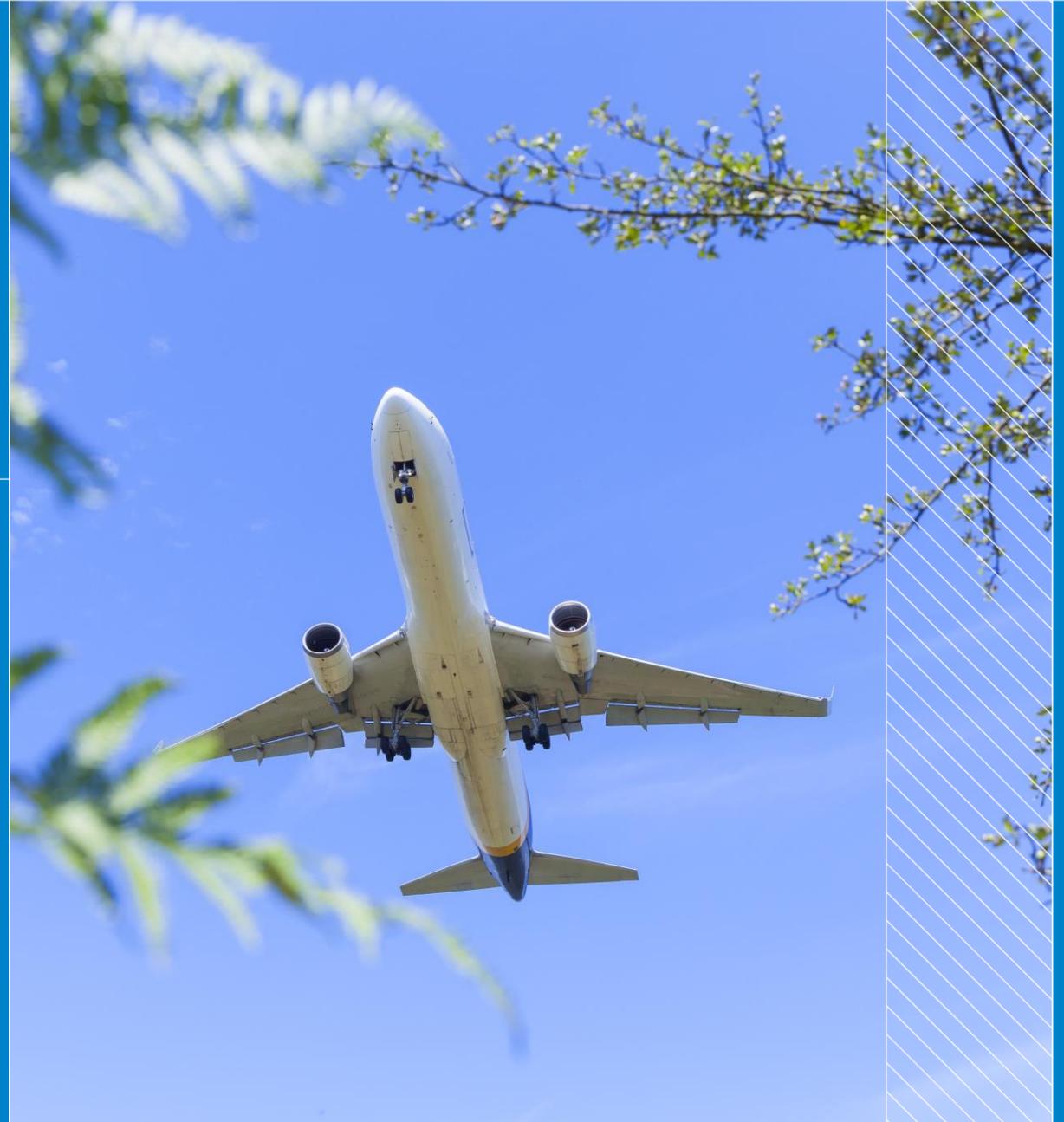


# The European Plan for Aviation Safety (EPAS)

Michael GERHARD  
Safety Programmes  
Section Manager



# EPAS – what and why?

- EPAS constitutes the regional aviation safety plan (RASP) for EASA Member States
  - setting out the strategic priorities + strategic enablers
  - providing the assessment of main risks affecting the European aviation system ...
  - ... and the necessary actions (e.g. RMTs) to mitigate those risks
- EPAS sets an aspirational safety goal to achieve constant safety improvement with a growing aviation industry
- EPAS is updated on a yearly basis

