



# Opinion No 02/2018

## Specific requirements for providers of meteorological services, aeronautical information services/aeronautical information management, and flight procedure design services; common rules for airspace structure design

RELATED NPAS/CRDS: 2016-02 (RMT.0477) & 2016-13 (RMT.0445)  
RMT.0719

### EXECUTIVE SUMMARY

This Opinion includes the final outcome of rulemaking task (RMT).0477 and RMT.0445, as well as RMT.0719 triggered by the latest International Civil Aviation Organization (ICAO) Annex 3 ‘Meteorological Service for International Air Navigation’ Amendment (77-A).

The objectives of the proposal are to:

- promote cost-efficiency in the regulatory and certification processes and to avoid duplication at national and European level’ (Article 2(2)(c) of Regulation (EC) No 216/2008);
- facilitate the free movement of airspace users across the European airspace; and
- ensure regulatory harmonisation across Europe, while assisting Member States (MSs) in fulfilling their obligations under the Convention on International Civil Aviation (also known as the ‘Chicago Convention’), by providing a basis for a common interpretation and uniform implementation of the Chicago Convention’s provisions.

This Opinion proposes amendments to the following rules:

- Regulation (EU) 2017/373 and Annexes I (Part-Definitions), II (Part-ATM/ANS.AR), III (Part-ATM.ANS.OR), V (Part-MET), VI (Part-AIS), and XI (Part-ASD) thereto; and
- Regulation (EU) No 139/2014 and Annexes II (Part-ADR.AR) and III (Part-ADR.OR) thereto.

<b>Action area:</b>	Airborne conflict (mid-air collisions) (RMT.0445 & 0477) and regular updates (RMT.0719)		
<b>Affected rules:</b>	<ul style="list-style-type: none"> <li>— Regulation (EU) 2017/373, Part-Definitions, Part-ATM/ANS.AR, Part-ATM/ANS.OR, Part-MET, Part-AIS, and Part-ASD;</li> <li>— Regulation (EU) No 139/2014, Part-ADR.AR, and Part-ADR.OR</li> </ul>		
<b>Affected stakeholders:</b>	Providers of ATM/ANS and the Network Manager, especially MET providers, aeronautical information service (AIS) providers, aerodrome operators, air traffic controllers (ATCOs), aircraft operators, GA pilots, MSs, competent authorities (CAs) and EASA		
<b>Driver:</b>	Safety (RMT.0445 & 0477) and efficiency/ proportionality (RMT.0719)	<b>Rulemaking group:</b>	Yes (RMT.0445 & 0477), no (RMT.0719)
<b>Impact assessment:</b>	Light(RMT.0445 & 0477), none (RMT.0719)	<b>Rulemaking Procedure:</b>	Standard (RMT.0445 & 0477), accelerated (RMT.0719)

• EASA rulemaking process milestones



RMT.0477	11.10.2013	28.4.2016	2018/Q1	2018/Q4	2018/Q4
RMT.0445	14.7.2014	25.10.2016			
RMT.0719	18.8.2017	20.12.2017 (AB consultation)			



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## 1. About this Opinion

### 1.1. How this Opinion was developed

The European Aviation Safety Agency (EASA) developed this Opinion in line with Regulation (EC) No 216/2008<sup>1</sup> (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure<sup>2</sup>.

This rulemaking activity is included in the EASA 5-year Rulemaking Programme<sup>3</sup> under rulemaking tasks RMT.0477, RMT.0445, and RMT.0719. The scope and timescales of the tasks were defined in the related ToRs<sup>4</sup>.

The *draft* text of this Opinion results from:

- The consultation of the following NPAs<sup>5</sup> with the interested parties, including industry, national aviation authorities (NAAs) and social partners:
  - NPA 2016-02 'Technical requirements and operational procedures for aeronautical information services and aeronautical information management', published on 28 April 2016; and
  - NPA 2016-13 'Technical requirements and operating procedures for airspace design, including flight procedure design', published on 25 October 2016.
- The consultation with the EASA Advisory Bodies (ABs) in accordance with Article 16 'Special rulemaking procedure: accelerated procedure' of MB Decision No 18-2015 of a proposal to amend Annex V (Part-MET) to Regulation (EU) 2017/373 under RMT.0719. That proposal was deemed necessary to transpose the newly introduced International Civil Aviation Organization (ICAO) Annex 3 Amendment 77-A provisions into the European Union (EU) regulatory framework. The aim was to resolve persisting discrepancies between the applicability of EU rules and the originating ICAO provisions. For that purpose, an ICAO-EU synchronisation mechanism was developed to enable the management of such regular updates of EU rules, stemming from the latest amendments to ICAO provisions (i.e. Standards and Recommended Practices (SARPs), procedures, documents).

In reference to NPA 2016-02, 1090 comments were submitted by service providers, aeronautical information services (AIS) providers, aerodrome operators, NAAs, industry and professional associations. EASA reviewed the comments received with the assistance of a group of experts, which

<sup>1</sup> 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) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1467719701894&uri=CELEX:32008R0216>).

<sup>2</sup> EASA is bound to follow a structured rulemaking process as required by Article 52(1) of Regulation (EC) No 216/2008. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure>).

<sup>3</sup> <http://easa.europa.eu/rulemaking/annual-programme-and-planning.php>

<sup>4</sup> — RMT.0477: <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0477-rmt0478>

— RMT.0445: <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0445>

— RMT.0719: <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0719>

<sup>5</sup> In accordance with Article 52 of Regulation (EC) No 216/2008 and Articles 6(3) and 7 of the Rulemaking Procedure.

was composed of the former RMG RMT.0477 members, other AIS experts and national authorities' representatives (who extensively contributed to the NPA consultation). This group held 5 meetings in the period from April 2017 to July 2017 and contributed to the review of the majority of the comments.

In reference to NPA 2016-13, 586 comments were submitted by industry, NAAs, and social partners' representatives. In order to take an informed decision, EASA also held a focused consultation in the form of a thematic meeting that took place on 5-6 September 2017 to analyse the identified issues raised by stakeholders during the NPA public consultation as well as to establish guidance for the review of the proposals towards drafting this Opinion. Said meeting was attended not only by members of RMG RMT.0445, but also by other experts who contributed actively to the NPA consultation.

EASA has assessed and responded to the comments received on the above-mentioned NPAs. The comments received and EASA responses thereto are presented in the respective Comment-Response Documents (CRDs) 2016-02 and 2016-13.<sup>6</sup>

In the context of RMT.0719, EASA has taken the decision to follow the procedure laid down in Article 16 of MB Decision No 18-2015 as explained above, as this regulatory proposal is expected to have a negligible impact and addresses an issue of non-controversial nature.

The *final* text of this Opinion and the draft regulation has been developed by EASA based on the guidelines received during the NPAs and focused consultation (RMT.0445 and RMT.0477) as well as ABs consultation (RMT 0719). The draft rule text proposed by EASA is published on the EASA website<sup>7</sup>.

The major milestones of this rulemaking activity are presented on the title page.

## 1.2. The next steps

This Opinion contains the proposed amendments to Regulation (EU) 2017/373<sup>8</sup> and Regulation (EU) No 139/2014<sup>9</sup> (the 'ADR Regulation'), as well as their potential impacts. It is submitted to the European Commission to be used as a technical basis in order to prepare an EU regulation.

For information, EASA published the draft text of the related EASA decision containing the associated AMC/GM. These draft AMC/GM, without prejudice to their final text, will be aligned with the implementing rules (IRs). EASA will publish the final decision amending the AMC/GM issued in accordance with ED Decision 2017/001/R once the European Commission has adopted the regulation.

<sup>6</sup> <http://easa.europa.eu/document-library/comment-response-documents>

<sup>7</sup> <http://easa.europa.eu/document-library/opinions>

<sup>8</sup> Commission Implementing Regulation (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011, (OJ L 62, 8.3.2017, p.1) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1511968302703&uri=CELEX:32017R0373>).

<sup>9</sup> Commission Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 44, 14.2.2014, p. 1) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1511972494718&uri=CELEX:32014R0139>).

