NOTICE OF PROPOSED AMENDMENT (NPA) NO 2008-22A

DRAFT OPINION OF THE EUROPEAN AVIATION SAFETY AGENCY,

FOR A COMMISSION REGULATION establishing the implementing rules for the competent authorities, including general requirements, approved training organisations, aeromedical centres, licensing and medical certification of flight crew.

and

DRAFT DECISION OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY on

acceptable means of compliance and guidance material related to the implementing rules for the competent authorities, including general requirements, approved training organisations, aeromedical centres, licensing and medical certification of flight crew.

and

DRAFT OPINION OF THE EUROPEAN AVIATION SAFETY AGENCY,

FOR A COMMISSION REGULATION establishing the implementing rules for organisations, including general requirements, approved training organisations, flight simulation training devices and aeromedical centres.

and

DRAFT DECISIONS OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY on

acceptable means of compliance, certification specifications and guidance material related to the implementing rules for managements systems, including general requirements, approved training organisations, flight simulation training devices and aeromedical centres.

"Authority Requirements and Organisation Requirements"

A. Explanatory Note and Appendices

NOTE: The NPA on "Authority and Organisation Requirements" contains draft Opinion on the Implementing Rules for Authorities, draft Opinion on the Implementing Rules for Organisations and the related draft Decisions and Regulatory Impact Assessments. The NPA is split into six separate NPAs (2008-22**A**, 2008-22**B,** 2008-22**C,** 2008-22**D,** 2008-22**E** AND 2008-22**F**) as indicated in the Table of Contents below. The documents are published in the Comment-Response Tool (CRT) available at http://hub.easa.europa.eu/crt/.

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A. EXPLANATORY NOTE

I. General

1. The purpose of this Notice of Proposed Amendment (NPA) is to develop an Opinion on the implementing rules for competent authorities, as well as for organisations. It also includes a Draft Decision on the related Acceptable Means of Compliance (AMC) and Guidance Material (GM). In a next step these proposed implementing rules, AMC and GM will be complemented with requirements related to ramp inspections and air operations. The scope of this rulemaking activity is outlined in the Terms of Reference (ToR) FCL.001 and OPS.001 and is described in more detail below.

2. The European Aviation Safety Agency (the Agency) is directly involved in the rule-shaping process. It assists the Commission in its executive tasks by preparing draft regulations and amendments thereof for the implementation of the Basic Regulation[1] which are adopted as "Opinions" (Article 19(1)). It also adopts Certification Specifications, including Airworthiness Codes and Acceptable Means of Compliance and Guidance Material to be used in the certification process (Article 19(2)).

3. When developing rules, the Agency is bound to following a structured 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"[2].

4. This rulemaking activity is included in the Agency's Rulemaking Programme for 2009. It implements the rulemaking tasks FCL.001 and OPS.001.

5. The text of this NPA has been developed by the Agency, based on the inputs of the FCL.001 and OPS.001 rulemaking groups. It is submitted for consultation of all interested parties in accordance with Article 52 of the Basic Regulation and Articles 5(3) and 6 of the Rulemaking Procedure.

II. Consultation

6. To achieve optimal consultation, the Agency is publishing the draft opinion and decision of the Executive Director on its Internet site. Comments should be provided within 3 months in accordance with Article 6(4) of the Rulemaking Procedure. Comments on this proposal should be submitted by one of the following methods:

CRT: Send your comments using the Comment-Response Tool (CRT) available at **http://hub.easa.europa.eu/crt/**

E-mail: In case the use of CRT is prevented by technical problems these should be reported to the CRT webmaster and comments sent by e-mail to NPA@easa.europa.eu.

Correspondence: If you do not have access to the Internet or e-mail, you can send your comment by mail to:
Process Support
Rulemaking Directorate
EASA
Postfach 10 12 53
D-50452 Cologne
Germany

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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] Management Board Decision concerning the procedure to be applied by the Agency for the issuing of opinions, certification specifications and guidance material (Rulemaking Procedure), EASA MB 08-2007, 13.6.2007

Comments should be received by the Agency before **31 January 2009**. If received after this deadline they might not be taken into account.

III. Comment response document

7. All comments received in time will be responded to and incorporated in a comment response document (CRD). The CRD will be available on the Agency's website and in the Comment-Response Tool (CRT).

IV. Content of the draft opinion and decision

Background

8. On 15 December 2004 the Agency issued an Opinion[3] to extend the scope of Regulation (EC) No. 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, to the regulation of pilot licensing, air operations and third country aircraft.

9. In November 2005, the Commission presented its proposal for the amendment of Regulation (EC) No. 1592/2002[4]. This proposal was accompanied by a Communication[5], where the Commission explained the main objectives of its proposal:

Pilot Licensing:

- To establish in the form of essential requirements high level safety objectives to be achieved by the regulation of pilot licensing;
- To require all pilots operating in the Community to hold a licence attesting compliance with common safety requirements covering their theoretical and practical knowledge, as well as their physical fitness;
- To require organisations, flight synthetic training devices and persons involved in the training, testing, checking and medical assessment of pilots to be certified on the basis of common rules;
- To allow assessment bodies to issue a new category of licence, the leisure pilot licence, tailored more closely to this category of airspace user, subject to appropriate verification of their ability to fulfil the related responsibilities;
- To give executive powers to the Commission to adopt the necessary implementing rules and to the Agency to oversee organisations located in third countries and to certify flight synthetic training devices.

Air Operations:

- To establish in the form of essential requirements high level safety objectives to be achieved by the regulation of air operations;

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[3] Opinion No. 3/2004 of the European Aviation Safety Agency of 15 December 2004 for amending Regulation (EC) No 1592/2002 of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, to extend its scope to the regulation of pilot licensing, air operations and third country aircraft. (http://www.easa.europa.eu/ws_prod/g/rg_opinions_main.php#2004)

[4] Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1592/2002 of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (presented by the Commission), COM(2005)579 final, 16 November 2005. (http://ec.europa.eu/prelex/detail_dossier_real.cfm?CL=en&DosId=193564)

[5] Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, "Extending the tasks of the European Aviation Safety Agency – An Agenda for 2010", COM(2005)578 final, 15 November 2005. (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0578:FIN:EN:PDF)

- To improve public safety, notably on the ground, and facilitate the free movement of services within the internal market, to extend common rules to all air operations.
- To require all commercial operators to be certified on the basis of common rules; require all commercial operators to hold a certificate certification requirement to all. Certificates would be issued by the Member States or, where appropriate, the Agency which could also, wherever necessary, impose operational directives.
- To establish common requirements for non-commercial operations tailored to the complexity of the aircraft;
- To require non-commercial operators of complex motor-powered aircraft to declare that they are able to meet all the essential requirements relating to air operations.
- To give executive powers to the Commission to adopt the necessary implementing rules and to the Agency to, where appropriate, issue operator's certificates as well as operational directives.

Third country operators:

- To ensure effective protection of public safety, on the ground and on board these aircraft, to impose common rules on third-country aircraft operating in the Community, within the limits imposed by the Chicago Convention[6].
- To require third-country operators engaged in commercial operations in the Community to attest compliance with the common rules through a certificate.

10. When adopting its proposal, the Commission recommended, as suggested by the Agency itself, that common requirements to be specified in implementing rules be based as much as possible on existing JAA material such as JAR-FCL, JAR-OPS and JAR-FSTD, and that they be tailored to the risks to be mitigated. In order to develop these implementing rules, the Agency included in its rulemaking programme the tasks FCL.001, OPS.001 and OPS.004.

11. The scope of task OPS.004 was to develop an opinion for a Commission implementing regulation and related AMC/GM material to regulate the issuance of an authorisation to third-country operators engaged in commercial operations, and as applicable, a declaration for third-country operations of non-commercial complex motor-powered aircraft. The opinion should include how aircraft or crew, which do not hold a standard ICAO certificate of airworthiness or licence, may be authorised to operate into, within or out of the Community. The ToR[7] were adopted in March 2007, and it was defined that the work would be carried out by the Agency. The time frame for this task was always dependent on the development of the legislative process for the adoption of the amendment to the Basic Regulation, and also on the development of task OPS.001.

12. As for tasks FCL.001 and OPS.001, the ToR[8], as well as the composition of the rulemaking groups, were adopted in July 2006, and the groups started the drafting in August 2006. The ToR defined the objective of the tasks as the development of common requirements for the implementation of the extended Basic Regulation as regards pilot licensing and air operations, including implementing rules and AMC/GM The ToR established that due consideration should be given to the conclusions reached during the legislative process relative to the extension of scope of Regulation (EC) No 1592/2002, so as to adjust the deliverables to the likely result of these negotiations.

13. The FCL.001 and OPS.001 rulemaking groups decided early on to divide itself into subgroups, in order to better deal with the different issues contained in their ToR.

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6 The Convention on International Civil Aviation on 7 December 1944.

7 http://www.easa.europa.eu/ws_prod/r/r_tor.php

8 http://www.easa.europa.eu/ws_prod/r/r_tor.php

Accordingly, the ToR and composition of four subgroups for each rulemaking group were adopted in October 2006.

14. The proposals contained in this NPA were developed by the FCL.001 subgroup *authority requirements and management systems* and by the equivalent OPS.001 subgroup. The objectives of the FCL.001 and OPS.001 subgroups on *authority requirements and management systems* were first to develop requirements and related AMC/GM for competent authorities based on appropriate ICAO documents and JAA Joint Implementation Procedures (JIPs), taking into account the need for consistency with similar provisions included in other implementing rules; they had also to draft a proposal for safety management systems' requirements based on ICAO Annex 6, ICAO Doc 9859 and work carried out by the JAA. The subgroups were asked to develop their work in close coordination with each other, in order to harmonise requirements for authorities and organisations in the field of FCL and OPS as much as possible. The JAA approach of "Consistency of Organisation Approvals" (COrA) had to be considered during this harmonisation exercise.[9] The applicable requirements had to be generic as they were considered similar for aircraft operators, training organisations, maintenance organisations, air traffic services providers and aerodrome operators. It was not precluded to have specific provisions on operations and licensing, as deemed necessary. Adequate coordination had to take place with the other subgroups of OPS.001 and FCL.001.

15. In order to provide the necessary input for the non-commercial operation of non-complex motor-powered aircraft, as well as for the licensing requirements applicable to the Leisure Pilot Licence (LPL), the MDM.032 group[10] was asked to provide this input to the OPS.001 and FCL.001 groups. The group started its work in March 2006 and by summer 2007 provided OPS.001 and FCL.001 with their input.

16. The subgroups finished their tasks, in accordance with their ToR, in summer 2007, by delivering their input to the FCL.001 and OPS.001 core groups. Since then the Agency and the core groups have been working on the finalisation of the draft implementing rules, using the material received from the subgroups as well as the MDM.032 rulemaking group.

17. In February 2008 the legislative process to extend the scope of Regulation (EC) No 1592/2002 reached a conclusion with the adoption of the Regulation of the European Parliament and of the Council (EC) No 216/2008 of 20 February 2008[11] (hereinafter referred to as the 'Basic Regulation'). The Basic Regulation entered into force on 8 April 2008 and, in accordance with its article 70, the provisions related to flight crew licensing, air operations and third country operators shall become applicable on the dates specified in their respective implementing rules, but in any case not later than on 8 April 2012.

18. During the legislative process, the Commission proposal was subject to amendments by the European Parliament and the Council and, therefore, the final text of the Basic Regulation differs, in some aspects, from that proposal. The main aspects of the Basic Regulation relevant for authorities and organisations in the fields of flight crew licensing and air operations are the following:

    - Pilot training organisations and aeromedical centres shall comply with Annex III to the Basic Regulation and are subject to an approval. Such approval shall be issued when compliance with the implementing rules has been demonstrated. This approval is issued by Member States' competent authorities, in the case of

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9 See A-NPA 15/2006 (http://www.easa.europa.eu/ws_prod/r/r_archives.php)

10 See http://www.easa.europa.eu/ws_prod/r/doc/TORs1/EASA_ToR_MDM_032.pdf for ToR.

11 See Footnote 1.

organisations located inside their territory, and by the Agency for organisation located outside the Community[12].

- Flight simulation training devices used for the training of pilots shall be certificated in accordance with the implementing rules adopted to ensure compliance with the essential requirements contained in Annex III to the Basic Regulation. These certificates are issued by the Agency in the case of devices used by the training organisations it certifies, or devices located outside of the Community, as well as devices located inside the Community when the Member State responsible so requests; in all other cases, the competence to issue these certificates remains with the Member States' competent authorities[13].

- Operators[14] engaged in commercial operations[15] shall be subject to a certification process in which they demonstrate their capability and means of discharging the responsibilities associated with their privileges. The privileges granted to an operator and the scope of operations shall be specified in the certificate. Certificates are issued by the Member States competent authorities. The implementing rules may determine the conditions under which a certificate shall be replaced by a declaration of the capability and means of discharging the responsibilities associated with the operation of the aircraft (Article 8(2) and 8(5)(b) of the Basic Regulation). With regard to commercial air transport by aeroplane, the implementing rules shall be based on EU-OPS[16].

- Operators engaged in non-commercial operations of complex motor-powered aircraft[17] shall declare their capability and means of discharging the responsibilities associated with the operation of the aircraft. The implementing rules may determine the conditions under which a declaration shall be replaced by a demonstration and the issuance of a certificate (Article 8(3) and 8(5)(d)).

- Operators of aircraft having a clear historical relevance (Annex II (a)(ii)), of military design (Annex II (d)) and replicas of historic or military aircraft (Annex II (h)) when used for commercial air transportation shall comply with the relevant essential requirements as specified in the appropriate implementing rules.

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12 See articles 7(3) and 21(1) of the Basic Regulation.

13 See articles 7(4) and 21(2) of the Basic Regulation.

14 An operator is any legal or natural person, operating or proposing to operate one or more aircraft. (Article 3(h) of the Basic Regulation)

15 Article 3(i) of the Basic Regulation defines commercial operations as any operation of an aircraft, in return for remuneration or other valuable consideration, which is available to the public or, when not made available to the public, which is performed under a contract between an operator and a customer, where the latter has no control over the operator.

16 Annex III to Council Regulation (EEC) No 3922/91 of 16 December 1991 on the harmonization of technical requirements and administrative procedures in the field of civil aviation (OJ L 373, 31.12.1991, p. 4). Regulation as last amended Commission Regulation (EC) No 859/2008 of 20 August 2008 (OJ L 254, 20.9.2008, p. 1)

17 A complex motor-powered aircraft is

1. an aeroplane with a maximum certificated take-off mass exceeding 5 700 kg; or certificated for a maximum passenger seating configuration of more than nineteen; or certificated for operation with a minimum crew of at least two pilots; or equipped with (a) turbojet engine(s) or more than one turboprop engine, or
2. a helicopter certificated for a maximum take-off mass exceeding 3 175 kg; or for a maximum passenger seating configuration of more than nine; or for operation with a minimum crew of at least two pilots, or
3. a tilt rotor aircraft. (Article 3(j) of the Basic Regulation)

- To give executive powers to the Agency to issue certification specifications, comprising in particular standard flight time limitation schemes, as acceptable means of compliance with the essential requirements and to certify itself individual operators' flight time limitation schemes when so required to provide for uniformity and fair competition in the market.

- The European Commission is empowered to adopt implementing rules for the implementation of the Basic Regulation and the essential requirements for pilot licensing and air operations. These implementing rules shall

  - reflect the state of the art and best practices in the field of air operations and flight crew licensing;

  - take into account worldwide aircraft in service experience and scientific and technical progress;

  - define different types of operations and allow for proportionate requirements and compliance demonstrations adapted to the complexity of operations and the risk involved;

  - be based on a risk assessment and proportional to the scale and scope of the operations, and allow for immediate reaction to established causes of accidents and serious incidents (Article 8 (5) and (6) of the Basic Regulation).

19. The work of the OPS.001 and FCL.001 tasks evolved at different paces. The draft implementing rules regarding pilot licensing were published by the Agency for public consultation as NPA 2008–17[18] on 5 June 2008, while the draft implementing rules for air operations are only now undergoing the final stages of preparation for the publication of the NPA.

20. These different paces affected the finalisation of the authority and organisation requirements associated with air operations and flight crew licensing. While the draft specific requirements related to pilot licensing could be finalised during the summer of 2008, the draft specific requirements related to air operations, and consequently, the draft general requirements, could not be finalised until the OPS.001 drafts were stabilised. Therefore, the Agency decided to divide the draft requirements for organisations and competent authorities into 2 separate NPAs, to be published at different dates: one NPA on authority and organisation requirements, containing the draft general requirements specific requirements related to flight crew licensing; one NPA on air operations, which will include the draft specific requirements for organisations and competent authorities related to air operations.

21. This NPA, therefore, contains only general and licensing specific draft provisions for competent authorities and organisations. The operations specific draft provisions will be published with the NPA on operational requirements, in which the explanatory note will contain further elements on these draft provisions. The proposals on this NPA are based mainly JAR-FCL and JAR-FSTD, on appropriate ICAO documents, JAA JIPs, and are harmonised with similar provisions included in existing implementing rules, e.g. Part-66, Part-145, Part-147 and Part-M.

22. Another consequence of the different paces in the development of the texts was that at the time when NPA 2008-17 was published the related regulatory impact assessment could not be concluded. In fact, in order to allow a detailed evaluation of the different options, it was necessary that the proposals related to authority and organisation requirements were already stabilised, which was not the case, as already explained. Therefore, NPA 2008-17 informed stakeholders, in paragraph 54 of the explanatory note, that the full regulatory impact assessment for flight crew licensing issues would be

[18] http://www.easa.europa.eu/ws_prod/r/r_npa.php

published with the NPA on authority and organisation requirements. Thus, this NPA also contains the Regulatory Impact Assessment on licensing issues (see NPA 2008-22f).

Structure

23. After issuing its Opinion for the extension of the Basic Regulation to air operations, flight crew licensing and third country operators[19], the Agency started defining the tasks necessary to develop the related implementing rules, making use of the regulatory material already developed by the JAA. When doing so, it realised that the structure underlying the set of JARs might not be the most appropriate for establishing a consistent set of rules governing all aspects of civil aviation safety regulation. The set of rules applicable to these fields in Europe originates from different regulators, such as the JAA and national administrations. They were developed over several decades, the responsibilities for drafting were sometimes changed and trade-offs, which may not be appropriate anymore, were made. Furthermore, the JARs did not cover all necessary elements, not only because they primarily aimed at harmonising some elements of national rules and presumed therefore the existence of an appropriate set of national rules, but also because the scope of the Basic Regulation is wider than that of the existing JARs – for example, JAR-FCL only covered two categories of aircraft, aeroplanes and helicopters, and the Basic Regulation covers, in addition, powered-lift aircraft, airships, sailplanes and balloons. In parallel, the objective of the Agency was to develop operational rules that would be integrated in a global regulatory system for aviation safety, covering not only airworthiness, but also in the future the safety regulation of air traffic management / air navigation services (ATM/ANS) and aerodromes. All these considerations lead the Agency to conclude that changing the way rules are structured and presented could provide for better consistency and facilitate their use by the regulated persons.

24. In addition to these aspects, other considerations of a more legal nature made it necessary to change the JAR structure. These issues stem from the different legal value of JARs and of implementing rules as these are Community law and need therefore to comply with a specific set of requirements on how they are drafted. In this context, one of the major legal reasons why the JAR structure could not be kept was related to the multiplication of similar or even identical requirements operated by the JARs by virtue of the way they were structured. For example, JAR-FCL was divided into JAR-FCL 1, which contained the requirements for aeroplanes, and JAR-FCL 2, which contained the requirements for helicopters. JAR-FCL 1 and 2 contained therefore many repeated requirements, those that were common to both categories of aircraft, alongside those that were really specific to each of the categories. Some of the common requirements were repeated verbatim, but in some cases slight differences in wording existed, stemming from the separate rulemaking processes for the two JARs, rather than from an actual specificity in the requirements for each category of aircraft. This led to difficulties in the interpretation of the requirements and could not be replicated in the implementing rules. It is a general principle of law that separate sets of provisions shall only exist when the requirements are different; if the legislator makes a distinction in the provisions, the European Court of Justice has concluded that this could only imply that different requirements were meant[20]. This general principle, when applied to rulemaking in the

[19] See footnote 3.

[20] This is the general principle at the basis of European Court Decisions such as in Case C-308/06, where the Court stated that "The general principle of legal certainty, which is a fundamental principle of Community law, requires, in particular, that rules should be clear and precise, so that individuals may ascertain unequivocally what their rights and obligations are and may take steps accordingly (see Case C-110/03 Belgium v Commission [2005] ECR I-2801, paragraph 30, and IATA and ELFAA, paragraph 68)." The jurisprudence of the Court of Justice applies this principle in the most general way, using it also as a basis to verify the legality of national measures, as in the Judgement of the Court of 2 February 1977 (Amsterdam Bulb BV v Produktschap voor Siergewassen - Reference for a preliminary ruling: College van Beroep voor het Bedrijfsleven - Netherlands - Case 50-76), where the Court stated that national measures that alter, obstruct, or obscure the nature of the Community

Community system, prevents the existence of two different provisions when the objective of the requirement is the same, contrary to what was done many times in the JARs. As paragraph 12 of the Joint Practical Guide[21] for drafting of Community legislation states, "enacting terms of a binding act shall not (…) repeat or paraphrase passages or articles from the Treaties or those which restate legal provisions already in force. Acts shall not include provisions which enunciate the content of other articles or repeat the title of the act. (…) Such repetition is dangerous, since any departure from the original wording may give the impression that a different result was intended, and even give rise to a sort of presumption to that effect". Therefore, it was not possible for the implementing rules to be organised in the same way as the JARs were.

25. Thus, the Agency started to work, with the help of a few experts from national aviation authorities, to develop an overall regulatory structure. This structure was to take into account ICAO Annexes and existing national or Community rules. It should address all fields of civil aviation safety regulation. Its objective was to establish a consistent regulatory structure that complies with the Community requirements for drafting legislation and that ensures the necessary links between the different regulations. The result of this work, called the "General EASA Rules Template" (GERT), together with envisaged working methods to develop the related rules, was presented to the Advisory Group of National Authorities (AGNA) and the Safety Standards Consultative Committee (SSCC) for discussion and comments.

26. The GERT was discussed by the AGNA and SSCC. However, these discussions never led to any formal decision on the adoption of the template, since it was clear that it would be difficult to discuss the structure in abstract, without going into detail about the content of the implementing rules. It was therefore decided that the rulemaking groups FCL.001 and OPS.001 would take the structure presented in GERT as a possible model for their work, but the final outcome would take into account the content of the requirements.

27. Based on the input from the FCL.001 and OPS.001 groups, and taking into account the objectives described above, the Agency developed a structure for the future implementing rules for air operations, flight crew licensing and third country operators. This structure, while inspired by GERT, is based on a 'tool-box' approach, designed to allow stakeholders to identify the Parts that apply to their specific activity and apply the relevant requirements. This structure was presented with NPA 2008-17 on Implementing Rules for Pilot Licensing. However, since the work on air operations as well as organisation requirements and authority requirements was not concluded by the time NPA 2008-17 was published, as was already explained above, the structure underwent further modifications in relation to what had been indicated in that NPA. These modifications were mainly related to the Parts on organisation requirements and authority requirements. In particular, the requirements initially defined for "Management systems" are now "Organisation requirements", which better reflects the intent of those rules. Moreover, this ensures consistency with the name of the requirements for competent authorities. Similarly, the cover regulation for Part FCL is now named "Personnel", in order to include an Annex dedicated to cabin crews. The structure is represented in Fig. 1 below. Parts and subparts contained in this NPA are highlighted in grey.

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regulation are considered to be a breach of Community law: "The Member States may neither adopt nor allow national organisations having legislative power to adopt any measure which would conceal the Community nature and effects of any legal provision from the persons to whom it applies."

[21] Joint Practical Guide of the European Parliament, the Council and the Commission for persons involved in the drafting of legislation within the Community Institutions, as drawn up pursuant to the Interinstitutional Agreement of 22 December 1998 on common guidelines for the quality of drafting of Community legislation (OJ C 73, 17.3.1999, p.1), (http://europa.eu/eur-lex/lex/en/techleg/index.htm)

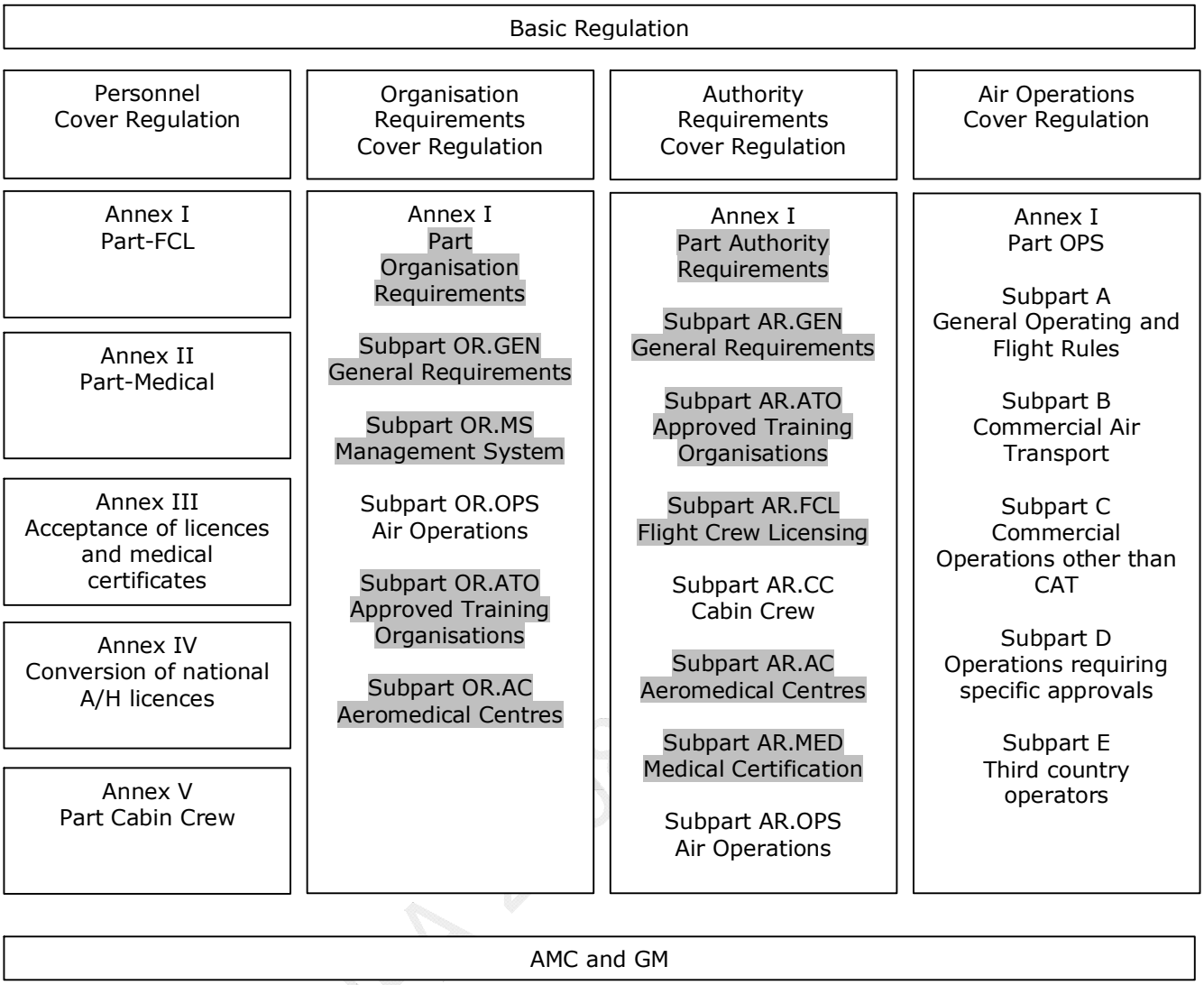

Fig. 1 – Structure of EASA Requirements

28. The proposed structure deviates from the JARs in one fundamental point: the separation between technical requirements (contained in the Regulations on flight crew licensing and air operations) from the requirements applicable to organisations (contained in the Regulation on organisation requirements). This difference reduces the administrative burden on organisations, which perform more than one activity. The separate development of the JARs, specifically JAR-OPS and JAR-FCL, created different requirements for organisations in each field of activity, which forced organisations that carried out more than one activity (for example, air operators that were also training organisations, or commercial air transport operators that were also aerial work operators) to have different management structures for each of those activities, with the inevitable consequence of a multiplication of the resources needed. This situation not only created difficulties for European organisations from an economic point of view, but also placed a heavy burden on the resources and time organisations and national aviation authorities had to invest on oversight activities: multiple activities meant multiple management systems, and multiple audit/oversight processes.

29. The proposed structure also deviates from the structure of the current EASA implementing rules[22], in that requirements applicable to competent authorities are contained in a separate Regulation, and not in each 'operational' Regulation. This difference has a similar objective as the separation of organisation requirements from operational requirements: to streamline the activity of competent authorities, avoiding, as much as possible, the duplication of processes.

30. The proposed structural changes have the additional advantage to facilitate the introduction of requirements on other fields of aviation, in accordance with the total system approach for aviation safety. The objective of the Agency is, after allowing some time for the consolidation of the new requirements, to amend the existing airworthiness implementing rules[23] to adapt them to the new proposed structure[24]. Similarly, once the scope of the Basic Regulation is extended to the safety regulation of aerodromes and ATM/ANS[25], the proposed structure will allow an easier introduction of new implementing rules related to these fields.

31. Part-AR as proposed in this NPA is therefore divided into 5 Subparts, which are further divided into Sections, containing both general requirements, and then specific requirements for the competent authority applicable to each type certificate, approval or activity (further details on each of the Subparts and respective Sections can be found in the explanatory memorandum to Part-AR, which is Appendix I to this NPA):

- Subpart GEN, containing general requirements;
- Subpart ATO, specific requirements related to approved training organisations;
- Subpart FCL, specific requirements related to flight crew licensing;
- Subpart AeMC, specific requirements related to aeromedical centres; and
- Subpart MED, specific requirements related to aeromedical certification.

32. In a next step, as a part of the NPA containing draft implementing rules on air operations, Subpart GEN will be complemented with a Section containing requirements related to ramp inspections and a new Subpart OPS will be added.

33. Similarly, Part Organisation Requirements (Part-OR) as proposed in this NPA is divided into 3 Subparts, which are further divided into Sections, containing both general and specific requirements applicable to organisations (further details on each of the Subparts and respective Sections can be found in the explanatory memorandum to Part-OR, which is Appendix II to this NPA):

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22 Commission Regulation (EC) No 1702/2003 of 24 September 2003, 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 243, 27.9.2003, p.6) and Commission Regulation (EC) No 2042/2003 of 20 November 2003 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 315, 28.11.2003, p.1).

23 See footnote above.

24 By inserting what is now contained in Section B of the implementing rules in specific Subparts for these issues in both Part Organisation Requirements and Part Authority Requirements.

25 See Opinion No 3/2007 of the European Aviation Safety Agency of 6 December 2007 for amending Regulation (EC) No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, to extend its scope to the regulation of safety and interoperability of aerodromes (http://www.easa.europa.eu/ws_prod/g/_rg_opinions_main.php#2007) and Agency Opinion No 1/2008 of the European Aviation Safety Agency of 15 April 2008 for amending Regulation (EC) No 216/2008 of the European Parliament and of the Council 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 (http://www.easa.europa.eu/ws_prod/g/rg_opinions_main.php#2008).

- Subpart GEN, containing general requirements;
- Subpart ATO, specific requirements related to approved training organisations; and
- Subpart AeMC, specific requirements related to aeromedical centres.

34. In a next step, as a part of the NPA containing draft implementing rules on air operations, a new Subpart OPS will be added.

35. The Agency would also like to highlight that to help stakeholders in their day-to-day activity and to facilitate the use of the new structure and requirements, it has initiated an activity to develop tools providing for an easy identification of the requirements applicable to each licence or activity. It has still not been decided what form these tools will take, but it will most probably be an Internet-based application.

Content

36. The content of the present NPA follows, for the larger part, the relevant content of JAR-FCL, JAR-OPS, JAR-FSTD and the associated JAA Administrative and Guidance Material. However, some differences in relation to the JARs were necessary. It also contains appropriate provisions of Section B of other existing implementing rules, e.g. Part-21, Part-66, Part-145, Part-147 and Part-M, for harmonisation purposes and to support the total system approach as described above.

37. A more detailed description of these differences can be found in the explanatory memorandums to Part-AR and Part-OR, which constitute Appendix I and Appendix II to this NPA. However, a general explanation on the reasons for such differences is given in the following paragraphs.

38. The differences that can be found between the proposed requirements in this NPA and the requirements of JAR-FCL, JAR-OPS and JAR-FSTD can be generally explained through the different legal value of the requirements in the JAA and EASA systems. As already referred above, the JARs were aimed at harmonising some elements of national rules and presumed therefore the existence of an appropriate set of national rules. They had no legal value themselves, and needed to be 'transposed' into the legal system of the JAA Member States through their own national legislations. Conversely, the implementing rules that will originate from the present NPA will be adopted through a Commission Regulation. They will, therefore, be directly applicable in the Member States without any further need for national legislation. They will also be binding in all their elements and neither stakeholders nor Member States' competent authorities will be able to deviate from them, other than in the cases covered by article 14 of the Basic Regulation (flexibility provisions[26]). This represents a significant difference with the JAA system, where JAA Member States were allowed to have national variants to the requirements of the JARs, not to mention the right to grant exemptions in accordance with their own national rules.

39. The specific nature of European Regulations would therefore justify in itself a difference in the way the requirements are presented, as opposed to the JARs; since Member States may no more deviate or derogate from the requirements in the implementing rules (outside the cases of article 14 of the Basic Regulation), it is imperative that only essential safety elements are contained in the rule, leaving non-essential implementation aspects to Certification Specifications (CS) or Acceptable Means of Compliance (AMC), which, albeit of a non-binding nature, have an important role to play in providing for a uniform implementation of common requirements with sufficient flexibility. This is the fundamental aspect of the 'performance based approach' to rulemaking that the Agency has followed, which is not only the most adequate in the EASA institutional environment,

[26] Article 14 of the Basic Regulation provides for the cases where member States may derogate or grant exemptions from the provisions of the Basic Regulation and implementing rules, in order to safeguard safety and to face cases of operational needs. These derogations and exemptions are subject to the control of the European Commission.

but also probably best adapted for the implementation of the safety management system concept as defined by ICAO[27].

40. In order to ensure that this difference in the level of the text has no negative effect on safety, the Agency proposes in this NPA a change in the way AMC are used today. Provisions are included in this NPA to detail the nature of AMC and the way that both stakeholders and national competent authorities should use them. AMC will retain their non-binding nature, but, similarly to what is already applicable to Certification Specifications developed by the Agency, they will be part of the approval basis for organisations. Once an approval is granted to an organisation based on compliance with AMC adopted by the Agency, they become binding for that particular organisation by virtue of their integration in the legal basis for the approval.

41. If and when an organisation wants to use alternative means of compliance, this will imply a change to the approval of that organisation, which has to be subject to prior control by the competent authority[28]. This NPA contains provisions with the criteria to be used by the competent authorities when evaluating these alternative means of compliance; they will also create the obligation for authorities to both publish and notify to the Agency any alternative means of compliance they approve[29]. Upon receiving notification of such alternative means of compliance, the Agency will analyse them with the help of panels of experts and, if it considers that they fully meet the safety criteria, will initiate a rulemaking task in order to adopt them as AMC. In case the Agency considers that such alternative means of compliance do not meet the safety criteria, action will be taken in accordance with the standardisation requirements and procedures. This system will guarantee an equal playing field, transparency and harmonisation, while still allowing for the necessary flexibility for stakeholders. Initially this new system will only apply to air operations and flight crew licensing, but the intention of the Agency is to propose its extension to other fields of the EASA system later on.

42. Finally, changes were made to the content of JAR-FCL requirements to ensure consistency with the Basic Regulation, existing implementing rules and the envisaged scope and content of the ones in this NPA. These differences will be further explained in the explanatory memorandums.

43. In addition to changes in the content of the requirements, the draft implementing rules also present differences in drafting style in relation to the text of JARs. The drafting of Community legislative acts needs to obey a specific set of principles[30]: they need to be drafted clearly, simply and precisely. The drafting of a European legislative act must be clear; easy to understand; unambiguous; simple and concise, containing no unnecessary elements; and precise, leaving no uncertainty in the mind of the reader. The need to follow these principles made it inevitable to change the way the requirements were drafted in the JARs, which were much more technical manuals than a legal text. One of

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27 See, for example, Appendix C to ICAO Assembly Resolution A36-13 – Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation, where it is stated that panel activity shall support a performance based approach to SARPs development to the extent possible.

28 A similar system is also applicable to organisations that do not need an approval, but will merely have to declare their activity (as is the case for non-commercial operators of complex motor-powered aircraft. In this case, the compliance with the Agency adopted acceptable means of compliance will be part of the organisation's declaration; this means that every time that the organisation intends to have an alternative means of compliance, it will have to notify to the competent authority a change to its declaration, which will be subject to oversight by the authority.

29 Similar provisions will apply to alternative means of compliance developed by the competent authorities themselves.

30 These principles are defined in the Joint Practical Guide of the European Parliament, the Council and the Commission for persons involved in the drafting of legislation within the Community Institutions (http://europa.eu/eur-lex/lex/en/techleg/index.htm), as well as in the Commission's Manual on legislative drafting.

the better examples of the changes that were necessary to obey this set of drafting principles was the need to develop provisions to complement the paragraphs in the JARs that left the determination of detailed requirements to the discretion of the national authorities. In order to ensure an adequate level of legal certainty, the definition of requirements on applicants cannot be left to the discretionary powers of authorities: the essential elements need to be defined in the law. Therefore, in some cases changes were made to the text of the JARs in order to achieve this required level of legal certainty.

Transition measures

44. Transition measures for the entry into force of the new requirements will be established in the Cover Regulations for Part-AR and Part-OR, taking into account the time needed for preparing their implementation. Such provisions can therefore only be elaborated when more is known about the exact content of the final rule and of its impact; as a consequence this NPA cannot include detailed proposals on how the transition from national requirements to the implementing rules should take place. This will be further elaborated in the CRD and included in the final Opinion of the Agency. In preparation for this, the Agency would like to know the views of stakeholders in this respect taking into account the following underlying principles for transitioning measures.

45. Similarly to what happened with the implementing rules for airworthiness, the Agency intends to propose that any attestations and certificates issued by Member States in accordance with JAR-FCL or JAR-FSTD requirements and associated procedures are considered as having been issued in accordance with the implementing rules[31]. This will guarantee a smooth transition for all the holders of an attestation or certificates that were fully compliant with with the JARs. Similarly, this will also represent a minimum amount of work for national authorities. The intention is to then establish a maximum period for attestation and certificate holders to correct any finding that may derive from the change from the national rules to the Community rules.

46. In the case of certificates for organisations that were issued on the basis of national rules or non-compliant with JAR-FCL and JAR-FSTD, national certificates could be converted into Part-OR certificates. The conversion would be based on a conversion report developed by the national authorities. This report would contain a description of the requirements that were at the basis of the approval, and an inventory of the findings in relation to the requirements of Part-OR. On the basis of this, a decision should be made whether the organisation can be considered to have been approved in accordance with Part-OR, in which case it may continue its activities and receive a certain deadline for the solution of any outstanding findings. Conversely, if the findings are considered too extensive to allow the organisation to simply continue activities, a decision should be made on whether it could still exercise part of its activities with some limitations; in this case the certificate of the organisation could be limited until the findings are solved. National authorities should be required to notify the Agency of any such reports, to allow standardisation of the results of this transition in all Member States. For the transition of these organisation certificates, a sufficiently long period of time should be provided for, possibly the full transition time foreseen by the Basic Regulation[32].