# EPAS 2021-2025 (10<sup>th</sup> Edition)



## Introduction & Strategy

- Strategic priorities were kept unchanged
- Full revision of EPAS strategy planned to start in 2021
- New section 2.1 'Operational context'



## EPAS Actions

- Rulemaking output reviewed to alleviate burden on stakeholders
- 170 active EPAS actions -> 50 % of these are Rulemaking actions
- 22 new actions
- 24 actions completed in 2020, out of which 19 RMTs



## Safety Risk Portfolios

- Key risks & underlying safety issues
- Domain-based safety risk portfolios (SRPs)
- Dedicated COVID-19 risk portfolio
- 150 + safety issues described and categorised (assess / monitor / mitigate)

# Volume I – Strategic Priorities (unchanged)

## Systemic Safety

- Safety Management, Human Factors and Competence of Personnel ★
- Integrated risk management (Security and Safety) ★
- Impact of socio-economic factors on safety
- Data for Safety
- Civil-military cooperation ★

## Operational Safety

- Commercial Air Transport and Non-Commercial CMPA operations (aeroplanes) ★
- Rotorcraft ★
- General Aviation ★

## Safe Integration of New Technologies and Concepts

- Artificial Intelligence ★
- Engine/aircraft certification ★
- Safe operations of drones ★
- New air mobility ★
- Electric and hybrid propulsion aircraft, VTOL ★
- New operational solutions developed by SESAR
- All-weather operations

## Environment – Sustainable Aviation

- Robust, efficient and innovative certification ★
- Smart and proportionate standards ★
- Effective transversal action
- Increased operational efficiency

# Volume I – Operational context

A newly introduced section **2.1** within EPAS 2021-2025

- describes the current context in which EPAS actions are deployed.
- provides information on:
  - the European aviation system in terms of size, nature and complexity
  - the COVID-19 impact per aviation domains
  - the number of aviation organisations, personnel and products monitored, showing the change from 2019 to 2020

