



Electric & Hybrid Aviation Project



Session: Flight Standards

Topic 2: Air operations

Presenter: Jan BOETTCHER

Questions and Answers

30 minutes!

Scope:

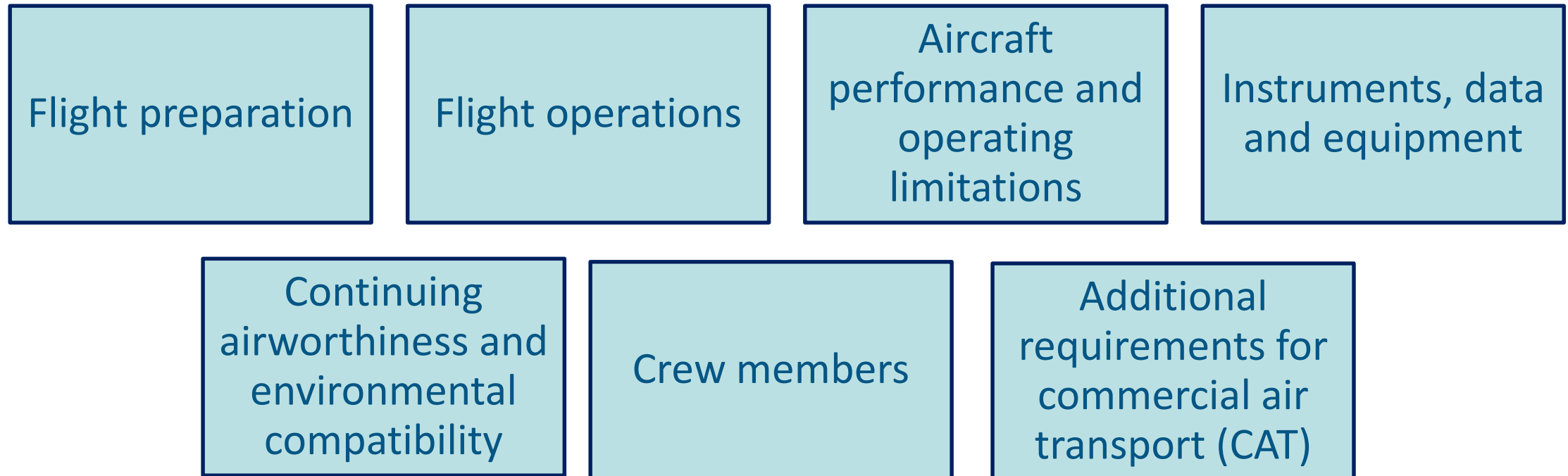
- EU regulatory framework for air operations
 - Essential Requirements
 - Implementing Rules





Essential Requirements for air operations

Annex V of Regulation 2018/1139 (the 'Basic Regulation')





Implementing Rules for air operations

- **Regulation 965/2012**

- Aeroplanes and helicopters

- **Regulation 2018/395**

- Balloons

- **Regulation 2018/1976**

- Sailplanes



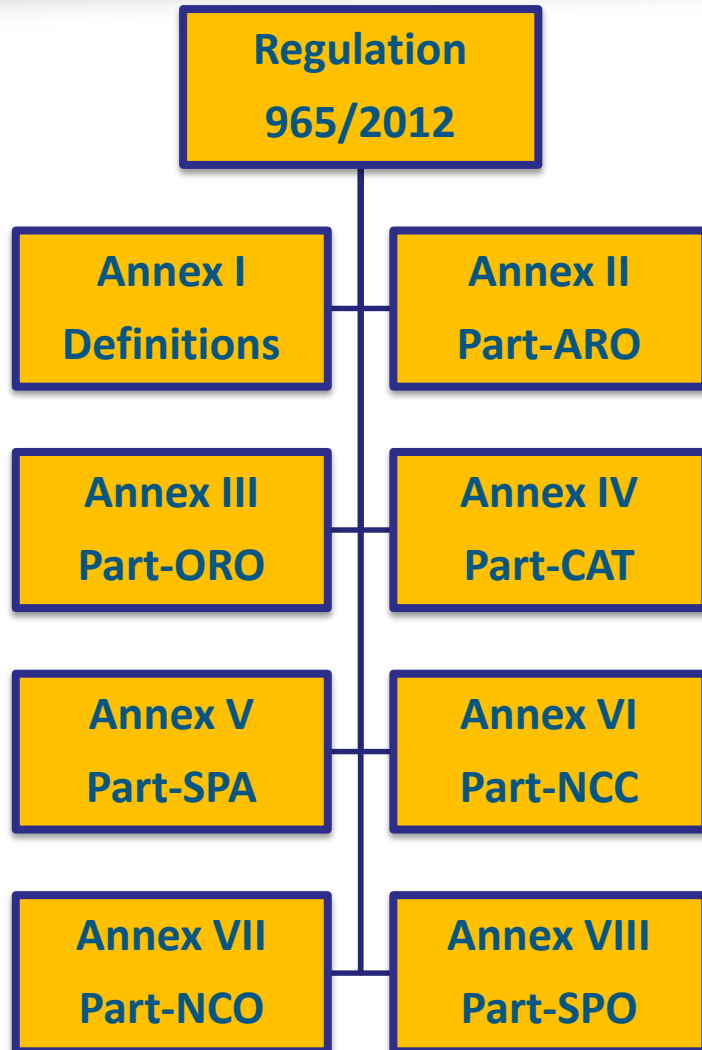
No rules for VTOLs, airships, gyroplanes, etc.