## 2. In summary — why and what

### 2.1. Why we need to change the rules — issue/rationale

#### 2.1.1. Meteorological services (MET)

Annex V (Part-MET) to Regulation (EU) No 2017/373 sets out the specific requirements for the providers of meteorological services (MET) within the EU, by transposing the relevant ICAO Annex 3 provisions. Such transposition takes into account the specific requirements of the European airspace structure, which are appropriate and proportionate for the provision of MET within the EU. The current version of Part-MET is aligned, to a great degree, with ICAO Annex 3 Amendment 77-A.

Indeed, Part-MET has already introduced, as recommended practice, the provision in digital format of volcanic ash advisory (VAA), tropical cyclone advisory (TCA), aerodrome routine meteorological report (METAR), aerodrome special meteorological report (SPECI), terminal aerodrome forecast (TAF), and information on the occurrence or expected occurrence of specified hazardous en-route weather and other phenomena in the atmosphere which may affect the safety of aircraft and low-level aircraft operations (AIRMET and SIGMET). Part-MET is also aligned with the other minor modifications and editorials transposed into said ICAO Annex 3 Amendment 77-A.

However, the following elements were not transposed into Part-MET:

- the references to additional flight levels in upper-air grid point forecasts provided by the world area forecast centres (WAFCs);
- the replacement of ‘aeronautical fixed service satellite distribution systems’ with ‘aeronautical fixed service Internet-based services’; and
- more importantly, the update of Table A6-1 (SIGMET, AIRMET, and special air-report (uplink)).

These updates are considered necessary to improve the provision of information relating to hazardous meteorological conditions. In addition, the improved world area forecast system (WAFS) information will enhance the situational awareness and contribute to a more efficient routing, including around hazardous meteorological conditions.

In consequence, the proposed amendment to Part-MET is intended to harmonise, as soon as possible, Regulation (EU) 2017/373 with ICAO Annex 3 Amendment 77-A, which is applicable since 10 November 2016.

#### 2.1.2. AIS towards aeronautical information management (AIM)

AIS providers in Europe provide and manage aeronautical data and aeronautical information in a very complex data chain where aeronautical ‘service provision’ is still primarily focused on paper/electronic data management practices. These practices may result in errors and inconsistencies in published aeronautical information. Air traffic management (ATM) is dependent on the provision of timely, relevant, accurate, and quality-assured information that ensures an efficient distribution method of aeronautical data and aeronautical information.

During the last decades, the role and importance of aeronautical data and aeronautical information has changed significantly with the advent of the internet era as well as the implementation of area navigation (RNAV), required navigation performance (RNP), ATM requirements, and airborne



computer-based navigation systems. This requires that the way aeronautical information is provided is accordingly adapted. Therefore, the provision and management of aeronautical data and aeronautical information is expected to meet the operational demands in order to have the right information in the right place at the right time.

Through this Opinion, EASA proposes implementing measures to reflect the current developments in the aeronautical data and aeronautical information environment. This will ensure the following:

- quality aeronautical data and aeronautical information are provided in a timely manner, with the accuracy and resolution appropriate for their intended use, and
- the required integrity levels are met and maintained throughout the management process, supporting all phases of flight.

Furthermore, the proposed rules on aeronautical data and aeronautical information will provide, for the first time at European level, a clear regulatory framework of AIS/AIM for those entities involved in the management of aeronautical data and aeronautical information. This will be achieved:

- by transposing into the EU framework (cf. Regulations (EU) 2017/373 and (EU) No 139/2014) the latest proposed amendment to ICAO Annex 15 ‘Aeronautical Information Services’ as well as the new Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM); and
- by repealing the current Regulation (EU) No 73/2010 (the ‘ADQ Regulation’)<sup>10</sup> on the quality of aeronautical data and aeronautical information for the single European sky (SES) as it is not considered adequate to maintain two different regulations with several overlapping requirements.

### 2.1.3. Flight procedure design (FPD) and airspace structure design (ASD)

The organisation of the airspace has a direct effect on the trajectory followed by aircraft; the poor and/or erroneous design of flight procedures as well as of airspace structures not only increases the risk of incidents or accidents, but also hinders the air traffic services (ATS) from maintaining and expediting an orderly air traffic flow. In an EASA study<sup>11</sup>, the complexity of the airspace structure was identified also as a safety issue that needs to be addressed. Said study highlighted as the greatest risk in controlled airspace the airspace infringements by General Aviation (GA) pilots lacking awareness of both the complex airspace structure and the services provided in different airspace types. Therefore, the design of flight procedures and of airspace structures plays an essential 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). Therefore, the consistent and harmonised design of flight procedures and of airspace structures contributes to ensuring safe operations within the European airspace.

In the discussions that led to the Member States (MSs)’ approval of Regulation (EU) 2017/373 (also known as ‘common requirements for service providers’), the MSs were of the opinion that the ASD (as opposed to FPD) is their sovereign State function and should thus not be part of the certification

<sup>10</sup> Commission Regulation (EU) No 73/2010 of 26 January 2010 laying down requirements on the quality of aeronautical data and aeronautical information for the single European sky (OJ L 23, 27.1.2010, p. 6) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1512039088315&uri=CELEX:32010R0073>)

<sup>11</sup> EASA Mid-Air Collision/Airprox Study, 2016.

scheme for service providers of air traffic management/air navigation services (ATM/ANS) and other ATM network functions. However, it was duly acknowledged that the technical requirements for ASD would be most effective at EU level as the harmonised rules across the EU would purposefully address the identified safety issues. Otherwise, the national rules would continue to contain numerous differences between the MSs; therefore, the issues identified would not be resolved and could even deteriorate over the years with the increase of traffic and the implementation of new airspace-related solutions, such as those stemming from the single European sky ATM research (SESAR) programme.

The approach taken in this Opinion not to prescribe a specific organisational model so that the different national models are accommodated was well-received by stakeholders as it, and to considers the varying degrees of involvement of the affected parties in each MS. This is especially the case in those MSs where different authorities are involved, e.g. Ministry of Transport, Ministry of Defense, NAAs, air navigation service providers (ANSPs). Hence, it was essential to provide a certain amount of flexibility in this area of activities, and allow the stakeholders to maintain their role and models under national legislation.

On the other hand, through this Opinion, EASA proposes IRs for the flight procedure design service providers (FPDSPs) which:

- fully respect the principle of proportionality, as a cornerstone of any legislation in the EU, and
- comply with Article 8b(7)(b) of the Basic Regulation requiring the ATM/ANS IRs to ‘be proportionate to the type and complexity of the services provided’.

The IRs should also allow for new operational concepts that support the continuous development and performance of the European airspace.

Finally, this proposal takes into consideration the ICAO SARPs related to this activity and builds on the requirements of the existing SES Regulations<sup>12</sup>, as far as applicable.

## 2.2. What we want to achieve — objectives

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

The specific objectives of this proposal are, therefore, to:

- ‘promote cost-efficiency in the regulatory and certification processes and to avoid duplication at national and European level’ (Article 2(2)(c) of the Basic Regulation);

<sup>12</sup> — 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) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1512392883331&uri=CELEX:32004R0549>);

— 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) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1512386945523&uri=CELEX:32004R0550>);

— 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) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1512393082871&uri=CELEX:32004R0551>); and

— 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) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1512393186545&uri=CELEX:32004R0552>).



- facilitate the free movement of airspace users and services across the European airspace; and
- ensure regulatory harmonisation across Europe, while assisting MSs in fulfilling their obligations under the Chicago Convention, by providing a basis for a common interpretation and uniform implementation of the ICAO provisions.

