European Aviation Safety Agency

Notice of Proposed Amendment 2015-12

Acceptable Means of Compliance (AMC) and Guidance Material (GM) to Part-21 for changes to Operational Suitability Data (OSD)

RMT.0607 (21.039(b)) — 20.8.2015

EXECUTIVE SUMMARY

This Notice of Proposed Amendment (NPA) proposes Acceptable Means of Compliance (AMC) and Guidance Material (GM) to facilitate the implementation of the rules related to the approval of changes to Operational Suitability Data (OSD).

The purpose of the draft AMC/GM presented in this NPA is to reduce the administrative burden on applicants for the approval of a change. The proposed guidance should allow these applicants to come easily to a decision with regard to:

— whether a design change impacts on OSD or not;

— the classification of changes to OSD as minor or major;

— the certification basis for the OSD change;

— the use of their Design Organisation Approval (DOA) for OSD changes.

Applicability		Process map	
Affected regulations and decisions:	Decision N° 2012/020/R (AMC/GM to Part-21); Commission Regulation (EU) No 748/2012	Concept Paper:	No
Affected stakeholders:	Type Certificate (TC)/Supplemental Type Certificate (STC) holders/applicants; applicants for the approval of minor changes	Terms of Reference:	13.8.2013
		Rulemaking group:	Yes
		RIA type:	Light
Driver/origin:	Proportionality/efficiency	Technical consultation during NPA drafting:	No
Reference:	CRD 2009-01 of 13 May 2011; Opinion 07/2011 of 13 December 2011	Duration of NPA consultation:	2 months
		Review group:	Yes
		Focussed consultation:	No
		Publication date of the Opinion:	n/a
		Publication date of the Decision:	2016/Q1

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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed this NPA in line with Regulation (EC) No 216/2008[1] (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure[2].

This rulemaking activity is included in the Agency's Revised 2014–2017 Rulemaking Programme under Rulemaking Task (RMT) 0607 (21.039(b)).

The text of this NPA has been developed by the Agency based on the input of the Rulemaking Group RMT.0607 (21.039(b)). It is hereby submitted for consultation of all interested parties[3].

The process map on the title page contains the major milestones of this rulemaking activity to date and provides an outlook of the timescale of the next steps.

1.2. The structure of this NPA and related documents

Chapter 1 of this NPA contains the procedural information related to this task. Chapter 2 (Explanatory Note) explains the core technical content. Chapter 3 contains the proposed text for the new AMC and GM.

1.3. How to comment on this NPA

Please submit your comments using the automated **Comment-Response Tool (CRT)** available at http://hub.easa.europa.eu/crt/[4] .

The deadline for submission of comments is **20 October 2015.**

1.4. The next steps in the procedure

The Agency will publish CRD 2015-12 concurrently with the associated Decision.

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1 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).

2 The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision 01-2012 of 13 March 2012 concerning the procedure to be applied by the Agency for the issuing of Opinions, Certification Specifications and Guidance Material (Rulemaking Procedure) .

3 In accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure.

4 In case of technical problems, please contact the CRT webmaster (crt@easa.europa.eu).

2. Explanatory Note

2.1. Overview of the issues to be addressed

On 28 January 2014 the European Commission published Commission Regulation (EU) No 69/2014[5] on Operational Suitability Data (OSD), which includes the necessary changes to Commission Regulation (EU) No 748/2012[6] (Part-21) and to the Implementing Rules (IRs) for OPS, FCL and Part-66 for the implementation of the OSD concept.

The OSD concept was already introduced in the Basic Regulation in February 2008 as part of the first extension package. The purpose was to transpose the existing Operational Evaluation Board (OEB) process into the European Union (EU) regulatory framework. At the same time the new rules were expected to contribute to safety enhancement.

The objective of OSD is to ensure that certain data, necessary for the safe operation of aircraft, is available to and used by the operators. This data is considered specific to an aircraft type and should, therefore, be produced by the designer of that aircraft type. It consists of:

— minimum syllabus for pilot type rating training;

— aircraft reference data to support the qualification of simulators;

— minimum syllabus for type rating training of maintenance certifying staff;

— type-specific data for cabin crew training; and

— Master Minimum Equipment List (MMEL).

The OSD proposed by the designer will be approved by the Agency as part of the airworthiness certification.

Once approved, the core of the OSD must be used by operators and training organisations when establishing their customised training courses and Minimum Equipment Lists (MELs).

The OSD is expected to contribute to bridging the gap between airworthiness and operations and, therefore, improving safety. Furthermore, it will provide the basis to enable greater standardisation in the EU for type training and MEL.

The first batch of AMC/GM to the new rules has already been published by the Agency on 31 January 2014[7].

The new OSD rule includes the requirement that someone who is proposing a change to design has also to assess the impact of that change on the OSD. It also contains requirements on how to handle stand-alone changes to OSD. However, the details on how these requirements should be implemented were not fully clear. Therefore, a transition period of three years for these requirements was

[5] Commission Regulation (EU) No 69/2014 of 27 January 2014 amending Regulation (EU) No 748/2012 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 23, 28.1.2014, p. 12).

[6] 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] Decision 2014/007/R of the Executive Director of the Agency of 31 January 2014 amending Acceptable Means of Compliance and Guidance Material to Part 21 of Regulation (EU) No 748/2012 'AMC & GM to Part 21 - Amendment 2 to Issue 2' 'Operational Suitability Data (OSD)'

incorporated in the Regulation. This transition period was included to allow time for the development of dedicated AMC/GM that would clarify all the issues related to changes to OSD.

2.2. Objectives

The overall objectives of the EASA system are defined in Article 2 of the Basic Regulation. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in Chapter 2 of this NPA.

The specific objective of this proposal is to provide AMC and GM for the new requirements in Part-21 to facilitate the implementation of the OSD requirements related to changes, once these requirements become mandatory on 19 December 2016.

These AMC and GM clarify all the issues related to the approval of changes to OSD, as well as the requirement to assess the impact of design changes on OSD.

The proposal covers guidance for all OSD constituents except the specific AMC/GM related to changes to the OSD constituent 'minimum syllabus for type rating training of maintenance certifying staff'. This will be developed under RMT.0106 (21.039(e)) (Development of CS-MCSD).

2.3. Regulatory Impact Assessment (RIA)

2.3.1. Issues to be addressed

With the issue of Commission Regulation (EU) No 69/2014, the OSD concept is introduced in Part-21 and is included in the type certification activity.

The new OSD rule includes the requirement that someone who is proposing a change to design has also to assess the impact of that change on the OSD. It also contains requirements on how to handle stand-alone changes to OSD. However, the details on how these requirements should be implemented were not fully clear. Therefore, a transition period of three years for these requirements is incorporated in the Regulation. This transition period was included to allow time for the development of dedicated AMC/GM that would clarify all the issues related to changes to OSD.

The purpose of the draft AMC/GM presented in this NPA is to reduce the administrative burden on applicants for the approval of a change. The proposed guidance should allow these applicants to come easily to a decision with regard to:

— whether a design change impacts on OSD or not;

— the classification of changes to OSD as minor or major;

— the certification basis for the OSD change;

— the use of their DOA for OSD changes.

Affected are all applicants for the approval of a change to the TC, or STC, and DOA holders using their privilege to approve minor changes.

2.3.2. Policy options

The option to 'do nothing' would mean that the rule would have to be implemented without the necessary guidance.

Within the option of developing AMC/GM for changes to OSD, the Agency did not identify any possible sub-options.

2.3.3. Analysis of impacts

The Regulation is already adopted and published, and as far as changes to TC are concerned, will become mandatory on 19 December 2016. The absence of dedicated AMC/GM to help applicants in applying the requirements will create additional burden on each affected stakeholder as well as on the Agency. Lack of guidance means that each time the new rules are applied, applicants will need to seek guidance from the Agency or will interpret the rule in such a way that might not be acceptable to the Agency. This leads to additional costs due to the need for additional discussions or negotiations between the applicants and the Agency.

Issuing dedicated AMC/GM will allow the applicants as well the Agency to avoid unnecessary administrative tasks which have no added value to safety.

2.3.4. Comparison and conclusion

The option of proposing this AMC/GM is the preferred one because the option of 'doing nothing' will lead to additional administrative burden and additional costs, whereas the option of issuing dedicated AMC/GM will help reducing those costs.

2.4. Overview of the proposed amendments

2.4.1. Amendments to Part-21

The amendments to Part-21 (as defined in Section 3.1) are not part of this NPA but were already included in NPA 2015-03 'Embodiment of Level of Involvement (LOI) requirements into Part-21'[8]. They are repeated here to provide a comprehensive overview of all amendments related to OSD changes.

In point 21.A.91, the word 'data' is deleted to prevent a circular logic. Since OSD is part of the TC, stating that 'a change to the TC would be minor if it has no appreciable effect on OSD' would be similar to stating that 'a change to the TC would be minor if it has no appreciable effect on the TC'.

The content of point 21.B.70 was not changed, but is proposed to be moved to the new point 21.B.107 as paragraph (c).