*Possible initial measure: flexibility provisions
(Article 71 of the Basic Regulation)*



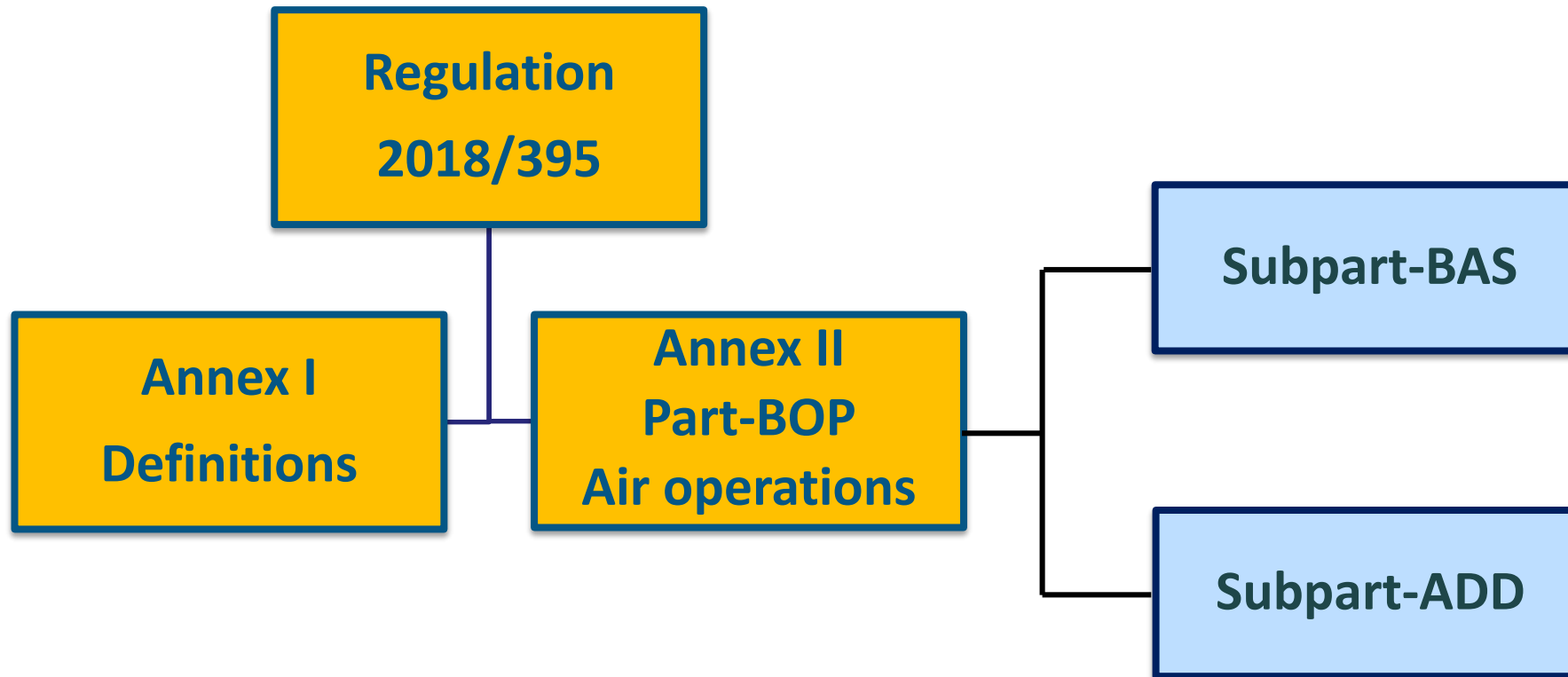
Regulation 965/2012 for aeroplanes and helicopters



- **Part-ARO:** Authority requirements – AIR OPS
- **Part-ORO:** Organisation requirements – AIR OPS
- **Part-CAT:** Commercial air transport operations
- **Part-SPA:** Operations requiring specific approvals
- **Part-NCC:** non-commercial operations with complex motor-powered aircraft
- **Part-NCO:** non-commercial operations with other-than-CMPA
- **Part-SPO:** specialised operations, e.g. aerial work



Regulation 2018/395 for balloons



BOP = Balloon Air Operations

BAS = basic operational requirements

ADD = additional requirements for commercial operations



Questions and answers (1)

➤ Q: What kind of rules do you expect for air operations?

➤ A: Not too dissimilar from existing rules

Air operation rules should be different for air taxi, tourism, delivery

Need to adjust rules for EHA, especially when considering distributed propulsion and aircraft concepts with differential thrust controls

We see no argument to deviate from the intent of existing rules for CAT operations. The one area that we believe needs reviewing is the fuel reserve requirement

We expect a clear set of rules regarding the mixed use of autonomous vehicles and piloted vehicles in the same airspace. A certain minimal equipment shall be determined that will allow for this



Questions and answers (2)

- Q: What are the main air operation topics you want to address during the workshop?
- A: Does the pilot need to be separated from the passengers?
What level of on-board environmental control system will be required?
Stabilisation system back-up, transition phase of take-off and landing
What should be the minimum requirements for reserve flight in nominal system conditions, and in case of single failure of the propulsion system?
Road map for autonomy
'Fuel' reserve, contingency and minima requirements. Standardisation of key performance numbers, i.e. range/battery/rated power, etc.
Safety precaution measures due to high voltage
Operational procedures



EASA
European Aviation Safety Agency



The End

... and the beginning of the discussion

Your safety is our mission.

An agency of the European Union 