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Easy access rules for S(K)PI (Regulations (EC) No 549/2004 and (EU) 2019/317)

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Published December 2020[1]

[1] The published date represents the date when the consolidated version of the document was generated.

[2] Euro-Lex, Important Legal Notice: http://eur-lex.europa.eu/content/legal-notice/legal-notice.html.

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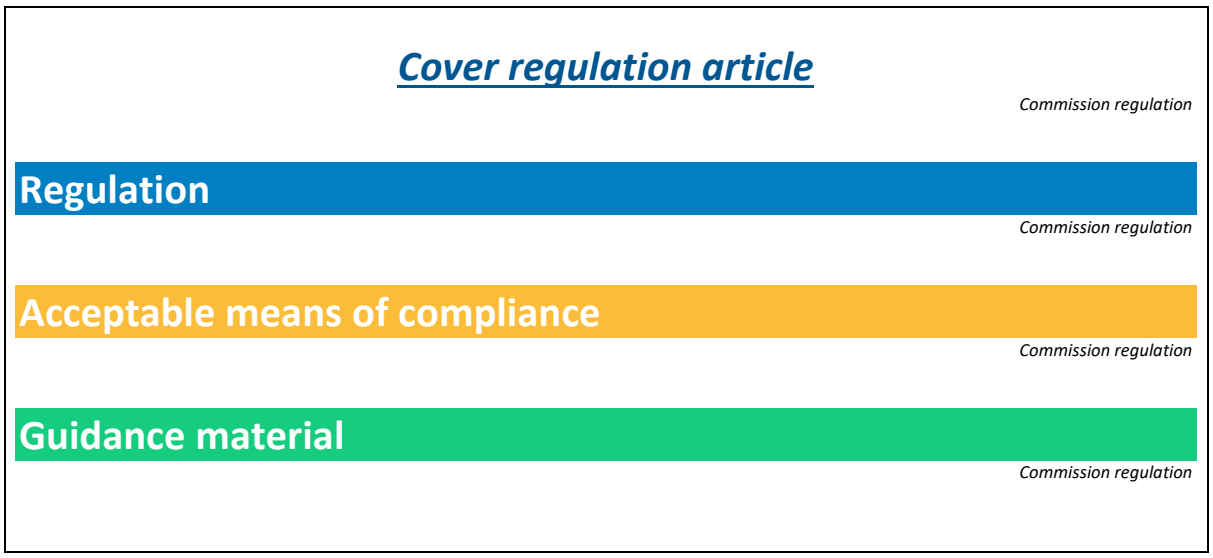
NOTE FROM THE EDITOR

The content of this document is arranged as follows: the cover regulations (recitals and articles) appear first, followed by the implementing rules (IR) points.

All elements (i.e. cover regulations, and IR points) are colour-coded and can be identified according to the illustration below. The Commission regulation or other regulatory source through which the point or paragraph was introduced or last amended is indicated below the point or paragraph title(s) *in italics*.



This document will be updated regularly to incorporate further amendments.

The format of this document has been adjusted to make it user-friendly and for reference purposes. Any comments should be sent to erules@easa.europa.eu.

INCORPORATED AMENDMENTS

IMPLEMENTING RULES (IRS) (COMMISSION REGULATIONS)

Incorporated Commission Regulation	Affected Part	Applicability date[1]
Regulation (EC) No 549/2004	N/a	20/4/2004
Regulation (EU) 2019/317	N/a	17/3/2019

Note: To access the official source documents, please use the links provided above.

[1] This date is the earliest applicability date for this regulation. Some provisions of the regulation may be applicable at a later date. Besides, there may be some opt-out filed by the Member States.

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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

Regulation (EC) No 549/2004

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 80(2) thereof,

Having regard to the proposal from the Commission[1],

Having regard to the opinion of the European Economic and Social Committee[2],

Having regard to the opinion of the Committee of the Regions[3],

Acting in accordance with the procedure laid down in Article 251 of the Treaty[4], in the light of the joint text approved by the Conciliation Committee on 11 December 2003,

Whereas:

(1) Implementation of the common transport policy requires an efficient air transport system allowing safe and regular operation of air transport services, thus facilitating the free movement of goods, persons and services.

(2) At its Extraordinary Meeting in Lisbon on 23 and 24 March 2000, the European Council called on the Commission to put forward proposals on airspace management, air traffic control and air traffic flow management, based on the work of the High Level Group on the single European sky set up by the Commission. This Group, made up largely of the civil and military air navigation authorities in the Member States, submitted its report in November 2000.

(3) Smooth operation of the air transport system requires a consistent, high level of safety in air navigation services allowing optimum use of Europe's airspace and a consistent, high level of safety in air travel, in keeping with the duty of general interest of air navigation services, including public service obligations. It should therefore be carried out to the highest standards of responsibility and competence.

(4) The single European sky initiative should be developed in line with the obligations stemming from the membership of the Community and its Member States of Eurocontrol, and in line with the principles laid down by the 1944 Chicago Convention on International Civil Aviation.

(5) Decisions relating to the content, scope or carrying out of military operations and training do not fall within the sphere of competence of the Community.

(6) The Member States have adopted a general statement on military issues related to the single European sky[5]. According to this statement, Member States should, in particular, enhance civil-

[1] OJ C 103 E, 30.4.2002, p. 1.

[2] OJ C 241, 7.10.2002, p. 24.

[3] OJ C 278, 14.11.2002, p. 13.

[4] Opinion of the European Parliament of 3 September 2002 (OJ C 272 E, 13.11.2003, p. 296), Council common position of 18 March 2003 (OJ C 129 E, 3.6.2003, p. 1) and position of the European Parliament of 3 July 2003 (not yet published in the Official Journal). Legislative resolution of the European Parliament of 29 January 2004 and Decision of the Council of 2 February 2004.

[5] See page 9 of this Official Journal.

military cooperation and, if and to the extent deemed necessary by all Member States concerned, facilitate cooperation between their armed forces in all matters of air traffic management.

(7) Airspace constitutes a limited resource, the optimum and efficient use of which will be possible only if the requirements of all users are taken into account and where relevant, represented in the whole development, decision-making process and implementation of the single European sky, including the Single Sky Committee.

(8) For all these reasons, and with a view to extending the single European sky to include a larger number of European States, the Community should, while taking into account the developments occurring within Eurocontrol, lay down common objectives and an action programme to mobilise the efforts by the Community, the Member States and the various economic stakeholders in order to create a more integrated operating airspace: the single European sky.

