

# Part 21 Light Workshop #4

EASA Certification Directorate

19/11/2020

**Your safety is our mission.**

# Content

- Welcome and introductions
- Part 21 Light Overview
- Part 21 Light Certified process
- Part 21 Light declared process
- Next Steps for Part 21 Light

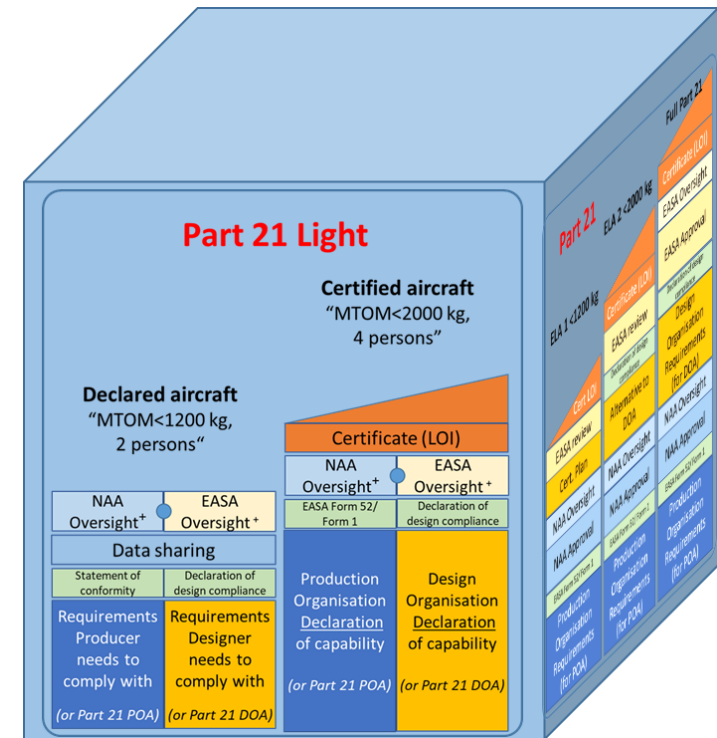
# Part 21 Light

## Overview

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# Overview of Part 21 Light

- Part 21 Light is based on the principles and objectives of Part 21
  - it considers all Part 21 amendments adopted by today, as well as the pending adoption on ICA and Parts without Form 1 and the proposed amendments on SMS
  - Part 21 ELA1/ELA2 will remain an option for an applicant
- Part 21 Light has a similar structure to Part 21 but a direct comparison should not be made
- Part 21 Light is split into:
  - Section A Technical Requirements
  - Section B Procedures for Competent Authorities



It is important to read both Sections as they complement each other

# Structure of Part 21 Light- Overview

Subpart A	GENERAL PROVISIONS
Subpart B	TYPE CERTIFICATES
Subpart C	DECLARATIONS OF AIRCRAFT DESIGN COMPLIANCE
Subpart D	CHANGES TO TYPE-CERTIFICATES
Subpart E	SUPPLEMENTAL TYPE-CERTIFICATES
Subpart F	CHANGES TO AIRCRAFT FOR WHICH DESIGN COMPLIANCE HAS BEEN DECLARED
Subpart G	DECLARED PRODUCTION ORGANISATIONS
Subpart H	CERTIFICATES OF AIRWORTHINESS AND RESTRICTED CERTIFICATES OF AIRWORTHINESS
Subpart I	NOISE CERTIFICATES AND RESTRICTED NOISE CERTIFICATES
Subpart J	DECLARED DESIGN ORGANISATIONS
Subpart K	PARTS
Subpart M	DESIGN OF REPAIRS TO TYPE-CERTIFIED PRODUCTS
Subpart N	DESIGN OF REPAIRS TO AIRCRAFT FOR WHICH DESIGN COMPLIANCE HAS BEEN DECLARED
Subpart P	PERMIT TO FLY
Subpart Q	IDENTIFICATION OF PRODUCTS AND PARTS
Subpart R	STATEMENT OF CONFORMITY FOR AIRCRAFT [...] THAT CONFORM TO A DECLARATION OF DESIGN COMPLIANCE

# Structure of Part 21 Light - Common

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# Structure of Part 21 Light - Certified

Subpart A	GENERAL PROVISIONS
Subpart B	TYPE CERTIFICATES
Subpart D	CHANGES TO TYPE-CERTIFICATES
Subpart E	SUPPLEMENTAL TYPE-CERTIFICATES
Subpart G	DECLARED PRODUCTION ORGANISATIONS
Subpart H	CERTIFICATES OF AIRWORTHINESS AND RESTRICTED CERTIFICATES OF AIRWORTHINESS
Subpart I	NOISE CERTIFICATES AND RESTRICTED NOISE CERTIFICATES
Subpart J	DECLARED DESIGN ORGANISATIONS
Subpart K	PARTS
Subpart M	DESIGN OF REPAIRS TO TYPE-CERTIFIED PRODUCTS
Subpart P	PERMIT TO FLY
Subpart Q	IDENTIFICATION OF PRODUCTS AND PARTS