V. Regulatory Impact Assessment

47. According to the formal Rulemaking Procedure of the Agency, a full regulatory impact assessment (RIA) has to be introduced as a part of any proposed new rule. However, the development of a RIA in this task has presented particular difficulties. Firstly, when

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31 This would include certificates issued to training organisations (FTOs and TRTOs) issued in accordance with JAR-FCL 1 and 2, certificates issued to aeromedical centres issued in accordance with JAR-FCL 3, as well as certificates issued to both FSTDs and their users in accordance with JAR-FSTD.

32 Until 8 April 2012, in accordance with article 70 of the Basic Regulation.

developing the NPA, it was apparent that development of a general RIA for the task would present limited value: the choice on whether or not to regulate air operations had already been made by the legislator, as well as the choice to maintain the system established by the JARs in as much as possible. On the other hand, the proposals in this NPA are still subject to change, taking into account the comments received during the public consultation. Therefore, it was decided that the evaluation of the impact of the proposed new rules should only be made where the NPA either deviated from the JARs, or went beyond their scope.

48. The RIA is attached as Appendix IV to of this NPA. Moreover, as was already explained above, this NPA also contains the RIA on licensing issues (see NPA 2008-22f).

Appendix I - Explanatory memorandum to Part-AR

1. The purpose of this memorandum is to provide more detailed explanations on the proposed implementing rules for the competent authority than the ones offered in the general part of the Explanatory Note to this NPA. These explanations focus on the new elements and on the differences with JAA regulation, i.e. JAR-OPS, JAR-FCL and JAR-FSTD. The Agency has also prepared cross-reference tables to help the comparison between the proposed requirements and JAR-OPS, JAR-FCL and JAR-FSTD documents. These tables can be found in Appendix III to this NPA.

2. The draft Part-AR consists of a Subpart GEN containing the general requirements which are applicable to all persons, organisations and products. The specific requirements are part of the subsequent Subparts. This approach enables the growth of Part-AR, which means the incorporation of Section B of the existing Parts and authority requirements related to future Agency's competences.

3. The EASA system is built on the Basic Regulation, which establishes at legislative level the safety objectives to be met by means of essential requirements; these requirements have been designed to mitigate any probable risk linked to civil aviation activities within the scope of the EASA system. These mitigating means are further detailed in appropriate implementing rules, AMC, CS and GM.

4. With this NPA the Agency establishes with Members States a comprehensive management system at Community level encompassing Community and Member State responsibilities for safety management. This framework will ensure compliance with the relevant ICAO Standards for safety management systems and State safety programmes for all EU Member States. In that context, the Agency supports a holistic approach towards management systems which incorporates safety management systems as a fundamental element of the management system of an organisation or authority. This holistic approach is very important when, like in the EASA system, aviation safety regulations rely on the concept of approved organisations.

5. Detailed requirements and associated AMC and GM encompassing the safety programme at Community level, defining the interaction between the Member States and the Agency, are currently under development and will be incorporated into Part-AR at a later stage.

Subpart GEN – General requirements

6. This Subpart consists of 3 Sections which are detailed below. It contains the general requirements applicable to all Subparts of Part-AR.

7. Section 1 – General. This Section includes provisions for the competent authority which stem from the Basic Regulation, such as the coordination between the competent authority and the Agency in relation to the implementation of the Parts. It requires also from the competent authority to organise safety promotion programmes, which is an element of the ICAO State safety programme. It contains also a new implementing rule (AR.GEN.020) concerning the new approach towards AMC. In order to enhance reporting practice between the competent authorities and the Agency, an implementing rule is created on the reporting of safety significant occurrences. More details on this matter will be specified in AMC and GM to be developed at a later stage.

8. Section 2 – Management system. The implementing rules in Section 2 stipulate that the competent authority shall have a management system in order to comply with its obligations as embedded in Part-AR. However, this is common practice and part of the Section B of existing Parts. For standardisation purposes, it also requires the competent authority to provide the Agency with the relevant documentation on their management system and changes thereto.

9. Section 3 – Certification, Oversight and Enforcement. This Section within Part-AR provides the necessary elements to the competent authority on to interact with regulated organisations and persons. It describes the process on how to handle the certification

process, where applicable, continuing oversight and enforcement measures. It is based on already established procedures in the Section B of existing Parts. A new implementing rule, where the activity of a person, organisation or undertaking involves more than one Member State (AR.GEN.355), is incorporated to enable collective oversight in accordance with Art. 10 of the Basic Regulation.

Subpart ATO – Specific requirements related to Approved Training Organisations (ATOs)

10. This Subpart provides the specific authority requirements for ATOs and qualification requirements for Flight Simulation Training Devices (FSTDs). The procedures for the approval of an ATO are based on JAR-FCL and associated Joint Implementation Procedures, with a new feature related to the validity period of an approval. In JAR-FCL it was stipulated that the validity period of a training organisation approval could vary between 1 to 3 years at the discretion of the competent authority. The new implementing rules contain the continued validity approach in line with the approval requirements of organisations approved under existing EASA Parts. This also includes that the ATOs will be part of continued oversight programme, established by the competent authority, to monitor whether the ATO is maintained in compliance with the applicable requirements and training is carried out according to Part-FCL standards.

11. Furthermore, Subpart GEN of Part-AR (AR.GEN.345) contains the criteria to suspend, revoke or limit an organisation approval, including the training organisation approval, in case of non-compliance with the applicable requirements of Part-OR and Part-FCL.

12. Section 2 of Subpart ATO defines the procedures for the competent authority on how to handle an application for a FSTD qualification as well as the changes to such qualification. The requirements are based on JAR-FSTD and associated Joint Implementation Procedure, with the exemption regarding the validity period of a FSTD qualification certificate. Similarly to an approval of a training organisation, a FSTD qualification remains valid as long as the FSTD stays in compliance with the applicable requirements.

Subpart FCL – Specific requirements related to flight crew licensing

13. This Subpart covers the specific authority requirements related to flight crew licensing, and more precisely the requirements for licences, ratings and certificates, examiners and theoretical knowledge examinations.

14. In addition to the introduction of requirements for examiners for the new categories of aircraft in Part-FCL, the whole system of examiners' certification had to be revised to take into account the change introduced by the Basic Regulation[33]. As explained in NPA 2008-17, examiners are no longer acting on the basis of a delegation from the authority, but on the basis of their own privileges, given after a certification process. Therefore, new requirements for the certification of examiners had to be developed, since the requirements in JAR-FCL were quite open and left a lot to the discretionary powers of the authorities. Similarly, requirements for the continuation of examiners' privileges had to be developed, as well as more detailed requirements on the obligations of examiners when conduction skill tests and proficiency checks. In this NPA new implementing rules are proposed to monitor the conduct and performance of examiners (AR.FCL.205) in line with the general requirements on monitoring of the activities of regulated persons. It contains also an implementing rule (AR.FCL.250) with the criteria for the limitation, suspension or revocation of examiner's certificate.

15. Section 3 of this Subpart defines the arrangements for theoretical knowledge examinations. Part-FCL contains all the requirements that the applicant needs to comply with (applicant's responsibilities, pass standards, validity period of the examinations), while the requirements applicable to the competent authority (arrangements for theoretical knowledge examinations) are in Part-AR. The implementing rules of this Section are based on Chapter 10 of JAA FCL Implementation Procedures.

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[33] For more detailed explanations on this issue, see the explanatory note of NPA 2008-17.

Subpart AeMC – Specific requirements related to Aeromedical Centres (AeMCs).

16. The acronym for aeromedical centre was changed from AMC in JAR-FCL 3 to AeMC in the EASA Parts to avoid possible confusion with Acceptable Means of Compliance (AMC). Conditions for the approval of AeMCs are included in Part-OR.

17. This Subpart provides the specific authority requirements for the approval of AeMC. The procedures for the approval of an AeMC are based on JAR-FCL 3 and associated Joint Implementation Procedures (Chapter 6, paragraph 6.3), with a new feature related to the validity period of an approval. In the JAA system it was stipulated that the validity period of an AeMC approval would not exceed 3 years. The new implementing rules contain the continued validity approach, in line with the approval requirements of organisations approved under existing EASA Parts. This also means that the AeMC will be part of continued oversight programme, established by the competent authority, to monitor whether the AeMC is maintained in compliance with the applicable requirements and aeromedical examinations are carried out according to Part-MED standards (AR.GEN.305).

18. In addition, the criteria to suspend, revoke or limit an AeMC approval in case of non-compliance with the applicable requirements of Part-OR and Part-MED are in Subpart GEN (AR.GEN.345).

Subpart MED – Specific requirements related to aeromedical certification.

19. This Subpart covers the specific authority requirements related to aeromedical certification, including the requirements for aeromedical examiners. As explained above for flight examiners, also aeromedical examiners are no longer acting on the basis of a delegation from the authority, but on the basis of their own privileges, given after a certification process. In this NPA new implementing rules are proposed to monitor the conduct and performance of general medical practitioners acting as AMEs and aeromedical examiners (AR.MED.245), in line with the general requirements on monitoring of the activities of regulated persons. It contains also a new implementing rule (AR.MED.250) with the criteria for the limitation, suspension or revocation of aeromedical examiner's certificate.

Appendices to Part-AR

20. Part-AR contains 4 appendices, including Appendix I which is the standard approval certificate form for approved organisations. With the introduction of this one certificate concept for approved organisations, the privileges of the organisations are mentioned in the approval schedules which are attached to the approval certificate. At the present it contains approval schedules for ATOs and AeMCs.

21. Appendix II is the FSTD qualification certificate based on JAA Form 300, which is part of the JAA FSTD Implementation Procedures.

22. Appendix III is the "Standard EASA Licence Format" based on Appendix 1 to JAR-FCL 1.075 and is adapted to the concept of containing all privileges in all categories of aircraft, since Part-FCL requires the pilot to hold only one licence that will contain all the privileges in all categories of aircraft.

23. Appendix IV is the "Standard EASA Medical Certificate Format", based on IEM FCL 3.100(a) and IEM FCL 3.100(b) in which the minimum periodic requirements for aeromedical examinations are adapted to the Part-MED provisions.

AMC and GM to Part-AR

24. The largest part of the proposed AMC and GM to Part-AR is based on Section 2 of JAR-FCL, JAR-OPS and JAR-FSTD, with the addition of some items coming from Section 1 that were considered better placed in AMC than in the implementing rules. It also includes the relevant chapters of the Joint Implementation Procedures of the abovementioned JARs. For harmonisation purposes and to facilitate the future integration of Section B of the existing EASA Parts into Part-AR, a substantial number of AMC have been based on AMC and GM to Section B of existing EASA Parts.

Appendix II - Explanatory memorandum to Part-OR

25. The purpose of this memorandum is to provide more detailed explanations on the proposed implementing rules for organisation requirements than the ones offered in the general part of the Explanatory Note to this NPA. These explanations focus on the new elements and on the differences with JAA regulation, i.e. JAR-OPS, JAR-FCL and JAR-FSTD. The Agency has also prepared cross-reference tables to help the comparison between the proposed requirements and JAR-OPS, JAR-FCL and JAR-FSTD documents. These tables can be found in Appendix III to this NPA.

26. The EASA system is built on the Basic Regulation, which establishes at legislative level the safety objectives to be met by means of essential requirements; these requirements have been designed to mitigate any probable risk linked to civil aviation activities within the scope of the EASA system. These mitigating means are further detailed in appropriate implementing rules, AMC, CS and GM.

27. With this NPA the Agency establishes with Members States a comprehensive management system at Community level encompassing Community and Member State responsibilities for safety management. This framework will insure compliance with the relevant ICAO Standards for safety management systems (SMS) and State safety programmes for all EU Member States. In that context, the Agency supports a holistic approach towards management systems which incorporates safety management systems as a fundamental element of the management system of an organisation or authority. This holistic approach is very important when, like in the EASA system, aviation safety regulations rely on the concept of approved organisations.

28. Where ICAO is amending the relevant Annexes to incorporate the SMS concept, the Agency is of the opinion that consolidated general requirements for management systems applicable to all approved organisations are more appropriate. The specific requirements related to a specific organisation approvals will be incorporated in the dedicated Subpart of Part-OR.

29. This NPA also includes implementing rules based on the recommendations prepared by the JAA Consistency of Organisation Approval (COrA) group to achieve consistency of the Joint Aviation Requirements (JAR's). JAA had introduced the concept of approved organisations in all its regulated fields as an important tool to promote safety. As the JARs had been developed progressively and more or less independently for each field, the regulatory material varied in many aspects. Inconsistencies regarding organisation approvals became apparent while implementing the JARs. The COrA group was established for reviewing the JARs and restoring consistency as far as possible.

30. The COrA group identified the following recommendations:
    - the clarification of wording;
    - the standardisation of forms;
    - propose one set of implementation procedures by authorities and a single approval system;
    - performance related oversight by using industry internal systems.

31. The task of implementing these recommendations was transferred to EASA. It was considered that these recommendations remain globally valid even though the regulatory framework had changed. All these tasks will necessarily lead to assessing the regulatory structure. The provisions could be compiled in a certain way to support the harmonisation objective allowing for proper enforcement while reducing the risk of inconsistencies, overlapping and loopholes.

32. The Agency will use a gradual approach for harmonising organisation approvals. In a first step, these recommendations will be taken into account for newly drafted legislation such as the implementing rules for air operations and flight crew licensing that are part of this NPA and the NPAs on FCL (NPA 2008-17) and OPS. While drafting these implementing rules, the Agency also considered the ICAO amendment on safety management system and the associated State safety programme. The evaluation of the ICAO standards and

recommended practices (SARPs) showed that many elements of COrA are addressed by the ICAO SMS philosophy. The ICAO objective of introducing SMS in all aviation fields necessarily leads to the same basic principles of organisation management and approval.[34] As explained above, this has already been started for the air operations and pilot licensing implementing rules.

33. Following the gradual approach and to ensure continued compliance with ICAO in the field of continuing airworthiness, Part-M, Part-145 and Part 147 require an amendment. Harmonisation with the implementing rules on air operations and pilot licensing will however be ensured as it follows the step by step approach.

34. The draft Part-OR consists of a Subpart GEN containing the general requirements, which are applicable to all approved organisations. The specific requirements are part of the subsequent Subparts, e.g. Subpart ATO and AeMC. This approach enables the growth of Part-OR, which means the incorporation of approval requirements for organisations of the existing Parts and the ones related to future Agency's competences.

Subpart GEN – General requirements

35. This Subpart consists of 2 Sections which are detailed below. It contains the general requirements applicable to all Subparts of Part-OR.

36. *Section 1 – General*. This Section includes a provision on AMC for organisations (OR.GEN.020) which complements the implementing rule for competent authorities (AR.GEN.020) as proposed in the Part-AR. The detailed reasoning for the introduction of this provision has been given in the general part of the explanatory note to this NPA.

37. *Section 2 – Organisation requirements*. Section 2 of this Subpart defines the core elements of a management system for organisations. A dedicated implementing rule (OR.GEN.200) establishes those elements with a built-in provision to adapt such system to the size, nature and complexity of the activities of the organisation. The elements of the management system and criteria to define the size of an organisation are detailed in associated AMC.

38. The proactive part of the elements contained in this implementing rule is compatible with ICAO SMS concept. It also contains a provision to establish a function to monitor compliance of the management system of an organisation with the relevant requirements and adequacy of the established procedures, which was already practice under the JAA system and in the existing EASA Parts. In summary, this Subpart contains the general elements of a management system applicable to organisations and the specific adjacent Subparts include the additional requirements which are applicable to specific type of organisations, e.g. approved training organisations and aeromedical centres.

39. The Agency would like to emphasise that the quality system concept, as known under the JAA system and in existing EASA Parts, is integrated as a compliance monitoring system becoming an element of the management system of an organisation. The management of this compliance monitoring system, including its programme, is part of the responsibilities of the safety manager.

40. It was also agreed to alleviate small organisations from having an independent audit function, which in the view of OPS.001 experts and the Agency created bureaucratic and financial constraints for those organisations. Specific AMC contain a simplified compliance monitoring programme based on a simplified compliance inspection checklist.

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[34] The Agency has therefore decided to stop task MDM.044 as COrA implementation task and to address the COrA recommendations through different rulemaking tasks dealing with the implementation of the ICAO SMS, also continuing and initial airworthiness organisations.

Subpart ATO – Approved Training Organisations (ATOs)

41. This Subpart provides the specific approval requirements for ATOs, qualification requirements for Flight Simulation Training Devices (FSTDs) and additional requirements for ATOs providing specifics type of training.

42. *Section 1 – General.* The implementing rules for the approval of an ATO are based on the JAR-FCL system, with a new feature related to the validity period of an approval. In JAR-FCL it was stipulated that the validity period of a training organisation approval could vary between 1 to 3 years at the discretion of the competent authority. The proposed implementing rules contain the continued validity approach in line with the approval requirements of organisations under existing EASA Parts (OR.GEN.035). This implies that the ATOs will be part of continued oversight programme, established by the competent authority, to monitor whether the ATO is maintained in compliance with the applicable requirements and training is carried out according to Part-FCL standards.

43. *Section 2 – Additional requirements for ATOs providing training for licences and ratings other than the LPL, PPL, SPL and BPL.* Section 2 of this Subpart contains additional implementing rules applicable to ATOs providing training for licences and ratings other than the LPL, PPL, SPL and BPL which are based on the JAR-FCL flying training organisation and type rating training organisation approval requirements.

44. *Section 3 – Additional requirements for ATOs providing training in FSTDs and the qualification of FSTDs.* Section 3 of Subpart ATO stipulates the approval for ATOs operating FSTDs and the qualification requirements for FSTDs based on JAR-FSTD. similarly to the approval of a training organisation, an FSTD qualification has a continued validity as long as the FSTD is in compliance with the applicable requirements. Based on JAR-FSTD, the Agency created 2 new CS (CS-FSTD(A) and CS-FSTD(H)) containing the specifications to qualify FSTDs, which are part of this NPA (NPA 2008-22c and NPA 2008-22d).

45. *Section 4 – Additional requirements for ATOs providing specific types of training.* This Section incorporates the implementing rules for specific types of training, including distance learning courses, zero flight time training, multi-crew pilot licence courses and flight testing qualification courses. The implementing rules for the first 3 courses are based on JAR-FCL. New implementing rules have been drafted for the flight testing qualification courses (OR.ATO.455).

Subpart AeMC – Specific requirements related to Aeromedical Centres (AeMCs)

46. This Subpart includes the approval requirements for AeMCs. In JAA system it was stipulated that the validity period of an AeMC approval shall not exceed 3 years. The new implementing rules contain the continued validity approach, in line with the approval requirements of organisations under existing EASA Parts (OR.GEN.035). This implies that the AeMC will be part of continued oversight programme, established by the competent authority, to monitor whether the AeMC is maintained in compliance with the applicable requirements and aeromedical examinations are carried out according to Part-MED standards.

AMC and GM

47. The largest part of the proposed AMC and GM to Part-OR is based on Section 2 of JAR-FCL, JAR-OPS and JAR-FSTD with the addition of some items coming from Section 1 that were considered better placed in AMC than in the implementing rules. For harmonisation purposes a substantial number of AMC have been based on AMC and GM of existing EASA Parts.

Certification Specifications

48. As part of this NPA you will also find 2 new CS for FSTDs as explained above. CS-FSTD(A) contains the qualification code for aeroplane FSTDs, and CS-FSTD(H) contains the qualification code for helicopter FSTDs. CS-FSTD(A) incorporates the JAA FSTD TGLs # 3,

8, 12, 13 and 14. JAA FSTD TGLs # 9, 10 and 11 are proposed as AMC and GM to Subpart ATO of Part-OR. For a detailed overview of the migration of the JAA documents into EASA Part-OR related documents, see the cross-reference tables in Appendix III.

Appendix III – Cross Reference Tables

A) EASA Part-AR to JAA Documents – Implementing Rules and AMC & GM

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
SUBPART GEN	**GENERAL REQUIREMENTS**	
Section 1	***General***	
AR.GEN.005	Scope	N/A
AR.GEN.020	Acceptable Means of Compliance	N/A
AR.GEN.025	Coordination and information	N/A
AR.GEN.030	Mutual exchange of information	N/A
AR.GEN.035	Mandatory safety information	N/A
AR.GEN.040	Reporting	N/A
AR.GEN.045	Notification of exemptions	N/A
Section 2	***Management***	
AR.GEN.200	Management system	N/A
AR.GEN.205	Changes in the management system	N/A
AR.GEN.220	Record-keeping	N/A
Section 3	***Certification, Oversight and Enforcement***	
AR.GEN.300	Continuing oversight	N/A
AR.GEN.305	Monitoring of activities	N/A
AR.GEN.310	Certification procedure - organisations	N/A
AR.GEN.315	Indirect approval	

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
AR.GEN.330	Changes - organisations	N/A
AR.GEN.340	Declaration –persons and organisations	N/A
AR.GEN.345	Findings and corrective actions – organisations	N/A
AR.GEN.350	Enforcement measures and penalties - persons	N/A
AR.GEN.355	Activities in more than one Member State	N/A
SUBPART ATO	**SPECIFIC REQUIREMENTS RELATED TO APPROVED TRAINING ORGANISATIONS (ATO)**	
Section 1	***General***	
AR.ATO.020	Record-keeping	N/A
AR.ATO.105	Monitoring of activities - ATOs	Appendix 1a to JAR-FCL 1.055 paragraph 5 Appendix 1a to JAR-FCL 2.055 paragraph 5
Section 2	***Flight Simulation Training Devices (FSTD) qualifications***	
AR.ATO.200	Initial evaluation procedure	JAR-FSTD A.015 JAR-FSTD H.015
AR.ATO.210	Issue of a FSTD qualification certificate	JAR-FSTD A.015 JAR-FSTD H.015
AR.ATO.220	Continuation of a FSTD qualification	N/A
AR.ATO.230	Changes	JAR-FSTD A.040 JAR-FSTD H.040
AR.ATO.235	**Findings and corrective actions - FSTD qualification certificate**	JAA FSTD JIP Chapter 7 Paragraph 7.1
SUBPART FCL	**SPECIFIC REQUIREMENTS RELATED TO FLIGHT CREW LICENSING**	
Section 1	***General***	

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
AR.FCL.020	Record-keeping	N/A
Section 2	***Licences, ratings and certificates***	
AR.FCL.200	Procedure for issue, revalidation and renewal of a licence, rating or certificate	JAR-FCL 1.075 JAR-FCL 2.075
AR.FCL.205	Monitoring of flight examiners	N/A
AR.FCL.210	Information for flight examiners	N/A
AR.FCL.215	Validity period	JAR-FCL 1.025 JAR-FCL 2.025
AR.FCL.220	Procedures for the re-issue of a pilot licence	N/A
AR.FCL.250	Limitation, suspension and revocation of licences, ratings and certificates	N/A
Section 3	***Theoretical knowledge examinations***	
AR.FCL.300	Examination procedure - General	JAR-FCL 1.480 JAR-FCL 2.480
SUBPART AEMC	**SPECIFIC REQUIREMENTS RELATED TO AEROMEDICAL CENTRES (AEMC)**	
Section 1	***General***	
AR.AeMC.005	Continuing oversight and monitoring of activities	N/A
AR.AeMC.010	Certification procedure	N/A
SUBPART MED	**SPECIFIC REQUIREMENTS RELATED TO AEROMEDICAL CERTIFICATION**	
Section 1	***General***	
AR.MED.020	Medical assessor	N/A
AR.MED.025	Referral to the competent authority	N/A
AR.MED.030	Medical certificate format	N/A

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
AR.MED.120	Record-keeping	N/A
Section 2	***Aeromedical examiners (AME)***	
AR.MED.200	Procedure for the issue of an AME certificate	N/A
AR.MED.230	Changes – approved AMEs	N/A
AR.MED.240	General Medical Practitioners (GMP) acting as AMEs	N/A
AR.MED.245	Monitoring of AME and GMP	N/A
AR.MED.250	Limitation, suspension and revocation of an aeromedical examiner´s certificate–	N/A
AR.MED.255	Enforcement measures and penalties	N/A
Section 3	***Medical certification***	
AR.MED.315	Review of examination reports	N/A
AR.MED.320	Issuance and removal of limitation(s) to medical certificates	N/A
AR.MED.325	Secondary review policy	JAR-FCL 3.125(c)
Appendices to Part-AR		
Appendix I	EASA Standard Organisation Approval Certificate	N/A
Appendix II	FSTD Qualification Certificate	JAA Form 300
Appendix III	EASA Standard Licence Format	Appendix 1 to JAR-FCL 1.075
Appendix IV	EASA Standard Medical Certificate Format	IEM FCL 3.100(a)

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
SUBPART GEN	**GENERAL REQUIREMENTS**	
Section 1	***General***	
GM to AR.GEN.020	Acceptable Means of Compliance	N/A
GM to AR.GEN.030	Mutual exchange of information	N/A
Section 2	***Management system***	
AMC to AR.GEN.200(a)	Management system - General	N/A
GM to AR.GEN.200(a)	Management system - General	N/A
AMC to AR.GEN.200(a)(1)	Management system – Documented procedures	N/A
AMC 1 to AR.GEN.200(a)(2)	Management system – Qualification and training – Inspectors	N/A
GM to AR.GEN.200(a)(2)	Management system – Qualification and training - General	N/A
AMC to AR.GEN.205	Changes in the management system	N/A
AMC 1 to AR.GEN.220(a)	Record-keeping	N/A
AMC 2 to AR.GEN.220(a)	Record-keeping	N/A
AMC 3 to AR.GEN.220(a)	Record-keeping	N/A
AMC to AR.GEN.220(c)	Record-keeping	N/A
Section 3	***Certification, Oversight and Enforcement***	
AMC to AR.GEN.300(a)	Continuing oversight - ATO	JAA FCL JIP Chapter 9 paragraph 9.1 and 9.2
AMC 1 to AR.GEN.305	Monitoring of activities - ATO	N/A
AMC 2 to AR.GEN.305	Monitoring of activities - ATO	N/A
AMC to AR.GEN.310	Certification procedure - organisation	N/A
AMC to AR.GEN.310(a)	Certification procedure-OPS	N/A

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
AMC to AR.GEN.330	Changes - ATO	N/A
GM to AR.GEN 330	Changes - ATO	N/A
Section 2	***Flight Simulation Training Devices (FSTD) qualifications***	
AMC 1 to AR.ATO.200(a)(1)	Initial evaluation procedure - Assessment Process leading to the issue of a FSTD qualification	JAA FSTD JIP Chapter 4 paragraph 4.1 and 4.2
AMC 2 to AR.ATO.200(a)(1)	Initial evaluation procedure - General	JAR-FSTD(A)/(H) ACJ No. 2 to JAR-FSTD A.015 paragraph 1 ACJ No. 2 to JAR-FSTD H.015 paragraph 1
AMC 3 to AR.ATO.200(a)(1)	Initial evaluation procedure - Initial evaluation	JAR-FSTD(A)/(H) ACJ No. 2 to JAR-FSTD A.015 paragraph 2 ACJ No. 2 to JAR-FSTD H.015 paragraph 2
AMC 4 to AR.ATO.200(a)(1)	Initial evaluation procedure – Composition of the evaluation team	JAR-FSTD(A)/(H) ACJ No. 1 to JAR-FSTD A.015 paragraph 2 ACJ No. 1 to JAR-FSTD H.015 paragraph 2
AMC 5 to AR.ATO.200(a)(1)	FSTD Evaluation Report	JAA FSTD JIP Appendix 5
GM to AR.ATO.200(a)(1)	Initial evaluation procedure - Initial evaluation	JAR-FSTD(A)/(H) ACJ No. 2 to JAR-FSTD A.015 paragraph 2 ACJ No. 2 to JAR-FSTD H.015 paragraph 2
AMC 3 to AR.ATO.200(a)(3)	Initial evaluation procedure - Functions and Subjective Tests – Suggested Test Routine	JAR-FSTD(A)/(H) ACJ No. 2 to JAR-FSTD A.015 paragraph 4 ACJ No. 2 to JAR-FSTD H.015 paragraph 4

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
GM to AR.ATO.200(a)(3)	Initial evaluation procedure	JAR-FSTD(A)/(H) ACJ No. 2 to JAR-FSTD A.015 paragraph 4 ACJ No. 2 to JAR-FSTD H.015 paragraph 4
AMC to AR.ATO.210	Issue of a FSTD qualification certificate - Basic Instrument Training Device (BITD)	JAR-FSTD A.015 paragraph (c) – (e)
AMC to AR.ATO.220	Continuation of a FSTD qualification – Recurrent Evaluations	JAR-FSTD(A)/(H) ACJ No. 2 to JAR-FSTD A.015 paragraph 3 ACJ No. 2 to JAR-FSTD H.015 paragraph 3
AMC 1 to AR.ATO.230	Changes	JAR-FSTD(A)/(H) JAR-FSTD A.040 paragraph (b)(1) JAR-FSTD H.040 paragraph (b)(1)
AMC 2 to AR.ATO.230	Changes	JAA FSTD JIP Chapter 5
AMC 1 to AR.ATO.235	Findings and corrective actions – FSTD qualification certificate	JAA FSTD JIP Chapter 7 Paragraph 7.1
AMC 2 to AR.ATO.235	Suspension, revocation or limitation of a FSTD qualification certificate – Suspension	JAA FSTD JIP Chapter 7 Paragraph 7.2
AMC 3 to AR.ATO.235	Suspension, revocation or limitation of a FSTD qualification certificate – Revocation	JAA FSTD JIP Chapter 7 Paragraph 7.3
SUBPART FCL	**SPECIFIC REQUIREMENTS RELATED TO FLIGHT CREW LICENSING**	
Section 1	***General***	
AMC to AR.FCL.020	Record-keeping	N/A
Section 2	***Licences, ratings and certificates***	
AMC to AR.FCL.205	Monitoring of flight examiners	N/A

CROSS-REFERENCE TABLE EASA PART-AR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
Section 3	***Theoretical knowledge examinations***	
AMC to AR.FCL.300	Examination procedure - General	JAA FCL JIP Chapter 10 Paragraph 10.
AMC 1 to AR.FCL.300(b)	Examination procedure for professional licences and instrument ratings Theoretical knowledge examinations – Duration and number of questions	JAA FCL JIP Chapter 10 Attachment 1
AMC 2 to AR:FCL.300(b)	Examination procedure for professional licences and instrument ratings Theoretical knowledge examinations – Distribution of questions	JAA FCL JIP Chapter 10 Attachment 2
SUBPART MED	**SPECIFIC REQUIREMENTS RELATED TO AEROMEDICAL CERTIFICATION**	
Section 1	***General***	
AMC to AR.MED.020	Medical assessor	N/A
AMC to AR.MED.025	Referral to the competent authority	N/A

B) EASA Part-OR to JAA Documents – Implementing Rules and AMC & GM

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
SUBPART GEN	**GENERAL REQUIREMENTS**	
Section 1	**General**	
OR.GEN.001	Competent authority	N/A
OR.GEN.010	Definitions	JAR-FSTD A.005 JAR-FSTD H.005
OR.GEN.015	Application	N/A
OR.GEN.020	Acceptable Means of Compliance	N/A
OR.GEN.025	Terms of approval and privileges of an organisation	N/A
OR.GEN.030	Changes to the organisation's approval	N/A
OR.GEN.035	Continued validity	N/A
OR.GEN.040	Declaration	N/A
OR.GEN.045	Findings	N/A
Section 2	**Management**	
OR.GEN.200	Management system	N/A
OR.GEN.205	Contracting and purchasing	N/A
OR.GEN.210	Personnel requirements	N/A
OR.GEN.215	Facility requirements	N/A
OR.GEN.220	Record-keeping	N/A
SUBPART ATO	**APPROVED TRAINING ORGANISATION**	
Section 1	**General**	
OR.ATO.005	Scope	N/A
OR.ATO.010	Legal entity and financial resources	Appendix 1a to JAR-FCL 1.055 paragraph 9 (a) Appendix 1a to JAR-FCL 2.055 paragraph 9 (a)

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
OR.ATO.015	Application	N/A
OR.ATO.110	Personnel requirements	Appendix 1a to JAR-FCL 1.055 paragraphs 9 (b) Appendix 1a to JAR-FCL 1.055 paragraph 9 (b)
OR.ATO.120	Record-keeping	Appendix 1a to JAR-FCL 1.055 paragraphs 21 - 23 Appendix 2 to JAR-FCL 1.055 paragraphs 18 - 20 Appendix 1a to JAR-FCL 2.055 paragraphs 21 - 23 Appendix 2 to JAR-FCL 2.055 paragraphs 18 -20
OR.ATO.125	Training programme	Appendix 1a to JAR-FCL 1.055 paragraphs 24 Appendix 1a to JAR-FCL 2.055 paragraphs 24
OR.ATO.130	Training aircraft and FSTDs	Appendix 1a to JAR-FCL 1.055 paragraphs 25 and 26 Appendix 1a to JAR-FCL 2.055 paragraphs 25 and 26
OR.ATO.135	Aerodromes	Appendix 1a to JAR-FCL 1.055 paragraphs 27 Appendix 1a to JAR-FCL 2.055 paragraphs 27 and 28
OR.ATO.140	Pre-requisites for training	Appendix 1a to JAR-FCL 1.055 paragraph 31 Appendix 2 to JAR-FCL 1.055 paragraph 24 Appendix 1a to JAR-FCL 2.055 Paragraph 30 Appendix 2 to JAR-FCL 2.055 paragraphs 24

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
OR.ATO.145	Training outside Member States	Appendix 1b to JAR-FCL 1.055 Appendix 1c to JAR-FCL 1.055 Appendix 1b to JAR-FCL 2.055 Appendix 1c to JAR-FCL 2.055
Section 2	**Additional requirements for ATOs providing training for licences and ratings other than LPL, PPL, SPL and BPL**	
OR.ATO.210	Personnel requirements	Appendix 1a to JAR-FCL 1.055 paragraphs 10 – 13 and 17 Appendix 1a to JAR-FCL 2.055paragraphs 10 – 13 and 17
OR.ATO.225	Training programme	Appendix 1a to JAR-FCL 1.055 paragraph 24 Appendix 1a to JAR-FCL 2.055 paragraph 24
OR.ATO.230	Training and Operations manual	Appendix 1a to JAR-FCL 1.055 paragraphs 31 - 33 Appendix 2 to JAR-FCL 1.055 paragraphs 25 - 27 Appendix 1a to JAR-FCL 2.055 paragraphs 32 - 33 Appendix 2 to JAR-FCL 2.055 paragraphs 25 - 27
Section 3	**Additional requirements for ATOs providing training in FSTDs and the qualification of FSTDs**	
Chapter 1	**Requirements for ATOs providing training in FSTDs**	
OR.ATO.300	General	JAR-FSTD A.001 (c) JAR-FSTD H.001 (c)
OR.ATO.305	FSTD qualification maintenance	JAR-FSTD A.030 (g) JAR-FSTD H.030 (g)
OR.ATO.310	Modifications	JAR-FSTD A.025 (b) JAR-FSTD H.025 (b)
OR.ATO.315	Installations	JAR-FSTD A.025 (c) JAR-FSTD H.025 (c)

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
OR.ATO.320	Additional equipment	JAR-FSTD A.025 (d) JAR-FSTD H.025 (d)
Chapter 2	**Requirements for the qualification of FSTDs**	
OR.ATO.350	Application for FSTD qualification	JAR-FSTD A.015 (a) and (c) JAR-FSTD H.015 (a)
OR.ATO.355	Certification specifications for FSTDs	N/A
OR.ATO.360	Qualification basis	JAR-FSTD A.001 JAR-FSTD H.001
OR.ATO.365	Issue of an FSTD qualification	JAR-FSTD A.015 (b) and (d) JAR-FSTD H.015 (b)
OR.ATO.370	Interim FSTD Qualification	JAR-FSTD A.045 JAR-FSTD H.045
OR.ATO.375	Duration and continued validity	JAR-FSTD A.020 and ACJ to JAR-FSTD A.020 JAR-FSTD H.020 and ACJ to JAR-FSTD H.020
OR.ATO.380	Changes to the qualified FSTD	JAR-FSTD A.040 JAR-FSTD H.040
OR.ATO.385	Transferability of an FSTD qualification	JAR-FSTD A.050 JAR-FSTD H.050
Section 4	**Additional requirements for training organisations providing specific types of training**	
Chapter 1	**General Distance learning courses**	
OR.ATO.400	General	Appendix 3 to JAR-FCL 1.055 paragraph 6 Appendix 3 to JAR-FCL 2.055 paragraph 6
OR.ATO.405	Classroom instruction	Appendix 3 to JAR-FCL 1.055 paragraphs 1 and 4 Appendix 3 to JAR-FCL 2.055 paragraphs 1 and 4

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – IMPLEMENTING RULES		
EASA REFERENCE	SUBJECT	JAA REFERENCE
OR.ATO.410	Instructors	Appendix 3 to JAR-FCL 1.055 paragraph 5 Appendix 3 to JAR-FCL 2.055 paragraph 5
Chapter 2	**Zero Flight Time Training (ZFTT)**	
OR.ATO.430	General	Appendix 1 to JAR-FCL 1.261(c)(2)
OR.ATO.435	Flight Simulation Training Devices	Appendix 1 to JAR-FCL 1.261(c)(2) Paragraph 2 (b)
Chapter 3	**MPL courses**	
OR.ATO.450	General	Appendix 1 to JAR-FCL 1.520 & 1.525 Paragraph 2
Chapter 4	**Flight testing qualification courses**	
OR.ATO.455	General	N/A
SUBPART AeMC	**AEROMEDICAL CENTRES**	
Section 1	**General**	
OR.AeMC.005	Scope	N/A
OR.AeMC.015	Application	N/A
OR.AeMC.035	Continued validity	N/A
OR.AeMC.045	Findings	N/A
Section 2	Management	
OR.AeMC.200	Management system	N/A
OR.AeMC.210	Personnel requirements	JAR-FCL 3.085 (c)
OR.AeMC.215	Facility requirements	JAR-FCL 3.085 (d)
OR.AeMC.220	Record-keeping	N/A

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
SUBPART GEN	**GENERAL REQUIREMENTS**	
Section 1	**General**	
AMC to OR.GEN.030	Changes to the organisation's approval	JAR-OPS 1.185
AMC to OR.GEN.035	Continued validity-OPS	JAR-OPS 1.145
AMC to OR.GEN.040	Declaration	N/A
Section 2	**Management system**	
AMC to OR.GEN.200(a)(1)	Management system SAFETY POLICY	N/A
AMC 1 to OR.GEN.200(a)(2)	Management system SAFETY MANAGEMENT SYSTEM – SAFETY RISK MANAGEMENT SMALL ORGANISATIONS	N/A
AMC 2 to OR.GEN.200(a)(2)	Management system SAFETY MANAGEMENT SYSTEM – SAFETY RISK MANAGEMENT OTHER ORGANISATIONS	N/A
AMC 1 to OR.GEN.200(a)(3)	Management system SAFETY MANAGEMENT SYSTEM – ORGANISATION AND ACCOUNTABILITIES - SMALL ORGANISATIONS	N/A
AMC 2 to OR.GEN.200(a)(3)	Management system SAFETY MANAGEMENT SYSTEM – ORGANISATION AND ACCOUNTABILITIES - OTHER ORGANISATIONS	N/A
AMC 1 to OR.GEN.200(a)(4)	Management system TRAINING AND COMMUNICATION ON SAFETY SMALL ORGANISATIONS	N/A
AMC 2 to OR.GEN.200(a)(4)	Management system TRAINING AND COMMUNICATION ON SAFETY OTHER ORGANISATIONS	N/A
AMC to OR.GEN.200(a)(5)	Management system OCCURRENCE REPORTING SCHEME	ACJ OPS 1.037(a)(2)
AMC to OR.GEN.200(a)(6)	Management system ORGANISATION MANUAL – CONTENT	N/A