These objectives will be achieved:

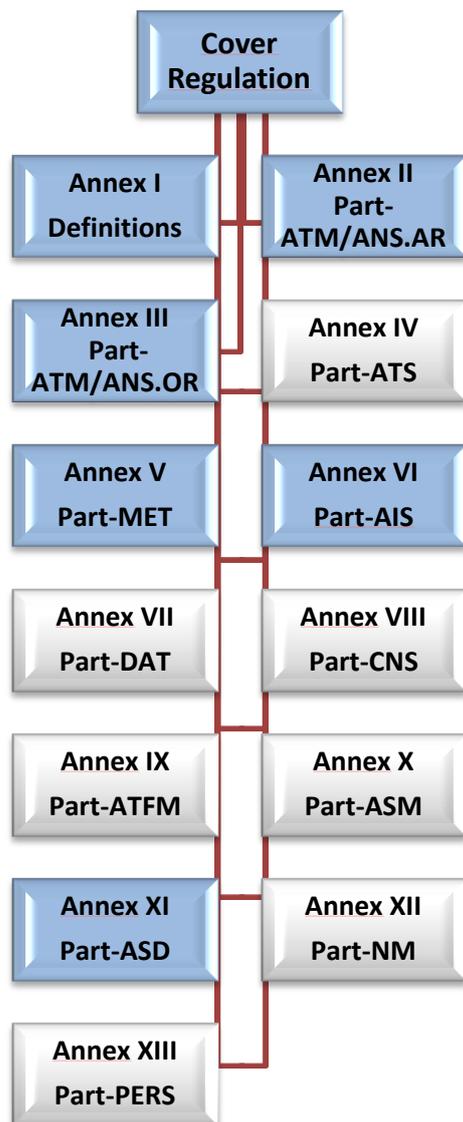
- through the uniform implementation of ICAO Annex 3, by transposing its latest amendment, i.e. ICAO Annex 3 Amendment 77-A, into the EU regulatory framework;
- by ensuring that the aeronautical data and aeronautical information are originated, assembled, formatted, edited, published, and finally provided at the required level of quality to the intended user and for all flight phases; and
- by creating properly designed, documented and validated flight procedures and airspace structures, including maintenance and periodic review thereof, in a coherent manner, before they can be deployed and used by aircraft.

This Opinion proposes amendments to the following rules:

- Regulation (EU) 2017/373, especially Part-Definitions, Part-ATM/ANS.AR, Part-ATM/ANS.OR, Part-MET, Part-AIS, and Part-ASD thereof, as regards specific requirements for providers of MET, AIS/AIM, and flight procedure design (FPD), as well as for service providers when originating aeronautical data. In addition, the Opinion addresses the responsibilities of the MSs in reference to the organisations involved in the origination of aeronautical data and proposes a common framework for ASD; and
- Regulation (EU) No 139/2014, especially Part-ADR.OR and Part-ADR.OPS thereof, by addressing the responsibility of aerodrome operators as regards the provision of aeronautical data and flight procedures as well as any changes thereto.

Figure 1 below illustrates the structure of Regulation (EU) 2017/373, highlighting the parts that are proposed to be amended by this Opinion:





- **Cover Regulation**
- **Annex I:** Definitions of terms used in Annexes II to XIII
- **Annex II:** Requirements for competent authorities — Provision of services and other ATM network functions
- **Annex III:** Common requirements for service providers
- **Annex IV:** Specific requirements for providers of air traffic services
- **Annex V:** Specific requirements for providers of meteorological services
- **Annex VI:** Specific requirements for providers of aeronautical information services
- **Annex VII:** Specific requirements for providers of data services
- **Annex VIII:** Specific requirements for providers of communication, navigation, or surveillance services
- **Annex IX:** Specific requirements for providers of air traffic flow management
- **Annex X:** Specific requirements for providers of airspace management
- **Annex XI:** Specific requirements for providers of flight procedure design services
- **Annex XII:** Specific requirements for the Network Manager
- **Annex XIII:** Requirements for service providers concerning personnel training and competence assessment

Figure 1

### 2.3. How we want to achieve it — overview of the proposals

#### 2.3.1. Legal basis, title and scope of Regulation (EU) 2017/373 (in the context of FPD and ASD)

During the NPA 2016-13 public consultation, several commentators questioned not only the legal basis of the proposal but also the title of the overarching Regulation (EU) 2017/313. It was proposed to amend them to specifically include FPD and ASD in order to ensure consistency among the title of the Regulation, the subject matter, and its scope laid down in Article 1 thereof.

In reference to the legal basis for regulating FPD and ASD, both EASA and the stakeholders acknowledge that FPD and ASD are not explicitly mentioned under the ATM/ANS definition neither in the Basic Regulation nor Regulation (EC) No 549/2004. However, Article 8b(6)(a) of the Basic Regulation as well as Point 2(i) of Annex Vb to said Regulation include the obligation to ensure safe FPD and ASD. Specifically, 'airspace design' is mentioned in said Annex Vb, which contains the 'essential

requirements for ATM/ANS and air traffic controllers'. In this context, it should be noted that the revision of the Basic Regulation is currently under discussion between the European Parliament and the European Council (co-decision procedure). Whilst the discussion is based on a European Commission's proposal, the aforementioned co-legislators are entitled to make amendments to the proposed text. During the discussion, it was proposed to amend the ATM/ANS definition in order to explicitly list all the ATM/ANS services therein. Thus, no amendment to the title of the Regulation would be required. However, EASA kindly invites the European Commission to consider this issue during the adoption process of this proposal. In this regard, it would be possibly required to adjust the related provisions in Articles 1 and 2 as well as the title and provisions of Article 3 of the draft Regulation proposed by this Opinion.

### 2.3.2. 'Cover' Regulation

#### Amendment of paragraph 1 of Article 3

In addition to the point raised in the previous Section, EASA took account of ICAO Resolution A39-2 in response to a specific comment: 'Whereas airspace management and design can play a role in addressing the impacts of aviation greenhouse gas emissions on the global climate, and the related economic and institutional issues need to be addressed by States, either individually or collectively on a regional basis; [...]'. As a consequence, Article 3(1) is proposed to be amended so that Member States take into consideration the environmental impact when ensuring the provision of the appropriate services.

#### New paragraph 5 of Article 3

This new paragraph is introduced to include requirements applicable to entities originating data for aviation purposes. Such entities (e.g. geodetic institutes, surveyors) are essential players involved from the very beginning of the aeronautical data chain. They affect a service delivered by a service provider as they create, modify or delete aeronautical information and aeronautical data for aviation purposes. Therefore, there is a need to ensure that when they originate aeronautical information and aeronautical data, they provide data of sufficient quality to the next user.

This new paragraph 5 of Article 3 refers to Annex III (Part-ATM/ANS.OR). The data origination requirements for service providers thus apply analogously also to such entities. These requirements were previously introduced in Appendix 1 to Article 3 in NPA 2016-02. Hence, said Appendix has been removed. The responsibility of the MSs to ensure that such entities do enforce such requirements remains. Some guidance to assist MSs in managing those entities is also provided.

The scope of the provisions includes visual flight rules (VFR) aerodromes. However, MSs maintain the flexibility to decide to what extent these provisions will apply to said aerodromes, depending on each national context and the way the provisions are included (or not) in the aeronautical information publication (AIP).

#### New paragraphs 6, 7 and 8 of Article 3

The new paragraph 6 addresses the MSs responsibilities with regard to designation of the portion of the airspace and aerodromes where ATS are to be provided.

The initial proposal was provided in NPA 2016-13 as Appendix 3 to Article 3. For further details, please refer to Section 2.3.9.



As the ASD should be a sovereign function of the MSs (see Section 2.1.3. above), the new paragraphs 7 and 8 are added to Article 3 to address the MSs obligations with regard to:

- the ASD, by ensuring that the design criteria laid down in the new draft Appendices 1 to the new draft Annex XI (Part-FPD) are met; and
- the maintenance and periodic review of flight procedures for aerodromes and in the airspace under their responsibility.

### **Paragraph k of Article 6**

This paragraph is amended to address the introduction of certification requirements for FPDSPs.

### **Article 10**

It provides for the entry into force of Regulation (EU) 2017/373 as well as the applicability dates for service providers.

In respect of the AIS/AIM requirements, three options were considered to address the synchronisation of ICAO provisions introduced by State Letter AN 2/2.1.1-17/22 amending ICAO Annex 15. The proposed ICAO amendment also has an impact on the current rules, in particular Regulation (EU) No 73/2010 with regard to data quality requirements (DQRs), as Regulation (EU) 2017/373 proposes to repeal said Regulation. The three options were presented at the Single Sky Committee (SSC) meeting in October 2017. Based on the outcome of this meeting, EASA has not proposed any amendments to the applicability date of the AIS/AIM rules.