2.4.2. GM No 1 to 21.A.15(d) Clarification of the term 'as applicable'

Use of the term 'OSD constituent': in this GM, and in several others, the term 'element' or 'OSD element' is replaced by the term 'OSD constituent'. This was done to agree on a consistent terminology trying to avoid confusion with the use of the term 'element' carrying its normal dictionary meaning (see also GM No 4 to 21.A.15(d)). The term 'OSD constituent' is now exclusively used to indicate one of the five regulatory parts of OSD:

— Flight Crew Data,

— Simulator Data,

— Cabin Crew Data,

[8] http://www.easa.europa.eu/system/files/dfu/NPA%202015-03.pdf

— Maintenance Certifying Staff Data, and

— MMEL.

The term 'element' is still used with its normal dictionary meaning also for other parts of the OSD as captured under point 21.A.15(d)(6) and explained in GM No 1 to 21.A.15(d)(6).

Furthermore, some minor improvements are introduced in this GM.

2.4.3. GM No 2 to 21.A.15(d) Determination of type or variant

The term 'OSD element' is replaced by 'OSD constituent'.

2.4.4. GM No 3 to 21.A.15(d) OSD content

The term 'OSD element' is replaced by 'OSD constituent'.

2.4.5. GM No 4 to 21.A.15(d) Scope of operational suitability data

The term 'OSD element' is replaced by 'OSD constituent'.

Additional explanation is added regarding the possible content of OSD constituents.

The previous paragraph (b) is deleted and replaced by the dedicated GM No 1 to 21.A.15(d)6 (see below).

2.4.6. GM No 1 to 21.A.15(d)6 Other type-related operational suitability elements

During the rulemaking activity leading to the introduction of OSD in Part-21, the Agency acknowledged that in addition to the five defined OSD constituents there may be other data which could qualify as OSD when it is important for the operational suitability of the aircraft type not included in the type design and specific to that aircraft type. That was the reason for adding the provision in 21.A.15(d)6. However, at the time of the said rulemaking activity no clear examples of the additional elements were established. Practical cases will be handled by the Agency on an ad hoc basis; the proposal for additional OSD can be included in the application at the request of the applicant and the Agency will decide if it meets the criteria that are now elaborated in the GM and can be included in the approved OSD. The Agency will use these cases to establish more guidance for future applicants, to be shared with stakeholders initially through Frequently Asked Questions or a Certification Memorandum.

2.4.7. GM to 21.A.21(f), 21.A.23(b) and 21.A.103(a)4 Approval of OSD

The term 'OSD element' is replaced by 'OSD constituent'.

The GM is improved to better explain the case where not all OSD constituents are ready at the time of issuing the TC. The OSD constituents that are ready will be approved under the TC, and the other ones can be added at a later stage. Until all applicable OSD constituents are included in the TC, the Agency may define limitations or restrictions in the Type Certificate Data Sheets (TCDS) for the use of the aircraft. The already included and approved OSD constituents can be used by operators or training organisations.

The GM now also explains the case where certain OSD constituents can be agreed by the Agency for provisional use by operators or training organisations before they are formally approved under the TC. For example, this will allow an operator to train its pilots before the new aircraft type enters into service with a high degree of certainty that this training will also comply with the final OSD.

2.4.8. GM to 21.A.90A Scope

This GM now explains the consequences of the amendments to Part-21, as introduced by Commission Regulation (EU) No 69/2014, regarding the use of the term 'change to type certificate' instead of 'change to type design'. The new term clarifies that changes to all parts of a TC can and must be approved in accordance with Part-21 Subpart D or E.

2.4.9. GM 21.A.91 Classification of changes to type certificate

This GM is amended to include also the classification of changes to OSD into the overall classification of changes into minor and major.

The new section 3.5 introduces specific guidance for the classification of changes to the OSD constituents. All OSD constituents have specific guidance except the constituent 'Maintenance Certifying Staff Data'. The relevant paragraph is reserved. This paragraph will be completed by RMT.0106 (21.039(e)), which will also produce CS-MCSD. The Agency considers that it is impossible to establish criteria for the classification of changes to an OSD constituent for which the necessary CS is not yet available. RMT.0106 (21.039(e)) is planned to produce a Decision by 2018.

The proposed classification criteria are different in nature from the criteria for classifying classic airworthiness changes. This is due to the fact that the OSD CSs are more procedural in nature without containing technical standards.

It should also be noted that the criteria for the classification of changes in minor and major will mostly be used by DOA holders who will determine the exact approval route of these changes. Therefore, the criteria in the GM are general and it is expected that the DOA holders will develop their own criteria, based on those provided in the GM.

The existing Appendix A to GM 21.A.91 (Examples of Major Changes per discipline) as well as the flow chart remain unchanged.

2.4.10. GM No 1 to 21.A.93(c) Interaction of changes to the type design and changes to operational suitability data

This new GM provides guidance for determining when a change to type design is expected to have an impact on OSD. When an impact on OSD is established, the application for approval of the change needs to be complemented by the necessary change to the OSD. One important piece of guidance is that design changes that are classified minor are considered not to have an impact on OSD. These changes can then be approved as before without any further consideration of OSD. For major design changes, a table with examples is included.

Paragraphs (d) and (e) explain that in most cases a design change cannot trigger the need to add an OSD constituent when it was not part of the TC before the change.

The guidance is applicable to all OSD constituents except MMEL for which a dedicated GM is proposed.

2.4.11. GM No 2 to 21.A.93(c) Interaction of changes to the type design with changes to MMEL

The purpose of this GM is the same with that of the previous one, except that this one is dedicated to the OSD constituent MMEL. Due to the alleviative nature of MMEL, in many cases there is no immediate need to change the MMEL when a design change is proposed for approval. If a new piece of

equipment is introduced through a change to design, the possible MMEL relief for that equipment can be treated as a stand-alone OSD change.

However, there can also be design changes that do have an impact on the MMEL and necessitate an immediate change to the MMEL that has to be considered as a change associated with the design change.

All this is explained in the GM with a flow chart to further illustrate the concept.

2.4.12. GM No 1 to 21.A.101(g) Establishment of the operational suitability data certification basis of changed type certificates

This GM provides guidance for establishing the OSD certification basis for changes to the TC.

The guidance is based on a few, simple principles and is aimed to allow easy and straightforward application of point 21.A.101 to OSD changes. The result of the guidance is that most OSD changes do not need to comply with the latest amendment of the CS. This is considered to be in line with the principles of 21.A.101 because of the different nature of the relevant CSs as compared to regular airworthiness CSs: OSD CSs do not contain detailed technical standards, but instead they prescribe the methods for establishing the OSD. Therefore, the Agency expects that OSD CSs will not change very often and the application of 21.A.101, whose aim is to apply the latest standard to changed products, is less relevant than for CSs that contain detailed technical standards and change frequently (such as CS-25).

2.4.13. GM to 21.A.103 and 21.B.70 Approval of changes to type certificates

This new GM explains two aspects of the approval of changes to TCs.

It explains that the requirement for a separate classification and approval process is mainly applicable to stand-alone OSD changes.

It confirms that the various parts of one change to a TC ultimately have to be approved under one approval, but it also explains how a DOA holder can benefit from separating the classification of OSD changes from design changes. This NPA contains two versions of the GM, acknowledging the ongoing RMT that will introduce the Level of Involvement (LOI) concept in Part-21. The NPA for this task (NPA 2015-03 (RMT.0262 (MDM.060))) was published on 2 March 2015 and will produce an Opinion to be submitted to the European Commission in 2016/Q1. Normally, the Regulation will be amended in 2016/Q4.

The first version of the GM is based on the current Part-21, explaining how the DOA holder can take credit of a separate classification process for OSD changes associated with a design change. This is the version that will be introduced in the related Decision following this NPA.

The second version of the GM is based on the text of Part-21 after incorporating the LOI concept. This version will be included in the AMC/GM package for LOI and will be published as soon as Part-21 is amended.

2.4.14. AMCs to 21.A.263

— AMC No. 1 to 21.A.263(c)(1) Procedure for the classification of changes to type certificate and repairs as minor and major

— AMC No. 2 to 21.A.263(c)(1) Privileges - Organisations designing minor changes to a type certificate or minor repairs to products: classification procedure

— AMC No. 1 to 21.A.263(c)(2) Procedure for the approval of minor changes to a type certificate or minor repairs

— AMC No. 2 to 21.A.263(c)(2) Privileges - Organisations designing minor changes to a type certificate or minor repairs to products: procedure for the approval of minor changes to a type certificate or minor repairs

These AMCs are amended to reflect the changes to Part-21 that were introduced with Commission Regulation (EU) No 69/2014. Furthermore, the language is adapted to the nature of AMC.

3. Proposed amendments

The text of the amendment is arranged to show deleted text, new or amended text as shown below:

(a) deleted text is marked with ~~strike through~~;

(b) new or amended text is highlighted in grey;

(c) an ellipsis (…) indicates that the remaining text is unchanged in front of or following the reflected amendment.

3.1. Draft Regulation (Draft EASA Opinion)

The following amendments to Part-21 are already included in NPA 2015-03 'Embodiment of Level of Involvement (LOI) requirements into Part-21'.

1. Deletion of the word 'data' in 21.A.91 as follows:

21.A.91 Classification of changes to a type certificate

Changes to a type certificate are classified as minor and major. A 'minor change' is one that has no appreciable effect on the mass, balance, structural strength, reliability, operational characteristics, noise, fuel venting, exhaust emission, operational suitability ~~data~~ or other characteristics affecting the airworthiness of the product. Without prejudice to point 21.A.19, all other changes are 'major changes' under this Subpart. Major and minor changes shall be approved in accordance with points 21.A.95 or 21.A.97 as appropriate, and shall be adequately identified.

