
European Aviation Safety Agency

Opinion No 03/2014

Requirements for service providers and the oversight thereof

RELATED NPAS/CRDs: **2013-08** — RMT.0148 (ATM.001(A)) & RMT.0149 (ATM.001(B)) AND RMT.0157 (ATM.004(A)) & RMT.0158 (ATM.004(B)), **2014-07** — RMT.0473 & RMT.0474 and **2014-13** — RMT.0469 & RMT.0470 — 12.12.2014

EXECUTIVE SUMMARY

This Opinion addresses safety, economic and regulatory coordination issues related to the provision of ATM/ANS services and ATM network functions for the purpose of air navigation as well as their oversight. It is also linked to the European Aviation Safety Plan (EASp) safety actions SYS 1.4, SYS 2.4 and AER 2.6.

This Opinion includes the final outcome of the rulemaking tasks RMT.0148 (ATM.001(A)), RMT.0157(ATM.004(A)), RMT.0473 and RMT.0469. These rule development activities resulted, as intermediate steps, in the publication of Commission Implementing Regulations (EU) Nos 1034/2011 on safety oversight in air traffic management and air navigation services, and 1035/2011 laying down common requirements for the provision of air navigation services, as well as in the Notices of Proposed Amendment (NPAs) 2013-08, 2014-07 and 2014-13.

The objectives of these rulemaking tasks are to ensure and maintain a high and uniform level of safety and to fill the gaps between the Essential Requirements of the EASA Basic Regulation (Regulation (EC) No 216/2008) and the currently existing Implementing Rules. Following the EC principle of 'smart regulation' (and 'less rules'), it is proposed to repeal three existing Regulations and to amend another one, while aligning the requirements for service providers and the oversight thereof into a single regulation. This draft rule aims also at enabling the free movement of services and facilitating the establishment of Functional Airspace Blocks (FAB) by enhancing the common standards for the provision of services for the purpose of air navigation. It provides as well the regulatory framework for the recognition of certificates at EU level. The Opinion proposes the necessary unification of the authority and organisation requirements (fully compliant with ICAO Annex 19) and enhances a risk-based 'change management' approach, in particular with regard to the 'assessment of changes to functional system'. In addition, it would facilitate the uniform implementation of ICAO Annex 3 by transposing the subject Standards and Recommended Practices into the EU framework, including the latest ICAO amendments. The proposed rule is further complemented by a set of AMC and GM. After a transition period of 2 years, this truly harmonised regulatory system throughout the EU will provide for cost-effectiveness, contribute to the reduction of regulatory tasks at national level and ensure ICAO compliance.

The measures proposed in this Opinion and the related AMC and GM were subject to public consultation via three separate NPAs. Moreover, they were discussed with stakeholders in a number of workshops and focussed consultation meetings. The Agency trusts that the final proposal contained in this Opinion meets the expectations of the regulated and affected organisations and that the Explanatory Note provides the necessary clarification on the issues raised.

	Applicability	Process map		
Affected regulations and decisions:	Commission Regulation (EC) No 482/2008; Commission Implementing Regulations (EU) Nos 1034/2011 and 1035/2011; and Commission Regulation (EU) No 677/2011.	ToRs publication dates — (1)ATM.001 & ATM.004: (2) RMT.0473 & RMT.0474: (3) RMT.0469 & RMT.0470: Rulemaking group:	16.1.2014 19.6.2012 7.9.2012 (¹) (²) (³) Yes	
Affected stakeholders:	Member States; competent authorities/National Supervisory Authorities;service providers; Network Manager; and the Agency.	RIA type: Technical consultation during NPA drafting: Publication date of:	(¹)Full/(²)No/(³)Full (¹) (²) (³) Yes 10.5.2013 28.3.2014 24.6.2014	
Driver/origin:	Legal obligation (Regulation (EC) 216/2008, EASp and ICAO SARPs)	(¹)NPA 2013-08: (²)NPA 2014-07: (³)NPA 2014-13:		
Reference:	N/A	Duration of NPAs consultations:	(¹) 25 weeks (²) 13 weeks (³) 14 weeks	
		Focussed consultation: Publication date of the Decision:	(¹) (²) (³) Yes 2015/Q4	



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1. Procedural information

1.1. The rule development procedure

The European Aviation Safety Agency (hereinafter referred to as the 'Agency') developed this Opinion in line with Regulation (EC) No 216/2008¹ (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the <u>Agency's Rulemaking Programme</u> under RMT.0148 (ATM.001(A)) & RMT.0149 (ATM.001(B)), RMT.0157 (ATM.004(A)) & RMT.0158 (ATM.004(B)), RMT.0469 & RMT.0470 and RMT.0473 & RMT.0474. The scope and timescale of these tasks were defined in the related Terms of Reference (see process map on the title page).

This Opinion results from the consultation of the following NPAs with the interested parties, including industry, national aviation authorities and social partners:

- NPA 2013-08 on 'Requirements for ATM/ANS providers and the safety oversight thereof' issued on 10 May 2013;
- NPA 2014-07 on 'Technical requirements and operational procedures for the provision of meteorological services' issued on 28 March 2014; and
- NPA 2014-13 on 'Requirements for safety assessment of changes to ATM/ANS functional systems' issued on 24 June 2014.

The Agency has addressed and responded to the comments received on said NPAs.

In reference to NPA 2013-08, the Agency organised a workshop on 2 July 2013 on the subject NPA to present the proposal to the stakeholders and to facilitate the understanding and the consultation process in general. Over 120 participants attended the workshop, focussed on the new aspects of the proposal. Presentations were delivered not only by EASA staff but also by several Air Navigation Service Providers (ANSP) or civil aviation authorities (CAA) representatives, who were members of the related Rulemaking Groups. The participants were given time for questions and remarks, an opportunity which was well utilised by submitting both well-founded comments and inquiries.

The NPA consultation period was prolonged, following the request of stakeholders, and ended on 31 October 2013. During the public consultation, the Agency received 2 357 comments. The distribution of said comments per 'sub-NPA' and according to stakeholders' sectors respectively are shown in Table 1 and Figure 1 below.

The Agency is bound to follow a structured rulemaking process as required by Article 52(1) of the Basic Regulation. Such process has been adopted by the Agency's Management Board and is referred to as the 'Rulemaking Procedure'. See Management Board Decision concerning the procedure to be applied by the Agency for the issuing of Opinions, Certification Specifications and Guidance Material (Rulemaking Procedure), EASA MB Decision No 01-2012 of 13 March 2012.



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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).

		Pages	Segments	Comments	Users
NPA 2013-08 (A)	Explanatory Note	76	41	483	45
NPA 2013-08 (B)	Implementing Rule	98	122	1319	56
NPA 2013-08 (C)	AMC/GM	184	106	533	39
NPA 2013-08 (D)	RIA	71	8	18	7
NPA 2013-08 (E)	Appendix VII to EN	42	2	4	3
		<u>471</u>		<u>2357</u>	

Table 1: Distribution of comments received on NPA 2013-08

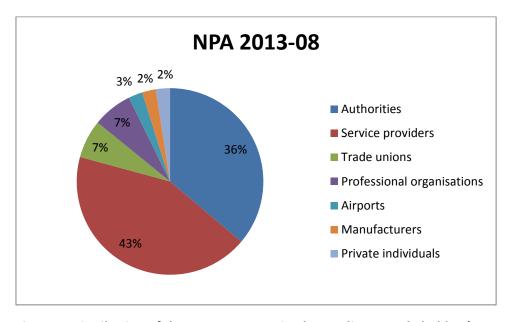


Figure 1: Distribution of the comments received according to stakeholders' sectors

The related Comment-Response Document (CRD) was published on 6 June 2014. It provides the full set of individual comments received to NPA 2013-08 and the responses provided thereto. The resulting text of the proposed rule has been provided to facilitate the understanding and the evaluation of the new changes proposed on the basis of the comments received. Out of the 2 357 comments received, 50 % have been accepted or partially accepted, while only 21 % have not been accepted. The distribution of the responses in CRD to NPA 2013-08 is shown in Figure 2 below.

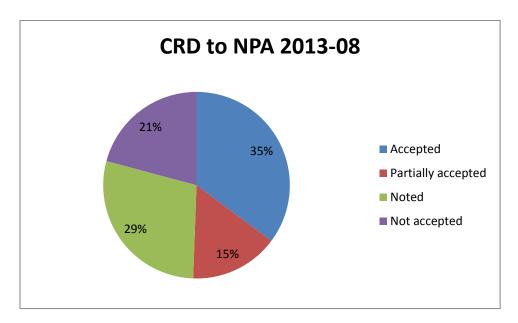


Figure 2: Distribution of the responses in CRD to NPA 2013-08

Stakeholders had an opportunity to submit reactions to the CRD by 12 September 2014 regarding possible misunderstandings of the comments received and the responses provided.

The Agency received 71 reactions to CRD to NPA 2013-08³. Based on the reactions received, the Agency was pleased to conclude that a clear majority of the stakeholders, who provided comments, were satisfied with the review undertaken by the Agency and supported the modifications introduced to the draft rule issued via the NPA. Those reactions which repeated the comments placed during the consultation by questioning the decision taken by the Agency were noted without further action. Some reactions brought to the attention of the Agency further inconsistencies; these comments were duly noted and taken into consideration in the development of this Opinion. Where the reactions highlighted misunderstandings or pointed out that the proposed text was not well understood, the Agency attempted to provide further clarifications either at Implementing Rule level or via additional AMC and/or GM. Many reactions also acknowledged positively the efforts made by the Agency when establishing the final solutions, which the Agency noted with satisfaction.

In reference to NPA 2014-07, the related public consultation brought real benefits as the stakeholders and interested parties provided the Agency with valuable comments and alternative proposals. A MET thematic meeting has been held with the objective to commonly identify and analyse the issues behind the comments and to provide guidance to the Agency in the review of the proposals towards developing its Opinion. The comments received and the Agency's responses thereto are presented in CRD to NPA 2014-07⁴.

In reference to NPA 2014-13, the Agency received 1 277 comments. The comments received contributed essentially to the improvements of the proposed rule. For the purpose of this Opinion, priority has been given to the comments related to the Implementing Rule and the Regulatory Impact Assessment (RIA), leaving the responses to the comments related to the AMC/GM for a later stage. The

http://easa.europa.eu/document-library/comment-response-documents
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comments received on said NPA and the Agency's responses thereto with regard to the Implementing Rule provisions are presented in CRD to NPA 2014-13⁵.

Considering said NPAs public consultations and the thematic meetings, the final text of this Opinion has been developed by the Agency.

1.2. The structure of this Opinion and related documents

Chapter 1 of this Opinion contains the procedural information related to this task. Chapter 2 'Explanatory Note' explains the core technical content. The draft rule text proposed by the Agency is published on the Agency's website⁶.

The related to this Opinion documents are the following:

- Draft cover regulation; and
- Annex to the draft cover regulation.

1.3. The next steps in the procedure

This Opinion contains the draft proposed regulation and is addressed to the European Commission, which uses it as a technical basis to prepare a legislative proposal.

By this draft regulation, the Agency proposes the repeal of:

- Regulation (EC) No 482/2008⁷ establishing a software safety assurance system to be implemented by air navigation service providers;
- Regulation (EU) No 1034/2011⁸ on safety oversight in air traffic management and air navigation services; and
- Regulation (EU) No 1035/2011⁹ laying down common requirements for the provision of air navigation services.

In addition, the Agency proposes the deletion of Article 12 — and its associated Annex — of Regulation (EU) No 677/2011¹⁰ laying down detailed rules for the implementation of air traffic management (ATM) network functions.

Said proposals are made taking into account the significance of the newly introduced 'requirements for the service providers and the oversight thereof', as well as the newly transposed and structured requirements for the provision of meteorological services. The Agency is of the opinion that it is more user-friendly, from the implementation point of view, if only 'one book' needs to be considered, instead of working with amending provisions, which are in general difficult to read. The proposed

Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010 (OJ L 185, 15.7.2011, p. 1).



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⁵ http://easa.europa.eu/document-library/comment-response-documents

http://easa.europa.eu/document-library/opinions

Commission Regulation (EC) No 482/2008 of 30 May 2008 establishing a software safety assurance system to be implemented by air navigation service providers and amending Annex II to Regulation (EC) No 2096/2005 (OJ L 141, 31.5.2008, p. 5).

⁸ Commission Implementing Regulation (EU) No 1034/2011 of 17 October 2011 on safety oversight in air traffic management and air navigation services and amending Regulation (EU) No 691/2010 (OJ L 271, 18.10.2011, p. 15).

⁹ Commission Implementing Regulation (EU) No 1035/2011 of 17 October 2011 laying down common requirements for the provision of air navigation services and amending Regulations (EC) No 482/2008 and (EU) No 691/2010 (OJ L 271, 18.10.2011, p. 23).

transitional arrangements are to ensure a smooth transition when establishing compliance with the newly introduced requirements.

As additional information, it is to be noted, that the Agency is publishing also the draft Agency Decision containing the related AMC and GM. These AMC and GM, without prejudice to the final text, will be aligned with the Implementing Rule and published as the final step of this subject rulemaking activity once the European Commission adopts this draft regulation.

2. Explanatory Note

2.1. Issues to be addressed

2.1.1 Structural changes

The draft proposed regulation proposes the amalgamation of the two Commission Implementing Regulations (EU) Nos 1034/2011 and 1035/2011 into one single rule. This would provide for the alignment of the scope and applicability of the requirements for the service providers and the requirements for the authorities responsible for their oversight. The draft rule builds on the structure established by Regulation (EU) No 1035/2011 containing dedicated parts with requirements applicable to Member States, to competent authorities and to service providers. Furthermore, the draft rule follows the structure of the Implementing Rules in other aviation domains. The so-called 'cover regulation' contains the basic principles, the scope and the applicability of the annexes thereto. Within the annexes, which are called 'Parts' according to the terminology used in the EASA Implementing Regulations, the requirements are split into 'Subparts', as necessary. The numbering of the provisions follows the common rule drafting convention. A harmonised structure of aviation rules aims also at improving clarity and at facilitating their safe and uniform implementation.

The Agency believes that the harmonised structure of the draft proposed rule enables stakeholders to better identify the requirements applicable to various services provided for the purpose of air navigation. Following the cover regulation, the draft rule contains 13 annexes, each of them dedicated to a given subject. Annex I contains an extensive list of definitions of terms used in the other Annexes. Annex II (Part-ATM/ANS.AR) establishes the requirements for the competent authorities responsible for the oversight of service providers, including harmonised requirements for their management system. Annex III (Part-ATM/ANS.OR) contains the common requirements to be met by a service provider subject to the Basic Regulation and the SES Regulations (Regulations (EC) Nos 549/2004¹¹, 550/2004¹², 551/2004¹³ and 552/2004¹⁴). Annexes IV to XII contain the specific technical requirements applicable to each of the service providers from the perspective of the organisational set-up as well as technical requirements for the provision of services. Annex XIII establishes the personnel requirements in respect of training and competence assessment of Air Traffic Safety Electronics Personnel (ATSEP).

2.1.2 Changes to the existing technical requirements

The changes introduced in the technical requirements (compared to the current rules) mainly concern the issue of a limited certificate, the implementation of Article 8b(3) of the Basic Regulation by allowing a declaration (instead of certification) by Flight Information Services (FIS) providers, the extension of the common requirements to all service providers, including the Network Manager, and the enhancement of the management system requirements for all service providers. An additional

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).



Regulation (EC) No 549/2004 of the European Parliament and of the Council of 10 March 2004 laying down the framework for the creation of the single European sky (the framework Regulation) - Statement by the Member States on military issues related to the single European sky (OJ L 96, 31.3.2004, p. 1).

Regulation (EC) No 550/2004 of the European Parliament and of the Council of 10 March 2004 on the provision of air navigation services in the single European sky (the service provision Regulation) (OJ L 96, 31.3.2004, p. 10).

Regulation (EC) No 551/2004 of the European Parliament and of the Council of 10 March 2004 on the organisation and use of the airspace in the single European sky (the airspace Regulation) - Commission statement (OJ L 96, 31.3.2004, p. 20).

change to the technical requirements compared to said Regulations is the alignment of the safety management system (SMS) requirements with those laid down in ICAO Annex 19, as has been the objective also in the implementing rules concerning other aviation domains, and the harmonisation of the set of rules related to the assessment of changes to functional systems. In addition, to implement the Essential requirements of the Basic Regulation, requirements laying down specific human factors requirements for ATC service providers have been introduced.