On the other hand, the majority of the NPA 2016-13 commentators invited EASA to limit up to 24 months the transition period, based on the applicability date of the amended Regulation (EU) 2017/373. As this date is 2 January 2020, the proposed rule should apply at the latest by 27 January 2022, taking also into account the AIRAC date. In addition, one MS indicated that it currently does not comply with some of the requirements stemming from the ICAO Annex 11 'Air Traffic Services' provisions, especially elements of the ASD, but that it intends to do so. Consequently, it requested a transitional period until January 2024. This would create considerably less operational and administrative burden as well as cost not only to the MS itself, but also to the service providers, including FPDSPs, and to the airspace users as well. Therefore, EASA has proposed a more flexible transition period in Article 10 of Regulation (EU) 2017/373, which was also well received during the RMT.0445 focused consultation.

### **2.3.3. Table of contents**

EASA believes that a table of contents will improve the readability of Regulation (EU) 2017/373 and ease the identification of its parts, subparts, and sections. Therefore, this Opinion proposes to introduce such a table of contents after Article 10 of Regulation (EU) 2017/373 and before Annex I (Part-DEFINITIONS) thereto.

### **2.3.4. Part-Definitions**

New definitions are introduced based on those contained in ICAO Annexes 11 and 15 as well as the new PANS-AIM.



Only those terms used in the AIS/AIM and FPD rules have been considered. The majority of them are transposed unchanged into Regulation (EU) 2017/373. In some cases, the related notes are also included to complement the definition and further explain how this term needs to be understood.

In addition, two new important terms are now proposed to be defined: ‘aeronautical information services (AIS) provider’ and ‘electronic AIP (eAIP)’.

### 2.3.5. Part-ATM/ANS.AR, the certificate template

Based on the certificate template in Regulation (EU) 2017/373, this Opinion proposes to amend the attachment to the service provider’s certificate to introduce the various types and scopes of AIS/AIM and FPD.

### 2.3.6. Part-ATM/ANS.OR

Besides the general requirement for service providers to provide their aeronautical data to the AIS provider (not included in NPA 2016-02), the proposal contains the necessary requirements for service providers when they act as parties originating, processing or transmitting aeronautical data to the AIS provider, including requirements on data management and data quality. In order to ensure data quality throughout the entire data chain, service providers should meet the same requirements as AIS providers or aerodrome operators when originating, processing or transmitting aeronautical data.

Moreover, the proposal introduces a common reference system for all relevant service providers. As this reference system is not only described in ICAO Annex 4 ‘Aeronautical Charts’ and 15 ‘AIS’, but also in ICAO Annex 11 ‘ATS’ and 14 ‘Aerodromes’, it is an ICAO transverse provision. Therefore, it is not meant to be applied only by AIS providers, but also by any other service provider that needs to use it for the performance of their duties.

### 2.3.7. Part-MET

The proposed amendments to Part-MET stem from ICAO Annex 3 Amendment 77-A. However, EASA took the alignment with ICAO as an opportunity to also propose necessary changes to improve the current rule text and ensure consistency throughout Part-MET.

#### Changes stemming from ICAO latest amendment 77-A

- In point MET.TR.275(b)(3)(i),(ii),(iii) and (viii), additional flight levels for WAFC upper-air grid point forecast are included.
- Following the Amendment 77-A change to the templates for SIGMET, AIRMET and special air-report uplink (former Table A6-1), Appendix 5 to Part-MET is changed to Appendix 5A to include only the template for SIGMET and AIRMET, whereas the new Appendix 5B now contains the special air-report (uplink) template.
- The references to legacy ‘aeronautical fixed service satellite distribution systems’ are removed and replaced with ‘aeronautical fixed service Internet-based services’.

#### Changes for improvement and consistency

- In points MET.OR.205 and MET.OR.210, the reference to ‘at aerodromes serving scheduled international commercial air transport operations’ is removed from the introductory sentence. This change is proposed to maintain the safety principle that the reporting and observing of

meteorological elements shall be ensured at all aerodromes and not only at such commercial air transport (CAT) aerodromes. The current possibility of exemption granted by the competent authority (CA) for the case of aerodromes not serving scheduled international CAT operations is considered sufficient to cover the exemption cases when needed. Therefore, the proposal will continue allowing small aerodromes not to provide all the MET elements listed in this requirement, if authorised by the CA.

- The terms ‘local routine report and local special reports’, ‘local routine and local special reports’ and ‘local routine and special reports’ are corrected to read ‘local routine and local special report’ (in singular) to improve consistency throughout Part-MET. Additionally, where appropriate, ‘local routine report and local routine special report and METAR’ has been replaced with ‘local routine report, local special report and METAR’ to improve readability without changing the meaning of the requirement.
- In point MET.TR.205(e), cloud base reporting above 10 000 ft is clarified in order to cater for mountainous areas regarding MSA and ‘cloud of operational significance’.
- In the definitions and in the rule text, the term ‘message’ is removed in SIGMET and AIRMET to eliminate the confusion between the terms ‘SIGMET’ and ‘SIGMET message’; Part-Definitions of Regulation (EU) No 2017/373 includes different definitions for each of the above-mentioned terms. The proposal amendment clarifies what is understood by a SIGMET and what by an AIRMET, and is in line with ICAO Annex 3.
- Changes are made to the phraseology and structures of some points (e.g. references to the geography markup language (GML)).
- In point MET.TR.265, the example of volcanic ash advisory information in graphical format is removed and included in AMC1 MET.TR.265(c) (using European examples).
- AMC1 MET.TR.270(b) on tropical-cyclones advisory centres is moved to GM1 MET.TR.270(b) and updated with more relevant tropical cyclone advisories based on European and not ICAO Annex 3 examples for outside Europe. The example of tropical cyclone advisory information in graphical format is removed and included in AMC1 MET.TR.270(d) (using European examples);
- Editorial updates are introduced in the template for METAR, TAF, wind shear warnings, local routine reports, and local special reports, as well as in the related tables on ‘ranges and resolution’. The changes to those tables are consequential to and consistent with the aforementioned changes, and include editorial corrections such as the removal of unnecessary indentation. In addition, the reference to ‘RERASN’ is included in the supplementary information although it is not contained in ICAO Annex 3. ‘RERASN’ will be reintroduced in the next ICAO Annex 3 amendment; therefore, the change is proposed to be proactively aligned with the future change at ICAO level.

### 2.3.8. Part-AIS

Part-AIS is amended to introduce requirements applicable to AIS providers. The proposed requirements reflect and complement the current AIS.OR.100(a) and (b) of Regulation (EU) 2017/373. In addition, the proposed technical requirements replace the content of AIS.TR.100 ‘Working methods and operating procedures for the provision of aeronautical information services’.



Part-AIS is divided into two categories: data quality requirements based on Regulation (EU) No 73/2010, and data provision requirements (products and services) based on the latest proposed amendment to ICAO Annex 15 and the new PANS-AIM.

**Data quality requirements** are introduced to ensure that AIS providers perform their data origination activities at the required quality level to meet the intended use of the data. The data quality requirements are based on the ADQ Regulation. A pragmatic approach has been adopted to ensure that AIS providers meet their obligations as well as the objectives of the ADQ Regulation. The following are the main elements of the proposal:

- A **data catalogue** is introduced based on the one developed by ICAO. It is a table presenting the scope of data that can be collected and maintained by the AIS providers. It also provides a common terminology that can be used by organisations involved in the origination of aeronautical data. Additionally, it contains the accuracy and integrity requirements for the determination and reporting of aeronautical data to the AIS providers, as well as the resolution and integrity requirements for the publication and charting of products, including aeronautical data. Furthermore, it details data elements in terms of field names, field types and field definitions. Finally, it is used as a reference for aeronautical data origination and publication requirements, as applicable.
- **Data exchange:** the proposal does not require AIS providers to exchange data in accordance with AIXM 5.1. Instead, a performance-based approach is introduced, allowing the AIS providers to choose the most suitable model for data exchange as long as this model is globally interoperable between the relevant parties. This means that the aeronautical information exchange model (AIXM) is required to be used, while a specific version thereof is not imposed. This approach is in line with ICAO Annex 15.
- **Data protection:** the proposal introduces requirements for AIS providers to ensure that aeronautical data and aeronautical information are verified and validated. This mechanism prevents the accidental or malicious alteration of aeronautical data and aeronautical information. The verification and validation processes ensure that aeronautical data and aeronautical information are protected and that their quality is not degraded or, if it is, that the degradation will be identified and corrected. Hence, this Opinion does not propose to apply a specific cyclic redundancy check (CRC) algorithm for the protection of data. The related GM explains how this aeronautical data and aeronautical information is ensured, and underlines the use of CRCs as an example of a digital error detection technique. This pragmatic approach is also in line with ICAO Annex 15.