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
GM to OR.GEN.200(a)(6)	Management system ORGANISATION MANUAL	N/A
AMC 1 to OR.GEN.200(a)(7)	Management system COMPLIANCE MONITORING SYSTEM - GENERAL	AMC OPS 1.035 IEM No. 1 to JAR-FCL 1.055
AMC 2 to OR.GEN.200(a)(7)	Management system - ATO COMPLIANCE MONITORING PROGRAMME – APPROVED TRAINING ORGANISATION	IEM No. 1 to JAR-FCL 1.055 paragraphs 10 and 14
AMC 3 to OR.GEN.200(a)(7)	Management system-OPS	AMC OPS 1.035 TGL 32
AMC 4 to OR.GEN.200(a)(7)	Management system-OPS	AMC OPS 1.035 TGL 32
AMC to OR.GEN.200(b)	Management system - ATO SIZE, NATURE AND COMPLEXITY OF THE ACTIVITIES - ATO	AMC FCL 1.055 paragraph 4
AMC to OR.GEN.205	Contracting and purchasing	AMC OPS 1.035 paragraph 5.1 IEM No. 1 to JAR-FCL 1.055 paragraph 20
GM to OR.GEN.205	Contracting and purchasing	Appendix 2 to OPS 1.175 (c)(2)
AMC 1 to OR.GEN.215	Facilities – ATOs	Appendix 1a to JAR-FCL 1.055 paragraphs 28 and 29
AMC 2 to OR.GEN.215	Facilities - ATO	N/A
AMC to OR.GEN.220(b)	Record-keeping	N/A
GM to OR.GEN.220(b)	Record-keeping	N/A
AMC to OR.GEN.220(d)	Record-keeping-OPS	JAR-OPS 1.150
SUBPART ATO	**APPROVED TRAINING ORGANISATIONS**	
Section 1	**Approved Training Organisations (AT0)**	
AMC to OR.ATO.010(b)	Legal entity and financial resources	IEM No. 2 to JAR-FCL 1.055
AMC to OR.ATO.015	Application APPLICATION FORM	JAA Form 151

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
AMC to OR.ATO.110	Personnel requirements – flight simulation training instructors	Appendix 1a to JAR-FCL 1.055 paragraphs 16 and 18 Appendix 1a to JAR-FCL 1.055 paragraph 16 and 18
AMC 1 to OR.ATO.125	Training Programme	Appendix 1a to JAR-FCL 1.055 paragraph 24 Appendix 1a to JAR-FCL 2.055 paragraph 24
AMC 2 to OR.ATO.125	Training programme TYPE RATING COURSE – AEROPLANE	AMC FCL 1.261(c)(2)
AMC 3 to OR.ATO.125	Training programme TYPE RATING COURSE – HELICOPTER	AMC FCL 2.261(c)(2)
AMC to OR.ATO.130	Training aircraft and FSTDs	Appendix 1a to JAR-FCL 1.055 paragraphs 25 and 26 Appendix 1a to JAR-FCL 2.055 paragraphs 25 and 26
AMC to OR.ATO.135	Aerodromes	Appendix 1a to JAR-FCL 1.055 paragraphs 27 Appendix 1a to JAR-FCL 2.055 paragraphs 27 and 28
Section 2	**Additional requirement for ATOs providing training for licences and ratings other than the LPL and PPL**	
AMC 1 to OR.ATO.210	Personnel requirements GENERAL	Appendix 1a to JAR-FCL 1.055 Paragraphs 11, 13 and 20 Appendix 2 to JAR-FCL 1.055 paragraph 16
AMC 2 to OR.ATO.210	Personnel requirements	
AMC to OR.ATO.230(c)	Training manual and operations manual TRAINING MANUAL	IEM No. 3 to JAR-FCL 1.055
AMC to OR.ATO.230(d)	Training manual and operations manual OPERATIONS MANUAL	IEM No. 3 to JAR-FCL 1.055
Section 3	**Additional requirements for ATOs providing training in FSTDs and the qualification of FSTDs**	

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
Chapter 1	**Requirements for ATOs providing training in FSTDs**	
AMC 1 to OR.ATO.300(a)(1)	General COMPLIANCE MONITORING PROGRAMME – APPROVED TRAINING ORGANISATION OPERATING FSTDs	ACJ No. 1 to JAR-FSTD A.025 paragraphs 3.3 and 4.6 ACJ No. 1 to JAR-FSTD H.025 paragraphs 3.3 and 4.6
AMC 2 to OR.ATO.300(a)(1)	General COMPLIANCE MONITORING PROGRAMME – APPROVED TRAINING ORGANISATION OPERATING FSTDs	ACJ No. 1 to JAR-FSTD A.025 paragraph 7 ACJ No. 1 to JAR-FSTD H.025 paragraph 7
AMC 3 to OR.ATO.300(a)(1)	General COMPLIANCE MONITORING PROGRAMME – APPROVED TRAINING ORGANISATION OPERATING BITDs	ACJ No. 2 to JAR-FSTD A.025
GM 1 to OR.ATO.300	General COMPLIANCE MONITORING SYSTEM – APPROVED TRAINING ORGANISATION OPERATING FSTDs- GENERAL	JAA FSTD TGL No. 9
GM 2 to OR.ATO.300	Compliance Monitoring System Assessment for ATOs operating FSTDs	JAA TGL FSTD No.9 Appendix 1
GM 3 to OR. ATO.300	Guidance for ATOs operating FSTDs to prepare for a competent authority evaluation	JAA TGL FSTD No.9 Appendix 2
AMC to OR.ATO.310(a)	Modifications	JAA FSTD TGL No. 9 paragraph 3
AMC to OR.ATO.310(b)	Modifications	JAA FSTD TGL No. 9 paragraph 4
AMC to OR.ATO.315	Installations	ACJ No. 3 to JAR-FSTD A.025 ACJ No. 2 to JAR-FSTD H.025
GM to OR.ATO.315	Installations	JAA FSTD TGL No. 9 paragraph 5
Chapter 2	**Requirements for the qualification of FSTDs**	
AMC to OR.ATO.350	Application for FSTD qualification LETTER OF APPLICATION	ACJ No. 1 to JAR-FSTD A.015 ACJ No. 1 to JAR-FSTD H.015

CROSS-REFERENCE TABLE EASA PART-OR TO JAA DOCUMENTS – AMC AND GM		
EASA REFERENCE	SUBJECT	JAA REFERENCE
GM to OR.ATO.350	Application for FSTD qualification USE OF FOOTPRINT TESTS IN QUALIFICATION TEST SUBMISSION	JAA FSTD TGL No. 11
AMC to OR.ATO.370	Interim FSTD qualification NEW AIRCRAFT FFS/FTD QUALIFICATION – ADDITIONAL INFORMATION	ACJ No. 1 to JAR-FSTD A.045 ACJ No. 1 to JAR-FSTD H.045
GM to OR.ATO.370	Interim FSTD qualification NEW AIRCRAFT FFS/FTD QUALIFICATION – ADDITIONAL INFORMATION	ACJ No. 1 to JAR-FSTD A.045 "NOTE" ACJ No. 1 to JAR-FSTD H.045 "NOTE"
AMC to OR.ATO.380(b)	Changes to the qualified FSTD UPDATING AND UPGRADING EXISTING FSTDs	JAA FSTD TGL No. 10
Section 4	**Additional requirements for ATOs providing specific type of training**	
Chapter 1	**Distance Learning Courses**	
AMC to OR.ATO.400	General	AMC FCL 1.055(a) AMC FCL 2.055(a)
Chapter 2	**Zero Flight Time Training (ZFTT)**	
AMC to OR.ATO.430	General	Appendix 1 to JAR-FCL 1.261(c)(2) paragraph (2)(d)
AMC to OR.ATO.435	Flight Simulation Training Devices	Appendix 1 to JAR-FCL 1.261(c)(2) paragraph (2)(b)
SUBPART AeMC	**AEROMEDICAL CENTRES**	
Section 1	**General**	
AMC to OR.AeMC.015	**Application**	N/A
Section 2	**Management**	
AMC to OR.AeMC.210	**Personnel requirements**	N/A
AMC to OR.AeMC.215	**Facility requirements**	N/A

C) JAA Documents # EASA Part-AR and OR

CROSS-REFERENCE TABLE JAR-FCL 1 AND 2 TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
SECTION 1 – REQUIREMENTS		
SUBPART A	**GENERAL REQUIREMENTS**	
JAR-FCL 1.025 JAR-FCL 2.025	Validity of licences and ratings	AR.FCL.215
JAR–FCL 1.065 JAR–FCL 2.065	State of licence issue	N/A
JAR–FCL 1.075 JAR–FCL 2.075	Format and specifications for flight crew licences	AR.FCL.200
Appendix 1a to JAR–FCL 1.055 Appendix 1a to JAR–FCL 2.055	Flying Training Organisations for pilot licences and ratings	AR.GEN.310 OR.ATO.010 – 145 OR.ATO.210 - 230
Appendix 1c to JAR–FCL 1.055 Appendix 1c to JAR–FCL 2.055	Additional requirements for training in FTOs whose principal place of business and registered office are located outside the JAA States	OR.ATO.145
Appendix 2 to JAR–FCL 1.055 Appendix 2 to JAR–FCL 2.055	Type Rating Training Organisation for the issue of type ratings only to pilot licence holders	AR.GEN.310 OR.ATO.010 – 145 OR.ATO.210 - 230
Appendix 1 to JAR–FCL 1.075 Appendix 1 to JAR–FCL 2.075	Specifications for flight crew licences	AR.FCL.200
SUBPART C	**PRIVATE PILOT LICENCE (AEROPLANE) – PPL(A)**	
Appendix 2 to JAR–FCL 1.125 Appendix 2 to JAR–FCL 2.125	Registration of facilities for PPL instruction only	OR.ATO.015(a)

CROSS-REFERENCE TABLE JAR-FCL 1 AND 2 TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
SUBPART J	**THEORETICAL KNOWLEDGE REQUIREMENTS AND PROCEDURES FOR THE CONDUCT OF THEORETICAL KNOWLEDGE EXAMINATIONS FOR PROFESSIONAL PILOT LICENCES AND INSTRUMENT RATINGS**	
JAR–FCL 1.475	Questions[35]	AR.FCL.300
JAR–FCL 1.480	Examination procedure	AR.FCL.300
SECTION 2		
	AMC/IEM A – GENERAL REQUIREMENTS	
AMC FCL 1.055 AMC FCL 2.055	Quality System for FTOs/TRTOs	AMC 2 to OR.GEN.200(a)(7)
AMC FCL 1.055(a) AMC FCL 1.055(a)	Approval of Modular Theoretical Knowledge Distance Learning Courses	AMC to OR.ATO.400
IEM No. 1 to JAR–FCL 1.055 IEM No. 1 to JAR–FCL 2.055	Quality system for FTOs/TRTOs	AMC 2 to OR.GEN.200(a)(7)
IEM No. 2 to JAR–FCL 1.055 IEM No. 2 to JAR–FCL 1.055	Financial Evaluation of Flying Training Organisations (FTOs)/Type Rating Training to Organisations (TRTOs)	AMC to OR.ATO.010(b)
IEM No. 3 to JAR–FCL 1.055 IEM No. 3 to JAR–FCL 2.055	Training and Operations Manual for FTOs and TRTOs (if applicable)	AMC to OR.ATO.230(d) AMC to OR.ATO.230(e)
	AMC/IEM F – CLASS AND TYPE RATING	
AMC FCL 1.261(c)(2) AMC FCL 2.261(c)(2)	Guidelines for approval of an aeroplane/helicopter type rating course	AMC 2 to OR.ATO.125 AMC 3 to OR.ATO.125

[35] Amended by Draft NPA-FCL 34

CROSS-REFERENCE TABLE JAR-FCL 1 AND 2 TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
	AMC/IEM J – THEORETICAL KNOWLEDGE REQUIREMENTS	
AMC FCL 1.470(a), (b) and (c) AMC FCL 2.470(a),(b) and (c)	Theoretical knowledge examination subjects/sections and length of examinations – ATPL(A), CPL(A) and IR(A) [36]	AMC 1 to AR.FCL.300(b)
IEM FCL 1.475(a) IEM FCL 1.475(a)	Construction of computer compatible questions[37]	N/A
IEM FCL 1.475(b)	Common abbreviations to be used for the European CQB	N/A
IEM FCL 1.480 IEM FCL 2.480	Distribution of examination questions[38]	AMC 2 to AR.FCL.300(b)
IEM FCL 1.490 IEM FCL 2.490	Terminology used in Subpart J for procedures for the conduct of theoretical knowledge examinations	N/A

[36] Amended by Draft NPA-FCL 34

[37] Amended by Draft NPA-FCL 34

[38] Amended by Draft NPA-FCL 34

CROSS-REFERENCE TABLE JAR-FCL 3 TO EASA PART-AR AND PART-OR		
JAR-FCL 3 REFERENCE	SUBJECT	EASA REFERENCE
SECTION 1 - REQUIREMENTS		
SUBPART A	**GENERAL REQUIREMENTS**	
JAR-FCL 3.085	Aeromedical Centres	OR.AeMC.005
JAR–FCL 3.090(f)	Authorised Medical Examiners (AMEs)	AR.MED.240
JAR–FCL 3.100	Medical certificates	AR.MED.030
JAR–FCL 3.125(c)	Delegation of Fit Assessment, Review Policy and Secondary Review	AR.MED.315
SECTION 2		
	AMC/ IEM A	
IEM FCL 3.100 (a) and (b)	Medical certificate - Class 1/2	AR.MED.030 Appendix IV to Part-AR

D) *EASA CS-FSTD(A) TO JAR-FSTD(A)*

CROSS-REFERENCE TABLE EASA CS-FSTD(A) TO JAR-FSTD(A)		
EASA REFERENCE	SUBJECT	JAA REFERENCE
	BOOK 1 – QUALIFICATION CODE	
Subpart A	**Applicability**	
CS-FSTD(A).001	Applicability	JAR-FSTD A.001
Subpart B	**Terminology**	
CS-FSTD(A).200	Terminology	JAR-FSTD A.005
Subpart C	**Aeroplane Flight Simulation Training Devices**	
CS-FSTD(A).300	Qualification basis	JAR-FSTD A.030
Appendix		
Appendix 1 to CS-FSTD(A).300	Flight Simulation Training Devices Standard	Appendix 1 to JAR-FSTD A.300
	BOOK 2 – ACCEPTABLE MEANS OF COMPLIANCE	
Subpart B	**Terminology**	
AMC to CS-FSTD(A).200	Terminology and abbreviations	ACJ to JAR-FSTD A.005
Subpart C	**Aeroplane Flight Simulation Training Devices**	
AMC No. 1 to CS-FSTD(A).300	Qualification basis	ACJ No.1 to JAR-FSTD A.030
Appendix 1 to AMC No. 1 to CS-FSTD(A).300	Validation Test Tolerances	Appendix 1 to ACJ No.1 to JAR-FSTD A.030
Appendix 2 to AMC No. 1 to CS-FSTD(A).300	Validation Data Roadmap	Appendix 2 to ACJ No.1 to JAR-FSTD A.030
Appendix 3 to AMC No. 1 to CS-FSTD(A).300	Data Requirements for Alternate Engines	Appendix 3 to ACJ No.1 to JAR-FSTD A.030
Appendix 4 to AMC No. 1 to CS-FSTD(A).300	Data Requirements for Alternate Avionics	Appendix 4 to ACJ No.1 to JAR-FSTD A.030
Appendix 5 to AMC No. 1 to CS-FSTD(A).300	Transport Delay Testing Method	Appendix 5 to ACJ No.1 to JAR-FSTD A.030
Appendix 6 to AMC No. 1 to CS-FSTD(A).300	Recurrent Evaluations – Validation Test Data Presentation	Appendix 6 to ACJ No.1 to JAR-FSTD A.030

CROSS-REFERENCE TABLE EASA CS-FSTD(A) TO JAR-FSTD(A)		
EASA REFERENCE	SUBJECT	JAA REFERENCE
Appendix 7 to AMC No. 1 to CS-FSTD(A).300	Applicability	Appendix 7 to ACJ No.1 to JAR-FSTD A.030
Appendix 8 to AMC No. 1 to CS-FSTD(A).300	General technical Requirements for FSTD Qualification Levels	Appendix 8 to ACJ No.1 to JAR-FSTD A.030
AMC No. 2 to CS-FSTD(A).300	Guidance on Design and Qualification of Level "A" Aeroplane FFSs	ACJ No. 2 to JAR-FSTD A.030
AMC No. 3 to CS-FSTD(A).300	Guidance on Design and Qualification of FNPTs	ACJ No. 3 to JAR-FSTD A.030
AMC No. 4 to CS-FSTD(A).300	Guidance on Design and Qualification of BITDs	ACJ No. 4 to JAR-FSTD A.030
AMC No. 5 to CS-FSTD(A).300	Guidance on Evaluations of Electrical Motion Systems for FFSs	JAA Temporary Guidance Leaflet No. 14
AMC No. 6 to CS-FSTD(A).300	Guidance on Enhanced Visual System (EVS) and Qualification of FFSs	JAA Temporary Guidance Leaflet No. 12
AMC No. 7 to CS-FSTD(A).300	Guidance on Old Visual Systems and New Visual Scenes for FFFs	JAA Temporary Guidance Leaflet No. 13
AMC No. 1 to CS-FSTD(A).300(c)(1)	Engineering Simulator Validation Data	ACJ No.1 to JAR-FSTD A.030(c)(1)
AMC No. 2 to CS-FSTD(A).300(c)(1)	Engineering Simulator Validation Data – Approved Guidelines	ACJ No.1 to JAR-FSTD A.030(c)(1)

E) EASA CS-FSTD(H) TO JAR-FSTD(H)

CROSS-REFERENCE TABLE EASA CS-FSTD(H) TO JAR-FSTD(H)		
EASA REFERENCE	SUBJECT	JAA REFERENCE
	BOOK 1 – QUALIFICATION CODE	
Subpart A	**Applicability**	
CS-FSTD(H).001	Applicability	JAR-FSTD H.001
Subpart B	**Terminology**	
CS-FSTD(H).200	Terminology	JAR-FSTD H.005
Subpart C	**Helicopter Flight Simulation Training Devices**	
CS-FSTD(H).300	Qualification basis	JAR-FSTD H.030
Appendix		
Appendix 1 to CS-FSTD(H).300	Flight Simulation Training Devices Standard	Appendix 1 to JAR-FSTD H.030
	BOOK 2 – ACCEPTABLE MEANS OF COMPLIANCE	
Subpart B	**Terminology**	
AMC to CS-FSTD(H).200	Terminology and abbreviations	ACJ to JAR-FSTD H.005
Subpart C	**Helicopter Flight Simulation Training Devices**	
AMC No. 1 to CS-FSTD(H).300	Qualification basis	ACJ No. 1 to JAR-FSTD H.030
Appendix 1 to AMC No. 1 to CS-FSTD(H).300	Validation Test Tolerances	Appendix 1 to ACJ No. 1 to JAR-FSTD H.030
Appendix 2 to AMC No. 1 to CS-FSTD(H).300	Validation Data Roadmap	Appendix 2 to ACJ No. 1 to JAR-FSTD H.030
Appendix 3 to AMC No. 1 to CS-FSTD(H).300	Rotor Aerodynamic Modelling Techniques	Appendix 3 to ACJ No. 1 to JAR-FSTD H.030
Appendix 4 to AMC No. 1 to CS-FSTD(H).300	Vibration Platforms for Helicopter FSTDs	Appendix 4 to ACJ No. 1 to JAR-FSTD H.030

CROSS-REFERENCE TABLE EASA CS-FSTD(H) TO JAR-FSTD(H)		
EASA REFERENCE	SUBJECT	JAA REFERENCE
Appendix 5 to AMC No. 1 to CS-FSTD(H).300	Transport Delay Testing Method	Appendix 5 to ACJ No. 1 to JAR-FSTD H.030
Appendix 6 to AMC No. 1 to CS-FSTD(H).300	Recurrent Evaluations – Validation Test Data Presentation	Appendix 6 to ACJ No. 1 to JAR-FSTD H.030
Appendix 7 to AMC No. 1 to CS-FSTD(H).300	Applicability	Appendix 7 to ACJ No. 1 to JAR-FSTD H.030
Appendix 8 to AMC No. 1 to CS-FSTD(H).300	Visual Display Systems	Appendix 8 to ACJ No. 1 to JAR-FSTD H.030
Appendix 9 to AMC No. 1 to CS-FSTD(H).300	General Technical Requirements for FSTD Qualification Levels	Appendix 9 to ACJ No. 1 to JAR-FSTD H.030
AMC No. 2 to CS-FSTD(H).300	Guidance on Design and Qualification of Level "A" Helicopter FFSs	ACJ No. 2 to JAR-FSTD H.030
AMC No. 3 to CS-FSTD(H).300	Guidance on Design and Qualification of Helicopter FTDs	ACJ No. 3 to JAR-FSTD H.030
AMC No. 4 to CS-FSTD(H).300	Use of Data for Helicopter FTDs	ACJ No. 4 to JAR-FSTD H.030
AMC No. 5 to CS-FSTD(H).300	Guidance on Design and Qualification of Helicopter FNPTs	ACJ No. 5 to JAR-FSTD H.030
AMC No. 1 to CS-FSTD(H).300(c)(1)	Engineering Simulator Validation Data	ACJ No. 1 to JAR-FSTD H.030(c)(1)
AMC No. 2 to CS-FSTD(H).300(c)(1)	Engineering Simulator Validation Data – Approved Guidelines	ACJ No. 2 to JAR-FSTD H.030(c)(1)

F) JAR-FSTD(A) TO EASA PART-AR AND OR

CROSS-REFERENCE TABLE JAR-FSTD(A) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
SECTION 1 - REQUIREMENTS		
SUBPART A	**APPLICABILITY**	
JAR–FSTD A.001	Applicability	CS-FSTD(A).001 OR.ATO.300(a)(2)
SUBPART B	**GENERAL**	
JAR–FSTD A.005	Terminology	CS-FSTD(A).200 OR.ATO.005
JAR–FSTD A.010	Implementation	N/A
SUBPART C	**AEROPLANE FLIGHT SIMULATION TRAINING DEVICES**	
JAR–FSTD A.015	Application for FSTD Qualification	AR.ATO.200 AR.ATO.205 AMC to AR.ATO.205 OR.ATO.365
JAR–FSTD A.020(c)	Validity FSTD Qualification	OR.ATO.375
JAR–FSTD A.025	Rules governing FSTD Operators	OR.ATO.200
JAR–FSTD A.030	Requirements for FSTDs qualified on or after 1 August 2008	CS-FSTD(A).300
JAR–FSTD A.031	Requirements for FFSs qualified on or after 1 April 1998 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD A.032	Requirements for FTDs qualified on or after 1 July 2000 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD A.033	Requirements for FNPTs qualified on or after 1 July 1999 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD A.034	Requirements for BITD qualified on or after 1 January 2003 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD A.035	Requirements for FFSs approved or qualified before 1 April 1998	Cover Regulation Part-OR
JAR–FSTD A.036	Requirements for FTDs approved or qualified before 1 July 2000	Cover Regulation Part-OR

CROSS-REFERENCE TABLE JAR-FSTD(A) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
JAR–FSTD A.037	Requirements for FNPTs approved or qualified before 1 July 1999	Cover Regulation Part-OR
JAR–FSTD A.040	Changes to qualified FSTDs	AR.ATO.215 OR.ATO.380
JAR–FSTD A.045	Interim FSTD Qualification	OR.ATO.370
JAR–FSTD A.050	Transferability of FSTD Qualification	OR.ATO.385
Appendix 1 to JAR–FSTD A.030	FSTD Standards	Appendix 1 to CS-FSTD(A).300
SECTION 2 – ADVISORY CIRCULARS JOINT (ACJ)		
	ACJ B – GENERAL	
ACJ to JAR–FSTD A.005	Terminology, Abbreviations	AMC to CS-FSTD(A).200
	ACJ C – AEROPLANE FSTDS	
ACJ No. 1 to JAR–FSTD A.015	FSTD Qualification – Application and Inspection	AMC to OR.ATO.350 AMC 4 to AR.ATO.200(a)(1)
ACJ No. 2 to JAR–FSTD A.015	FSTD Evaluations	AMC 2 to AR.ATO.200(a)(1) AMC 3 to AR.ATO.200(a)(1) GM to AR.ATO.200(a)(1) AMC to AR.ATO.200(a)(3) GM to AR.ATO.200(a)(3) AMC to AR.ATO.210
ACJ to JAR–FSTD A.020(c)	Validity of an FSTD Qualification	OR.ATO.375(b)
ACJ No. 1 to JAR–FSTD A.025	Quality system	AMC 1 to OR.ATO.300(a)(1) AMC 2 to OR.ATO.300(a)(1)
ACJ No. 2 to JAR–FSTD A.025	BITD Operator Quality System	AMC 3 to OR.ATO.300(a)(1)
ACJ No. 3 to JAR–FSTD A.025	Installations	AMC to OR.ATO.315
ACJ No. 1 to JAR–FSTD A.030	FSTDs qualified on or after *1 August 2008*	AMC No. 1 to CS-FSTD(A).300
Appendix 1 to ACJ No. 1 to JAR–FSTD A.030	Validation Test Tolerances	Appendix 1 to AMC No. 1 to

CROSS-REFERENCE TABLE JAR-FSTD(A) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
		CS-FSTD(A).300
Appendix 2 to ACJ No. 1 to JAR–FSTD A.030	Validation Data Roadmap	Appendix 2 to AMC No. 1 to CS-FSTD(A).300
Appendix 3 to ACJ No. 1 to JAR–FSTD A.030	Data Requirements for Alternate Engines	Appendix 3 to AMC No. 1 to CS-FSTD(A).300
Appendix 4 to ACJ No. 1 to JAR–FSTD A.030	Data Requirements for Alternate Avionics	Appendix 4 to AMC No. 1 to CS-FSTD(A).300
Appendix 5 to ACJ No. 1 to JAR–FSTD A.030	Transport Delay Testing Method	Appendix 5 to AMC No. 1 to CS-FSTD(A).300
Appendix 6 to ACJ No. 1 to JAR–FSTD A.030	Recurrent Evaluations – Validation Test Data Presentation	Appendix 6 to AMC No. 1 to CS-FSTD(A).300
Appendix 7 to ACJ No. 1 to JAR–FSTD A.030	Applicability	Appendix 7 to AMC No. 1 to CS-FSTD(A).300
Appendix 8 to ACJ No. 1 to JAR–FSTD A.030	General Technical Requirements for FSTD Qualification Levels	Appendix 8 to AMC No. 1 to CS-FSTD(A).300
ACJ No. 2 to JAR-FSTD A.030	Guidance on Design and Qualification of Level ”A” Aeroplane FFSs	AMC No. 2 to CS-FSTD(A).300
ACJ No. 3 to JAR–FSTD A.030	Guidance on Design and Qualification of FNPTs	AMC No. 3 to CS-FSTD(A).300
ACJ No. 4 to JAR–FSTD A.030	Guidance on Design and Qualification of BITDs	AMC No. 4 to CS-FSTD(A).300
ACJ No. 1 to JAR–FSTD A.030(c)(1)	Engineering Simulator Validation Data	AMC No. 1 to CS–FSTD(A).300(c)(1)
ACJ No. 2 to JAR–FSTD A.030(c)(1)	Engineering Simulator Validation Data – Approved Guidelines	AMC No. 2 to CS–FSTD(A).300(c)(1)

CROSS-REFERENCE TABLE JAR-FSTD(A) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
ACJ to JAR–FSTD A.035	FFS Approved or Qualified before 1 April 1998	N/A
ACJ to JAR–FSTD A.036	FTD Approved or Qualified before 1 July 2000	N/A
ACJ to JAR–FSTD A.037	FNPT Approved or Qualified before 1 July 1999	N/A
ACJ to JAR–FSTD A.045	New Aeroplane FFS/FTD Qualification – Additional Information	AMC to OR.ATO.370 GM to OR.ATO.370
	Temporary Guidance Leaflets - FSTD	
Leaflet No. 3	Integrated testing	AMC No. 1 to CS-FSTD(A).300
Leaflet No. 8	Applicability of JAR-STD 1A Amendments to simulator data packages for existing aeroplanes	Appendix 7 to AMC No. 1 to CS-FSTD(A).300
Leaflet No. 9	Additional guidance on quality systems for operators of synthetic training devices	GM to OR.ATO.300 Appendix 3 to Subpart ATO Appendix 4 to Subpart ATO
Leaflet No. 10	Updating and upgrading existing FSTDs	AMC to OR.ATO.380(b)
Leaflet No. 11	Use of footprint tests in JAR-STD 1A qualification test submissions	GM to OR.ATO.350
Leaflet No. 12	Guidance for Enhanced Vision System (EVS) simulator qualification	AMC No. 6 to CS-FSTD(A).300
Leaflet No. 13	Old visual systems and new visual scenes for FSTDs	AMC No. 7 to CS-FSTD(A).300
Leaflet No. 14	Guidance on evaluations of electrical motion systems for FSTDs	AMC No. 5 to CS-FSTD(A).300

G) JAR-FSTD(H) TO EASA PART-AR AND OR

CROSS-REFERENCE TABLE JAR-FSTD(H) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
SECTION 1 - REQUIREMENTS		
SUBPART A	**APPLICABILITY**	
JAR–FSTD H.001	Applicability	CS-FSTD(H).001 OR.ATO.300(a)(2)
SUBPART B	**GENERAL**	
JAR–FSTD H.005	Terminology	CS-FSTD(H).200 OR.ATO.005
JAR–FSTD H.010	Implementation	N/A
SUBPART C	**HELICOPTER FLIGHT SIMULATION TRAINING DEVICES**	
JAR–FSTD H.015	Application for FSTD Qualification	AR.ATO.200 AR.ATO.205 AMC to AR.ATO.205 OR.ATO.350
JAR–FSTD H.020	Validity FSTD Qualification	OR.ATO.375
JAR–FSTD H.025	Rules governing FSTD Operators	OR.ATO.300
JAR–FSTD H.030	Requirements for FSTDs qualified on or after 1 August 2008	CS-FSTD(H).300
JAR–FSTD H.031	Requirements for FFSs qualified on or after 1 April 2001 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD H.032	Requirements for FTDs qualified on or after 1 January 2004 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD H.033	Requirements for FNPTs qualified on or after 1 January 2003 and before 1 August 2008	Cover Regulation Part-OR
JAR–FSTD H.035	Requirements for FFSs approved or qualified before 1 April 2001	Cover Regulation Part-OR
JAR–FSTD H.036	Requirements for FTDs approved or qualified before 1 January 2004	Cover Regulation Part-OR
JAR–FSTD H.037	Requirements for FNPTs approved or qualified before 1 January 2003	Cover Regulation Part-OR

CROSS-REFERENCE TABLE JAR-FSTD(H) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
JAR–FSTD H.040	Changes to qualified FSTDs	AR.ATO.215 OR.ATO.380
JAR–FSTD H.045	Interim FSTD Qualification	OR.ATO.370
JAR–FSTD H.050	Transferability of FSTD Qualification	OR.ATO.385
Appendix 1 to JAR–FSTD H.030	FSTD Standards	Appendix 1 to CS-FSTD(H).300
SECTION 2 – ADVISORY CIRCULARS JOINT (ACJ)		
	ACJ B – GENERAL	
ACJ to JAR–FSTD H.005	Terminology, Abbreviations	AMC to CS-FSTD(A).200
	ACJ C – HELICOPTER FSTDS	
ACJ No. 1 to JAR–FSTD H.015	FSTD Qualification – Application and Inspection	AMC to OR.ATO.350 AMC 4 to AR.ATO.200(a)(1)
ACJ No. 2 to JAR–FSTD H.015	FSTD Evaluations	AMC 2 to AR.ATO.200(a)(1) AMC 3 to AR.ATO.200(a)(1) GM to AR.ATO.200(a)(1) AMC to AR.ATO.200(a)(3) GM to AR.ATO.200(a)(3) AMC to AR.ATO.210
ACJ to JAR–FSTD H.020(c)	Validity of an FSTD Qualification	OR.ATO.375(b)
ACJ to JAR–FSTD H.025	Quality system	AMC 1 to OR.ATO.300(a)(1) AMC 2 to OR.ATO.300(a)(1)
ACJ No. 1 to JAR–FSTD H.030	FSTDs qualified on or after *1 August 2008*	AMC No. 1 to CS-FSTD(H).300
Appendix 1 to ACJ No. 1 to JAR–FSTD H.030	Validation Test Tolerances	Appendix 1 to AMC No. 1 to CS-FSTD(H).300

CROSS-REFERENCE TABLE JAR-FSTD(H) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
Appendix 2 to ACJ No. 1 to JAR–FSTD H.030	Validation Data Roadmap	Appendix 2 to AMC No. 1 to CS-FSTD(H).300
Appendix 3 to ACJ No. 1 to JAR–FSTD H.030	Rotor Aerodynamic Modelling Techniques	Appendix 3 to AMC No. 1 to CS-FSTD(H).300
Appendix 4 to ACJ No. 1 to JAR–FSTD H.030	Vibration Platforms for Helicopter FSTDs	Appendix 4 to AMC No. 1 to CS-FSTD(H).300
Appendix 5 to ACJ No. 1 to JAR–FSTD H.030	Transport Delay Testing Method	Appendix 5 to AMC No. 1 to CS-FSTD(H).300
Appendix 6 to ACJ No. 1 to JAR–FSTD H.030	Recurrent Evaluations – Validation Test Data Presentation	Appendix 6 to AMC No. 1 to CS-FSTD(H).300
Appendix 7 to ACJ No. 1 to JAR–FSTD H.030	Applicability	Appendix 7 to AMC No. 1 to CS-FSTD(H).300
Appendix 8 to ACJ No. 1 to JAR–FSTD H.030	Visual Display Systems	Appendix 8 to AMC No. 1 to CS-FSTD(H).300
Appendix 9 to ACJ No. 1 to JAR–FSTD H.030	General Technical Requirements for FSTD Qualification Levels	Appendix 9 to AMC No. 1 to CS-FSTD(H).300
ACJ No. 2 to JAR–FSTD H.030	Guidance on Design and Qualification of Level "A" Helicopter FFS	AMC No. 2 to CS-FSTD(H).300
ACJ No. 3 to JAR–FSTD H.030	Guidance on Design and Qualification of Helicopter FTDs	AMC No. 3 to CS-FSTD(H).300
ACJ No. 4 to JAR–FSTD H.030	Use of Data for Helicopter FTDs	AMC No. 4 to CS-FSTD(H).300
ACJ No. 5 to JAR-FSTD H.030	Guidance on Design and Qualification of Helicopter FNPTs	AMC No. 5 to CS-FSTD(H).300

CROSS-REFERENCE TABLE JAR-FSTD(H) TO EASA PART-AR AND OR		
JAA REFERENCE	SUBJECT	EASA REFERENCE
ACJ No. 1 to JAR–FSTD H.030(c)(1)	Engineering Simulator Validation Data	AMC No. 1 to CS-FSTD(H).300(c)(1)
ACJ No. 2 to JAR–FSTD H.030(c)(1)	Engineering Simulator Validation Data – Approved Guidelines	AMC No. 2 to CS-FSTD(H).300(c)(1)
ACJ to JAR–FSTD H.035	FFS Approved or Qualified before 1 April 2001	N/A
ACJ to JAR–FSTD H.037	FNPTs Approved or Qualified before 1 January 2003	N/A
ACJ to JAR–FSTD H.045	New Helicopter FFS/FTD Qualification – Additional Information	AMC to OR.ATO.370 GM to OR.ATO.370

Appendix IV – Regulatory Impact Assessment

REGULATORY IMPACT ASSESSMENT

ON THE SUPPLEMENTING MEASURES FOR

COMPETENT AUTHORITIES (AR)
and
ORGANISATION REQUIREMENTS (OR)

per Articles 5(5), 7(6) and 8(5)
of Regulation (EC) No 216/2008

TABLE OF CONTENT

List of acronyms

AIB	Accident Investigation Body
AMC	Acceptable Means of Compliance
AOC	Air Operator Certificate
CFIT	Controlled Flight Into Terrain
CRD	Comment Response Document
CRI	Class Rating Instructor
CS	Certification Specification
EASA	European Aviation Safety Agency
EC	European Commission / Commission of the European Communities
ECAC	European Civil Aviation Conference
Ers	Essential Requirements
EU	European Union
FI	Flight Instructor
FTE	Full Time Equivalent
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
IRs	Implementing Rules (= supplementing measures)
IRI	Instrument Rating Instructor
JAA	Joint Aviation Authorities
JIP	JAA Joint Implementation Procedures
LAFI	Light Aircraft Flight Instructor
MCA	Multi – Criteria Analysis
MCCI	Multi Crew Coordination Instructor
MI	Mountain Rating Instructor
MS	Member State
NAA/NSA	National (or Civil) Aviation Authority/Supervisory Authority
NPA	Notice for Proposed Amendment
OPS	Air Operations
RIA	Regulatory Impact Assessment
SARPs	Standards and Recommended Practices
SES	Single European Sky
SFI	Synthetic Flight Instructor
SME	Small/Medium Enterprise
SMS	Safety Management System
STI	Synthetic Training Instructor
TRI	Type Rating Instructor
VLJ	Very Light Jet

Executive Summary

The purpose of this Regulatory Impact Assessment (RIA) is to assess, from a European perspective, the potential impact of options to be considered in the drafting of the implementing rules to the Basic Regulation for authorities and organisations.

The present RIA builds upon the impact assessment performed in 2005 at the initiative of the Commission services. It estimates the compliance costs and benefits related to the implementation of said rules.

This RIA analyses the underlying problems and derives general, specific and operational objectives, to overcome the problems identified. Result indicators correlated to the specific objectives will be proposed at a later stage. The RIA then presents and compares the available options and explains which option best addresses the identified problems. In this way the RIA documents the evidence-based rulemaking process implemented by the Agency and thus makes transparent the final decisions as reflected in the draft rule.

In relation to the identified problems, 8 issues were identified, each time with 3 or 4 options. The alternative options were assessed for their impact in terms of safety, economic, environment, social impact and relationship with other EASA and non-EASA regulations. Particular care was taken to outline different effects on different stakeholders or aviation sectors and to ensure a balance of effects as well as equity. Subsequently they have been compared using non-dimensional "weighted scores" through a Multi-Criteria Analysis.

As a consequence, the Agency proposes to:

- adopt a uniform regulatory structure which aims at standardising the requirements for all kind of organisations
- develop performance-based rulemaking
- adopt a continued validity for approvals
- require safety management systems (SMS) under proportionate rules
- require quality management systems (QMS) under proportionate rules
- report all significant occurrences directly to the Agency
- grant a single certificate to an organisation
- ensure systematic collective oversight

1. Introduction & Scope

1.1 Context

When establishing the European Aviation Safety Agency[39] ("the Agency"), the legislator, in recital (2) of the Regulation, already envisaged that appropriate essential requirements should have been developed to cover operations of aircraft and flight crew licensing as well as application of same Regulation to third-country aircraft. Therefore the European Commission ("EC" or "the Commission"), in November 2005, adopted a legislative proposal[40] to extend the tasks of the Agency to the three mentioned domains.

