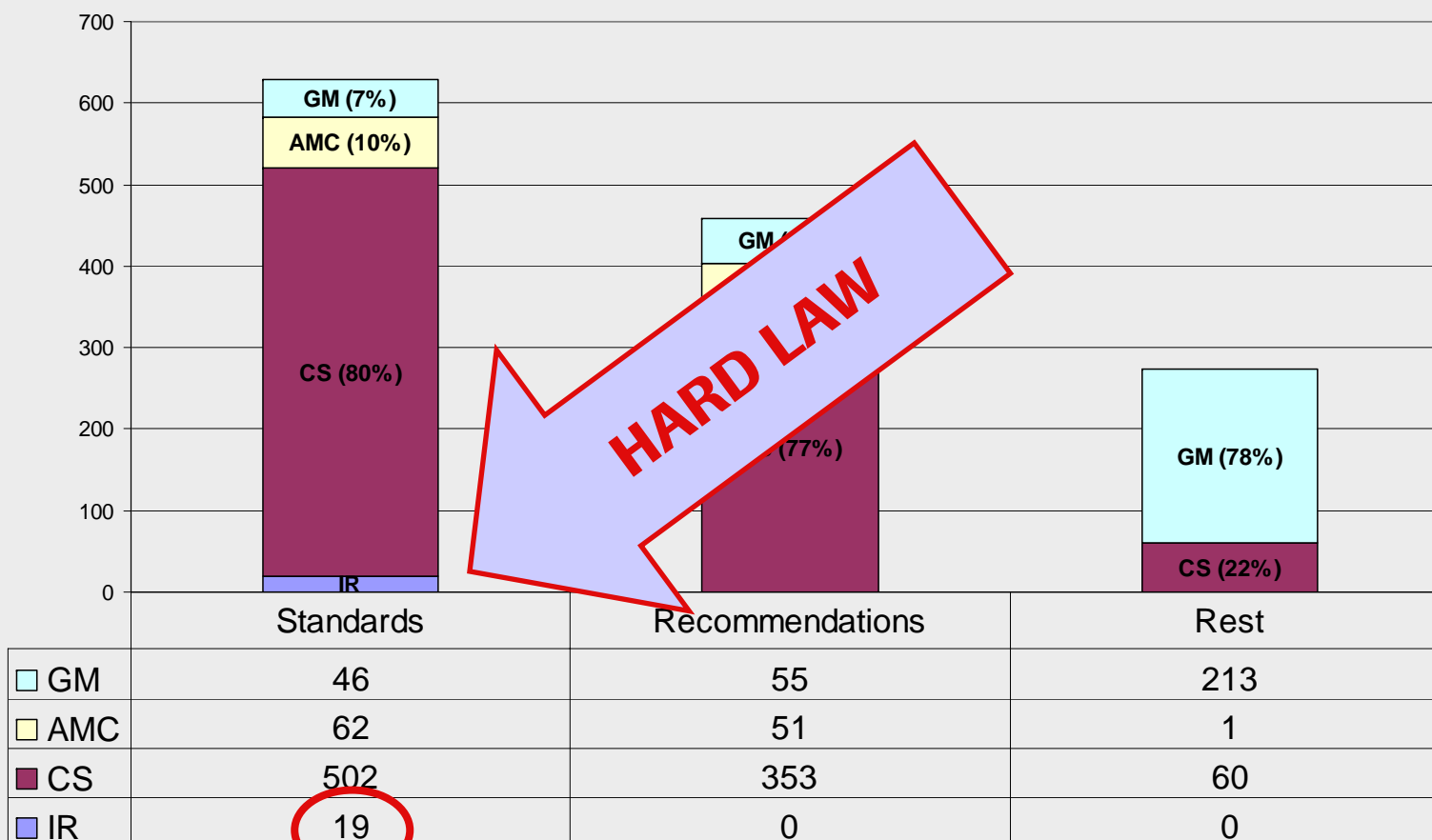
/Transposition of Annex 14 into EASA NPA Aerodrome Design Statistical analysis



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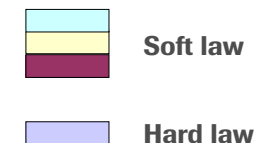


/Transposition of Annex 14 into EASA NPA Aerodrome Design Statistical analysis



Note: some SARPs transposed to CS (DSN) and AMC (AR) at the same time (lighting of objects)