**Data provision requirements** are the aeronautical products and services requirements stemming from the latest proposed amendment to ICAO Annex 15 and the new PANS-AIM. The related ICAO appendices (AIP content, NOTAM, SNOWTAM and ASHTALM format) are transposed as such with some minor editorial changes. In addition, the proposal is adapted to the current practices of the European AIS providers and made proportionate to their activities.

- **Aeronautical charts** requirements were revised during the consultation period. While NPA 2016-02 developed light requirements based on ICAO Annex 4, this Opinion now strictly follows the ICAO Annex 15 approach, by listing the aeronautical charts that need to be published



by the AIS providers when they are made available. The way these charts are produced must be in accordance with ICAO Annex 4.

- **NOTAM:** the proposal recognises that in the case of NOTAM or digital NOTAM that are crucial to ensure the safety of flight, it is not always possible to comply with all the relevant data quality requirements. Therefore, the NOTAM office may issue a NOTAM not meeting the data quality requirements. However, when doing so, it has to ensure at the minimum that the party originating the aeronautical data is authorised and/or an eligible/reasonable source, that the content is plausible and that the data quality requirements are validated post publication.
- **Digital data sets** for AIP, terrain and obstacle, aerodrome mapping, and instrument flight procedures are to be published by the AIS providers only when they are made available to them (decision of the MS). This approach is in line with the latest proposed amendment to ICAO Annex 15. This Opinion also takes into account the fact that the AIP data set is a new requirement stemming from ICAO and that its technical implementation is considered a challenge, even beyond 2020.
- **AIP content (Appendix 1 to Part-AIS):** the proposal introduces Appendix 2 ‘Contents of the aeronautical information publication (AIP)’ of the new PANS-AIM. However, some additions are proposed as a consequence of other EU regulations or ongoing EASA RMTs. More specifically:
  - ENR 1.3 ‘Instrument flight rules’, ENR 3.5 ‘Other routes’, free route airspace (FRA) general procedures, as well as its description are introduced, stemming from Regulation (EU) No 923/2012 (the ‘SERA Regulation’)<sup>13</sup>;
  - ENR 2.2 ‘Other regulated airspace’, as well as the description of radio-mandatory zones (RMZs) and transponder-mandatory zones (TMZs) are also added, as a consequence of the SEAR Regulation requirements; and
  - AD 2.23 ‘Additional information’, as well as specific information regarding remote-tower aerodrome ATS are introduced with regard to the following:
    - indication of such provision;
    - description of the location of the signaling lamp;
    - communication methods;
    - action required by the airspace users following an emergency/abnormal situation and possible contingency measures; and
    - the interdependencies of service availability or indication of aerodromes not suitable for diversion from the aerodrome.

<sup>13</sup> Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p. 1) (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1515409274101&uri=CELEX:32012R0923>).



### 2.3.9. Part-FPD

The specific requirements to be complied with by the FPDSPs, in addition to the amended common requirements laid down in Annex III (Part-ATM/ANS.OR) to Regulation (EU) 2017/373 are proposed in this Part, which is divided into two subparts:

- SUBPART A ‘Additional organisation requirements for the providers of flight procedure design services (FPD.OR)’; and
- SUBPART B ‘Technical requirements for the providers of flight procedure design services (FPD.TR)’.

**FPD.OR.100** on FPD services sets up the scope and objectives of the FPDSP’s activities. Based on the NPA 2016-13 public consultation, this requirement was revised to improve its clarity. It now specifies that the FPDSP performs the design and documentation of flight procedures and/or the validation of flight procedures considering that the MS concerned carries the responsibility for the overall process of maintenance and periodic review of flight procedures for aerodromes and in airspace under their responsibility.

Regulation (EU) 2017/373, especially Part-ATM/ANS.OR, already includes requirements on the management system, while **FPD.OR.105**, **FPD.OR.110** and **FPD.OR.115** address the additional specific organisation requirements on the management system and record-keeping as well as on the technical and operational competences and capabilities applicable only to FPDSPs.

**FPD.OR.115** ‘Required interfaces’ addresses the responsibilities of the FPDSP in the aeronautical data chain and is one of the most essential requirements, ensuring that the SES objectives on interoperability with respect to data are achieved.

**FPD.TR.100** and **FPD.TR.105** form the technical requirements framework for the design of flight procedures, by:

- introducing the FPD criteria specified in Appendices 1 and 2 to this Part; and
- defining the coordinates and aeronautical data to be used in addition to ATM/ANS.OR.A.090 ‘Common reference systems for air navigation’ that was already proposed by NPA 2016-02.

The formerly proposed Appendix 2 and Appendix 3 to Article 3 on design and designation criteria were reconsidered and further reworked.

Following the legal drafting guidelines, the former Appendix 2 became Appendix 1 to Part-FPD. It contains requirements for airspace structures and flight procedures contained therein. Based on the NPA 2016-13 public consultation and the discussion during the related focused consultation under RMT.0445, EASA redrafted some of the Appendix 1 requirements towards more performance-based rules: the essential elements are kept at IR level (e.g. when identifying standard departure and arrival routes and associated procedures), while the details are to be found in the related AMC. This approach not only provides stakeholders with a certain degree of flexibility, but also ensures compliance of the EU rules with the ICAO provisions.

In addition, the formerly proposed Appendix 3 to Article 3 on ‘Designation of the portions of the airspace where ATS will be provided’ was reconsidered and further reworked by EASA. As explained in Section 2.3.2, the new paragraph 6 of Article 3 addresses the MSs responsibilities with regard to designation of the portion of the airspace and aerodromes where ATS are to be provided.



In this context, RMG RMT.0445 did not reach a consensus on the designation issue of airspace zones, especially where aerodrome flight information service (AFIS) and alerting service are to be provided. Therefore, stakeholders were requested to specifically provide their feedback on the matter during the NPA 2016-13 public consultation, but no clear preference was indicated. However, a wide range of stakeholders indicated that the correct term used for that purpose is traffic information zone (TIZ) rather than flight information zone (FIZ). Considering the links with other Annexes to Regulation (EU) 2017/373 (e.g. Part-ATS), EASA decided to define the term referring to the portions of the associated airspace around aerodromes where AFIS and alerting service are to be provided and introduce the features of said airspace by amending the initially proposed Section I of Appendix 1. In addition, following the NPA public consultation, EASA reviewed all comments and performed a focused consultation in the form of a thematic review meeting. During this meeting, the issue of FIZ versus TIZ was discussed, but no term was finally selected as the preferred one. EASA considers that 'FIZ' is the term to be used as it is the term already used by the majority of the affected parties. However, EASA invites the European Commission to further consider this subject during the comitology process.

### 2.3.10. The ADR Regulation

NPA 2016-02 acknowledged that the ADR Regulation only contained general data quality requirements for aerodrome operators, based on ICAO Annex 14. Due to the importance of aerodrome operators in the data origination chain, EASA proposes to further complement the data quality requirements of said Regulation with those similarly applicable to service providers and parties originating aeronautical data (as well to update the related AMC/GM accordingly). Thus, a complete set of data quality requirements is proposed for aerodrome operators, which was lacking in the NPA. The necessary reference to the aeronautical data catalogue is also ensured.

Following the NPA 2016-13 public consultation, EASA recognised that the ADR Regulation is not linked with Regulation (EU) 2017/373, concerning the applicable requirements for the approval of flight procedures and airspace associated to the aerodrome. Consequently, this Opinion proposes an amendment to the ADR Regulation, especially ADR.OR.B.015 'Application for a certificate', ADR.OR.B.025 'Demonstration of compliance' and ADR.OR.B.040 'Changes'.

## 2.4. What are the stakeholders' views — outcome of the consultation

### 2.4.1. Outcome of the focused consultation under RMT.0719

On 5-6 September 2017, EASA held a thematic meeting on the update of Part-MET, attended by MET experts representing the following organisations: ENAC, ENAV, KNMI, EUROCONTROL, ROMATSA, BELGOCONTROL and METEOSWISS.