2. The content of 21.B.70 'Approval of changes to type certificates' is moved to 21.B.107(c) as follows:

21.B.107 Issue of an approval of a change to a type certificate

(…)

(c) The approval of the changes to the operational suitability data is included in the approval of the change to the type certificate. However, the Agency shall use a separate classification and approval process for administering changes to operational suitability data.

(…)

3.2. Draft Acceptable Means of Compliance and Guidance Material (Draft EASA Decision)

1. GM No 1 to 21.A.15(d) is amended as follows:

GM No 1 to 21.A.15(d) Clarification of the term 'as applicable'

The term 'as applicable' indicates that not all ~~elements~~ OSD constituents as listed in 21.A.15(d)(1) through (~~6~~5) are always part of the OSD.

For example, when the operational rules do not require cabin crew for an aircraft with a certain number of passenger seats, the ~~element~~OSD constituent of (d)(4) is not required for the OSD of this aircraft. Another example is that a minimum syllabus for pilot type rating training is not required if the aircraft is in a class rating.

If a new aircraft type is considered a variant for licensing purposes a full syllabus for type rating training is not required, but the applicant can suffice with the syllabus for differences training.

Most of the OSD ~~elements~~constituents are not applicable to aircraft in the category 'other-than-complex motor-powered'. In more detail:

— The requirement to produce minimum syllabi for type rating training of pilots is only applicable when the aircraft has a type rating. By default, most small aircraft will be in a class rating.

However, the Agency can decide that a type rating is necessary due to performance, design or other features that require specific training. For most small aircraft this is not the case and they will be in a class rating. Whether a new aircraft type should have a type rating or can be in a class rating will be part of the OSD approval process and finally will be decided by the Agency. The assessment is based on objective criteria which are included in the Certification Specifications for the related OSD ~~element~~constituent. When no individual type rating is required for the aircraft, it means that the relevant OSD ~~elements~~constituents are not required. Nevertheless, on a voluntary basis, the applicant can always provide a minimum syllabus for type training to be approved under OSD.

— The requirement to produce minimum syllabi for type rating training of maintenance certifying staff is only applicable for the aircraft required to have a type rating training, which are the aircraft in Group 1 as per Annex III of ~~(EC)~~ Regulation (EC) No 2042/2003 (point 66.A.5). When no individual type rating training is required for the aircraft, it means that the relevant OSD ~~elements~~constituents are not required. Nevertheless, on a voluntary basis, the applicant can always provide a minimum syllabus for type training to be approved under OSD.

— Simulator data is only required when the syllabus for pilot type rating training includes the use of full flight simulators. This is typically not the case for most small aircraft.

— The type-specific data for cabin crew training is only required when the operational rules require cabin crew for the maximum approved passenger seating capacity. Currently, cabin crew is required for aircraft with a maximum approved passenger seating configuration of more than 19. Small aircraft do not have this number of passenger seats.

— The requirement to establish an ~~M~~MEL is applicable to all complex motor-powered aircraft and to all aircraft that can be used for commercial operations ~~since the relevant operators must have MELs for those aircraft~~. This means that also for other-than-complex aircraft type certificate or restricted type certificate an MMEL will be required. However, in order to minimise the burden ~~for the~~ on TC and STC applicants, the following applies:

  • For other-than-complex aeroplanes excluding very light aeroplanes (VLA), light sport aeroplanes (LSA) and powered sailplanes, generic MMELs by means of a dedicated CS are established by the Agency. The TC or STC applicant for an aircraft or change to an aircraft within that category can suffice with identifying the items of the generic MMEL that are appropriate for its design. This does not preclude that the applicant may elect to develop a type-specific MMEL, using CS-MMEL.

  • For very light aeroplanes (VLA), light sport aeroplanes (LSA), very light rotorcraft (VLR), sailplanes, powered sailplanes, balloons and ELA2 airships, the Agency considers that the list of required equipment as included in the TCDS and/or AFM/POH, in combination with equipment required for the flight by the associated implement rules, such as operational requirements, airspace requirements and any other applicable requirements to the intended operation, establishes the list of equipment that must be operative for all flights. Other equipment may be inoperative and this constitutes the MMEL. Design approval applicants for these aircraft are, therefore, not required to establish an MMEL.

2. GM No 2 to 21.A.15(d) is amended as follows:

GM No 2 to 21.A.15(d) Determination of type or variant

The criteria for the determination whether an aircraft with a new type certificate (TC) is considered a new type or is a variant with reference to another aircraft type from the same TC holder for the purpose of the specific OSD ~~element~~constituent~~,~~ are provided in the applicable certification specifications for maintenance certifying staff data, flight crew data and cabin crew data.

3. GM No 3 to 21.A.15(d) is amended as follows:

GM No 3 to 21.A.15(d) OSD content

The OSD will typically consist of elements that are required to be included by the TC applicant and elements that can be added at the request of the TC applicant. (See also GM No 4 to 21.A.15(d)).

Both the required elements and the additional elements will have a part that is mandatory to be used by the operator or training organisation (status of rule) and a part which is not mandatory to the operator or training organisation (status of AMC). For illustration of this concept, ~~the below F~~figure 1 below is included.

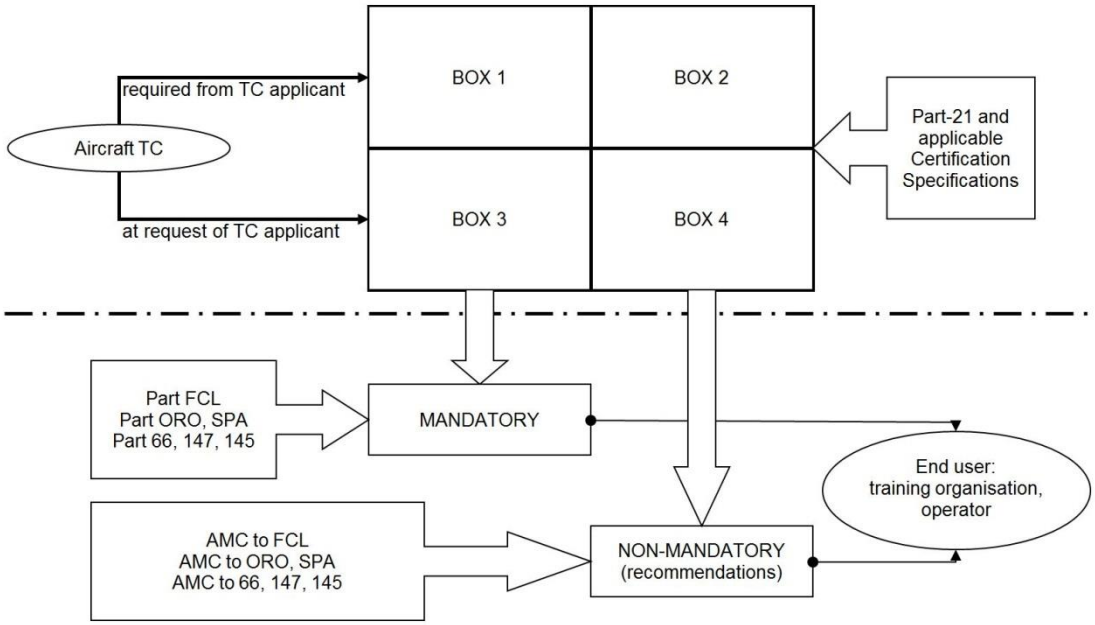


Figure 1: OSD boxes concept

Box 1: required from TC holder; mandatory for end-users.

Box 2: required from TC holder; not mandatory (recommendations) for end-users.

Box 3: at request of TC holder; mandatory for end-users.

The TC applicant may wish to apply for the approval of differences training between variants or types to reduce training, checking or currency requirements for operations of more than one type or variant. This is regarded as an optional element in addition to the required elements of Box 1 and 2.

Box 4: at request of TC holder; not mandatory (recommendations) for end-users.

The exact content of the four boxes in the above figure is determined by the certification specification that is applicable to the specific ~~element~~OSD constituent or the special condition in case of an 'other type-related operational suitability element'.

The status the data will have on the side of the operator or training organisation should be indicated in the OSD by segregating the data in a section called 'Mandatory' and a section called 'Non-mandatory (recommendations)'.

4. GM No 4 to 21.A.15(d) is amended as follows:

GM No 4 to 21.A.15(d) Scope of operational suitability data

~~(a)~~ In the application-extension for approval of operational suitability data, the TC applicant may apply for the approval of different types of operations. If the aircraft is certificated for certain types of operations (e.g. ETOPS, RNP, LVO), the impact on the ~~elements~~ OSD constituents of 21.A.15(d) should be addressed.

The five defined OSD constituents are listed in 21.A.15(d)(1) through (5). As explained in GM No 1 to 21.A.15(d), they may not be all applicable to all aircraft types. The content of each of the OSD constituent is defined in the relevant Certification Specification and will be approved under a type certificate, supplemental type certificate or change to those certificates.

As explained in GM No 3 to 21.A.15(d), each OSD constituent can have a part that is mandatory for the end-user (operator, training organisation, etc.) and a part that is not mandatory (recommendation) for the end-user. However, both the mandatory and the non-mandatory part together are the OSD constituent. Furthermore, the OSD constituent always includes the portion required from the TC/STC applicant as specified in the CS and may include additional portions at the request of the TC/STC applicant, but still as defined in the CS.