Novelties proposed in the technical requirements compared to Regulation (EU) No 1035/2011 are the specific requirements for the provision of meteorological services; namely the transposed requirements from ICAO Annex 3 ('Meteorological Services for International Air Navigation') including its latest amendments and certain additional technical requirements, which as a whole provide for the first time a common regulatory framework in Europe for the provision of meteorological services.

Furthermore, to facilitate the implementation of the State Safety Programme (SSP), the Agency proposes in Annex II (Part-ATM/ANS.AR) to the draft rule the necessary requirements for the competent authorities' oversight system which are in line with the ICAO critical elements for a State's safety oversight system. It should be highlighted, however, that these tasks do not differ from those which the competent authorities should already be performing today based on the Implementing Regulations of the other aviation domains.

Furthermore, detailed requirements for service providers on training and competence assessment of air traffic safety electronic personnel (ATSEP) are now integrated into this proposed Implementing Regulation.

The proposed changes are explained in detail in Section 2.5 of this Opinion.

2.1.3 Changes stemming from implementation feedback

Several aspects of this proposal result from the implementation feedback received or observed by the Agency. This mainly originates from the Agency's standardisation visits in the ATM/ANS domain as well as from different SES reporting mechanisms.

This Opinion has no mandate to go into the details of actual findings following the standardisation inspections, since those are specifically and systematically addressed via other means. However, as a general remark, the Agency wishes to emphasise that in general the feedback from the first 2-year inspection cycle shows on the one hand a need for clearer regulatory framework in this field, and on the other hand the necessity to establish AMC and GM with the view to assisting the stakeholders in the implementation of the regulatory requirements. The volume of regulatory non-compliances has also been very high in this aviation domain. Having in mind the above-mentioned, this proposed rule includes, only where deemed necessary, binding rules with no room for diverse interpretations in order to ensure uniform implementation and at the same time a flexible approach, allowing for tailored solutions adapted to the specific environments.

The Agency, therefore, believes that a uniform implementation method is essential, for example in cases where critical changes to the ATM/ANS functional system are introduced in order to ensure the safety of air traffic services or with regard to the recognition of certificates, while the necessary flexibility is maintained, provided that safety is not adversely affected.

2.1.4 Evolution of the proposed regulation

Most of the Essential Requirements in points 5(a)(b) and (c) of Annex Vb to the Basic Regulation are implemented by this proposal, while by adopting the subject draft rule, the Essential Requirements of said Annex in point 2 are partially met. In order to accommodate the achievement of the rest of the objectives laid down by the Essential requirements of the Basic Regulation, the draft proposed regulation contains placeholders to accommodate the addition of IRs provisions which will result from separate rulemaking tasks. These tasks, included in the revised 4-year Rulemaking Programme (2014–2017) which was adopted with ED Decision 2013/029/R¹⁵, are as follows:

- RMT.0445 'Technical requirements and operational procedures for airspace design, including design procedures';
- RMT.0464 'Requirements for ATS';
- RMT.0477 'Technical requirements and operational procedures for AIS/AIM'; and
- RMT.0593 'Technical requirements and operational procedures for the provision of data for airspace users for the purpose of air navigation'.

In reference to airspace design (ASD), the Agency has initiated the rulemaking task RMT.0445 with the aim of proposing implementing measures purposed to ensure that the airspace structures and flight procedures are appropriately surveyed, designed and validated.

Moreover, the rulemaking task RMT.0464 on 'Requirements for ATS' has been established, aiming at the development of the necessary measures to meet the Essential Requirements in paragraph 2(c) of Annex Vb to the Basic Regulation concerning the provision of air traffic services.

The rulemaking task on 'Technical requirements and operational procedures for AIS/AIM' is in progress and the subject NPA is anticipated to be published for consultation in the 2nd quarter of 2015. The proposal will amend the dedicated Annex on specific requirements for the provision of AIS/AIM.

As a result of RMT.0593, the Agency has issued NPA 2014-20 that proposes specific organisation requirements and responsibilities that are to be applicable to Data Services (DAT) providers as well as the associated technical requirements for the provision of data services. Following the consultation of NPA 2014-20, another Agency's Opinion will be issued proposing an amendment to Annex VII to the draft regulation proposed by this Opinion.

These tasks as a whole will provide the necessary regulatory framework, which also serves as the basis for the evolution of ATM/ANS services in Europe, including those stemming from SESAR deployment.

2.1.5 Introduction of specific provision for ATS providers providing services to aircraft undergoing flight tests

During the rule development, the Agency was made aware of the specific needs required by ATS providers which provide ATS services to aircraft undergoing flight tests, especially when these tests are carried out in cohabitation with other airspace users. Therefore, the Agency acknowledges the need to allow the use of specific and alternative conditions and operating procedures subject to approval by their competent authority. Consequently, the Agency proposes a regulatory approach consisting of a

Decision 2013/029/R of the Executive Director of the Agency of 20 December 2013 adopting the Revised 2014–2017 Rulemaking Programme — 'Revised 2014-2017 Rulemaking Programme'.



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particular privilege within the certificate. However, nothing prevents the competent authority from deciding not to include such a privilege in the certificate, if this is not deemed necessary.

The Agency is also pleased to note the positive feedback received on this issue during the CRD to NPA 2013-08 reaction period.

2.1.6 ICAO compliance

According to Article 38 of the Chicago Convention, ICAO Contracting States are obliged to notify ICAO of any differences between their national regulations or practices and those prescribed in ICAO Standards — the 'filing of differences'. Although the EU is not an ICAO contracting party, it has acquired competence in areas covered by the ICAO Convention, inter alia following the adoption of the Basic Regulation.

When the Commission — assisted by the Agency — adopts new regulations, there is a need for support to identify any differences between the new regulations and the ICAO SARPs so that Member States can then notify ICAO of the differences. One of the mandates of the Basic Regulation (Article 2(2)(d)) is 'to assist Member States in fulfilling their obligations under the Chicago Convention, by providing a basis for a common interpretation (...)'.

To this end, cross reference tables are attached to this Opinion as Appendices 1, 2 and 3 providing full comparison of the proposed regulation with the ICAO SARPs. The Agency hopes that this is well appreciated especially by the Member States' competent authorities.

2.2. Objectives

What is inferred from the overall analysis is that the growth and evolving nature of aviation require the establishment of common measures in the field of ATM/ANS to meet the general objectives of Article 2 of the Basic Regulation, i.e.:

- to maintain a high uniform level of civil aviation safety; and
- to facilitate the free movement of services, while providing a level playing field steered by proportionate and cost-efficient rules.

Said objectives are relevant to all the issues analysed in this Opinion and its related CRDs. Costefficiency includes ensuring a smooth transition from national to common European Union requirements.

There are also specific objectives valid for several issues related to the requirements for the service providers and the oversight thereof:

- to fill the existing gaps between the Basic Regulation objectives and the existing Implementing Rules;
- to align the Safety Management Systems (SMS) requirements in Regulation (EU) No 1035/2011 with the SMS requirements within the ICAO SMS framework and to facilitate the SSP implementation required by ICAO;
- to ensure an overall improvement of the ability of the competent authority to perform its duties;
- to promote the mutual recognition of certificates;
- to improve the effectiveness of the services provision; and



 to establish the necessary synergies for certified service providers to perform the assessment of changes to functional systems, and the rules for competent authorities for the oversight of these changes.

Additionally, a specific objective is 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 the rules drawn up for its implementation, e.g. the provision of meteorological services.

Furthermore, this draft rule aims at enabling the establishment of Functional Airspace Blocks (FABs) via the formation of common standards for service providers and the oversight thereof.

2.3. Outcome of the consultations

2.3.1 Outcome of the NPA 2013-08 consultation ('Requirements for ATM/ANS providers and the safety oversight thereof')

CRD to NPA 2013-08, published on 6 June 2014, comprised the comments received on the NPA related to 'Requirements for ATM/ANS providers and the oversight thereof' (published on 10 May 2013) and the responses provided thereto by the Agency. The resulting text was provided as well to facilitate the understanding and the evaluation of the changes proposed in the light of the responses to the comments.

The Agency considers that the comments received contribute essentially to the improvement of the proposed rule.

In order to be able to take an informed decision, the Agency also carried out focussed consultation comprising a series of thematic meetings with the aim of commonly identifying and analysing the issues and of establishing guidance for the review of the proposals towards drafting this subject Opinion. These meetings were held to enable open, constructive and targeted contributions and to ensure an effective and focussed participation of experts according to their field of expertise.

The thematic meetings covered the following subjects:

- definitions;
- requirements for competent authorities;
- changes (in general);
- application for limited certificates and declarations by flight information services providers;
- management system for service providers and the SMS requirements for ATS providers;
- specific human factors requirements for air traffic control service providers;
- specific requirements for the provision of meteorological services; and
- requirements for personnel training and competence assessment.

Said thematic meetings provided the Agency with a better understanding of the comments and the underlying issues, and contributed greatly to the review of the proposal and to providing responses to the comments.

The Agency is also very pleased to note the high number of responses received to the specific questions addressed to stakeholders via NPA 2013-08, which certainly assisted in the development of this Opinion.

Out of the 2 357 comments received, more than 50 % have been accepted or partially accepted, while only 21 % have not been accepted. Stakeholders had the opportunity to provide reactions to the CRD by 12 September 2014 related to possible misunderstandings of the comments received or the responses provided. The distribution of the comments received and of the responses provided in CRD to NPA 2013-08, as well as the statistics on the CRD reactions received, are shown in Figures 1 and 2 in Section 1.1. of this document.

2.3.2 Outcome of the NPA 2014-07 consultation ('Technical requirements and operational procedures for the provision of meteorological services')

The main issues as well as the replies to individual comments can be found in CRD to NPA 2014-07. The Agency concludes that the public consultation of NPA 2014-07 on the technical requirements for the provision of meteorological services brought real benefits to this rulemaking activity. Stakeholders and interested parties provided valuable comments and alternative proposals accompanied by justifications and practical examples, facilitating, thus, the review of the proposal.

The Agency reviewed the comments and provided responses thereto with the assistance and contribution of experts who participated in the drafting of the text proposal and of individuals and organisations who were not members of the rulemaking group. For this purpose, and to ensure a balanced participation of experts, the Agency held a MET thematic meeting with the objective to commonly identify and analyse the issues behind the comments. An additional objective of said meeting was to provide the Agency with guidance on the review of the proposals towards developing its Opinion.

The thematic meeting covered the following subjects:

- the criteria for local special reports;
- GAMET;
- SIGMET;
- volcano observatories;
- TAF;
- definition of 'Meteorological authority';
- XML vs GML language;
- upgrades of ICAO recommendation to Implementing Regulations; and
- averaging period for visibility for local routine and local special reports.

The MET thematic meeting contributed to the review of the proposal and to providing responses to the comments.

CRD to NPA 2014-07 provides the full set of individual comments received on NPA 2014-07, and the responses provided thereto. In total, 447 comments have been received during the consultation of the NPA. The comments were submitted by 32 stakeholders: 14 NAAs, 7 ANSPs, 1 aerodrome operator, 6

meteorological institutes, 1 ATS provider, 2 professional associations and 1 airline. These 447 comments were responded as follows: 140 were accepted, 21 were partially accepted, 109 were noted and 177 were not accepted.

The distribution of the comments received on NPA 2014-07, as well as distribution of the comments received according to stakeholders' sectors are shown in Table 1 and Figure 1 of CRD to NPA 2014-07, respectively.

2.3.3 Outcome of the NPA 2014-13 consultation ('Assessment of changes to functional systems by service providers and the oversight of these changes by competent authorities')

NPA 2014-13 was published for consultation on 24 June 2014 and the commenting period ended on 24 September 2014. 1 277 comments were received from 42 stakeholders: 15 NAAs (including one military one), 17 ANSPs, 3 organisations for air navigation services, 4 professional associations of ATCOs, 1 aircraft manufacturer and 2 individuals. For the publication of this Opinion, the Agency focussed its analysis on the comments related to the Implementing Rule text and RIA. The completion of the analysis, including the comments related to the AMC/GM, will follow at a later stage. The Agency was pleased to conclude that the public consultation of NPA 2014-13 brought real benefits to this rulemaking activity. Stakeholders and interested parties provided valuable comments and, in many circumstances, alternative proposals to the Implementing Rule accompanied by justifications, which facilitated the review and amendment of the final proposal. The major issues raised during the consultation as well as the replies to individual comments that are related to the Implementing Rule text can be found in CRD to NPA 2014-13. The rest of the comments, related to AMC/GM, will be published at a later stage.

The most contentious issues during the consultation were as follows:

- the special handling of management procedures of changes to functional systems;
- the competent authority's risk-based decision to review notified changes to functional changes;
- the management of multi-actor changes to functional changes;
- the processes within the management system to identify change drivers;
- the criteria for the safety and safety support assessments of changes to the functional system;
- the necessity of having the objective of safety of a change to the functional system; and
- the safety criteria expressed in terms of other measures that relate to safety.

659 out of the 1 277 comments were directly or indirectly linked to the Implementing Rule text, and were responded as follows: 273 were accepted or partially accepted, 298 were noted and 88 were not accepted.

The distribution of comments received on NPA 2014-13, as well as their distribution according to stakeholders' sectors and how the comments were responded are shown in Table 1, Figure 1 and Figure 2 of CRD to NPA 2014-13, respectively.

2.4. Summary of the Regulatory Impact Assessment

2.4.1 Short reminder of the analysed subjects¹⁶

Based on the general issues identified above, the following specific subjects were analysed in the ENs and RIAs included in NPA 2013-08 (D) and NPA 2014-13:

NPA 2013-08 and NPA 2014-13

Transition period

NPA 2013-08

- management system of the CAs/NSAs (AR);
- introduction of the findings classification (AR);
- performance-based oversight (AR);
- common European Union requirements for service providers (former ATM/ANS providers);
- common European Union requirements for the declaration of flight information services providers; and
- common European Union requirements for ATSEP.

NPA 2014-13

- with regard to safety assessment of changes to functional system:
 - risk-based review decision by the competent authority;
 - risk-based review by the competent authority;
 - Communication, Navigation and Surveillance (CNS) providers performing safety support assessment instead of safety assessment;
 - removal of the severity classification scheme from IR; and
 - changes affecting software and Regulation (EC) No 482/2008.

In reference to NPA 2014-07, no RIA was developed due to the fact that the Agency simply transposed ICAO Annex 3 with no major changes. Furthermore, during the consultation, no negative comment on this subject was received.

2.4.2 Stakeholders

- Generally, there are up to two competent authorities per Member State, including the Agency,
 within the scope of certification and oversight activities of service providers.
- The service providers, and more specifically the providers of ATFM, ASM, DAT and FIS providers and the Network Manager. The majority of them are not certified, but overseen by their competent authorities. The draft rules provide a framework for their certification, in addition to

¹⁶ As presented in NPA 2013-08, NPA 2014-07 and NPA 2014-13.



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the air navigation service providers already certified in the EASA Member States (287 for the year 2011¹⁷).

Staff working as ATSEP.

2.4.3 Objectives

Please refer to Section 2.2.

2.4.4 RIA update as a result of the NPA 2013-08 and NPA 2014-13 public consultations

The analysis of the subjects described in 2.4.1. identified potential cost drivers from the aviation stakeholders' point of view including:

- adaptation of the current processes and documentation;
- adaptation of the training and competence assessment (e.g. the case of ATSEP);
- information to be provided to employees of the stakeholders' affected parties; and
- length of the transition period.

Based on the comments received during the NPA 2013-08 and NPA 2014-13 public consultations, the Agency revisited the subjects in order to address these cost drivers and prevent over-regulation. Below is a summary of the changes and their impacts by subject.

NPA 2013-08 and NPA 2014-13

— TRANSITION PERIOD:

The proposal for a 2-year transition period is deemed to be sufficient for the service providers to implement the provision in question and the associated aspects (adaptation of current processes, documentation, etc.).

After a transition period of 2 years, this truly harmonised regulatory system throughout the EU will provide for cost-effectiveness, contribute to the reduction of regulatory tasks at national level and ensure ICAO compliance.