The proposal, after the co-decision process, has led to a revised Basic Regulation[41], which indeed established essential requirements in the three domains mentioned above and substantive requirements respectively in Article 7 therein for pilots, in Article 8 for air operations and in Article 9 for aircraft used by third-country operators, into, within or out of the Community. In particular, while Articles 8 and 9 involve air operators, Article 7 involves Approved (pilot) Training Organizations (ATO) and Aeromedical Centres (AeMC). These substantive and essential requirements are additional to those already contained in Article 5 of the Basic Regulation, dealing with airworthiness of aircraft and organizations involved in their design, production, maintenance, continuing airworthiness and training of maintenance staff.

Each organization in the scope of the Basic regulation has to implement a management system and has to demonstrate compliance of it to the applicable rules. In turn the competent authorities have to use properly trained and sufficient staff, as well as follow clear and transparent processes, controlled by their own management system.

In each of the mentioned Articles of the Basic Regulation, the legislator delegated the European Commission to adopt measures supplementing the basic legislative provisions, in accordance with the regulatory procedure with scrutiny and based on proposals contained in Opinions delivered by the Agency. The proposed rules (and associated Acceptable Means of Compliance – AMC) shall then cover also:

- detailed requirements for the competent authorities (Authority Requirements -AR);
- detailed requirements for the regulated organizations (Organisation Requirements - OR).

According to the principles of the "better regulation"[42], the Agency shall hence analyze different alternative options as well as consult stakeholders, in order to develop the Opinions to be transmitted to the EC.

This comparative analysis for implementing rules (and AMC) for AR and OR, is indeed the purpose of the present Regulatory Impact Assessment (RIA).

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39 Regulation (EC) No 1592/2002 of the European Parliament and of the Council of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (OJ L 240, 7.9.2002, p.1).

40 Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1592/2002 of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (COM(2005)579 final of 15 November 2005).

41 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 (EASA) and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L79, 19.3.2008, p. 1). Hereinafter referred to as the Basic Regulation.

42 http://ec.europa.eu/governance/better_regulation/index_en.htm

1.2 Scope of present Regulatory Impact Assessment

Aviation is very diverse. According to the EC[43] it encompasses activities ranging from recreational flying with non-powered aircraft to complex operation of high-performance business jets and specialized aerial works. This creates challenges, as policy initiatives can not be based on the "one size fits all" approach.

Of course this shall happen while maintaining adequate standards of safety, in a context where air traffic density increases, and therefore also the complexity of operations increases. Maintaining, if not increasing, the safety level, in the context summarized above, is indeed the purpose of the Implementing Rules (IRs) and related Acceptable Means of Compliance (AMCs) for AR and OR. Comparing various options for these rules, in the perspective of safety, economic and other needs is the purpose of present RIA.

Community competence for air operations, pilots and third country operators has been established by the legislator. The question "whether" the EASA system should be extended to said domains has already been analysed in the Impact Assessment carried out by the Commission services according to the applicable guidelines[44]. What remains to be assessed is therefore "how" to balance the need to safeguard safety with the need to establish proportionate processes at the level of implementing rules, with particular attention to Small and Medium-sized Enterprises (SMEs).

Currently the Agency envisages developing six different sets of specific implementing rules for:

- air operations (OPS);
- flight crew licensing (FCL)[45];
- third-country operators;
- organisation requirements (OR);
- operational suitability certificates (OSC);
- requirements for competent authorities, so called "Section B" in the former JAA material (AR).

The development of each set of rules will be accompanied by a Regulatory Impact Assessment (RIA).

Scope of present paper is therefore to analyze, in the above context, the impact of possible implementing rules (IRs) and Acceptable means of Compliance (AMCs) for AR and OR and in particular for:

- structure of the rules;
- relationship between IRs and AMCs;
- proportionate requirements and procedures for OR and quality management (or compliance monitoring).

Out of scope of the present RIA are on the contrary:

- assessment bodies, since these had been proposed by the EC[46], but not included by the legislator in the Basic Regulation;
- requirements for Air Operators (and third-country operators), which will be part of the planned NPAs on OPS and third-country aircraft;
- requirements for approved Design (DOA), Production (POA), Maintenance (MOA), Continued Airworthiness (CAMO) and Maintenance Training (MTO) Organisations, which could possibly be included in the new structure of the rules on AR and OR at a later stage;
- requirements for Air Navigation Service Providers (ANSPs), aerodrome operators and ATC Training Organizations, which could be included in the rules on AR and OR after approval of the second extension of the Basic Regulation[47] by the legislator;

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43 COM (2007) 869 final of 11 January 2007: "An Agenda for sustainable future in general and business aviation".

44 Referred in paragraph 4 of mentioned COM(2005)579 final.

45 NPA 2008-17 published on 05 June 2008 and open for consultation until 15 December of same year: http://www.easa.europa.eu/ws_prod/r/doc/NPA/NPA%202008-17a.pdf

46 Mentioned COM (2005) 579 final.

- impact on the non-commercial air operators of complex motor-powered aircraft of alternative solutions to implement Article 8(3) of the Basic Regulation, since this topic will be analysed in the RIA for the rules on said air operations.

1.3 An iterative process for impact assessment

1.3.1 "Better Regulation"

According to the principles of "better regulation" the Agency shall carry out a Regulatory Impact Assessment (RIA) when producing an Opinion.

Having identified the problem as reflected in paragraph 1.3.2 below, the work has been organised in order to reduce duplication of effort. The EC had in fact carried out an initial impact assessment focusing on "whether" the Agency's competences should be extended to air operations, flight crew licensing and safety of third country aircraft. The conclusions are summarised in paragraph 1.3.3.

1.3.2 Identification of the problem

According to said Communication (2005) 579[48] for a long time the Joint Aviation Authorities (JAA) had been developing rules, inter alia on air operations and flight crew licensing (and associated medical requirements), but their application had been left to the discretion of the States which had signed up to them and which afterwards implemented them in very different ways, or did not implement them at all, or, at least, implemented them in different time frames. These rules normally included in "Section 2" requirements addressed to competent authorities. Even the latter requirements were not legally binding. Consequently, there was no uniform level of safety with significant national disparities.

That's why the EC proposed to the legislator to extend the mandate of the Agency to air operations, flight crew licensing (FCL) and safety of third-country aircraft. This has now been achieved by the mentioned amended Basic Regulation. Therein[49] the legislator delegated the EC to issue supplementing measures including:

- the conditions for issuing, maintaining, amending, limiting, suspending or revoking approvals, certifications or licences;
- privileges and responsibilities (including for the management of organisations) of the holders of certificates or approvals.

The former bullet has an impact on the procedures to be followed by applicants (i.e. OR IRs) as well as on the competent authorities processing the applications (i.e. AR IRs). The latter bullet impacts the management systems of the organisations. More in particular the relevant provisions of the Basic Regulation can be summarised in Table 1 below:

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47 Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 216/2008 in the field of aerodromes, air traffic management and air navigation services and repealing Council Directive 06/23/EEC (COM (2008) 390 final of 25 June 2008): http://ec.europa.eu/transport/air_portal/traffic_management/ses2/doc/communication/com_2008_0390_1_proposal_regulation_en.pdf

48 Paragraph 2 therein.

49 Article 7(6) and 7(7) of the Basic Regulation.

Organisations	Article, Annex and/or Paragraph of the Basic Regulation		
	Organisation requirements	Delegation to European Commission to adopt supplementing measures	
		For issuing, maintaining, amending, suspending or revoking approvals or certifications (or overseeing declarations)	For the application of the ERs
DOA, POA	Art. 5(2)(e) and par. 3.a of Annex I	Art. 5(5)(f)	Art. 5(5)
MOA	Art. 5(2)(d) and par. 3.a of Annex I	Art. 5(5)(f)	Art. 5(5)
MTO	Art. 5(2)(g) and par. 3.b of Annex I	Art. 5(5)(f)	Art. 5(5)
ATO	Art. 7(1) & 7(3) and par. 3.a of Annex III	Art. 7(6)(b)	Art. 7(6)
AeMC	Art. 7(1) & 7(3) and par. 4.c of Annex III	Art. 7(6)(b)	Art. 7(6)
Air Operators	Art. 8(1), 8(2) & 8(3) and par. 8.a of Annex IV	Art. 8(5)(b), (c), (d)	Art. 8(5)(a)
Third-country operators	Art. 9(1), 9(2) & 9(3) and par. 8.a of Annex IV	Art. 9(4)(c), (d) & (e) and Art. 9(5)(d)	Art. 9(4)(b)

Table 1: Summary of the Basic Regulation

Both for the management and for the processes to issue or maintain approvals or certifications, a range of options can be possible, with different impacts on society. The major issues then deserve further analysis, as in the following parts of present RIA.

1.3.3 The Initial Impact Assessment

In paragraph 1.2 above it has already been recalled that the EC has already carried out its impact assessment in 2005, before proposing the extension of the competencies of the Agency to air operations, flight crew licensing and safety of third-country aircraft.

Two options in particular were examined by the EC:

- extending the scope of the Basic Regulation, and hence of the Agency's remit;
- transposing into Community law, via Regulation (EEC) No 3922/91[50], the rules defined through intergovernmental cooperation within the JAA.

The study showed clearly that it would have been better for aviation safety, and for the functioning of the internal market, to introduce specific Community measures: the EC therefore opted to extend the scope of Basic Regulation and this was endorsed by the legislator.

Involved organisations shall therefore be certified on the basis of common rules. The Agency would be responsible for checking that these rules are correctly applied by the authorities competent at national level, and would itself certify the organisations and flight synthetic training devices of third countries. To execute its standardization task, the Agency then needs clear requirements directly addressed to authorities.

The present RIA will therefore not repeat the exercise already carried out by the EC, but on the contrary it will focus on the different options possible at the level of implementing rules, in particular for the structure of the rules themselves and on the proportionality of rules on behalf of SMEs.

1.3.4 The Present Regulatory Impact Assessment

In summary the Impact Assessment on the EASA rules for AR and OR has been an iterative process, comprising two steps:

- The initial impact assessment carried out by the Commission which had indeed concluded that extending the Agency's competencies was the best option;
- And the present RIA which adds further considerations and present conclusive analysis.

Stakeholders have been extensively consulted as presented in paragraph 2.2.2 below.

[50] Council Regulation No 3922/91 of 16 December 1991 on the harmonization of technical requirements and administrative procedures in the field of civil aviation (OJ L 373, 31.12.1991, p. 4).

2. Regulatory Impact Assessment

2.1 Approach to impact assessment

2.1.1 Qualitative and quantitative assessment

A Regulatory Impact Assessment (RIA) is an evaluation of the pros and cons of an envisaged rule or modification to legislation, taking into account various possible options to reach the expected community goal (i.e. more effective and efficient regulation of oversight and management processes, while neither unduly penalizing SMEs, nor creating too burdensome procedures for the competent authorities). The impact of said rules on all categories of affected organisations should be quantified as much as feasible.

The depth of the study shall be proportionate to the likely impact of the proposal, as stated in the applicable EC guidelines for impact assessment[51].

These impacts shall be analysed from different "perspectives" (also called "Key Performance Areas" = KPAs). Therefore this RIA, affecting the aviation sector and in particular competent authorities and organisations, considers in particular the following KPAs for impact assessment:

- safety;
- economic;
- environment;
- social;
- and regulatory harmonisation, at both EU and global level, which, in the case of AR and OR means, in addition to consistency with the EU/EASA regulatory framework, also compatibility with ICAO standards.

More in particular the impacts in the KPAs listed above have been assessed qualitatively or quantitatively: as order of magnitude in terms of K€ for economic impact and in terms of Full Time Equivalents (1 FTE = 1 man/year of work) for social aspects. A summary of the qualitative or quantitative assessment is presented in Table 2:

Assessment	**I M P A C T**					
	Safety		**Economic**	**ENV**	**Social**	**Regulatory harmonisation**
	Past	**Future impact**				
Quantitative	Not assessed		X		X	
Qualitative		X	X	X	X	X

Table 2: Qualitative and quantitative impact assessment

Each of those five KPAs for impact assessment will be reviewed in detail for the most relevant identified issues, from § 2.6 onwards in this document.

2.1.2 Economic flows

Any new aviation safety rule may imply expenditure, income or other economic effects for a number of entities, and typically:

- the regulated persons in this case the involved organisations (ATO & AeMC);
- the direct employment generated by the former (if any);
- the competent Authorities;
- the Agency;
- all the citizens in the society at large;
- tax payers.

[51] http://ec.europa.eu/governance/impact/docs/key_docs/sec_2005_0791_en.pdf

In this case however:

- the economic benefits from increased safety are difficult to estimate;
- the environmental cost is considered negligible;
- there is neither directly generated employment nor proportional tax from it.

In other words there can be only costs for citizens/organisations, in terms of:

- additional budget (if any) for the Agency;
- additional income (if any) for the competent authorities;
- compliance costs, stemming from change of rules or introduction of new rules.

These latter three cost factors will be examined as appropriate in the pertinent paragraphs for economic assessment and, where possible quantified, in order to compare the various options.

2.1.3 Assessment methodology

The applied methodology for impact assessment is structured in eight steps:

- Identification of the problem (as in 1.3.2 above);
- Identification of the relevant Key Performance Areas (as in 2.1.1 above);
- Problem analysis described in paragraph 2.3 below, which identifies a number of issues requiring solution;
- Definition of objectives (general, specific and operational) and indicators as presented in paragraph 2.4;
- Identification of alternative options for the main identified issues in paragraph 2.5;
- Identification and estimation of the size of the target group for each issue;
- Identification and assessment of impacts of each possible option for all five KPAs, in order to determine the most significant ones, versus the applicable specific objectives;
- Conclusive Multi-Criteria Analysis (MCA) for each issue.

In particular the specific objectives and the MCA methodology are the tools to compare the identified options. The indicators linked to the operational objectives can be used to monitor the progress of the initiative. This is depicted in Figure 1 below:

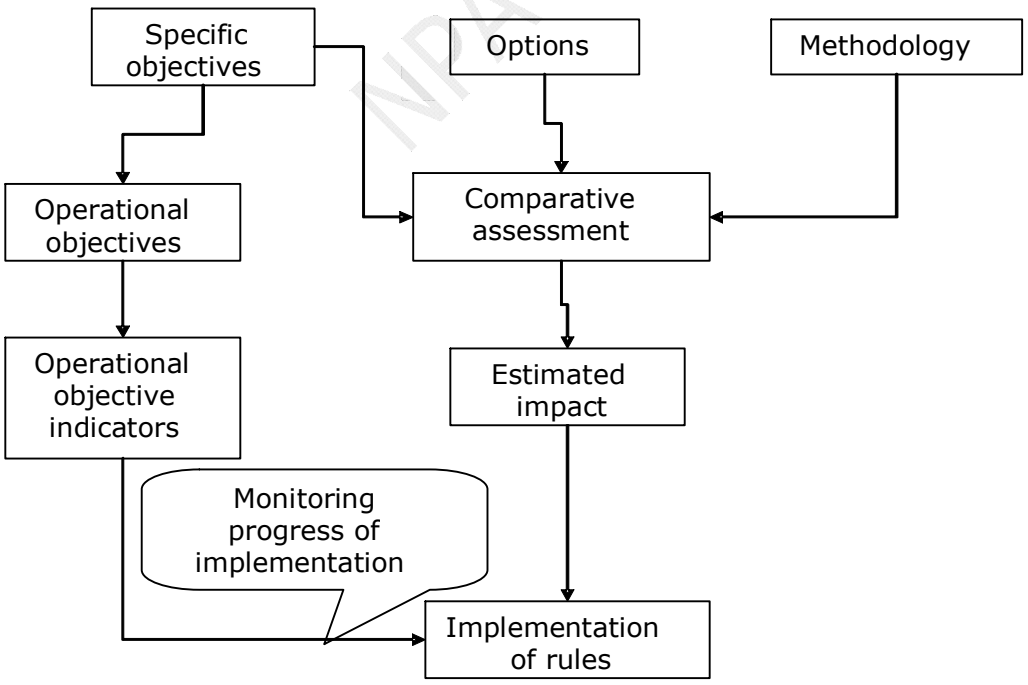

Figure 1: Comparative assessment of alternative options

After all impacts for each main issue and each related policy option have been identified, in relation to the said specific objectives, the results are presented in summary in an impact matrix in the conclusive sub-paragraphs from 2.6.8 onwards. The procedure to develop such a matrix is the Multi-Criteria Analysis (MCA), carried out through the following detailed steps:

- Identification of specific objectives, applicable in general to the solution of all issues;
- Correlation of each option to the potential items of impact which are relevant, in order to allow the comparison of the options;
- Establishment of measurement criteria (through the result indicators): at least in qualitative terms and, where possible, in quantitative terms (in the latter case taking into account the size of the target group);
- Scoring how well each option meets the criteria, expressing each impact, whether measured quantitatively or assessed qualitatively, in a non-dimensional ranking ("score"): i.e. -3 for very negative impact, -2 for medium negative, -1 for little negative impact, 0 for neutral impact and up to +3 for positive impacts;
- Assigning "weights" to each impact item to reflect its relative importance, according to the "weights" established in paragraph 2.4.2 below;
- Finally compare the options by combining their respective weighted scores.

2.2 Organisation of the process

2.2.1 Tasks FCL.001 and OPS.001

Following the legislative proposal by the EC[52] to extend the competencies to air operations (OPS) and flight crew licensing (FCL), the Agency has published the Terms of Reference for tasks OPS.001[53] and FCL.001[54]. The objective was to develop rules as regards OPS and FCL, encompassing implementing rules and Acceptable Means of Compliance (AMCs) or guidance material inter alia for:

- competent authorities, based on appropriate JAA Joint Implementation procedures (JIP's) and harmonised with similar provisions included in other implementing rules;
- all involved organisations, including training organisations and aeromedical centres.

Said ToRs then established two drafting groups, respectively for OPS.001 and for FCL.001. Furthermore respective ToRs also mandated mutual coordination between the two groups, so as to clarify as well authorities and organisations requirements, which are "horizontal" across various domains. Hence the groups established four subgroups inside each of them in October 2006. One subgroup OPS and one subgroup FCL were dedicated to OR and AR IRs/AMCs. These two subgroups worked in close coordination and delivered their input to the future IRs/AMCs in summer 2007.

The rules for air operators are out of the scope of the present RIA: for them a dedicated RIA will be compiled by the Agency.

For the other topics, in the scope of the present RIA, the task FCL.001 has been carried out through a group of external experts[55] and through subgroups, respectively for:

- rules for pilot categories formerly covered by JARs as well as pilots of powered-lift aircraft;
- aeromedical requirements and procedures;
- pilot categories outside the scope of the former JARs;
- Leisure Pilot (LPL) requirements (although this was in fact a subgroup on task MDM.032);
- requirements for Organisations and Authorities.

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52 Already mentioned COM(2005)579 final of 15 November 2005.

53 http://www.easa.europa.eu/ws_prod/r/doc/final%20ToR%20OPS.001%20(20.07.06).pdf

54 http://www.easa.europa.eu/ws_prod/r/doc/final%20ToR%20FCL.001%20(20.07.06).pdf

55 http://www.easa.europa.eu/ws_prod/r/doc/FCL.001%20Group%20Composition%20+%20Subgroups%20Iss.%202.pdf

Many experts from relevant stakeholders have been involved in the group or sub-groups, which already constituted an element of the stakeholder consultation.

2.2.2 Consultation of stakeholders

A structured and iterative consultation of the stakeholders (in addition to mails and informal exchanges) has been planned and substantially already carried out via nine mechanisms so far, as summarised in Table 3 below:

N.	Responsible	Consultation period	Target Group	Mechanism	Results
1	EASA	2005	Advisory Group of National Authorities (AGNA)	Consultation on EASA annual rulemaking programme	Tasks OPS.001 & FCL.001
2	EASA	2005	Safety Standards Consultative Committee (SSCC)		Tasks OPS.001 & FCL.001
3	EASA	1st half 2006	AGNA	Consultation on ToRs for tasks OPS.001 & FCL.001[56]	ToRs adopted 20 Jul 2006
4	EASA	1st half 2006	SSCC		ToRs adopted 20 Jul 2006
7	EASA	28/29 Apr 2008	All stakeholders	Public Workshop on the first extension of EASA remit	Around 200 participants
8	EASA	09/10 Oct 2008	All stakeholders	Public Workshop on AR & OR	Around 250 participants
9	EASA	4th Quarter 2008	Public through web consultation	NPA 2008-22	Comments possible until 31 Jan 2009

Table 3: Consultation of stakeholders

In summary the Agency, as mandated by its rulemaking procedure, has initially consulted twice AGNA and SSCC respectively on the inclusion of tasks OPS.001 and FCL.001 into the rulemaking programme and then on the detailed ToRs for those tasks. In addition both AGNA and SSCC have been consulted on the General EASA Rules Template (GERT), which has been tentatively applied to the IRs for AR, OR, FCL and OPS. The comments to the respective NPAs would possibly contribute to confirming the validity of said new structure.

Finally all the comments to NPA 2008-22 will be analysed, and replies provided in CRD 2008-22, to be published in 2009. Possible reactions to the CRD will be analysed in preparation of the Opinion on the implementing rules for AR and OR.

In conclusion, and obviously within the limits of the available resources, all stakeholders had multiple opportunities for interacting with the Agency, in the spirit, but often even beyond and never less than the letter of the applicable rulemaking procedure, in turn based on the principles for "better regulation".

2.3 Problem analysis

2.3.1 Problem tree and issues to be solved

According to Paragraph 3.2 of the Annexes[57] to the mentioned Commission's Guidelines for Impact Assessment, a possible approach to analyse the identified problem(s) is the "problem tree". The problem tree approach consists of three steps:

1. listing the various problems linked to the issue at stake;

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[56] According to the EASA's Rulemaking Procedure:

http://www.easa.europa.eu/ws_prod/g/doc/About_EASA/Manag_Board/2007/MB%20Decision%2008-2007%20amending%20rulemaking%20procedure9ba9.pdf?page=3

[57] http://ec.europa.eu/governance/impact/docs/key_docs/sec_2005_0791_anx_en.pdf

2. setting out problems in a hierarchical order, i.e. identifying the relationship between problems (primary causes at the lower level; effect going above; if neither a cause nor an effect, it goes on the same level);
3. draw a tree-like structure (in complex situations, there can be several root problems or initial nodes of the tree) to show the causal relationships among the various issues.

In the case of present RIA for instance, a root problem is that most existing rules are not "performance based". As a consequence, such rules are often over prescriptive, in particular resulting disproportionately heavy for SMEs. Rules too heavy for SMEs could also emerge for the Safety Management System (SMS) and this in turn also connected to the somehow unclear relationship between SMS and Quality Management System (QMS).

All the major identified issues for rules on AR and OR, with the "root" problems at the bottom, and the arrows representing all likely causal relationships, are presented in the problem tree in Figure 2 below:

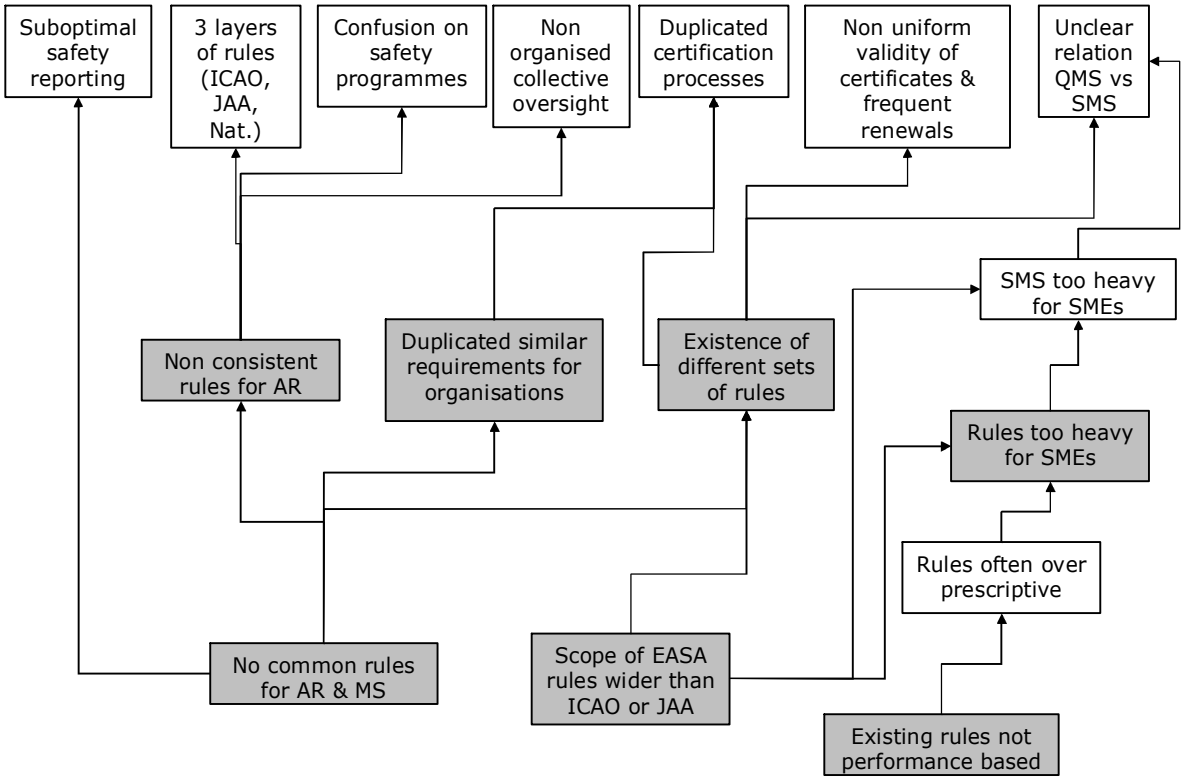

Figure 2: Problem tree

In said Figure 2 each box represents one significant issue. However the shaded boxes represent issues that are only "roots" for other issues. They will not be analysed in detail in present RIA. On the contrary the remaining nine boxes contain issues which can be solved through different alternative options: these will be analysed in paragraphs 2.6 to 2.13 below.

2.3.2 Scope of EASA rules

The preamble to the Convention on International Civil Aviation (Chicago Convention), signed on 7 December 1944, states that the Governments undersigned therein, having agreed on certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner, and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically, had accordingly concluded that Convention.

And in fact Article 11 (i.e. applicability) in said Convention clarifies that, subject to the provisions of the Chicago Convention, the **laws and regulations of a contracting State** relating to the admission to or departure from its territory of aircraft engaged in **international air navigation**, or to the operation and navigation of aircraft while within its territory, shall be applied to all contracting States without distinction

as to nationality, and shall be complied with by such aircraft upon entering or departing from or while within the territory of that State.

In other words the scope of the Chicago Convention is limited to:

- international civil aviation;
- international standards and recommended practices, which, to have force of law, need to be transposed by contracting States.

According to Article 1 of the Basic Regulation, the scope of EASA's rules is wider, since covering the totality of civil aviation (with the exclusion of very simple, old, unique or light aircraft as listed in Annex II to the Basic Regulation). Furthermore the supplementing measures (or IRs) adopted by the European Commission are immediately legally binding for the 27 + 4 EASA Member States. It can therefore be concluded that the scope of the EASA rules is wider than the scope of ICAO standards and recommended practices (SARPs).

Furthermore the scope of EASA is wider than the former scope of the JARs issued by the JAA. For instance:

- JAR-FCL only covered two categories of aircraft (i.e. aeroplanes and helicopters) while the Basic Regulation also includes powered-lift aircraft, airships, sailplanes and balloons;
- JAR-OPS 1, for aeroplanes, and JAR-OPS 3, for helicopters, (and the "EU-OPS"[58] based on them) only covered Commercial Air Transport (CAT) by aeroplanes, while the Agency covers all CAT (even by other aircraft categories), other commercial operations as well as non-commercial air operations;
- Finally the EASA regulatory framework is constructed to accommodate, in due time, also IRs/AMCs for Air Traffic Management (ATM), Air Navigation Services (ANS) and aerodrome safety, while those domains have never been covered by the JAA.

In conclusion a new set of rules is necessary, since the EASA's scope is wider than that of the ICAO Annexes or that of the JAA JARs.

2.3.3 Not yet common rules for AR and OR

2.3.3.1 Suboptimal safety reporting

Directive 2003/42/EC[59] established the concept of mandatory safety reports in case of serious incidents. Its related implementing measures[60] generically state that the Commission shall set up and manage a central repository to store the information received by Member States and make it available to any entity entrusted with regulating civil aviation safety (i.e. including the Agency).

However, these provisions are not detailed enough in terms of format of the information to be sent, responsibilities of the originating authority and timeliness. Furthermore, mentioned Directive includes also "voluntary" reports for less severe occurrences, which also provide very useful information for safety analysis at EU level.

Therefore more comprehensive rules are necessary, in order to convey to the Agency all available safety information in a suitable format. In turn this will provide the Agency an essential tool to develop the annual safety review requested by the legislator[61].

2.3.3.2 Non consistent rules for AR

The structure of the JAA rules presumes the existence of international standards on one side (i.e. the ICAO SARPs) as well as of national legislation on the other side. In other words this leads to three layers of regulation (global + European + national). On the contrary in the EASA system, only two layers of

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58 Commission Regulation (EC) No 8/2008 of 11 December 2007 amending Council Regulation (EEC) No 3922/91 as regards common technical requirements and administrative procedures applicable to commercial transportation by aeroplane (OJ L 10, 12.1.2008, p. 1).

59 Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation (OJ L 167, 4.7.2003, p. 23).

60 Article 2 of Commission Regulation (EC) No 1321/2007 of 12 November 2007 laying down implementing rules for the integration into a central repository of information on civil aviation occurrences exchanged in accordance with Directive 2003/42/EC of the European Parliament and of the Council Text with EEA relevance (OJ L 294, 13.11.2007, p. 3).

61 Article 15(4) of the Basic Regulation.

rules exist (global + European Community). As a consequence aspects left by the JARs to individual States, need now to be covered by the common EU rules and their structure need to be suitable for this purpose.

In turn this will also ensure uniformity, as mandated by the legislator[62].

Furthermore ICAO has introduced in three of its Annexes the concept of "safety programme", as responsibility of the contracting States, distinct from "safety management systems", being the responsibility of the regulated organisations. In particular this is covered by the amendments to the ICAO Annexes listed in Table 4 below:

Annex	Domain	Standard requiring		Amendment No.	Dates
		Safety Programme	SMS		*Adopted* *Effective* *Applicable*
6	Air Operations (OPS)	3.2.1	3.2.4	30	14 March 2006 17 July 2006 23 Nov 2006/01 Jan 2009
11	Air Traffic Services (ATS)	2.27.1	2.27.3	44	14 March 2006 17 July 2006 23 Nov 2006
14	Aerodromes	8	1.5.1	1.5.3	14 March 2006 17 July 2006 23 Nov 2006

Table 4: Safety programme distinct from safety management systems in ICAO Annexes

2.3.3.3 Similar requirements duplicated

A general principle of EU legislation is that separate sets of provisions shall only exist when the requirements are different. Any repetition is dangerous since any departure from identical wording may give the impression that a different result was intended. Furthermore "vertically" split rules lead to multiple certification of organisations providing services in different domains, based on slightly different sets of requirements, with a subsequent waste of resources for both the authorities and the regulated entities.

Vice versa in an efficient regulatory framework, each organisation should hold a single approval (or certificate), clearly specifying its privileges and scope, even when spanning across various activities, sites or domains.

2.3.3.4 Different sets of rules

In the JAR system the period of validity of the certificates issued to organisations was left to the discretion of the competent authorities. This of course led to non uniform rules, which in turn did not contribute to creating a level playing field in the internal market. Therefore common rules on the validity of the certificates may alleviate this concern.

Furthermore the relationship between the Quality Management System (QMS) and the Safety Management System (SMS) was not clear to some organisations and in particular raising concerns for the SMEs, if two parallel systems were required. The relationship between QMS and SMS needs then to be clarified, in a way sustainable also by SMEs.

2.3.3.5 Rules over-prescriptive

The ICAO and JAA requirements accrued along various decades and they were not always "performance based". In turn this give raise to the concerns for these rules being in some cases over-prescriptive, in particular for SMEs, as well as for SMS requiring sophisticated mathematical analysis, beyond the reach (and the safety need) for them.

2.3.4 Safety analysis

Very few data exist to highlight the causal link between accidents (or serious incidents) and shortcomings in the MS or in the concrete activities carried out by the competent authorities. A quantitative safety

[62] Article 2(1) of the Basic Regulation.

analysis cannot therefore be included in the present RIA, since the volume of available information is not sufficient.

2.3.5 Conclusions and justification for EU intervention

In conclusion the identified and analysed problems justify intervention at EU level in order to:

- Cover the entire scope of the Agency which is wider than that of the ICAO Annexes or that of the JAA JARs;
- convey to the Agency all available safety information in a suitable format;
- cover by the common EU rules aspects which before were left by the JARs to individual States, and adapt to this need the structure of said rules;
- establish more comprehensive EU rules to properly fulfil the ICAO requirements for the States' safety programmes, in particular in respect of competence of the technical staff working in the competent authorities, data collection and analysis by competent authorities and by the Agency, as well as collective oversight of organisations providing services in more than one member state;
- allow an organisation to hold a single approval (or certificate), clearly specifying its privileges and scope, even when spanning across various activities, sites or domains;
- create a level playing field in terms of validity or certificates or approvals;
- clarify the relationship between QMS and SMS, in a way sustainable also by SMEs;
- create a set of "performance based" rules, not over-prescriptive and sustainable by SMEs, in particular for their Management System.

2.4 Objectives

2.4.1 Taxonomy of objectives

In broad terms the possible impacts of any new rules can be correlated "objectives". Their measurement is based on related monitoring "indicators".

Said objectives can be classified according to the three levels normally used for impact assessment by the services of the European Commission, such as:

- The **general objectives**, which represent the overall policy goals;
- The **specific objectives**, which are the more immediate objectives of the planned rulemaking initiative contributing to achieve the general objectives. Both the general and specific objectives are influenced by factors outside the direct control of the Commission or of the Agency and therefore sometimes difficult to measure;
- The **operational objectives**, which are related to the precise outputs of the proposal and which can then be assessed or even measured by appropriate indicators, although the latter do not give an indication on the impact of the new rules on the entire society, but only on the progress of a certain task executed by the Agency.

The indicators related to the general objectives, due to their very broad nature (e.g. "improve aviation safety by XX% in YY years"), could be influenced very significantly by other policies or factors (e.g. other EU/EASA rules; technical progress; etc.). Therefore it will not be proper to consider them in the future, when assessing the impact of the proposed EASA's implementing rules for AR and OR.

The main uses of the **"general" objectives** are:

- **to support the definition of the "specific" objectives**, for the proposed EASA IRs/AMCs on AR and OR;
- to **define the "weights"** for each of the five KPAs identified in paragraph 2.1.1 above.

In turn the **specific objectives** will then be used in the present RIA to:

- **identify the possible alternative options**, in order to solve the issues analysed in 2.3 above;
- **compare** the said options;

- **define indicators** correlated to them to be used in the future for mid term reviews, the latter named "evaluations" in Article 62 of the Basic Regulation.

Finally, the operational objective indicators are not utilized for the present RIA. Nevertheless they could be used by the Commission, by the Agency management and/or by stakeholders, to monitor the progress of the proposed initiative.

Objectives for the newly proposed EASA rules for competent authorities (AR) and organisations (OR), are presented in following paragraphs 2.4.2 to 2.4.4. Indicators will be defined at a later stage, with a view to ensure monitoring and evaluation of the adopted rule.

2.4.2 General objectives and "weights"

The legislator has assigned the following general objectives to EASA[63]:

1. The **principal objective** of this Regulation is to establish and maintain a high uniform level of **civil aviation safety** in Europe.
2. **Additional objectives** are, in the fields covered by this Regulation, as follows:
   (a) to ensure a high uniform level of **environmental protection**;
   (b) to facilitate the **free movement of goods, persons and services**;
   (c) to promote **cost-efficiency** in the regulatory and certification processes and to **avoid duplication at national and European level**;
   (d) to assist Member States in **fulfilling their obligations under the Chicago Convention**, by providing a basis for a common interpretation and uniform implementation of its provisions, and by ensuring that its provisions are duly taken into account in this Regulation and in the rules drawn up for its implementation;
   (e) to **promote Community views** regarding civil aviation safety standards and rules throughout the world by establishing appropriate cooperation with third countries and international organisations;
   (f) to provide a level playing field for all actors in the **internal aviation market**.

It can be therefore easily observed that indeed the general objectives assigned by the legislator refer to the five KPAs already identified: safety; environment; economic; social impact and global regulatory harmonization.

For environment, in addition, of mentioning this aspect among the general objectives, the legislator has also given the Agency specific tasks, through implementing rules to be adopted by the Commission[64].

Vice versa, no specific tasks have been assigned to the Agency for economic, social aspects or global harmonisation.

For the above considerations, then the following "weights" for the Multi Criteria Analysis (MCA) are assigned herein:

- 3 to safety;
- 2 to environmental protection;
- 1 to the three remaining KPAs: economic, social impact and global regulatory harmonisation.

2.4.3 Specific objectives

The specific objectives are related on one side to the general objectives listed in the paragraph above and on the other linked to the EASA IRs/AMCs for AR and OR. Taking into account both of said factors, the following **eight specific objectives** have been identified for the present RIA:

1. Substantially implement the **safety programme** required by ICAO **at EU level**;
2. **Avoid over-prescriptive** rules;
3. **Reduce** the need for aviation safety **legislation at national level**;

[63] Article 2 of the Basic Regulation.

[64] Article 6 of the Basic Regulation.

4. Establish efficient, comprehensive and **uniform processes for safety oversight** at EU level;
5. Create an aviation safety **regulatory framework** for the "total aviation system", whose parts are mutually **consistent,** as well as consistent with other EU legislation and with international requirements, while building upon the former JAA system;
6. Establish **Management Systems effective and sustainable** by all regulated organisations;
7. Improve **safety data collection and analysis**;
8. Increase **quality of jobs** even in the public sector.

Obviously the specific objectives of the EASA IRs for AR and OR are then closely linked not only to the general objectives, but also addressing the problems analysed in paragraph 2.3. They have a relevant impact on society and therefore they can be appropriately used in the present RIA. The indicators correlated to them could be used in the medium term to evaluate the actual impact of the adopted IRs/AMCs.

2.4.4 Operational objectives

The operational objectives are on the contrary related to the concrete actions necessary to establish of common EU rules for AR and OR. Their output is easily observable and can be directly attributed to the action carried out. These observable/measurable operational objectives are:

1. Common IRs for OR and AR throughout the Community have been developed in accordance with the BR and the EASA rulemaking procedure;
2. Common IRs for OR and AR have been adopted by the European Commission, through "comitology";
3. Related AMCs are available;
4. Continuous standardisation of competent authorities is carried out by EASA for all domains in the scope of the Basic Regulation.