# Structure of Part 21 Light - Declared

Subpart A

GENERAL PROVISIONS

Subpart C

DECLARATIONS OF AIRCRAFT DESIGN COMPLIANCE

Subpart F

CHANGES TO AIRCRAFT FOR WHICH DESIGN COMPLIANCE HAS BEEN DECLARED

Subpart H

CERTIFICATES OF AIRWORTHINESS AND RESTRICTED CERTIFICATES OF AIRWORTHINESS

Subpart I

NOISE CERTIFICATES AND RESTRICTED NOISE CERTIFICATES

Subpart K

PARTS

Subpart N

DESIGN OF REPAIRS TO AIRCRAFT FOR WHICH DESIGN COMPLIANCE HAS BEEN DECLARED

Subpart P

PERMIT TO FLY

Subpart Q

IDENTIFICATION OF PRODUCTS AND PARTS

Subpart R

STATEMENT OF CONFORMITY FOR AIRCRAFT [...] THAT CONFORM TO A DECLARATION OF DESIGN COMPLIANCE



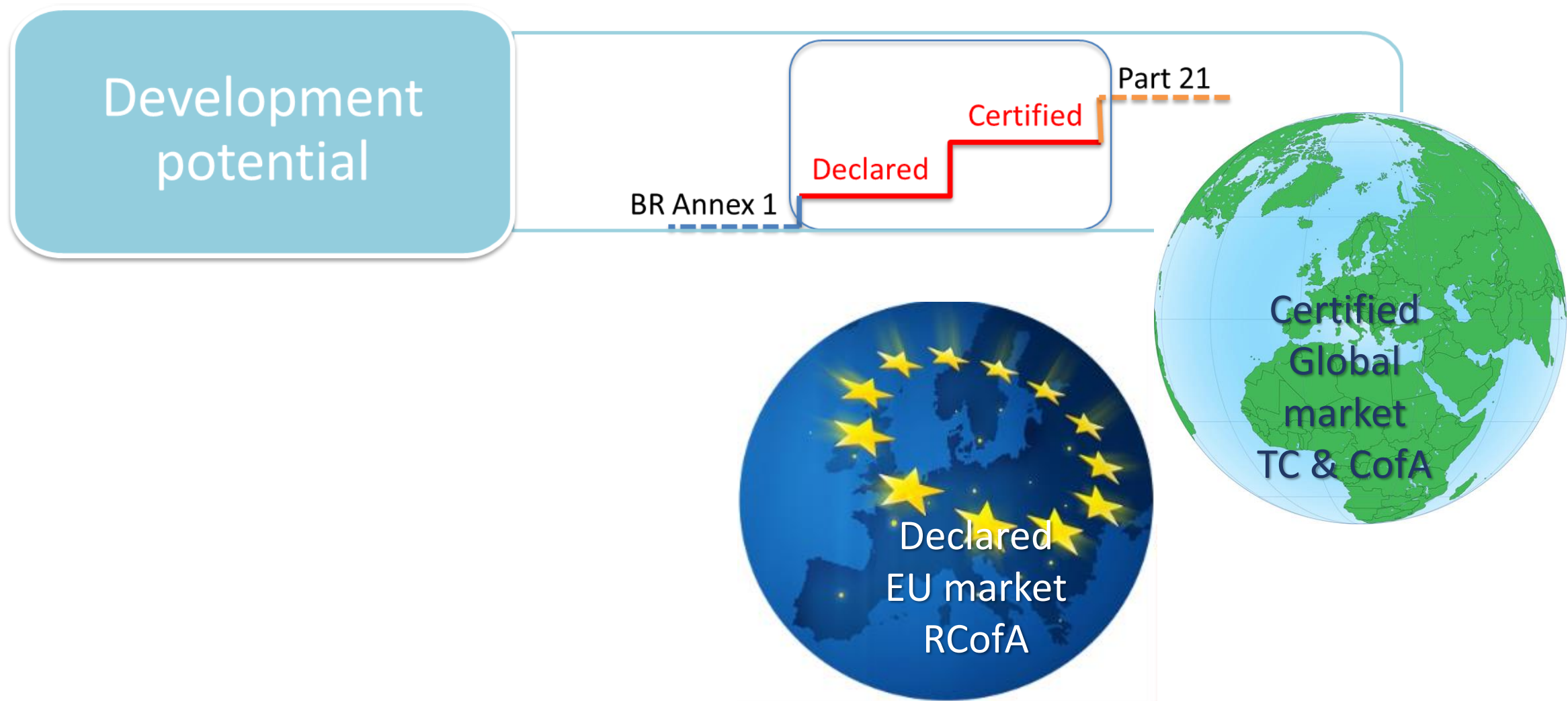
# Constraints of the Basic Regulation

- The flexibility of the Basic Regulation have been utilised when developing Part 21 Light
- However there are some constraints in the Basic Regulation which include:
  - Declared organisations are not permitted to have privileges
    - no approval of changes/repairs
    - no issuance of flight conditions or permits to fly
  - A declared aircraft only receives a Restricted CofA and Restricted Noise Certificate
  - For aircraft whose compliance has been declared, the responsibility for compliance remains with the declarant

# Interaction with other EU regulations

- Amendments to Regulation (EU) 1321/2014 have been identified but are still being finalised;
- Only minimal changes to Regulation (EU) 1321/2014 are foreseen including:
  - references to Part 21 and Part 21 Light;
  - statements of conformity (EASA Form 1B) for the manufacture of parts for declared aircraft;
  - 'statements of release' (TBD) (EASA Form 1C (TBD) after maintenance or overhaul of parts to be installed on a declared aircraft.
- No changes are foreseen to Air Operations Regulation (EU) 965/2012.

# What Part 21 Light is aiming for



# Part 21 Light

## Light 'Certified' process

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# Scope of Part 21 Light- Certified

- an aeroplane with a Maximum Take-off Mass (MTOM) of 2000 kg or less with a seating configuration of maximum 4 persons;
- a sailplane or powered sailplane of 2 000 kg MTOM or less;
- a balloon;
- a hot air airship;
- a passenger gas airship designed for not more than 4 persons;
- a rotorcraft with a Maximum Take-off Mass (MTOM) of 1 200kg or less with a seating configuration of maximum 4 persons;
- a piston engine and fixed pitch propeller that is intended to be installed on an aircraft referred to in points 1 to 6. In this case, the type certificate data sheet shall be appropriately annotated to only permit installation of the engine or propeller on such aircraft;
- gyroplanes

Applicable Certification Specifications  
(21.Light.B.43)



Special Conditions<sup>1</sup>  
(21.Light.B.44)