NPA 2013-08

AIR TRAFFIC SAFETY ELECTRONICS PERSONNEL (ATSEP)

Several comments were submitted, particularly by authorities, as regards the approach to and the methodology for the transposition of the EUROCONTROL 'Specification for Air Traffic Safety Electronics Personnel Common Core Content Initial Training' into EU law. The large majority of the commentators stated that the proposal was over-prescriptive and not proportionate. The rationale behind the transposition is explained and justified in the RIA contained in NPA 2013-08 and its Explanatory Note. The Agency is of the opinion that the proposed approach remains the most valid for promoting further harmonisation as well as the mobility of ATSEP. However, in order to provide more flexibility as regards basic training and taking into account the comments received on this subject, the Agency has decided to introduce a number of changes thereto:

The basic training was amended with regard to the number of mandatory subjects;

¹⁷ Source NPA 2013-08 (D), Table 8.



- The introduction of optional subjects offers more flexibility; and
- The content of the ATSEP CCC was rearranged to AMC level.

COST COMPLIANCE WITH NPA 2013-08

In NPA 2013-08, the Agency asked explicitly the stakeholders to quantify the economic impacts. Only one stakeholder provided detailed cost impacts, which were limited¹⁸. The Agency analysed these potential costs with this stakeholder. The further adjustments proposed in this Opinion, introducing more flexibility, ensure that the cost impacts entailed by the final rules are very limited.

NPA 2014-13

RISK-BASED REVIEW BY THE COMPETENT AUTHORITY

The result of the NPA 2014-13 consultation, together with the lack of concrete results of current research studies, has led the Agency to withdraw its proposal to include provisions for the competent authority to perform a risk-based review of the notified changes to the functional system. This subject will be reconsidered when sufficient material is available to ensure harmonised implementation of this concept and the Agency is in a position to propose specific AMC/GM for this very purpose. This approach was the 'Option 2' described in section 4.4.8.1 of NPA 2014-13.

PERFORMING SAFETY SUPPORT ASSESSMENTS

A number of comments received pointed out that the scope of the RIA was restricted only to CNS providers, whereas other service providers, such as those providing ASM, ATFM and DAT, who will now be formally required to assess the changes to their functional systems, had not been included in the assessment. The Agency does acknowledge that the scope of the option was not completely reflected in the impact analysis section where mainly CNS providers were mentioned. In fact, the impact analysis applies to all service providers other than ATS providers. Furthermore, a question was addressed to stakeholders to provide cost estimate and only one answer was provided.

Performing safety support assessment could be seen as a new requirement for AIS, MET, ATFM and ASM providers. But it was considered that:

- ATFM services are provided by the Network Manager (as central ATFM unit) and ATS providers (as local ATFM units) and the regulations applicable to them already require a safety assessment when introducing new functional systems or changing the existing ones;
- ASM services are usually provided by the ATS providers and the regulations applicable to them already require them to have a management system based on which such safety assessments should be performed; and
- the data provided as part of the MET and AIS serviceshas to be of sufficient quality, according to the applicable Regulation (EU) No 1035/2011. This is ensured through the

The relative shares of the potential cost impacts in relation to the total revenues are approximately 0.06 % for the non-recurrent costs and 0.01 % for the recurrent costs.



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already required quality system which contains provisions for the change management to keep the demonstrated quality assurance. Detailed rules for these service providers do not currently exist. However, the Basic Regulation requires them to have a risk-based management system and to verify that the safety performance requirements of their services are met.

As regards DAT providers, it is important to note that they are already regulated (although via voluntary measures based on EASA Opinion No 01/2005) and the changes management requirements are applicable to this type of providers as well.

The analysis provided as regards the CNS providers (short-term implementation costs and long-term benefits in terms of safety and regulatory coordination and harmonisation) remains valid for the above other than ATS providers as the proposed change is considered to more clearly specify what these service providers have to perform (already foreseen in today's environment). Potential short-term cost which is legitimate for every regulatory change should be compensated with the long-term benefits expected for all stakeholders. Therefore, Option 2 remains the overall preferred option.

 REPEAL OF REGULATION (EC) No 482/2008 (establishing a software safety assurance system to be implemented by air navigation service providers)

During the NPA 2014-13 consultation, commentators pointed out that the scope was not completely covered within the RIA, as by repealing Regulation (EC) No 482/2008 and making this regulation applicable to all service providers, DAT providers would now be formally required to assure software changes in their functional systems too. Furthermore, all service providers will be formally required by the new rule to assure changes to people, procedures and hardware in addition to software. This has led the Agency to reassess the economic impact of the preferred option¹⁹.

It is important to note that already today Regulation (EU) No 1034/2011 requires all service providers to conduct an assessment of changes to their functional systems (system, people and procedures) and 'system' includes hardware and software elements. Therefore, for providers of ANS, ATFM and ASM, this is not considered as a new element.

In reference to DAT providers, it could be assessed as a new requirement; however, as stated above, DAT providers are already regulated (although via voluntary measures based on EASA Opinion No 01/2005) and the changes management requirements are applicable to this type of providers. By including the DAT providers in the scope of the RIA, the increase in terms of implementation costs and long-term benefits will be proportional to the provider's weight.

In conclusion, the preferred option remains valid after this reassessment.

COST COMPLIANCE WITH NPA 2014-13

Following a question addressed in NPA 2014-013 requesting the stakeholder to provide cost impact, the Agency has received only one cost estimate for the implementation of the requirements on training. The changes proposed as a result of the consultation, further reduce

¹⁹ Option 2 in NPA 2014-13.



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this cost estimate. In addition, the more safe, harmonised and efficient regulation should compensate for the implementation costs.

Based on the above, the Agency concludes that the concerns raised on potential negative economic impact have been relieved due to the changes introduced throughout the proposal, which significantly reduce the projected administrative burden originating from the newly established requirements of this proposal.

2.4.5 Conclusions

The main impacts of the proposal are summarised as follows:

The draft rule will have a positive impact on safety, social and regulatory harmonisation aspects. It will require adaptation from stakeholders, which will create additional activities during a certain period of time. To allow for sufficient time to prepare for the necessary changes and to keep the potential burden induced by these changes to a minimum, an opt-out period is proposed, followed by an appropriate time frame to allow for the implementation of the necessary changes (e.g. exchange of the grandfathered certificates according to the new template). Once implemented, the new rule will support a cost-efficient service providers certification and oversight scheme and will contribute to the overall efficiency of the ATM/ANS system in Europe as well.

Competent authorities will benefit from:

- the easier implementation of the SSP²⁰;
- the harmonised oversight requirements for all providers of ATM/ANS and other ATM network functions;
- the common approach to findings classification;
- the reduction of the administrative burden and the time currently attributed to regulatory coordination and harmonisation with ICAO (the Agency ensuring mainly this role); and
- the synergies of these rules with other aviation domains towards a 'total system approach'.

Overall, the above will enhance safety, oversight and cost-efficiency over time.

The service providers, and more specifically the providers of MET and the Network Manager as well as FIS providers, will benefit from:

- the one clear set of requirements with the necessary flexibility via AMC and GM;
- the clarifications improving also the legal certainty; and
- the harmonised set of requirements for the providers of various services plus synergies with relevant requirements applicable to other aviation domains.

Overall, the above will enhance safety, level playing field and cost-efficiency.

ATSEP will benefit from:

the common requirements at EU level on training and competence assessment; and

It should be highlighted, however, that the core of the authorities' tasks defined in the draft Implementing Rule are not fundamentally different from those already performed by the competent authorities today.



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the necessary flexibility given to service providers to adapt their initial training to their needs.

Overall, the above will ensure safety, mobility, and cost-efficiency.

The Agency will benefit from a single set of common rules that:

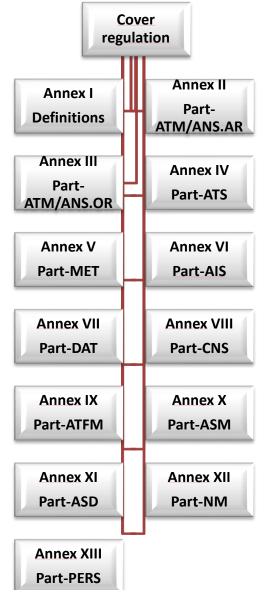
 facilitates the task of assisting Member States to fulfil their obligations under the Chicago Convention.

The European aviation community will benefit from a single set of common rules that:

- provides a basis for a common interpretation and uniform implementation of the requirements;
 and
- promotes cost-efficiency in the regulatory processes and aims at avoiding duplication at national and EU level.

2.5. Overview of the proposed amendments

2.5.1 Structure of the proposed regulation



- Cover regulation
- Annex I: Definitions
- Annex II: Requirements for Authorities
- Annex III: Common requirements for service providers
- Annex IV: Requirements for Air Traffic Services
- Annex V: Requirements for Meteorological Services
- Annex VI: Requirements for Aeronautical Information Services
- Annex VII: Requirements for Data provision
- Annex VIII: Requirements for Communication, Navigation & Surveillance
- Annex IX: Requirements for Air Traffic Flow Management
- Annex X: Requirements for Air Space Management
- o Annex XI: Requirements for Air Space Design
- Annex XII: Requirements for the provision of other ATM network functions
- o Annex XIII: Requirements for Personnel

Figure 2: Rule structure

Figure 2 above represents the structure of the proposed rule. Following the cover regulation, the draft rule contains 13 Annexes, each of them dedicated to a given subject. Annex I contains an extensive list of definitions of terms used in the other Annexes. Annex II (Part-ATM/ANS.AR) establishes the requirements for the competent authorities responsible for the oversight of the service providers, including harmonised requirements for their management system. Annex III (Part-ATM/ANS.OR) contains the common requirements to be met by a service provider subject to the Basic Regulation and Regulations (EC) Nos 549/2004, 550/2004, 551/2004 and 552/2004. Annexes IV to XII define the specific technical requirements applicable to each of the service providers from the perspective of their organisational set-up and technical requirements for the provision of services. Annex XIII establishes the requirements concerning the training and the competence assessment of Air Traffic Safety Electronics Personnel (ATSEP).

2.5.2 Cover regulation

The recitals of the new proposed regulation are introduced in this Opinion. They reflect the contents of the proposed rule. Considering in particular the reactions submitted to CRD 2013-08 by a trade union organisation, a new recital on safety culture is now introduced.

Article 1 of the draft cover regulation defines the subject matter and scope of the proposed regulation which results from the amalgamation of Regulations (EU) Nos 1034/2011 and 1035/2011.

Article 2 contains only three definitions which are of relevance to the cover regulation. The rest of the definitions (used in Annexes II to XIII) are moved to Annex I to the subject draft rule. Based on an indepth analysis of the comments received during the NPA 2013-08 consultation, a definition of the 'service provider' is introduced replacing the initial term 'ATM/ANS provider'. This proposal was very well received by stakeholders at the thematic review meetings. In addition, it is in line with ICAO material and SES-related initiatives by the European Commission. The Agency is glad to note that no objections were received during the CRD to NPA 2013-08 reaction period.

The term 'service provider' defines the providers of services in the scope of the Basic Regulation. It includes providers of aeronautical information services (AIS), services consisting in the origination and processing of data and formatting and delivering data to general air traffic for the purpose of safetycritical air navigation (DAT), Air Traffic Services (ATS), Communication, Navigation and Surveillance services (CNS), Meteorological services (MET), Air Traffic Flow management (ATFM), Airspace Management (ASM) and other ATM network functions (which are functions performed by the Network Manager established under Article 3 in accordance with Regulation (EU) No 677/2011).

Article 3 'Provision of services' requires the Member States to ensure that appropriate services are provided for the operation in a given airspace, taking into account safety consideration. This is essential for establishing conditions or specifications for the provision of meteorological services. While this concept is only used in the proposal for the provision of meteorological services, it may be used for introducing the technical requirements for other services too, e.g. in the context of aeronautical information services.

As already proposed in NPA 2013-08, Article 4 'Competent authority' takes into account the amalgamation of the said two Regulations and the specific requirements for the competent authorities. This article considers the competent authority responsible for certification and oversight as in the current Regulations. In addition, it also stipulates the required action in cases where more than one competent authorities would be established or nominated by the State. In such cases, the area of competence of the competent authorities concerned shall be clearly defined in terms of responsibilities and geographical and airspace limitation. Moreover, coordination between the competent authorities, based on written arrangements, is required to ensure a proper oversight of the regulated organisations. Additionally, paragraph 4 guarantees their independence from the service providers. Besides that, based on the concept laid down in Article 4 of Regulation (EU) No 1034/2011, in cases of Functional Airspace Blocks (FAB) or in cross-border service provision in which the Agency is the competent authority for at least one of the organisations, a new paragraph 3 is introduced. This provision requires the Member States concerned to coordinate with the Agency in order to ensure that the responsibilities for the safety oversight are properly identified and allocated.

Article 5 'Service providers' specifies which Annex needs to be complied with by each provider.

Taking into account the introduction of the management system of the competent authorities, Article 6 defines 'Oversight capabilities' of the competent authorities originating from Article 12 of Regulation (EU) No 1034/2011 and the relevant requirements of Article 7 of Regulation (EU) No 1035/2011. It is also fully consistent with the critical elements of a safety oversight system as defined by ICAO and requires the Member States to ensure that their personnel is empowered to carry out certification and oversight tasks in accordance with the applicable legal provisions. One of the novelties introduced into the provision on oversight capability is a requirement, which is aligned with the similar ones in the other aviation domains, on the need to avoid conflict of interest by the competent authority personnel.

Article 7 'Declaration by flight information service providers' implements Article 8b.3 of the Basic Regulation by allowing the declaration of these services (instead of certification) and determines 'who' is eligible to declare, while ATM/ANS.OR.A.020 details the requirements to be met if declaring.

Article 8 provides grandfathered measures and, as a general rule, certificates issued in accordance with Regulation (EU) No 1035/2011 shall be deemed to have been issued in accordance with this Regulation. Existing certificates should be replaced with certificates according to the new EU templates. As it is not regarded feasible to require all certificates to be replaced at the same time and at the date of application, a sufficient time span is provided to allow stakeholders to implement the necessary changes and exchange the necessary documents.

Article 9 repeals Regulations (EC) No 482/2008 and (EU) Nos 1034/2011 and 1035/2011. Furthermore, Article 12 of Regulation (EU) No 677/2011 is deleted.

Article 10 regulates the entry into force of the rule together with the applicability date for the service providers and the opt-out possibilities to ensure a smooth transition for complying with the requirements of this regulation. The Agency is proposing a 2-year transition period for the applicability date after the estimated date of adoption of the rule, which is, however, complemented by an 1-year opt-out period, during which Member States may elect not to apply the new requirements, or parts thereof. Consequently, this regime allows for the early introduction of certain requirements or even the entire rule for those Member States who wish to do so.

Annex I — Definitions of terms used in Annexes II to XIII 2.5.3

As explained in section 2.5.1, the Agency considered beneficial to follow the same approach already applied in other Implementing Rules to the Basic Regulation (such as air operations, air crew and aerodromes) by introducing a dedicated Annex I with all the definitions used in the various Parts. Said Annex contains definitions coming from both Articles 2 of Regulation (EU) No 1034/2011 and Regulation (EU) No 1035/2011. In addition, some new definitions became necessary because of the introduction of new requirements, while some definitions were removed as they have become redundant. Such is the definition of 'operating organisation' due to the fact that the concept has been replaced by the concept of 'contracted activities'.

Some of the proposed new definitions come from the ICAO Annex 3 and relate to terms used within Annex V to the proposed new regulation. These definitions would be needed for the technical requirements for different services stemming from the transposition of other relevant provisions in ICAO Annexes.

The definition of 'psychoactive substance' is aligned with the new forthcoming Commission regulation 'laying down technical requirements and administrative procedures relating to air traffic controllers' licences and certificates pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, amending Commission Implementing Regulation (EU) No 923/2012 and repealing Commission Regulation (EU) No 805/2011', which is at the moment subject to scrutiny by the European Parliament. This definition is based upon the ICAO definition of psychoactive substances, with a modification replacing the term 'coffee' with 'caffeine'. This modification was consulted, having a wide acceptance, during the rulemaking processes and delivered proposals for both the ATCO licensing and medical certification and this Opinion. The text of the aforementioned draft Commission regulation includes an article which will amend the definition of psychoactive substances in Regulation (EU) No 923/2012 accordingly. Moreover, the Agency is committed to promote the appropriate modification in the related ICAO documentation via the appropriate working arrangements.

After integration of the provisions related to the 'assessment of changes to functional system' into the draft rule, the definitions of 'aviation undertaking', 'functional system' and 'argument' have been added.