A summary of the objectives identified in paragraphs 2.4.2, 2.4.3 and 2.4.4 above, is presented in following Table 5:

General objectives
1. High uniform level of civil aviation safety
2. High and uniform level of environmental protection
3. free movement of goods, persons and services
4. cost-efficiency in the regulatory and certification processes
5. avoid duplication at national and European level
6. fulfill obligations under the Chicago Convention
7. promote Community views throughout the world
8. promote the internal aviation market
Specific objectives
1. Safety programme at EU level
2. Avoid over-prescriptive rules
3. Reduce legislation at national level
4. Efficient, safety oversight
5. Consistent and harmonised regulatory framework
6. Effective and sustainable Management Systems
7. Safety data collection and analysis
8. Quality of jobs

Operational objectives
1. Common IRs for OR and AR developed
2. Common IRs for OR and AR adopted
3. Related AMCs available
4. Continuous standardisation of competent authorities carried out

Table 5: Summary of objectives

2.5 Options available

The 9 issues identified and analysed in 2.3 above, can be possibly solved through a number of options, which in turn have to contribute to the specific objectives identified in paragraph 2.4.3. The identified options are identified in 6 below:

N.	Issue	Alternative options		
		N.	Description	Par.
1	Structure of the rules	1A	"Do nothing" = retain the JAR structure (i.e. technical requirements and requirements for organisations mixed)	2.6
		1B	Use a structure similar to airworthiness rules (e.g. Part 21), i.e. Section A for organisations and Section B for authorities	
		1C	Develop a new structure of rules (i.e. GERT)	
2	Performance based approach to rulemaking	2A	"Do nothing" = maintain all of section 1 from the JARs at the level of legally binding implementing rules	2.7
		2B	Transfer all non-essential safety requirements to AMCs, and leave to competent authorities to develop national AMCs	
		2C	Transfer all non-essential safety requirements to AMCs, but adopt and publish them by EASA, while maintaining the way they are treated by authorities and stakeholders	
		2D	Transfer all non-essential safety requirements to AMCs, adopt and publish them by EASA, and change the way they are treated by authorities and stakeholders	
3	Validity of organisation approvals	3A	Establish undetermined validity at EU level	2.8
		3B	Establish fixed validity at EU level	
		3C	Leave to authorities at national level to establish periods of validity	
4	Safety management by organisations	4A	Do not require safety management	2.9
		4B	Require safety management by all organisations, under proportionate rules	
		4C	Require safety management by all organisations, under identical rules	
5	Quality management by organisations	5A	Do not require quality management	2.10
		5B	Require quality management by all organisations, under identical rules	
		5C	Require quality management by all organisations, under proportionate rules	
6	Reporting of safety occurrences to EASA	6A	No reporting to EASA	2.11
		6B	Reporting to EASA only accidents and serious incidents	
		6C	Reporting all significant occurrences to EASA	
7	Concept of certification	7A	One certificate for each aviation activity	2.12
		7B	One certificate for all aviation activities in one organisation	
		7D	Number of certificates at the discretion of competent authority	
8	Continuous oversight	8A	Oversight at discretion of competent authorities	2.13
		8B	Collective oversight of non-EU organisations	
		8C	Collective oversight of EU and non-EU organisation, upon request by the competent authorities having certified the organisation	
		8D	Systematic collective oversight	

Table 6: Identified alternative options

2.6 Structure of the rules

2.6.1 Alternative options

Historically rulemaking in aviation has been based on effort provided by group of experts in specific disciplines. This has lead e.g. to the "vertical" structure of the ICAO Annexes, which reflects the expertise necessary by the authors of the various Chapters/Sections. This "author oriented" structure in general:

- Minimizes the effort necessary to organise the rules, their edition and their maintenance;
- Therefore it had no alternatives when then the principal support of the information was printed paper, like in 1944 when ICAO had been established (in the modern digital environment, where also data bases exist, this issue can be removed);
- Obliges the readers (e.g. managers of a commercial air transport operator) to go across many "books", chapters and sections to find the requirements applicable to them;
- The third bullet in turn causes a cost on organisations, proportionally heavier on SMEs.

Therefore it is possible to imagine an alternative horizontal and "reader oriented" structure, offering enterprises and managers basically a single set of rules applicable to a certain aviation activity. The difference among the two structures can be highlighted pictorially by Figure 3 below:

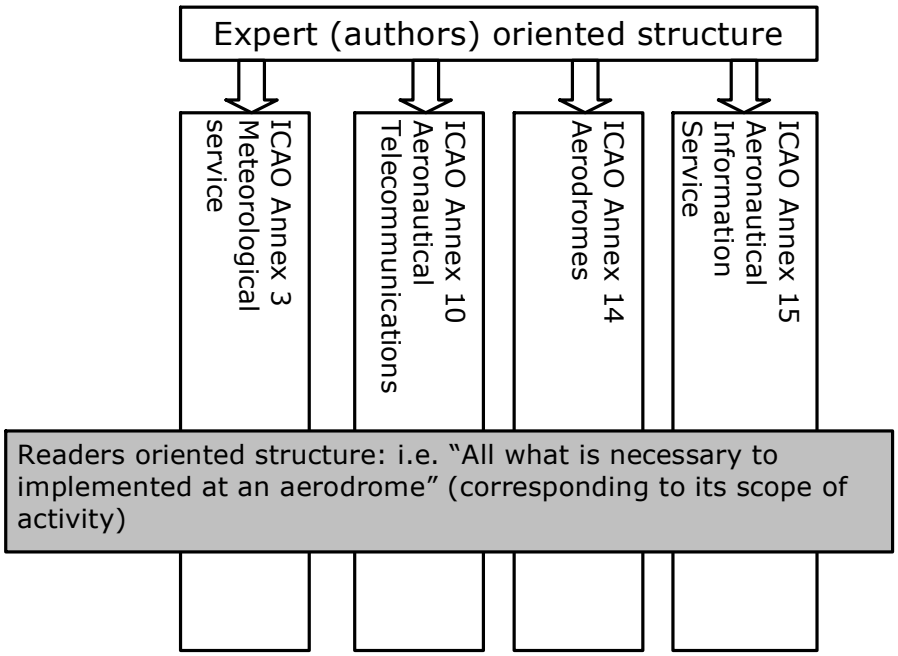

Figure 3: "Author" oriented versus "reader" oriented structure

The "vertical" approach has been partially followed by the JAA in Europe since 1990. This has lead in some cases to almost identical requirements (in the substance) repeated in different documents, but with slightly different wording.

The Agency has therefore considered as possible alternative structures, a totally vertical structure on one side and on the other a new structure, based on the so called "General EASA Rules Template" (GERT). AGNA and SSCC have been informed about this possible new concept which is "horizontal" and "reader" oriented.

The Agency has in conclusion identified the following three possible alternative options in respect of the structure of the rules:

- **1A: "Do nothing"** option which means retaining the **JAR** "partially vertical" **structure**, where, inter alia, technical requirements and requirements for organisations are mixed (for the

organisations), but and where the rules for authorities in JAA Joint Implementation Procures (JIP) are relatively grouped, respectively for OPS, FCL and possibly other domains;

- **1B:** Use a totally **"vertical"** structure similar to airworthiness rules (i.e. Part-21, Part-M, Part-66, Part-145 and Part-147) also for the authorities, i.e. **Section A for organisations** (still mixing therein management and technical requirements) **and Section B for authorities** for each "Part";
- **1C:** Develop a new substantially "horizontal" structure of rules (i.e. **GERT = "reader oriented"**).

The three different options can be visualised in Figures 4, 5 and 6 below:

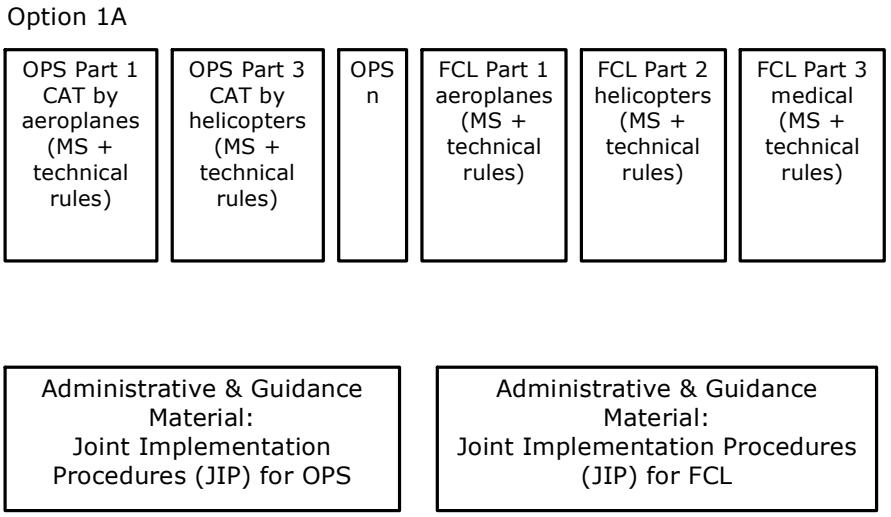

Figure 4: Option 1A (same structure of JARs)

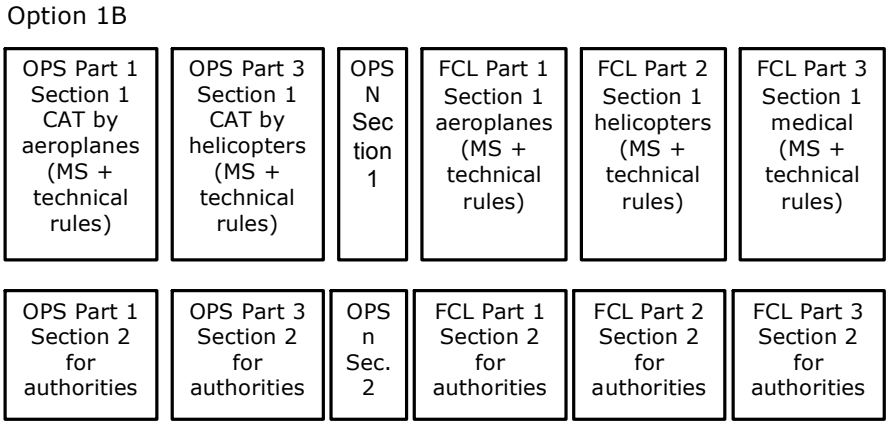

Figure 5: Option 1B (same structure of EASA airworthiness rules)

Option 1C

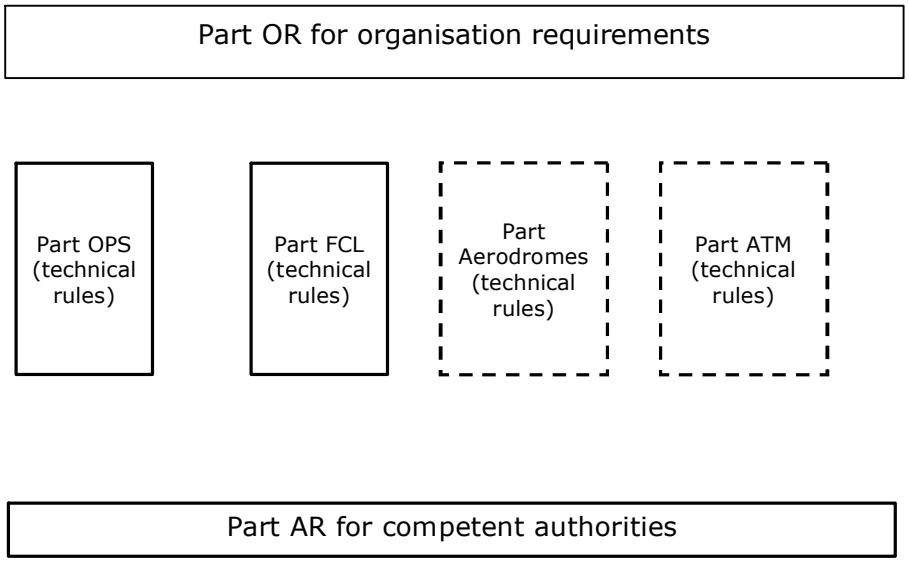

Figure 6: Option 1C (new horizontal structure = GERT)

2.6.2 Target group and number of entities concerned

2.6.2.1 Competent Authorities

In **option 1A,** basically the competent authorities will continue to make reference to one "book" for OPS, one for FCL, Regulation 1315/2007[65] for oversight in ATM/ANS, Sections B or "Parts" 21, M, 66, 145 and 147 for airworthiness matters. In this case then, since nothing will change the present situation, the **number of affected competent authorities at national level will be zero.**

On the contrary, either **option 1B or 1C** will introduce a new structure: in either case the impacted competent authorities will be **31.**

In addition, in any of the three options, **the Agency will always be impacted**, since it will have anyway to initially produce, and then maintain, all sets of common rules.

2.6.2.2 Design, Production and Maintenance organisations

Presently it is not proposed to change in any way the rules in EASA Part-21, Part-M, Part-66, Part-145 or Part-147. Therefore, in the context of the present RIA the **number of affected DOA, POA, CAMO, MOA or MTOA is zero** for any of the options under consideration.

2.6.2.3 Air operators

There is today no coherent data base or information source, with information on the number of air operators in the EASA countries (EU27+4). For the purpose of this RIA a range of sources was used and integrated in order to provide a plausible estimation. All sources and calculation methodology is documented below in order to provide a maximum of transparency.

The JAA data base on Air Operator Certificate (AOC) holders published in August 2008 contained 1026 operators from 24 out of the 31 EASA countries, representing 93% of the population. Thus it is estimated that all 31 countries have approximately 1100 AOC holders. It is assumed that these include scheduled and non-scheduled commercial airlines including commercial business aviation operators.

In addition, in August 2008 the Agency extracted figures from the AirClaims databases. Therein the number of EU 27 + 4 operators was 370 using aircraft with more than 19 seats. These CAT operators operate a fleet of 5206 aircraft.

As regards business aviation, AirClaims reports 709 business aviation operators. A recent EUROCONTROL study "Business Aviation in Europe in 2007", reports a total number of 3000 business jets being operated

[65] Commission Regulation (EC) No 1315/2007 of 8 November 2007 on safety oversight in air traffic management and amending Regulation (EC) No 2096/2005 (OJ L 291, 9.11.2007, p. 16).

in Europe. EUROCONTROL does, however, not specify how many of these aircraft are operated as commercial business aviation (charter, air taxis), corporate business aviation (non-commercial) and owner-operated (non-commercial).

In order to get an idea of the share of commercial and non-commercial business aviation activity, ratios from a previous study reported by the European Business Aviation Association is used. In this study there are 866 commercial business aviation operators and 615 corporate business aviation operators. According to an IBAC brief on business aviation 14% of business aviation is owner operated. Taking the ratios thus provided and applied to the total fleet of 3000 business aviation aircraft and 709 operators the resulting figures are presented in table 7 below. Note, however, that due to the different sources used, the total number of AOC holders is not matched by the sum of the commercial airlines operators and the business aviation operators.

As regards aerial works, the AirClaims database contains 59 operators with 270 aircraft. Since AirClaims only contains aircraft with more than 19 seats and business jets this results is not giving a sufficiently complete picture of aerial works operations in Europe. However, the Agency conducted a survey among the EU27+4 Civil Aviation Authorities. 10 Countries replied, reporting 1050 aerial works operators and representing approximately 40% of the EU27+4 population. Using the share of population to extrapolate to the whole EU27+4, the resulting estimate is 2600 operators. Based on the AirClaims database it is assumed that each operator has 4.5 aircraft on average. The summary of this estimation is presented below.

As concerns non commercial operations of non complex aircraft, it was difficult to derive from the total number of pilots or aircraft related to this area the number of concerned operators.

Type of air operations	**Source**	**Number**	
		Aircraft	**Operators**
Total Commercial Air Transport (AOC Holders)	JAA AOC database		1100
Thereof commercial airlines excluding air taxis	*AirClaims*	5,206	370
Thereof Commercial Business Aviation / Air Taxis	*Estimate based on data provided by EBAA and Eurocontrol*	1514	411
Total non-commercial aviation with complex motor powered aircraft		1486	689
Thereof Corporate Business Aviation	*Estimate based on data provided by EBAA and Eurocontrol*	1095	298
Thereof Owner-operated complex motor powered aircraft (Non commercial GA)	*Estimate based on data provided by EBAA and Eurocontrol*	391	391
Aerial Work	Estimate based on data provided by CAAs in an EASA quesionnaire	11700	2600
TOTAL number of air operators organisations under EASA competence		**147905**	**4389**

Table 7: Estimated total number of air operators in the EU 27 + 4 (excluding non commercial operators of non complex aircraft)

In case of **option 1A (i.e. do nothing) none of these air operators will be affected**, since the structure of the rules will remain unchanged. The **same will apply to option 1B**, since in it only the structure of the rules for authorities will change (i.e. alignment on the structure of existing EASA Parts).

Finally in case of option 1C air operators involved in only one type of activity will not be significantly impacted. Others (e.g. those providing aerial work, but also CAT by small aeroplanes or operating aeroplanes and helicopters) will be affected; their number is estimated in the range of 4% of the total: i.e. **125 operators affected by option 1C.**

2.6.2.4 Approved Training Organisations (ATO) for pilots

In March 2007 the Agency distributed a questionnaire to the competent authorities. 16 States (AT, BG, CZ, DK, EE, FR, DE, IS, LT, PT, NL, NO, SK, SE, CH and UK) replied to question 5 (number of Flight Training Organisations, number of Type Rating Training Organisations and number of "registered facilities" offering PPL training). According to Eurostat data published by European Commission Directorate-General for Energy and Transport (DG-TREN)[66], these States represent about 295 million inhabitants, which is around 58% over a total population of around 506 millions in the EU27+4. Using this percentage the following data can then be estimated:

Pilot training organisations		Reported by 16 States	Estimated total for EU 27 + 4
ATOs providing training only for LPL and PPL (formerly called "registered facilities")		1,573	**2,712**
ATOs providing other pilot training	Flight Training Organisations (FTOs)	322	555
	Type Rating Training Organisations (TRTO)	240	414
	Partial TOTAL	562	**969**
GRAND TOTAL		2,135	**3,681**

Table 8: Estimated total number of pilot training organisations

Even for those organisations, **nothing will change in case of either option 1A or 1B**.

On the contrary, in case of **option 1C** it assumed that:

- Around 5% of the **simplest pilot training organisations** (formerly named "registered facilities") might be interested in expanding the scope of their activities: i.e. 5% of 2712 = **135** and therefore the new structure of the rules will be relevant for them;
- While around 10% of the said 969 **"other" ATOs** are involved in additional activities different from training (e.g. business aviation; air taxi; aerial work; fixed base operator for maintenance or part of large company/corporation, carrying out also CAT): i.e. 10% of 969 = **97**.

2.6.2.5 Aeromedical Centres (AeMC)

In August 2008 the Agency requested also information on the number of Aeromedical Centres (AeMC). 25 EASA Member States replied (i.e. AT, CY, CZ, DE, DK, EL, FI, FR, HU, IE, IS, IT, LT, LV, LU, MT, NL, NO, PL, PT, RO, SL, SE, CH and UK) reporting a total of 63 AeMC. Said 25 States represent about 86% of the total population in the EU27+4. Therefore the **total number of AeMCs can be estimated as 73.**

These specialized Centres are normally involved only in medical activities and not in other aviation activities. **So none of the options under consideration will significantly affect any of them**.

2.6.2.6 Summary of affected entities

In conclusion, on the basis of the information in sub-paragraphs 2.6.2.1 to 2.6.2.5 above, the number of affected entities is estimated in table 9 below:

[66] http://ec.europa.eu/dgs/energy_transport/figures/pocketbook/doc/2007/pb_1_general_2007.pdf

Organisations	Total in EU 27+4	Affected entities		
		Options		
		1A	1B	1C
		JAR like	vertical	GERT
EASA	1	1	1	1
Competent authorities	31	0	31	31
TOTAL Authorities		**1**	**32**	**32**
DOA, POA, CAMO, MOA, MTOA	N.A.	0	0	0
Air Operators	4,389	0	0	125
ATO (only for LPL and PPL)	2,712	0	0	135
Other ATO	969	0	0	97
AeMC	73	0	0	0
TOTAL Organizations		**0**	**0**	**342**
Grand TOTAL		**1**	**32**	**374**

Table 9: Number of entities affected by the structure of rules

2.6.3 Safety impact

It is practically impossible to establish a quantitative link between the level of safety and the structure of the rules. However it has long been recognised by international civil aviation that organisational factors may well have a safety impact[67]. Equally, as highlighted on paragraph 2.3.3.2 above, the fact that oversight may well have a safety impact has also been agreed by all ICAO contracting States.

The European legislator, when establishing EASA, has not only given the Agency the principal objective of pursuing a "high" level of aviation safety, but also a "uniform" level of safety[68]. Different rules in different States may in fact jeopardize the achievement of uniform safety. But also different OR or AR rules across different aviation domains, might create non-uniformities, due to different wording of rules aiming at an identical purpose.

Therefore it has to be observed that:

- **Option 1B is the most prone to the potential risk of non-uniform safety**, since it implies a "vertical" split of the rules for both AR and OR;
- **Option 1A is slightly less prone,** since it will generate "horizontal" rules for AR at least for the major domains (but for organisations it is identical to 1A);
- Finally **option 1C is optimal**, because in it the entire sets of AR and OR rules are "horizontal" and hence basically uniform across different aviation domains.

In conclusion, according to the methodology presented in paragraph 2.1.2 above (including a weight factor of 3 for the safety impacts), the simple observations listed above, can be translated into scores, in order to compare the three possible options versus the applicable specific objectives from paragraph 2.4.3. This leads to the scores presented in following Table 10:

Specific Objectives	Scoring of options		
	1A	1B	1C
	JAR like	vertical	GERT
Efficient, safety oversight	- 1	- 3	2
Consistent and harmonised regulatory framework	- 1	- 3	1
Effective and sustainable Management Systems	- 3	- 3	3
TOTAL	**- 5**	**- 9**	**6**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 1.67**	**- 3**	**2**
WEIGHTED AVERAGE (Score x 3 for safety)	**- 5**	**- 9**	**6**

Table 10: Scoring of the safety impact for the structure of the rules

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67 ICAO Circular 216-AN/131 "Human Factors Digest N. 1", edited in 1989, inter alia mentioning the "SHELL" model.

68 Article 2 of the Basic Regulation.

From the above Table 10 it can be concluded that **only option 1C is scores positively in terms of uniform safety**.

2.6.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.6.5 Economic Impact

2.6.5.1 Regulatory cost for the Agency

For this RIA the Agency assumes that **1 FTE[69] represents in average**:

- **200 effective man/days of labour** (i.e. 356 days in the year – 104 Saturdays and Sundays – 30 days of leave/Bank holidays – 2 days sick leave – 20 days spent for administrative/routine overhead tasks, which do not really represent the "product" of the labour);
- **1500** (i.e. 200 x 7.5 hours/day) effective **working hours/year;**
- **50,000 €** for the competent authorities, air operators, pilot training organisations, and AeMC; **or**
- **100,000 €** for the Agency.

Option 1C will be the cheapest for the Agency, since not only the number of rules and their lines of text will be minimised, but also because the need to align different sets of rules (e.g. for organisations) across various documents will be virtually eliminated. Therefore **option 1C is estimated to have zero additional cost for the Agency,** since the extension of the Agency's mandate to new domains has already been accounted elsewhere (i.e. in the order of 15 FTEs for rulemaking, about 30 for standardisation and 5 for safety analysis, in the domains OPS and FCL). In other words option 1C implies the minimum cost, in order to accomplish the mandate established by the legislator. In turn it is the baseline against which the additional costs stemming from the other two options can be estimated.

In **option 1A, major interrelations might emerge across the management rules** for different aviation entities, whose text may even significantly diverge if the interrelations are not continuously controlled. This will cause the need of extra labour effort necessary in the Agency to:

- Clarify the matter to stakeholders involved in more than one activity (or their respective competent authorities), when they will have found discrepancies in two different sets of rules, aiming at the same purpose, but in different domains;
- Reconciliate major discrepancies among different sets of rules, through the rulemaking procedure;
- Establish multiple processes when necessary to amend similar rules repeated in different documents;
- Train or familiarise personnel (in rulemaking or standardisation) when employed in more than one domain, or moved between two different domains.

All the above mentioned additional burden may lead to a request of **additional labour in the order of about 4 FTEs for said option 1A, which means 400,000 €.**

In case of **option 1B** this will be even worse, since also the number of sets of rules applicable to authorities will proliferate. In this case then, the additional cost can be estimated in **8 FTEs = 800,000 €**.

2.6.5.2 Economic impact on the competent authorities

No authorities will be affected by **option 1A**. So in case it there will be **neither additional cost nor any savings** for competent authorities.

In case of option 1B the structure of rules to which the competent authorities have been long used (i.e. JAR like in option 1A) in the OPS and FCL domains, will be changed and become even more fragmented. This will imply diseconomies in terms of familiarisation of staff with different rules, horizontal internal

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[69] Full Time Equivalent = the working time that one single person could produce in one calendar year, if employed in that job full time, from 01 January to 31 December. 1 FTE can also be produced by two individuals, with second replacing the former at a certain date, or e.g. by four individuals working for the entire year on the task, but devoting to it only 25% of their labour time.

communications inside the authorities (since different semantics may be used in different domains), mobility of staff and so on. In conclusion, it is estimated that **option 1B will imply, in average, additional effort of 0.5 FTEs in each competent authority, which represents 25,000 €/year.**

In case of **option 1C**, the same semantic and the same approach will be used across various domains and also, a single set or rules will be applicable to the safety oversight processes. This then, after an initial period to manage the change, in the medium term, for reasons opposite to option 1B, will lead to savings. A very prudent estimate is a **saving of about - 0.2 FTEs per authority, in average, representing a saving of – 10,000 €/year.**

2.6.5.3 Economic impact on air operators

In case of **either option 1A or 1B** there will be no affected air operators and therefore **no economic impact** on them.

Vice versa, in paragraph 2.6.2.3 above it has been estimated that 125 operators, whose activities potentially span across more than one domain, involving different categories of aircraft or air operations different from CAT or even aviation activities different from air operations, will be impacted by **option 1C**. In case of option 1C these organisations will have to confront themselves with a single basic set of rules, constructed around the same semantic and concepts. In the medium term this will lead to **savings in their MS, in average estimated in - 0.5 FTEs/organisation, which represents – 25,000 €/year per organisation**.

2.6.5.4 Economic impact on ATO for pilots

In case of **either option 1A or 1B** there will be no affected ATOs and therefore **no economic impact** on them.

Vice versa, in paragraph 2.6.2.4 above it has been estimated that 232 (i.e. 135 + 97) ATOs, whose activities potentially span across more than one category of aircraft, type of training or even aviation activities, will be impacted by option 1C. In case of option 1C these organisations will have to confront themselves with a single basic set of rules, constructed around the same semantic and concepts. In the medium term this will lead to savings in their MS. However these organisations are often relatively small and highly specialised. Therefore fro them, in case of option 1C, **in average the saving is estimated in - 0.1 FTEs/organisation, which represents – 5,000 €/year per ATO**.

2.6.5.5 Economic impact on aeromedical centres

In 2.6.2.5 above it is been estimated that no AeMCs will be affected by any of the options under consideration. So in any case for them there will be **no economic impact**.

2.6.5.6 Safety dividend

In paragraph 2.3.4 above, it has been stated that no sufficient (in quantitative terms) and reliable data exist for quantifying the contribution by OR or AR rules to aviation safety. Therefore no safety dividend can be estimated.

2.6.5.7 Environmental burden

As stated in 2.6.4 above, any of the options under consideration will be neutral in the environment KPA. So no environmental burden will emerge in either case.

2.6.5.8 Summary of economic impact

In conclusion, on the basis of the information in sub-paragraphs 2.6.5.1 to 2.6.5.7 above, the emerging additional costs or the savings (taking today's situation as baseline) can be estimated in table 11 below:

Authorities or Organisations	Options								
	1A			1B			1C		
	JAR like			vertical			GERT		
	N.	Economic impact (k€)		N.	Economic impact (k€)		N.	Economic impact (k€)	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
EASA	1	400	400	1	800	800	1	0	0
Competent authorities	0	N.A.	0	31	25	775	31	- 10	- 310
Air Operators	0	N.A.	0	0	N.A.	0	125	- 25	- 3,125
ATOs	0	N.A.	0	0	N.A.	0	232	- 5	- 1,160
AeMCs	0	N.A.	0	0	N.A.	0	0	N.A.	0
TOTAL	**26**		**400**	**57**		**1575**	**564**		**- 14,595**

Table 11: Additional costs or savings (-) from structure of rules

In other words option:

- 1A will cost taxpayers around 400 k€ per year, to finance additional resources in EASA for rulemaking, standardisation and safety analysis;
- 1B will cost taxpayers around 1.5 M€ per year, to finance EASA and competent authorities;
- **1C will allow the civil aviation community in the EU27+4 to save about 14 M€/year, mainly reducing the internal effort in the organisations, necessary for their respective MS.**

The monetary terms in the present paragraph, are then translated into scoring, with reference to the applicable specific objectives in following table 12:

Specific Objectives	Scoring of options		
	1A	1B	1C
	JAR like	vertical	GERT
Reduce legislation at national level	- 1	1	1
Consistent and harmonised regulatory framework	- 1	- 2	1
Effective and sustainable Management Systems	0	0	3
TOTAL	**- 2**	**- 1**	**5**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 0.67**	**- 0.33**	**1.67**
WEIGHTED AVERAGE (Score x 1 for economic)	**- 0.7**	**- 0.3**	**1.7**

Table 12: Scoring of the economic impact

In conclusion only option 1C scores positively in economic terms.

2.6.6 Social Impact

2.6.6.1 Full-time work equivalents (FTE)

The orders of magnitude of the changes in required labour input expressed in FTE have been estimated in various sub-paragraphs in 2.6.5 above. They can be summarised in 13 below:

Authorities or Organisations	Options								
	1A			1B			1C		
	JAR like			vertical			GERT		
	N.	FTEs		N.	FTEs		N.	FTEs	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
EASA	1	4	4	1	8	8	1	0	0
Competent authorities	0	N.A.	0	31	0.5	15	31	- 0.2	- 6
TOTAL change in required FTEs in the public sector			**4**			**23**			**- 6**
Air Operators	0	N.A.	0	0	N.A.	0	125	- 0.5	- 62
ATOs	0	N.A.	0	0	N.A.	0	232	- 0.1	- 23
AeMCs	0	N.A.	0	0	N.A.	0	0	N.A.	0
TOTAL change in required FTEs in the private sector			**0**			**0**			**- 85**
TOTAL change in required FTEs			**4**			**23**			**- 91**

Table 13: Social impact in terms of FTEs

In terms of FTEs then, **option 1A** will have a very **marginal effect** for EU at large.

Option 1B will require around 20 FTEs, exclusively **in the public sector**.

Option 1C will have a very marginal effect on the public sector, but it will lead to a reduction of about 100 FTEs for EU27+4 aviation.

2.6.6.2 Other social impacts

Either option 1A or 1B will not substantially change today's situation, which is characterized by cultures relatively segregated between the various domains of aviation. This in turn, beside the communication difficulties, could lead to less labour mobility across various aviation domains, which has not to be considered in positive terms.

On the contrary, option 1C will progressively create a common aviation management culture and common semantic, with an opposite positive social effect, mainly in terms of quality of jobs.

2.6.6.3 Summary of social impact

The quantitative and qualitative considerations in paragraphs 2.6.6.1 and 2.6.6.2 above can be translated into scores for the social impact, against the applicable specific objectives, as presented in following Table 14:

Specific Objectives	Scoring of options		
	1A	1B	1C
	JAR like	vertical	GERT
Efficient, safety oversight	0	- 1	1
Consistent and harmonised regulatory framework	0	1	- 2
Quality of jobs	0	- 1	1
TOTAL	**0**	**- 1**	**0**
AVERAGE SCORE (Tot/3 quantified parameters)	**0**	**- 0.33**	**0**
WEIGHTED AVERAGE (Score x 1 for social impact)	**0**	**- 0.3**	**0**

Table 14: Scoring of the social impact

In conclusion any on the options will have a very marginal social impact.

2.6.7 Regulatory harmonisation

2.6.7.1 Compatibility with other EU/EASA regulations

Option 1A will basically maintain today's situation, in terms of e.g. a single "package" or rules for CAT by large aeroplanes[70] and, also in perspective, different sets of rules for OR and AR in the airworthiness, aerodrome and ATM/ANS domains. This approach may however lead to major discrepancies with the principles of EU legislation (i.e. not to repeat similar requirements in different acts, unless really necessary to do so). A concrete example of this risk can be offered by Article 6 of the regulation on 8.33 kHz channels[71] which duplicates requirements for AR (contained in mentioned Regulation (EC) No 1315/2007) as well as for safety management, while Article 8 therein overlaps with Article 6 of the "interoperability" Regulation[72] for ATM in the "Singe Sky".

In conclusion option 1A does not comply with the principle that separate sets of legal provisions shall only exist when the requirements are really different.

Option 1B will be even worse in this respect, since further fragmenting the set of rules.

On the contrary, **Option 1C will eliminate such issue** and also:

- Allow an orderly expansion of Parts OR and AR to the aerodrome and ATM/ANS domains, once the 2nd extension of EASA will have been adopted by the legislator;
- Be aligned with the "total system" approach advocated also by the European Commission (e.g. in paragraph 6 of COM (2008) 389 final of 25 June 2008[73]).

2.6.7.2 Compatibility with ICAO standards

The Chicago Convention does not impose on the Contracting States any obligation in terms of the structure of the rules, providing that the content of the ICAO standards is reflected. Therefore any on the three options under consideration has to be considered neutral in terms of compatibility with the ICAO Annexes.

2.6.7.3 Comparison with the FAA rules

Equally the compatibility of the content of the EU rules with the equivalent FAA rules in the USA does not depend on the structure adopted for the former.

2.6.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 15:

Specific Objectives	Scoring of options		
	1A	1B	1C
	JAR like	vertical	GERT
Efficient, safety oversight	- 2	- 3	3
Consistent and harmonised regulatory framework	0	0	0
Effective and sustainable Management Systems	- 2	- 3	3
TOTAL	**- 4**	**- 6**	**6**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 1.33**	**- 2**	**2**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**- 1.3**	**- 2**	**2**

Table 15: Scoring of impact on regulatory harmonisation

70 So called "EU OPS": Commission Regulation (EC) No 8/2008 of 11 December 2007 amending Council Regulation (EEC) No 3922/91 as regards common technical requirements and administrative procedures applicable to commercial transportation by aeroplane (OJ L 10, 12.1.2008, p. 1)

71 Commission Regulation (EC) No 1265/2007 of 26 October 2007 laying down requirements on air-ground voice channel spacing for the single European sky (OJ L 283, 27.10.2007, p. 25)

72 Regulation (EC) No 552/2004 of the European Parliament and of the Council of 10 March 2004 on the interoperability of the European Air Traffic Management network (the interoperability Regulation) (OJ L 96, 31.3.2004, p. 26)

73 http://ec.europa.eu/transport/air_portal/traffic_management/ses2/doc/communication/com_2008_0389_1_communciation_en.pdf

Therefore only option 1C has to be considered positive in terms of regulatory (and legislative) harmonisation, while 1A and 1B have both a negative score.

2.6.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.6.3 to 2.6.7, the following matrix for MCA can be provided:

Weighted score of options for the structure of the rules		**1A**	**1B**	**1C**
Key Performance Area	**Weight**	**JAR like**	**vertical**	**GERT**
Safety	3	- 5	- 9	6
Environmental	2	0	0	0
Economic	1	- 0.7	- 0.3	1.7
Social	1	0	- 0.3	0
Global harmonisation	1	- 1.3	- 2	2
WEIGHTED TOTAL		**- 7**	**- 11.6**	**9.7**

Table 16: Multi Criteria Analysis for the structure of the rules

From Table 16 above one can observe that only option 1C in the end scores positively. Therefore neither option 1A nor 1B are acceptable. In particular, option 1C:

- outscores the others for the safety;
- is neutral for the environment and for the social aspects;
- is the only one with a positive economic score;
- does not increase the cost for taxpayers;
- is the best in terms of regulatory harmonisation.

2.7 Performance based approach to rulemaking

2.7.1 Alternative options

In the early decades after the establishment of ICAO, complexity and density of aviation operations were much less severe than today, while the technological choices were relatively limited. Nowadays the situation is opposite:

- progress of digital communications, computer science and other disciplines, had opened the way to an innumerable number of technical alternatives and the number of available choices tends to proliferate;
- complexity and density of operations have highlighted that organisations are even more important to maintain a high level of safety, than a specific technology.

Therefore the question whether the traditional style of aviation rulemaking (i.e. fixing all the technical details in mandatory rules) is the best solution to cope with the challenges of the 21st century, or whether alternatives exist, has to be posed.

In the EU "basic" legal instruments can be adopted only by the legislator (i.e. the European Parliament and the Council) in compliance with the Treaties. The legislator may however decide to delegate to the European Commission the adoption of legally binding "measures" of general scope (i.e. implementing rules) designed to apply essential provisions of basic instruments (e.g. essential requirements for safety), including measures concerning the protection of the health or safety of humans, as well as measures designed to adapt or update certain non-essential provisions of a basic instrument. In this case of course the basic instrument (e.g. the Basic Regulation) shall stipulate the essential elements of the powers thus conferred to the Commission[74]. Normally such legally binding IRs are adopted by the Commission having

[74] Article 1 of 1999/468/EC: Council Decision of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission (OJ L 184, 17.7.1999, p. 23). So called "comitology".

obtained the positive majority vote by a Committee, whose members are representatives of the EU Member States[75]. **This force of law of the IRs, immediate and direct in all the EU 27 + 4 is a key difference with respect to standards or requirements issued by intergovernmental organisations (e.g. ICAO, JAA, EUROCONTROL, etc.)**. As a consequence more care has to be exercised before inserting any norm into such IRs.

And in fact, Article 65 of the Basic Regulation establishes that the Commission shall be assisted by a Committee, when adopting implementing rules for airworthiness[76], environmental protection[77], flight crew licensing[78], air operations[79] or safety of third country aircraft[80]. In aviation however, an unforeseen issue may emerge any time. Therefore the legislator has conferred Member States the power to react immediately to a safety problem[81], even in deviating from the existing implementing rules. In such a case however a mechanism is established by the Basic Regulation, for the "flexibility" of said IRs: in the end the Commission decides whether the State has to withdraw its urgent measure, or whether such an alternative becomes applicable in all member States. In other words the **IRs are legally binding, but there is a mechanism for their "controlled" flexibility.**

In parallel the EU legislator became aware that the speed of the advancement of the state of the art in modern technology was so high, that it would be impossible to face it through legislative processes. The legislator also concluded that, to protect the citizen, this was unnecessary. Therefore the Council approved a decision on the "new approach" to standardisation[82], whose Annex II clarifies that:

- the task of drawing up the technical specifications for products conforming to the essential requirements established by the legislator, taking into account development of the technology, is entrusted to entities with competence in a defined specific area;
- the **specifications are not mandatory and maintain the status of voluntary standards**.

In other words, in the EU legal order:

- only the legislator can adopt "basic instruments";
- only the Commission (through "comitology") can adopt legally binding IRs;
- in the case of aviation safety IRs there is a mechanism for controlled flexibility;
- the Agency, competent in the field of aviation safety, can adopt and publish specifications or similar material for "voluntary" application.

More precisely the legislator has in fact tasked the Agency[83] to issue Certification Specifications (CSs), including airworthiness codes (e.g. CS-25 for large aeroplanes) and Acceptable Means of Compliance (AMCs) as well as Guidance Material (GM). None of these documents is legally binding. In principle then the aviation regulatory material can be distributed among IRs, AMCs, CSs and GM. However, while the Basic Regulation specifies how to handle deviations from IRs, it says nothing with respect to deviations from AMCs. One solution would be then to leave this open (i.e. without any control); the opposite would be, due to the relevance that AMCs may have for aviation safety, to introduce (at the level of the IRs, a mechanism to "control" any deviation from the AMCs.

Such control could be based e.g. on:

- Possibility of using alternatives to the published AMC only when it is demonstrated that the safety objective set by the relevant IR is nevertheless met;
- Proposals developed and documented by the applicant, but evaluated and approved by the competent authority;

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75 Article 5 therein.

76 Article 5 of the Basic Regulation.

77 Article 6 therein.

78 Article 7 ibidem.

79 Article 8 ibidem.

80 Article 9 ibidem.

81 Article 14 ibidem.

82 Council Resolution of 7 May 1985 on a new approach to technical harmonization and standards (OJ C 136 , 04/06/1985 P. 0001).