(9) Where Member States take action to ensure compliance with Community requirements, the authorities performing verifications of compliance should be sufficiently independent of air navigation service providers.

(10) Air navigation services, in particular air traffic services which are comparable to public authorities, require functional or structural separation and are organised according to very different legal forms in the various Member States.

(11) Where independent audits are required relating to providers of air navigation services, inspections by the official auditing authorities of the Member States where those services are provided by the administration, or by a public body subject to the supervision of the abovementioned authorities, should be recognised as independent audits, whether the audit reports drawn up are made public or not.

(12) It is desirable to extend the single European sky to European third countries, either within the framework of participation by the Community in the work of Eurocontrol, after the accession by the Community to Eurocontrol, or by means of agreements concluded by the Community with these countries.

(13) The accession of the Community to Eurocontrol is an important component in the creation of a pan-European airspace.

(14) In the process of creating the single European sky, the Community should, where appropriate, develop the highest level of cooperation with Eurocontrol in order to ensure regulatory synergies and consistent approaches, and to avoid any duplication between the two sides.

(15) In accordance with the conclusions of the High Level Group, Eurocontrol is the body that has the appropriate expertise to support the Community in its role as regulator. Accordingly, implementing rules should be developed, for matters falling within the remit of Eurocontrol as a result of mandates to that organisation, subject to the conditions to be included in a framework of cooperation between the Commission and Eurocontrol.

(16) The drafting of the measures necessary in order to create the single European sky requires broad-based consultations of economic and social stakeholders.

(17) The social partners should be informed and consulted in an appropriate way on all measures having significant social implications. The Sectoral Dialogue Committee set up under Commission Decision 1998/500/EC of 20 May 1998 on the establishment of Sectoral Dialogue

Committees promoting the dialogue between the social partners at European level[1] should also be consulted.

(18) Stakeholders such as air navigation service providers, airspace users, airports, manufacturing industry and professional staff representative bodies should have the possibility to advise the Commission on technical aspects of the implementation of the single European sky.

(19) The performance of the air navigation services system as a whole at European level should be assessed on a regular basis, with due regard to the maintenance of a high level of safety, to check the effectiveness of the measures adopted and to propose further measures.

(20) The sanctions provided for with respect to infringements of this Regulation and of the measures referred to in Article 3 should be effective, proportional and dissuasive, without reducing safety.

(21) The impact of the measures taken to apply this Regulation should be evaluated in the light of reports to be submitted regularly by the Commission.

(22) This Regulation does not affect the power of Member States to adopt provisions in relation to the organisation of their armed forces. This power may lead Member States to adopt measures to ensure that their armed forces have sufficient airspace for adequate education and training purposes. Provision should therefore be made for a safeguards clause to enable this power to be exercised.

(23) Arrangements for greater cooperation over the use of Gibraltar airport were agreed in London on 2 December 1987 by the Kingdom of Spain and the United Kingdom in a joint declaration by the Ministers of Foreign Affairs of the two countries. Such arrangements have yet to enter into operation.

(24) Since the objective of this Regulation, namely the creation of the single European sky, cannot be sufficiently achieved by the Member States, by reason of the transnational scale of the action, and can therefore be better achieved at Community level, while allowing for detailed implementing rules that take account of specific local conditions, the Community may adopt measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve this objective.

(25) The measures necessary for the implementation of this Regulation should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission[2].

(26) Article 8(2) of the Standard Rules of Procedure for committees[3] established in application of Article 7(1) of Decision 1999/468/EC provides a standard rule according to which the Chairman of a committee may decide to invite third parties to a meeting of that committee. If appropriate, the Chairman of the Single Sky Committee should invite representatives of Eurocontrol to take part in meetings as observers or experts,

[1] OJ L 225, 12.8.1998, p. 27.

[2] OJ L 184, 17.7.1999, p. 23.

[3] OJ C 38, 6.2.2001, p. 3.

HAVE ADOPTED THIS REGULATION:

Article 1 — Objective and scope

Regulation (EC) No 549/2004

1. The objective of the single European sky initiative is to enhance current safety standards and overall efficiency for general air traffic in Europe, to optimise capacity meeting the requirements of all airspace users and to minimise delays. In pursuit of this objective, the aim of this Regulation is to establish a harmonised regulatory framework for the creation of the single European sky by 31 December 2004.

2. The application of this Regulation and of the measures referred to in Article 3 shall be without prejudice to Member States' sovereignty over their airspace and to the requirements of the Member States relating to public order, public security and defence matters, as set out in Article 13. This Regulation and the abovementioned measures do not cover military operations and training.

3. The application of this Regulation and of the measures referred to in Article 3 shall be without prejudice to the rights and duties of Member States under the 1944 Chicago Convention on International Civil Aviation.

4. The application of this Regulation and of the measures referred to in Article 3 to the airport of Gibraltar is understood to be without prejudice to the respective legal positions of the Kingdom of Spain and the United Kingdom with regard to the dispute over sovereignty over the territory in which the airport is situated.

5. Application of this Regulation and of the measures referred to in Article 3 to Gibraltar airport shall be suspended until the arrangements included in the Joint Declaration made by the Foreign Ministers of the Kingdom of Spain and the United Kingdom on 2 December 1987 enter into operation. The Governments of Spain and the United Kingdom will inform the Council of such date of entry into operation.

Article 2 — Definitions

Regulation (EC) No 549/2004

For the purpose of this Regulation and of the measures referred to in Article 3, the following definitions shall apply:

1. 'air traffic control (ATC) service' means a service provided for the purpose of:

   (a) preventing collisions:

   — between aircraft, and

   — in the manoeuvring area between aircraft and obstructions; and

   (b) expediting and maintaining an orderly flow of air traffic;

2. 'aerodrome control service' means an ATC service for aerodrome traffic;

3. 'aeronautical information service' means a service established within the defined area of coverage responsible for the provision of aeronautical information and data necessary for the safety, regularity, and efficiency of air navigation;

4. 'air navigation services' means air traffic services; communication, navigation and surveillance services; meteorological services for air navigation; and aeronautical information services;

5. ‘air navigation service providers’ means any public or private entity providing air navigation services for general air traffic;

6. ‘airspace block’ means an airspace of defined dimensions, in space and time, within which air navigation services are provided;

7. ‘airspace management’ means a planning function with the primary objective of maximising the utilisation of available airspace by dynamic time-sharing and, at times, the segregation of airspace among various categories of airspace users on the basis of short-term needs;

8. ‘airspace users’ means all aircraft operated as general air traffic;

