



# Notice of Proposed Amendment 2024-102 (A)

in accordance with Article 6 of MB Decision 01-2022

## Update of the flight simulation training device requirements

RMT.0196 — SUBTASK 2

<b>EXECUTIVE SUMMARY</b>		
<p>This focused consultation concerns a proposal for a new CS-FSTD which is developed to introduce common certification specifications for the initial qualification of flight simulation training devices (FSTDs) for fixed-wing and rotary-wing aircraft by applying an innovative approach with regard to FSTD capabilities.</p> <p>Historically, the FSTD technical requirements for aeroplanes and helicopters have been contained in separate documents, leading to considerable information duplication. To address this, it was decided to merge these requirements into a single CS-FSTD document, making it suitable for both fixed-wing and rotary-wing aircraft.</p> <p>The subject draft CS-FSTD (contained in NPA 2024-102 (B)) follows the FSTD Capability Signature (FCS) concept and the guidance established in Doc 9625 ‘Manual of Criteria for the Qualification of Flight Simulation Training Devices — Volume I — Aeroplanes’ of the International Civil Aviation Organization (ICAO). The draft new CS-FSTD accommodates new technologies, by specifying the technical requirements of an FSTD in a technologically agnostic manner. This approach allows for the integration of various innovative technologies.</p> <p>The proposed new CS-FSTD is expected to enhance safety by allowing for the use of new technologies, enabling the qualification of innovative FSTDs, and facilitating the transposition of ICAO Doc 9625.</p>		
<b>REGULATION(S) TO BE AMENDED/ISSUED</b> n/a	<b>ED DECISION TO BE ISSUED</b> Draft ED Decision 202X/XXX/R ‘CS-FSTD Issue 1’	
<b>AFFECTED STAKEHOLDERS</b> The stakeholders mostly affected by the proposed new CS-FSTD will be FSTD manufacturers, organisations that operate FSTDs, aircraft manufacturers, FSTD data providers, and competent authorities.		
<b>WORKING METHODS</b>		
<b>Development</b>	<b>Impact assessment(s)</b>	<b>Consultation</b>
By EASA with external support	Detailed	NPA — focused
<b>RELATED DOCUMENTS / INFORMATION</b>		
<ul style="list-style-type: none"> <li>— <a href="#">ToR RMT.0196 – Update of flight simulation training devices requirements   EASA (europa.eu)</a></li> <li>— <a href="#">NPA 2020-15 – Update of the flight simulation training device requirements   EASA (europa.eu)</a></li> </ul>		
<b>PLANNING MILESTONES:</b> According to the latest edition of EPAS <i>Volume II</i> .		



---

## Table of contents

<b>1.</b>	<b>About this NPA</b> .....	<b>3</b>
1.1.	How this regulatory material was developed .....	3
1.2.	How to comment on this NPA.....	3
1.3.	The next steps .....	4
<b>2.</b>	<b>In summary — why and what</b> .....	<b>5</b>
2.1.	Why we need to act.....	5
2.2.	What we want to achieve — objectives.....	5
2.3.	How we want to achieve it — overview of the proposed regulatory material.....	5
2.4.	What are the stakeholders' views .....	10
<b>3.</b>	<b>What are the expected benefits and drawbacks of the proposed regulatory material</b> .....	<b>13</b>
<b>4.</b>	<b>Proposed regulatory material</b> .....	<b>14</b>
<b>5.</b>	<b>Monitoring and evaluation</b> .....	<b>15</b>
<b>6.</b>	<b>Proposed actions to support implementation</b> .....	<b>16</b>
	<b>Appendix — Quality of the NPA (NPA 2024-102 (A) &amp; (B))</b> .....	<b>17</b>



## 1. About this NPA

### 1.1. How this regulatory material was developed

EASA developed the subject draft CS-FSTD in line with Regulation (EU) 2018/1139<sup>1</sup> (the Basic Regulation) and the Rulemaking Procedure<sup>2</sup>, as well as in accordance with the objectives and working methods described in the Terms of Reference (ToR) for this RMT<sup>3</sup>.