# Volume II - actions

## Main new actions



**RES:** Aviation Resilience to GNSS Jamming and Spoofing



**SPTs:** Flight Data Monitoring precursors & analysis techniques 



**SPT/MST:** Human Factors -> common understanding & oversight, provide States with a basis for training their staff



**RMT:** Environmental Protection and Operational rules for Supersonic Transport Aircraft 



**RMT:** One Business Group Continuing Airworthiness Management Organisation



**SPTs:** Support effective implementation and oversight of FRMS/FTL

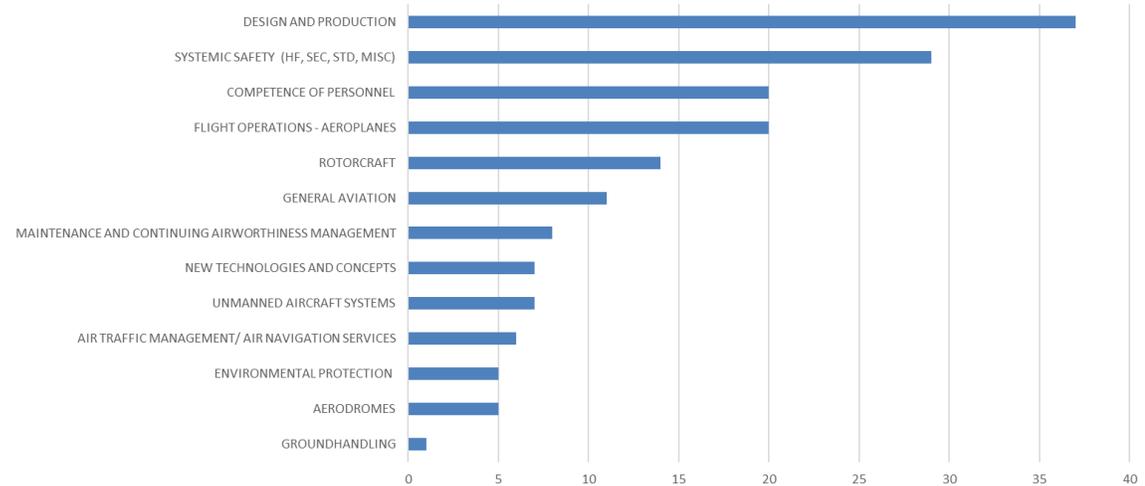


**EVT:** evaluate rules for small aeroplane operations under Part-CAT and Part-SPO

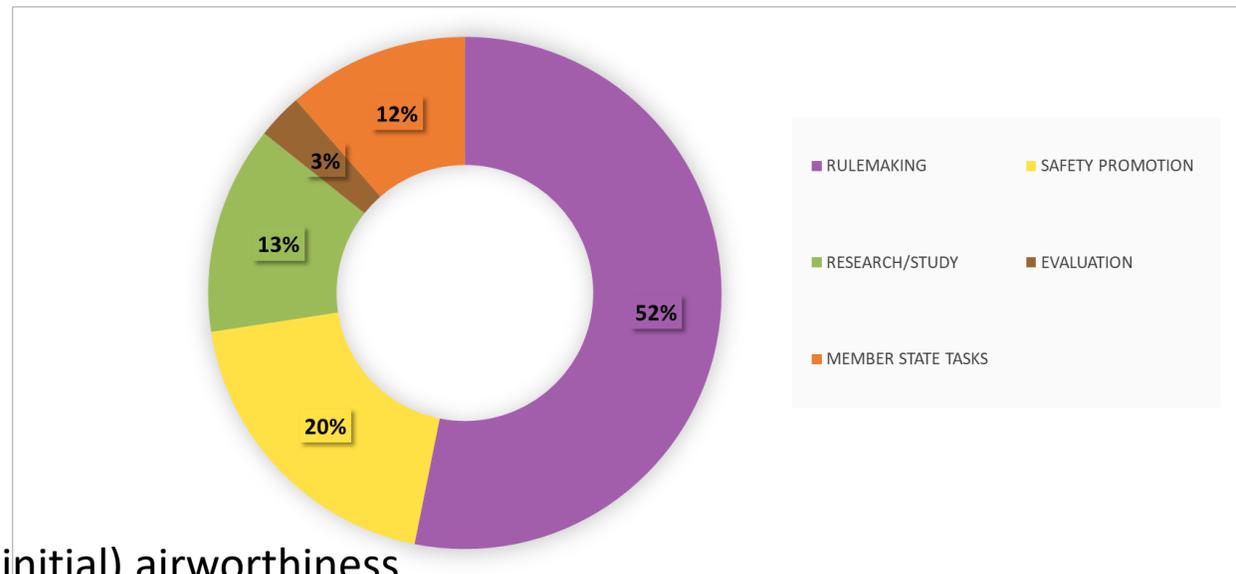


**SPTs/MSTs/RESs:** enhanced MET info, MET learning objectives for PPL/LAPL, airspace design, promote iConspicuity, safety in parachuting operations

### EPAS actions per domain



### EPAS actions per type



# Chapter 9: Design & Production

*Key RM deliverables in 2021*

EXAMPLE



New

no new actions

NPAs	
RMT.0118	Analysis of on-ground wings contamination effect on take-off performance degradation
RMT.0128	Regular update of CS-27 & 29, CS-VLR
RMT.0688	Regular update of CS-SIMD (Certification Specifications for Simulator Data)
RMT.0690	Regular update of CS-STAN
RMT.0709	Prevention of catastrophic accidents due to rotorcraft hoists issues

# Chapter 9: Design & Production

## Key RM deliverables in 2021



NPAs (continued)	
RMT.0711	Reduction in accidents caused by failures of critical rotor and rotor drive components through improved vibration health monitoring systems
RMT.0712	Enhancement of the safety assessment processes for rotorcraft designs
RMT.0725	Rotorcraft chip detection system
RMT.0726	Rotorcraft occupant safety in the event of a bird strike
RMT.0727	Alignment of Part 21 with Regulation (EU) 2018/1139 <b>Subtask 2</b> -> other amendments to Part 21 as required by the Basic Regulation, including rules required to ensure environmental compatibility

