



# Terms of Reference

for rulemaking task RMT.0733

## Environmental protection requirements for supersonic transport aeroplanes

ISSUE 1

### Issue/rationale

The objective of this RMT is to maintain a high level of environmental protection in the Union in view of a new generation of supersonic transport (SST) aeroplanes that is currently under development.

To that end, EASA will develop under this RMT environmental protection requirements for SST aeroplanes, including landing-and-take-off (LTO) noise requirements and CO<sub>2</sub> emission requirements. Operational requirements for SST aeroplanes including for the purpose of en route noise mitigation are dealt with in RMT.0476 'Regular update of the standardised European rules of the air'.

In the absence of adequate environmental protection standards in the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs) for the areas mentioned above, as per Article 9(2) of Regulation (EU) 2018/1139, the definition of environmental protection certification requirements for SST will be based on the essential requirements for environmental compatibility set out in Annex III to that Regulation.

<b>Domain:</b>	Environmental protection		
<b>Affected rules:</b>	Commission Regulation (EU) No 748/2012 (Initial Airworthiness) CS-36 CS-CO <sub>2</sub>		
<b>Affected stakeholders:</b>	SST airframe and engine manufacturers, Member States, competent authorities, operators of SST aeroplanes		
<b>Driver:</b>	Environment	<b>Rulemaking group:</b>	No
<b>Impact assessment:</b>	Yes	<b>Rulemaking Procedure:</b>	Standard

### EASA rulemaking procedure milestones

<b>Start</b> Terms of Reference	<b>Public consultation</b> Advance Notice of Proposed Amendment	<b>Proposal to the Commission</b> Opinion	<b>Adoption by Commission</b> Implementing Rules	<b>Decision</b> Certification Specifications, Acceptable Means of Compliance, Guidance Material
<b>16.12.2021</b>	<b>2022 Q2</b>	<b>TDB</b>	<b>TDB</b>	<b>TDB</b>
	<b>Public consultation</b> Notice of proposed Amendment			
	<b>TDB</b>			

## 1. Why we need to amend the rules — issue/rationale

A new generation of SST aeroplanes is currently under development for business jet and commercial airline applications and is expected to become operational by the late 2020s. These SST aeroplanes may be expected to be operated worldwide. Consequently, EASA may receive applications for certification/validation of new types of SST aeroplanes. In this context, environmental protection requirements for SST aeroplanes including LTO noise and CO<sub>2</sub> emission requirements need to be developed to ensure a high, uniform level of environmental protection in the Union.

### Related safety issues

There is no safety recommendation pertinent to the scope of this RMT.

### Exemptions<sup>1</sup> in accordance with Article 70 ‘Safeguard provisions’ and/or Article 71 ‘Flexibility provisions’ and/or Article 76 ‘Agency measures’ of Regulation (EU) 2018/1139 (‘Basic Regulation’)<sup>2</sup>

There is no exemption pertinent to the scope of this RMT.

### Alternative means of compliance (AltMoC) relevant to this RMT

There is no AltMoC pertinent to the scope of this RMT.

### ICAO and third-country references relevant to this RMT

#### ICAO:

Unlike for subsonic aeroplanes, ICAO Annex 16 Volume I does not contain an LTO noise standard for SST aeroplanes. Similarly, ICAO Annex 16 Volume III does not contain a CO<sub>2</sub> emissions standard for SST aeroplanes.

#### FAA:

In April 2020, the United States (US) Federal Aviation Administration (FAA) proposed a potential domestic LTO noise standard for SST aeroplanes focused specifically on the business jet segment. This covers aeroplanes with 2-3 engines, a maximum take-off weight up to 150 000 lb (68 039 kg), and design speeds up to Mach 1.8. The proposed US noise limits are in between the most recent (US Stage

<sup>1</sup> Exemptions that have an impact on the development of this RMT and refer to:

- Article 70(1): Measures taken as an immediate reaction to a safety problem;
- Article 71(1): Limited in scope and duration exemptions from substantive requirements laid down in the Basic Regulation and its implementing acts in the event of urgent unforeseeable circumstances that affect any natural or legal person subject to the Basic Regulation or urgent operational needs of that persons;
- Article 71(3): Derogation from the acts(s) implementing the Basic Regulation where an equivalent level of protection to that attained by the application of the said rules can be achieved by other means; or
- Article 76(7): Individual flight time specification schemes that deviate from the applicable certification specifications (CSs) that ensure compliance with essential requirements and, as appropriate, the related implementing acts.