9. ‘air traffic flow management’ means a function established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilised to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate air traffic service providers;

10. ‘air traffic management’ means the aggregation of the airborne and ground-based functions (air traffic services, airspace management and air traffic flow management) required to ensure the safe and efficient movement of aircraft during all phases of operations;

11. ‘air traffic services’ means the various flight information services, alerting services, air traffic advisory services and ATC services (area, approach and aerodrome control services);

12. ‘area control service’ means an ATC service for controlled flights in a block of airspace;

13. ‘approach control service’ means an ATC service for arriving or departing controlled flights;

14. ‘bundle of services’ means two or more air navigation services;

15. ‘certificate’ means a document issued by a Member State in any form complying with national law, which confirms that an air navigation service provider meets the requirements for providing a specific service;

16. ‘communication services’ means aeronautical fixed and mobile services to enable ground-to-ground, air-toground and air-to-air communications for ATC purposes;

17. ‘European air traffic management network’ (EATMN) means the collection of systems listed in Annex I to 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)[1] enabling air navigation services in the Community to be provided, including the interfaces at boundaries with third countries;

18. ‘concept of operation’ means the criteria for the operational use of the EATMN or of part thereof;

19. ‘constituents’ means tangible objects such as hardware and intangible objects such as software upon which the interoperability of the EATMN depends;

20. ‘Eurocontrol’ is the European Organisation for the Safety of Air Navigation set up by the International Convention of 13 December 1960 relating to Cooperation for the Safety of Air Navigation[2]

[1] See page 33 of this Official Journal.

[2] Convention modified by the protocol of 12 February 1981 and revised by the protocol of 27 June 1997.

21. ‘Eurocontrol’s principles for establishing the cost-base for route facility charges and the calculation of unit rates’ means the principles as specified in document No 99.60.01/01 of 1 August 1999, issued by Eurocontrol;

22. ‘flexible use of airspace’ means an airspace management concept applied in the European Civil Aviation Conference area, as specified in the first edition of 5 February 1996 of the ‘Airspace Management Handbook for the application of the Concept of the Flexible Use of Airspace’ issued by Eurocontrol;

23. ‘flight information region’ means an airspace of defined dimensions within which flight information services and alerting services are provided;

24. ‘flight level’ means a surface of constant atmospheric pressure which is related to the specific pressure datum of 1 013,2 hectopascals and is separated from other such surfaces by specific pressure intervals;

25. ‘functional airspace block’ means an airspace block based on operational requirements, reflecting the need to ensure more integrated management of the airspace regardless of existing boundaries;

26. ‘general air traffic’ means all movements of civil aircraft, as well as all movements of State aircraft (including military, customs and police aircraft) when these movements are carried out in conformity with the procedures of the ICAO;

27. ‘ICAO’ means the International Civil Aviation Organisation, as established by the 1944 Chicago Convention on International Civil Aviation;

28. ‘interoperability’ means a set of functional, technical and operational properties required of the systems and constituents of the EATMN and of the procedures for its operation, in order to enable its safe, seamless and efficient operation. Interoperability is achieved by making the systems and constituents compliant with the essential requirements;

29. ‘meteorological services’ means those facilities and services that provide aircraft with meteorological forecasts, briefs and observations as well as any other meteorological information and data provided by States for aeronautical use;

30. ‘navigation services’ means those facilities and services that provide aircraft with positioning and timing information;

31. ‘operational data’ means information concerning all phases of flight that are required to take operational decisions by air navigation service providers, airspace users, airport operators and other actors involved;

32. ‘procedure’, as used in the context of the interoperability Regulation, means a standard method for either the technical or the operational use of systems, in the context of agreed and validated concepts of operation requiring uniform implementation throughout the EATMN;

33. ‘putting into service’ means the first operational use after the initial installation or an upgrade of a system;

34. ‘route network’ means a network of specified routes for channelling the flow of general air traffic as necessary for the provision of ATC services;

35. ‘routing’ means the chosen itinerary to be followed by an aircraft during its operation;

36. ‘seamless operation’ means the operation of the EATMN in such a manner that from the user’s perspective it functions as if it were a single entity;

37. ‘sector’ means part of a control area and/or a flight information region/upper region;

38. ‘surveillance services’ means those facilities and services used to determine the respective positions of aircraft to allow safe separation;

39. ‘system’ means the aggregation of airborne and groundbased constituents, as well as space-based equipment, that provides support for air navigation services for all phases of flight;

40. ‘upgrade’ means any modification that changes the operational characteristics of a system.

Article 3 — Fields for action by the Community

Regulation (EC) No 549/2004

1. This Regulation establishes a harmonised regulatory framework for the creation of the single European sky in conjunction with:

   (a) 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)[1];

   (b) 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)[2]; and

   (c) 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)[3];

   and with the implementing rules adopted by the Commission on the basis of this Regulation and the regulations referred to above.

2. The measures referred to in paragraph 1 shall apply subject to the provisions of this Regulation.

Article 4 — National supervisory authorities

Regulation (EC) No 549/2004

1. Member States shall nominate or establish a body or bodies as their national supervisory authority in order to assume the tasks assigned to such authority under this Regulation and under the measures referred to in Article 3.

2. The national supervisory authorities shall be independent of air navigation service providers. This independence shall be achieved through adequate separation, at the functional level at least, between the national supervisory authorities and such providers. Member States shall ensure that national supervisory authorities exercise their powers impartially and transparently.

3. Member States shall notify the Commission of the names and addresses of the national supervisory authorities, as well as changes thereto, and of the measures taken to ensure compliance with paragraph 2.

[1] See page 20 of this Official Journal.

[2] See page 10 of this Official Journal.

[3] See page 26 of this Official Journal.

Article 5 — Committee procedure

Regulation (EC) No 549/2004

1. The Commission shall be assisted by the Single Sky Committee, hereinafter referred to as 'the Committee', composed of two representatives of each Member State and chaired by a representative of the Commission. The Committee shall ensure an appropriate consideration of the interests of all categories of users.

2. Where reference is made to this paragraph, Articles 3 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

3. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

   The period referred to in Article 5(6) of Decision 1999/468/ EC shall be set at one month.

4. The Committee shall adopt its rules of procedure.

Article 6 — Industry consultation body

Regulation (EC) No 549/2004

Without prejudice to the role of the Committee and of Eurocontrol, the Commission shall establish an 'industry consultation body', to which air navigation service providers, associations of airspace users, airports, the manufacturing industry and professional staff representative bodies shall belong. The role of this body shall be solely to advise the Commission on technical aspects of the implementation of the single European sky.