# Chapter 9: Design & Production

*Key RM deliverables in 2021*



## Opinions

RMT.0727

Alignment of Part 21 with Regulation (EU) 2018/1139

**Subtask 1** -> simple and proportionate rules for General Aviation

RMT.0586

Tyre pressure monitoring system

# Chapter 9: Design & Production

## Key RM deliverables in 2021

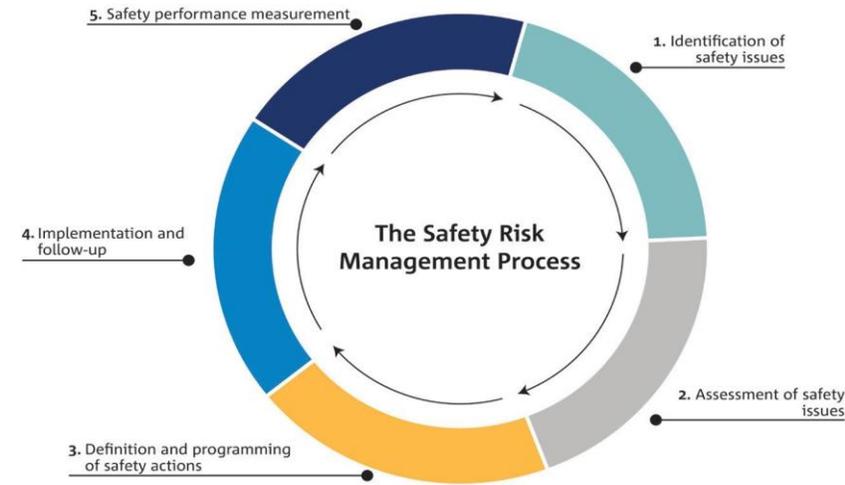


### Decision (CS and stand-alone)

RMT.0713	Human factors in rotorcraft design
RMT.0031	Regular update of AMC & GM to Part 21 (DOA issues)
RMT.0037	Regular update of CS-22 (Sailplanes and Powered Sailplanes)
RMT.0643	Regular update of AMC-20 <b>Subtask 2</b> -> high-intensity radiated field (HIRF) and lightning as well as Multi core processors
RMT.0687	Regular update of CS-23 (Normal, Utility, Aerobatic and Commuter Aeroplanes)

# EPAS Volume III – Safety Risk Portfolios

- EPAS Volume III provides the first set of available EASA Safety Risk Portfolios
- **Safety Risk Portfolios** are a list of safety issues that need to be mitigated at European level and need further action (assess, monitor, mitigate)
- Safety issues and Safety Risk Portfolios are currently available for the following domains:
  - Aerodromes & Groundhandling,
  - ATM/ANS,
  - Commercial Air Transport – Aeroplanes,
  - Human Factors,
  - Non-commercial operations – Small Aeroplanes
- A dedicated **COVID-19 Safety Risk Portfolio** is also included
- Safety Risk Portfolios for certain domains (e.g. Rotorcraft) are still undergoing validation. Upon validation, they will be included in future editions of EPAS Volume III



# EPAS Volume III – Safety Risk Portfolios

- Safety issues are prioritised in the Safety Risk Portfolios as follows:
  - Assess (need for further analysis)
  - **Mitigate (take action)**
  - Monitor (barriers remain effective)
- For each safety issue classified as ‘to mitigate’ an **assessment of a range of proposed actions** is performed.
- Once agreed, the **actions are included in the next EPAS:**
  - RMT Rulemaking Task
  - SPT Safety Promotion Task
  - MST Member State Task
  - RES Research Project