The subject draft is based on an initial CS-FSTD proposal, which was publicly consulted with NPA 2020-15<sup>4</sup>. EASA has significantly reworked that initial proposal, considering the comments received on that NPA and the decision taken in the meantime to merge existing CS-FSTD(A) Issue 2 and CS-FSTD(H) Initial Issue into a single CS-FSTD document (see ToR RMT.0196 Issue 4).

During the development of the subject proposal, EASA received support from rulemaking group RMG.0196.

### 1.2. How to comment on this NPA

The proposal for a new CS-FSTD is hereby submitted for consultation with the EASA Advisory Bodies (Aircrew TeB, Air Operations TeB, relevant stakeholder Action Groups, Rotorcraft Committee (R.COM)), European FSTD Technical Group (EFTeG), and affected third-country authorities (FAA, CASA).

NPA 2024-102 comprises part (A) and (B):

- NPA 2024-102 (A) contains background information pertaining to the draft regulatory proposal;
- NPA 2024-102 (B) contains proposed new CS-FSTD.

Please submit your comments via email to [fcl@easa.europa.eu](mailto:fcl@easa.europa.eu) with the subject '**Comments on NPA 2024-102 (A) & (B) (RMT.0196 Subtask 2)**' by using the attached '**comment sheet**' (Excel table).

The deadline for the submission of comments is **30 September 2024**.

Please note that EASA plans to organise a workshop (mid-September 2024) with the stakeholders involved in the focused consultation to discuss the draft regulatory material and the comments issued. The stakeholders concerned are strongly advised to provide their comments well before the deadline

---

<sup>1</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=1535612134845&uri=CELEX:32018R1139>).

<sup>2</sup> EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 01-2022 of 2 May 2022 on the procedure to be applied by EASA for the issuing of opinions, certification specifications and other detailed specifications, acceptable means of compliance and guidance material ('Rulemaking Procedure'), and repealing Management Board Decision No 18-2015 (<https://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-01-2022-rulemaking-procedure-repealing-mb>).

<sup>3</sup> [ToR RMT.0196 - Update of flight simulation training devices requirements | EASA \(europa.eu\)](#)

<sup>4</sup> [NPA 2020-15 - Update of the flight simulation training device requirements | EASA \(europa.eu\)](#)



in order to facilitate the preparation of the workshop and gain maximum benefit from it. Invitations for the workshop will be sent in due time.

### 1.3. The next steps

Following the consultation of the draft regulatory material, EASA will review all the comments received and will duly consider them in the subsequent phases of this rulemaking activity. The RMG.0196 members will support EASA in reviewing the comments and considering them before EASA finalises the draft regulatory material.

Considering the above, EASA may issue a Decision on new CS-FSTD. When issuing the Decision, EASA will also provide feedback to the commentators and information to the public on who engaged in the process and/or provided comments during the consultation of the draft regulatory material, which comments were received, how such engagement and/or consultation was used in rulemaking, and how the comments were considered.

#### Target applicability of new CS-FSTD

The target applicability of the new CS-FSTD shall be 2 years after the date of entry into force of the proposed amendments to Regulations (EU) No 1178/2011<sup>5</sup> and 965/2012<sup>6</sup>. The new CS-FSTD shall become applicable simultaneously with the applicability of all the amendments to the above-mentioned Regulations and the associated acceptable means of compliance (AMC) and guidance material (GM).

---

<sup>5</sup> Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1) ([Regulation - 1178/2011 - EN - EUR-Lex \(europa.eu\)](#)).

<sup>6</sup> Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) ([Regulation – 965/2012 – EN – EUR-Lex \(europa.eu\)](#)).