~~(b) Under the term 'Other type-related operational suitability elements' of 21.A.15(d)(6) there are several possibilities for including elements in the OSD at the request of the TC applicant in addition to the required elements. These additional elements should be linked to one of the required elements or should concern the operational suitability of the aircraft type.~~

5. A new GM No 1 to 21.A.15(d)6 is added as follows:

GM No 1 to 21.A.15(d)6 Other type-related operational suitability elements

During the rulemaking activity leading to the introduction of OSD in Part-21, the Agency acknowledged that in addition to the five defined OSD constituents there may be other data which could qualify as OSD when it is important for the operational suitability of the aircraft type not included in the type design and specific to that aircraft type.

That was the reason for adding the provision in 21.A.15(d)6.

The term 'element' as used in 'other type-related operational suitability elements' carries its normal dictionary meaning, i.e. part, portion, component, etc.

In order to qualify as 'other type-related operational suitability element', the following conditions apply:

— it should concern data (not the approval of equipment);
— the data should be type-specific (not generally applicable to different types of aircraft);
— the data is not already part of the 'classic' part of the type certificate (such as ICA, AFM, etc.);
— the data is important for the safe operation of the aircraft type;
— conditions/criteria for the approval of the data can be established.

The other type-related operational suitability elements can only contain data that is not mandatory for the end-users unless they are covered by one of the existing requirements in Regulations (EU) No 965/2012, No 1178/2011 or No 1321/2014 referring to OSD approved in accordance with Part-21.

If data can be included in one of the five defined OSD constituents, it does not qualify as an additional operational suitability element under 21.A.15(d)6. For example, the pilot training necessary to

introduce an Electronic Flight Bag (EFB) can be included in the OSD constituent Flight Crew Data, and is not considered an additional operational suitability element.

6. GM to 21.A.21(f), 21.A.23(b) and 21.A.103(a)(4) is amended as follows:

GM to 21.A.21(f), 21.A.23(b) and 21.A.103(a)(4) Approval of OSD

It is acknowledged that it may not always be possible to have the operational suitability data available on~~at~~ the date of the issue~~ance~~ of the type certificate (TC), change approval or STC. The derogation provided by points 21.A.21(f), 21.A.23(b) and 21.A.103(a)(4) are intended for that case. The TC, change approval or STC can be issued before compliance with the operational suitability data certification basis has been ~~shown~~demonstrated, provided the applicant declares the date that the OSD will be available. The OSD should be approved before the data must be used by a training organisation for the purpose of obtaining a European Union licen~~c~~se, rating or attestation, or by an EU operator. This is normally done ~~at the~~ upon entry into service of the first aircraft by an EU operator but could also be later for some of the ~~elements~~OSD constituents, such as the data for simulators, which should only be available when a simulator has to be qualified.

However, there may be a need to make one or several OSD ~~elements~~constituents available before the entry into service~~, or even before the TC is issued~~. For example, there may be a need to start training activities before all ~~elements~~OSD constituents contained in the OSD application can be approved. Making use of the derogation of point 21.A.21(f), 21.A.23(b) or 21.A.103(a)(4), the relevant OSD constituent can be approved under the TC, change approval or STC, the use of which can then be limited to specific purposes.

There may, in some specific cases, even be a need to make provisional OSD available before the TC (or STC) is issued. ~~Therefore~~ In such cases, before the availability of a complete and fully compliant OSD, the Agency can ~~certify~~ confirm partial compliance of only one or several provisional OSD ~~elements~~constituents~~under the TC, change approval or STC, the use of which can then be limited to specific purposes~~.

7. GM to 21.A.90A is amended as follows:

GM to 21.A.90A Scope

~~In case of changes to operational suitability data, the term 'changes' includes amendments, deviations, additions and supplements.~~

The term 'changes to the type certificate' is consistently used in Subpart D and E of Part-21, as well as in its AMCs and GMs. This term does not refer to changing the document that reflects the type certificate but to the concept of type certificate as defined in 21.A.41. It means that the processes for approval of changes as described in these two Subparts do not only apply to changes to the type design, but also to changes to:

— the operating limitations;

— the type certificate data sheet for airworthiness and emissions;

— the applicable type-certification basis and environmental protection requirements with which the Agency records compliance;

— any other conditions or limitations prescribed for the product in the applicable certification specifications and environmental protection requirements;

— the applicable operational suitability data certification basis;

— the operational suitability data; and

— the type certificate data sheet for noise.

8. GM 21.A.91 is amended as follows:

GM 21.A.91 Classification of changes to type ~~design~~certificate

1. PURPOSE OF CLASSIFICATION

Classification of changes to a type ~~design~~ certificate into MAJOR or MINOR is to determine the approval route to be followed in Part-21 Subpart D, i.e., either 21.A.95 or 21.A.97, or alternatively whether application and approval has to be made in accordance with Part-21 Subpart E.

2. INTRODUCTION

2.1 21.A.91 proposes criteria for the classification of changes to a type ~~design~~ certificate as minor and major.

(~~i~~a) This GM is intended to provide guidance on the term 'appreciable effect' affecting the airworthiness of the product or affecting any of the other characteristics mentioned in ~~from~~ 21.A.91, where 'airworthiness' is interpreted in the context of a product in conformity with type design and in condition for safe operation. It provides complementary guidelines to assess a ~~design~~ change to the type certificate in order to fulfil the requirements of 21.A.91 and 21.A.117 where classification is the first step of a procedure.

Note: For classification of Repairs see GM 21.A.435.

(~~ii~~b) Although this GM provides guidance on the classification of major changes, as opposed to minor changes as defined in 21.A.91, the GM and 21.A.91 are deemed entirely compatible.

2.2 For an ETSO authorisation, 21.A.611 gives specific additional requirements for design changes to ETSO articles.

For APU, this GM should be used.

3. ASSESSMENT OF A ~~DESIGN~~ CHANGE FOR CLASSIFICATION

3.1 Changes to the type ~~design~~certificate

~~21.A.31 defines what constitutes the type design. Alteration to any of the data included within the scope of 21.A.31 is considered a change to the type design.~~

21.A.91 addresses changes to all aspects of a type certificate. This includes changes to type design as defined in 21.A.31 as well as the other constituents of a type certificate as defined in 21.A.41. This GM provides guidance on changes to the type design and changes to the operational suitability. A change to a type certificate can include a change to the type design and/or a change to the operational suitability data.

3.2 Separate classification for type design and OSD

Although in the end the change to the type certificate, which includes a change to type design and a change to OSD, will have only one classification, it will be possible to classify the different components of the change independently. This will facilitate the approval of a major change with no verification by the Agency of the OSD component if the change to OSD is considered minor (see also GM to 21.A.103).

3.~~2~~3 Classification Process (see attached diagram)

21.A.91 requires all changes to be classified as either major or minor, using the criteria of 21.A.91 and the complementary guidance of paragraph 3.~~3~~4.

On some occasions, the classification process is initiated at a time when some data necessary to make a classification decision are not yet available. Therefore, the applicant should wait for availability of data before making a decision.

Wherever there is doubt as to the classification of a change, the Agency should be consulted for clarification.

When the strict application of the paragraph 3.~~3~~4 criteria results in a major classification, the applicant may request re-classification, if justified, and the Agency could take the responsibility in re-classifying the change.

A simple design change planned to be mandated by an airworthiness directive may be re-classified minor due to the involvement of the Agency in the continued airworthiness process.

Reasons for a classification decision should be recorded.

3.~~3~~4 Complementary guidance for classification of changes~~.~~

A change to the type ~~design~~ certificate is judged to have an 'appreciable effect on the mass, balance, structural strength, reliability, operational characteristics, noise, fuel venting, exhaust emission, operational suitability or other characteristics affecting the airworthiness of the product' and, therefore should be classified major, in particular but not only, when one or more of the following conditions are met:

(~~i~~a) Where the change requires an adjustment of the type-certification basis or the operational suitability data certification basis (~~such as~~ special conditions or equivalent safety findings~~, elect to comply, earlier certification specification (reversion), later certification specification~~) other than elect to comply with later certification specifications.

(~~ii~~b) Where the applicant proposes a new interpretation of the certification specifications used for the ~~type~~ type-certification basis or the operational suitability data certification basis that has not been published as AMC material or otherwise agreed with the Agency.

(~~iii~~c) Where the demonstration of compliance uses methods that have not been previously accepted as appropriate for the nature of the change ~~to the product or for similar changes to other products designed by the applicant~~.

(~~iv~~d) Where the extent of new substantiation data necessary to comply with the applicable certification specifications and the degree to which the original substantiation data has to be re-assessed and re-evaluated is considerable.

(~~v~~e) The change alters the Airworthiness Limitations or the Operating Limitations.

(~~vi~~f) The change is made mandatory by an airworthiness directive or the change is the terminating action of an airworthiness directive (ref. 21.A.3B). See N~~n~~ote 1.

(~~vii~~g) Where the design change introduces or affects functions where the failure effect is classified catastrophic or hazardous.

Note 1: The ~~design~~ change previously classified minor and approved prior to the airworthiness directive issuance decision needs no re-classification. However, the Agency retains the right to review the change and re-classify/re-approve if found necessary.

Note 2: The~~se~~ above conditions are an explanation of the criteria noted in 21.A.91.

For an understanding of how to apply the above conditions it is useful to take note of the examples given in Appendix A to GM 21.A.91.