83 Article 18(c) of the Basic Regulation.

- Publication of the alternative AMC by said authority and parallel notification to the Agency;
- Possibility for competent authorities to develop and propose additional AMCs, but prior submission of them to the Agency, together with a safety assessment;
- Decision by the Agency on the acceptability of such additional AMCs and, in the positive case, activation of a specific rulemaking task, in order to extend their applicability to the entire EU27+4.

Taking the above into consideration, the Agency has therefore identified the following possible alternatives for the "performance based" approach to rulemaking:

- **Option 2A**: "Do nothing"; i.e. transfer all of section 1 from the former JARs at the level of **legally binding Implementing Rules (IRs);**
- **Option 2B**: Delete all non-essential safety requirements from IRs, and leave to competent authorities to develop **national AMCs** to implement them;
- **Option 2C**: Transfer all non-essential safety requirements to **AMCs**; adopt and publish them **by the Agency**, but leave authorities and stakeholders free to deviate **without control**;
- **Option 2D**: AMCs adopted and published by the Agency, but also mechanism to **control deviations** (or alternatives or development of additional AMCs) to them.

2.7.2 Target group and number of entities concerned

2.7.2.1 Competent Authorities

The role of the competent authorities and of the Agency for the different options can be presented in Table 17 below:

Option		Agency	Authorities
2A	Only IRs	• develops Opinions proposing IRs • standardises authorities	• apply IRs • can deviate, subject to Article 14 of basic Regulation
2B	National AMCs	• as 2A	• as 2A; plus • develop, adopt, publish and apply national AMC • AMCs are applicable in a single country
2C	EU AMCs; no control	• as 2A; plus • develops, adopts and publishes AMCs	• as 2A; plus • apply EASA AMCs • deviate from AMCs at their discretion, providing that they are convinced that an equivalent level of safety is attained
2D	Controlled deviations from EU AMCs	• as 2C; plus • implements a mechanism to develop additional AMCs based on national proposals	• as 2A; plus • apply EASA AMCs • inform EASA of any deviation • propose to EASA additional AMCs

Table 17: Different roles for authorities and Agency

In other words **the 31 competent authorities and the Agency will be affected by any of the four options under consideration**.

2.7.2.2 Design, Production and Maintenance organisations

Presently it is not proposed to change in any way the rules in EASA Part-21, Part-M, Part-66, Part-145 or Part-147. Therefore, in the context of the present RIA the **number of affected DOA, POA, CAMO, MOA or MTOA is zero** for any of the options under consideration.

2.7.2.3 Air operators

All 4,389 air operators estimated in paragraph 2.6.2.3 above, will be affected **by the options** 2A, 2C and 2D (which all imply common EU rules) under consideration. About 50% of them (i.e. 2200) could be affected by the non-uniformity of AMCs, stemming from option 2B.

2.7.2.4 Approved Training Organisations (ATO) for pilots

All 3,681 ATOs estimated in paragraph 2.6.2.4 above, will be affected **by any of the options** under consideration.

2.7.2.5 Aeromedical Centres (AeMC)

All 73 AeMCs estimated in paragraph 2.6.2.5 above, will be affected **by any of the options** under consideration.

2.7.2.6 Summary of affected entities

In conclusion, on the basis of the information in sub-paragraphs 2.7.2.1 to 2.7.2.5 above, the number of affected entities is estimated in table 18 below:

Organisations	Total in EU 27 + 4	Affected entities			
		Options			
		2A	2B	2C	2D
		Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
EASA	1	1	1	1	1
Competent authorities	31	31	31	31	31
TOTAL Authorities		**32**	**32**	**32**	**32**
DOA, POA, CAMO, MOA, MTOA	N.A.	0	0	0	0
Air Operators	4,389	4389	2200	4389	4389
ATOs	3,681	3,681	3,681	3,681	3,681
AeMC	73	73	73	73	73
TOTAL Organizations		**8,143**	**5,954**	**8,143**	**8,143**
Grand TOTAL		**8,175**	**5,986**	**8,175**	**8,175**

Table 18: Number of entities affected by the approach to rulemaking

2.7.3 Safety impact

In paragraph 2.6.3 above, it has already been recalled that the European legislator, when establishing the Agency, has not only given the Agency the principal objective of pursuing a "high" level of aviation safety, but also a "uniform" level of safety. Both parameters therefore (high safety, but also uniformity), need to be considered in order to compare the four options under consideration.

Some considerations in these two respects can therefore be presented in Table 19 below:

High and uniform safety	Options			
	2A	2B	2C	2D
	Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
High level of safety	Maximum compulsory status of all rules	• Most rules voluntary • But deviations possible only if attaining an equivalent level of safety	• Most rules voluntary • But deviations possible only if attaining an equivalent level of safety	• Most rules voluntary • But deviations possible only if attaining an equivalent level of safety
Uniform safety	All deviation under control by the European Commission	• AMCs applicable only in one country • No control of AMCs at EU level	• AMCs applicable in the entire EU 27 + 4 • No control of AMCs at EU level	• AMCs applicable in the entire EU 27 + 4 • Control of AMCs at EU level

Table 19: Comparison of the options for the regulatory approach in the safety KPA

From Table 19 above it can be observed that **Option 2A leads to the most stable, binding and controlled safety rules.**

On the contrary **Option 2B** not only has no control on the discretional decisions taken by any of the 31 competent authorities, **but does not guaranty any uniformity** at EU level.

Option 2C equally leaves ample margins for uncontrolled and not common deviations;

Finally, **Option 2D**, although more flexible than 2A, ensures that **any decision by any authority is collectively controlled, while any good lesson learnt by any authority can be quickly made applicable** throughout the EU27+4. In particular in it, like in 2B and 2C, although the AMCs are not legally binding by definition, the "certification basis" developed starting from them, is on the contrary legally binding (e.g. like a contract). The above qualitative considerations, versus the applicable specific objectives, lead to the scores presented in following Table 20:

Specific Objectives	Scoring of options			
	2A	2B	2C	2D
	Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
Avoid over-prescriptive rules	- 3	2	3	3
Reduce legislation at national level	3	- 3	3	3
Consistent and harmonised regulatory framework	3	- 2	- 2	2
TOTAL	**3**	**- 3**	**4**	**8**
AVERAGE SCORE (Tot/3 quantified parameters)	**1**	**- 1**	**1.33**	**2.67**
WEIGHTED AVERAGE (Score x 3 for safety)	**3**	**- 3**	**4**	**8**

Table 20: Scoring of the impact for high and uniform safety

From Table 20 it can be observed that option 2B is negative in safety terms, while option 2D is the optimal to balance high safety, uniformity and flexibility.

2.7.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.7.5 Economic Impact

2.7.5.1 Regulatory cost for the Agency

In either **option 2C** the volume of common EU rules to be developed **will not change** and it has already been accounted by the Agency. This option is assumed as a baseline with **zero cost**.

However, in case of Option 2A all the rules will have to be adopted by the Commission, which implies that the Agency has to:

- Develop the rules through the rulemaking procedure like in 2C, but deliver an Opinion to the Commission and subsequently;
- Interact with the Commission during the "comitology" process, which is additional to the rulemaking procedure;
- Also to travel to support the Commission during the Committee sessions.

Therefore in case of **option 2A**, one additional FTE is estimated necessary (i.e. 100,000 €/year) + 20% more for travel: **120,000 €/year**.

In case of option 2B two opposite effects have to be considered:

- About 3 FTEs less will be required in rulemaking, since the AMCs will be adopted and published nationally;
- But extra work will arise for standardisation (since all the AMCs have to comply with the IRs), in an even greater measure (5 FTEs).

In conclusion **option 2B** is estimated to lead to an additional cost of 2 FTEs = **200,000 €/year**.

Finally in **option 2D** there will be some additional work to assess the proposals for additional FTEs by the competent authorities. This is estimated in 1 FTE = **100,000 €/year**.

2.7.5.2 Economic impact on the competent authorities

In option 2A, all the rules will be adopted at EU level and will be legally binding (since IRs). Only in exceptional cases the authorities will formally deviate and activate the procedure of Article 10 of the Basic Regulation. In fact, should they see the need for a modification of the IRs, they could act, with much less formalities, as today, through, the Rulemaking Procedure and the Advisory Group of National Authorities (AGNA) already established and budgeted.

Therefore from **option 2A no additional cost** will derive for said authorities. Option 2A then constitutes the baseline against which to compare the additional costs emerging from the other options.

In case of **option 2B** a consistent volume of rules will developed, adopted and published (as AMCs) at national level. This will require effort, estimated in average in 1 FTE (= **50,000 €/year) per authority.**

In **option 2C** all the rules (IRs and AMCs) will be published at EU level, but the authorities will have to assess any possible deviations, without a formal mechanism established to share the lesson learned in the face of the advancement of the state of the art. It is assumed that this process might require about **0.5 FTE/authority (i.e. 25,000 €/year).**

Finally in **option 2D** some effort will still be required to manage the "flexibility" of the AMCs (in any case greater than the IRs), but there will be a mechanism (not requiring meetings) to share lessons learned from other authorities. In this case therefore it is assumed that 0.25 FTEs in average will suffice in each authority (i.e. **12,500 €/year**).

2.7.5.3 Economic impact on the organisations

The affected organisations are of different sizes, complexity, geographical distribution, scope of activities and so on. Quantifying the economic impact that the rulemaking approach will have on them is extremely difficult, if at all possible.

Therefore in this RIA this is assessed only in very coarse terms. In **option 2A** the transition will be easier (which represents zero non-recurrent cost), but the rigidity of rules will lead to subsequent diseconomies, especially when the state of art evolves beyond the pace of evolution of the rules. This could cause in average a very limited but still appreciable **economic damage of 1,000 €/year**, for each involved organisation (in any case much less than the cost of 1 FTE).

In case of **option 2B around 50% of the air operators (i.e. 2200) might suffer diseconomies** due to different national AMCs (since they will be subject to collective oversight and the staff of the competent authorities may not be totally familiar with the AMCs of other States). These **diseconomies are estimated in the range of 10,000 €/year per air operator.** On the contrary, ATOs and AeMCs, which operate essentially at a fixed location, will suffer few damages from option 2B, which anyway will grant them a greater flexibility and adaptability.

In either **option 2C or 2D** the AMCs will be basically uniform, but also more flexible than the IRs to be adapted to specific needs, across the EU27+4. Therefore there will be **no additional cost** for any organisation.

2.7.5.4 Safety dividend

In paragraph 2.3.4 above, it has been stated that no sufficient (in quantitative terms) and reliable data exist for quantifying the contribution by OR or AR rules to aviation safety. Therefore no safety dividend can be estimated.

2.7.5.5 Environmental burden

As stated in 2.7.4 above, any of the options under consideration will be neutral in the environment KPA. So no environmental burden will emerge in either case.

2.7.5.6 Summary of economic impact

The economic impact is summarised below:

- Option 2A will be the cheapest for the taxpayers (120,000 €/year), but it will cause around 6 M€ of additional internal costs to organisations;
- Option 2B would be the most expensive for the taxpayers (i.e. 1,750,000 €/year) and also quite expensive (more than 22 M€) for the organisations;

- Option 2C will cost 775,000 €/year to taxpayers, but it will cause no diseconomies to organisations;
- The organisations will equally not be damaged by option 4D, which would cost even less to taxpayers (i.e. 447,000 €/year).

The monetary terms and the considerations presented above can be translated into scoring, versus the applicable specific objectives, in following table 21:

Specific Objectives	Scoring of options			
	2A	2B	2C	2D
	Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
Avoid over-prescriptive rules	- 3	3	3	3
Reduce legislation at national level	3	- 3	3	3
Efficient, safety oversight	- 2	- 2	2	3
Consistent and harmonised regulatory framework	3	- 3	1	2
TOTAL	**1**	**- 5**	**9**	**11**
AVERAGE SCORE (Tot/4 quantified parameters)	**0.25**	**- 1.25**	**2.25**	**10.25**
WEIGHTED AVERAGE (Score x 1 for economic)	**0.2**	**- 1.2**	**2.2**	**10.2**

Table 21: Scoring of the economic impact

Form table 21 it can be observed that option 2B has a negative score for the economic impact, while option 2D definitely outscores both 2A and 2C.

2.7.6 Social Impact

2.7.6.1 FTE

In paragraphs 2.7.5.1 and 2.7.5.2 the number of additional FTEs deriving from each of the four options under considerations has been estimated respectively for the Agency and for the competent authorities. The volume of economic impact on each individual organisation is so little that it will divert some working hours from one task to a different one, but it will not create or destroy jobs. In summary the number of additional FTEs can be presented in table 22 below:

Organisations	Total in EU 27 + 4	Affected entities			
		Options			
		2A	2B	2C	2D
		Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
EASA	1	1	2	0	1
Competent authorities	31	0	31	15	7
TOTAL Authorities		**1**	**33**	**15**	**8**
TOTAL Organizations		**0**	**0**	**0**	**0**
Grand TOTAL		**1**	**33**	**15**	**8**

Table 22: Social impact in terms of FTEs

2.7.6.2 Other social impacts

Option 2A will give citizens the impression that common rules are often obsolete and unnecessarily rigid. This has to be considered negative in social terms.

A bit less negative is the impression of non-uniformity which will derive from option 2B.

Option 2C is flexible enough from the citizens' point of view and ensures a sufficient level of uniformity: so it has to be considered positive in qualitative social terms.

Finally option 2D does not only offer flexibility and uniformity, but also contributes to social cohesion, by establishing a mechanism for quick dissemination of lessons learnt.

2.7.6.3 Summary of social impact

The additional FTEs required are estimated in 2.7.6.1 above, and the qualitative considerations in 2.7.6.2 are then translated into scores versus the applicable specific objectives in following table 23:

Specific Objectives	Scoring of options			
	2A	2B	2C	2D
	Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
Avoid over-prescriptive rules	- 3	3	2	2
Reduce legislation at national level	2	- 2	2	2
Consistent and harmonised regulatory framework	- 1	- 2	2	3
TOTAL	**- 2**	**- 1**	**6**	**7**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 0.67**	**- 0.33**	**2**	**2.33**
WEIGHTED AVERAGE (Score x 1 for social impact)	**- 0.7**	**- 0.3**	**2**	**2.3**

Table 23: Scoring of the social impact

2.7.7 Regulatory harmonisation

2.7.7.1 Compatibility with other EU/EASA regulations

Options 2A and 2B will not be tuned with the spirit of "global approach" described in 2.7.1 above which can be summarised in "flexible but common" rules at EU level.

On the contrary options 2C and 2D will be fully compliant.

2.7.7.2 Compatibility with ICAO standards

The Chicago Convention obliges contracting States to make their best efforts to actually implement the ICAO standards. However said Convention does not oblige to transpose any standard into legally binding rules. Any of the four options under consideration is therefore fully compatible with the ICAO regime.

2.7.7.3 Comparison with the FAA rules

The regulatory approach is irrelevant in terms of harmonisation with FAA, for which the content of the rules is on the contrary significant.

2.7.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 24:

Specific Objectives	Scoring of options			
	2A	2B	2C	2D
	Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
Avoid over-prescriptive rules	-3	3	3	3
Reduce legislation at national level	3	- 3	3	3
TOTAL	**0**	**0**	**6**	**6**
AVERAGE SCORE (Tot/2 quantified parameters)	**0**	**0**	**3**	**3**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**0**	**0**	**3**	**3**

Table 24: Scoring of impact on regulatory harmonisation

In conclusion options 2C and 2D are better than 2A or 2B in terms of regulatory harmonisation.

2.7.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.7.3 to 2.7.7, the following matrix for MCA can be provided:

Weighted score of options for the extension of the LPL privileges to new classes or types of aircraft		2A	2B	2C	2D
		Only IRs	National AMCs	EU AMCs; no control	Controlled deviations
Key Performance Area	**Weight**				
Safety	3	3	- 3	4	8
Environmental	3	0	0	0	0
Economic	2	0.2	- 1.2	2.2	10.2
Social	2	- 0.7	- 0.3	2	2.3
Regulatory harmonisation	1	0	0	3	3
WEIGHTED TOTAL		**2.5**	**- 4.5**	**11.2**	**23.5**

Table 25: Multi Criteria Analysis for the rulemaking approach

From Table 25 above one can observe that that option 2D scores about twice as good than option 2C, while the impact of option 2A is marginally positive and that of option 2B globally negative. In particular, option 2D:

- has the best scores in safety terms;
- is environmentally neutral;
- is definitely the best from the economic point of view, since it cost almost 0.5 M€/year to tax payers, but does not imply any diseconomies in the organisations;
- Creates no jobs in the private aviation sector (and very few in the authorities), but it is the best for the qualitative social impact (i.e. relationship between citizens and authorities and cohesion at continental level);
- is the best (like 2C) in terms of regulatory harmonisation.

2.8 Validity of organisation approvals

2.8.1 Alternative options

One of the general principles for EU legislation is that the essential elements of the rules have to be defined in acts having force of law. Leaving them to the discretionary powers of competent authorities will not ensure an adequate level of legal certainty. Of course judgement is necessary in order to decide what an "essential element" is and what is not: this could be the case for the period of validity of the organisation approvals.

In JAR-FCL it was stipulated that the validity period of an ATO approval could vary between 1 to 3 years at the discretion of the competent authority. Similarly the JAR established e.g. that the validity of an AeMC approval could not exceed 3 years, without establishing a uniform period of validity throughout the EU27+4.

In this context the Agency has therefore identified three possible options:

- **Option 3A:** Establish **unlimited duration** of all organisation approvals in the EU27+4 (of course only until the organisation remains compliant with the applicable requirements, until the competent authority is granted access for audits and inspections or until the approval is not surrendered or revoked);
- **Option 3B**: Establish **fixed validity** at EU level (e.g. 3 years);
- **Option 3C: Leave to authorities at national level to establish** periods of validity.

2.8.2 Target group and number of entities concerned

2.8.2.1 Competent Authorities

Whichever is the period of validity of a certificate or approval, the organisation holding it is anyway subject to continuous oversight. So, **for any of the options** under consideration, the impacted competent authorities will be **31.**

In addition, in any of the three options, **EASA will always be impacted**, since it will have most probably to certify the "pan-European" ANSPs.

2.8.2.2 Design, Production and Maintenance organisations

Presently it is not proposed to change in any way the rules in EASA Part 21, M, 66, 145 or 147. Therefore, in the context of the present RIA to **number of affected DOA, POA, CAMO, MOA or MTOA is zero** for any of the options under consideration.

2.8.2.3 Air operators

In paragraph 2.6.2.3 above it has been estimated that the number of air operators in the EU 27 + 4 and in the scope of the EASA rules is presently:

- 3700 commercial operators (1100 for CAT + 2600 for aerial work);
- 689 for non commercial operators with complex aircraft.

The former will most probably will have to hold an organisation certificate[84]. For non commercial aviation, the operators of complex motor-powered aircraft[85] of any MTOM, will normally be only required to produce themselves a "declaration"[86]. The issues linked to the "declaration" (or other means) applicable to the latter group of operators, will be analysed in the RIA for the rules on air operations, and are therefore out of scope of the present document, as already stated in paragraph 1.2 above.

As a consequence, 3700 commercial air operators will be affected by any of the options under consideration. It is herein assumed that:

- 1/3 of them (i.e. 1233) "small" operators carry out relatively simple operations (e.g. onshore operations by not more than 4 multi-engine helicopters);
- Equally 1233 carry out "medium" complex activities (e.g. CAT by aeroplanes with MTOM between 5,700 and 40,000 kg and with 10 to 24 aircraft in their fleet);
- finally 1234 are "large" operators executing international CAT by aeroplanes with MTOM above 40,000 kg with 45 to 149 aircraft in their fleet.

Herein it is reminded that the present document is not a study on aviation economics in the EU but, more simply, a RIA for a set of EASA rules. Any estimation then does not need to be extremely accurate, but only sufficiently reasonable and fit only for the purpose of allowing comparison among various options.

2.8.2.4 Approved Training Organisations (ATO) for pilots and AeMCs

Equally all the **2,712 ATOs training LPL/PPLs** (formerly named "registered facilities") and the **other 969 ATOs**, whose number has been estimated in 2.6.2.4 above, will be affected by any of the options under consideration.

The **same will apply to the 73 AeMCs** estimated in paragraph 2.6.2.5 above.

2.8.2.5 Summary of affected entities

In conclusion, on the basis of the information in sub-paragraphs 2.8.2.1 to 2.8.2.4 above, the number of affected entities is estimated in table 26 below:

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84 According to Article 8.2 of the Basic Regulation.

85 As defined by Article 3(j) of the Basic Regulation.

86 Article 8.3 of the Basic Regulation.

Authorities or Organisations	Total in EU 27 + 4	Affected entities		
		Options		
		3A	3B	3C
		unlimited	fixed	national
EASA	1	1	1	1
Competent authorities	31	31	31	31
TOTAL Authorities		**32**	**32**	**32**
DOA, POA, CAMO, MOA, MTOA	N.A.	0	0	0
Small Air Operators	4389 (3700 commercial)	1233	1233	1233
Medium Air Operators		1233	1233	1233
Large Air Operators		1234	1234	1234
ATO (only for LPL and PPL)	2,712	2,712	2,712	2,712
Other ATO	969	969	969	969
AeMC	73	73	73	73
TOTAL Organizations		**7,454**	**7,454**	**7,454**
Grand TOTAL		**7,486**	**7,486**	**7,486**

Table 26: Number of entities affected by the structure of rules

2.8.3 Safety impact

According to the Agency proposed rules[87], the competent authority shall establish a continuing oversight and monitoring programme of the organisations under its supervision, including regular audits at intervals that (except for SMEs carrying out less complex activities) shall not exceed 24 months. This programme will in turn be subject to standardisation by the Agency.

In other words, whichever will be the validity of the approval or certificate, the organisations will be anyway be subject to periodical audits and inspections by the competent authorities. The latter may decide at any time to revoke, suspend or limit the certificate or approval.

The above considerations, on which basis the three alternatives under consideration are equivalent, lead then to the scores in following Table 27, versus the applicable specific objectives:

Specific Objectives	Scoring of options		
	3A	3B	3C
	unlimited	fixed	national
Efficient, safety oversight	3	3	3
TOTAL	**3**	**3**	**3**
AVERAGE SCORE (Tot/1 quantified parameters)	**3**	**3**	**3**
WEIGHTED AVERAGE (Score x 3 for safety)	**9**	**9**	**9**

Table 27: Scoring of the safety impact

From Table 27 above it can be observed that all the options under considerations are satisfactory and equivalent in safety terms.

2.8.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.8.5 Economic Impact

2.8.5.1 Economic impact on air operators

The fees to be paid by air operators to competent authorities for the initial issue, for the renewal or for the annual fee covering the continuous oversight are determined by national legislation and are very diversified. As a general principle however fees are highly dependent on:

[87] Draft implementing rule AR.GEN.320.

- the MTOM of the operated aircraft and on the diversification and complexity of aircraft in the fleet;
- the size of the organisation expressed in terms of staff, turnover, aircraft in the fleet or flown flight hours;
- differentiation between initial issue and renewal.

A deep analysis of such complex situation will not be proportionate for the present RIA. Therefore only data estimated as order of magnitude are used herein.

The UK CAA has a complex system of charges for organisations, readily accessible through their web site. Therein the Official Record Series 5, N. 228[88] of 30 January 2008, describes the scheme of charges applicable to air operators, where in particular the basic (minimum) charges for issuing an Air Operator Certificate (AOC) and maintaining it (i.e. annual charge for safety oversight) are contained. Furthermore the Italian competent authority (i.e. ENAC) in its regulation for fees and charges[89] stipulates that the cost of renewal of a certificate is 40% of the cost incurred for the initial issue.

In conclusion, using data or information extracted from the two sources mentioned above, the following estimations will be used in this RIA, as presented in Table 28 below:

Air operator		Basic (minimum) charge					
		Initial issue		Renewal (= 40% of initial issue)		Annual charge for safety oversight	
Type	Example features	£	€	£	€	£	€
Small	multi-engine helicopters on shore	8,254	10,257	N.A.	4,103	8,100	10,066
Medium	aeroplanes 5.7 ton < MTOM < 40 ton	16,266	20,214	N.A.	8,086	45,600	56,667
Large	aeroplanes MTOM >40 ton	20,160	25,053	N.A.	10,021	174,000	216,230

*Exchange rate on 29 August 2008: 1 € = 0.8047 £

Table 28: certification and oversight costs for a single air operator

In case of option 3A the recurrent cost for the (186 x 3) involved air operators will only be the annual charge for safety oversight. In case of option 3B, assuming a validity of 3 years for the certificates, the recurrent cost will be the annual charge + 1/3 of the cost of renewal. Finally, in case of option 3C it is assumed that around half of the competent authorities will opt for an unlimited validity and half for three years validity. This will in turn impact 50% of the operators.

The above considerations lead to the costs estimated in following Table 29:

Air operators	Options								
	3A unlimited			3B fixed			3C national		
	N.	Economic impact (k€)		N.	Economic impact (k€)		N.	Economic impact (k€)	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
Small	1233	10	12,330	1233	11	13,563	1233*	11	13,563
Medium	1233	57	70,281	1233	59	72,747	1233*	58	71,514
Large	1234	216	266,544	1234	220	271,480	1234*	218	269,012
TOTAL	**3700**		**349,155**	**3700**		**357,790**	**3700**		**354,089**

*50% will sustain only the annual charge. The remaining 50% the annual charge and the renewal every 3 years.

Table 29: recurrent costs for the totality of air operators

88 http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=3022

89 http://www.enac-italia.it/documents/regolazione_amm-cont.htm

It is important to note that, in this Chapter 2.8 of the RIA, not the variation of recurrent yearly cost is considered, but those costs themselves. **Since already today air operators pay fees for the safety oversight, these cost then are NOT additional to present situation**.

2.8.5.2 Economic impact on ATO for pilots

The UK CAA Official Record Series 5, N. 230[90] of 30 January 2008, describes the scheme of charges applicable to FCL and ATOs, where in particular the charges for issuing and renewing and ATO Certificate (AOC) are contained. The Agency assumes that the annual charge for safety oversight, in case of unlimited validity, could be in the range of 40% of the cost for the initial issue.

In conclusion, using data and assumptions mentioned above, the following estimations will be used in this RIA, as presented in Table 30 below:

ATO		Basic (minimum) charge					
		Initial issue		Renewal		Annual charge for safety oversight (= 40% of initial issue)	
Type	Example features	£	€	£	€	£	€
Only for LPL/PPL	single pilot aeroplanes	449	558	449	558	N.A.	223
Other	CPL (A) with IR	10,600	13,173	9,380	11,657	N.A.	5,269

*Exchange rate on 29 August 2008: 1 € = 0.8047 £

Table 30: certification and oversight costs for a single ATO

In case of option 3A the recurrent cost for the (2,712 for LPL/PPL and 969 for other categories of pilots) involved ATOs will only be the annual charge for safety oversight. In case of option 3B, assuming a validity of 3 years for the certificates, the recurrent cost will be the annual charge + 1/3 of the cost of renewal. Finally, in case of option 3C it is assumed that around half of the competent authorities will opt for an unlimited validity and half for three years validity. This will in turn impact 50% of the ATOs.

The above considerations lead to the costs estimated in following Table 31:

ATOs	Options								
	3A			3B			3C		
	unlimited			fixed			national		
	N.	Economic impact (k€)		N.	Economic impact (k€)		N.	Economic impact (k€)	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
Only for LPL/PPL	2,712	0.22	597	2,712	0.37	1,003	2,712	0.3	814
Other	969	5.3	5,136	969	8.4	8,140	969	6.8	6,589
TOTAL	**3,681**		**5,733**	**3,681**		**9,143**	**3,681**		**7,403**

*50% will sustain only the annual charge. The remaining 50% the annual charge and the renewal every 3 years.

Table 31: recurrent costs for the totality of ATOs

2.8.5.3 Economic impact on Aeromedical Centres

The Agency assumes that the cost of certification of Aeromedical Centres (AeMC) will be in the same order of magnitude as that of the simplest ATOs: i.e. 558 € for initial issue/renewal of the certificate, and 223 of annual fee for oversight.

The total costs for AeMCs can then be estimated in following Table 32:

90 http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=3024&filter=2

ATOs	Options								
	3A			3B			3C		
	unlimited			fixed			national		
	N.	Economic impact (k€)		N.	Economic impact (k€)		N.	Economic impact (k€)	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
AeMCs	73	0.22	16	73	0.37	27	73	0.3	22
TOTAL	**73**		**16**	**73**		**27**	**73**		**22**

*50% will sustain only the annual charge. The remaining 50% the annual charge and the renewal every 3 years.

Table 32: recurrent costs for the totality of AeMCs

2.8.5.4 Economic impact on the competent authorities

All the remaining costs (i.e. except from the pan-European ANSPs) for certification, renewal of certificates and continuous oversight, will become income for the competent authorities. The total is provided in paragraph 2.8.5.7 below. It has to be noticed however that this income is not "additional", but already existing today on the basis on the various regulations mentioned in the present Chapter of this RIA.

2.8.5.5 Safety dividend

In paragraph 2.3.4 above, it has been stated that no sufficient (in quantitative terms) and reliable data exist for quantifying the contribution by OR or AR rules to aviation safety. Therefore no safety dividend can be estimated.

2.8.5.6 Environmental burden

As stated in 2.8.4 above, any of the options under consideration will be neutral in the environment KPA. So no environmental burden will emerge in either case.

2.8.5.7 Summary of economic impact

In conclusion, on the basis of the information in sub-paragraphs 2.8.5.1 to 2.8.5.6 above, the emerging additional costs for the organisation or the savings (taking today's situation as baseline) can be estimated in table 33 below:

Authorities or Organisations	Options					
	3A		3B		3C	
	unlimited		fixed		national	
	N.	Total economic impact (k€)	N.	Total economic impact (k€)	N.	Total economic impact (k€)
Air Operators	3700	**349,155**	3700	**357,790**	3700	**354,089**
ATOs	3681	5,733	3,681	9,143	3,681	7,403
AeMCs	73	16	73	27	73	22
TOTAL cost for organisations	**7454**	**354,904**	**7454**	**366,960**	**7454**	**361,514**
EASA	1	225	1	300	1	262
Competent authorities	31	206,722	31	264,591	31	235,683
TOTAL income for Authorities	**32**	**206,947**	**32**	**264,891**	**32**	**235,945**
Additional (or less) income for authorities, with respect to option 3C		**- 28,998**		**28,946**		**0**

Table 33: Additional costs for organisations and additional income for authorities

As already stated before, it is not the ambition of the present RIA to constitute a deep study on aviation economics. The coarse estimations presented in this paragraph 2.8.5 serve only the purpose of comparing the various options. The 200 M€ for the cost of certification and oversight are in fact already sustained by the aviation community today, although the total estimated volume may be applicable only as a wide order of magnitude.

It is now herein assumed that option 3C (period of validity of the organisation certificates decided by the competent authority) reflects more or less today's situation. In conclusion option:

- 1A will allow organisations to save around 28 M€ per year, in comparison with 3C, to pay for certification and oversight;
- 1B will cost to said organisations around 29 M€ per year more than option 3C;
- Option 3C will anyway cost more than 3A.

The monetary terms in the present paragraph, are then translated into scoring, with reference to the applicable specific objectives in following table 34:

Specific Objectives	Scoring of options		
	3A	3B	3C
	unlimited	fixed	national
Efficient, safety oversight	3	- 3	0
TOTAL	**3**	**-3**	**0**
AVERAGE SCORE (Tot/1 quantified parameters)	**3**	**- 3**	**0**
WEIGHTED AVERAGE (Score x 1 for economic)	**3**	**- 3**	**0**

Table 34: Scoring of the economic impact

2.8.6 Social Impact

2.8.6.1 Competent authorities

The economic estimations in paragraph 2.8.5 above are not accurate enough to be translated into number of FTEs. However in qualitative terms it is observed that that while audits and oversight are technical activities of high quality, much of the work to renew the certificate to one organisation (in addition to periodical audits) is largely administrative.

2.8.6.2 Social impact on organisations

The total additional or less cost of about 29 M€ per year for the totality of almost 5,500 organisations, translates in average in 5,300 €/year for each of them, which is insufficient to generate or destroy jobs/FTEs.

2.8.6.3 Other social impacts

The majority of stakeholders seem convinced that periodic oversight is necessary to maintain high and uniform levels of aviation safety. On the contrary some of them may perceive the renewal of the certificate (e.g. to an AeMC which is used daily) as excessively bureaucratic. Furthermore option 3C will give citizens the image of a very fragmented Europe, notwithstanding the existence of EASA.

2.8.6.4 Summary of social impact

The qualitative considerations in 2.8.6.1, 2.8.6.2 and 2.8.6.3, are then translated into scores versus the applicable specific objectives in following table 35:

Specific Objectives	Scoring of options		
	3A	3B	3C
	unlimited	fixed	national
Avoid over-prescriptive rules	2	- 2	- 1
Reduce legislation at national level	1	1	- 3
Quality of jobs	2	- 2	- 1
TOTAL	**5**	**- 3**	**- 5**
AVERAGE SCORE (Tot/3 quantified parameters)	**1.67**	**- 1**	**- 1.67**
WEIGHTED AVERAGE (Score x 1 for social impact)	**1.7**	**- 1**	**- 1.7**

Table 35: Scoring of the social impact

From Table 35 it can then be observed that both options 3B and 3C are negative in social terms, while option 3A has a clearly positive social impact.

2.8.7 Regulatory harmonisation

2.8.7.1 Compatibility with other EU/EASA regulations

Options 3A and 3B will perfectly comply with the legal mandate for EASA to pursue not only a "high" level of safety, but also an "uniform" level of safety.

On the contrary, option 3C, although not necessarily leading to non-uniform safety, will definitely lead to non-uniformity of safety rules.

2.8.7.2 Compatibility with ICAO standards

Standard 4.2.1.5 in ICAO Annex 6 stipulates that the **continued validity** of an air operator certificate shall depend upon the operator maintaining the applicable requirements under the supervision of the State of the Operator.

In other words option 3A is the one most conforming to the letter and the spirit of ICAO Annexes. This spirit of "continued validity" could still be applied by individual member States under option 2C, while option 2B will go into the opposite direction.

2.8.7.3 Comparison with the FAA rules

The period of validity of the organisations certificates, does neither impair nor enhance the possibility for operators or providers of being recognised by the FAA or other foreign authorities.

2.8.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 36:

Specific Objectives	Scoring of options		
	3A	3B	3C
	unlimited	fixed	national
Consistent and harmonised regulatory framework	3	- 1	1
TOTAL	**3**	**- 1**	**1**
AVERAGE SCORE (Tot/1 quantified parameters)	**3**	**- 1**	**1**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**3**	**- 1**	**1**

Table 36: Scoring of impact on regulatory harmonisation

From Table 36 one can observe that option 3A scores better than 3C in terms of regulatory harmonisation, while option 3B has a negative score.

2.8.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.8.3 to 2.8.7, the following matrix for MCA can be provided:

Weighted score of options for validity of organisation approvals		3A	3B	3C
		unlimited	fixed	national
Key Performance Area	**Weight**			
Safety	3	9	9	9
Environmental	2	0	0	0
Economic	1	3	- 3	0
Social	1	1.7	- 1	- 1.7
Regulatory harmonisation	1	3	- 1	1
WEIGHTED TOTAL		**16.7**	**4**	**8.3**

Table 37: Multi Criteria Analysis for validity of organisation approvals

From Table 37 above one can observe that option 3A scores about twice better than 3C and 4 times better than3B. In particular:

- All the three options ensure high levels of safety and all are environmentally neutral;
- However option 3A is definitely the best in economic an social terms; and as well
- It is the best in terms of regulatory harmonisation.

2.9 Safety management by organisations

2.9.1 Alternative options

ICAO Annex 6 defines "Safety Management System" (SMS) as meaning a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. SMS potentially apply to any organisation providing aeronautical products or services. The alternatives for its implementation are compared in present Chapter 2.9 of this RIA.

- Hence the following potential options have been identified:
- **4A: do not impose SMS,** through legally binding rules, to any organisation providing products or services in the field of civil aviation (which does not exclude voluntary SMS implementation by any organisation);
- **4B:** Require SMS by all approved (or certified) civil aviation organisations, under **proportionate rules;**
- **4C:** Require SMS by all approved (or certified) civil aviation organisations, under **identical rules.**

2.9.2 Target group and number of entities concerned

2.9.2.1 Competent Authorities

SMS is presently required by ICAO for air operators, aerodrome operators and Air Traffic Service providers. This is applied by virtually the totality of EU27+4 Member States. In case of option 4A, SMS will become only voluntary. This may represent a significant change for the involved authorities, which will have no more duties in terms of certifying said system and exercising continuous oversight on it. So, all the competent authorities will be impacted by option 4A. Equally all of them will have to provide certification and oversight in case of either 4B or 4C.

So, **for any of the options** under consideration, the number of impacted competent authorities will be **31.**

In addition, the Agency will not be impacted by option 4A, since no operators/providers under its oversight will be mandated to implement SMS. Vice versa, **the Agency will be impacted by either option 4B or 4C**, since it will have most probably to certify and oversee the SMS of the "pan-European" ANSPs.

2.9.2.2 Design, Production and Maintenance organisations

Presently it is not proposed to change in any way the rules in EASA Part-21, Part-M, Part-66, Part-145 or Part-147. Therefore, in the context of the present RIA to **number of affected DOA, POA, CAMO, MOA or MTOA is zero** for any of the options under consideration.

2.9.2.3 Air operators

In paragraph 2.6.2.3 above it has been estimated that the number of air operators in the EU27+4 and in the scope of the EASA rules is presently:

- 1100 for CAT;
- 2600 for aerial work;
- 1486 for non commercial aviation with complex aircraft.

For the purposes of SMS, it is assumed that among the 1100 CAT operators, 370 can be considered "large", 370 "medium" sized and 360 "small". Vice versa all aerial work operators and all non commercial operators with complex aircraft are considered "small". Therefore for the purpose of present Chapter 2.9 of the RIA one can take into consideration:

- 370 "large" air operators (all providing international CAT);
- 370 "medium" sized air operators (again all of them providing international CAT, at least cross-border inside the EU27+4);
- 3649 (i.e. 360 + 2600 + 689) "small" air operators, of which:

ICAO Annex 6 (parts I, II and III) requires or recommends, for all of them, a SMS from 1 January 2009. So **all air operators will be impacted by option 4A** (i.e. remove the mandatory requirement).

Equally **all of them will be impacted by either option 4B or 4C**.

2.9.2.4 Approved Training Organisations (ATO) for pilots and AeMCs

Equally all the **2,712 ATOs training LPL/PPLs** (formerly named "registered facilities") and the **other 969 ATOs**, whose number has been estimated in 2.6.2.4 above, will be affected by any of the options under consideration. The former are considered "small" and the later "large" for the purposes of SMS.

The **same will apply to the 73 AeMCs** estimated in paragraph 2.6.2.5 above. All of them are considered "small" for the purposes of SMS.