2.5.4 Annex II — Requirements for competent authorities — provision of services and other ATM network functions (Part-ATM/ANS.AR)

Part-ATM/ANS.AR consists of three Subparts, namely Subpart A — General requirements, Subpart B — Management and Subpart C — Oversight, certification and enforcement. A significant number of commentators requested the Agency to align as much as possible the provisions related to competent authorities with the existing ones relevant to other aviation domains unless there is a sector-specific reason for them to be different, since in most cases the authority responsible for the oversight of ANSPs is the same body for more than one aviation domain. Following this principle, the requirements are now grouped in alignment with the existing authority requirements relevant to other aviation domains, e.g. aircrew and air operations, aerodromes and air traffic controller licensing. They offer a balanced combination of already existing requirements in the current existing EU framework, and some new or revised requirements purposed to meet the specific safety objectives of the Basic Regulation.

2.5.4.1 Subpart A — General requirements

Subpart A outlines the scope (ATM/AMS.AR.A.001) of applicability. These requirements have been mainly transferred from Regulation (EU) No 1034/2011 with some adaptations being applied by the competent authorities. Some others originate from the Basic Regulation or other EU legislation obligations, such as the provision of 'information to the Agency' and the contribution to the Member States' annual reports by the competent authorities.

In reference to AMT/ANS.AR.A.005 'Oversight functions', after the integration of the proposals presented in NPA 2014-13, a new provision is introduced due to the need for coordination between competent authorities to ensure an effective selection and review of notified changes to functional systems in the case of multi actor changes. This is required as the service providers may be under the oversight of different competent authorities and the regulatory review of different parts of the change could be performed by different competent authorities.

Following the principle of alignment of the competent authorities' requirements with the existing ones relevant to other aviation domains, ATM/ANS.AR.A.010 on 'Oversight documentation' has been introduced and the former Article 7 of the cover regulation dealing with the means of compliance alternative to the AMC issued by the Agency has been divided into two separate provisions, namely ATM/ANS.AR.015 and ATM/ANS.OR.020 from the perspective of the authorities' and organisations' responsibilities respectively.

The following provisions on 'Information to the Agency', 'Immediate reaction to safety problem', 'Safety Directive' and 'Oversight reporting' have only been renumbered.

With a view to achieving a realistic implementation of the safety management procedures through SSP as required by ICAO, there is a growing support within the ATM/ANS community for the need to also harmonise the management systems of the competent authorities. Further regulating SSP at EU level would effectively support the harmonisation of the competent authorities' management systems and oversight procedures.

2.5.4.2 Subpart B — Management (ATM/ANS.AR.B)

Subpart B requires the competent authorities to upgrade their systems and procedures to meet the new SSP-based authority requirements. It should be also noted that within the competent authorities of some Member States the oversight for ATM/ANS, air traffic controllers licensing and aerodromes are combined in one functional unit. Towards a total system approach, these management system-related requirements are consistent unless subject specificities are required.

Following said principle, and aiming at ensuring consistency between the different provisions on competent authorities, the provision on 'Oversight records' has been renamed 'Record keeping'.

2.5.4.3 Subpart C — Oversight, certification and enforcement (ATM/ANS.AR.C)

Subpart C provides to the competent authority the necessary elements on how to interact with regulated service providers. It describes general oversight principles, addresses the elements of the oversight programme and details the specific actions, roles and responsibilities of competent authorities with regard to raising findings and undertaking enforcement measures (ATM/ANS.AR.C.050). Most of the provisions are based on the requirements of Regulations (EU) Nos 1034/2011 and 1035/2011, complemented as necessary to implement the Basic Regulation.

ATM/ANS.AR.C.005 on 'Certification, declaration and verification of service providers' compliance with the requirements' is largely based on Article 6 of Regulation (EU) No 1034/2011, with some minor amendments. Based on the NPAs consultation, no substantial changes have been introduced. Appendix I introduces the standard certificate form for the service provider. By introducing this single certificate concept, all the privileges of a service provider are to be mentioned in the attachment to the certificate specifying the types of services provided. This would facilitate the mutual recognition of certificates, as it also implements Article 11 of the Basic Regulation.

Following the principles in other Implementing Regulations on authority requirements (AR), the provision on oversight was split into ATM/ANS.AR.C.010 'Oversight' and ATM/ANS.AR.C.015 'Oversight programme'. Based on the NPA 2013-08 consultation feedback, the latter provision was further adapted to promote the implementation of performance-based oversight by introducing the notion of maximum 4 years' oversight planning. This was supported by the majority of the

stakeholders as it was considered the most suitable solution. This approach provides the oversight planning with further flexibility under certain safety-related conditions.

One of the novelties introduced in this Subpart C is the provisions on 'Issue of certificates' (ATM/ANS.AR.C.020) which introduces the flexibility for the issue of a certificate with 'open finding' and on 'Declarations of flight information services providers' (ATM/ANS.AR.C.045) which mirrors the ATM/ANS.OR.A.015 requirements.

One of the most commented topics during the NPA 2013-08 consultation was the ATM/ANS.AR.C.025 provision on 'general' changes. This issue was also thoroughly discussed at the thematic review meetings. As an outcome of the in-depth elaboration of the subject, the related provisions have been significantly reworked to better clarify the issue, especially when it comes to the scope of the changes and their management.

The Agency is pleased to note the positive feedback received on this effort during the CRD to NPA 2013-08 reaction period. Furthermore, based on these reactions some of the draft AMC/GM have been slightly modified to better reflect the intent of the provisions.

ATM/ANS.AR.C.030 'Approval of change management procedures of changes to functional systems' has been added to ensure that the competent authority reviews the change management procedures implemented by service providers. It originates from Article 9 of Regulation (EU) No 1034/2011, but there the requirement is made from the perspective of the service provider and seems to imply that the competent authority is bound to accept the change management procedures. This provision introduces the ability to reject them and clarifies how modifications to and deviations from such procedures are to be addressed by the competent authority.

ATM/ANS.AR.C.035 'Decision to review the notified change to functional system' is proposed as a replacement of Article 10(1) of the existing Regulation (EU) No 1034/2011. The provision was widely commented by service providers as it was considered subjective and complex, and it has been amended following the commentators' suggestions. It introduces flexibility for the competent authority to decide whether or not to review a change to a functional system notified by a service provider. This decision is based on risk, which is expressed as a combination of the likelihood of the argument being complex or unfamiliar to the service provider and the severity of the possible consequences of the change. The criteria for the decision are included in the proposed rule to ensure greater harmonisation of implementation across Europe. GM on how to build a model of the decision process, as well as the criteria that should be considered, is already proposed. Once such a model is defined and recognised, the Agency would propose AMC for harmonisation purposes.

ATM/ANS.AR.C.040 'Review of the notified change to functional system' replaces Article 10(2) of Regulation (EU) No 1034/2011 by clarifying the existing requirements and removing their risk basis. Originally, the review of the notified change was intended to be commensurate with the level of risk posed by the change. The Agency considers this risk to be different from the risk used in the decision to review the change. Efforts to define the basis for this risk were made by the Agency but have proven unsuccessful and, following suggestions made during the consultation, the Agency has removed the requirement to perform the review based on risk. There is, however, some guidance that was produced during the search for the risk and some guidance developed within the NSA coordination platform (NCP) and by EUROCONTROL on the review of changes to functional systems

by competent authorities. The Agency would consider all this material and, if it is suitable, use it as the basis for the development of further GM.

2.5.5 Annex III — Common requirements for service providers (Part-ATM/ANS.OR)

Similarly to the current Annex I to Regulation (EU) No 1035/2011, Part-ATM/ANS.OR, on common requirements for all service providers, is established. New requirements are introduced in order to fulfil the Essential Requirements in point 5(a) of Annex Vb to the Basic Regulation. All provisions are structured in a harmonised manner, similar to that of the requirements applicable to other fields of aviation such as aircraft operations, aerodromes and air traffic controller training organisations.

Based on the implementation experience and the need for proportionality, not all requirements contained in the current Annex I to Regulation (EU) No 1035/2011 need to be made applicable to all service providers. Therefore, the applicability of some of the requirements are limited to ANS and ATFM providers as well as to the Network Manager. Furthermore, when introducing the risk-based concept on 'assessment of changes to functional system' a dedicated Subpart was deemed necessary to be established for the service providers other than ATS providers. Therefore, this Annex consists of four Subparts.

2.5.5.1 Subpart A — General requirements (ATM/ANS.OR.A)

Subpart A (ATM/ANS.OR.A) contains the general requirements which are applicable to all service providers.

ATM/ANS.OR.A.001 establishes the scope of the requirements to be met by a service provider.

ATM/ANS.OR.A.005 'Application for a service provider certificate' originates from Article 4 of Regulation (EU) No 1035/2011 on 'Granting of certificates' and is tailored to apply only to service providers.

ATM/ANS.OR.A.010 'Application for a limited certificate' replaces Article 5 of Regulation (EU) No 1035/2011 on derogations. The proposed provision maintains the same conditions and essence as the ones applicable today. Furthermore, the concept of a certificate with limitation is better aligned with the flexibility scheme foreseen in Article 14 of the Basic Regulation.

As explained in Section 2.5.2, Article 7 implements Article 8b(3) of the Basic Regulation: '... Member States may decide that providers of flight information services shall be allowed to declare their capability and means of discharging their responsibilities associated with the services provided'. The criteria proposed are based on the criteria and requirements already existing in Regulation (EU) No 1035/2011 for FIS providers entitled to apply for derogation of some requirements. Acknowledging comments related to declaration received during the NPA 2013-08 consultation, the provisions in ATM/ANS.OR.A.015 on 'Declaration by flight information service providers' have been reworked aiming at completeness and consistency. Article 7 determines now 'who' is eligible to declare, while ATM/ANS.OR.A.015 details the requirements to be met if declaring. Furthermore, for completeness, a new provision (ATM/ANS.OR.A.030) on 'Continued validity of a declaration of a FIS provider' has been introduced.

ATM/ANS.OR.A.020 'Continued validity' is a new element compared to the current regulatory framework in relation to the validity of the certificate of the service provider. The proposal is to maintain the validity of the certificate unlimited subject to the provider being in compliance with the

applicable requirements. The Agency proposes an unlimited validity to the service provider certificate in order to facilitate and promote the implementation of a risk-based oversight scheme by the competent authority, and also to ensure a continuous oversight based on the identified risks instead of an oversight aiming at ensuring compliance and closing the findings only at the stage of the re-certification process.

ATM/ANS.OR.A.035 'Demonstration of compliance' originates from Article 6.1. of Regulation (EU) No 1035/2011.

ATM/ANS.OR.A.040 'Changes — general' has been significantly redrafted compared to the proposal in NPA 2013-08, based on the NPA 2013-08 public consultation and the related focussed thematic meetings. The Agency is pleased to note the positive reactions to CRD to NPA 2013-08 indicating that many stakeholders do support the enhanced proposal.

ATM/ANS.OR.A.045 'Changes to the functional system' has been included as a replacement for Article 9(2) of Regulation (EU) No 1034/2011, allowing more detailed information to be provided after notifying the competent authority of a change. It also states that other parties affected by the change, e.g. other service providers and aviation undertakings, are to be informed of the change. This provision is also a clarification of Article 9(3) of Regulation (EU) No 1034/2011. It requires the service provider to follow the approved procedures for managing the change and, where the competent authority has decided to review the change, to wait until the change has been approved before putting it into operation. The service provider may wish to implement the change in several parts and the competent authority can approve parts of the change individually, provided an assurance case exists for the part. This requirement also includes provisions to deal with the case of changes involving more than one service providers and aviation undertakings, aiming at ensuring that all risks are correctly identified and mitigated. In order to do this, an appropriate coordination between the service provider making the change and the affected service providers and aviation undertakings is necessary. This coordination determines the dependencies between those affected by the change and identifies shared assumptions. Its purpose is to allocate appropriate risk mitigations that will ensure the total change is safe enough. This is especially relevant when the other providers have to change their functional systems as well.

This requirement has been simplified compared to the proposal in NPA 2014-13 to clarify the intent of the burden on service providers. It still ensures that the minimum elements (i.e. dependencies, assumptions and risk mitigations) have been adequately identified and coordinated between service providers and, where feasible, with affected aviation undertakings.

The principles laid down in ATM/ANS.OR.A.050 'Facilitation of inspections, audits and access' originates from Article 7 of Regulation (EU) No 1035/2011. However, based on the CRD to NPA 2013-08 consultation and towards a 'total system approach', the requirements have been redrafted to retain the intent and to align with the ones applicable to aviation organisations in other domains.

Based on the principles of Article 8 'Corrective actions' of Regulation (EU) No 1034/2011, the provision ATM/ANS.OR.A.050 on 'Findings and corrective actions' further clarifies what are the actions expected from the service provider when the competent authority raises a finding in accordance with ATM/ANS.AR.C.050.

As foreseen in the Basic Regulation, the competent authority shall react to identified safety problems. The Implementing Rules for the competent authority are contained in

ATM/ANS.AR.A.025(c), while ATM/ANS.OR.A.060 'Immediate reaction to a safety problem' is a requirement for the service provider to implement safety measures (e.g. safety directives) mandated by the competent authority in accordance with said provision.

ATM/ANS.OR.A.065 'Occurrence reporting' ensures that the management of occurrences is an integral part of the system for managing safety. It supports the implementation of Regulation (EU) No 376/2014²¹ on the reporting, analysis and follow-up of occurrences in civil aviation. It is important to note that Article 23 of said Regulation repeals Directive 2004/42/EC²² and Regulations (EC) Nos 1321/2007²³ and 1330/2007²⁴. However, these acts shall remain applicable until the date of application of Regulation (EU) No 376/2014. Article 24 of the same Regulation foresees that it shall apply from 15 November 2015 and not before the entry into force of the associated implementing measures. Based on reactions received on CRD 2013-08, the subject provisions have been further amended describing what is expected to be reported (i.e. details of the event, as opposed to the analysis of the event itself). Furthermore, it has to be underlined that this (drat) Implementing Regulation is without prejudice to Regulations (EU) Nos 996/2010 and 376/2014.

ATM/ANS.OR.A.070 'Contingency plans' and ATM/ANS.OR.A.075 'Open and transparent provision of services' originate from points 8.2 and 8.1 of Annex I to Regulation (EU) No 1035/2011. As an outcome of the NPA 2013-08 consultation, the provisions are moved to the 'General requirements' to apply to all service providers.

2.5.5.2 Subpart B — Management (ATM/ANS.OR.B)

Subpart B — Management (ATM/ANS.OR.B) contains the requirements which are applicable to all service providers and originate from the principles already laid down in Annex I to Regulation (EU) No 1035/2011, e.g. ATM/ANS.OR.B.001 'Technical and operational competence and capability'.

ATM/ANS.OR.B.005 'Management system' replaces the existing requirements for the safety and quality management of services with a more comprehensive management system requirement. As explained in NPA 2013-08, the Basic Regulation requires all service providers to have in place a risk-based management system. Neither the rules applicable today, nor ICAO require all providers to have in place a safety management system but a quality system. In addition, the current rules require ATS and CNS providers to have a safety management system. Therefore, and for reasons of proportionality and subsidiarity, the intention of the Agency has been to build the regulation so that it allows integration of all the management systems being required if the regulated organisation wishes so. In order to facilitate such integration, the ICAO SMS framework has been considered as

Commission Regulation (EC) No 1330/2007 of 24 September 2007 laying down implementing rules for the dissemination to interested parties of information on civil aviation occurrences referred to in Article 7(2) of Directive 2003/42/EC of the European Parliament and of the Council (OJ L 295, 14.11.2007, p. 7).



Regulation (EU) No 376/2014 of the European Parliament and of the Council of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007 (OJ L 122, 24.4.2014, p. 18).

Directive 2004/42/EC of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC (OJ L 143, 30.4.2004, p. 87).

²³ 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 (OJ L 294, 13.11.2007, p. 3).

the basis by extending some elements stemming from Annex I (e.g. paragraph 3.1) of Regulation (EU) No 1035/2011.

Within said provisions on the management system, a requirement for the service provider to monitor the behaviour of the functional system is introduced. During the consultation of NPA 2014-13, this issue was highly commented. Some commentators, however, considered these requirements necessary and part of the proactive performance management, and the Agency concurs with this approach. This provision, which was present for ATS and CNS in point 3.1.3 (b) of Regulation (EU) No 1035/2011, has been extended to include the monitoring criteria for changes. As a result, this monitoring may be performed both at the level of the service and, when the monitoring criteria require doing so, at the level of subsystems of the functional system. If, during operation, as a result of the monitoring, the service is found to be underperforming, i.e. not performing as intended, by showing that these monitoring criteria are not satisfied, the service provider must eliminate the causes. It alternatively may decide to mitigate the effects of the underperformance.