## 2. In summary — why and what

### 2.1. Why we need to act

On 16 December 2020, EASA issued NPA 2020-15 which comprehensively reviewed the current framework for the qualification and use of FSTDs, proposing a new certification specification for the qualification of FSTDs based on the FSTD Capability Signature (FCS) concept. The subject NPA is based on the revision of the comments placed on NPA 2020-15 and proposes some major amendments, compared to existing CS-FSTD, and follows the FCS concept.

The need to issue a new CS-FSTD arises from existing barriers that currently limit the possibility to obtain training credits by using other types of training devices that are not certified under CS-FSTD(A) or CS-FSTD(H) in type-rating training (Appendix 9 to Annex I (Part-FCL) to Regulation (EU) No 1178/2011) and operator recurrent training (Subpart FC of Annex III (Part-ORO) to Regulation (EU) No 965/2012 (the Air Operations Regulation)).

The proposed draft certification specifications form part of the whole package of regulatory amendments, proposed with RMT.0196, whose aim is to enable better recognition and crediting of existing, as well as emerging, training device/tool capabilities in type-rating training.

### 2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. The draft regulatory material presented here is expected to contribute to achieving these overall objectives by addressing the issue described in Section 2.1.

The specific objective of RMT.0196 Subtask 2 is to establish a regulatory framework which shall allow the introduction of the ‘task-to-tool’ concept for aeroplanes and helicopters used in type-rating training.

The objective of the proposed new CS-FSTD is to establish certification specifications for the initial qualification of FSTDs for both aeroplanes and helicopters in a single document.

### 2.3. How we want to achieve it — overview of the proposed regulatory material

#### Merging of FSTD certification specifications for aeroplanes and helicopters

Historically, the FSTD technical requirements for aeroplanes and helicopters were in separate documents, leading to considerable information duplication. It was decided to merge these requirements into a single CS-FSTD document, with the terminology adjusted to be aircraft agnostic, making it suitable for both aeroplanes and helicopters. The layout of the proposed CS-FSTD allows for easy identification of the requirements applicable to both aircraft categories, and those specific to aeroplanes or helicopters.

This merging is also beneficial for novel aircraft categories, such as eVTOL and tilt-rotor aircraft, which have characteristics of both aeroplanes and helicopters. A single CS-FSTD document clarifies the requirements for FSTDs for such aircraft, enables more effective revisioning, and reduces the chances of having different requirements or revision cycles for aeroplane and helicopter FSTDs.



### Transition to the FCS concept only

NPA 2020-15 defined FSTD types and levels (e.g. FNPT C, FTD A) along with the FCS, thus creating a hybrid of old and new frameworks/concepts. This approach required many features to be at the same level, limiting the flexibility offered by the FCS concept. The proposed CS-FSTD now supports a pure FCS concept by using only the FCS, separating features more clearly than NPA 2020-15 did. This amendment allows for a greater variety of FCS and, consequently, a greater variety of FSTDs suitable for selected training tasks. This is what the industry expected.

### Amendments as regards FSTD features

The features in the proposed new CS-FSTD differ significantly from those contained in NPA 2020-15, impacting the entire FCS concept and all FSTD requirements. The features are now isolated entities with clear requirements for each feature and fidelity level. Previously, in NPA 2020-15, there was considerable overlap, and it was not always clear which feature regulated a particular aspect. The proposed CS-FSTD now offers clarity in this regard.

CS-FSTD now includes 14 features, with names that are descriptive and meaningful to end users, such as pilots. Simulated Air Traffic Control Environment (SATCE) is no longer a feature because it is not mandatory and not yet widely used; a specific section provides SATCE requirements, should an operator elect to implement SATCE on their devices. Performance and handling features are divided into flight regimes: 'on-ground', 'in-ground effect' and 'out-of-ground effect'. This approach allows for assessing performance and handling as an integrated FSTD for the flight regimes rather than separating the ground and flight regimes as it was the case in NPA 2020-15. Flight controls are now considered separately for hardware and system operation. These amendments enable the use of a variety of different FSTDs for different training tasks. For example, an FSTD using touchscreens (low fidelity for flight control hardware) can still have the highest level of Flight Control Systems Operation and earn training credits for system operation tasks. Similarly, Flight Deck Layout and Structure and Aircraft Systems work logically together, with the former concerning hardware solutions and the latter system operation and logic.