Article 7 — Relations with European third countries

Regulation (EC) No 549/2004

The Community shall aim at and support the extension of the single European sky to countries which are not members of the European Union. To that end, it shall endeavour, either within the framework of agreements concluded with neighbouring third countries, or within the context of Eurocontrol, to extend the scope of this Regulation, and of the measures referred to in Article 3, to those countries.

Article 8 — Implementing rules

Regulation (EC) No 549/2004

1. For the development of implementing rules pursuant to Article 3 which fall within the remit of Eurocontrol, the Commission shall issue mandates to Eurocontrol setting out the tasks to be performed and the timetable therefor. In this connection, it shall endeavour to make best use of the arrangements of Eurocontrol for the involvement and consultation of all interested parties, where these arrangements correspond to Commission practices on transparency and consultation procedures and do not conflict with its institutional obligations. The Commission shall act in accordance with the procedure referred to in Article 5(2).

2. On the basis of the work completed pursuant to paragraph 1, decisions regarding the application of the results of such work within the Community and the deadline for their implementation shall be taken in accordance with the procedure referred to in Article 5(3). These decisions shall be published in the *Official Journal of the European Union*.

3. Notwithstanding paragraph 2, if Eurocontrol cannot accept a mandate that was issued to it under paragraph 1, or if the Commission, in consultation with the Committee, considers that

   (a) the work carried out on the basis of such mandate is not progressing satisfactorily given the deadline set, or

(b) the results of the work carried out are not adequate,

the Commission, acting in accordance with the procedure referred to in Article 5(3), may adopt alternative measures to achieve the objectives of the mandate concerned.

4. For the development of implementing rules pursuant to Article 3 which fall outside the remit of Eurocontrol, the Commission shall act in accordance with the procedure referred to in Article 5(3).

Article 9 — Sanctions

Regulation (EC) No 549/2004

The sanctions that Member States shall lay down for infringements of this Regulation and of the measures referred to in Article 3 by airspace users and service providers shall be effective, proportional and dissuasive.

Article 10 — Consultation of stakeholders

Regulation (EC) No 549/2004

The Member States, acting in accordance with their national legislation, and the Commission shall establish consultation mechanisms for appropriate involvement of stakeholders in the implementation of the single European sky.

Such stakeholders may include:

— air navigation service providers,

— airspace users,

— airports,

— manufacturing industry, and

— professional staff representative bodies.

Consultation of stakeholders shall cover, in particular, the development and introduction of new concepts and technologies in the EATMN.

Article 11 — Performance review

Regulation (EC) No 549/2004

1. The Commission shall ensure the examination and evaluation of air navigation performance, drawing upon the existing expertise of Eurocontrol.

2. The analysis of the information collected for the purposes of paragraph 1 aims at:

   (a) allowing the comparison and improvement of air navigation service provision;

   (b) assisting air navigation service providers to deliver the required services;

   (c) improving the consultation process between airspace users, air navigation service providers and airports;

   (d) allowing the identification and the promotion of best practice, including improved safety, efficiency and capacity.

3. Without prejudice to the public's right of access to the Commission's documents as laid down in Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001

regarding public access to European Parliament, Council and Commission documents[1], the Commission shall adopt, in accordance with the procedure referred to in Article 5(3), measures for the dissemination to interested parties of the information referred to in paragraph 2.

Article 12 — Supervision, monitoring and methods of impact assessment

Regulation (EC) No 549/2004

1. The supervision, monitoring and methods of impact assessment shall be based on the submission of annual reports by the Member States on implementation of the actions taken pursuant to this Regulation and to the measures referred to in Article 3.
2. The Commission shall periodically review the application of this Regulation and of the measures referred to in Article 3, and shall report to the European Parliament and to the Council, on the first occasion by 20 April 2007, and every three years thereafter. For this purpose, the Commission may request from the Member States information additional to the information contained in the reports submitted by them in accordance with paragraph 1.
3. For the purposes of drafting the reports referred to in paragraph 2, the Commission shall request the opinion of the Committee.
4. The reports shall contain an evaluation of the results achieved by the actions taken pursuant to this Regulation including appropriate information about developments in the sector, in particular concerning economic, social, employment and technological aspects, as well as about quality of service, in the light of the original objectives and with a view to future needs.

Article 13 — Safeguards

Regulation (EC) No 549/2004

This Regulation shall not prevent the application of measures by a Member State to the extent to which these are needed to safeguard essential security or defence policy interests. Such measures are in particular those which are imperative:

— for the surveillance of airspace that is under its responsibility in accordance with ICAO Regional Air Navigation agreements, including the capability to detect, identify and evaluate all aircraft using such airspace, with a view to seeking to safeguard safety of flights and to take action to ensure security and defence needs,

— in the event of serious internal disturbances affecting the maintenance of law and order,

— in the event of war or serious international tension constituting a threat of war,

— for the fulfilment of a Member State's international obligations in relation to the maintenance of peace and international security,

— in order to conduct military operations and training, including the necessary possibilities for exercises.

[1] OJ L 145, 31.5.2001, p. 43.

Article 14 — Entry into force

Regulation (EC) No 549/2004

This Regulation shall enter into force on the 20th day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Strasbourg, 10 March 2004.

For the European Parliament	*For the Council*
The President	*The President*
P. COX	D. ROCHE

STATEMENT BY THE MEMBER STATES ON MILITARY ISSUES RELATED TO THE SINGLE EUROPEAN SKY

Regulation (EC) No 549/2004

The Member States,

1. taking into account that the Regulations aimed at creating the single European sky apply only to general air traffic and do not cover military operations and training,
2. affirming the necessity to put into practice the legislative framework for the single European sky in a coherent and consistent way, taking full account of the needs related to national defence and security policy and international agreements,
3. being convinced that the safe and efficient use of airspace can only be achieved through close cooperation between civil and military users of airspace, mainly based on the concept of flexible use of airspace and effective civil-military coordination as established by ICAO,

declare that they will:

1. cooperate with each other, taking into account national military requirements, in order that the concept of flexible use of airspace is fully and uniformly applied in all Member States by all users of airspace;
2. ensure that the interests of Member States' military users of airspace will, where relevant, be represented in the whole development, decision-making process and implementation of the single European sky, including the Single Sky Committee set up under Article 5 of Regulation (EC) No 549/2004 (framework Regulation);
3. ensure, where appropriate, that military personnel are involved in the work undertaken by recognised organisations set up under Article 3 of Regulation (EC) No 550/2004 (service provision Regulation);
4. take into account, in relation to matters of air traffic management, the fundamental importance of Eurocontrol;
5. enhance civil military cooperation and, if and to the extent deemed necessary by all Member States concerned,
   - facilitate cooperation between their armed forces in all matters of air traffic management, so as to make it possible to address relevant needs in the implementation of the regulatory framework for the single European sky;
   - taking into account the objective of establishing the regulatory framework for the single European sky by 31 December 2004, create the arrangements necessary to support such military cooperation in order to guarantee a balanced consideration of economic as well as security and defence requirements.