ATM/ANS.OR.B.010 'Change Management Procedures' has been proposed in the draft regulation to incorporate Article 9(1) of Regulation (EU) No 1034/2011 and point 3.1 of Annex I to Regulation (EU) No 1035/2011 with more details. The possibility to deviate from these approved procedures, as an exceptional case, if the service provider has found that they are not suitable for a particular change, is introduced to increase the flexibility of the provider. The proposed provision gives service providers the flexibility to include these procedures as part of the management systems or manage them separately, and for them not to be dependent on certification. Any material modification of those procedures is to be approved by the competent authority.

The provision on 'Contracted activities' (ATM/ANS.OR.B.015) sets up the requirements for all service providers to manage the activities they contract out to or purchase from other organisations (which may, or may not, be certified to carry out such activities). It guarantees that the contracted activities are also carried out under the approval and oversight of the certified service provider in accordance with the applicable requirements, and ensures that the competent authority is provided with access to the contractors' facilities and data for oversight purposes. By introducing this requirement, the term 'operating organisation' is not needed anymore.

The proposal in NPA 2013-08 on 'Human resources' has been commented considering the management system requirements. As an outcome, the provision was renamed to 'Personnel requirements' (ATM/ANS.OR.B.020) and the requirement for the service provider to appoint an accountable manager is introduced. Said manager shall have the authority to ensure that all activities can be financed and carried out in accordance with the applicable requirements. Moreover, taking due account of the feedback from the stakeholders, a view was shared that the provision on 'Organisational structure' would better relate to the personnel requirements, therefore, it has been integrated therein to.

ATM/ANS.OR.B.025 'Facilities requirements' is not considered as a new element and is purposed to implement point 5(a) of the Essential Requirements in Annex Vb to the Basic Regulation.

The provision on 'Record keeping' (ATM/ANS.OR.B.03) also implements point 5(a) of the Essential Requirements in Annex Vb to the Basic Regulation. It does not specify the records that require to be kept per type of services. This allows the service provider to identify during the establishment of the management system the list of records they would need to keep, taking into account their services. The format and retention period of the records are required to be specified in the service provider's management system.

The provision on 'Operations manuals' (ATM/ANS.OR.B.040) derives from the current legislation. It is considered important to keep this requirement as the operations manual contains the operational procedures to be followed by the operational personnel for the provision of the services.

2.5.5.3 Subpart C — Specific organisational requirements for service providers other than ATS providers (ATM/ANS.OR.C)

This new Subpart proposes a set of requirements for the assessment and assurance of the changes to functional systems by service providers other than ATS providers. It resolves the issue of current regulations that request CNS providers to perform a safety assessment of the changes they make to their functional systems. Furthermore, for MET and AIS, the data provided as part of their services has to be of sufficient quality, according to Regulation (EU) No 1035/2011. The reason why a different set of requirements for ATS providers and for CNS providers is needed is that they have different responsibilities related to safety and different abilities to influence the safety of operations, thus, different abilities to implement mitigating measures for safety risks. The difference between an ATS provider and a CNS provider lies in that whereas an ATS provider can dynamically intervene in order to control the safe use of the service it provides, if and when it sees an unsafe situation developing, a CNS provider cannot. The CNS provider does not have this dynamic view of the use of its service and, therefore, cannot intervene in order to alter the situation. Furthermore, the CNS provider may not know how its service is being used, either in normal circumstances or in circumstances where immediate intervention is necessary in order to maintain safety. Consequently, the CNS provider will not be able to judge whether it will be used safely. The same argument can be made for the other service providers that provide supporting services to ATS, i.e. MET, AIS, ASM, ATFM and DAT.

It should be noted that in making safety support assessment and assurance applicable to all service providers other than ATS providers, they will now be formally required to assess and assure changes to their functional systems.

For these reasons, it is necessary to differentiate between the types of assessment the different type of service providers are able to conduct. ATS providers will need to conduct a safety assessment and this is covered in ATS.OR.205 of Annex IV. Service providers other than ATS providers shall conduct what has been called a 'safety support assessment'. The result of the safety support assessment is presented in a safety support argument. The goal of a safety support assessment is to ensure that the changed service will behave only as specified (it does what it is said to do and nothing more) in the specified context (operational environment) and the way the service behaves complies with and does not contradict any applicable requirements placed on the changed service by this or other regulations.

The provisions included in this Subpart are those on the determination of the scope of the change, the determination of the monitoring criteria whose satisfaction will demonstrate that the change behaves as predicted by the assurance argument during operation. It is important to the Agency that the elements of the safety support assessment are contained in the Implementing Rule to ensure a harmonised implementation.

The proposed provisions adapt the concept of the existing requirements in Regulation (EC) No 482/2008 and extend its applicability to other parts of functional systems (people, procedures and equipment) rather than to software alone. Based on the consultation, it has been concluded that Regulation (EC) No 482/2008 can be repealed, but certain provisions should be moved to AMC. When the Agency completes the AMC/GM, these aspects will be addressed.

2.5.5.4 Subpart D — Specific organisational requirements for ANS and ATFM providers and the Network Manager (ATM/ANS.OR.D)

Subpart D sets up the specific organisational requirements for ANS and ATFM providers and the Network Manager. All the provisions in this Subpart originate from Regulation (EU) No 1035/2011 and Annex VI to Regulation (EU) No 677/2011, including requirements for business, annual and performance plans; security management; financial strength; liability and insurance cover; and reporting requirements. Based on the outcome of the NPA consultation, the application of the same requirements to ATFM providers as well was proposed. This Opinion, therefore, maintains the established regulatory coverage to apply these requirements to all ANSPs, the Network Manager and the providers of tactical ATFM at a national level (this aspect is covered by point 2(g) of in Annex Vb to the Basic Regulation).

One of the novelties considered was the cyber security aspects when referring to the security management system based on the comments received during the NPA consultation. There are two parameters to be taken into account — the concept of information security threats and the concept of trust. The latter, in this particular situation, would result in the notion of 'trusted organisations'. The Agency, however, believes that this aspect is sufficiently covered in the regulation as far as the service providers need to formalise agreements with operating organisations. Also, the Agency believes that the extension of the scope of security management in this very regulation needs further consideration. Based on these aspects, the Agency decided not to include further specific requirements on the concept of trust, but instead to insert the notion of cyber security threats.

2.5.6 Annex IV — Specific requirements for the provision of air traffic services (Part-ATS)

Part-ATS is based on Annex II to Regulation (EU) No 1035/2011 after making the necessary adjustments to implement the specific provisions laid down in point 5(b) of Annex Vb to the Basic Regulation and stemming from the NPAs 2013-08 and 2014-13 consultations. It consists of two Subparts.

2.5.6.1 Subpart A — Additional organisation requirements for the provision of air traffic services (ATS.OR)

Subpart A (ATS.OR) sets up the additional organisation requirements for the provision of air traffic services and is divided in three Sections:

<u>Section 1 (General requirements)</u> contains the requirements related to 'Ownership' (ATS.OR.100) and 'Open and transparent provision of service' (ATS.OR.115) which derive from the current EU framework and apply today.

<u>Section 2 (Safety of services)</u> sets the requirements for the air traffic services (ATS) provider with regard to the safety of services.

By ATS.OR.200, the ATS provider is required to establish a 'Safety management system'. After due consideration of the stakeholders' responses to the specific questions posed by the Agency in the Explanatory Note (questions in paragraphs 46 and 139) regarding the ICAO Annex 19 SMS

framework, and the focussed consultation, the Agency acknowledges the overall preference to align with the ICAO framework. The Agency considers that the most appropriate implementation of the SMS framework is a combination of IR and AMC material, and as such, the four components of the ICAO SMS framework are retained in the IR and the elements thereof are adopted between IR and AMC.

Despite having been commented by one individual stakeholder during the CRD to NPA 2013-08 reaction period, the Agency believes that the objectives of performance-based rulemaking are better met with this proposal.

ATS.OR.205 'Safety assessment and assurance of changes to the functional system' replaces point 3.2 of Annex II to Regulation (EU) No 1035/2011. However, it is more generic and does not impose the use of any particular method on the service provider. Indeed, the proposed requirements allow different methods and techniques to be used to perform the safety assessment of changes to the functional system.

The severity table which is included in Section 4 of point 3.2.4 of Annex II to Regulation (EU) No 1035/2011 has been moved to GM, but rules for the construction of a severity table are intended to be in an AMC. This is because there can be also other types of severity schemes that are more appropriate for different operational environments. Therefore, a severity classification limited to only one possibility would have been too restrictive and without any added value to the assessment. This is in line with the approach taken to ensure that the requirements are generic and not methodoriented, and is a significant change to the existing Regulation (EU) No 1035/2011.

In addition, the proposed provisions follow the approach of the safety support assurance requirements, but instead of providing assurance that the service will behave only as specified in the specified environment, in the case of an ATS provider, the safety argument contains the assurance that the safety criteria are valid, satisfied and will remain satisfied during the operation of the changed functional system. This requirement includes the determination of the scope of the change; the identification of hazards; risk assessment and, if necessary, mitigation; verification; and the identification of monitoring criteria.

ATS.OR.210 'Safety Criteria' describes the criteria that are used to decide the safety acceptability of a change to a functional system. Such criteria shall be specific, observable and verifiable. They can be expressed in terms of safety risk or other objective measures that relate to safety, e.g. proxies (recognised codes of practices or comparison with similar systems), which have now been moved to AMC material.

In NPA 2014-13, an 'objective for safety', which was related to the validity of the set of safety criteria, was included in the SMS. However, that provision was widely criticised by commentators. ATS.OR.210 now includes the criterion to assess the set of safety criteria that, when taken as a whole, must collectively ensure that no unacceptable risk is introduced in the system after the change. AMC will be developed showing means to achieve this. One way is to ensure that the changed functional system is at least as safe as before introducing the change. It is, however, understood that there are other ways to ensure that an unacceptable risk is not introduced. The Agency will explore these ways and propose AMC that accommodate them.

ATS.OR.215 sets the requirements for ATS providers to ensure that air traffic controllers are properly licensed and hold a medical certificate in accordance with the new forthcoming Regulation on air

traffic controller licensing and medical certification, which follows the same principle applied today in accordance with point 3.1.2(a) of Annex II to Regulation (EU) No 1035/2011.

Aiming at ensuring consistency between different provisions within the proposed rule, the initial proposal on 'Safety requirements for engineering and technical personnel undertaking operational safety-related tasks' that originates from point 3.3 of Annex II to Regulation (EU) No 1035/2011 has been redrafted, renamed and simplified. It has resulted in ATS.OR.220 'Requirements for air traffic safety electronic personnel'. It requires the ATS provider to ensure rostering arrangements for ATSEP as well as to establish a procedure for cases when the physical and/or mental conditions of ATSEP are in doubt. In addition, the ATS provider is required to ensure that a register related to ATSEP locations and duties, including any rostering methodology, is maintained.

Section 3 'Specific human factors requirements for air traffic control service providers' establishes provisions that implement the Essential Requirements in point 5 'Service providers and training organisations', paragraph (b) of Annex Vb to the Basic Regulation. It is recognised that human factors may significantly impact on the performance of organisations and individuals involved in the safety of air operations. The legislator has identified this as a potential risk in the provision of ATS for which an implementing action is required, in particular with regard to the negative effects of air traffic controllers' stress, fatigue and problematic use of psychoactive substances on the services rendered. This section establishes the requirements to be fulfilled by the ATC service providers to manage air traffic controllers' stress (ATS.OR.310), fatigue (ATS.OR.315) and rostering system (ATS.OR.320), as well as to set up a policy along with the associated procedures to deal with the prevention and the detection of cases of problematic use of psychoactive substances, in particular by air traffic controllers (ATS.OR.305). The proposed provisions form a proportionate approach which is supported by a set of draft AMC and GM complementing them.

With regard to a specific comment on ATS.OR.315, the Agency is of the opinion that the purpose of this provision cannot be regarded as introducing a complete or partial Fatigue Risk Management System, but it requires the ATC service provider to undertake actions which are already in line with the actual SMS provisions. This approach is confirmed by the existence of draft AMC1 ATS.OR.200(a)(2)(ii) which clarifies that human factors are included in the scope of the SMS of ATS providers. ATS.OR.315 will be further accompanied by appropriate AMCs and GMs for which a placeholder in the draft Decision is already established and which the Agency will develop in due time, in accordance with the approach just described and with the contribution of qualified experts from the industry via a focussed consultation meeting.

Based on the comments received during the public consultation and taking into account the discussions held during the thematic review group meeting, the safety elements of the air traffic controllers' rostering system have been elevated from AMC to Implementing Rule and placed to ATS.OR.320. It is recalled that this provision implements an explicit Essential Requirement in Chapter 5 (b)(i)of Annex Vb to the Basic Regulation on the subject. In this light, the actual provision responds to the need to emphasise with appropriate regulatory force the importance of considering fatigue as a factor of risk which needs to be appropriately identified and mitigated when organising the alternation of duty and rest periods of air traffic controllers.

Furthermore, the Agency is fully involved in the ongoing ICAO activities leading to the establishment of a regulatory framework addressing air traffic controllers' fatigue management, to be introduced in

Annex 11 and the associated documentation. The proposed provisions are considered to be in line with the direction ICAO has followed on this specific issue. The adopted EASA Rulemaking Programme already includes a rulemaking task (RMT.0486) which will ensure a full alignment with the future ICAO provisions on this subject. A RIA will be developed together with the introduction of Fatigue Risk Management System (FRMS) provisions, which will be based on the future ICAO provisions and which the Agency will transpose into the EU legislation through the future RMT.0486, to be started in the 3rd quarter of 2015.

2.5.6.2 Subpart B — Technical requirements for the provision of air traffic services (ATS.TR)

The provisions on 'Working methods and operating procedures' (ATS.TR.100) derive from point 4 of Annex II to Regulation (EU) No 1035/2011. The reference to ICAO Annex 2 has been replaced with a reference to Regulation (EU) No 923/2012 (the SERA Regulation), which transposes the same ICAO Annex 2 and some provisions of ICAO Annex 3 and ICAO Annex 11 as well into the EU regulatory framework. However, since the rest of ICAO Annex 11 has not yet been transposed into the EU regulatory framework, the up-to-date references to ICAO Annex 11 and ICAO Annex 10 are kept in this provision including up to the last amendment made. These references will be replaced with the introduction of a complete set of technical requirements addressing the provision of ATS, mainly based on provisions in ICAO Annex 11 and Doc 4444. The definition of this set of requirements is currently in progress under RMT.0464 'Requirements for Air Traffic Services (ATS)' activities; the Agency envisages to publish the related Opinion by the end of 2016.

Introduction of specific provisions for ATS providers providing services to flight test

During the rule development, the Agency was made aware of the specific needs required by ATS providers which provide ATS services to flight test, especially when carrying out these services in cohabitation with other airspace users. Therefore, the Agency acknowledges the need to allow the use of specific and alternative conditions and operating procedures subject to approval by their competent authority. Consequently, the Agency proposes a regulatory approach consisting of a particular privilege within the certificate (Appendix 1 to Annex II) which further allows any limitations or conditions to be specified, if deemed necessary.

While the service provision for flight test may vary from one Member State to another, the Agency's opinion is that such a general scheme can be applied uniformly across the EU in order to support and facilitate the necessary flight testing performed by the manufacturing industry within the European airspace ATS.TR.105(b). However, nothing prevents the competent authority from deciding not to include such a privilege in the certificate, if this is not deemed necessary.

The Agency is also pleased to note the positive feedback received on this specific issue during the CRD to NPA 2013-08 reaction period.

2.5.7 Annex V — Specific requirements for the provision of meteorological services (Part-MET)

This Annex lays down the requirements related to the provision of meteorological services. The proposal transposes ICAO Annex 3 Part I (Core SARPs) and Part II (Appendices and Attachments), which correspond to Subpart A (MET.OR) and Subpart B (MET.TR) respectively. The proposed rule is in line with the latest ICAO amendments negating the need for Member States to transpose these amendments into their national legislation. It is structured in a way to anticipate the future ICAO Annex 3 restructuring with the forthcoming amendments 77 and 78 (PANS-MET development). The

MET rules are also based on the European Air Navigation for MET (ICAO Doc EUR 14) and other relevant ICAO or WMO documents.