3.5 Complementary guidance for the classification of changes to OSD

This paragraph provides firstly general guidance for minor OSD change classification, and secondly additional guidance specific to each OSD constituent.

Changes to OSD are considered minor when they:

— incorporate optional information (representing improvements/enhancements);

— provide clarifications, interpretations, definitions or advisory text; or

— do not change the intent of the OSD document, e.g. changes to:

- titles, numbering, formatting, applicability;
- order, sequence, pagination;
- sketches, figures; or
- to correct errors.

Given the structure and individual intent of the separate OSD constituents, the interpretation of 'appreciable' is also affected by the specific nature of the applicable Certification Specifications (CS) for that constituent. Therefore, specific guidance for each of the OSD constituents is provided here.

(a) Master Minimum Equipment List (MMEL)

(1) A change to the MMEL is judged to have an 'appreciable effect on the operational suitability of the aircraft' and, therefore, should be classified major, in particular but not only when one or more of the following conditions are met:

(i) Where the change requires an adjustment of the operational suitability data certification basis.

(ii) Where the applicant proposes changes to the means of compliance with the requirements used for the operational suitability data certification basis (i.e. MMEL safety methodology).

(iii) Where the extent of substantiation data and the degree to which the substantiation data has to be assessed and evaluated is considerable, in particular but not only when:

(A) the substantiation data involving the review of failure conditions that are classified hazardous or catastrophic has to be evaluated;

(B) the assessment of the failure effects (including next worst failure/event effects) on crew workload and the applicable crew procedures has to be evaluated; or

(C) the capability of the aircraft to perform types of operation (e.g. ETOPS, IFR) under MMEL is extended.

(2) A change to the MMEL is judged not to have an 'appreciable effect on the operational suitability of the aircraft' and, therefore, should be classified minor, in particular but not only when one or more of the following conditions are met:

Modifications to an existing item:

(i) The change only corresponds to the applicability of an item for configuration management purposes.

(ii) The change corresponds to the removal of an item.

(iii) The change corresponds to the increase in the number of items required for dispatch.

(iv) The change corresponds to a reduction in the rectification interval of an item.

Addition of a new item when:

(v) it is considered as non-safety-related (refer to CS-MMEL, GM2 MMEL.110); or

(vi) it is indicated as eligible for minor change classification in Appendix 1 to GM1-CS-MMEL-145.

(b) Flight Crew Data (FCD)

(1) FCD change related to change to the type design

Classification of the FCD change in minor or major should use the method of CS-FCD Subpart D.

(i) An analysis should be performed to assess the change impact on the FCD through the allocation of difference levels realised with Operator Difference Requirement (ODR) tables as per CS FCD.400. In this case the base aircraft is the aircraft without the type design change, whereas the candidate aircraft is the aircraft which includes the type design change.

(A) If no more than level B difference is assigned for training, checking and currency for the candidate aircraft, the related FCD change should be classified minor.

(B) If a difference level C, D or E for training, checking and currency is assigned to the candidate aircraft, the related FCD change should be classified major.

(ii) Notwithstanding the above, the change to FCD should be classified major when a T2 test is found necessary by the applicant to confirm that the aircraft with the type design change is not a new type for pilot type rating.

(2) Stand-alone changes to FCD are not related to any type design changes. They may be triggered for example by in-service experience or by the introduction of data at the request of the applicant after type certification.

(i) Introduction of credits in training, checking or currency should be classified major. Example: addition of further differences training, common take-off and landing credits, etc.

(ii) Stand-alone changes to FCD that correspond to a change of the intent of a data should be classified major. Example: addition of a Training Area of Special Emphasis (TASE) or prerequisite, expansion of a TASE.

(iii) Stand-alone changes to FCD that correspond to editorial change or corrections should be classified minor. Example: wording change of a TASE for the purpose of clarity due to in-service feedback.

(c) Cabin Crew Data (CCD)

(1) OSD change related to change to the type design

Classification of the OSD CCD change in minor or major should use the method from CS-CCD Subpart B.

(i) An analysis should be performed to assess the change impact on the OSD CCD through the identification of the difference and its impact on operation in the Aircraft Difference Table (ADT) as per CS CCD.200. In this case the base aircraft is the aircraft without the type design change, whereas the candidate aircraft is the aircraft which includes the type design change.

(A) If the difference has no impact on the operation of an element of the ADT for the candidate aircraft, the related OSD CCD change should be classified minor.

(B) If the difference has an impact on the operation of an element of the ADT for the candidate aircraft, the related OSD CCD change should be classified major.

(ii) Notwithstanding the above, the change to OSD CCD should be classified major when an ADT analysis is found necessary by the applicant to confirm that the aircraft with the type design change is not a new type for cabin crew.

(2) Stand-alone changes to OSD CCD are not related to any type design changes. They may be triggered for example by in-service experience or by the introduction of data at the request of the applicant after type certification.

(i) Introduction of additional CCD should be classified major. Example: addition of further CASE.

(ii) Stand-alone change to OSD CCD that corresponds to a change of the intent of data should be classified major. Example: expansion of a CASE.

(iii) Stand-alone change to OSD CCD that corresponds to editorial change or corrections should be classified minor. Example: wording change of type-specific data for the purpose of clarity due to in-service feedback.

(d) Simulator Data (SIMD)

(1) A change to the SIMD should be classified major, in particular but not only when one or more of the following conditions are met:

(i) When a change to the SIMD introduces validation source data from an engineering platform where the process to derive such data has not been audited by the Agency in the initial SIMD approval; or

(ii) When the process to derive validation source data from an engineering platform is changed.

(2) A change to the SIMD could be classified minor, in particular but not only when one or more of the following conditions are met:

(i) Changes to engineering validation data independent of the aircraft due to improvements or corrections in simulation modelling (e.g. aerodynamics, propulsion);

(ii) Configuration changes to the aircraft where the process to derive validation source data from an engineering platform is unchanged;

(iii) Changes to validation source data by using better, more applicable flight test data; or

(iv) Editorial changes to the Validation Data Roadmap (VDR).

(e) Maintenance Certifying Staff Data (MCSD)

[Reserved]

Appendix A to GM 21.A.91: Examples of Major Changes per discipline

The information below…

(…)

9. A new GM No. 1 to 21.A.93(c) is added as follows:

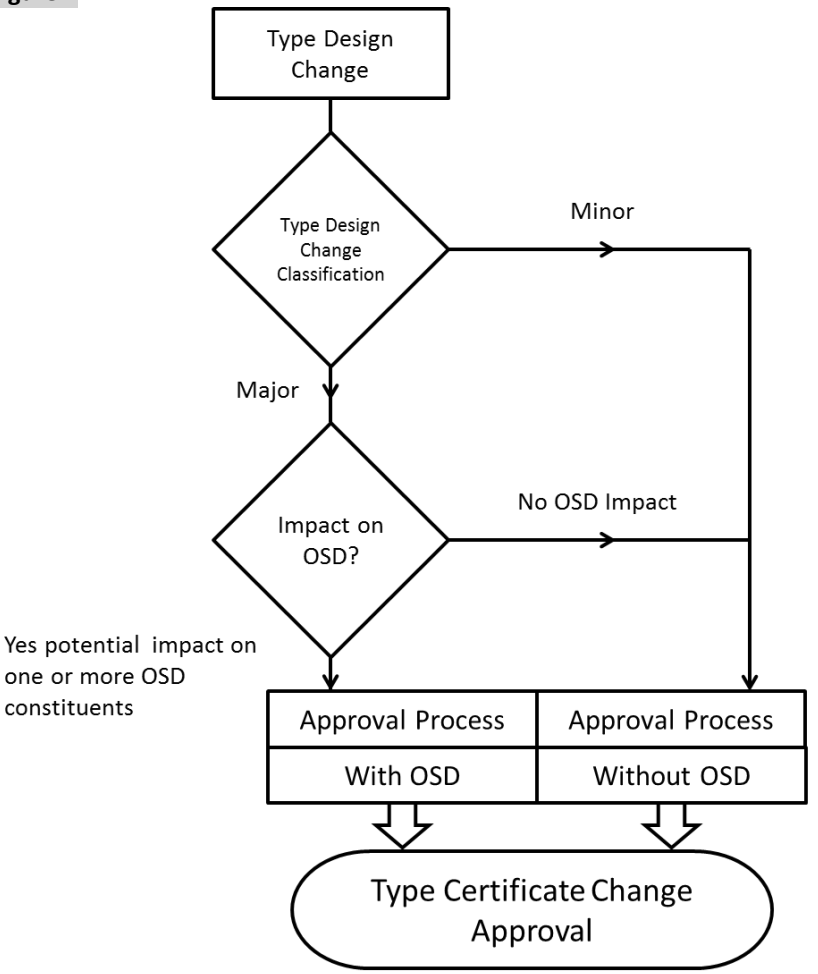
GM No. 1 to 21.A.93(c) Interaction of changes to the type design and changes to operational suitability data

In general, it has to be assumed that changes to the type design can have an effect on the operational suitability data.

Due to the alleviative nature of the OSD constituent MMEL, the impact of design changes on MMEL can be treated differently from the impact on other OSD constituents. Therefore, a separate GM No. 2 to 21.A.93(c) is available to explain the interaction between design changes and MMEL. The following guidance is, therefore, only applicable to the other OSD constituents: Flight Crew Data, Cabin Crew Data, Simulator Data, and Maintenance Certifying Staff Data.