The purpose of the meeting was to further align the European meteorological requirements of Part-MET with the ICAO Annex 3 Amendment 77-A. The participants agreed on all the changes necessary to align the EU rules with the ICAO provisions:

- update Table A6-1 for SIGMET, AIRMET, and special air-reports (uplink);
- include the references to additional flight levels in upper-air grid point forecasts provided by the world area forecast centres (WAFCs); and
- replace the references to legacy 'aeronautical fixed service satellite distribution systems' with 'aeronautical fixed service Internet-based services'.



Moreover, the participants agreed that the meeting was an opportunity to review and possibly amend the requirements that were not affected by ICAO Annex 3 Amendment 77-A. In addition to many editorial and phraseology changes made to improve the clarity of the rule text, the participants proposed a few substantial changes to the requirements. However, these proposals did not have an impact on the objectives of the rule as they were consequential to other agreed changes, mainly made for consistency. Furthermore, some graphics and examples transposed from ICAO Annex 3 are replaced by more relevant ones, reflecting the European geographical area. Finally, additional GM is added to clarify the intent of the rule.

#### 2.4.2. Outcome of the NPA 2016-02 public consultation

NPA 2016-02 was publicly consulted from 28 April to 30 September 2016. In total, 1090 comments were submitted by 53 stakeholders: NAAs, ANSPs, AIS providers, aircraft manufacturers, aviation industry, professional associations and individuals.

The NPA 2016-02 public consultation contributed very positively to the development of this Opinion as stakeholders provided valuable comments to the NPA. The most commented issues during said consultation were the following:

- data origination;
- data catalogues;
- data exchange (including data exchange model);
- formal arrangements;
- verification and validation processes;
- reference to the CRC algorithm;
- reference to specific EUROCONTROL documents; and
- transition period.

In cases when the stakeholders provided implementation feedback or made statements not directly related to the proposal, EASA noted the comments.

The distribution of the comments received on the various parts of NPA 2016-02, the distribution of the comments received per stakeholders' sector, and the distribution of EASA's responses to the comments are shown in Table 1 as well as in Figures 1 and 2, respectively.

NPA 2016-02	Page(s)	Comments
General	N/a	60
Executive summary	1-5	10
Procedural information	5-6	2
Explanatory note	6-18	124
Implementing rules (IRs)	18-55	603
AMC/GM	55-93	211

Regulatory impact assessment (RIA)	94-102	23
References	103	2
Appendices	104	55
<b>Total</b>	<b>104</b>	<b>1090</b>

Table 1— Distribution of the comments received on the various parts of NPA 2016-02

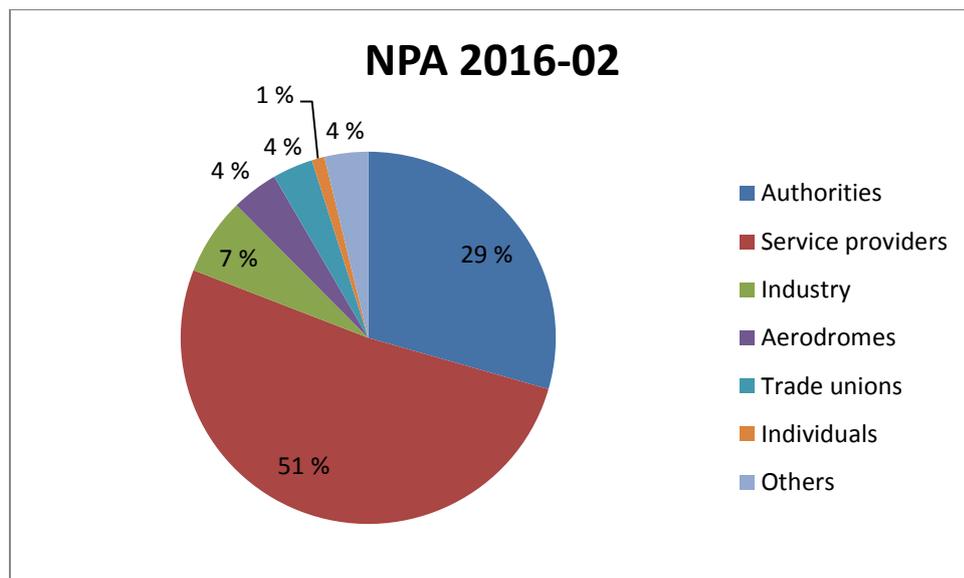


Figure 1 — Distribution of the comments received per stakeholders' sector

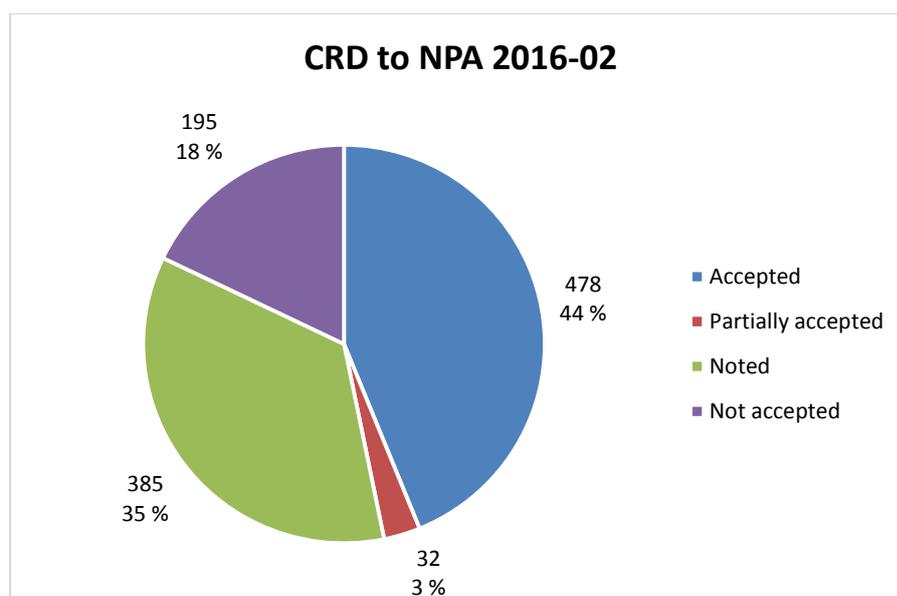


Figure 2 — Distribution of EASA's responses in CRD to NPA 2016-02

### 2.4.3. Outcome of the NPA 2016-13 public consultation

NPA 2016-13 was publicly consulted from 25 October 2016 to 31 March 2017. In total, 586 comments were submitted by 36 stakeholders: NAAs, service providers, organisations for air navigation, aerodromes, professional associations, aircraft operators, as well as an individual.

EASA is aware that several comments were duplicates and of editorial nature. However, EASA acknowledges that the NPA 2016-13 public consultation on the technical requirements and operating procedures for airspace design, including FPD, brought real benefits to this rulemaking activity and contributed to the development of this Opinion. Stakeholders and interested parties provided valuable comments and responses to the questions included in the NPA, as well as, in some instances, alternative proposals to the proposed text. The proposals were accompanied by justifications, which facilitated the review and amendment of the initial NPA proposal and the development of the final one in this Opinion. Furthermore, the stakeholders provided feedback on the various questions put in the NPA as well as RIA issues, which were replied as ‘noted’.

The most contentious and commented issues during the consultation were the following:

- the introduction of a term to be used for the portions of the airspace zone around aerodromes, where AFIS (i.e. flight information service (FIS) and alerting service for aerodrome traffic) is provided;
- the scope of regulated activities (i.e. what airspace design includes);
- the introduction of a ‘buffer zone’;
- the transition period;
- the identification of common terms to be used, e.g. ‘flight procedures design services provider (FPDSP)’;
- the link with other rules, e.g. Regulation (EU) No 139/2014 (the ‘ADR Regulation’); the compliance of a ‘non-complex’ FPDSP with the applicable requirements, in particular the ‘common requirements’; and
- the identification of a standard departure route.

The distribution of the comments received on the various parts of NPA 2016-13, the distribution of the comments received per stakeholders’ sector and the distribution of EASA’s responses to the comments are shown in Table 2 as well as Figures 3 and 4, respectively.