The transposition of ICAO Annex 3 will ensure harmonised application and availability of the meteorological standards in Europe to support the integration of meteorological information and data exchange into the system wide information system (SWIM) digital environment. In particular, it will support the exchange of meteorological data envisaged by the ATM functionality (Initial System Wide Information Management) specified by Article 3(1)(e) of Regulation (EU) No 716/2014²⁵. The European rules for meteorology will further enable the evolution of the provision of meteorological service in support of the Aviation System Block Upgrade (ASBU) envisioned by the Global Air Navigation Plan, and the SESAR Master Plan.

2.5.7.1 Subpart A — Additional organisation requirements for the provision of meteorological services (MET.OR)

This Subpart A addresses the requirements applicable to meteorological services providers. It specifies what kind of meteorological information needs to be provided and by which meteorological services provider. The draft rules mainly transpose ICAO Annex 3 Part I. This Subpart A contains the requirements for MET providers and is divided into two sections. Section 1 contains the general obligations that are applicable to all MET providers and Section 2 addresses those requirements to be met by the six specific categories of MET providers that have been identified.

This Subpart only contains very little changes, mostly editorial ones or for improvement of clarity, compared to the proposal made into the NPA/CRD version. Alignment with the latest Amendment 76 to ICAO Annex 3 is ensured throughout the text. Moreover, some changes have been made in order to ensure consistency with Subpart B (technical requirements) that has been developed separately.

Section 1 on 'general requirements' applicable to all MET providers is limited to five provisions reflecting general obligations covering similar ICAO Annex 3 obligations. The main provision is the one identifying who are the users that need to be provided with meteorological information. Unless the meteorological information is provided to a particular user, this provision — MET.OR.100 — applies to all the other relevant requirements throughout the text.

Section 2 on 'specific requirements' contains the requirements applicable to the six categories of the identified MET providers: the aeronautical meteorological station, the aerodrome meteorological office, the meteorological watch office, the volcanic ash advisory centre, the tropical cyclone advisory centre and the world area forecast centre. Each chapter related to a specific MET provider starts with a general requirement covering the main obligations of this MET provider. The following requirements of each chapter address more specific obligations related to the type of meteorological information provided.

2.5.7.2 Subpart B — Technical requirements for the provision of meteorological services (MET.TR)

This Subpart B complements Subpart A and transposes ICAO Annex 3 Part II 'Appendices and Attachment' by proposing the technical requirements for the provision of meteorological services. These technical requirements reflect 'how' MET providers need to provide the meteorological

²⁵ Commission Implementing Regulation (EU) No 716/2014 of 27 June 2014 on the establishment of the Pilot Common Project supporting the implementation of the European Air Traffic Management Master Plan (OJ L 190, 28.6.2014, p. 19).



information to the users. The reference numbers of each technical requirement correspond to those in Subpart A (organisation requirements).

Based on the comments received, the following main changes have been made compared to the proposal made in NPA 2014-07:

- (1) The following definitions have been added as requested by stakeholders: 'Minimum sector altitude'; 'Alternate aerodrome'; 'Take-off alternate'; 'Destination alternate' and 'En route alternate'.
- (2) The order of the chapters has been amended to list in a more logical way the meteorological service providers according to the type of services they provide, starting at local level and progressing to more global level: aeronautical meteorological stations, aeronautical meteorological offices, meteorological watch offices, VAAC, TCAC and WAFC. Consequently, the reference numbers of the requirements have changed as well.
- (3) The related criteria for local special reports (ICAO Annex 3, Appendix 3, paragraph 2.3.2) are reinserted into the resulting text.
- (4) The relevant charts and forms from Appendix 1 to ICAO Annex 3 have been transposed into the resulting text.
 - (5) The paragraph related to the time of transmission of a valid TAF has been aligned with ICAO Annex 3 Appendix 10, paragraph 2.1.2.
- (6) The provision on the averaging period for visibility (in former MET.TR.255(b)(4)(i) has been moved from the Implementing Rule to AMC material and, therefore, follows the ICAO recommendation 4.2.3 a) on the 1-minute averaging visibility for local routine and local special reports.
- (7) A different approach to transpose provision 1.1.3 of Appendix 6 to ICAO Annex 3 has been proposed in order to clarify the numbering of a SIGMET message. The new provision is in MET.TR.250(b) and (c).
- (8) The templates for the local routine and local special reports and for aerodrome warnings are moved to AMC material as it is noted that, in practice, they may not be issued in accordance with the template.
- (9) Local routine and local special reports: the term 'local routine and special reports' has been replaced by 'local routine and local special reports' throughout the text, for consistency.
- (10) List of additional AMC/GM and deleted AMC/GM:
 - 2 GMs added on Meteorological Bulletins;
 - 1 GM added on aerodrome meteorological offices;
 - 1 AMC added to include the template for aerodrome warnings;
 - 1 AMC added to include the template for local routine and local special reports;
 - 1 AMC related to supplementary information on wind shear warnings is deleted;
 - 1 GM added on the dissemination of wind shear alerts;



- The GM related to the example of volcanic activity report is deleted;
- 1 GM on ATS units related to meteorological reports is added;
- 1 GM on 'marked continuity' is added;
- The AMC related to the characteristics of present weather phenomena is deleted;
- 1 AMC on human observation is added;
- The related AMC on 'display' of meteorological observation is deleted;
- 1 GM on marked discontinuity of visibility is added; and
- 2 AMCs on the sequence number of SIGMET messages is added.
- (11) Attachments A and B to ICAO Annex 3 have been directly transposed into the rule text and not referred to anymore.

2.5.8 Annex VI — Specific requirements for the provision of aeronautical information services (Part-AIS)

Annex VI currently contains only limited requirements, which are based on Annex IV to the current Regulation (EU) No 1035/2011. As this Annex VI has not been subject to implementation, it remains unchanged as also presented in the CRD resulting text version.

The activity of rulemaking task (RMT.0477) on 'Technical requirements and operational procedures for AIS/AIM' is in progress and the related NPA is expected to be published for consultation in the 2nd quarter of 2015. The proposal included in said NPA will amend this Annex VI and will transpose ICAO Annex 15 and its latest amendments.

2.5.9 Annex VII — Specific requirements for the provision of Data for airspace users for the purpose of air navigation (Part-DAT)

During the CRD to NPA 2013-08 reaction period, the draft regulation was commented with regard to the issues related to DAT providers. As already mentioned in Section 2.1.4, the Agency issued NPA 2014-20 (on 8 August 2014) that proposes the specific organisation requirements and responsibilities that are to be applicable to DAT providers as well as the associated technical requirements for the provision of data services, and will amend Annex VII to this draft proposal for a Commission Implementing Regulation. Said NPA proposes definitions of terms used in Annex VII, e.g. 'aeronautical data', in addition to the definitions of 'DAT provider', its types and the scope of its activities. Furthermore, in the Explanatory Note to NPA 2014-20, there is a description of the interfaces between the regulated parties and the proposed rule and how the interoperability is achieved throughout the aeronautical data chain, as well as a clarification of who should be considered a customer.

It is important to be noted that the evaluation shows that the oversight of DAT providers of navigation and aeronautical databases by the Agency is considered to be the preferred option as it provides the highest benefits in terms of decrease of workload for DAT providers and the airlines operators. This oversight will enable the DAT providers to show compliance with the minimum requirements ensuring data quality, thus relieving the airlines operators to perform audits on DAT providers. In addition, the preferred option will bring full harmonisation in terms of scope between the Agency and the FAA regarding regulatory requirements for these types of databases.

The consultation period of NPA 2014-20 expired on 31 October 2014 and the Agency will take due consideration of the issues raised by the commentators on this subject at the stage of the Opinion development that is anticipated to be addressed to the Commission during the 1st quarter of 2015.

2.5.10 Annex VIII — Specific requirements for the provision of communication, navigation or surveillance services (Part-CNS)

Annex VI on the provision of AIS and Annex VIII on the provision of CNS originate from Annex V to Regulation (EU) No 1035/2011.

After the alignment of the SMS requirements with the ICAO ones, a Note in Annex 19 was duly taken into consideration. Said Note states that 'the provision of AIS, CNS, MET and/or SAR services, when under the authority of an ATS provider, are included in the scope of the ATS provider's SMS. When the provision of AIS, CNS and/or MET services are wholly or partially provided by an entity other than an ATS provider, the related services that come under the authority of the ATS provider, or those aspects of the services with direct operational implications, are included in the scope of the ATS provider's SMS.' Therefore, the safety of CNS services was considered to be more effectively managed by the users of those services with direct operational implications, i.e. ATS providers, aircraft operators and/or ADR operators, in the context of the SMS they have in place. In addition, acknowledging that CNS providers are not necessarily ATS providers, and vice versa, the obligation for a CNS provider to have an SMS in place has been removed. It is important to be noted the CNS providers will remain subject to certification and they will be required to have in place a management system to manage the performance of the services they provide. This is also in line with the principles of 'assessment of changes to functional system'.

However, both CNS and ATS providers may employ ATSEPs and the requirements for such personnel should be the same. Therefore, the requirements for air traffic safety electronic personnel have been retained by making a reference to ATS.OR.220 instead of repeating the same provision.

CNS.OR.100 'Technical and operational competence and capability' and CNS.RT.100 'Working methods and operating procedures for the provision of communication, navigation and surveillance services' remain unchanged.

2.5.11 Annex IX — Specific requirements for the provision of air traffic flow management (Part-ATFM)

Many comments received during the NPA 2013-08 consultation indicated a need for integration of Regulation (EC) No 255/2010²⁶ into the draft proposed rule and for development of AMC and GM related to the specific requirements for the provision of ATFM. Also, a detailed proposal for integration of Regulation (EU) No 255/2010 into this draft proposed rule was submitted to the Agency during the CRD reaction period. In order to achieve a timely issuing of this Opinion, the provision ATFM.TR.100 'Working methods and operating procedures for the provision of ATFM' retains its reference to Regulation (EU) No 255/2010, and after further consideration, a reference to Regulation (EU) No 677/2011 was inserted as well. Nevertheless, the Agency agrees with the need to update the ATFM-related common requirements, to simplify the regulatory framework and to support the stakeholders

Commission Regulation (EU) No 255/2010 of 25 March 2010 laying down common rules on air traffic flow management (OJ L 80, 26.3.2010, p. 10).



with relevant AMC and GM. Therefore, the Agency will continue to support the European Commission on the issue submitting possibly a regulatory proposal.

2.5.12 Annex X — Specific requirements for the provision of airspace management (Part-ASM)

In NPA 2013-08, this Annex was denoted as 'reserved' waiting for the outcome of a separate rulemaking activity. However, after further evaluation of the current applicable requirements, only one provision (ASM.TR.100) on 'Working methods and operating procedures for the provision of ASM' is introduced in this Annex. Said provision requires an ASM provider to be able to demonstrate that its working methods and operating procedures are compliant with Regulation (EC) No 2150/2005²⁷ and Regulation (EU) No 677/2011.

Some comments received questioned the definition of ASM as a service, especially when considering ASM Level 1 as a sovereign competence of a Member State. The Agency responded that Regulation (EC) No 549/2004 (the Framework Regulation) provides the definition of ASM and also the definition of ATM including ASM. The Basic Regulation with its Article 8b requires that providers of ATM/ANS are subject to certification. In this draft rule, which has a dual legal basis, the above provisions are reflected accordingly. However, considering the issues raised during the consultation, the certification scheme is limited to pre-tactical (ASM Level 2) and tactical (ASM Level 3) services.

2.5.13 Annex XI — Specific requirements for the provision of airspace design (Part-ASD)

During the NPA 2013-08 consultation, the definition of 'airspace design' as a service including its certification, was questioned. On the one hand, the Agency acknowledges that Airspace Design (ASD) is not clearly defined as an ATM/ANS service neither in the Basic Regulation nor in Regulation (EC) No 549/2004, thus, it may appear excessive to regulate it as an ATM/ANS service according to Article 8b of the Basic Regulation (e.g. requiring a certificate to provide the ASD service). However, the Essential Requirements included in Paragraph 2(i) of Annex Vb to the Basic Regulation address the obligation for the Agency to ensure safe airspace structure and flight procedures designs, and, hence, the legal basis for their regulation. Including the ASD provider in the definition of 'service provider' would mean that the ASD service should be certified. The concern that a certification process for ASD providers may be too cumbersome in certain situations (e.g. airspace structures) is acknowledged; moreover, any Implementing Rule, in accordance with Article 8b.(7)(b) of the Basic Regulation, should be 'proportionate to the type and complexity of the services provided.' Therefore, it could be reasonable in the case of ASD to envisage a leaner certification process, if any.

On the other hand, it is obvious that Airspace Design has a direct effect on the trajectory followed by aircraft; poor and/or erroneous designs of airspace structures and flight procedures can increase the risks of incidents or accidents. The correct and harmonised design of the airspace structures and flight procedures should, therefore, contribute to ensuring safe operations within the European airspace. Furthermore, the ASD plays a key role in the safety of air operations and is also a key enabler for the implementation of new navigation concepts such as Performance-Based Navigation (PBN).

The Agency has already launched RMT.0445 with the objective of proposing Implementing Rules and AMC/GM on airspace design, including procedure design. Given that said future proposal will aim at

²⁷ Commission Regulation (EC) No 2150/2005 of 23 December 2005 laying down common rules for the flexible use of airspace (OJ L 342, 24.12.2005, p. 20).



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ensuring that the airspace structures and flight procedures are appropriately surveyed, designed and validated. It seems appropriate that this RMT analyses and decides on the most appropriate way to regulate the organisations that design these elements. It is, therefore, proposed that the decision about the need of certification will be addressed by that rulemaking task without prejudging the approach in this Opinion. Therefore, the ASD is removed from the definition of 'service provider' ('ATM/ANS provider' proposed in NPA 2013-08), and from the certificate. Given that the development of the subject implementing measures cannot be included in this Opinion as initially planned, this Annex (Part-ASD) is 'reserved'.

2.5.14 ANNEX XII — Specific requirements for the provision of other ATM network functions (Part-NM)

Annex XII (Part-NM) stems from the implementation of the Basic Regulation, especially Article 8b(2), wherein ATM/ANS providers (including providers of ATFM) are required to hold a certificate. The Network Manager being a provider of centralised ATFM needs to be subject to the same requirements as the rest of the ATFM providers and has, therefore, to be certified. The main change that would apply compared to the current state of play is the certification of the Network Manager by its competent authority before being subject to continuous oversight. Based on Article 22a of the Basic Regulation, the Agency acts as the competent authority for the certification and oversight of the Network Manager.

This Annex XII contains only one provision (NM.TR.100) that addresses working methods and operating procedures provision. It makes reference to Regulations (EU) Nos 255/2010 and 677/2011 on the subject.

2.5.15 ANNEX XIII — Requirements for personnel training and competence assessment (Part-PERS)

Point 5(a)(iv) of Annex Vb to the Basic Regulation stipulates that 'the service provider shall use only suitably qualified and trained personnel and implement and maintain training and checking programmes for the personnel'. The Agency is, therefore, mandated to propose rules for the service providers to ensure that their personnel are appropriately trained to perform their duties and that they are continuously assessed to maintain their competence.

Annex XIII is purposed to provide the necessary implementing measures on that subject. With this Opinion, only one subpart (Subpart A) on air traffic electronic personnel is proposed. Possible other subparts dedicated to other categories of personnel may be proposed later on, as necessary.

2.5.15.1 Subpart A — Air traffic safety electronics personnel (ATSEP)

Subpart A proposes service provider requirements for the training and competence assessment of air traffic safety electronics personnel (ATSEP). This Subpart has not been subject to further amendments following the few reactions received during the CRD consultation phase. The 4 sections contained in this Subpart, therefore, remain unchanged.

The definition of ATSEP

The change affecting this Subpart is the definition of ATSEP (definition No 17 in Annex I to this draft regulation) which now reads:

"Air traffic safety electronics personnel (ATSEP)" means any authorised personnel who are competent to operate, maintain, release from, and return into operations systems that are necessary for the provision of services."

This proposal is based on the outcome of NPA 2014-13 consultation on 'Requirements for safety assessment of changes to ATM/ANS functional systems'. It is now proposed to define the term 'functional system' as 'combination of procedures, human resources and equipment, including hardware and software, organised to perform a function within the context of ATM/ANS'. In order to complement the definition of functional system and to better understand the scope of the requirements, a definition of equipment is proposed: "Equipment' means an assembly of the framework for locating hardware, the hardware itself and possibly a cover to act as a barrier between the internal and external environments.'