COVER REGULATION TO REGULATION (EU) 2019/317

COMMISSION IMPLEMENTING REGULATION (EU) 2019/317
of 11 February 2019
laying down a performance and charging scheme in the single European sky and repealing Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013

Regulation (EU) 2019/317

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to 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)[1] and in particular Article 11(6) thereof,

Having regard to 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[2], and in particular Article 15(4) thereof, Whereas:

(1) The performance scheme referred to in Article 11 of Regulation (EC) No 549/2004 should improve the performance of air navigation services and network functions in the single European sky.

(2) The charging scheme for air navigation services referred to in Article 15 of Regulation (EC) No 550/2004 is instrumental to the successful implementation of the performance scheme and should therefore complement it. The charging scheme should contribute to greater transparency in the determination, imposition and enforcement of charges to airspace users and should contribute to the cost efficiency of providing air navigation services and to efficiency of flights, while maintaining an optimum safety level. The charging scheme should be consistent with the Eurocontrol's charging system for *en route* charges and with Article 15 of the 1944 Chicago Convention on International Civil Aviation (the 'Chicago Convention').

(3) In the interest of clarity, and in order to provide for an adapted regulatory framework for the third reference period of the performance scheme, it is necessary to revise the implementing rules governing the performance and charging schemes contained in Commission Implementing Regulation (EU) No 390/2013[3] and Commission Implementing Regulation (EU) No 391/2013[4] and to consolidate these provisions in a single Implementing Regulation.

(4) In accordance with Article 11(1) of Regulation (EC) No 549/2004, the performance scheme should cover air navigations services and network functions referred to in Article 6 of Regulation (EC) No 551/2004 of the European Parliament and of the Council[5]. Therefore, this Regulation

[1] OJ L 96, 31.3.2004, p. 1.

[2] OJ L 96, 31.3.2004, p. 10.

[3] Commission Implementing Regulation (EU) No 390/2013 of 3 May 2013 laying down a performance scheme for air navigation services and network functions (OJ L 128, 9.5.2013, p. 1).

[4] Commission Implementing Regulation (EU) No 391/2013 of 3 May 2013 laying down a common charging scheme for air navigation services (OJ L 128, 9.5.2013, p. 31).

[5] 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) (OJ L 96, 31.3.2004, p. 20).

should apply to the Network Manager appointed in accordance with Article 4(3) of Commission Implementing Regulation (EU) 2019/123[1].

(5) The performance and charging schemes should enhance the performance of air navigation services through a gate-to-gate approach covering both *en route* and terminal air navigation services. They should foster long-term improvements in the performance of air navigation services, as reflected in the European ATM Master Plan[2] while having due regard to the overriding safety objectives. The performance scheme should contribute to the reduction of greenhouse gas emissions from aviation and should allow optimum use of airspace, taking into account air traffic flows in the European airspace.

(6) A Performance Review Body upon Commission's request may give independent advice to the Commission in all areas that affect the performance of air navigation services and network functions in the Union.

(7) National supervisory authorities should be able to obtain from all relevant parties, including air navigation service providers under their supervision, relevant data necessary for the purpose of ensuring the proper implementation and oversight of this Regulation at a local level. Air navigation service providers should facilitate inspections and surveys carried out by the national supervisory authorities for the purpose of monitoring the implementation of the performance and charging schemes.

(8) The Network Manager should provide relevant inputs to target setting at Union, national and functional airspace block levels, and should support the achievement of performance targets through measures and processes provided in the Network Operations Plan.

(9) In implementing the performance scheme, the Commission and Member States should coordinate with the European Union Aviation Safety Agency in order to ensure that safety aspects are properly addressed, in line with the safety objectives and requirements stemming from Regulation (EU) 2018/1139 of the European Parliament and of the Council[3].

(10) The duration of a reference period for the performance scheme should be such as to provide the certainty required to implement multi-annual capital expenditure programmes in order to achieve the expected return on investments in the form of performance improvements, while still allowing accuracy of forecasting.

(11) Key performance indicators should be defined in the key performance areas of safety, environment, capacity and cost-efficiency. These key performance indicators should be used for the purpose of setting achievable, sustainable, realistic and time-bound performance targets at Union level, national level or functional airspace block level. The key performance indicators should cover both *en route* and terminal air navigation services, as well as network functions, in order to improve the overall performance of the network.

(12) Union-wide performance targets should be set by the Commission, taking account of the level of performance achieved in the previous reference period or periods and of relevant inputs

[1] Commission Implementing Regulation (EU) 2019/123 of 24 January 2019 laying down detailed rules for the implementation of air traffic management (ATM) network functions and repealing Commission Regulation (EU) No 677/2011 (OJ L 28, 31.1.2019, p. 1).

[2] As defined in Article 3 of Commission Implementing Regulation (EU) No 409/2013 of 3 May 2013 on the definition of common projects, the establishment of governance and the identification of incentives supporting the implementation of the European Air Traffic Management Master Plan Text with EEA relevance (OJ L 123, 4.5.2013, p. 1).

[3] Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1).

provided by the Performance Review Body, the Network Manager and the national supervisory authorities. The inputs from national supervisory authorities should include in particular initial cost and information about traffic forecasts for the reference period concerned. The Commission should substantiate Union-wide performance targets with a description of underlying assumptions and rationales. Drafting of the Union-wide performance targets should be subject to stakeholder consultation.

(13) Member States should be able to decide on whether their respective performance plans are established at national level or at the level of functional airspace blocks, taking account of local circumstances.

(14) National supervisory authorities should be responsible for the development of national or functional airspace block performance plans, including binding performance targets, based on key performance indicators applied at national level or at the level of functional airspace block. The national or functional airspace block performance plans should include initiatives to support cross-border cooperation between air navigation service providers, irrespective of their geographical scope.

(15) Performance plans should provide full transparency on the determined costs of new and existing investments in respect of the purchase, development or leasing of fixed assets. Major investments should be detailed and justified, as well as consistent with SESAR deployment and with expected performance gains.