### Amendments to the structure of requirements

The proposed CS-FSTD is divided into the following subparts:

- Subpart A: General
- Subpart B: Qualification Basis
- Subpart C: Engineering Justification
- Subpart D: Objective Tests
- Subpart E: Functions and Subjective Tests

In NPA 2020-15, UPRT was a separate subpart, but the subject CS-FSTD integrates UPRT requirements into the relevant sections to enhance readability and maintain data integrity. For instance, objective test (QTG) requirements for UPRT are now among other objective test requirements.

Current CS-FSTD(A) Issue 2 and CS-FSTD(H) Initial Issue contain scattered information across documents. This dispersion makes it difficult to find all the details associated with any topic. The requirements in new CS-FSTD are structured to enable easy identification of relevant information.



### **New (innovative) technologies**

The draft new CS-FSTD accommodates new technologies, unlike current CS-FSTD(A) Issue 2 and CS-FSTD(H) Initial Issue, which often specify particular technological solutions. New CS-FSTD specifies what the FSTD must be capable of without focusing on the technology used. This approach allows for the integration of various new (innovative) technologies.

New CS-FSTD addresses additional FSTD capabilities, such as mission equipment, tactical equipment, air work equipment, search and rescue equipment, external loads, and ship landing. These capabilities must be realistic to ensure positive transfer of training, necessitating the inclusion of these requirements. It includes EASA policies and principles for qualifying an FSTD using extended reality<sup>7</sup>. The principles presented in these documents are divided among the FSTD features. The regulatory material refers to these special conditions (SCs) for extended reality.

### **Amendments to Subpart A**

Subpart A of new CS-FSTD is similar to that presented in NPA 2020-15. It outlines the applicability of CS-FSTD, defines terminology and abbreviations, and provides guidance on how to implement CS-FSTD. The terminology has been harmonised throughout the document.

### **Amendments to general requirements (Subpart B)**

The merging of aeroplane and helicopter requirements and changes in features significantly impacted the general requirements, which have been rewritten compared to the NPA 2020-15 version. The wording in new CS-FSTD is clearer and considers current CS-FSTD(A) Issue 2, CS-FSTD(H) Initial Issue, and ICAO Doc 9625 Volumes I and II.

The CS-FSTD definitions for FSTD features and fidelity levels differ from those presented in NPA 2020-15 and in ICAO Doc 9625. New CS-FSTD establishes 4 fidelity levels (N, G, R and S) for each feature, whereas NPA 2020-15 did not endorse S level for all features. The current standards contained in CS-FSTD(A) Issue 2 and in CS-FSTD(H) Initial Issue for level D full flight simulators are comparable to an FCS that includes all features at S fidelity level.

High-level summaries of feature requirements are provided as guidance material to help stakeholders familiarise themselves with the FCS concept and the proposed new CS-FSTD.

All features now have criteria for levels G, R and S. For the Aircraft Systems feature, different systems can be at different fidelity levels. For example, the autoflight system may be at a different level than the pneumatic system, and these levels should be described in the equipment specifications list (ESL). This concept allows for a variety of FSTDs tailored to specific training tasks.

Existing FSTD specifications require a 'statement of compliance' for selected entities. The proposed new CS-FSTD introduces an amendment by requiring a 'statement of justification' (SoJ). The aim of this approach followed and the shift in terminology is to ensure that the statement provides information on *how* the requirements are met, rather than just declaring compliance. SoJs enable

---

<sup>7</sup> <https://www.easa.europa.eu/en/newsroom-and-events/news/fstd-special-conditions-development-and-assessment-process-published-easa>  
<https://www.easa.europa.eu/en/domains/aircrew-and-medical/flight-simulation-training-devices-fstd>

traceability and serve as a factual checklist for device manufacturers to ensure that applicable requirements are met, establishing a standard method for compliance demonstration.