In the Explanatory Note to CRD to NPA 2013-08, the Agency explained that the term 'system' (used in the definition of ATSEP) would be defined in NPA 2014-13. But at the time of the CRD to NPA 2013-08 publication, said NPA had not been published yet. Now the term 'functional system' has been defined, which is not seen as fully appropriate in the context of ATSEP. However, the intention of the Agency has always been to align the definition of ATSEP with the outcome of the definition of functional system resulting from NPA 2014-13 as both definitions need to be consistent. This is why, the ATSEP definition now includes the term 'equipment' which is defined in NPA 2014-13 and fully part of the functional system environment. The proposed definition is considered to be in line with the tasks of ATSEP.

<u>Training requirements</u> — no changes

There is currently no European Union regulation to ensure the training and assessment of competence of ATSEP nor are there any harmonised requirements on how to ensure that ATSEP who operate and maintain equipment have and maintain sufficient knowledge and understanding of the services they support and of the actual and potential effects of their work on the safety of those services.

To ensure the training and competence assessment of ATSEP in Europe, the Agency has made use of EUROCONTROL documents related to ATSEP training and competence assessment activities. With regard to the ATSEP initial training, the Agency has taken as a basis the ATSEP Common Core Content (CCC).

The transposition of the ATSEP CCC has been subject to discussion especially regarding the flexibility and proportionality principles. The approach proposed in CRD to NPA 2013-08 has not been further changed. The Agency is of the opinion that the balance achieved between the mandatory elements and the means of ATSEP to comply with these elements is proportionate and provides enough flexibility to service providers according to their size and types of services. The proposal for the basic training does allow service providers to develop their training syllabi according to their needs. Indeed, the rules provide for optional training and leave all the objectives of the basic training at AMC level. Service providers may, therefore, comply with the objectives in the way they consider most appropriate for them. The same approach applies to the qualification training. All the training objectives of the shared and selected streams can be complied with differently, if necessary. In conclusion, the transposition level proposed by the Agency offers a flexible framework for service providers to establish the needs for their ATSEP within their actual operations and in line with their

management systems. This approach also offers the necessary proportionality to all categories of service providers according to the types of services they provide and the number of ATSEP they have, and can, therefore, be tailored to the activities of the service provider and to the task ATSEP will perform.

Concerning the System and Equipment (S/E) rating training, the Agency proposes very general requirements that are based on the EUROCONTROL Guidelines for ATSEP System/Equipment Rating Training Ed. 3.0 which contains material for the final training phase before undertaking assessment to achieve operational competence on particular systems and/or equipment. The Agency also proposes very general requirements to ensure that ATSEP are provided with continuation training based on the EUROCONTROL Guidance for ATSEP Training Progression and Concepts Ed. 1.0.

Competence assessment — no changes

The competence assessment requirements ensure that ATSEP have reached the appropriate level of competence at the end of the training phases. For the Agency, it is important that service providers ensure that ATSEP are competent and maintain their competency through an adequate test and evaluation programme to confirm their competence and to identify areas in need of improvement, as appropriate, either in the individual or the system within which ATSEP work. This assessment needs to be performed to ensure that they remain competent to operate and maintain the system and equipment they are qualified for.

The requirements on competence assessment are very general. Service providers have to establish a training programme as well as an assessment programme. Both programmes are of particular importance as they contain the necessary elements that service providers need to foresee to ensure that ATSEP are properly trained and assessed.

Done at Cologne, on 12 December 2014

Patrick Ky Executive Director

3. References

3.1. Affected regulations

- Commission Regulation (EC) No 482/2008 of 30 May 2008 establishing a software safety assurance system to be implemented by air navigation service providers and amending Annex II to Regulation (EC) No 2096/2005 (OJ L 141, 31.5.2008, p. 5).
- Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010 (OJ L 185, 15.07.2011, p.1).
- Commission Implementing Regulation (EU) No 1034/2011 of 17 October 2011 on safety oversight in air traffic management and air navigation services and amending Regulation (EU) No 691/2010 (OJ L 271, 18.10.2011, p.15).
- Commission Implementing Regulation (EU) No 1035/2011 of 17 October 2011 laying down common requirements for the provision of air navigation services and amending Regulations (EC) No 482/2008 and (EU) No 691/2010 (OJ L 271, 18.10.2011, p. 23).

3.2. Affected decisions

Not applicable

3.3. Reference documents

- Commission Regulation (EC) No 482/2008 of 30 May 2008 establishing a software safety assurance system to be implemented by air navigation service providers and amending Annex II to Regulation (EC) No 2096/2005 (OJ L 141, 31.5.2008, p. 5).
- Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010 (OJ L 185, 15.07.2011, p.1).
- Commission Implementing Regulation (EU) No 1034/2011 of 17 October 2011 on safety oversight in air traffic management and air navigation services and amending Regulation (EU) No 691/2010 (OJ L 271, 18.10.2011, p.15).
- Commission Implementing Regulation (EU) No 1035/2011 of 17 October 2011 laying down common requirements for the provision of air navigation services and amending Regulations (EC) No 482/2008 and (EU) No 691/2010 (OJ L 271, 18.10.2011, p. 23).
- Annex 3 to the Convention on International Civil Aviation (Chicago Convention)
- Annex 19 to the Convention on International Civil Aviation (Chicago Convention)
- EUROCONTROL Specification for Air Traffic Safety Electronics Personnel Common Core Content
 Initial Training Edition 1.0 Edition date: 27/08/2009
- EUROCONTROL Guidelines for the Competence Assessment of Air Traffic Safety Electronics Personnel

4. Appendices

4.1. Appendix 1

Cross references between the relevant provisions on SSP elements laid down in ICAO Annex 19 and the draft proposed regulation

ICAO SSP components	ICAO SSP elements	EASA reference to the new ATM/ANS proposal
	1.1 State safety legislative framework	N/A
State safety policy and objectives	1.2 State safety responsibilities and accountabilities	ATM/ANS.AR.B.001 ATM/ANS.AR.B.005 ATM/ANS.AR.B.010 ATM/ANS.AR.B.015
	1.3 Accident and incident investigation	N/A
	1.4 Enforcement policy	ATM/ANS.AR.C.050
State safety risk management	2.1 Safety requirements for the service provider's SMS	Annex IV (Part-ATS), Section 2 — Safety of service and especially ATS.OR.200 Safety Management System
	2.2 Agreement on the service provider's safety performance	N/A
	3.1 Safety oversight	ATM/ANS.AR.B.001 ATM/ANS.AR.C.005 ATM/ANS.AR.C.010 ATM/ANS.AR.C.015
3. State safety assurance	3.2 Safety data collection, analysis and exchange	ATM/ANS.AR.A.020 ATM/ANS.AR.A.025 ATM/ANS.AR.A.030
	3.3 Safety-data-driven targeting of oversight of areas of greater concern or need	ATM/ANS.AR.C.010 ATM/ANS.AR.C.015
4. State safety promotion	4.1 Internal training, communication and dissemination of safety information	ATM/ANS.AR.B.001 AMC2 ATM/ANS.AR.B.001(a)(2) Training programme and recurrent training

ICAO SSP components	ICAO SSP elements	EASA reference to the new ATM/ANS proposal
	4.2 External training, communication and dissemination of safety information.	N/A

4.2. Appendix 2

Cross references between the relevant provisions on SMS requirements laid down in ICAO Annex 19 and the draft proposed regulation

ICAO SMS component	ICAO SMS elements	EASA reference to the new service providers proposal
	1.1 Management commitment	ATS.OR.200(a)(1)(i)
	and responsibility	AMC1 ATS.OR.200(a)(1)(i)
	1.2 Safety accountabilities	ATS.OR.205(a)(1)(ii)
	1.2 Juicty accountabilities	AMC1 ATS.OR.200(a)(1)(ii);(iii)
	1.3 Appointment of key safety	ATS.OR.200(a)(1)(iii)
1. Safety policy and objectives	personnel	AMC1 ATS.OR.200(a)(1)(ii);(iii)
and objectives	1.4 Coordination of emergency	ATS.OR.200(a)(1)(iv)
	response planning	AMC1 ATS.OR.200(a)(1)(iv)
		ATS.OR.200(a)(1)(v)
	1.5 SMS documentation	AMC1 ATS.OR.200(a)(1)(v)
		AMC2 ATS.OR.200(a)(1)(v)
	2.1 Hazard identification	ATS.OR.200(a)(2)(i)
2. Safety risk management	2.2 Safety risk assessment and	ATS.OR.200(a)(2)(ii)
management	mitigation	AMC1 ATS.OR.200(a)(2)(ii)
	3.1 Safety performance monitoring and measurement	ATS.OR.200(a)(3)(i)
3. Safety	3.2 The management of change	ATS.OR.200(a)(3)(ii)
assurance	3.3 Continuous improvement of	ATS.OR.200(a)(3)(iii)
	the SMS	AMC1 ATS.OR.200(a)(3)(iii)

ICAO SMS component	ICAO SMS elements	EASA reference to the new service providers proposal
4. Safety	4.1 Training and education	ATS.OR.200(a)(4)(i)
promotion	4.2 Safety communication	ATS.OR.200(a)(4)(ii)

4.3. Appendix 3

Cross references between the relevant provisions of the proposed Annex V — Part-MET and ICAO Annex 3 on Meteorological Services for International Air Navigation

Annex V — Subpart A — Implementing Rules (MET.OR)

Draft regulation Annex V Subpart B Rule reference	Draft regulation Annex V — Subpart B Rule title	ICAO Annex 3 rule reference	ICAO Annex 3 rule title
MET.OR.100(a)	Meteorological data & information	Ch.2, 2.1.2	Objective, determination and provision of meteorological service
MET.OR.100(b)	Meteorological data & information	-	-
MET.OR.105(a)	Retention of meteorological information	Ch.9, 9.3.4	Flight documentation
MET.OR.105(b)	Retention of meteorological information	Ch.9, 9.3.4	Flight documentation
MET.OR.110(a)	Meteorological information exchange requirements	Ch.11, 11.1.8	Requirements for communications
MET.OR.110(b)	Meteorological information exchange requirements	Ch.11, 11.1.1 to 11.1.3	Requirements for communications
MET.OR.115	Meteorological bulletins	Ch.11, 11.2	Use of aeronautical fixed service communications and the public Internet — meteorological bulletins
MET.OR.120	Notification of discrepancies to the World Area Forecast Centres	Appendix2, 2.2	Notification of WAFC concerning significant discrepancies
MET.OR.200(a)(1)	Meteorological reports and other information	Ch.4, 4.3.2	Routine observations and reports
MET.OR.200(a)(2)	Meteorological reports and other information	Ch.4, 4.4.2 a)	Special observations and reports
MET.OR.200(a)(3)	Meteorological reports and other information	Ch.4, 4.4.2 b)	Special observations and reports
MET.OR.200(b)	Meteorological reports and other information	Ch.4, 4.6.3.5	Observing and reporting meteorological elements

Draft regulation Annex V Subpart B Rule reference	Draft regulation Annex V — Subpart B Rule title	ICAO Annex 3 rule reference	ICAO Annex 3 rule title
MET.OR.200(c)	Meteorological reports and other information	Ch.4, 4.8 – 1st sentence	Observations and reports of volcanic activity
MET.OR.200(d)	Meteorological reports and other information	Ch.4, 4.4.1	Special observations and reports
MET.OR.205	Reporting of meteorological elements	Ch.4, 4.5.1	Content of reports
MET.OR.210(a)	Observing meteorological elements	Ch.4, 4.6.1	Observing and reporting meteorological elements
MET.OR.210(b)	Observing meteorological elements	Ch.4, 4.6.2	Observing and reporting meteorological elements
MET.OR.210(c)	Observing meteorological elements	Ch.4, 4.6.3	Observing and reporting meteorological elements
MET.OR.210(d)	Observing meteorological elements	Ch.4, 4.6.4	Observing and reporting meteorological elements
MET.OR.210(e)	Observing meteorological elements	Ch.4, 4.6.5	Observing and reporting meteorological elements
MET.OR.210(f)	Observing meteorological elements	Ch.4, 4.6.6	Observing and reporting meteorological elements
MET.OR.210(g)	Observing meteorological elements	Ch.4, 4.6.7	Observing and reporting meteorological elements
MET.OR.210(h)	Observing meteorological elements	Ch.4, 4.6.8	Observing and reporting meteorological elements
MET.OR.215(a)	Forecasts and other information	Ch.3, 3.3.2 a)	Aerodrome meteorological offices
MET.OR.215(b)	Forecasts and other information	Ch.3, 3.3.2 b)	Aerodrome meteorological offices
MET.OR.215(c)	Forecasts and other information	6.2.4	Aerodrome meteorological offices
MET.OR.215(d)	Forecasts and other information	Ch.3, 3.3.2 d)	Aerodrome meteorological offices
MET.OR.215(e)	Forecasts and other information	Ch.8, 8.1.1	General provisions
MET.OR.215(f)	Forecasts and other information	Ch.3, 3.3.2 h)	Aerodrome meteorological offices

Draft regulation Annex V Subpart B Rule reference	Draft regulation Annex V — Subpart B Rule title	ICAO Annex 3 rule reference	ICAO Annex 3 rule title
MET.OR.215(g)	Forecasts and other information	Ch.10, 10.2	Information for search and rescue services units
MET.OR.215(h)	Forecasts and other information	Ch.10, 10.3	Information for aeronautical information services units
MET.OR.215(i)	Forecasts and other information		
MET.OR.215(j)	Forecasts and other information		
MET.OR.220(a)	Aerodrome forecasts	Ch.6, 6.2.2	Aerodrome forecasts
MET.OR.220(b)	Aerodrome forecasts	Ch.6, 6.2.7	Aerodrome forecasts
MET.OR.225(a)	Forecasts for landing	Ch.6, 6.3.1	Landing forecasts
MET.OR.225(b)	Forecasts for landing	Ch.6, 6.3.2	Landing forecasts
MET.OR.225(c)	Forecasts for landing	Ch.6, 6.3.3	Landing forecasts
MET.OR.230(a)	Forecasts — Take-off	Ch.6, 6.4.1	Forecasts for take-off
MET.OR.230(b)	Forecasts — Take-off	Ch.6, 6.4.3	Forecasts for take-off
MET.OR.235(a)	Aerodrome warnings and wind shear warnings and alerts	Ch.7, 7.3.1	Aerodrome warnings
MET.OR.235(b)	Aerodrome warnings and wind shear warnings and alerts	Ch.7, 7.4.1 – 1st sentence	Wind shear warnings and alerts
MET.OR.235(c)	Aerodrome warnings and wind shear warnings and alerts	Ch.7, 7.4.1 – 2nd sentence	Wind shear warnings and alerts
MET.OR.235(d)	Aerodrome warnings and wind shear warnings and alerts	Ch.7, 7.4.3	Wind shear warnings and alerts
MET.OR.235(e)	Aerodrome warnings and wind shear warnings and alerts	Ch.7, 7.3.2	Aerodrome warnings
MET.OR.240(a)	Information for use by operator or flight crew	Ch.9, 9.3.1	Information for aircraft in flight
MET.OR.240(b)	Information for use by operator or flight crew	Ch.9, 9.3.2	Flight documentation

Draft regulation Annex V Subpart B Rule reference	Draft regulation Annex V — Subpart B Rule title	ICAO Annex 3 rule reference	ICAO Annex 3 rule title
MET.OR.245(a)	Watch and other information	Ch.3, 3.4.2)	Meteorological watch offices
MET.OR.245(b)	Watch and other information	Ch.7, 7.1.5	SIGMET
MET.OR.245(c)	Watch and other information		
MET.OR.245(d)	Watch and other information	Ch.3, 3.4.2 f)	Meteorological watch offices
MET.OR.245(e)	Watch and other information	Ch.3, 3.4.2. g)	Meteorological watch offices
MET.OR.245(f)	Watch and other information		
MET.OR.250(a)	SIGMET	Ch.3, 3.4.2. b) & d)	Meteorological watch offices
MET.OR.250(b)	SIGMET	Ch.7, 7.1.1	SIGMET Information
MET.OR.250(c)	SIGMET	Ch.7, 7.1.2	SIGMET Information
MET.OR.250(d)	SIGMET	Ch.7, 7.1.3	SIGMET Information
MET.OR.250(e)	SIGMET	Ch.7, 7.1.6	SIGMET Information
MET.OR.255(a)	AIRMET	Ch.7, 7.2.1 – 1st sentence	AIRMET Information
MET.OR.255(b)	AIRMET	Ch.7, 7.2.1 – 2nd sentence	AIRMET Information
MET.OR.255(c)	AIRMET	Ch.7, 7.2.2	AIRMET Information
MET.OR.255(d)	AIRMET	Ch.7, 7.2.3	AIRMET Information
MET.OR.260(a)	Area Forecasts for low-level flights	Ch.6, 6.5.1 – 1st sentence	Area forecasts for low-level flights
MET.OR.260(b)	Area Forecasts for low-level flights	Ch.6, 6.5.1 – 2nd sentence	Area forecasts for low-level flights
MET.OR.260(c)	Area Forecasts for low-level flights	Ch.6, 6.5.3	Area forecasts for low-level flights
MET.OR.265(a)(1)	Volcanic Ash Advisory Centre responsibilities	Ch.3, 3.5.1 c)	Volcanic ash advisory centres