In assessing the interactions of the changes to the type design and the operational suitability data, the following can be taken into consideration (see Figure 1):

Figure 1



Note: The process for determining potential type design change impact on the OSD constituent MMEL is not captured in this graph.

(a) Changes to the type certificate that only include changes to the operational suitability data ('stand-alone' OSD changes) do not have an effect on the type design.

(b) Changes to the type certificate that only include a minor change to the type design ('stand-alone' type design changes) do not have an effect on the operational suitability data. No dedicated assessment of the effects of the minor type design change on the operational suitability data is needed in this case.

(c) Type certificate changes that only include a major type design change do not need to be assessed for their effect on the operational suitability data in case the experience of the applicant has demonstrated that similar changes do not to have an effect on the OSD. Examples of major type design changes and their expected effect on OSD elements are identified in Table 1 below.

Table 1: Examples of major type design changes and their expected impact on OSD constituents

Discipline	Example of major type design change	Expected impact on OSD constituent			
		FCD	SIMD	CCD	MCSD
Structure	(i) Changes such as a cargo door cut-out, fuselage plugs, change to dihedral, addition of floats.	No	No	No	tbd[9]
	(ii) Changes to material, processes or methods of manufacture or primary structural elements such as spars, frames and critical parts.	No	No	No	tbd
	(iii) Changes that adversely affect fatigue or damage tolerance or life-limit characteristics.	No	No	No	tbd
	(iv) Changes that adversely affect aeroelastic characteristics.	No	No	No	tbd
	(v) Aircraft weight changes such as Maximum Zero Fuel Weight (MZFW) changes or reduction in Maximum Take-Off Weight (MTOW) for operational considerations [new]	No	No	No	No
Cabin safety	(i) Changes which introduce a new cabin layout of sufficient change to require a reassessment of emergency evacuation capability or which adversely affect other aspects of passenger or crew safety in aeroplanes with more than 19 passenger seats.	No	No	Yes	No
	(ii) Changes which introduce new cabin layout of sufficient change to require a reassessment of emergency evaluation capability or which adversely affect other aspects of passenger or crew safety in aeroplanes with 19 or less passenger seats.	No	No	No (unless assessment identifies need for Cabin Crew Data)	No
	(iii) Installation of observer seat.	No	No	No	No
Flight	(i) Software changes that do not affect the pilot interface.	No	No	No	No
	(ii) Software changes that affect the pilot interface.	Yes	No	No	No
Systems	(i) Updating the aircraft Cockpit Voice Recorder (CVR) or Flight Data Recorder (FDR) to meet a later standard.	No	No	No	No
Propellers	(i) Changes to: — diameter	No	No	No	No

[9] To be determined under rulemaking task RMT.0106 (21.039(e)).

	— airfoil — planform — material — blade retention system				
Engines	(i) Power limit change	No	No	No	No
Rotors and drive systems	[Reserved]				
Environment	(i) A change that introduces either an increase in the noise certification level(s) or a reduction in the noise certification level(s) for which the applicant wishes to take credit.	No	No	No	No
Power plant installation	(i) Modifications to the fuel system and tanks (number, size, or configuration)	No	No	No	tbd
Avionics	Comprehensive flight deck upgrade, such as conversion from entirely federated, independent electromechanical flight instruments to highly integrated and combined electronic display systems with extensive use of software and/or complex electronic hardware	Yes	No	No	tbd

(d) If an OSD constituent was not required to be included in the 'catch-up' OSD in accordance with Article 7a.2 of Regulation (EU) No 748/2012, as amended by Regulation (EU) No 69/2014, no design change can trigger the need to add that constituent.

(e) Notwithstanding paragraph (d), when the design change makes an OSD constituent applicable (see GM No 1 to 21.A.15(d) Clarification of the term 'as applicable') where it was not applicable before, that OSD constituent should be added to the application for the approval of the change to the type certificate.

10. A new GM No. 2 to 21.A.93(c) is added as follows:

GM No. 2 to 21.A.93(c) Interaction of changes to the type design and changes to MMEL

In general, it has to be assumed that changes to the type certificate that affect the type design can have an effect on the MMEL. Due to its alleviative nature, the MMEL is developed to improve aircraft use, thereby providing a more convenient and economical air transportation for the public. Therefore, not introducing an MMEL relief for new equipment, system or function has no effect on the safe operation. The introduction of an MMEL relief for new equipment can, therefore, be treated as a stand-alone MMEL change, separately from the design change and can be processed at a later date than the design change approval. Not modifying an MMEL item whose validity is altered by a type design modification may, however, have an effect on the safe operation. The applicant for a change to the type certificate that changes the type design should, therefore, identify if this change needs to be supplemented by a change to the MMEL.

It may be assumed that a change to the type design does not affect the MMEL if any of the following conditions is fulfilled:

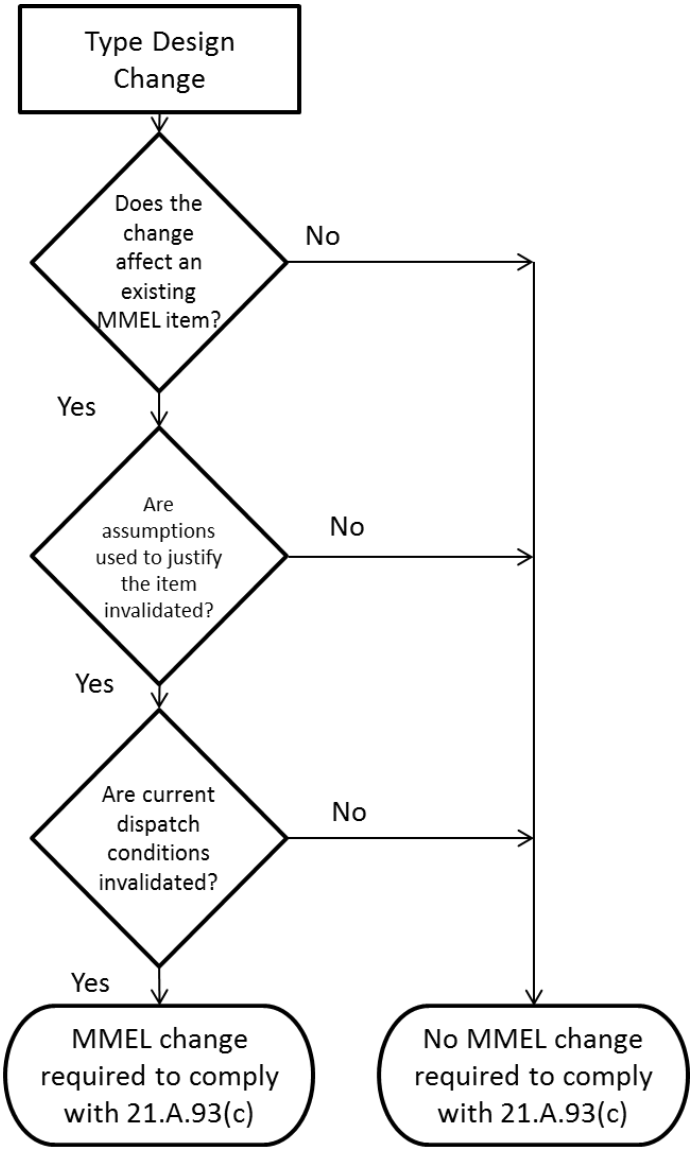
(a) The change does not affect an existing MMEL item: there is no change to equipment, system or function linked to an MMEL item, and no change to the operational limitations and procedures linked to an MMEL item. This is for example the case for the introduction of new equipment, system or function in the type design;

(b) The change does not invalidate the assumptions used to justify an existing MMEL item. This is for example the case if the change has no adverse impact on the qualitative and quantitative assessment used to justify an MMEL item; or

(c) The change does not invalidate any dispatch conditions of the MMEL. This is for example the case if the dispatch conditions do not need to be more restrictive, if the current intent of (o) or (m) procedures is not impacted.

The following diagram summarises the interaction between type design changes and changes to MMEL (see Figure 1).

Figure 1



11. A new GM No. 1 to 21.A.101(g) is added as follows:

GM No. 1 to 21.A.101(g) Establishment of the operational suitability data certification basis of changed type certificates

This GM provides guidance on the application of 21.A.101(g) in order to determine the applicable OSD certification basis in accordance with points 21.A.101(a), (b), (c), (d) and (f) for changes to the operational suitability data of type certificated aircraft.

1. Minor changes

Minor changes to the operational suitability data are automatically considered not significant under 21.A.101(b) and the existing operational suitability data certification basis is considered adequate for their approval under 21.A.95.

2. 21.A.101

a. If the design change that triggered the change to the OSD constituent is classified significant, the change to the OSD constituent should comply with the latest amendment of the applicable CS, unless the exceptions of 21.A.101(b)3 apply.

b. Stand-alone changes to an OSD constituent are considered non-significant.

c. When a new OSD constituent is added or required to be added, it should comply with the latest amendment of the applicable CS.

d. If changes to an OSD constituent should not comply with the latest amendment of the applicable CS in accordance with a., b., or c. above, the applicant can comply with an earlier amendment of the CS for this change to the OSD constituent. However, these earlier amendments may not precede the corresponding amendment of the CS for operational suitability data incorporated by reference in the type certificate.

e. Changed parts of OSD constituents are the parts of the OSD constituents that are proposed to be modified, amended or added.

f. In accordance with Article 7a(3) of Regulation (EU) No 69/2014, the Operational Evaluation Board (OEB) reports and Master Minimum Equipment Lists (MMEL) issued in accordance with the JAA procedures or by the Agency before the entry into force of Regulation (EU) No 69/2014 are deemed to constitute the operational suitability data approved in accordance with point 21.A.21(e) of Annex I (Part-21).