General requirements are now presented in separate tables for each feature to enhance readability. These tables include columns for verification and validation, referencing objective tests (QTG) and functions and subjective testing (F&S). This format links testing to the general requirements of each feature, facilitating traceability and aiding the preparation of SoJs.

### Amendments to data requirements (Subpart C)

In NPA 2020-15, stakeholders identified issues with the data requirements, so the proposed new CS-FSTD dedicates an entire subpart (Subpart C) to this topic. Acceptable data sources and gathering methods for levels G, R and S are now clearly presented, with extensive guidance material added.

The data requirements in new CS-FSTD are significantly different from those contained in NPA 2020-15 and in ICAO Doc 9625. Data requirements are designed to support training needs. Validation data requirements in new CS-FSTD are as follows:

- *generic* fidelity level: data may originate from multiple aircraft within the simulated class or group;
- *representative* fidelity level: data may originate from aircraft operated under the same pilot type rating;
- *specific* fidelity level: data originates from one aircraft type and variant.

Each feature may be at different fidelity levels, so the data for aircraft features may vary. For example, if the Flight Control Forces and Hardware feature is at *representative* level and the Flight Control Systems Operation is at *specific* level, the data requirements for these features will differ. Applicable documentation must clearly indicate the data sources for each feature.

Current CS-FSTD(A) Issue 2 and CS-FSTD(H) Initial Issue require either a validation data roadmap (VDR) or an engineering report (ER), depending on the FSTD's qualification (BITD, FNPT, FTD or FFS). These certification specifications offer little detail on the expectations as regards the engineering report. The proposed new CS-FSTD harmonises this by mandating both a VDR and an ER for all FSTDs regardless of the FCS (i.e. including devices or features on the *generic* fidelity level). Further, the proposed new CS-FSTD provides examples of VDRs for different fidelity levels.

The VDR should show validation data sources and applicable rationales, while the ER should justify the data and methods used to design and verify an FSTD against the applicable requirements. The ER should also substantiate any validation data other than aircraft flight tests. VDR and ER complement each other. For instance, if a feature is based on an OEM data package and VDR, the ER for this feature should be simple, acknowledging the data's suitability and compliance. Conversely, for a feature on the *generic* fidelity level, the VDR should indicate the data sources, and the ER should justify why the data is compliant and demonstrate that the proposed validation data for the particular feature is characteristic of a given aircraft class or group.



## Amendments to objective tests (Subpart D)

In NPA 2020-15, stakeholders identified issues with the selection of applicable objective (QTG) tests for a given FCS. The proposed new CS-FSTD restructures this concept, allowing features to be at different levels, thus enabling the development of various FSTDs for different training tasks.

The proposed new CS-FSTD requires more objective tests, especially for *representative* and *generic* fidelity levels, than NPA 2020-15 did. This is due to a revised process for determining applicable tests. The applicable objective tests for all fidelity levels have been revised based on training matrices, ensuring that allowed training tasks for any fidelity level are supported by necessary objective testing.

The layout of objective test requirements has been amended. While NPA 2020-15 presented all tests in a single lengthy table, new CS-FSTD separates each test section into its own table for aeroplanes and helicopters. Test conditions, requirements and guidance are presented directly below each test section, thus improving readability and keeping related information together within the document. The tests and their numbering have been harmonised between aeroplanes and helicopters.

The proposed new CS-FSTD assigns each parameter of an objective test to a specific feature. This assignment helps in selecting applicable objective tests and their tolerances as explained in CS-FSTD. FSTD cost can also be controlled by selecting a certain FCS, which defines the required objective tests and associated data. The proposed new CS-FSTD facilitates this by separating the features.