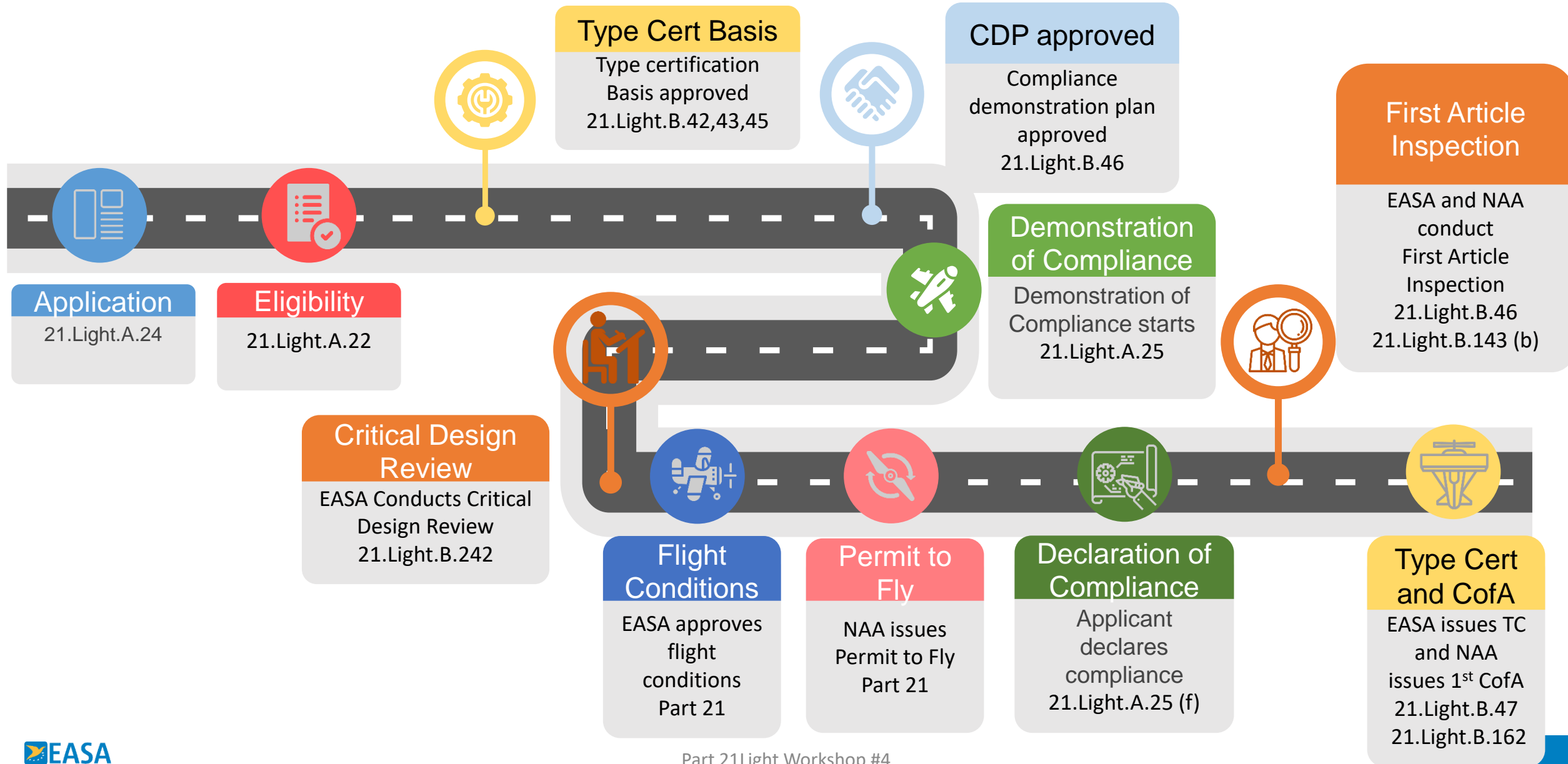


Environmental compatibility  
requirements  
(21.Light.B.45)

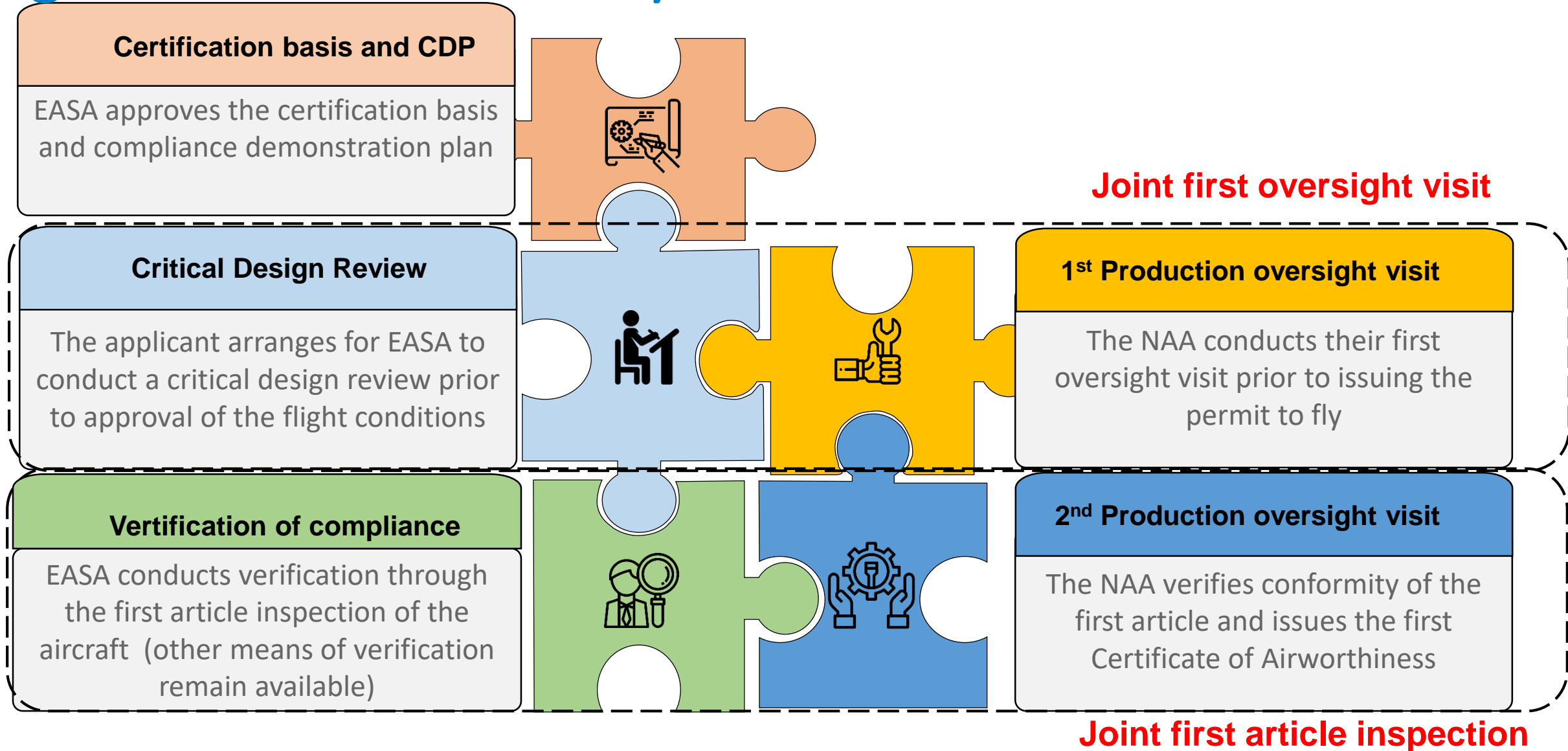


Type Certification Basis  
(21.Light.B.43)