The original procedures, guidance material, Advisory Circular Joint (ACJ) and/or AMC (Advisory Material Joint (AMJ)) material that were used to establish the original documents (JAA/Agency MMEL or OEB report), are deemed to be the original certification basis for these documents.

g. 21.A.101(c) provides an exception from the requirements of 21.A.101(a) for a change to OSD of certain aircraft under a specified maximum weight. If an applicant applies for a change to OSD for an aircraft (other than rotorcraft) of 2 722 kg (6 000 lb) or less maximum weight, or for a non-turbine-powered rotorcraft of 1 361 kg (3 000 lb) or less maximum weight, the applicant can demonstrate that the changed OSD complies with the OSD certification basis incorporated by reference in the TC. The applicant can also elect to comply, or may be required to comply, with a later amendment. See also Chapter 4, Section 2 (GM No. 1 to 21.A.101) for specific guidance on this provision.

Note: Refer to GM No. 1 to 21.A.15(d) for applicability of OSD to aircraft other-than-complex motor-powered aeroplanes.

h. 21.A.101(d) provides for the use of special conditions, under 21.A.16B, when the proposed amendment of the applicable airworthiness code and any later amendment thereto do not provide adequate standards to the proposed change.

12. A new GM No. 1 to 21.A.103 and 21.B.70 is added as follows:

12.a. The interim version until the Level of Involvement (LOI) concept (according to NPA 2015-03) is included in Part-21:

GM No. 1 to 21.A.103 and 21.B.70 Approval of changes to type certificates

The requirement for the Agency in 21.B.70 is mainly addressing stand-alone changes to OSD. For such stand-alone changes there is a separate classification process (see GM 21.A.91) and the way to administer the changes depends on the extent of the change, but normally does not require an update of the TCDS. However, the requirement can also be applied to combinations of design changes and OSD changes.

Changes to Type Certificates (TCs) can comprise several interrelated changes to different components of the TC. For example, a change to the cockpit design may trigger a change to the flight crew data, being part of the Operational Suitability Data (OSD) and, therefore, included in the TC.

All interrelated changes should ultimately be approved together under a single approval. However, before issuing such a comprehensive approval, it is possible that different processes are used for the different parts of the change.

The complete change can be split up in changes to the type design and changes to the OSD. Both parts can be classified in minor or major separately (see GM 21.A.91). In case the change to type design is classified major, while the associated change to OSD is classified minor, the approved design organisation can propose to the Agency not to verify the classification and the minor OSD change itself in accordance with its privilege under 21.A.263(b)2 or 3. The Agency should then accept the OSD part of the change without further verification. Once it is satisfied that compliance is demonstrated for the change to type design, the Agency can then issue the complete change approval or Supplemental Type Certificate (STC).

12.b. The final version of the LOI concept as included in Part-21:

GM No. 1 to 21.A.103 and 21.B.107(c) Approval of changes to type certificates

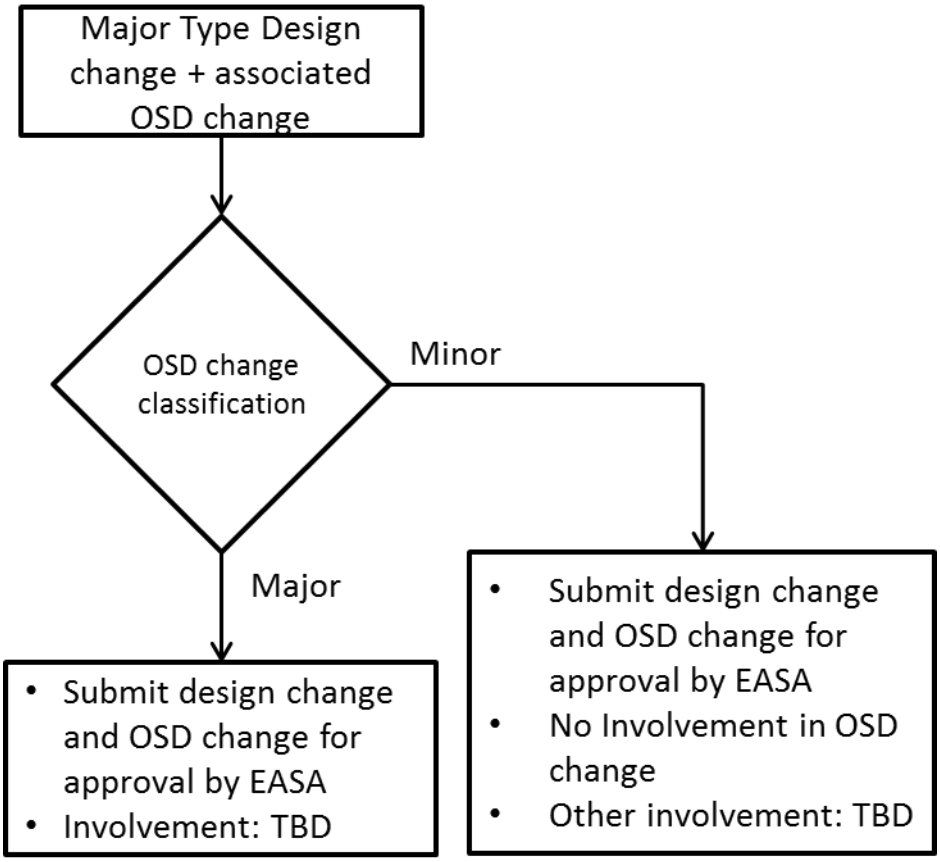
The requirement for the Agency in 21.B.107(c) is mainly addressing stand-alone changes to OSD. For such stand-alone changes there is a separate classification process (see GM 21.A.91) and the way to administer the changes depends on the extent of the change, but normally does not require an update of the TCDS. However, the requirement can also be applied to combinations of design changes and OSD changes.

Changes to Type Certificates (TCs) can comprise several interrelated changes to different components of the TC. For example, a change to the cockpit design may trigger a change to the flight crew data, being part of the Operational Suitability Data (OSD) and, therefore, included in the TC.

All interrelated changes should ultimately be approved together under a single approval. However, before issuing such a comprehensive approval, it is possible that different processes are used for the different parts of the change.

The complete change can be split up in changes to the type design and changes to the OSD. Both parts can be classified in minor or major separately (see GM 21.A.91). In case the change to type design is classified major, while the associated change to OSD is classified minor, the approved design organisation can propose to the Agency not to verify the classification and the minor OSD change itself as part of its proposal for the Level of Involvement by the Agency (see 21.A.15(b)7). The Agency should then accept the OSD part of the change without further verification. Once it is satisfied that compliance is demonstrated for the change to type design, the Agency can then issue the complete change approval or Supplemental Type Certificate (STC) (see Figure 1).

Figure 1



13. AMC No. 1 to 21.A.263(c)(1) is amended as follows:

AMC No. 1 to 21.A.263(c)(1) Procedure for the classification of changes to type ~~design~~ certificate and repairs as minor and major

1. INTENT

This A~~a~~cceptable M~~m~~eans of C~~c~~ompliance (AMC) provides the means to develop a procedure for the classification of changes to a type ~~design~~ certificate and repairs.

Each DOA applicant ~~must~~ should develop its own internal classification procedure following this AMC~~,~~ in order to obtain the associated privilege under 21.A.263(c)(1) ~~privilege~~.

2. PROCEDURE FOR THE CLASSIFICATION OF CHANGES TO A TYPE ~~DESIGN~~ CERTIFICATE AND REPAIRS

2.1 Content

The procedure ~~must~~ should address the following points:

- the identification of changes to a type ~~design~~ certificate or repairs,
- classification,
- justification of the classification,
- authorised signatories,
- supervision of changes to a type ~~design~~ certificate or repairs initiated by sub-contractors.

For changes to a type ~~design~~ certificate, the criteria used for the classification ~~must~~ should be in compliance with 21.A.91 and GM 21.A.91.

For repairs, the criteria used for the classification ~~must~~ should be in compliance with 21.A.435 and GM 21.A.435.

2.2 Identification of changes to a type ~~design~~ certificate or repairs

The procedure ~~must~~ should indicate how the following are identified:

- major changes to a type ~~design~~ certificate or major repairs;
- those minor changes to a type ~~design~~ certificate or minor repairs where additional work is necessary to demonstrate compliance with the CS and environmental protection requirements;
- other minor changes to a type ~~design~~ certificate or minor repairs requiring no further demonstration of compliance.

2.3 Classification

The procedure ~~must~~ should show how the effects on airworthiness, operational suitability and environmental protection are analysed, from the very beginning, by reference to the applicable requirements.

If no specific CS or environmental protection requirements are applicable to the change or repairs, the above review ~~must~~ should be carried out at the level of the part or system where the change or repair is integrated and where specific CS or environmental protection requirements are applicable.

2.4 Justification of the classification

All decisions of classification of changes to a type ~~design~~ certificate or repairs as 'major' or 'minor' ~~must~~ should be recorded and, for those which are not straightforward, also documented. These records ~~must~~ should be easily accessible to the Agency for sample check.