The concept of recurrent objective testing is amended to enable a more efficient and straightforward review of recurrent test results. New CS-FSTD now requires that recurrent objective tests should have an ‘essential match’ (EM) with the MQTG (where applicable), meaning negligible differences from the MQTG. This can be easily evaluated by overlaying the recurrent test results with the MQTG. This principle, mentioned in current CS-FSTD(A) Issue 2 and in CS-FSTD(H) Initial Issue, is now established as the standard method for all FSTDs.

NPA 2020-15 outlined the requirements for the Objective Motion Cueing Test (OMCT) concept. Although this concept offers detailed information about the motion system’s operation, it does not specify any tolerances, only ‘boundaries’ for aeroplanes (in ICAO Doc 9625 Volume I), and not even boundaries for helicopter FSTDs (in ICAO Doc 9625 Volume II). It was concluded that the OMCT concept is not yet mature enough to be included in the proposed new CS-FSTD. Therefore, it was decided to exclude this concept from the new CS-FSTD and provide instead clearer requirements for the motion cueing performance signature tests. This decision clarifies the expectations are regards motion cueing.

The detailed guidance and test criteria for the motion cueing performance signature tests in new CS-FSTD are based on existing requirements contained in CS-FSTD(A) Issue 2 and FAA Part-60: ‘The FSTD motion cueing system should have a high tilt coordination gain, high rotational gain, and high correlation with respect to the aeroplane simulation model.’ New CS-FSTD requires that the motion cueing performance signature tests demonstrate these gains and correlations by comparing the motion cues to the accelerations and attitudes of the flight dynamics model.

CS-FSTD(H) Initial Issue establishes motion envelope tests for helicopter FSTDs. Those tests are not present in ICAO Doc 9625 Volume II nor in FAA Part-60. The proposed new CS-FSTD is harmonised with those documents by removing the objective test requirements for motion envelope, but adding the same values as recommendations.



Compared to NPA 2020-15 or current FSTD certification specifications, the proposed new CS-FSTD provides more logically ordered guidance on objective tests. It no longer contains outdated or unnecessary requirements, such as visual requirements for old simulators, and offers information relevant to new FSTDs which shall be qualified under it.

### Amendments to functions and subjective tests (Subpart E)

Comments were placed on NPA 2020-15 regarding the selection of applicable functions and subjective tests. The proposed new CS-FSTD now provides clear information on this process. Given the great number of different FCS permutations and the varying capabilities of each aircraft type, it is not feasible to provide a specific list of applicable functions and subjective tests for any FSTD. It is the FSTD operator's responsibility to follow the process and guidance contained in proposed new CS-FSTD to determine the applicable tests. The tables in proposed new CS-FSTD serve as a starting point for this process.

## 2.4. What are the stakeholders' views

NPA 2020-15 received approximately 530 comments on CS-FSTD(A), which ranged from editorial suggestions to broad-scope issues across the entire concept. All comments have been reviewed, assessed and, where applicable, addressed. The table below summarises the areas of NPA 2020-15 that attracted multiple and/or very important comments. The text after the table elaborates more on many of these topics.

Comments issued on NPA 2020-15	How they have been addressed in the context of the subject draft CS-FSTD
Many comments focused on the specific wording and terminology used.	The wording and terminology have been amended accordingly.
Many comments indicated that it was unclear whether specific requirements applied to a particular FSTD. For instance, it was unclear whether certain requirements were relevant only to fidelity level S or exclusively for FSTDs qualified for UPRT.	The applicability of the requirements has been clarified in entire new CS-FSTD.
The number of features and their names was not the best possible.	Proposed new CS-FSTD incorporates 14 features, whereas NPA 2020-15 incorporated only 12 features. The content of these features has been adjusted to prevent overlap. Additionally, feature names have been revised to enhance their relevance for FSTD users.
SATCE requirements	Although SATCE was removed from the list of features, its requirements remain in proposed new CS-FSTD. If an FSTD requires qualification with a SATCE system, compliance with the SATCE requirements is necessary.
Data requirements were not clear.	Proposed new CS-FSTD now includes an entire Subpart C that outlines data requirements. These requirements have been clarified and