(16) Consultations should take place at national or functional airspace block level in order to ensure that the views of stakeholders are taken into account in the establishment of performance plans and targets contained therein.

(17) Given the strong links between the different key performance areas, the interdependencies between performance targets should be duly taken into account for the purposes of target setting, having regard to the overriding safety objectives.

(18) Performance targets should be subject to incentives with a view to encouraging better performance, including the application of a traffic risk sharing mechanism in respect of the key performance area of cost-efficiency. Incentive schemes should be effective and should set parameters in a non-discriminatory and transparent manner for the purpose of rewarding or penalising actual performance in relation to the adopted performance targets. The safety key performance area should not be subject to any incentives due to its overriding nature. Member States should ensure that the implementation of incentive schemes does not adversely impact planned and ongoing investments aimed at delivering the adequate capacity and flight efficiency to users.

(19) Member States should adopt draft performance plans and submit them to the Commission for the Commission's assessment and review. In this respect, the Commission should first verify whether the performance plans are complete. If the plans are complete, the Commission should assess whether the proposed performance targets contained in the performance plans are consistent with the Union-wide performance targets. If the required consistency cannot be established, the Commission should request Member States to revise their performance plans and targets, or to take corrective measures.

(20) Member States should adopt and publish the final versions of their respective performance plans only after the Commission has found that the national performance targets or performance targets set at the level of functional airspace blocks (‘FAB performance targets’) contained therein are consistent with the Union-wide targets.

(21) The targets set in the draft performance plans should apply during the procedures for the assessment from the start of the reference period and, where appropriate, during the revision of performance targets set at national or functional airspace block level. Upon the adoption of the final performance plans, the performance targets in the key performance area of cost-efficiency should apply retroactively through an adjustment of unit rates in order to ensure that airspace users benefit from performance improvements from the start of the reference period.

(22) Member States should request permission from the Commission if they want to revise one or several performance targets during a reference period. Such a request can be made where alert thresholds are reached, or where the Member State demonstrates that the initial data, assumptions and rationales, including on investments, underpinning the performance targets are to a significant and lasting extent no longer accurate due to circumstances that were unforeseeable at the time of the adoption of the performance plan. The Commission should authorise the Member State concerned to proceed with the intended revision only if it is necessary and proportionate in light of the aforementioned circumstances, and where the revised performance targets ensure that consistency with the Union-wide performance targets is maintained.

(23) The introduction of new technologies and business models to stimulate integrated service provision should lead to significant cost reductions to the benefit of users over time but can lead to initial restructuring costs. If a Member State demonstrates that restructuring measures bring a net benefit to users, it should also be able to request a revision of local cost-efficiency targets in order to recover the associated restructuring costs through a revision of the determined costs contained in their performance plans, subject to the Commission's authorisation.

(24) The Commission should review the Union-wide performance targets during the reference period to determine whether they remain adequate. The Commission should consider a revision of Union-wide performance targets where it is demonstrated during a reference period that these targets are no longer adequate in light of changed circumstances, and that the revision of targets is necessary and proportionate. A revision of Union-wide targets during a reference period should trigger the start of a new reference period, including the establishment of associated performance plans and performance targets set at national or functional airspace block level.

(25) Network functions should also be subject to performance targets and should contribute to the achievement of the Union-wide performance targets. For this purpose the Network Manager should prepare the Network Performance Plan which should be verified and adopted by the Commission.

(26) An effective operational partnership and cooperative decision making between the principal stakeholders, such as air navigation service providers, functional airspace blocks, airports, civil and military airspace users and the Network Manager is of key importance for the achievement of performance targets of network functions.

(27) The determined costs of air navigation services should be financed by charges imposed on airspace users. These charges should be levied in charging zones established for *en route* and terminal air navigation services. Member States should ensure that the geographical scope of these charging zones is clearly defined and that the charging zones are consistent with the provision of air navigation services. It may be necessary to modify a terminal charging zone during a reference period due to changes in the operation of airports.

(28) A cost base for charges, which comprises the determined costs of eligible air navigation services and facilities, should be established for each charging zone. Member States should also be

allowed to include in these cost bases the determined costs incurred by their national supervisory authorities as well as other State costs related to the provision of air navigation services.

(29) The determined costs for *en route* and terminal charges should be established prior to the start of each reference period, as part of the performance plans. These determined costs shall be specified for each calendar year of the reference period concerned. National supervisory authorities should verify that the established determined costs only comprise cost items that are eligible under the performance and charging scheme.

(30) The determined costs included in a cost base for *en route* or terminal air navigation services should include staff costs, operating costs other than staff costs, depreciation costs, cost of capital, and exceptional costs. Actual costs incurred should be annually reported in accordance with the same categorisation in order to ensure consistency and transparency.

(31) National supervisory authorities should, before the start of each reference period, define the criteria used to allocate costs between *en route* and terminal services and inform the Commission accordingly. Those criteria should ensure the transparent setting of determined costs and guarantee that there are no cross-subsidies between *en route* and terminal services.

(32) Member States should annually calculate the unit rates for their *en route* and terminal charging zones. In calculating the unit rate, Member States should ensure that services or facilities funded through public funds including Union assistance programmes such as the Trans-European transport network, the Connecting Europe Facility and the Cohesion Fund, are not charged to airspace users. In calculating the unit rates, Member States should be allowed to adjust their determined costs for inflation.

(33) The performance and charging scheme should provide for a traffic risk sharing mechanism to incentivise the provision of services. National supervisory authorities should be allowed to adjust the values of the traffic risk sharing parameters as defined in this Regulation in order to take account of local circumstances and to better incentivise the provision of air navigation services. That adjustment should be done after consultation of air navigation service providers and airspace users. However, those adjustments should not reduce the risk exposure of the air navigation service provider or providers concerned in comparison with the default mechanism set out in this Regulation.

(34) Air navigation service providers should bear the cost risk with regard to differences between determined and actual costs, except for a limited number of cost items subject to specific requirements.

(35) Air navigation service providers should not be allowed to generate financial surpluses as a result of the cancellation or postponement of new and existing investments during a reference period. Air navigation service providers should be able to annually adjust the planned major investments during a reference period, subject to a detailed justification and provided that the requested changes are approved by the national supervisory authority concerned. Where the actual costs of new and existing investments exceed the corresponding determined costs over a reference period, national supervisory authorities should be responsible for verifying the detailed justifications provided by air navigation service providers and for authorising any subsequent recovery of additional costs from airspace users. Any material difference in those costs should not be charged to users, unless the national supervisory authority has established that the additional costs were exclusively due to new and existing investments required for operational changes consistent with the implementation of the European ATM Master Plan and in particular SESAR common projects.