2.5 Authorised signatories

All classifications of changes to a type ~~design~~ certificate or repairs ~~must~~ should be accepted by an appropriate authorised signatory.

The procedure ~~must~~ should indicate the authorised signatories for the various products listed in the terms of approval.

For those changes or repairs that are handled by sub-contractors, as described under paragraph 2.6, it ~~must~~ should be described how the DOA holder manages its classification responsibility.

2.6 Supervision of changes to a type ~~design~~ certificate or repairs initiated by sub-contractors

The procedure ~~must~~ should indicate, directly or by cross-reference to written procedures, how changes to a type ~~design~~ certificate or repairs may be initiated and classified by sub-contractors and are controlled and supervised by the DOA holder.

14. AMC No. 2 to 21.A.263(c)(1) is amended as follows:

AMC No. 2 to 21.A.263(c)(1) Privileges - Organisations designing minor changes to a type ~~design~~ certificate or minor repairs to products: classification procedure

1. Content

   The procedure ~~must~~ should address the following points:

   - configuration control rules, especially the identification of changes to a type ~~design~~ certificate or repairs;
   - classification~~,~~ in compliance with 21.A.91 and GM 21.A.91 for changes and GM 21.A.435 for repairs;
   - justification of the classification;
   - authorised signatories.

2. Identification of changes to a type ~~design~~ certificate or repairs

   The procedure ~~must~~ should indicate how the following minor changes to a type ~~design~~ certificate or minor repairs are identified:

   - those minor design changes to a type ~~design~~ certificate or minor repairs where additional substantiation data is necessary to demonstrate compliance with the CS or environmental protection requirements;
   - other minor design changes to a type ~~design~~ certificate or minor repairs requiring no further demonstration of compliance.

3. Classification

   The procedure ~~must~~ should show how the effects on airworthiness, operational suitability and environmental protection are analysed, from the very beginning, by reference to the applicable requirements.

   If no specific requirements are applicable to the change or the repair, the above review ~~must~~ should be done at the level of the part or system where the change or repair is integrated and where specific CS or environmental protection requirements are applicable.

   For repair, see also GM 21.A.435.

4. Justification of the classification

   All decisions o~~f~~n classification of changes to a type ~~design~~ certificate or repairs as 'minor'~~.~~ ~~must~~ should be recorded and, for those which are not straightforward, also documented. These records ~~must~~ should be easily accessible to the Agency for sample check.

   It may be in the format of meeting notes or register.

5. Authorised signatories

   All classifications of changes to a type ~~design~~ certificate or repairs ~~must~~ should be accepted by an appropriate authorised signatory.

   The procedure ~~must~~ should indicate the authorised signatories for the various products listed in the terms of approval.

15. AMC No. 1 to 21.A.263(c)(2) is amended as follows:

AMC No. 1 to 21.A.263(c)(2) Procedure for the approval of minor changes to a type ~~design~~ certificate or minor repairs

1. INTENT

This A~~a~~cceptable M~~m~~eans of C~~c~~ompliance (AMC) provides the means to develop a procedure for the approval of minor changes to a type ~~design~~ certificate or minor repairs.

Each DOA applicant ~~must~~ should develop its own internal procedures following this AMC~~,~~ in order to obtain the associated privilege under 21.A.263(c)(2).

2. PROCEDURE FOR THE APPROVAL OF MINOR CHANGES TO A TYPE ~~DESIGN~~ CERTIFICATE OR MINOR REPAIRS

2.1 Content

The procedure ~~must~~ should address the following points:

- compliance documentation;
- approval under the DOA privilege;
- authorised signatories;
- supervision of minor changes to a type ~~design~~ certificate or minor repairs handled by sub-contractors.

2.2 Compliance documentation

For those minor changes to a type ~~design~~ certificate or minor repairs where additional work to demonstrate compliance with the applicable CS and environmental protection requirements is necessary, compliance documentation ~~must~~ should be established and independently checked as required by 21.A.239(b).

The procedure ~~must~~ should describe how the compliance documentation is produced and checked.

2.3 Approval under the DOA privilege

2.3.1 For those minor changes to a type ~~design~~ certificate or minor repairs where additional work to demonstrate compliance with the applicable CS and environmental protection requirements is necessary, the procedure ~~must~~ should define a document to formalise the approval under the DOA privilege.

This document ~~must~~ should include at least:

— identification and brief description of the change or repair and reasons for change or repair;

— applicable CS or environmental protection requirements and methods of compliance;

— reference to the compliance documents;

— effects, if any, on limitations and on the approved documentation;

— evidence of the independent checking function of the demonstration of compliance;

— evidence of the approval under the privilege of 21.A.263(c)(2) by an authorised signatory;

— date of the approval.

For repairs, see AMC 21.A.433(a).

2.3.2 For the other minor changes to a type ~~design~~ certificate or minor repairs, the procedure ~~must~~ should define a means to identify the change or repair and reasons for the change or repair, and to formalise its approval by the appropriate engineering authority under an authorised signatory. This function may be delegated by the Office of Airworthiness but ~~must~~ should be controlled by the Office of Airworthiness~~,~~ either directly or through appropriate procedures of the DOA holder's design assurance system.

2.4 Authorised signatories

The persons authorised to sign for the approval under the privilege of 21.A.263(c)(2) ~~must~~ should be identified (name, signature and scope of authority) in appropriate documents that may~~be~~ be linked to the handbook.

2.5 Supervision of minor changes to a type ~~design~~ certificate or minor repairs handled by sub-contractors

For the minor changes to a type ~~design~~ certificate or minor repairs described in 2.3.2, that are handled by sub-contractors, the procedure ~~must~~ should indicate, directly or by cross-reference to written procedures, how these minor changes to a type ~~design~~ certificate or minor repairs are approved at ~~the~~ sub-contractor level and the arrangements made for supervision by the DOA holder.

16. AMC No. 2 to 21.A.263(c)(2) is amended as follows:

AMC No. 2 to 21.A.263(c)(2) Privileges - Organisations designing minor changes to a type ~~design~~ certificate or minor repairs to products: procedure for the approval of minor changes to a type ~~design~~ certificate or minor repairs

1. Content

The procedure ~~must~~ should address the following points:

— compliance documentation;

— approval under the DOA privilege;

— authorised signatories.

2. Compliance documentation

For those minor changes to a type ~~design~~ certificate or minor repairs where additional work to demonstrate compliance with the applicable CS and environmental protection requirements is necessary, compliance documentation ~~must~~ should be established and independently checked as required by 21.A.239(b).

The procedure ~~must~~ should describe how the compliance documentation is produced and checked.

3. Approval under the DOA privilege

3.1. For those minor changes to a type ~~design~~ certificate or minor repairs where additional work to demonstrate compliance with the applicable CS or environmental protection requirements is necessary, the procedure ~~must~~ should define a document to formalise the approval under the DOA privilege.

This document ~~must~~ should include at least:

1. identification and brief description of the change or the repair and reason for change or repair;

2. applicable CS or environmental protection requirements and methods of compliance;
3. reference to the compliance documents;
4. effects, if any, on limitations and on the approved documentation;
5. evidence of the independent checking function of the demonstration of compliance;
6. evidence of the approval under the privilege of 21.A.263(c)(2) by an authorised signatory;
7. date of the approval.

For repairs, see also AMC 21.A.433(a).

3.2. For the other minor changes to a type ~~design~~ certificate or minor repairs, the procedure ~~must~~ should define a means to identify the change or repair and reasons for the change or repair, and to formalise its approval by the appropriate engineering authority under an authorised signatory. This function ~~must~~ should be controlled through appropriate procedures of the DOA holder's design assurance system.

4. Authorised signatories

The persons authorised to sign for the approval under the privilege of 21.A.263(c)(2) ~~must~~ should be identified (name, signature and scope of authority) in appropriate documents that may be linked to the handbook.

4. References

4.1. Affected 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)

4.2. Affected decisions (CS, AMC, GM)

— Decision N° 2012/020/R of the Executive Director of the Agency of 30th October 2012 on acceptable means of compliance and guidance material 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 ('AMC and GM to Part 21'), repealing Decision No 2003/01/RM of the Executive Director of the Agency of 17 October 2003

4.3. Reference documents

— Decision 2014/004/R of the Executive Director of the Agency of 31 January 2014 adopting Certification Specifications and Guidance Material for Master Minimum Equipment List 'CS-MMEL — Initial issue'

— Decision 2014/005/R of the Executive Director of the Agency of 31 January 2014 adopting Certification Specifications and Guidance Material for Generic Master Minimum Equipment List 'CS-GEN-MMEL — Initial issue'

— Decision 2014/006/R of the Executive Director of the Agency of 31 January 2014 adopting Certification Specifications and Guidance Material for Cabin Crew Data 'CS-CCD — Initial Issue'

— Decision 2014/008/R of the Executive Director of the Agency of 31 January 2014 adopting Certification Specifications and Guidance Material for Flight Crew Data 'CS-FCD – Initial issue'

— Executive Director Decision 2014/033/R of 2nd December 2014 adopting Certification Specifications for Simulator Data 'CS-SIMD — Initial issue'

— NPA 2015-03 'Embodiment of Level of Involvement (LOI) requirements into Part-21'

— CRD 2009-01 'Operational Suitability Certificate and Safety Directives'

— Opinion 07/2011 'Operational Suitability Data'