**99% of transposed ICAO
Annex 14 becomes soft law**



ICAO STD → IR:
6 x definitions

2.13. → OPS.A.015
Coordination between
ADR, AIS, ANSP

6.1.6. → OPS.B.080
Marking/lighting
of mobile objects

9.1. → OPS.B.005
ADR emergency planning

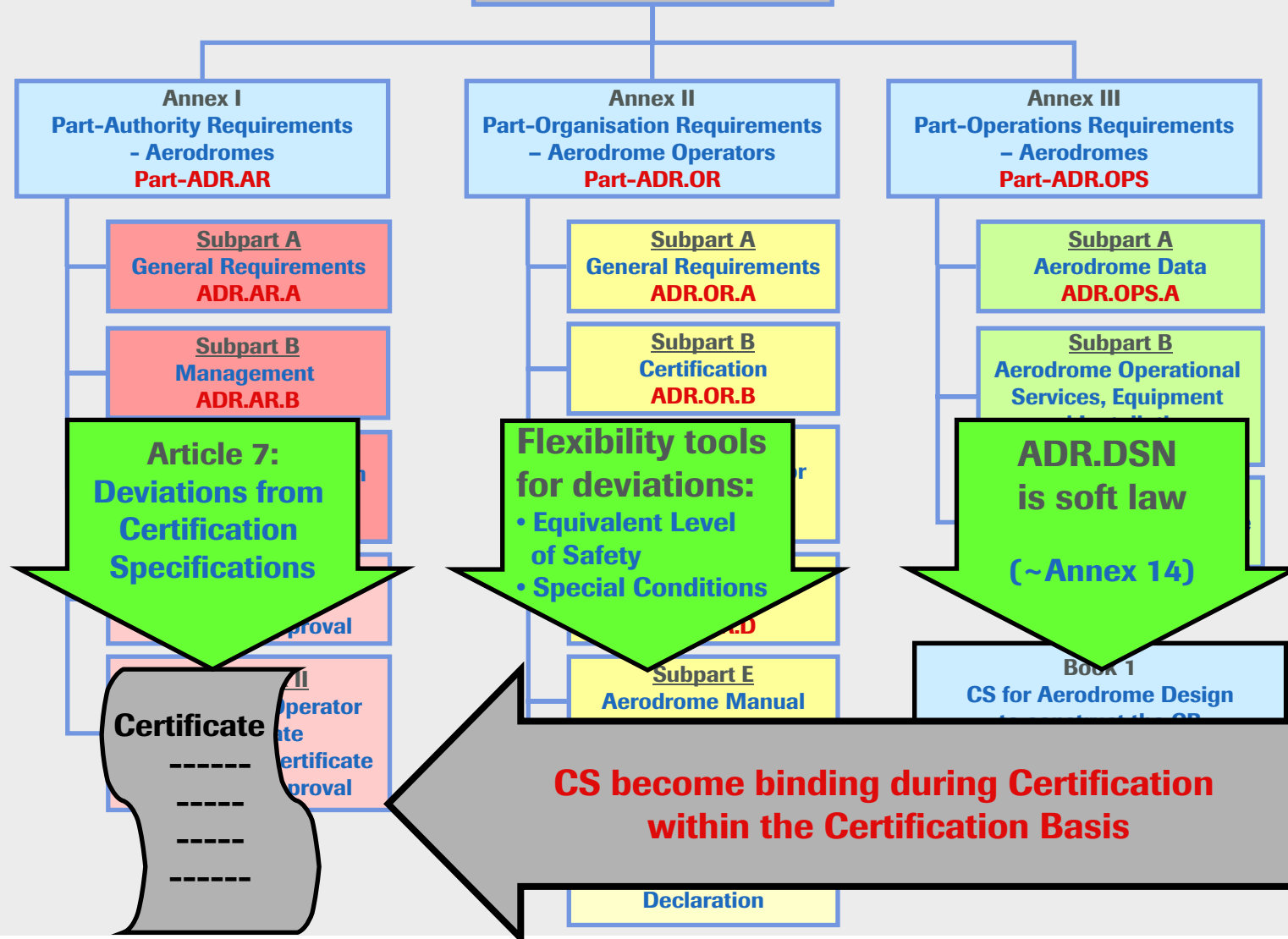
9.4.3. → OPS.B.020
Wildlife strike hazard
reduction

9.5.4 → OPS.B.045 (d)
Low Visibility Operations

9.8.1 → OPS.B.030
SMGCS

10.2.1 → OPS.C.010
Pavements

Cover Regulation



/Study Results – future requirements

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/Summary

Requirements for ADR



Common rules



Requirements for CA

European National



Possibility of deviations

Annex 14

EASA NPA



Hard law

generic specific



Requirements for Design and Operations

Annex 14

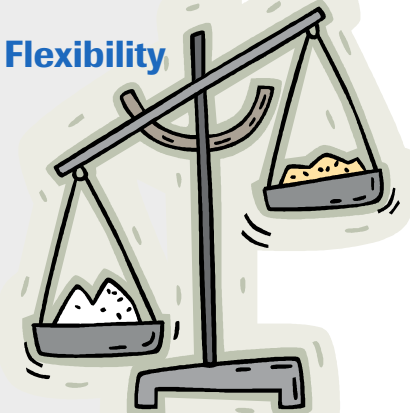
NPA



Rules of NPA

Standardisation

Flexibility



/Conclusions

- **Overall, the proposed future aerodrome rules**
 - are quite good and meet the future requirements
 - still need some editorial changes and minor adjustments

- **Challenges**
 - **For Aerodromes**
 - ☐ Resources for CB & new certificate, and lots of paper work
 - **For Authorities**
 - ☐ Management systems
 - ☐ Personnel requirements
 - ☐ Training

- **Expected difficulties**
 - Different application (especially of CS, ELoS, SA)
 - Information & training necessary

CB:
Certification Basis

ELoS:
Equivalent Level of Safety

SA:
Safety Assessments