2.9.2.5 Total entities

In conclusion, on the basis of the information in sub-paragraphs 2.9.2.1 to 2.9.2.4 above, the total number of entities subject to SMS requirements on the basis of present (and foreseen) EASA common rules, is estimated in table 38 below:

Authorities or Organisations	Total in EU 27+4	Affected entities		
		Options		
		4A	4B	4C
		voluntary SMS	proportionate SMS	identical SMS
EASA	1	0	1	1
Competent authorities	31	31	31	31
TOTAL Authorities		**31**	**32**	**32**
DOA, POA, CAMO, MOA, MTOA	N.A.	0	0	0
Small Air Operators	4,389 (S+ M + L)	3,649	3,649	3,649
ATO (only for LPL and PPL)	2,712	2,712	2,712	2,712
AeMC	73	73	73	73
Total "small" organisations		**6,434**	**6,434**	**6,434**
Medium Air Operators	4,389 (S+ M + L)	370	370	370
Total "medium sized" organisations		**370**	**370**	**370**
Large Air Operators	4,389 (S+ M + L)	370	370	370
Complex ATO	969	969	969	969
Total "large" organisations		**1,339**	**1,339**	**1,339**
TOTAL Organizations		**8,143**	**8,144**	**8,144**
Grand TOTAL		**8,174**	**8,175**	**8,175**

Table 38: Total number of entities affected by Safety Management

2.9.2.6 Entities affected by difference with ICAO requirements

However it has to be noted that ICAO Annexes currently require States to impose the obligation to establish a SMS to air operators, as summarised in Table 39 below:

ICAO Reference		Target group	SMS requirement	Applicability date
Document	Par.			
Annex 6, Part I	3.3.4	Operators of international CAT by aeroplanes	"acceptable" to the State	1 January 2009
Annex 6, Part II, Section 2	N.A.	International general aviation	**No requirement**	N.A.
Annex 6, Part II, Section 3	3.3.2.1	International general aviation by large aeroplanes (MTOM > 5.7 ton) or by turbojet aeroplanes	SMS appropriate for the size and complexity of operations	18 November 2010
Annex 6, Part II, Section 3	3.3	Corporate aviation organisations operating three or more aircraft	**Recommended**	**N.A.**
Annex 6, Part III, Section 2	1.3.4	Operators of international CAT by helicopters	"acceptable" to the State	01 January 2009
Annex 6, Part III, Section 3	N.A.	International general aviation by helicopters	**No requirement**	N.A.

Table 39: Current ICAO requirements for SMS

The taxonomy used by ICAO is however not exactly coincident with that used in the future EASA rules, while on the other side, the number of entities affected by changes in the SMS regulations is also relevant, for the purposes of this RIA. These "differential" numbers are estimated in table 40 below taking into account that the present ICAO requirements for SMS already include the principle of proportionality. In other words for the organisations already obliged to have an SMS, nothing will change in option 4B. But for the small and medium sized ones, option 4C will lead to additional requirements.

Organisations	SMS already required by ICAO	Organisations affected by change of requirements for SMS		
		Options		
		4A	4B	4C
		voluntary SMS	proportionate SMS	identical SMS
Small Air Operators – domestic CAT	No	0	360	360
Small Air Operators – aerial work (light piston-engined aeroplanes)	No	0	2,600	2,600
non-commercial aviation with complex motor powered aircraft	No*	0	689	689
ATO (only for LPL and PPL)	No	0	2,712	2,712
AeMC	No	0	73	73
Total "small" organisations		**0**	**6,434**	**6,434**
Medium Air Operators (international CAT)	YES	- 370	0	370
Total "medium sized" organisations		**- 370**	**0**	**370**
Large Air Operators (international CAT)	YES	- 370	0	0
Complex ATO	No	0	969	969
Total "large" organisations		**- 370**	**969**	**969**
TOTAL Organizations		**- 740**	**7,403**	**7,403**

*only recommended

Table40: number of organisations affected by variations in SMS requirements

2.9.3 Safety impact

From Table 39 above, one could observe that presently (or very soon) ICAO requires the most relevant organisations involved in aviation operations, to establish an SMS. **Option 4A** (i.e. "voluntary" SMS) **would definitely represent a regression**, from the perspective of pro-active safety, with reference to today's situation. In fact, in it, about 1,300 organisations (mainly "large") could eliminate or drastically downsize their SMS.

Both **options 4B and 4C** on the contrary, will go **beyond the minimum ICAO requirements**, since addressing a larger number of target groups (e.g. AeMC, ATOs for LPL, etc.) and in total more or less 2,800 additional organisations. They are therefore conducive to even more safety than the minimum required by ICAO for international aviation. Furthermore, option 4B, avoiding over-prescriptive rules, is likely to obtain a greater commitment by operators, which in turn is essential to build a proper safety culture.

The above considerations are then translated into scores versus the applicable specific objectives in following Table 41:

Specific Objectives	Scoring of options		
	4A	4B	4C
	voluntary SMS	proportionate SMS	identical SMS
Avoid over-prescriptive rules	0	3	- 1
Consistent and harmonised regulatory framework	- 3	2	3
Effective and sustainable Management Systems	- 1	3	1
Safety data collection and analysis	- 3	2	3
TOTAL	**- 7**	**10**	**6**
AVERAGE SCORE (Tot/4 quantified parameters)	**- 1.75**	**2.5**	**1.5**
WEIGHTED AVERAGE (Score x 3 for safety)	**- 5.2**	**7.5**	**4.5**

Table 41: Scoring of the safety impact

From the table above, one could observe that option 4A will be detrimental in comparison with present level of proactive safety, while both options 4B and 4C have a positive safety score.

2.9.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.9.5 Economic Impact

2.9.5.1 Economic impact on "small" organisations

Small organisations are assumed to employ less than 20 FTEs, for a cost of 50,000 € each, and, under present ICAO requirements, to use for a "rudimentary" SMS (when required) in average only 0.2 FTE in each of them.

For "small" organisations option 4A will neither imply additional cost nor savings.

In case of option 4B it has to be considered that the principle of proportionality is already accepted by ICAO. So for the "small" organisations already obliged to have an SMS, nothing will significantly change. On the contrary for the additional organisations (i.e. 6,434) it will become necessary to align themselves (i.e. to spend around 0.2 FTEs). In monetary terms this represents, in case of **said option 4B:**

6434 organisations x 0.2 FTEs x 50,000 € = 1286.8 FTEs x 50,000€ = **64,340,000 €**

Finally, in case of **option 4C**, the requirements applicable to "small" organisations will essentially be identical to those applicable to larger ones. Therefore it is assumed that 1 FTE may be necessary for SMS in each "small" organisation. In monetary terms:

6,434 organisations x 1 FTE = 6,434 FTEs x 50,000 € = **321,700,000 €**

2.9.5.2 Economic impact on "medium" sized organisations

A "medium" sized average organisation is assumed to employ in total around 300 staff and to use about 1 FTE for SMS, under today's proportionate requirements, at a cost of 50,000 €.

In case of **option 4A** it is assumed that the 370 organisations relieved from the obligation for a formal SMS, could reduce by 50% the effort required: i.e. – 0.5 FTEs for each of them. Therefore the obtained savings can be estimated in the order of magnitude of:

370 organisations x (- 0.5 FTEs) x 50,000 € = - 185 FTEs x 50,000 € = **- 9,250,000 €**

Vice versa, in case of option 4B, nothing will change for those "medium" sized organisations.

Finally, in case of **option 4C**, the requirements applicable to "medium" sized organisations will essentially be identical to those applicable to larger ones. Therefore it is assumed that 3 FTEs may be necessary for SMS in each of these organisations, which represents + 2 FTE for each of those 370 organisations already having an SMS. In monetary terms:

(370 x 2 FTEs) = 740 FTEs =

= 740 FTEs x 50,000 € = **37,000,000 €**

2.9.5.3 Economic impact on "large" organisations

A large operator is estimated to employ in average 5,000 staff, 15 FTEs of which used for SMS, at a cost of 50,000 €.

In case of **option 4A** then, 370 organisations will be relieved from the obligation to have a formal SMS. However in this case, since safety is the *reason d'être* of these organisations, it is assumed that they will substantially continue to have an SMS. The savings could only be in the range of 10% = - 0.15 FTEs. Therefore in monetary terms:

(370 operators x (-0.15 FTEs) x 50,000 €) = - 55 FTEs x 50,000 € = **- 2,775,000 €**

In case of **option 4B** nothing will change for organisations already obliged to SMS. In addition 969 ATOs organisations will be obliged to introduce it. For an ATO it is estimated that in average 5 FTEs will be sufficient to implement the SMS. However, safety is already a concern of the ATOs by definition. Therefore it is assumed that only 1 additional FTEs will be required per ATO to transition to a more formalised SMS. Hence:

969 ATOs x 1 FTEs x 50,000 € = 969 FTEs x 50,000 € = **48,450,000 €**

Exactly the same considerations apply to option 4C, since for it nothing will change for "large" organisations already subject to formal SMS, while the requirement to have a more formalised system will only apply to the 969 complex ATOs.

2.9.5.4 Regulatory cost for the Agency

No additional costs for these organisations (turned into income for the Agency) are connected to any of the three options under consideration.

2.9.5.5 Economic impact on the competent authorities

The same will apply to the competent authorities, since the cost for certification and oversight has already been considered in paragraph 2.8.5.7 above.

2.9.5.6 Safety dividend

In paragraph 2.3.4 above, it has been stated that no sufficient (in quantitative terms) and reliable data exist for quantifying the contribution by OR or AR rules to aviation safety. Therefore no safety dividend can be estimated.

2.9.5.7 Environmental burden

As stated in 2.9.4 above, any of the options under consideration will be neutral in the environment KPA. So no environmental burden will emerge in either case.

2.9.5.8 Summary of economic impact

In conclusion, on the basis of the information in sub-paragraphs 2.9.5.1 to 2.9.5.7 above, the emerging additional costs (or savings) for the organisations can be estimated in table 42 below:

Authorities or Organisations	Options					
	4A		4B		4C	
	voluntary SMS		proportionate SMS		identical SMS	
	N.	Total economic impact (k€)	N.	Total economic impact (k€)	N.	Total economic impact (k€)
"Small" organisations	0	0	6434	64340	6434	321700
"Medium" sized organisations	-370	- 9250	0	0	370	37000
"Large" organisations	- 370	- 2775	969	48450	969	48450
TOTAL internal cost for organisations	**-740**	**-12025**	**7403**	**112790**	**7773**	**407150**
EASA	0	0	1	0	1	0
Competent authorities	31	0	31	0	31	0
TOTAL income for Authorities	**31**	**0**	**32**	**0**	**32**	**0**

Table 42: Additional costs or savings for organizations

In conclusion option:

- 4A will lead to less effort necessary for SMS inside organisations, representing savings for about 12 M€/year;
- 4B will cost around 112 M€ for highly skilled labour inside organisations;
- and 4C will cost about 407 M€/year.

The monetary terms and the considerations presented above can be translated into scoring, versus the applicable specific objectives, in following table 43:

Specific Objectives	Scoring of options		
	4A	4B	4C
	voluntary SMS	proportionate SMS	identical SMS
Avoid over-prescriptive rules	3	2	- 3
Efficient, safety oversight	- 1	2	- 2
Effective and sustainable Management Systems	2	1	- 3
TOTAL	**4**	**5**	**- 8**
AVERAGE SCORE (Tot/3 quantified parameters)	**1.33**	**1.67**	**- 2.67**
WEIGHTED AVERAGE (Score x 1 for economic)	**1.3**	**1.7**	**- 2.7**

Table 43: Scoring of the economic impact

From the table, it can be seen that option 4C has to be considered negative in economic terms: i.e. disproportionate cost for SMEs.

On the contrary both options 4A and 4B are positive in economic terms, however with the former leading to savings and the latter leading to sustainable expenditure.

2.9.6 Social Impact

2.9.6.1 Competent authorities

None of the options under consideration will imply more or less income for the Agency of for any of the competent authorities. In turn this means no change for the number of required FTEs.

2.9.6.2 Social impact on organisations

The number of FTEs deriving from additional demand has already been estimated in paragraph 2.9.5 above. The numbers of the estimated FTEs can be summarised in Table 44 below:

Organisations	Options					
	4A		4B		4C	
	voluntary SMS		proportionate SMS		identical SMS	
	N.	Lost FTEs	N.	Additional FTEs	N.	Additional FTEs
"Small" organisations	0	0	6434	1287	6434	6434
"Medium" organisations	- 370	- 185	0	0	370	740
"Large" organisations	- 370	- 55	969	969	969	969
TOTAL internal cost for organisations	**-740**	**-240**	**7403**	**2256**	**7773**	**8143**

Table 44: Variation of required FTEs

2.9.6.3 Other social impacts

Furthermore, in qualitative terms, it has to be noted that option 4A will lead to a reduction in required FTEs by around 250.

On the contrary option 4B will create additional demand for around 2250 FTEs in highly qualified jobs. Option 4C will require even more FTEs (i.e. around 8,000), but part of them will be due to the additional bureaucratic burden on SMEs.

2.9.6.4 Summary of social impact

The orders of magnitude of the additional FTEs required are estimated in 2.9.6.2 and the considerations in 2.9.6.3 above are then translated into scores versus the applicable specific objectives in following table 45:

Specific Objectives	Scoring of options		
	4A	4B	4C
	voluntary SMS	proportionate SMS	identical SMS
Avoid over-prescriptive rules	2	2	- 2
Efficient, safety oversight	2	2	2
Effective and sustainable Management Systems	- 3	3	- 3
Quality of jobs	- 3	3	1
TOTAL	**- 2**	**10**	**- 2**
AVERAGE SCORE (Tot/4 quantified parameters)	**- 0.5**	**2.5**	**- 0.5**
WEIGHTED AVERAGE (Score x 1 for social impact)	**- 0.5**	**2.5**	**- 0.5**

Table 45: Scoring of the social impact

From Table 45 it can then be observed that only option 4B is positive in social terms.

2.9.7 Regulatory harmonisation

2.9.7.1 Compatibility with other EU/EASA regulations

Option 4A will represent a regression with respect to the existing and mentioned above "Single Sky" provisions. On the contrary option 4B will represent the greatest continuity with the proportional approach, while option 4C might impose additional burden to SMEs, in particular local ATSPs.

2.9.7.2 Compatibility with ICAO standards

The present applicable ICAO standards and recommended practices for SMS have been presented in Table 39 in paragraph 2.9.2.8 above. With respect to them:

- option 4A will represent a regression from safety requirements already accepted by the aviation community; this is even worse when considering that SMS is the corner stone to evolve from prescriptive rules to performance based rules, which is the present policy in ICAO;
- option 4B will maintain the principle of proportionality already included in the ICAO standards; furthermore it will extend the scope of SMS to SMEs, in line with some recommended practices; going beyond the scope and applicability of ICAO SARPs is perfectly compatible with the Chicago Convention, whose aim is only to establish minimum requirements for international civil aviation;
- finally option 4C also will be compatible with the ICAO minimum requirements, since imposing additional (no less) requirements to SMEs.

2.9.7.3 Comparison with the FAA rules

Option 4A, relieving international CAT operators of large aeroplanes from the obligation to implement an SMS (and exempting the authority to audit it), might create difficulties in terms of access by EU27+4 commercial operators to North America. Some difficulties may also emerge for airports open today to international CAT.

2.9.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 46:

Specific Objectives	Scoring of options		
	4A	4B	4C
	voluntary SMS	proportionate SMS	identical SMS
Consistent and harmonised regulatory framework	- 3	3	1
Effective and sustainable Management Systems	- 3	3	1
TOTAL	**- 6**	**6**	**2**
AVERAGE SCORE (Tot/2 quantified parameters)	**- 3**	**3**	**1**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**- 3**	**3**	**1**

Table 46: Scoring of impact on regulatory harmonisation

Clearly option 4B is the most harmonised with ICAO and FAA, as well as with existing EU common rules. On the contrary option 4A is negative in this respect.

2.9.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.9.3 to 2.9.7, the following matrix for MCA can be provided:

Weighted score of options for Safety Management System (SMS)		4A	4B	4C
Key Performance Area	Weight	voluntary SMS	proportionate SMS	identical SMS
Safety	3	- 5.2	7.5	4.5
Environmental	2	0	0	0
Economic	1	1.3	1.7	- 2.7
Social	1	- 0.5	2.5	- 0.5
Regulatory harmonisation	1	- 3	3	1
WEIGHTED TOTAL		**- 7.4**	**14.7**	**2.3**

Table 47: Multi Criteria Analysis for SMS

From Table 47 above one can observe that that option 4A has a highly negative score, while 4B scores about 6 times better than 4C. In particular, option 4B:

- has the best score in safety terms;
- is environmentally neutral like the other two;
- is sustainable in economic terms, while option 4C will impose a disproportionate burden on SMEs;
- is the only one scoring positively in social terms, since it may create demand for additional 1000 FTEs in highly qualified areas;
- scores better than the others in terms of regulatory harmonisation.

2.10 Quality management by organisations

2.10.1 Alternative options

Current definition of the minimum requirements for SMS from ICAO includes:

a) identification of safety hazards;

b) ensuring that remedial action necessary to maintain an acceptable level of safety is implemented;

c) providing for continuous monitoring and regular assessment of the safety level achieved;

d) aiming to make continuous improvement to the overall level of safety;

e) clear definitions of lines of safety accountability throughout the operator's organization, including a direct accountability for safety on the part of senior management.

Verification of compliance with the established procedures is not explicit in the ICAO minimum requirements listed above. Nevertheless QMS, whose core is indeed verification of compliance with published procedures, has become common industry practice even beyond aviation and a number of operators have implemented it.

In the EU27+4, currently OPS 1.035[91] requires an air operator to establish one quality system and designate one Quality Manager, acceptable to the Authority, to monitor compliance with, and adequacy of, procedures required to ensure safe operational practices and airworthy aeroplanes. This activity is of course based on procedures described in relevant documentation.

However, the relationship between SMS and QMS was questioned by a number of organisations. Actually, although the aims of QMS and SMS are different, both SMS and QMS have in common:

- Published procedures whose concrete application has to be monitored;
- A "feedback" loop based on data and information collected from actual experience.

Hence, in a similar way to SMS, the following potential options have been identified:

[91] In Commission Regulation (EC) No 8/2008 of 11 December 2007 amending Council Regulation (EEC) No 3922/91 as regards common technical requirements and administrative procedures applicable to commercial transportation by aeroplane (*OJ L 10, 12.1.2008, p. 1–206*). So called "EU-OPS".

- **5A: do not impose QMS,** through legally binding rules, to any organisation providing products or services in the field of civil aviation (which does not exclude voluntary QMS implementation by any organisation);
- **5B:** Require QMS by all approved (or certified) civil aviation organisations, under **identical rules.**
- **5C:** Require QMS by all approved (or certified) civil aviation organisations, under **proportionate rules;**

2.10.2 Target group and number of entities concerned

2.10.2.1 Competent Authorities

"EU-OPS" presently mandates air operators, established in the EU27+4 Member States, to implement a QMS.

In case of option 5B, today's situation will be maintained, although progressively extended to a greater number of organisations (e.g. aerodrome operators). Equally the tasks for inspecting, auditing, certifying, approving and overseeing organisations will not substantially change in case of option 5C. It will decrease in case of 5A.

The Agency will be impacted **equally for third country organisations.**

2.10.2.2 Design, Production and Maintenance organisations

Presently it is not proposed to change in any way the rules in EASA Part-21, Part-M, Part-66, Part-145 or Part-147. Therefore, in the context of the present RIA the **number of affected DOA, POA, CAMO, MOA or MTOA is zero** for any of the options under consideration.

2.10.2.3 Air operators

In paragraph 2.6.2.3 above it has been estimated that the number of air operators (i.e. organisations constituted by more than 1 person; so excluding the pilot owners and operators) in the EU27+4 and in the scope of the EASA rules is presently:

- 1100 for CAT;
- 2600 for aerial work;
- 689 for non commercial complex operators.

Only **CAT operators** are already subject to the "EU-OPS". In **option 5B nothing will change for them**. In case of option 5A the legal requirement for QMS will be removed, but in practice, to obtain and maintain the Air Operator Certificate (AOC) some form of compliance monitoring will be necessary anyway. Even in case of **option 5B** then, **no CAT operators will be impacted**.

In case of option 5C, some operators may want to change their organisation, in order to align compliance monitoring (or QMS) with Safety Management System. However, in the Agency's proposal this is not mandatory, since the rule is "soft" (i.e. AMC). On the other side these operators have already been certified by their respective competent authorities, which have found their internal organisation acceptable. In other words, even in case of **option 5C no CAT operators will be impacted**.

The **2600 operators of aerial work** today are not obliged to implement any form of QMS. In case of **option 5A, nothing will change** for them. On the contrary, **all 2600 will be impacted by any of the options 5B or 5C**, since them all will make compliance monitoring mandatory.

The **same applies to the 689 non-commercial complex operators**.

2.10.2.4 Approved Training Organisations (ATO) for pilots and AeMCs

Equally all the **2,712 ATOs training LPL/PPLs** (formerly named "registered facilities") and the **other 969 ATOs**, whose number has been estimated in 2.6.2.4 above, will be affected by any of the options under consideration, except 5A.

The **same will apply to the 73 AeMCs** estimated in paragraph 2.6.2.5 above.

In fact neither the ATOs nor the AeMCs are today obliged to have any form of compliance monitoring.

2.10.2.5 Summary of affected entities

In conclusion, the number of entities affected by the options for QMS (i.e. compliance monitoring) can be presented in Table 48 below:

Authorities or Organisations	QMS already required by EU OPS	Organisations affected by change of requirements for SMS		
		Options		
		5A	5B	5C
		Voluntary QMS	Identical QMS	Proportionate QMS
EASA	N.A.	-1	0	0
competent authorities	N.A.	-31	0	0
Total authorities		**-32**	**0**	**0**
CAT Air operators	YES	0	0	0
Aerial work operators	N.A.	0	2600	2600
non commercial complex **operator**	N.A.	0	689	689
ATOs (only for LPL and PPL)	N.A.	0	2,712	2,712
Other ATOs	N.A.	0	969	969
AeMC	N.A.	0	73	73
TOTAL Organizations		**0**	**7043**	**7043**
GRAND TOTAL		**-32**	**7043**	**7043**

Table 48: number of organisations affected by QMS

2.10.3 Safety impact

Option 5A (i.e. voluntary QMS) would definitely represent a regression, from the perspective of compliance with safety rules, with reference to today's situation, as around 1100 organisations (CAT air operators) could eliminate or downsize their QMS.

Both options 5B and 5C are conducive to more safety. It is expected that option 5C, avoiding over-prescriptive rules, is likely to obtain a greater commitment by operators, which in turn is essential to build a proper safety culture.

The above considerations are then translated into scores versus the applicable specific objectives in following Table 49:

Specific Objectives	Scoring of options		
	5A	5B	5C
	Voluntary QMS	Identical QMS	Proportionate QMS
Avoid over-prescriptive rules	0	-1	3
Consistent and harmonised regulatory framework	- 3	3	2
Effective and sustainable Management Systems	- 2	2	3
TOTAL	**-5**	**4**	**8**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 1.67**	**1.33**	**- 2.67**
WEIGHTED AVERAGE (Score x 3 for safety)	**- 5**	**4**	**8**

Table 49: Scoring of the safety impact

So it may be concluded that options 5A scores negatively in safety terms, while options 5B and 5C score positively in this KPA.

2.10.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.10.5 Economic Impact

2.10.5.1 Economic impact on air operators

Neither additional fees to be paid to authorities, nor any need to necessarily pay for work carried out by other entities, will emerge for air operators on the basis of any of the options under consideration. However some additional working hours (and hence internal costs) may emerge.

In case of **option 5A nothing will change for air operators** and therefore there will **neither be additional costs, nor saving for any of them (i.e. CAT, aerial work or corporate business aviation).**

None of the options under consideration will affect CAT operators.

On the contrary the 2600 aerial work operators and the 689 non commercial complex operators will be mandated to implement a compliance monitoring systems under option 5B and 5C.

Finally, in case of **option 5B**, the requirements applicable to "small" organisations will essentially be identical to those applicable to larger ones. Therefore it is assumed that 1 FTE may be necessary for QMS in each "small" organisation, i.e. for each of the 3289 organisations. In monetary terms:

3289 FTEs = 3289 x 50,000 € = **164,450,000 €**

In case of option 5C, it will become necessary for the "small" organisations to align themselves (i.e. to spend around 0.2 FTEs). In monetary terms this represents, in case of **said option 5C:**

3289 organisations x 0.2 FTEs x 50,000 € = **32,890,000 €**

2.10.5.2 2.10.5.2 Economic impact on ATO for pilots

No ATOs at all will be impacted by option 5A: in this case then there will be no additional costs for them imposed by regulation.

As for small air operators, the cost for ATOs will be:

3681 organisations x 1FTE x 50,000 €=**184,050,000** € for option 5B, and

3681 organisations x 0.2FTE x 50,000 €=**36,810,000** € for option 5 C

2.10.5.3 Economic impact on Aeromedical Centres

Along the same lines, and assuming that there will be no impact ion case of option 5A, the **costs stemming for AeMCs for options 5B and 5C are calculated below**:

73 organisations x 1FTE x 50,000 €=**3,650,000** € for option 5B, and

73 organisations x 0.2FTE x 50,000 €=**730,000** € for option 5C.

2.10.5.4 Regulatory cost for the Agency and the competent authorities

No additional cost is to be considered since the cost for certification and oversight has already been considered.

2.10.5.5 Safety dividend

In paragraph 2.10.3 above it has been stated that no sufficient data exist to quantify the safety contribution by management systems. Therefore a negligible safety dividend is assumed. i.e. neither additional damage, nor societal benefit due to less accidents.

2.10.5.6 Environmental burden

For the considerations exposed in 2.10.4 there is equally no economic burden deriving from the environmental impact of any of the options under consideration.

2.10.5.7 Summary of economic impact

On the basis of the considerations, calculations and results presented in sub-paragraphs 2.10.5.1 to 2.10.5.6 above, the total of the additional burden for internal qualified labour, as a function of the various options for the QMS, can be presented in Table 50 below:

Organisations	Estimated variation of recurrent (internal) costs for QMS (k€)		
	Options		
	5A	5B	5C
	Voluntary QMS	Identical QMS	Proportionate QMS
CAT Air operators	0	0	0
Other air operators	0	**164,450**	**32,890**
ATO (only for LPL and PPL)	0	**184,050**	**36,810**
AeMC	0	**3,650**	**730**
TOTAL	**0**	**352,150**	**70,430**

Table 50: Summary of economic impact (recurrent internal yearly costs)

In other words:

- No money at all will flow from citizens (taxpayers or applicants) to the Agency or to the competent authorities for any of the options under consideration;
- Any of the options will be neutral towards society, in terms of safety dividend or environmental burden;
- Option 5A will essentially be cost neutral;
- Among the others the cheapest will be option 5C;

The monetary terms and the considerations presented above can be translated into scoring, versus the applicable specific objectives, in following table 51:

Specific Objectives	Scoring of options		
	5A	5B	5C
	Voluntary QMS	Identical QMS	Proportionate QMS
Avoid over-prescriptive rules	3	-3	2
Effective and sustainable Management Systems	2	-3	1
TOTAL	**5**	**-6**	**3**
AVERAGE SCORE (Tot/2 quantified parameters)	**2.5**	**-3**	**1.5**
WEIGHTED AVERAGE (Score x 1 for economic)	**2.5**	**-3**	**1.5**

Table 51: Scoring of the economic impact

From Table 51 it can be observed that option 5A is the cheapest. Options 5B and 5C would enable full implementation of QMS, but at a lower cost for 5C.

2.10.6 Social Impact

2.10.6.1 Competent authorities

None of the options under consideration will imply more or less income for the Agency of for any of the competent authorities. In turn this means no changes as regards the required FTEs.

2.10.6.2 Social impact on organisations

Vice versa the number of additional (or lost) FTEs inside organisations has already been estimated in the various sub-paragraphs in 2.10.5 above. The results of these calculations can be summarized in Table 52 below:

Organisations	Estimated variation of FTEs for QMS (k€)		
	Options		
	5A	5B	5C
	Voluntary QMS	Identical QMS	Proportionate QMS
CAT Air operators	0	0	0
"Small" operators	0	3289	657
ATOs	0	3681	736
AeMC	0	73	15
TOTAL	**0**	**7043**	**1406**

Table 52: Summary of social impact

2.10.6.3 Other social impacts

Option 5A will not create any additional highly qualified job in the area of quality management.

Also option 5B, while extending the QMS to small and medium aviation organisations, will give them no further guidance nor flexibility in implementation.

Both options 5A and 5B are therefore slightly negative in qualitative social terms.

On the contrary options 5C will give "soft" guidance to organisations, without obliging any of them to a specific model. In addition however, option 5C will clearly show that:

- QMS in aviation may be a "tool" to support SMS;
- Costly certification of QMS by a third party, is not mandatory from the safety regulation point of view.

2.10.6.4 Summary of social impact

The orders of magnitude the variation in required FTEs is estimated in 2.10.6.2 and the qualitative considerations in 2.10.6.3 above are then translated into scores versus the applicable specific objectives in Table 53 below:

Specific Objectives	Scoring of options		
	5A	5B	5C
	Voluntary QMS	Identical QMS	Proportionate QMS
Consistent and harmonised regulatory framework	-1	1	2
Effective and sustainable Management Systems	-1	- 2	2
Quality of jobs	0	-1	3
TOTAL	**-2**	**- 2**	**7**
AVERAGE SCORE (Tot/3 quantified parameters)	**-0.67**	**- 0.67**	**2.33**
WEIGHTED AVERAGE (Score x 1 for social impact)	**-0.7**	**- 0.7**	**2.3**

Table 53: Scoring of the social impact

From Table 53 above one could observe that option 5A and 5B will be slightly negative in social terms, while option 5C scores positively.

2.10.7 Regulatory harmonisation

2.10.7.1 Compatibility with other EU/EASA regulations

Option 5A will represent a regression from "EU-OPS". On the contrary 5B and 5C will extend the need for compliance monitoring to all aviation entities, in line with the spirit of the mentioned regulation.

2.10.7.2 Compatibility with ICAO standards

ICAO does not prescribe QMS for the whole set of organisations under consideration in this Chapter of the RIA. Options 5B and 5C will not affect compatibility with ICAO standards. Option 5C, taking into account the principle of proportionality, is more in line with the ICAO spirit.

2.10.7.3 Comparison with the FAA rules

FAA regulations currently do not require any mandatory QMS by air operators. Option 5A is the closest to this approach. But the other options will facilitate, not jeopardize, access by operators to North America.

2.10.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 54:

Specific Objectives	Scoring of options		
	5A	5B	5C
	Voluntary QMS	Identical QMS	Proportionate QMS
Consistent and harmonised regulatory framework	-2	1	2
Effective and sustainable Management Systems	-1	1	2
TOTAL	**-2**	**2**	**4**
AVERAGE SCORE (Tot/2 quantified parameters)	**-1**	**1**	**2**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**-1**	**1**	**2**

Table 54: Scoring of impact on regulatory harmonisation

Option 5C is the most harmonised with the global and EU regulatory framework.

2.10.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.10.3 to 2.10.7, the following matrix for MCA can be provided:

Weighted score of options for QMS		5A	5B	5C
Key Performance Area	Weight	Voluntary QMS	Identical QMS	Proportionate QMS
Safety	3	-5	4	8
Environmental	2	0	0	0
Economic	1	2.5	-3	1.5
Social	1	-O.7	- 0.7	2.3
Regulatory harmonisation	1	-1	1	2
WEIGHTED TOTAL		**-4.2**	**1.3**	**13.8**

Table 55: Multi Criteria Analysis for QMS

From Table 55 above one can observe that that options 5A and 5B have negative or almost neutral scores, option 5C largely outscores the others. In particular, option 5C:

- Has a high positive score in the safety KPA;
- is environmentally neutral, like the other options;
- is sustainable in economic terms;
- has the most positive social impact;
- Is the best in terms of regulatory harmonisation, on the global scale and in respect of existing EU legislation.

2.11 Reporting of safety occurrences to EASA

2.11.1 Alternative options

EU Directive 2003/42 requires MS to organise reporting from organisations of specified occurrences to competent authorities. This Directive was supplemented by regulations 1321/2007 and 1337/2007, which organise a central repository of information, together with its dissemination. The Agency has access to the central repository, but only to de-identified information. This does not allow identification of data received more than one time through different channels (voluntary). In order to analyse safety data and draw conclusions which can lead to risk assessment and mitigating measures, the Agency needs to be provided with the full information. This will ensure proper functioning of safety management at the European level, which is necessary to comply with ICAO requirement on state safety programmes.

Hence, in a similar way to SMS, the following potential options have been identified:

- **6A: do not require reporting to the Agency,** leaving data analysis at national level;
- **6B:** Require reporting to the Agency of **only accidents and serious incidents**;
- **6C:** Require reporting to the Agency of **all significant occurrences;**

2.11.2 Target group and number of entities concerned

2.11.2.1 Competent Authorities

Competent authorities will be affected by a requirement to report to the Agency, who will be affected as it will then need to process the information. Therefore, only option 6A will not affect competent authorities and the Agency.

2.11.2.2 Organisations

Organisations will not be affected by option 6A and 6B, as they already report to their authorities. They might possibly be affected by option 6C, in case the scope of occurrences to be reported is wider than the one specified in Directive 2003/42.

2.11.2.3 Summary of affected entities

Authorities or Organisations	Total in EU 27 + 4	Affected entities		
		Options		
		6A	6B	6C
		No mandatory reporting	Only accidents and serious incidents	All significant occurrences
EASA	1	0	1	1
Competent authorities	31	0	31	31
TOTAL Authorities		**0**	**32**	**32**
DOA, POA, CAMO, MOA, MTOA	N.A.	0	0	0
CAT Air Operators	1100	0	0	1100
Aerial work operators	2600	0	0	2600
ATO (only for LPL and PPL)	2,712	0	0	2712
Other ATOs	969	0	0	969
AeMC	73	0	0	73
TOTAL Organizations		**0**	**0**	**7454**
Grand TOTAL		**0**	**32**	**7486**

2.11.3 Safety impact

In order to take appropriate measures and to ensure a proper functioning of safety management at the European level (Community safety programme), it is necessary for the Agency to get all relevant information. Option 6A does not enable the Agency to have this necessary information.

Option 6B is better, as far as safety is concerned, since it would enable EASA to react after a safety problem has been identified through an investigation following an accident or a serious incident, before the report is published.

But, only option 6C would enable proactive safety management through systematic analysis of all significant occurrences.

Specific Objectives	Scoring of options		
	6A	6B	6C
	No mandatory reporting	Only accidents and serious incidents	All significant occurrences
Safety programme at EU level	0	-1	3
Safety data collection and analysis	-3	2	3
TOTAL	**-3**	**1**	**6**
AVERAGE SCORE (Tot/2 quantified parameters)	**- 1.5**	**0.5**	**3**
WEIGHTED AVERAGE (Score x 3 for safety)	**- 4.5**	**1.5**	**9**

This allows concluding that option 6C scores far higher than the other options, in terms of safety.

2.11.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.11.5 Economic Impact

2.11.5.1 Regulatory cost for the Agency

The Agency has already planned the analysis of safety data. The mandatory reporting would only give valuable data to enhance this analysis. The only cost which can be induced would come from the need to process more data than what is already foreseen through Directive 2003/42. This could be the case with option 6C. It can be estimated to 0.1 FTE.

In monetary terms,

0.1 FTEs x 50,000 € = **5,000 €**

2.11.5.2 Economic impact on the competent authorities

The competent authorities have already implemented a reporting system on a national basis, in accordance with Directive 2003/42. The cost of adding the Agency to the already existing list of addresses internal to the competent authority may be neglected.

The only cost would arise from a possible need to report more than the data which are already reported to the competent authority. It can be estimated to **0.1FTE and would affect option 6C**.

In monetary terms,

32 competent authorities x 0.1 FTEs x 50,000 € = **160,000 €**

2.11.5.3 Safety dividend

In paragraph 2.10.3 above it has been stated that no sufficient data exist to quantify the safety contribution by management systems. Therefore a negligible safety dividend is assumed. i.e. neither additional damage, nor societal benefit due to less accidents.

2.11.5.4 Environmental burden

No environmental impact was identified, whatever the option. Equally, there is no economic burden deriving from the environmental impact of any of the options under consideration.

2.11.5.5 Economic impact on organisations

A possible cost would arise from a need to report more than the data which are already encompassed in Directive 2003/42. This concerns option 6C. It can be estimated to **0.1FTE**

In monetary terms,

7454 organisations x 0.1 FTEs x 50,000 € = **37,270,000 €**

However, even if the benefit of proactive safety management is difficult to evaluate, it can be understood that its absence is likely to be conducive to accidents, with the related costs.

2.11.5.6 Summary of economic impact

Organisations	Estimated variation of costs for occurrence reporting (k€)		
	Options		
	6A	6B	6C
	No mandatory reporting	Only accidents and serious incidents	All significant occurrences
The Agency	0	0	5
Competent authorities	0	**0**	**160**
Organisations	0	**0**	**37,270**
TOTAL	**0**	**0**	**37,435**

Table 56: Summary of economic impact (recurrent internal yearly costs)

The monetary terms and the considerations presented above can be translated into scoring, versus the applicable specific objectives, in following table 57:

Specific Objectives	Scoring of options		
	6A	6B	6C
	No mandatory reporting	Only accidents and serious incidents	All significant occurrences
Safety programme at EU level	-1	-1	1
Safety data collection and analysis	0	1	1
TOTAL	**-1**	**0**	**2**
AVERAGE SCORE (Tot/2 quantified parameters)	**-0.5**	**0**	**1**
WEIGHTED AVERAGE (Score x 1 for economic)	**-0.5**	**0**	**1**

Table 57: Scoring of options

From Table 57 it can be observed that even though option 6C is not the cheapest, it is the only one allowing implementation of the safety programme at EU level at reasonable cost.

2.11.6 Social Impact

2.11.6.1 Competent authorities

It has already been estimated that option 6C would imply **3.2 FTEs** for competent authorities, including the Agency. The other options have no impact.

2.11.6.2 Organisations

Similarly, it has been estimated **745.4** FTEs for organisations, as concerns option 6C.

2.11.6.3 Other social impact

No option is likely to directly impact on the required number of FTEs. Option 5C, by allowing proactive management of safety, will be beneficial to the full aeronautical community.

2.11.6.4 Summary of social impact

The orders of magnitude of the changes in required FTEs is estimated in 2.10.6.2 and the qualitative considerations in 2.10.6.3 above are then translated into scores versus the applicable specific objectives in Table 58 below:

Specific Objectives	Scoring of options		
	6A	6B	6C
	No mandatory reporting	Only accidents and serious incidents	All significant occurrences
Safety programme at EU level	0	1	3
Effective and sustainable Management Systems	-1	0	2
Quality of jobs	0	0	3
TOTAL	**-1**	**1**	**8**
AVERAGE SCORE (Tot/3 quantified parameters)	**-0.33**	**0.33**	**2.67**
WEIGHTED AVERAGE (Score x 1 for social impact)	**-0.33**	**0.33**	**2.67**

Table 58: Scoring of the social impact

From Table 58 above one could observe that option 5A and 5B will be almost neutral in social terms, while option 5C scores positively.

2.11.7 Regulatory harmonisation

2.11.7.1 Compatibility with other EU/EASA regulations

The need to collect safety data and the possibility of using them are already the subject of EU regulations 1321/2007 and 1337/2007. The requirement to report to the Agency will provide the necessary means to close the loop of a safety programme at community level.

2.11.7.2 Compatibility with ICAO standards

Only option 6C would fully comply with ICAO standards by allowing proactive safety management.

2.11.7.3 Comparison with the FAA rules

FAA will also need to implement the ICAO state safety programme, hence collection of data at central level will also be implemented.