	supplemented with guidance material. Additionally, the concept of fidelity levels G, R and S provides further clarity (see next row).
It was unclear whether fidelity level R simulates an aircraft type or class. Additionally, the distinction between level R and S remained unclear.	The overall concept has been revised in proposed new CS-FSTD. Specifically, fidelity level G now entails simulating an entire aircraft class or group, while level R focuses on simulating a specific aircraft type. Level S, on the other hand, replicates a particular aircraft type and variant.
Clear guidance regarding expectations for generic devices and fidelity levels is necessary.	Proposed new CS-FSTD contains a lot of new guidance material explaining the expectations as regards the <i>generic</i> fidelity level.
Clear guidance regarding Correct Trend & Magnitude is necessary.	Guidance material (GM1 CS FSTD.ENG.020 'Correct Trend & Magnitude') has been added to provide comprehensive information on Correct Trend & Magnitude.
The differences to ICAO Doc 9625 (e.g. for motion feature, draft CS-FSTD(A) used level S, while ICAO Doc 9625 uses R1).	In proposed new CS-FSTD, all the features now use all the fidelity levels (G, R and S). The requirements and their formulation have been revised.
Flexibility should be allowed for aircraft systems to operate at varying fidelity levels, as some FSTDs are designed with such arrangements.	The proposed new CS-FSTD, along with other requirements within the FCS framework, explicitly acknowledges that aircraft systems may operate at different fidelity levels. The equipment and specifications list (ESL) is expected to provide information on the level of each system. Guidance is provided to select the systems which are presented on an FSTD, according to their integration on the simulated aircraft.
Requirements versus existing qualified devices.	The requirements in proposed new CS-FSTD have been revised and amended where applicable to better enable qualification of current FSTDs under new CS-FSTD.
Extended reality requirements are needed.	Proposed new CS-FSTD includes requirements related to extended reality and references special conditions (SCs). These SCs should be followed until future CS-FSTD versions incorporate comprehensive technical requirements.
Objective test requirements concerning aeroplane stall buffet.	The applicable requirements have been clarified.
UPRT requirements were found to be too strict.	Minor clarifications have been made in proposed



	new CS-FSTD. The UPRT requirements in NPA 2020-15 and in proposed new CS-FSTD are essentially the same as in current CS-FSTD(A) Issue 2.
Objective Motion Cueing Tests (OMCT)	Proposed new CS-FSTD does not contain the OMCT concept anymore. It was concluded that the OMCT concept is not yet mature enough to be included in new CS-FSTD.
The requirements on the use of engineering simulator validation data were not clear.	The requirements in NPA 2020-15 and in proposed new CS-FSTD are essentially the same as in current CS-FSTD(A) Issue 2. Only minor amendments have been made to reflect current practices.
It was not clear what QTG tests are applicable to any FSTD.	The overall concept and logic for determining applicable tests for FSTDs and the FCS have been revised in the proposed new CS-FSTD. Subpart D contains clear requirements and guidance to facilitate this process.
It was not clear what functions and subjective tests are applicable to any FSTD.	Subpart E of the proposed new CS-FSTD now provides explicit information on how to compile the list of tests. Supporting guidance is included.



### 3. What are the expected benefits and drawbacks of the proposed regulatory material

A detailed impact assessment was developed at the stage of NPA 2020-15. It included the assessment of impacts of creating a new CS-FSTD. The assessment is still relevant and applies to this NPA, taking into consideration that it also includes CS-FSTD for helicopters (CS-FSTD(H)).

In particular, to summarise the impact assessment developed for this part here in NPA 2020-15, the proposed regulatory material has been developed considering the better regulation principles, and in particular the regulatory fitness principles.