(36) Unforeseeable changes in applicable legal provisions or financial conditions may lead, during a reference period, to significant deviations of actual pension costs from the determined pension costs set out in the performance plans. Subject to scrutiny by the national supervisory authority, those cost differences should be passed on to airspace users through unit rate adjustments.

(37) Member States should set annually a unit rate for each charging zone. Member States should be able to set their unit rates collectively, in particular when charging zones extend across the airspace of more than one Member State or when they are parties to a joint route charges system. The Commission should verify that the unit rates submitted by Member States comply with the provisions on unit rate calculation of this Regulation.

(38) The charging scheme should ensure complete and transparent information on the cost bases for charges, actual costs and unit rates. Before the start of a reference period, Member States should consult air navigation service providers, airspace users' representatives, and, where relevant, airport operators and airport coordinators on the planned determined costs, planned investments, service unit forecasts and the charging policy for the reference period concerned. During the reference period, Member States should ensure that these stakeholders are annually consulted on the intended unit rates and on the actual costs incurred in connection with the provision of air navigation services. Member States should make complete and adequate information available to all the consulted entities for the purpose of the consultations.

(39) Member States should be able to decide to modulate air navigation charges to provide incentives to equip aircraft with systems included in the SESAR common projects. Member States should be able to further modulate charges, taking into account the level of congestion of the network in a specific area or on a specific route at specific times, to increase the efficiency of air navigation services and to promote their optimised use.

(40) Member States should be able to collect *en route* charges collectively through a single charge per flight within a joint route charges system, in order to improve the efficiency of the charging scheme and to reduce the administrative and accounting workload.

(41) Enforcement measures should be provided for in order to ensure the prompt and full payment of air navigation charges by airspace users.

(42) Air navigation charges for any specific flight should be calculated, in respect of each charging zone, as a product of applicable unit rate and the number of service units. The level of charges imposed, in particular on light aircraft, should not discourage the use of facilities and services necessary for safety or the introduction of new techniques and procedures. Member States should cover the costs for the services that air navigation service providers have provided to flights exempted from air navigation charges.

(43) Member States should have the possibility, where there is no historical evidence of operational issues, to apply a simplified charging scheme in order to incentivise air navigation service providers and to reduce the administrative burden for the air navigation service providers and national supervisory authorities concerned.

(44) Where terminal air navigation services or communication, navigation and surveillance services, meteorological services for air navigation and aeronautical information services ('CNS, MET and AIS') or ATM data services are provided under market conditions, Member States should be allowed to exempt those services from certain provisions pertaining to the charging scheme and from target setting on cost-efficiency. Member States should be able to establish such market conditions during a reference period.

(45) The provision of adequate data and information by national supervisory authorities, air navigation service providers, airport operators, airport coordinators, airspace users and the

Network Manager, is essential for the purpose of performance target setting and monitoring at Union-wide level and at national or functional airspace block level.

(46) The national supervisory authorities should regularly monitor the progress made in achieving the performance targets contained in the performance plans. Where the targets are not met, the Member State or national supervisory authority concerned should apply the appropriate measures that they have defined in order to address the situation.

(47) The Commission should monitor the performance of air navigation services and network functions, and regularly assess the achievement of performance targets. The Commission should present the results of that monitoring annually to the Single Sky Committee.

(48) Without prejudice to confidentiality requirements pertaining to market conditions, the essential information and final reports required under this Regulation should be made publicly available in order to guarantee adequate transparency and enable the proper consultation of stakeholders.

(49) Implementing Regulation (EU) No 390/2013 and Implementing Regulation (EU) No 391/2013 should be repealed with effect from 1 January 2020, but should continue to apply beyond that date in respect of obligations related to the second reference period.

(50) This Regulation should apply in respect of the third reference period and to the subsequent reference periods. In order to allow for the adoption of Union-wide targets and the preparation and adoption of performance plans before the beginning of the third reference period, this Regulation should apply with immediate effect from the date of its entry into force.

(51) The measures provided for in this Regulation are in accordance with the opinion of the Single Sky Committee,

HAS ADOPTED THIS REGULATION:

CHAPTER I — GENERAL PROVISIONS

Article 1 — Subject matter and scope

Regulation (EU) 2019/317

1. This Regulation lays down the measures for the functioning of the performance and charging schemes for air navigation services and network functions.

2. This Regulation applies to the provision of air navigation services and network functions for general air traffic within the International Civil Aviation Organization ('ICAO') European ('EUR') region, where Member States are responsible for the provision of air navigation services.

   This Regulation applies to:

   (a) the air navigation service providers referred to in Article 2(5) of Regulation (EC) No 549/2004;

   (b) the body nominated by the Commission to perform the tasks necessary for the execution of the network functions (the 'Network Manager') in accordance with Article 6(2) of Regulation (EC) No 551/2004 and appointed in accordance with Article 4 of Implementing Regulation (EU) 2019/123.

   This Regulation also applies, for the purpose of target setting and performance monitoring on cost-efficiency, to the authorities or entities incurring eligible costs to be recovered through

user charges, as specified in point (b) of Article 15(2) of Regulation (EC) No 550/2004 and in the third subparagraph of Article 22(1) of this Regulation.

3. This Regulation applies to terminal air navigation services provided at airports located within the territories of the Member States with 80 000 instrument flight rules ('IFR') air transport movements or more per year.

4. Member States may decide to apply the provisions of this Regulation also to terminal air navigation services provided at other airports located within their respective territories than the ones referred to in paragraph 3.

5. Member States may decide to apply the provisions of this Regulation also to:

   (a) air navigation services and network functions provided in airspace under their responsibility within other ICAO regions than the ICAO EUR region, without prejudice to the rights and duties of Member States under the 1944 Chicago Convention on international civil aviation (the 'Chicago Convention');

   (b) providers of air navigation services having the permission to provide air navigation services without certification, in accordance with Article 7(5) of Regulation (EC) No 550/2004.

6. Member States shall, without delay, inform the Commission of any decision taken pursuant to paragraph 4 or 5.

   Member States shall ensure that the duration of those decisions corresponds to the duration of a reference period. They shall not amend or withdraw those decisions during a reference period.

7. This Regulation shall apply to the third reference period as set out in Article 7 and to the subsequent reference periods.