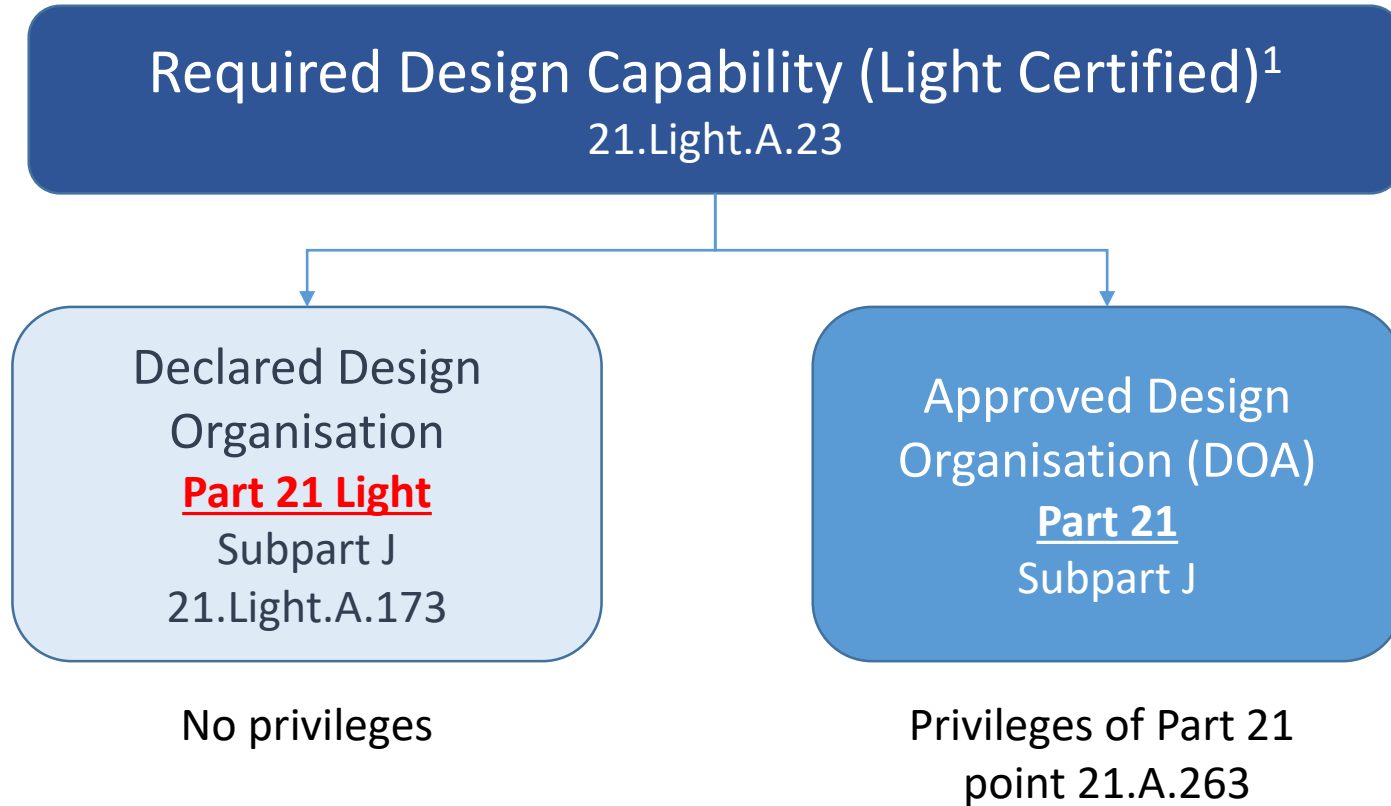
# Part 21 Light Certified - The route to Type Certification



# Light Certified- Authority involvement and coordination



# Light Certified- Design capability requirements



<sup>1</sup>There are no formal design capability requirements for Light Declared



# Light Certified- Design and production capability requirements

- The declaration of capability (design or production) is submitted to the relevant competent authority:
  - EASA for design capability (21.Light.A.173)
  - NAA for production capability (21.Light.A.123)
- Declarations of capability are registered by the competent authority and a reference number is provided (21.Light.B.141, 21.Light.B.182)
- Organisation declares their intended scope of activities for design and production (21.Light.A.123(c)(4), 21.Light.A.173 (c)(4))
- Declared organisations are not permitted to be granted privileges (i.e. to issue PtF, to approve changes)



# Light Certified- Design and production capability requirements

- Declared organisations are subject to oversight from the competent authority (21.Light.B.143, 21.Light.B.183)
- Oversight should be 'product focussed' where on-site visits to the organisation and verification of the product should provide the primary means for the competent authority to get assurance of regulatory compliance (21.Light.B.143 (b), 21.Light.B.183 (b))
- Other means remain available to the competent authority
- Findings can be raised by the competent authority for non-compliances (21.Light.B.21)
- Enforcement actions can be taken to prevent further design or production activities (21.Light.B.22)



# Light Certified- Conformity of individual aircraft



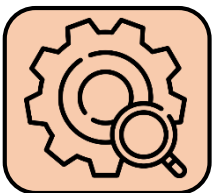
Only a declared or approved production organisation can issue a statement of conformity for an aircraft they have produced in order to request a Certificate of Airworthiness *(21.Light.A.143 (c)(1))*



The declared production organisation uses a statement of conformity for aircraft (EASA Form 52B) to confirm the conformity of the aircraft with the approved data *(21.Light.A.126 (b))*



A declared or approved production organisation uses an authorised release certificate for engines, propellers and parts (EASA Form 1) to confirm their conformity with the approved data *(21.Light.A.126 (c))*



Certificates of Airworthiness and Noise certificates are issued by the competent authority using risk based oversight of the need to verify the statement of conformity (after the initial issue) *(21.Light.B.161(c))*