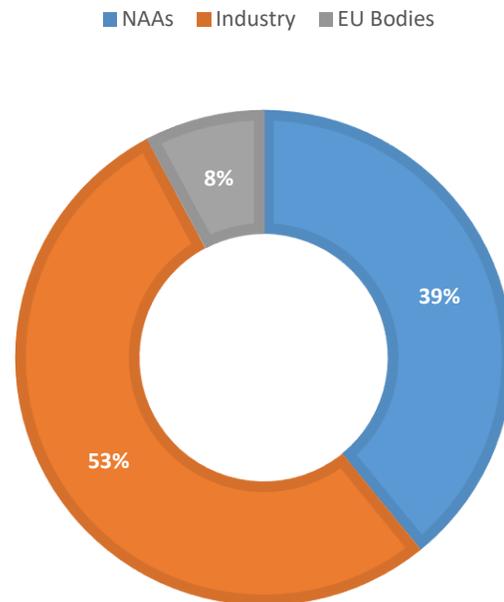
# Outlook: EPAS 2022 - 2026

- Next edition is about to be finalised shortly
  - Will be presented to EASA MB for endorsement in December
  - Will be published on EASA website mid January
  
- Current situation and next steps
  - Draft EPAS consulted with the Advisory Bodies in July / August
  - All comments collected are currently addressed; the preparation of the CRD and the final draft is ongoing
  - Review of latest timelines of EPAS actions is planned for the first two weeks in November

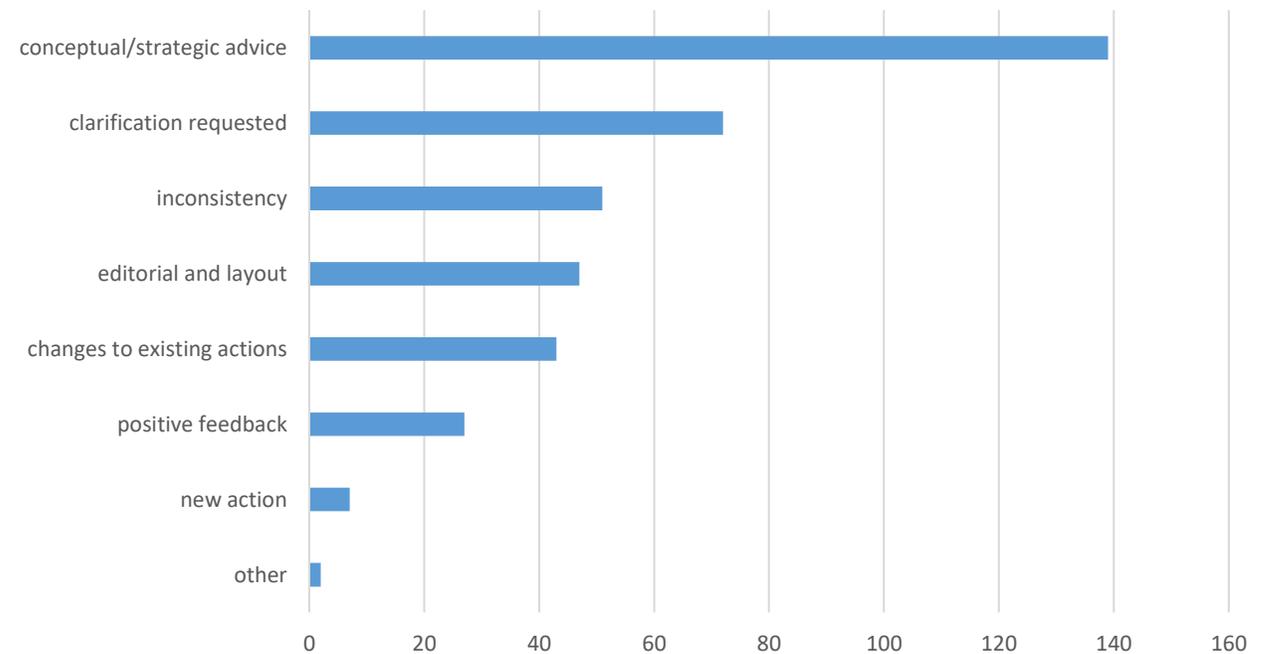
# EPAS 2022 - 2026: Outcome of Advisory Body consultation

388 comments received (2019 -> 648)

COMMENT DISTRIBUTION: ORIGIN



COMMENT DISTRIBUTION: TYPE



# Some initial feedback following comment analysis

## → EPAS structure, contents & planning cycle

- E.g. streamline information in Volume I; review structure (Vol. I & II) for Drones/New Air Mobility/new types of propulsion for better clarity