<sup>2</sup> Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1536149403076&uri=CELEX:32018R1139>).

5 / ICAO Chapter 14) and previous (US Stage 4 / ICAO Chapter 4) noise standards for subsonic jet aeroplanes. There are currently no proposed CO<sub>2</sub> emission requirements for SST aeroplanes in the US.

## 2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation, one of the said objectives is the contribution to a high, uniform level of environmental protection. This RMT will contribute to the achievement of this objective by addressing the issues described in Chapter 1.

The specific objective of this proposal is to maintain the current high level of environmental protection in the Union by developing adequate environmental protection requirements for the new generation of SST aeroplanes.

## 3. How we want to achieve it

As per Article 9(2) of the Basic Regulation<sup>3</sup>, since no ICAO standards for landing-and-take-off (LTO) noise and CO<sub>2</sub> emissions exist for SST aeroplanes in ICAO Annex 16, the environmental protection requirements that apply are those set out in Annex III to that Regulation. Based on these essential requirements, EASA intends to develop environmental protection requirements for SST aeroplanes, including LTO noise requirements and CO<sub>2</sub> emission requirements.

A regulatory impact assessment (RIA) will be carried out as part of the NPA using qualitative and/or quantitative input in line with evidence-based policymaking and focusing on major and complex items.

## 4. What are the deliverables

- An advanced notice of proposed amendment (A-NPA) containing technical concepts and draft requirements (if available) in the domains of LTO noise and CO<sub>2</sub> emissions.
- A notice of proposed amendment (NPA) on:
  - amendments to Regulation (EU) No 748/2012<sup>4</sup> and/or new regulation, as required, introducing environmental protection requirements for SST aeroplanes. The NPA will also propose the related acceptable means of compliance (AMC) and guidance material (GM) to support the implementation of the new requirements;
  - environmental protection specifications for SST aeroplanes, through a new CS or amendments to CS-36 and CS-CO<sub>2</sub>;
- An opinion proposing amendments to Commission Regulation (EU) No 748/2012 and/or new regulation in accordance with Article 19(1)(a) of the Basic Regulation, as required;
- A decision issuing the related AMC and GM; and decisions amending CS-36 and CS-CO<sub>2</sub> (or creating a new CS), including related AMC and GM as required.

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<sup>4</sup> Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (J L 224, 21.8.2012, p. 1–85)



## 5. How we consult

Workshops and/or technical meetings with affected stakeholders and state experts<sup>5</sup> may be arranged to discuss the proposed concepts and ideas. A public consultation of technical concepts and draft requirements will take place through an A-NPA, to be followed by an NPA in accordance with Article 7 of the Rulemaking Procedure<sup>6</sup>.

## 6. Dependencies

- RMT.0727 'Alignment of Part 21 with Regulation (EU) 2018/1139'.
- Operational requirements for SSTs including for the purpose of en route noise mitigation are being dealt with in Subtask 4 of RMT.0476 'Regular update of the standardised European rules of the air'.

## 7. References

### 7.1. Related EU regulations

Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 224, 21.8.2012, p. 1).

### 7.2. Related EASA decisions

- Decision No. 2003/004/RM of the Executive Director of the Agency of 17 October 2003 on certification specifications providing for acceptable means of compliance for aircraft noise (CS-36).
- ED Decision 2019/016/R of the Executive Director of the Agency of 29 July 2019 issuing the Certification Specifications, Acceptable Means of Compliance and Guidance Material for Aeroplane CO<sub>2</sub> Emissions (CS-CO<sub>2</sub>).

### 7.3. Other references

[Proposed Rule for Noise Certification of Supersonic Airplanes](#) of 13 April 2020 of the Federal Aviation Administration (FAA).

<sup>5</sup> Member State experts will also be involved via existing European Technical Expert Groups (TEG) for SST aeroplanes in the domains of Noise (N-TEG), CO<sub>2</sub> Emissions (C-TEG), and Forecasting and Impact Assessment (F-TEG).

<sup>6</sup> EASA Management Board [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').