NPA 2016-13	Pages	Comments
General	n/a	14
Explanatory note	1-15	246
IRs	16-38	91
AMC/GM	39–67	196
Regulatory impact assessment (RIA)	68–75	36
References	79-90	3
<b>Total</b>	<b>90</b>	<b>586</b>

**Table 2 — Distribution of the comments received on the various parts of NPA 2016-13**

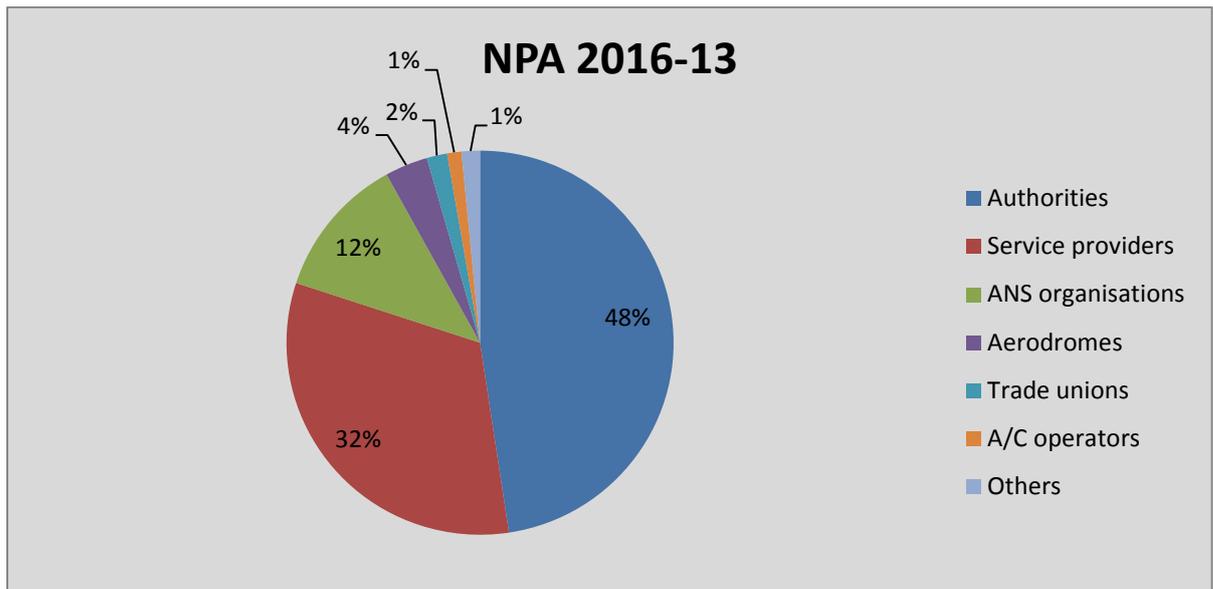


Figure 3 — Distribution of the comments received per stakeholders' sector

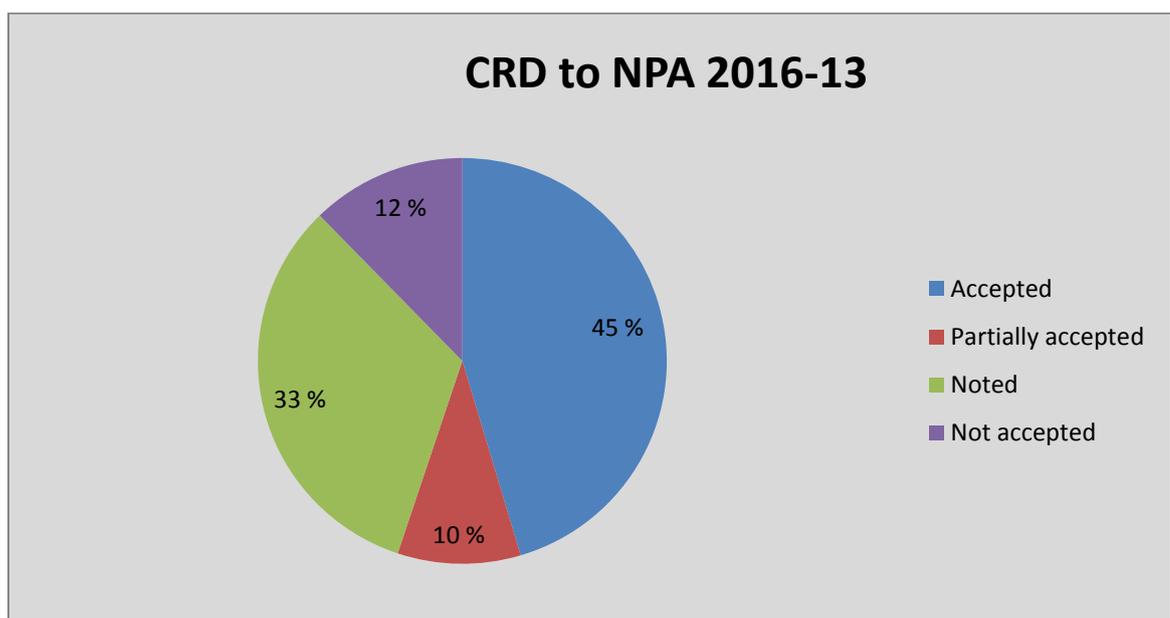


Figure 4 — Distribution of EASA's responses in CRD to NPA 2016-13

## 2.5. What are the expected benefits and drawbacks of the proposals

### 2.5.1. MET

The proposal is expected to maintain the safety level. The impact of the proposed requirements is considered to be negligible for the European MET providers as the vast majority are already compliant with them, whereas the actual implementation cost is anticipated to be minimal. With regard to the CAs, the implementation of the new requirements is not expected to increase their workload.

The proposal includes an update of Part-MET to ensure that the MET provision is consistent with latest ICAO policy and that unnecessary requirements are removed, while clear IRs and AMC/GM are

provided. These updates will improve the efficiency of the provision of information on hazardous meteorological conditions and of the MET rules in general.

### 2.5.2. AIS towards AIM

The overall impact of the proposal was specifically assessed in relation to the current implementation of the data quality requirements of the ADQ Regulation. The proposal brings clear benefits, in particular in terms of proportionality, better regulation and the economic impact.

The following three options have been considered:

Option No	Short title	Description
0	Do nothing	Baseline option (no change in the rules; risks remain as outlined in the issue analysis).
1	Performance-based rulemaking	The rules on data quality are drafted following a performance-based approach.
2	Prescriptive rulemaking	The rules on data quality include prescriptive and technical requirements.

However, Option 2 on prescriptive and technical requirements was discarded at an early stage of the analysis as it entailed the transposition of the ADQ Regulation into the EASA regulatory framework. It was, therefore, very similar to Option 0 in terms of rules content and potential impacts. Option 2 was thus not subject to an impact analysis.

A summary of the impacts of each options is provided in the following table:

Impact	Option 0	Option 1
Safety	0	+
Environmental	N/a	N/a
Social	N/a	N/a
Economic	–	+/-
GA and proportionality issues	–	+
‘Better regulation’ and harmonisation	–	+
<b>Overall impact</b>	<b>-/0</b>	<b>+</b>

The proposal to repeal the ADQ Regulation brings several benefits to the regulated parties as regards the overall implementation of the aeronautical data and aeronautical information management. Not only two sets of rules with several overlapping requirements cease to exist in parallel, but also the more proportionate and flexible requirements introduced facilitate such implementation.



Since 2013, the implementation of the ADQ Regulation has been significantly delayed in most of the EU MSs due to two main reasons: the high cost of implementation and the many regulatory requirements that are open to interpretation or even impossible to comply with (e.g. those addressing data originators and aerodromes). The European Commission's latest survey, conducted in October 2015, showed that the vast majority of the MSs have not fully complied with the requirements to be met by the implementation dates of 1 July 2013 and 1 July 2014 respectively. One significant obstacle to meeting the requirements of the ADQ Regulation is the implementation cost. Said Regulation requires the use of two detailed technical means: an aeronautical information exchange model, prescribing its technical characteristics, and a specific algorithm (CRC32Q) for data protection.