# Part 21 Light

## Light 'Declared' process

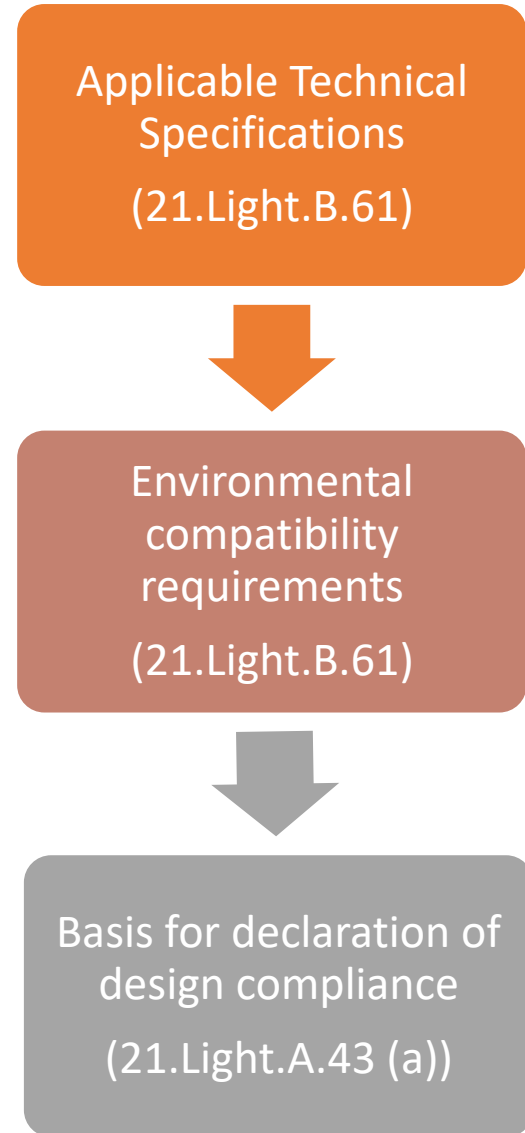
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# Scope of Part 21 Light- Declared

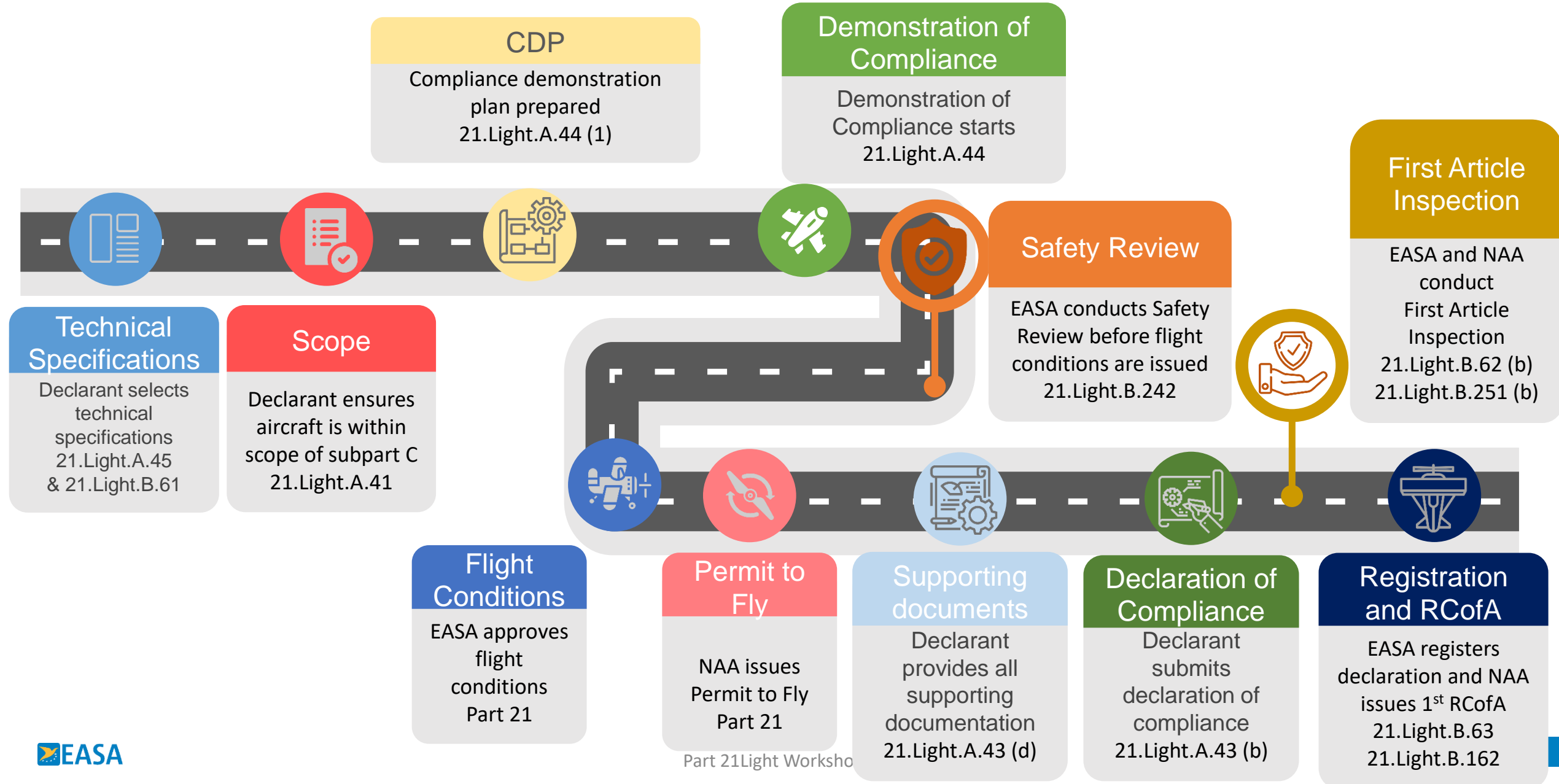
- an aeroplane with a Maximum Take-off Mass (MTOM) of 1 200 kg or less that is not jet-powered with a seating configuration of maximum 2 persons
- a sailplane or powered sailplane of 1 200 kg MTOM or less
- a balloon designed for not more than 4 persons
- a hot air airship designed for not more than 4 persons

and when the design of these aircraft does not cover novel or unusual design features.

A design feature is novel or unusual if there are no design specifications in the technical specifications