## → Rulemaking: Processing and Programming

- E.g. ensure better alignment with ICAO SARPs entry into force ; break down complex Regular Update Rulemaking Tasks

## → Initial Airworthiness

- Out of 12 comments related to Initial Airworthiness 3 are of conceptual nature or request a change in scope. 9 comments were asking for clarifications or pointed out an inconsistency.
- The request to adjust the description for the RMT.0709 Prevention of catastrophic accidents due to rotorcraft hoist issues is accepted. The change in scope from revising rotorcraft certification specifications to revising equipment standards, specifically CS-ETSO will change the agreed standards.
- Contrary to what was described the project for RES.0027 Sandwich structured composites is not 'a high priority from a safety and environmental perspective'. Proposal is accepted.
- RES.0014 Air data enhanced fault detection and diagnosis. The request to involve the manufacturing industry is currently being discussed and will be communicated together with the CRD.

# What is new in EPAS 2022 – 2026: Volume I – Strategy

- Review of the strategic priorities & enablers
- Main inputs:
  - Safe return to operation
  - EC Sustainable and Smart Mobility Strategy
  - Integrated approach to risk management
    - Security & cyber-security threats on the rise
  - EASA Research and Innovation Strategy
    - Safe integration of new technologies and operating concepts:
      - Urban Air Mobility, UAS
      - High Altitude Operations,
      - Artificial Intelligence, Virtual Certification,
      - Reduced Crew Operations etc.

# What is new in EPAS 2022 – 2026: Volume II – Actions

- New actions resulting from
  - EU Safety Risk Management, including dedicated COVID-19 risk portfolio
  - ICAO SARPs transposition
  - Completed evaluations
  - Etc...
- Review priority ranking on the basis of strategic priorities
- Review and adjust resource allocation
- Review of the EASA rulemaking process



# Review of the EASA rulemaking process

- EASA rulemaking procedure (MB Decision) was last amended in 2015
- EASA MB agreed in its June meeting to revisit the rulemaking procedure
- Objective: to make the rulemaking process more efficient, effective and flexible
  - Efficiency objectives of last amendment were not achieved
  - New Basic Regulation adopted since 2015
  - Link to safety management (EPAS) not yet reflected
  - Improved Better Regulation agenda of the European Commission
  - EASA internal efficiency project on the rulemaking process

# What do we need to achieve?



One, lean procedure



Reduced lead time

- before starting a RMT
- certain consultation



Effective consultation and engagement of interested parties



Flexible toolbox for all procedural steps



Strong, iterative impact assessment



A procedure enabling

- strategic and priority driven rules development
- the drafting of simple, state of the art rules (better regulation)
- which are well explained and justified



EASA Management Board Decision 18-2015  
15/12/2015

## Management Board Decision

DECISION N° 18-2015

of 15 December 2015

replacing Decision 01/2012 concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure')

THE MANAGEMENT BOARD OF THE EUROPEAN AVIATION SAFETY AGENCY,

Having regard to Regulation (EC) No 216/2008<sup>1</sup> of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, hereinafter referred to as the 'Basic Regulation', and in particular Article 52 thereof,

Having regard to Decision 01-2012 of the Management Board (MB) of 13 March 2012 concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications, acceptable means of compliance and guidance material (the 'Rulemaking Procedure'),

Taking into account the experience gained since that date as regards the efficiency and effectiveness of the Rulemaking Procedure,

Having regard to the proposals presented in WP06 at the MB meeting 02/2015 for less, better and timely regulations, which calls for new ways of developing and consulting regulations,

Having regard to the opinion of the Rulemaking Advisory Group (RAG) and the Safety Standards Consultative Committee (SSCC) on the draft text of this MB Decision,

Having regard to the opinion of the EASA Advisory Body (EAB) on the draft text of this MB Decision,

<sup>1</sup> Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1).



# Status and next steps



- Revision of the RM procedure (MB Decision)
- Consultation of MAB and SAB starting shortly
- Presentation of a first draft to the MB in December

 Carefully monitor – it will provide the frame for your future engagement in RMTs and how EASA will consult you on draft regulatory material



**THANK  
YOU**