The proposal is expected to limit the cost of implementing new technologies as the requirements for the information exchange model and data protection are performance-based. AIS providers are not required to exchange data using a specific version of an aeronautical information exchange model as long as the exchange of data is globally interoperable between the relevant parties. This option mitigates the negative economic impact as it allows AIS providers to adjust their working methods and smoothly prepare for the future. With regard to data protection, AIS providers have the possibility not to use the CRC32Q but to choose another protection mechanism that suitably meets the protection performance requirement. In addition, this approach ensures that the objectives of the ADQ Regulation are maintained, thus also securing the investments done so far by the regulated parties.

Another significant obstacle to meeting the ADQ Regulation requirements relates to regulatory aspects. Since the entry into force of the ADQ Regulation, the affected stakeholders have pointed out not only the complexity of the rule but also its detailed technical requirements, which are challenging to comply with or disproportionate for them.

This proposal is expected to provide to the regulated parties the necessary regulatory means and support them in the implementation of data quality management. The proposal is expected to be adapted to all stakeholders involved in the data chain (up to publication) and relieve them, while maintaining a sufficient level of safety. The proposal ensures that the requirements are suitable to achieve the required objective and that they do not go beyond what is necessary to achieve this objective. The proposal is now objective-based, while the developed means of compliance provide the necessary flexibility.

The proposed requirements are expected to improve, harmonise, and clarify the implementation of the rule. The right balance between IRs and AMC is achieved, by moving the methods and techniques for complying with the data quality requirements to AMC, which are complemented with the necessary GM supporting the implementation.

Therefore, the goal of proportionality and 'better regulation' is achieved, by providing to the stakeholders the flexibility to meet the safety objectives defined at IR level according to their particular organisation, business model and type of infrastructure. Specific safeguards, determined in line with performance-based principles, are also proposed to ensure that the adoption of new technologies will not lower the standards required by the ADQ Regulation.

Furthermore, the consistency between the ADR Regulation on aerodrome operators (as data originators) and this proposal is ensured by introducing similar data quality requirements related to origination purposes into said Regulation. The alignment between the ADR Regulation and this



proposal eliminates the gap between the ADQ Regulation and the AMC/GM to the ADR Regulation. Therefore, regulatory harmonisation is achieved.

### 2.5.3. FDP and ASD

The following three options have been considered:

Option No	Short title	Description
0	Do nothing	Lack of EU IRs on FPD and ASD. The Basic Regulation is not implemented in this regard. The MSs need to develop their own national design criteria and requirements to fulfil their obligation stemming from the Chicago Convention.
1	Performance-based rules, especially on ASD	The rules do not prescribe in detail organisational or ownership models, and focus on describing the required output and objectives of the activity itself. Thus, it is at the discretion of the MS to employ the most efficient national administrative model in order to assign the roles as regards the airspace structure. In this way, the rules allow all MSs' currently existing national models to continue to exist (without duplication) as they do not prescribe a certain organisational model for ASD. This approach takes duly into account the varying degree of the MSs', CAs' or service providers' involvement.
2	Prescriptive rules on FPD and ASD	The rules introduce organisational or ownership models. The rule would require that all currently existing models in the MSs be adjusted to the new requirements. This Option does not take into account the varying degree of the MSs', CAs' or service providers' involvement. This may require a longer transition period.

A summary of the impacts of the above options is presented in the following table:

Impact	Option 0	Option 1	Option 2
Safety	–	+	+
Social	0	+	+
Economic	0	+/-	–
GA and proportionality issues	0	+	–
‘Better regulation’ and harmonisation	–	+	+
<b>Overall impact</b>	<b>0</b>	<b>+</b>	<b>–</b>

Option 1 is the most favourable one as it intends to resolve the safety issue identified and supports one of the specific objectives of this Opinion by facilitating the free movement of airspace users. In addition, the implementation cost of this Option is expected to be low as the adjustments to the existing systems in the MSs will not be significant. Furthermore, some MSs already adhere to the ICAO Doc 8168 ‘PANS-OPS’ provisions, from which the content of Part-FPD and the technical requirements for the design of airspace structure are derived. Thus, the expected cost impact is considered minor. In the long term, the economic impact of the harmonised requirements among the MSs is expected to be positive. Furthermore, the rules provide for a proportionate implementation through the development of AMC/GM. In addition, it is anticipated that this Option has a positive impact on proportionality issues and the better regulation principle. Finally, the transparency and accountability of the airspace and ATS provision as well as the increased process/procedural harmonisation will create a more readily understood regulatory framework.

Option 2 is less favourable due to the higher compliance costs incurred by MSs, CAs and other affected stakeholders as they would be required to adjust and to tailor their existing (national) models to the one prescribed by the rules. This Option might have a negative impact on proportionality as it proposes prescriptive rules with organisational or ownership models on all the areas of ASD.

Based on this argumentation and the one provided in Chapter 4 of NPA 2016-13, Option 1 is the preferred Option for this Opinion.



#### 2.5.4. General feedback from stakeholders' consultation of the RIAs

The NPAs consultation confirmed the impact of the different options envisaged in the RIAs as well as the preferred ones.

Minor adjustments were performed following stakeholders feedback.

The proposed rules in the NPAs were welcomed by stakeholders as they promote regulatory harmonisation in the areas concerned. The approach taken provides flexibility in these areas and allows stakeholders to maintain their roles and organisational models.

Cologne, 7 March 2018

*[original signed by]*

Patrick KY  
Executive Director



### 3. References

#### 3.1. Affected regulations

- Commission Implementing Regulation (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 (OJ L 62, 8.3.2017, p.1)
- Commission Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 44, 14.2.2014, p.1)

#### 3.2. Related decisions

- Executive Director Decision 2017/001/R of 8 March 2017 issuing Acceptable Means of Compliance and Guidance Material to Commission Implementing Regulation (EU) 2017/373 'Common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight'
- Executive Director Decision 2014/012/R of 27 February 2014 adopting Acceptable Means of Compliance and Guidance Material to Regulation (EU) No 139/2014 'AMC/GM for Aerodromes – Initial Issue'

#### 3.3. Other reference documents

- 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)
- 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)
- 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)
- Commission Regulation (EC) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EC) No 691/2010 (OJ L 185, 15.7.2011, p.1)
- Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC)



- No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p. 1)
- ICAO Annex 3 to the Convention on International Civil Aviation, 'Meteorological Service for International Air Navigation', 19th Edition, 2016
  - ICAO Annex 4 to the Convention on International Civil Aviation, 'Aeronautical Charts', 11th Edition, 2009
  - ICAO Annex 11 to the Convention on International Civil Aviation, 'Air Traffic Services', 13th Edition, 2001
  - ICAO Annex 14 to the Convention on International Civil Aviation 'Aerodromes', Vol I 'Aerodrome Design and Operations', 4th Edition, July 2004
  - ICAO Annex 15 to the Convention on International Civil Aviation 'Aeronautical Information Services', 15th Edition July 2016 and 16th Edition, 2017
  - ICAO Document XXXX 'Aeronautical Information Management', 1st Edition, 2017
  - ICAO Document 8168 OPS/611 'Procedures for Air Navigation Services: Aircraft Operations' (PANS-OPS), Vol I 'Flight Procedures', 5th Edition, 2006
  - ICAO Document 4444 ATM/501, 'Procedures for Air Navigation Services: Air Traffic Management' (PANS-ATM), 15th Edition, 2007
  - ICAO Document 9426 AN/924, 'Air Traffic Services Planning Manual', 1st Edition, 1984
  - ICAO Document 9613 AN/937, 'Performance-based Navigation Manual', 4th Edition, 2013
  - ICAO Document 9906 AN/472, 'Quality Assurance Manual for Flight Procedure Design', Vols 1-6, 1st Edition, 2012
  - ICAO Document 9905 AN/471, 'Required Navigation Performance Authorization Required (RNP AR) Procedure Design Manual', 1st Edition, 2009
  - ICAO Document 8126 AN/872, 'Aeronautical Information Services Manual', 6th Edition, 2006
  - ICAO Document 7910 'Location Indicators', 165th Edition, September 2017
  - ICAO Document 9368 'Instrument Flight Procedures Construction Manual', 2nd Edition, 2002



#### 4. Appendices

- Appendix 1 to Opinion No 02/2018 — CRD 2016-02
- Appendix 2 to Opinion No 02/2018 — CRD 2016-13