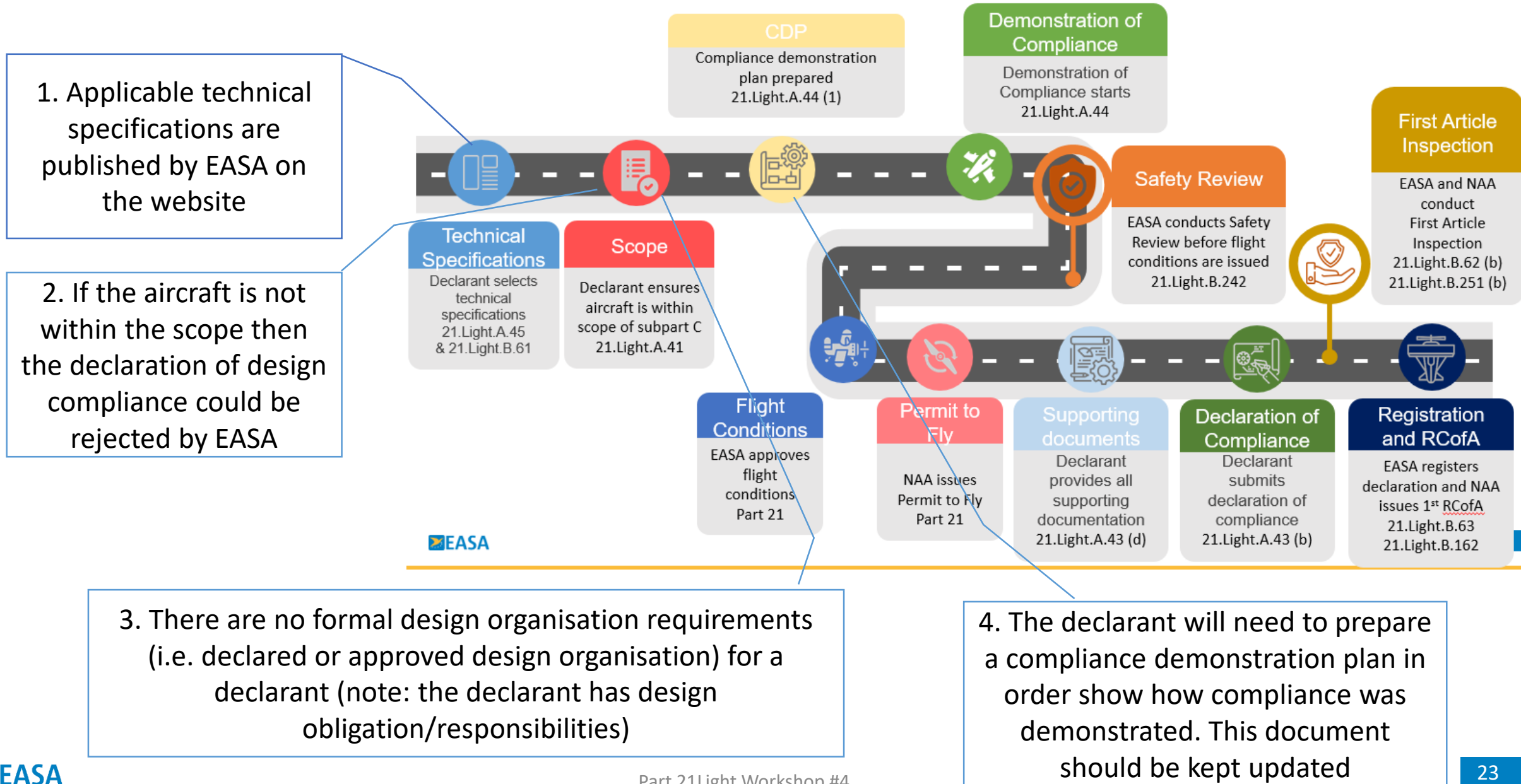


# Part 21 Light Declared - The route to a declaration

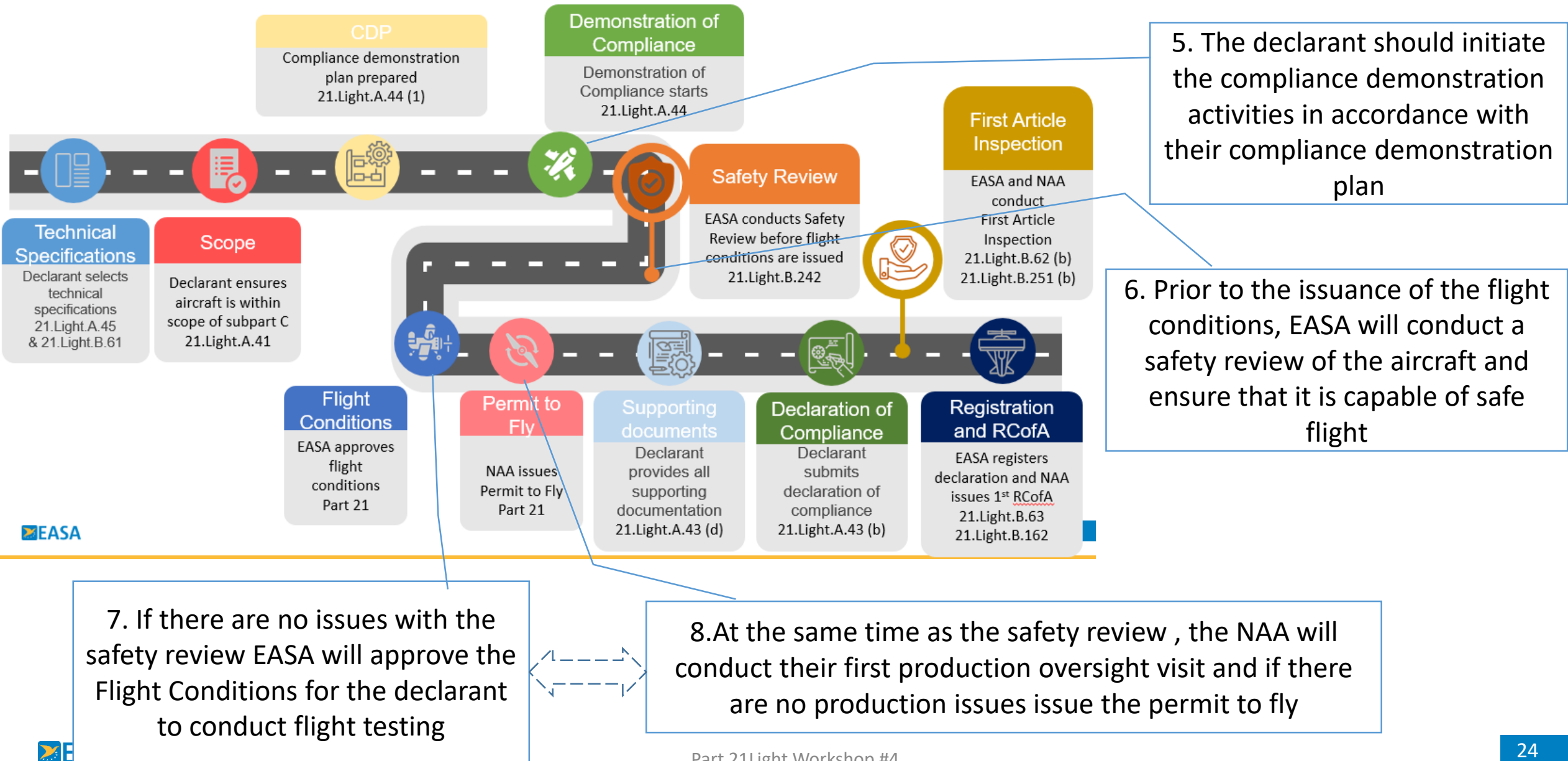




# Part 21 Light Declared - The route to a declaration

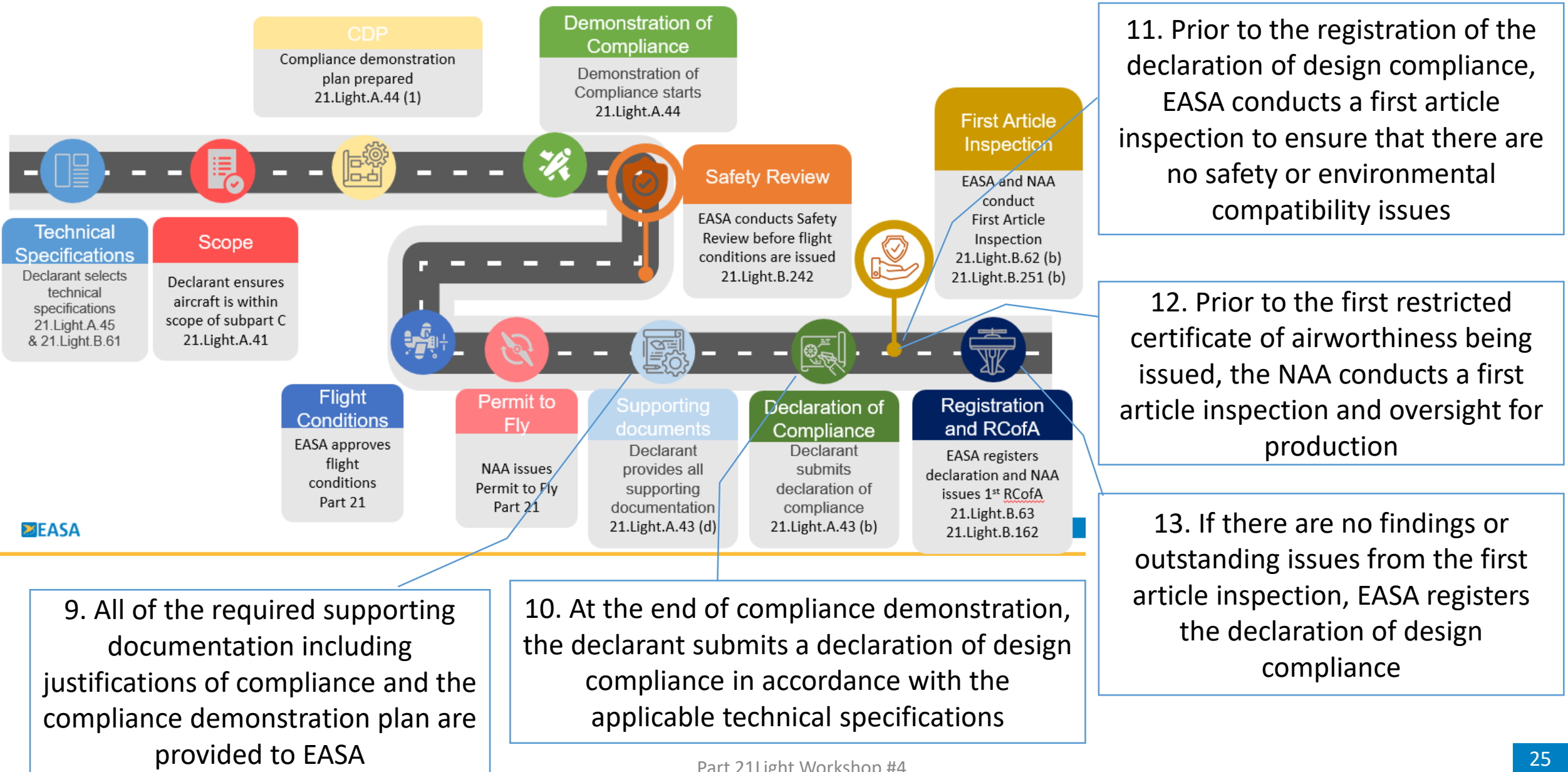


# Part 21 Light Declared - The route to a declaration





# Part 21 Light Declared - The route to a declaration



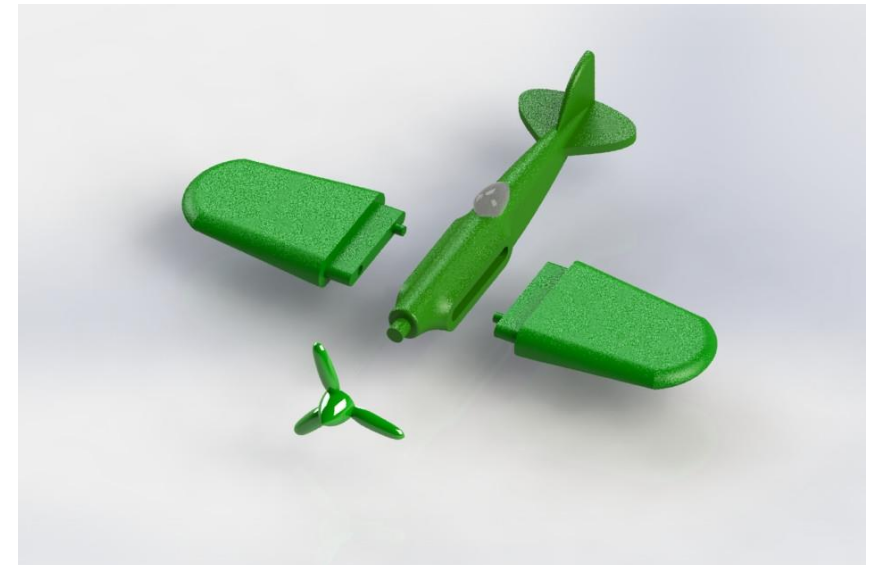
# EASA assistance prior to a declaration of design compliance

- Prior to submitting the declaration of design compliance to EASA, the declarant can express their intent to design an aircraft and to declare its design compliance (*21.Light.A.43(e)*)
- EASA can then assist the declarant and:
  - confirm that the aircraft is within the scope of the declared process
  - assess the appropriateness of the technical specifications that have been selected
  - assess the ability of the proposed design to comply with the technical specifications
  - provide advice on the most appropriate means to demonstrate compliance with the technical specifications
  - assess the completeness of the compliance demonstration plan