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MET.OR.265(b)	Volcanic Ash Advisory Centre responsibilities	Ch.3, 3.6	State volcano observatories
MET.OR.265(c)	Volcanic Ash Advisory Centre responsibilities	Ch.3, 3.5.1. d)	Volcanic ash advisory centres
MET.OR.265(d)	Volcanic Ash Advisory Centre responsibilities	Ch.3, 3.5.2	Volcanic ash advisory centres
MET.OR.270(a)	Tropical Cyclone Advisory Centres responsibilities	Ch.3, 3.7 b)	Tropical cyclone advisory centres
MET.OR.270(b)	Tropical Cyclone Advisory Centres responsibilities	Ch.3, 3.7 c)	Tropical cyclone advisory centres
MET.OR.275(a)(1)	World Area Forecast Centre responsibilities	Ch.3, 3.2.1 a) & c)	World area forecast centres
MET.OR.275(a)(2)	World Area Forecast Centre responsibilities	Ch.3, 3.2.1 b)	World area forecast centres
MET.OR.275(b)	World Area Forecast Centre responsibilities	Ch.11, 11.3	Use of aeronautical fixed service communications — world area forecast system products

Annex VI — Subpart B — Implementing Rules (MET.TR)

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В	Rule title		
Rule Reference			
MET.TR.115(a)	Meteorological bulletins	App.10, 2.1.3	Heading of bulletins
MET.TR.115(b)	Meteorological bulletins	App.10, 2.1.4	Structure of bulletins
MET.TR.200(a)	Meteorological reports and other information	Ch. 4.5.1	Contents of reports
MET.TR.200(b)	Meteorological reports and other information	App. 3, 4.1.5.3	Reporting
MET.TR.200(c)(1)	Meteorological reports and other information	App. 3, 2.1.2	Format of meteorological reports
MET.TR.200(c)(2)	Meteorological reports and other information	App. 3, 2.1.4 & 2.1.5	Format of meteorological reports
MET.TR.200(c)(3)	Meteorological reports and other information	App. 10, 2.1.2	Filing times of bulletins
MET.TR.200(d)	Meteorological reports and other information	App. 3, 2.2	Use of CAVOK
MET.TR.200(e)(1)	Meteorological reports and other information	App. 3, 2.3.1 a)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(2)	Meteorological reports and other information	App. 3, 2.3.1 b)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(3)	Meteorological reports and other information	App. 3, 2.3.1 c)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(4)	Meteorological reports and other information	App. 3, 2.3.1 d)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(5)	Meteorological reports and other information	App. 3, 2.3.1 e)	Criteria for issuance of local special reports and SPECI
MET.TR.250(e)(6)	Meteorological reports and other information	App. 3, 2.3.2 a)	Criteria for issuance of local special reports and

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Rule Reference	Rule title		
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			SPECI
MET.TR.200(e)(7)	Meteorological reports and other information	App. 3, 2.3.2 b)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(8)	Meteorological reports and other information	App. 3, 2.3.2 c)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(9)	Meteorological reports and other information	App. 3, 2.3.2 d)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(10)	Meteorological reports and other information	App. 3, 2.3.2 e)	Criteria for issuance of local special reports and SPECI
MET.TR.200(e)(11)	Meteorological reports and other information	App. 3, 2.3.2 f)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(1)	Meteorological reports and other information	App. 3, 2.3.3 a)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(2)	Meteorological reports and other information	App. 3, 2.3.3 b)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(3)	Meteorological reports and other information	App. 3, 2.3.3 c)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(4)	Meteorological reports and other information	App. 3, 2.3.3 d)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(5)	Meteorological reports and other information	App. 3, 2.3.3 e)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(6)	Meteorological reports and other information	App. 3, 2.3.3 f)	Criteria for issuance of local special reports and SPECI

Draft regulation	Drat Regulation	ICAO Annex 3	ICAO Annex 3
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MET.TR.200(f)(7)	Meteorological reports and other information	App. 3, 2.3.3 g)	Criteria for issuance of local special reports and SPECI
MET.TR.200(f)(8)	Meteorological reports and other information	App. 3, 2.3.3 h)	Criteria for issuance of local special reports and SPECI
MET.TR.205(a)(1)	Reporting of meteorological elements	App. 3, 4.1.5.1 – 1st sentence	Reporting
MET.TR.205(a)(2)	Reporting of meteorological elements	App. 3, 4.1.5.1 – 2nd sentence	Reporting
MET.TR.205(a)(3)(i) & (ii)	Reporting of meteorological elements	App.3, 4.1.5.2 b)	Reporting
MET.TR.205(a)(3)(iii)	Reporting of meteorological elements	App.3, 4.1.5.2 c)	Reporting
MET.TR.205(a)(3)(ivi)	Reporting of meteorological elements	App.3, 4.1.5.2 d)	Reporting
MET.TR.205(a)(3)(v)	Reporting of meteorological elements	App.3, 4.1.5.2 e)	Reporting
MET.TR.205(a)(4)	Reporting of meteorological elements	App.3, 4.1.5.2 f)	Reporting
MET.TR.205(b)(1)	Reporting of meteorological elements	App.3, 4.2.4.1	Reporting
MET.TR.205(b)(2)	Reporting of meteorological elements	App.3, 4.2.4.1	Reporting
MET.TR.205(b)(3)	Reporting of meteorological elements	App. 3, 4.2.4.2	Reporting
MET.TR.205(c)(1)	Reporting of meteorological elements	App.3, 4.3.6.1	Reporting
MET.TR.205(c)(2)	Reporting of meteorological elements	App.3, 4.3.6.1	Reporting
MET.TR.205(c)(3)	Reporting of meteorological	App.3, 4.3.6.3	Reporting

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	elements		
MET.TR.205(c)(4)	Reporting of meteorological elements	App.3, 4.3.6.4	Reporting
MET.TR.205(d)(1)	Reporting of meteorological elements	App.3, 4.4.2.1	Reporting
MET.TR.205(d)(2)	Reporting of meteorological elements	App.3, 4.4.2.2	Reporting
MET.TR.205(d)(3)	Reporting of meteorological elements	App.3, 4.4.2.5	Reporting
MET.TR.205(d)(4)	Reporting of meteorological elements	App.3, 4.4.2.8	Reporting
MET.TR.205(e)(1)	Reporting of meteorological elements	App.3, 4.5.4.1	Reporting
MET.TR.205(e)(2)	Reporting of meteorological elements	App.3, 4.5.4.1	Reporting
MET.TR.205(e)(3)	Reporting of meteorological elements	App.3, 4.5.4.4	Reporting
MET.TR.205(f)(1)	Reporting of meteorological elements	App.3, 4.6.2.1	Reporting
MET.TR.205(f)(2)	Reporting of meteorological elements	App.3, 4.6.2.1	Reporting
MET.TR.252(f)(3)	Reporting of meteorological elements	App.3, 4.6.2.2	Reporting
MET.TR.205(g)(1)	Reporting of meteorological elements	App.3, 4.7.3.1	Reporting
MET.TR.205(g)(2)	Reporting of meteorological elements	App.3, 4.7.3.1	Reporting
MET.TR.205(g)(3)	Reporting of meteorological elements	App.3, 4.7.3.2	Reporting
MET.TR.205(g)(4)	Reporting of meteorological elements	App.3, 4.7.3.3	Reporting

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MET.TR.210(a)	Observing meteorological elements	Ch.4, 4.6.1.1	Surface wind
MET.TR.210(a)(1)	Observing meteorological elements	App.3, 1.1	General provisions related to meteorological observations
MET.TR.210(a)(2)	Observing meteorological elements	App.3, 4.1.2.1	Displays
MET.TR.210(a)(3)	Observing meteorological elements	App.3, 4.1.3.1	Averaging
MET.TR.210(b)(1)	Observing meteorological elements		
MET.TR.210(b)(2)	Observing meteorological elements		
MET.TR.210(b)(3)	Observing meteorological elements	App.3, 4.2.2	Displays
MET.TR.210(b)(4)	Observing meteorological elements	App.3, 4.2.3 b)	Averaging
MET.TR.210(c)(1)	Observing meteorological elements		
MET.TR.210(c)(2)	Observing meteorological elements	App.3, 4.3.2.1	Instrumented systems
MET.TR.210(c)(3)	Observing meteorological elements	App.3, 4.3.3.1	Display
MET.TR.210(c)(4)	Observing meteorological elements	App.3, 4.3.4	Averaging
MET.TR.210(d)(1)	Observing meteorological elements	Ch.4, 4.6.4.1	Present weather
MET.TR.210(d)(2)	Observing meteorological elements		
MET.TR.210(e)(1)	Observing meteorological	Ch.4, 4.6.5.1	Clouds

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	elements		
MET.TR.210(e)(2)	Observing meteorological elements		
MET.TR.210(e)(3)	Observing meteorological elements	App.3, 4.5.2	Display
MET.TR.210(e)(4)	Observing meteorological elements	App.3, 4.5.3	Reference level
MET.TR.210(f)(1)	Observing meteorological elements	Ch.4, 4.6.6.1	Air temperature and dew-point temperature
MET.TR.210(f)(2)	Observing meteorological elements	App.3, 4.6.1	Display
MET.TR.210(g)(1)	Observing meteorological elements	Ch.4, 4.6.7	Atmospheric pressure
MET.TR.210(g)(2)	Observing meteorological elements	App.3, 4.7.1	Display
MET.TR.210(g)(3)	Observing meteorological elements		
MET.TR.215(a)(1)	Forecast and other information	Ch.9, 9.1.2	General provisions
MET.TR.215(a)(2)	Forecast and other information	Ch.9, 9.1.2	General provisions
MET.TR.215(a)(3)	Forecast and other information	Ch.9, 9.1.2	General provisions
MET.TR.215(a)(4)	Forecast and other information	Ch.9, 9.1.3	General provisions
MET.TR.215(b)	Forecast and other information	App.9, 2.1	List of information
MET.TR.215(c)	Forecast and other information	App.9, 3.1	List of information
MET.TR.215(d)(1)-(4)	Forecast and other information	App.8, 4.2.1.2	Characteristics of charts
MET.TR.215(d)(5)	Forecast and other information	App.8, 4.2.3 b)	Height indications
MET.TR.215(e)	Forecast and other information	Ch.9, 9.3.1	Services for operators and flight crew members

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MET.TR.215(f)	Forecast and other information	Ch.9, 9.1.6	Services for operators and flight crew members - General provisions
MET.TR.215(g)	Forecast and other information	Ch.9, 9.1.7	Services for operators and flight crew members - General provisions
MET.TR.215(h)	Forecast and other information	Ch.9, 9.1.8	Services for operators and flight crew members - General provisions
MET.TR.215(i)	Forecast and other information	Ch.8, 8.1.1	Aeronautical climatological Information - General provisions
MET.TR.220(a)	Aerodrome forecasts	Ch.6, 6.2.3	Aerodrome forecasts
MET.TR.220(b)	Aerodrome forecasts	App.5, 1.1.1	TAF format
MET.TR.220(c)	Aerodrome forecasts	EUR ANP, 13	Forecasts
MET.TR.220(d)(1)& (2)	Aerodrome forecasts	App.5, 1.1.3	TAF format
MET.TR.220(d)(3)	Aerodrome forecasts	App.5, 1.1.4	TAF format
MET.TR.220(e)(1)	Aerodrome forecasts	App.5, 1.2.1	Inclusion of meteorological elements in TAF
MET.TR.220(e)(2)	Aerodrome forecasts	App.5, 1.2.2	Visibility
MET.TR.220(e)(3)	Aerodrome forecasts	App.5, 1.2.3	Weather phenomena
MET.TR.220(e)(4)	Aerodrome forecasts	App.5, 1.2.4	Cloud
MET.TR.220(f)(1)	Aerodrome forecasts	App.5, 1.3.1	Use of change groups
MET.TR.220(f)(2)	Aerodrome forecasts	App.5, 1.3.3	Use of change groups
MET.TR.220(f)(3)	Aerodrome forecasts	App.5, 1.3.4	Use of change groups

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MET.TR.220(f)(4)	Aerodrome forecasts	App.5, 1.3.5	Use of change groups
MET.TR.220(f)(5)	Aerodrome forecasts	App.5, 1.3.6	Use of change groups
MET.TR.220(g)	Aerodrome forecasts	App.5, 1.4	Use of probability groups
MET.TR.225(a)	Forecasts for landing	App.5, 2.1 1st sentence	Format of trend forecasts
MET.TR.225(b)	Forecasts for landing	App.5, 2.1 - 2nd sentence	Format of trend forecasts
MET.TR.225(c)	Forecasts for landing	App.5, 2.2.1	Inclusion of meteorological elements in trend forecasts
MET.TR.225(c)(1)	Forecasts for landing	App.5, 2.2.2	Surface wind
MET.TR.225(c)(2)(i) & (ii)	Forecasts for landing	App.5, 2.2.3	Visibility
MET.TR.225(c)(2)(iii)	Forecasts for landing	App.5, 2.2.3 - Note	Visibility
MET.TR.225(c)(3)	Forecasts for landing	App.5, 2.2.4	Weather phenomena
MET.TR.225(c)(4)	Forecasts for landing	App.5, 2.2.5	Clouds
MET.TR.225(c)(5)	Forecasts for landing	App.5, 2.2.6	Vertical visibility
MET.TR.225(c)(6)	Forecasts for landing	App.5, 2.2.7	Additional criteria
MET.TR.225(c)(7)	Forecasts for landing	App.5, 2.3	Use of change groups
MET.TR.225(c)(8)	Forecasts for landing	App.5, 2.4	Use of the probability indicator
MET.TR.230(a)	Forecasts for take-off	Ch.6, 6.4.2	Forecasts for take-off
MET.TR.230(b)	Forecasts for take-off	App.5, 3.1	Format of forecasts for take-off
MET.TR.235(a)	Aerodrome warnings and wind shear warnings and alerts	App.6, 6.2.1	Format and dissemination of wind shear warnings and

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	flights		level flights
MET.TR.265(a)	Volcanic Ash Advisory Centre responsibilities	App.2, 3.1.1	Volcanic ash advisory information
MET.TR.265(b)	Volcanic Ash Advisory Centre responsibilities	App.2, 3.1.2	Volcanic ash advisory information
MET.TR.270(a)	Tropical Cyclone Advisory Centre responsibilities	App.2, 5.1.1	Tropical cyclone advisory information
MET.TR.270(b)	Tropical Cyclone Advisory Centre responsibilities	App.2, 5.1.2	Tropical cyclone advisory information
MET.TR.275(a)	World Area Forecast Centre responsibilities	App.2, 1.1	Formats and codes
MET.TR.275(b)(1)	World Area Forecast Centre responsibilities	App.2, 1.2.1	Upper-air gridded forecasts
MET.TR.275(b)(2)	World Area Forecast Centre responsibilities	App.2, 1.2.1 – last sentence	Upper-air gridded forecasts
MET.TR.275(b)(3)	World Area Forecast Centre responsibilities	App.2, 1.2.2 & 1.2.4	Upper-air gridded forecasts
MET.TR.275(c)(1)	World Area Forecast Centre responsibilities	App.2, 1.3.1.1	General provisions
MET.TR.275(c)(2)	World Area Forecast Centre responsibilities	App.2, 1.3.2	Types of SIGWX forecasts
MET.TR.275(c)(3)	World Area Forecast Centre responsibilities	App.2, 1.3.3	Items included in SIGWX forecasts
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MET.TR.275(d)	World Area Forecast Centre responsibilities	App.2, 1.3.2 - Note	Types of SIGWX forecasts