2.11.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 59:

Specific Objectives	Scoring of options		
	6A	6B	6C
	No mandatory reporting	Only accidents and serious incidents	All significant occurrences
Consistent and harmonised regulatory framework	-3	1	3
Avoid over-prescriptive rules	-1	2	2
TOTAL	**-4**	**3**	**5**
AVERAGE SCORE (Tot/2 quantified parameters)	**-2**	**1.5**	**2.5**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**-2**	**1.5**	**2.5**

Table 59: Scoring of impact on regulatory harmonisation

2.11.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.11.3 to 2.11.7, the following matrix for MCA can be provided:

Weighted score of options for reporting safety occurrences		6A	6B	6C
Key Performance Area	**Weight**	**No mandatory reporting**	**Only accidents and serious incidents**	**All significant occurrences**
Safety	3	-4.5	1.5	9
Environmental	2	0	0	0
Economic	1	-0.5	0	1
Social	1	-0.33	0.33	2.67
Regulatory harmonisation	1	-2	1.5	2.5
WEIGHTED TOTAL		**-7.33**	**3.33**	**15.2**

Table 60: Multi Criteria Analysis for the XXX

Therefore, it can be concluded that **option 6C largely outscores the others**. In particular, it:

- has a high positive score in the safety KPA;
- is environmentally neutral, like the other options;
- is sustainable in economic terms;
- has the most positive social impact;
- is the best in terms of regulatory harmonisation, on the global scale and in respect of existing EU legislation.

2.12 Concept of certification

2.12.1 Alternative options

Since more than 30 years, it has become common among safety experts (even beyond aviation) to refer to the "SHEL" concept (the name being derived from the initial letters of its components, Software, Hardware, Environment, Liveware), as first developed by Prof. Elwyn Edwards in 1972. Capt. Frank Hawkins, around the end of that decade, modified the concept in order to tailor it to aviation: the "L" ("liveware") become double, to indicate that not only the individuals, but their organisations have to be investigated in case of an accident, or, vice versa, also the organisation have to be considered when ensuring aviation safety.

In turn the SHELL concept has been accepted by ICAO[92] and paved the way for introducing the principle of certification and oversight of aviation organisations in various international standards or legal rules, as summarised in Table 61 below:

Year	Rule	Reference
1990	Air Operator Certificate (AOC)	Amend. 19 ICAO Ann. 6
1991	Mutual recognition of certification of air operators (AOC), Design (DOA), Production (POA) and Maintenance (MOA) organisations (for aircraft) in EU law	Council Regulation 3922/1991
1992	Legal requirement for AOC to offer commercial air services in EU	Art. 9 of Regulation 2407/1992
1993	DOA, POA mandatory in Europe	First edition JAR 21
1989	MOA mandatory in Europe	First edition JAR 145
1998	MOA mandatory worldwide	Amend. 23 ICAO Ann. 6
2004	DOA and POA enabled worldwide	9th ed. ICAO Annex 8

Table 61: Influence of the SHELL model on aviation safety regulation

[92]ICAO Circular 216-AN/131 Human factors Digest N. 1 – Fundamental principles, 1989.

So today in the EU27+4 almost the totality of aviation organisations are certified or approved. For historical reasons, and also because aviation rules are drafted by groups of experts (by definition "experts" in a single discipline) a certificate has to be obtained for each activity.

In theory the opposite alternative exists: i.e. issue a single certificate to a single company and include the different activities, if necessary, not in a second certificate but in the scope of the certificate itself.

The Agency has therefore identified in this context the following possibilities:

- **Option 7A: "do nothing"**; i.e. maintain today's situation and require one **separate** certificate for each aviation activity;
- **Option 7B:** one **single** certificate for all aviation activities by one organisation;
- **Option 7C:** number of certificates at the **discretion** of the competent authority.

2.12.2 Target group and number of entities concerned

The Agency would not be significantly involved by any of the options under consideration, since it will only certify third country organisations. On the contrary all the 31 competent authorities will be affected by two of the options under consideration (i.e. not by 7A which represents the status quo).

The total number of organisations today active in aviation in the EU27+4 has been estimated in previous paragraphs in this RIA and summarised in 2.8.2.7 above. However here it is relevant not to identify the total number but the number of those which could be involved in more than one activity.

First, a number of air operators also hold a DO approval. Consulting the public list of DOAs on the Agency web site[93] on 13 September 2008 12 known airlines were identified as being also DOAs (e.g. Austrian Airlines AG; Alitalia S.p.A; and similar). Furthermore, it is assumed that at least 200 CAT operators are also approved as MOA. None of those operators will be affected by option 7A (i.e. obliged to obtain two separate certificates as today). All of them will be affected by option 7B (i.e. single certificate) and 50% by 7C (i.e. depending on decisions by competent authorities at national level, potentially different from State to State.

On the basis of Article 8.3 of the Basic Regulation, non-commercial operators may not be obliged to be certified. So it is herein assumed that none of them will be affected by any of the options under consideration.

In paragraph 2.6.2.4 it has been estimated that about 5% of the simple ATOs (i.e. 135) could be interested in providing other aviation services (e.g. commercial VFR transport or maintenance). They will be affected by option 7B and 67 by option 7C.

In said paragraph 2.6.2.4 it has been assumed that this situation (two or more aviation activities) could interest about 10% of the 969 complex ATOs (i.e. 97): so all 97 will be affected by option 7B and 48 by 7C.

AeMCs are considered very specialized in a field not directly connected with aviation operations: they will not be affected by any of the options under consideration.

The above considerations in conclusion lead to the figures estimated in following Table 62:

[93] http://www.easa.europa.eu/ws_prod/c/doc/Org_Appro/easa_doa.pdf

Authorities or Organisations	Total in EU27+4	Affected entities		
		Options		
		7A	7B	7C
		separate	single	discretion
EASA	1	0	0	0
Competent authorities	31	0	31	31
TOTAL Authorities		**0**	**31**	**31**
CAT operators/DOAs	12	0	12	6
CAT operators/MOAs	200	0	200	100
Simple ATO (only for LPL and PPL)	2,712	0	135	67
Complex ATO	969	0	97	48
AeMC	73	0	0	0
TOTAL Organizations		**0**	**444**	**221**
Grand TOTAL		**0**	**475**	**252**

Table 62: Number of entities affected by the concept of certification

2.12.3 Safety impact

Certification and oversight will be carried out identically in case of issuing separate or single certificates: only the related administrative work to manage one, two or more formal documents will change.

Therefore any of the options under consideration has to be considered neutral in safety terms.

2.12.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.12.5 Economic Impact

2.12.5.1 Economic impact on air operators

As mentioned in paragraph 2.8.5.1 above the UK CAA has a complex system of charges for organisations, readily accessible through their website. Therein the Official Record Series 5, N. 228[94] of 30 January 2008, describes the scheme of charges applicable to air operators, where in particular the basic (minimum) charges for issuing an Air Operator Certificate (AOC) are contained, as well as the charge to obtain extension of scope (e.g. ETOPS or dry lease). The charges to be paid by applicants to obtain a MOA, or for variation to it, are instead contained in Official Record Series 5, N. 229[95] of 08 April 2008.

Some data extracted from the sources mentioned above, are presented in Table 63 below:

94 http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=3022

95 http://www.caa.co.uk/docs/33/229Airworthiness.pdf

Organisation		Basic (minimum) charge					
		Initial issue of AOC		Extension to ETOPS		Approval for dry lease	
Type	Example features	£	€	£	€	£	€
Small air operators	single engine aeroplanes	6,069	7,542				
	multi-engine helicopters on shore	8,254	10,257	N.A.	N.A.	3,080	3,828
Medium air operators	aeroplanes 5.7 ton < MTOM < 40 ton	16,266	20,214	16,266	20,214	3,080	3,828
Large air operators	aeroplanes MTOM >40 ton	20,160	25,053	20,150	25,040	3,080	3,828
		Initial issue of MOA		Variation			
		£	€	£	€		
Maintenance Organisation (Part M – Subpart F)		2,786	3,462	690	857		

*Exchange rate on 29 August 2008: 1 € = 0.8047 £

Table 63: UK CAA fees for extension of the scope of the AOC

More comprehensive data on other States or on other situations are very difficult to acquire and in addition their analysis would require an effort disproportionate with respect to the present RIA.

However from the data presented above one could assume that *grosso modo* the extension of scope to very different activities cost as much as a separate certification, which applies to the CAT operators wishing to be also DOAs. Vice versa the extension of the scope of the certificate to similar activities could cost, in the case of a CAT operator wishing also to become a MOA, around 1,000, instead of 3,500 = 2,500 € of savings in the charges. A parallel simplification of the internal cost to manage the administrative procedure, could lead to a benefit of 0.05 FTEs for one organisation (= 2,500 €. These estimations are not considered very accurate, but however sufficient to compare the options under consideration.

The above considerations lead to the costs estimated in following Table 64:

Air operators becoming also DOAs or MOAs	Options								
	7A			7B			7C		
	separate			single			discretion		
	N.	Economic impact (k€)		N.	Economic impact (k€)		N.	Economic impact (k€)	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
CAT operators/ DOAs	0	0	0	12	0	0	6	0	0
CAT operators/ MOAs	0	- 5	0	- 200	- 5	- 1,000	- 100	- 5	- 500
TOTAL savings	**0**		**0**	**- 212**		**- 1,000**	**- 106**		**- 500**

Table 64: Savings for air operators becoming DOA or MOA

2.12.5.2 Economic impact on ATO for pilots

The UK CAA Official Record Series 5, N. 230[96] of 30 January 2008, describes the scheme of charges applicable to ATOs, where in particular the charges for issuing or extending ATO Certificates (AOC) are contained. In particular some relevant information contained therein is presented in Table 65 below:

[96] http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=3024&filter=2

ATO		Basic (minimum) charge					
		Initial issue		Extension to instrument training		Extension to additional course	
Type	Example features	£	€	£	€	£	€
Only for LPL/PPL	single pilot aeroplanes	449	558			49	61
Other	CPL (A) with IR	10,600	13,173	1,180	1,466		

*Exchange rate on 29 August 2008: 1 € = 0.8047 £

Table 65: certification and oversight costs for a single ATO

It is then assumed that the "simple" ATOs, if asking any extension of their scope will have to pay the entire fee (e.g. 7,542€ to obtain an AOC for single engine aeroplanes) and also bear the associated internal costs.

Vice versa the complex ones to become air operators, could pay a fee of about 2,000 € instead of 7,500 €, for a saving of 5,500 € per organisation. Even in this case it is also assumed that each organisation could save 0.05 FTEs (i.e. 2,500) because of simpler administrative procedures = 8,000 € of savings.

The above considerations lead to the savings estimated in following Table 66:

ATOs becoming air operators	Options								
	7A			7B			7C		
	separate			single			discretion		
	N.	Economic impact (k€)		N.	Economic impact (k€)		N.	Economic impact (k€)	
		For 1 entity	Total		For 1 entity	Total		For 1 entity	Total
Simple ATOs	0	0	0	135	0	0	67	0	0
Complex ATOs	0	0	0	97	- 8	- 776	48	- 8	- 384
TOTAL savings	**0**		**0**	**222**		**- 776**	**115**		**- 384**

Table 66: Savings for ATOs becoming air operators

2.12.5.3 Economic impact on Aeromedical Centres

In paragraph 2.12.2 above, it has already been stated that there will be no economic impact on the AeMCs, in relation to any of the options under consideration.

2.12.5.4 Economic impact on the competent authorities

The considerations in the above sub-paragraphs 2.12.5.1 to 2.12.5.3 relative to less income for the competent authorities can then be summarised in Table 67 below:

Lost income for Authorities from Organisations	Total in EU27+4	Economic impact (k€)		
		Options		
		7A	7B	7C
		separate	single	discretion
CAT operators/MOAs	200	0	- 500	- 250
Complex ATO	969	0	- 533	- 264
TOTAL		**0**	**- 1,033**	**- 514**

Table 67: Less income for competent authorities

2.12.5.5 Safety dividend

In paragraph 2.12.3 above, it has been stated that all the options under consideration are safety neutral. Therefore no one will lead to any safety dividend.

2.12.5.6 Environmental burden

As stated in 2.12.4 above, any of the options under consideration will be neutral in the environment KPA. So no environmental burden will emerge in either case.

2.12.5.7 Summary of economic impact

In conclusion the savings for the organisations and the decrease of income for the authorities can be summarized in Table 68 below:

Authorities or Organisations	Total in EU 27 + 4	Economic impact (k€)		
		Options		
		7A	7B	7C
		separate	single	discretion
CAT operators/DOAs	12	0	0	0
CAT operators/MOAs	200	0	- 1,000	- 500
Simple ATO (only for LPL and PPL)	2,712	0	0	0
Complex ATO	969	0	- 776	- 384
TOTAL savings for organizations		**0**	**- 1,776**	**- 884**
Less income for competent authorities	**31**	**0**	**- 1,033**	**- 514**

Table 68: Summary of economic impact

It has to be noted that in general the cost for continuous oversight (paid yearly) is more or less equal to the cost of the initial certification. Therefore the savings presented in Table 68 above have to be considered recurrent annual savings.

In summary option7A will lead to no savings at all for organisations. Option 7B will allow to save about 2 M€/year and option 7C about 1 M€/year.

The monetary terms in the present paragraph, are then translated into scoring, with reference to the applicable specific objectives in following table 69:

Specific Objectives	Options		
	7A	7B	7C
	separate	single	discretion
Efficient, safety oversight	1	3	2
TOTAL	**1**	**3**	**2**
WEIGHTED AVERAGE (Score x 1 for economic)	**1**	**3**	**2**

Table 69: Scoring of the economic impact

2.12.6 Social Impact

2.12.6.1 Changes in required FTEs

The economic considerations presented above (assuming 1 FTE = 50 k€) can in theory be translated into lost FTEs in Table 70 below:

Authorities or Organisations	Total in EU27+4	Lost FTEs		
		Options		
		7A	7B	7C
		separate	single	discretion
CAT operators/DOAs	12	0	0	0
CAT operators/MOAs	200	0	- 10	- 5
Simple ATO (only for LPL and PPL)	2,712	0	0	0
Complex ATO	969	0	- 5	- 2
Lost FTEs for organizations		**0**	**- 15**	**- 7**
Total affected organisations		**0**	**444**	**221**
Lost FTEs for competent authorities	**31**	**0**	**- 21**	**- 10**

Table 70: Changes in required FTEs

However the ration between the variations in FTEs and the number of affected organisations is very small (less than 3%) and it is therefore not expected to result in any changes in employment.

2.12.6.2 Other social impacts

Furthermore, in qualitative terms, the reduction of the administrative burden for the extension of the scope of the certificate (i.e. either option 7B or 7C) will lead to increase in the quality of jobs.

Simplified and uniform procedures across various domains may also greatly contribute to improve the image of the EU entities inside stakeholders. The latter will also gain in terms of possibility to move staff from one activity to a different one, since the rules and processes will be based on the same principles.

2.12.6.3 Summary of social impact

The above quantitative and qualitative considerations are then translated into scores for the applicable specific objectives in following table 71:

Specific Objectives	Options		
	7A	7B	7C
	separate	single	discretion
Efficient, safety oversight	0	2	1
Consistent and harmonised regulatory framework	- 1	2	1
Quality of jobs	- 1	1	1
TOTAL	**- 2**	**5**	**3**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 0.67**	**1.67**	**1**
WEIGHTED AVERAGE (Score x 1 for social impact)	**- 0.7**	**1.7**	**1**

Table 71: Scoring of the social impact

From Table 71 above it can be observed that option 7A will be negative in social terms, while both 7B and 7C would be positive.

2.12.7 Regulatory harmonisation

2.12.7.1 Compatibility with other EU/EASA regulations

"Reducing paperwork" (i.e. simplifying, harmonising and unifying procedures) is one of the key goals of the "better regulation"[97] in the EU. Option 7A will not aim at this goal; option 7C will aim at it partially, while option 7B will be fully compliant.

[97] http://ec.europa.eu/governance/better_regulation/documents/brochure/br_brochure_en.pdf

2.12.7.2 Compatibility with ICAO standards and FAA rules

Any of the possible options will be neutral with respect to ICAO and the FAA, since how many certificates and in which format is a decision accepted to belong to States (individually or collectively).

2.12.7.3 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 72:

Specific Objectives	Options		
	7A	7B	7C
	separate	single	discretion
Efficient, safety oversight	- 2	3	1
Consistent and harmonised regulatory framework	- 3	3	1
TOTAL	**- 5**	**6**	**2**
AVERAGE SCORE (Tot/2 quantified parameters)	**- 2.5**	**3**	**1**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**- 2.5**	**3**	**1**

Table 72: Scoring of impact on regulatory harmonisation

Clearly option 7B is the best in terms of regulatory harmonisation with the legal order of the EU.

2.12.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.12.3 to 2.12.7, the following matrix for MCA can be provided:

Weighted score of options for the concept of certification		7A	7B	7C
Key Performance Area	Weight	separate	single	discretion
Safety	3	0	0	0
Environmental	2	0	0	0
Economic	1	1	3	2
Social	1	- 0.7	1.7	1
Regulatory harmonisation	1	- 2.5	3	1
WEIGHTED TOTAL		**- 2.2**	**7.7**	**4**

Table 73: Multi Criteria Analysis for the concept of certification

From Table 73 above one can observe that that option 7A scores globally negative, in particular from the regulatory harmonisations and the social perspectives. On the contrary options 7B and 7C have a positive score, with the former scoring twice as good. All the options under consideration are neutral in safety and environmental terms.

2.13 Continuous oversight

2.13.1 Alternative options

Aviation safety regulation according to the ICAO definition for the "Safety Programme" comprises an integrated set of activities. The principal items of such programme, according to the applicable ICAO documents, are recalled in Table 74 below:

ICAO Reference	Item of Safety Programme
Annex 6, standard 3.3.1	integrated set of regulations
Doc 9734, Part A, CE-6	Approval, licensing or certification of personnel and organisations
Doc 9734, Part A, CE-7	**Inspections and audits** of organisations
Doc 9734, Part A, CE-8	**Urgent safety measures**
Doc 9859 par. 3.3.2f)	analysis of safety trends
Doc 9859 par. 3.3.2a4)	accident investigations

Table 74: principal elements of the Safety Programme (or safety regulation)

These elements are additional to the cycle of the Safety Management System to be applied by organisations (i.e. observe; react; plan; do). Many authors depict SMS as a continue cycle where the safety data analysis and collections drives the identification of critical areas and the definition of corrective actions then implemented:

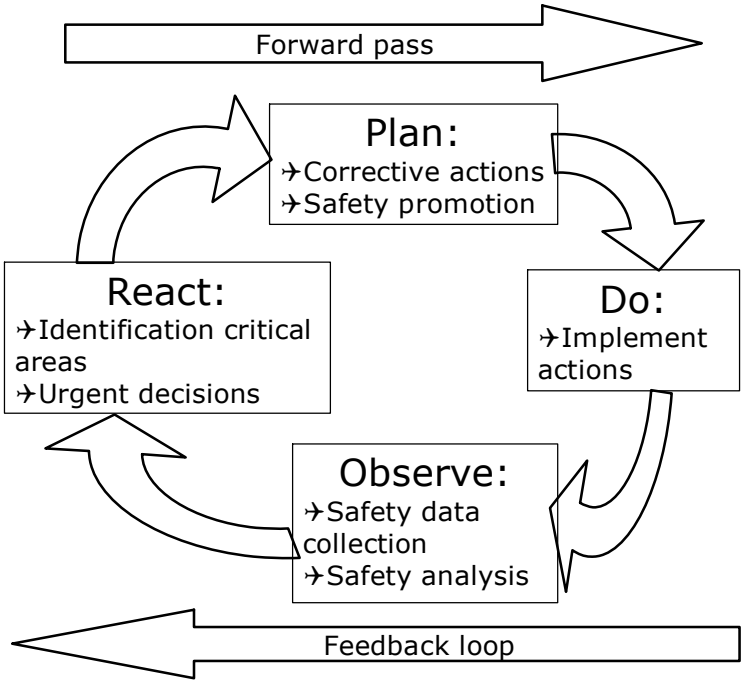

Figure 7: the cycle of safety management

Engineers could easily say that in the cycle there is a forward pass (i.e. from the identification of critical areas to operations) and a feedback loop in the opposite direction.

However SMS is complementary to the Safety Programme mentioned above, which in turn contains three more feedback loops:

- Inspections and audits of organisations, carried out by competent authorities and which can lead to urgent measures (e.g. grounding of aircraft);
- Safety data collection and analysis, which identifies trends and critical areas;
- Independent accident investigations.

The four feedback loops can be depicted in figure 8 below:

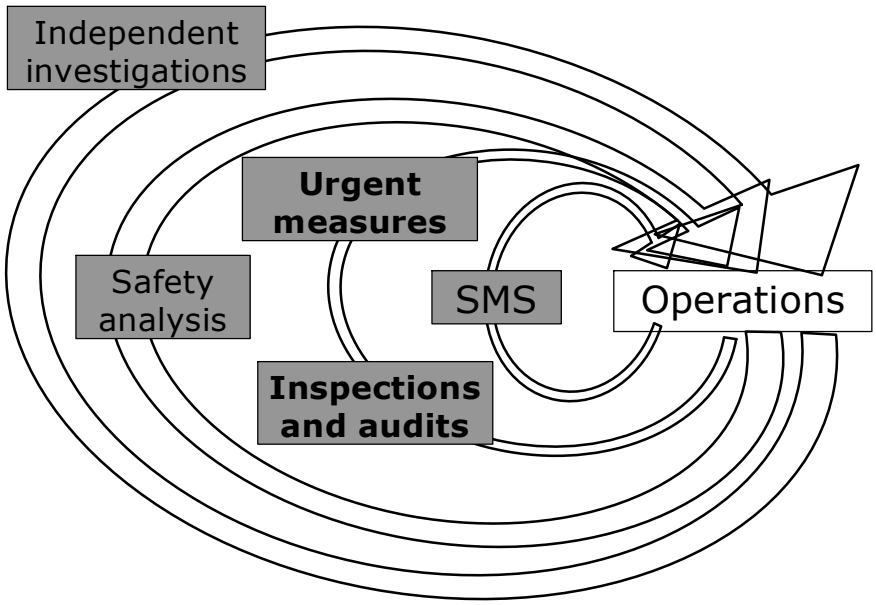

Figure 8: Four feedback loops for aviation safety

Scope of this chapter of the RIA is the second inner most feedback loop: i.e. the continuous oversight which contains systematic inspections and audits (even ramp inspections), related findings and, if necessary, urgent measures.

In this respect the Agency has identified four alternatives:

- **Option 8A:** leave scope, target group, content and procedures of continuous oversight to the **discretion** of individual competent authorities = neither coordination of oversight nor exchange of information at EU level;
- **Option 8B:** organise collective oversight at EU level, but **only for non-EU** organisations;
- **Option 8C:** exercise collective (at EU level) oversight of EU and non-EU organisation, but **only upon request** by the competent authorities having certified the organisation;
- **Option 8D: systematic** collective oversight at EU level of any person, organisation or undertaking involving more than one Member State, an immediate sharing of information and decisions on possible urgent measures.

2.13.2 Target group and number of entities concerned

The second feedback loop (i.e. oversight) is based on inspections carried out at short notice (or even without prior announcements):

- Of a person or organisation which has no other duties than accepting the inspection (since the certification and the continuity of the validity are a different process, analysed in 2.8 above);
- Carried out by an authority which has enforcement powers (e.g. grounding an aircraft or a pilot) in a defined territory.

As a consequence of the above the organisations will not be significantly affected by any of the options under consideration.

Equally the Agency, which has no enforcements powers anywhere, will not be significantly affected by option 8A. On the contrary it will be involved by options 8B, 8C and 8D which all imply an exchange of information at EU level.

A summary of the affected entities is then presented in Table 75 below:

Authorities or organisations	Options			
	8A	8B	8C	8D
	discretionary	non-EU	on request	systematic
Aviation organisations	0	0	0	0
Competent authorities	31	31	31	31
EASA	0	1	1	1
TOTAL	**31**	**32**	**32**	**32**

Table 75: entities affected by continuous oversight

2.13.3 Safety impact

In Article 2(1) of the Basic Regulation the legislator tasked the Agency to establish and maintain a high level of safety, also **uniform** across the EU. Furthermore in Article 2(2)(b) in same Regulation the legislator gave to the Agency the task of "facilitating" the **free movement** of goods, persons and services in the internal market. The "free movement" in turn requires mutual trust among the various competent authorities, which have to mutually recognise the respectively issued certificates, licences and authorizations.

Figure 10 in the Annual Safety Review[98] 2006 published by EASA shows the rate (per million flights) of fatal accidents for the period 2000 – 2005 (scheduled and non-scheduled operations) in the various ICAO regions, as summarised in Table 76 below:

ICAO Region	Rate of fatal accidents per million flights
Africa	14
Latin America/Caribbean	3.6
Middle East	3.5
Asia	1.8
EUR[99]	1.7
North America	0.9

Table 76: Rate of fatal accidents in ICAO Regions

From the ICAO USOAP it is known that the competent authorities in a number of States in the first three regions in above Table 76, often lack resources or are less efficient than the authorities e.g. in North America. There is therefore a link between the professionalism and effectiveness of the competent authorities and the safety of aviation organisations registered in their respective territories.

Form the point of view of uniform safety then, the following can be observed:

- Option 8A will not only lead to obvious non-uniformity, but, which is even more critical for safety, would lead to the absence of shared information;
- Option 8B will address the issue of third country air operators, but will not contribute to increase mutual trust among competent authorities in the EU27+4;
- Option 8C might fail to address the most critical organisations: in other words the risk exist that the possibly less organised authorities will not request inspections; this would be absolutely contrary to the principle of concentrating efforts on the most critical areas;
- Option 8D will address EU and non-EU organisations in a systematic way and in parallel ensure a quick sharing of safety related information.

The above quantitative and qualitative considerations are then translated into scores for the applicable specific objectives in following table 77:

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98 http://www.easa.europa.eu/ws_prod/g/doc/COMMS/Annual%20Safety%20Review%202006.pdf

99 The ICAO EUR Region comprises all the 27 + 4 EASA Member States, plus the remaining Eastern Europe members of ECAC (e.g. Albania, Armenia, Ukraine and others), as well as the Russian Federation and the central Asian Republics that once belonged to the Soviet Union (e.g. Kazakhstan).

Specific Objectives	Scoring of options			
	8A	8B	8C	8D
	discretionary	non-EU	on request	systematic
Safety programme at EU level	- 2	2	1	3
Efficient, safety oversight	- 2	- 1	- 3	3
Safety data collection and analysis	- 3	2	1	3
TOTAL	**- 7**	**3**	**- 1**	**9**
AVERAGE SCORE (Tot/3 quantified parameters)	**- 2.33**	**1**	**- 0.33**	**3**
WEIGHTED AVERAGE (Score x 3 for safety)	**- 7**	**3**	**- 1**	**9**

Table 77: Scoring of the safety impact

In conclusion options 8A and 8C would be detrimental (the former more than the latter) fro aviation safety. Option 8D would address the totality of the safety issues, differently from 8B, whose score, albeit positive, is much lower.

2.13.4 Environmental impact

No environmental impacts have been identified for any of the options under consideration. All of them have therefore to be considered neutral for this KPA in the present RIA.

2.13.5 Economic Impact

2.13.5.1 Regulatory cost for the Agency

At end of 2006 the SAFA coordination activities, including the centralised data base, have been transferred[100] from the Central JAA to EASA. the Agency Department S.4 has been created in the Standardisation Directorate. The order of magnitude of the FTEs employed therein is 10 (= 1,000,000 €/year of recurrent costs).

Furthermore, on the basis of Articles 10 and 15(4) of the Basic Regulation, the Agency employs about 5 FTEs (= 500,000 €/year) for safety data collection and analysis.

In case of option 8A those central functions (funded by taxpayers) will not exist anymore: 1,500,000 € will be saved per year.

In the case of options 8B, 8C or 8D nothing will change for the Agency and taxpayers: no additional costs.

2.13.5.2 Economic impact on the competent authorities

Also the competent authorities are already organised with a number of inspectors for continuous oversight. Their activity will substantially continue in this field under any of the four options under considerations: neither additional costs nor saving will emerge as an immediate effect of any of said options.

2.13.5.3 Economic impact on organisations

In paragraph 2.13.2 above it has already been stated that none of the options under considerations will imply significant additional direct costs or savings for any of the aviation organisations concerned by present RIA.

Furthermore none of the options under consideration will directly create additional or deceased demand in the internal market.

2.13.5.4 Safety dividend

No sufficient data exist to systematically quantify the safety dividend connected to the various options under consideration.

2.13.5.5 Environmental burden

As stated in 2.13.4 above, any of the options under consideration will be neutral in the environment KPA. So no environmental burden will emerge in either case.

[100] http://ec.europa.eu/transport/air_portal/safety/doc/2008_09_09_2nd_safa_report_en.pdf

2.13.5.6 Summary of economic impact

In conclusion the additional cost on citizens and stakeholders stemming from the four options under consideration can be summarized in Table 78 below:

Parameter	8A discretionary	8B non-EU	8C on request	8D systematic
From taxpayers to national authorities (k€)	0	0	0	0
From taxpayers to EASA	- 1,500	0	0	0
Total from taxpayers to fund aviation (k€)	**- 1,500**	**0**	**0**	**0**
From applicants to national authorities	0	0	0	0
From applicants to the Agency	0	0	0	0
Total from applicants to authorities	**0**	**0**	**0**	**0**
TOTAL from citizens to public sector	**- 1,500**	**0**	**0**	**0**
Additional safety cost	4,640	0	1,160	0
Environmental burden	0	0	0	0
Cost for society (k€)	**4,460**	**0**	**1,160**	**0**
TOTAL additional cost	**3,140**	**0**	**1,160**	**0**

Table 78: Summary of economic impact

From it one can observe that option 8A could cost citizens about 3 M€/year as a consequence of more aviation accidents, while option 8C could cost about 1 M€/year. Options 8B and 8D will be cost neutral.

The monetary terms in table 78 above, are then translated into scoring versus the applicable specific objectives, in following table 79:

Specific Objectives	Scoring of options			
	8A discretionary	8B non-EU	8C on request	8D systematic
Efficient, safety oversight	- 3	0	- 1	0
TOTAL	**- 3**	**0**	**- 1**	**0**
WEIGHTED AVERAGE (Score x 1 for economic)	**- 3**	**0**	**- 1**	**0**

Table 79: Scoring of the economic impact

2.13.6 Social Impact

2.13.6.1 Variations in required FTEs

The economic considerations presented above can be translated into lost FTEs (only for the Agency) in Table 80 below:

Authorities or organisations	8A discretionary	8B non-EU	8C on request	8D systematic
competent authorities	0	0	0	0
EASA	- 15	0	0	0
Total public sector	**- 15**	**0**	**0**	**0**
Aviation organisations	0	0	0	0
Direct demand	0	0	0	0
Total private sector	**0**	**0**	**0**	**0**
TOTAL jobs	**- 15**	**0**	**0**	**0**

Table 80: Variations in required FTEs

2.1.6.2 Other social impacts

Furthermore, in qualitative terms, option 8A will represent a regression with respect to the cooperation built since 1990 among the EU27+4 competent authorities, which in terms of social cohesion has to be considered negative. In additional it will lead to the loss of highly qualified jobs.

Equally negative will be option 8B which will discriminate operators on the basis of their nationality, without any link to safety concerns.

Also option 8C will present negative aspects, since it will not apply just principles in deciding where to focus the inspections.

The quality of jobs will not be affected

2.13.6.3 Summary of social impact

The above quantitative and qualitative considerations are then translated into scores for the applicable specific objectives in following table 81:

Specific Objectives	Scoring of options			
	8A	8B	8C	8D
	discretionary	non-EU	on request	systematic
Efficient, safety oversight	- 3	- 1	- 2	3
quality of jobs	- 1	0	0	0
TOTAL	**- 4**	**- 1**	**- 2**	**3**
AVERAGE SCORE (Tot/2 quantified parameters)	**- 2**	**- 0.5**	**- 1**	**1.5**
WEIGHTED AVERAGE (Score x 1 for social impact)	**- 2**	**- 0.5**	**- 1**	**1.5**

Table 81: Scoring of the social impact

2.13.7 Regulatory harmonisation

2.13.7.1 Compatibility with other EU/EASA regulations

Option 8A will represent a significant regression from the SAFA programme, initiated in 1996 by the Directors General of Civil Aviation belonging top the European Civil Aviation Conference (ECAC). It will also represent a regression from established EU law, namely the "SAFA Directive"[101] and its implementing rules[102].

2.13.7.2 Compatibility with ICAO standards

The Conference of Directors General of Civil Aviation on a Global Strategy for Safety Oversight (held in ICAO in 1997) emphasized the need for coordinating and harmonizing the principles and procedures for assessing safety oversight at a global level, recognizing at the same time the advantages of adopting a regional focus. In that context, the Conference recommended that ICAO promote the establishment of regional mechanisms with a view to achieving the long-term support of safety oversight capability at a global level.

Options 8B, 8C and 8D would be compliant with such recommendations, while option 8A would not be. However, Option 8B would discriminate among ICAO contracting States.

2.13.7.3 Comparison with the FAA rules

None of the options under consideration will impact harmonisation with FAA rules.

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101 Directive 2004/36/CE of the European Parliament and of the Council of 21 April 2004 on the safety of third-country aircraft using Community airports (OJ L 143, 30.4.2004, p. 76).

102 Commission Regulation (EC) No 768/2006 of 19 May 2006 implementing Directive 2004/36/EC of the European Parliament and of the Council as regards the collection and exchange of information on the safety of aircraft using Community airports and the management of the information system (Text with EEA relevance) (OJ L 134, 20.5.2006, p. 16).

2.13.7.4 Summary of impact on regulatory harmonisation

The above considerations are then translated into scores related to the applicable specific objectives in following table 82:

Specific Objectives	Scoring of options			
	8A	8B	8C	8D
	discretionary	non-EU	on request	systematic
Consistent and harmonised regulatory framework	- 3	- 2	3	3
TOTAL	**- 3**	**- 2**	**3**	**3**
WEIGHTED AVERAGE (Score x 1 for regulatory harmonisation)	**- 3**	**- 2**	**3**	**3**

Table 82: Scoring of impact on regulatory harmonisation

Then only options 8C or 8D would be satisfactory in terms of harmonisation with previous rules or recommendations, on a global or EU scale.

2.13.8 Multi Criteria Analysis (MCA) and recommended option

According to the methodology described in paragraph 2.1.2 and the scores attributed in paragraphs 2.13.3 to 2.13.7, the following matrix for MCA can be provided:

Weighted score of options for continuous oversight		8A	8B	8C	8D
Key Performance Area	Weight	discretionary	non-EU	on request	systematic
Safety	3	- 7	3	- 1	9
Environmental	2	0	0	0	0
Economic	1	- 3	0	- 1	0
Social	1	- 2	- 0.5	- 1	1.5
Regulatory harmonisation	1	- 3	- 2	3	3
WEIGHTED TOTAL		**- 15**	**0.5**	**0**	**13.5**

Table 83: Multi Criteria Analysis for the continuous oversight

From Table 83 above one can observe that option 8A has a significant negative score under all KPAs. Options 8B and 8C are almost neutral, while only 8D has a clearly positive score. In particular option 8D:

- has the highest score in safety terms;
- is environmentally neutral like all the other options;
- is neutral in economic terms, while 8A and 8C are negative in this respect;
- is the only one positive in social terms;
- is positive, like 8C, also in terms of regulatory harmonisation.

3. Conclusions

The scores of the different options identified in the present RIA are recalled below:

Issue	Alternative options		
	N.	Description	Scores
Structure of the rules	1A	"Do nothing" = retain the JAR structure (i.e. technical requirements and requirements for organisations mixed)	-7
	1B	Use a structure similar to airworthiness rules (e.g. Part 21), i.e. Section A for organisations and Section B for authorities	-11.6
	1C	Develop a new structure of rules (i.e. GERT)	9.7
Performance based approach to rulemaking	2A	"Do nothing" = maintain all of section 1 from the JARs at the level of legally binding implementing rules	2.5
	2B	Transfer all non-essential safety requirements to AMCs, and leave to competent authorities to develop national AMCs	-4.5
	2C	Transfer all non-essential safety requirements to AMCs, but adopt and publish them by EASA, while maintaining the way they are treated by authorities and stakeholders	11.2
	2D	Transfer all non-essential safety requirements to AMCs, adopt and publish them by EASA, and change the way they are treated by authorities and stakeholders	23.5
Validity of organisation approvals	3A	Establish undetermined validity at EU level	16.7
	3B	Establish fixed validity at EU level	4
	3C	Leave to authorities at national level to establish periods of validity	8.3
Safety management by organisations	4A	Do not require safety management	-7.4
	4B	Require safety management by all organisations, under proportionate rules	14.7
	4C	Require safety management by all organisations, under identical rules	2.3
Quality management by organisations	5A	Do not require quality management	-4.2
	5B	Require quality management by all organisations, under identical rules	1.3
	5C	Require quality management by all organisations, under proportionate rules	13.8
Reporting of safety occurrences to EASA	6A	No reporting to EASA	-7.33
	6B	Reporting to EASA only accidents and serious incidents	3.33
	6C	Reporting all significant occurrences to EASA	15.2
Concept of certification	7A	One certificate for each aviation activity	-2.2
	7B	One certificate for all aviation activities in one organisation	7.7
	7C	Number of certificates at the discretion of competent authority	4
Continuous oversight	8A	Oversight at discretion of competent authorities	-15
	8B	Collective oversight of non-EU organisations	0.5
	8C	Collective oversight of EU and non-EU organisation, upon request by the competent authorities having certified the organisation	0
	8D	Systematic collective oversight	13.5

Having assessed the impact of each considered option, against the specific objectives of the proposed policy, in terms of safety, economic, environmental and social aspects, as well as in relation with other policies, the Agency proposes to:

- select option 1C, which means adopting a structure which aims at standardising the requirements for all kind of organisations, keeping only specific requirements in separate subparts. This is in line with the wishes of the stakeholders in order to avoid duplication of certification processes.
- select option 2D, which fosters performance-based rulemaking, thus allowing to adopt standardised rules, but keeping the necessary flexibility in the implementation.
- select option 3A, proposing a continued validity to approvals, thus providing smoother oversight, with significant benefits in economic and social terms.
- select option 4B, which would require safety management systems (SMS) under proportionate rules. This option, which outscored the other proposed ones, will enable small organisations in particular to fully comply with SMS.
- select option 5C, which would require quality management systems (QMS) under proportionate rules. This option will be fully in line with the selected option for SMS.
- select option 6C, which proposes reporting all significant occurrences to the Agency. Notwithstanding its other advantages, this option is far the best in safety terms, as it is the only one allowing a proactive approach to safety management.
- select option 7B, aiming at granting a single certificate to an organisation. Although this option does not imply specific improvements in safety terms, it will induce economic and social benefits.
- Select option 8D, which fosters systematic collective oversight. This option proved to be, by far, the best in safety terms, as well as better than the others in economic or social terms.

The above proposals are also in line with the positions expressed by many Authorities or stakeholders, emerged during the extensive consultations (reference paragraph 2.2.2 above) and in particular from the principles outlining the work performed on consistency of organisation approvals.

For the record, the combination of the selected options, which in turn are included in the Agency's opinion on the matter, is provided below:

Key Performance Area	**Weight**	1C	2D	3A	4B	5C	6C	7B	8D
Safety	3	6	8	9	7.5	8	9	0	9
Environmental	2	0	0	0	0	0	0	0	0
Economic	1	1.7	10.2	3	1.7	1.5	1	3	0
Social	1	0	2.3	1.7	2.5	2.3	2.67	1.7	1.5
Global harmonisation	1	2	3	3	3	2	2.5	3	3
WEIGHTED TOTAL		**9.7**	**23.5**	**16.7**	**14.7**	**13.8**	**15.2**	**7.7**	**13.5**

In general, the selected options will be more economical than solutions formerly implemented in JARs. Major safety and cost benefits are expected from a uniform set of rules that is applicable across the EASA Member States.