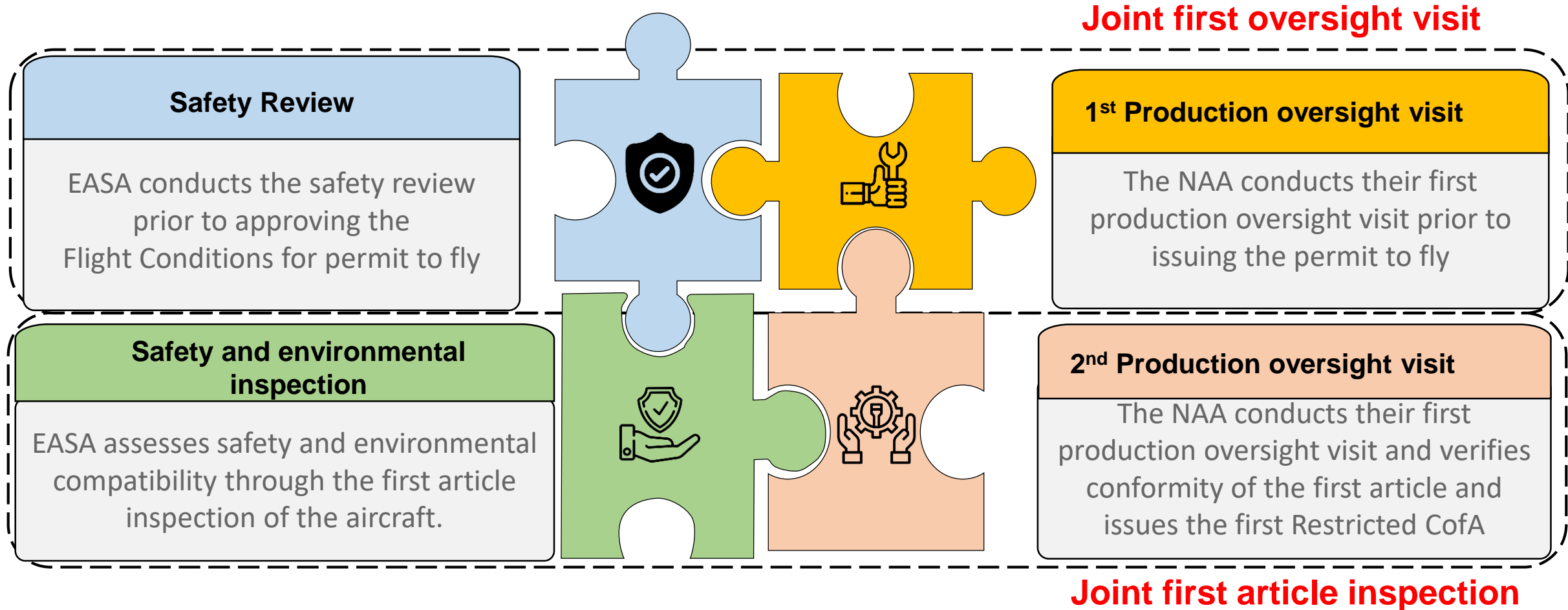


# Changes to a declared aircraft

- A new declaration of design compliance is required for the design of changes/repairs to a declared aircraft (*21.Light.A.105, 21.Light.A.106, 21.Light.A.225, 21.Light.A.226*)
- Only the original declarant is permitted to declare the compliance for a change/repair to a declared aircraft (*21.Light.A.104, 21.Light.A.224*)
- Standard changes/repairs are possible for declared aircraft (*21.Light.A.102, 21.Light.A.222*)
- For major changes/repairs the declarant must submit a declaration of design compliance to EASA for registration (*21.Light.A.106(d), 21.Light.A.226*)
- For minor changes/repairs the declarant must maintain a register of declarations (*21.Light.A.105 (d), 21.Light.A.225(c)*)



# Light Declared- Authority involvement and coordination



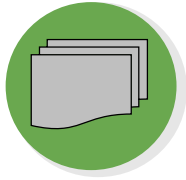
# Registration of a declaration of design compliance

- After the declaration of design compliance has been submitted, the declarant should arrange for the first article inspection by EASA and the NAA (*21.Light.A.47, 21.Light.B.62(b)*) *21.Light.B.251 (b)*)
- If there are no findings or after findings are resolved then the declaration of design compliance is registered by EASA (*21.Light.B.63*)
- Registration by EASA allows:
  - Transparency between EASA and NAAs
  - The NAA to issue the RCoFA;
  - Transparency when enforcement actions need to be taken (e.g. suspension or revocation of the RCoFA when the declaration of design compliance is suspended or revoked and de-registered)





# Conformity of individual aircraft



## Conformity with declared design data

The aircraft must be produced in conformity with the data of the registered declaration of design compliance.



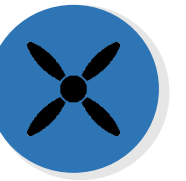
## Production organisation

The declared aircraft and parts may be produced under Subpart R without the need for a declaration of production capability or holding a POA



## Other production organisations

Approved or declared production organisations are also permitted to produce declared aircraft and parts



## Statements of conformity

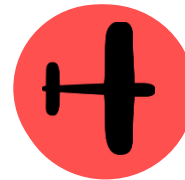
For declared aircraft a production organisation issues:

- a Statement of Conformity (EASA Form 52B) for aircraft
- a Statement of Conformity (EASA Form 1B) for engines, propellers and parts



## Oversight by NAA

The NAA conducts risk based and product focussed oversight of the producer issuing statements of conformity after the first article inspection. Coordination of oversight outcomes between NAAs is required.



## Restricted CofA/Restricted Noise Certificate

The NAA issues a RCoFA based upon the EASA Form 52B and Restricted Noise Certificate based upon the Noise database. NAA inspections are conducted based upon risk based evaluation.



# Part 21 Light

## Next Steps

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# Next steps for Part 21 Light

## Focussed Consultation

Stakeholders are invited to provide their comments on the preliminary draft Part 21 Light to

[CT5-Workshops@easa.europa.eu](mailto:CT5-Workshops@easa.europa.eu)

using the attached form:



Microsoft Word  
Document

The commenting period will  
close on **12/12/2020**



## Publication of opinion

EASA will publish an Opinion for Part 21 Light (and the European Commission will start the legislative process)



## Advisory Body Consultation

EASA will consult the final draft Opinion for Part 21 Light with the Advisory Bodies in Q1/2021



# Thank you for your attention.

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