The proposed new CS-FSTD is expected to:

- provide more flexible certification specifications which would allow for a broader range of training devices to be qualified according to the FCS concept and for higher efficiency of their use in pilot training, testing and checking;
- pave the way for further innovation when designing and producing new FSTDs; Europe would be the first globally in utilising the possibilities for innovation provided by ICAO Doc 9625;
- provide a common framework for the integration of FSTD certification specifications for both aeroplanes and helicopters into a single document;
- provide a level playing field and equal treatment of stakeholders through harmonisation with ICAO Doc 9625;
- enable better standardisation of FSTD qualification practices based on the new FCS concept through detailed requirements and guidance;
- provide clarity as regards the design of the applicable certification specifications; in the proposed draft, only certification specification standards are included with accompanied guidance material (where needed), without the use of acceptable means of compliance (AMC). The reason is that it has proved to be difficult to understand the use of AMC as non-binding regulatory material to new CS-FSTD (practice which exists in current CS-FSTD).

No significant drawbacks are expected from the implementation of the new CS-FSTD. Certain requirements, such as the SoJs, in the new CS-FSTD may create additional workload for FSTD manufacturers. However, it is expected that the overall benefits would outweigh any potential disadvantages and, therefore, the proposed new CS-FSTD requirements are considered justified.

The proposed new CS-FSTD shall only apply to newly (initially) qualified aeroplane and helicopter FSTDs. All existing (qualified) FSTDs shall not be affected by the new CS-FSTD and shall be subject to transitional provisions which are part of the proposed amendments to Regulation (EU) No 1178/2011. Those amendments have been consulted with the Advisory Bodies in the context of focused consultations that EASA launched in June 2023 and in March 2024.



#### 4. Proposed regulatory material

Please refer to NPA 2024-102 (B).



## 5. Monitoring and evaluation

EASA plans to monitor whether the objectives described in Section 2.2 will be achieved with the proposed regulatory material as follows:

- Once the new CS-FSTD is adopted, EASA will organise implementation support events to effectively raise awareness and explain how the new FCS concept can be implemented by the affected stakeholders.
- Furthermore, after the new CS-FTD becomes applicable, its implementation will be monitored through the number of newly qualified FSTDs against this qualification basis. Any implementation issues reported by the stakeholders will be captured and analysed. The EASA Advisory Bodies may serve as one of the channels used to collect such data.



## 6. Proposed actions to support implementation

In order to support affected stakeholders with the implementation of the new regulatory material, EASA plans to undertake a separate implementation support task which will provide comprehensive information and guidance on the entire package of the RMT.0196 deliverables.



## Appendix — Quality of the NPA (NPA 2024-102 (A) & (B))

To continuously improve the quality of its documents, EASA welcomes your feedback on the quality of this document with regard to the following aspects:

Please provide your feedback on the quality of this document as part of the other comments you have on this NPA. We invite you to also provide a brief justification, especially when you disagree or strongly disagree, so that we consider this for improvement. Your comments will be considered for internal quality assurance and management purposes only and will not be published (e.g. as part of the CRD).

### 1. The regulatory proposal is of technically good/high quality

*Please choose one of the options*

Fully agree / Agree / Neutral / Disagree / Strongly disagree

### 2. The text is clear, readable and understandable

*Please choose one of the options*

Fully agree / Agree / Neutral / Disagree / Strongly disagree

### 3. The regulatory proposal is well substantiated

*Please choose one of the options*

Fully agree / Agree / Neutral / Disagree / Strongly disagree

### 4. The regulatory proposal is fit for purpose (achieving the objectives set)

*Please choose one of the options*

Fully agree / Agree / Neutral / Disagree / Strongly disagree

### 5. The regulatory proposal is proportionate to the size of the issue

*Please choose one of the options*

Fully agree / Agree / Neutral / Disagree / Strongly disagree

### 6. The regulatory proposal applies the 'better regulation' principles<sup>[1]</sup>

*Please choose one of the options*

Fully agree / Agree / Neutral / Disagree / Strongly disagree

### 7. Any other comments on the quality of this document (please specify)

---

<sup>[1]</sup> For information and guidance, see:

- [https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how\\_en](https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how_en)
- [https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox\\_en](https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en)