Article 2 — Definitions

Regulation (EU) 2019/317

For the purposes of this Regulation, the following definitions apply:

(1) 'actual cost' means a cost actually incurred in a calendar year for the provision of air navigation services which are subject to certified accounts or, in the absence of such certified accounts, subject to a final audit;

(2) 'air traffic services unit' or 'ATS unit' means a unit, either civil or military, responsible for providing air traffic services in a given airspace;

(3) 'airport coordinator' means the natural or legal person appointed by a Member State to carry out the coordination duties at coordinated airports set out in Article 4 of Council Regulation (EEC) No 95/93[1];

(4) 'airport operator' means any legal or natural person who operates one or more aerodromes;

(5) 'airspace user' means the operator of the aircraft at the time when the flight is performed or, if the identity of the operator is not known, the owner of the aircraft, unless it can be proved that another person was the operator at that time;

(6) 'airspace users' representative' means any legal person or entity representing the interests of one or several categories of airspace users;

[1] Council Regulation (EEC) No 95/93 of 18 January 1993 on common rules for the allocation of slots at Community airports (OJ L 14, 22.1.1993, p. 1).

(7) 'area control centre' means a unit providing air traffic services to controlled flights in its area of responsibility.

(8) '*en route* charging zone' means a volume of airspace that extends from the ground up to, and including, upper airspace, where *en route* air navigation services are provided and for which a single cost base and a single unit rate are established;

(9) 'exceptional event' means circumstances under which ATM capacity is abnormally reduced so that the level of air traffic flow management ('ATFM') delays is abnormally high, as a result of a planned limitation induced through operational or technical change, major adverse weather circumstances, the unavailability of large airspace parts either through natural or political reasons, or industrial action, and the activation of the European Aviation Crisis Coordination Cell ('EACCC') by the Network Manager;

(10) 'IFR air transport movements per year' means the sum of take-offs and landings performed under IFR, calculated as the yearly average over the three calendar years preceding the year in which the draft performance plan was to be submitted in accordance with Article 12;

(11) 'forecast inflation index' means the annual inflation index based on the third year before the start of a reference period and computed by using the latest available inflation forecast of average Consumer Price Index percentage change published by the International Monetary Fund for the Member State concerned at the time of drafting the performance plan. In case the percentage change published by the International Monetary Fund for a given year is negative, a zero value shall be used.

(12) 'actual inflation index' means the annual actual inflation index based on the third year before the start of a reference period and computed by using the actual inflation rate published by the Commission in the Eurostat Harmonised Index of Consumer Price for the State concerned in April of year n+1. In case the percentage change published by the Commission for a given year is negative, a zero value shall be used.

(13) 'major investment' means the acquisition, development, replacement, upgrade, or leasing of fixed assets representing a total value over the whole lifetime of the assets greater than EUR 5 million in real terms;

(14) 'national authority' means a regulatory or supervisory authority established by one or more Member States at national or functional airspace block level;

(15) 'new and existing investment' means the acquisition, development, replacement, upgrade or leasing of fixed assets where depreciation costs, cost of capital, or in the case of leasing, operating costs, for that investment are incurred during the reference period covered by the performance plan;

(16) 'reference period' means the period of validity and application of the Union-wide performance targets, as set out in point (d) of Article 11(3) of Regulation (EC) No 549/2004 and Article 7 of this Regulation;

(17) 'reference value' means the value computed by the Network Manager of *en route* ATFM delay for each Member State and each functional airspace block for the purpose of ensuring that the Union-wide *en route* ATFM delay target is met;

(18) 'restructuring costs' means significant one-time costs incurred by air navigation service providers in the process of restructuring for introducing new technologies, procedures or business models to stimulate integrated service provision, compensating employees, closing air traffic control centres, shifting activities to new locations, writing off assets or acquiring strategic participations in other air navigation service providers;

(19) 'runway incursion' means any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft;

(20) 'separation minima infringement' means a situation in which prescribed separation minima were not maintained between aircraft;

(21) 'terminal charging zone' means an airport or a group of airports, located within the territories of a Member State, where terminal air navigation services are provided and for which a single cost base and a single unit rate are established.

CHAPTER II — TASKS AND RESPONSIBILITIES

Article 3 — Assistance by the Performance Review Body

Regulation (EU) 2019/317

Where necessary for carrying out the tasks of the Commission related to the detailed functioning of the performance scheme, the Commission may request assistance from the Performance Review Body as regards the following:

(a) the collection, examination, validation and dissemination of relevant data for the performance of air navigation services and network functions;

(b) the selection or adaptation of key performance areas;

(c) the definition of key performance indicators and indicators for monitoring;

(d) the setting of Union-wide performance target ranges, and the setting and the revision of Union-wide performance targets;

(e) the establishment of the baseline values, alert thresholds, and comparator groups referred to in Article 9(4);

(f) the assessment of the consistency of draft national performance targets or performance targets set at the level of functional airspace blocks ('FAB performance targets') with the Union-wide performance targets in accordance with Article 14 and Article 15 and the review of draft performance plans in accordance with Article 14(1) and Article 15(1);

(g) the verification of the completeness of the draft performance plans in accordance with Article 13;

(h) the verification, in accordance with Article 19, of the draft Network Performance Plan as referred in Article 10(5) of this Regulation;

(i) the assessment of revised performance targets and of the corrective measures adopted by Member States pursuant to Article 15(5);

(j) the monitoring of the performance of air navigation services, including investment and capital expenditure, at Union level, at national level and at the level of functional airspace blocks;

(k) the monitoring of the performance of the network functions in accordance with Article 37(2);

(l) the assessment, in accordance with Article 37(3), of the information received from the national supervisory authorities in relation to the performance plans, for the purpose of monitoring the performance of the European ATM network;

(m) the assessment of the achievement of the performance targets during the reference period;

(n) the maintenance and support in the coordination of a stakeholder consultation calendar concerning performance plans and the consultation requirements referred to in Article 24(2) and (3) and in Article 30.

Article 4 — Provision of information and facilitation of monitoring by air navigation service providers

Regulation (EU) 2019/317

1. Where necessary for carrying out the tasks of the national supervisory authorities related to the detailed functioning of the performance scheme, the air navigation service providers shall, upon request and without delay, provide to those authorities the following:

   (a) information about local conditions relevant to the setting of national performance targets or performance targets set at the level of functional airspace block;

   (b) data for establishing the return on equity rate for air navigation charges;

   (c) information about planned investments in the five years following the date of the request, showing the profile of planned expenditure for new and existing investments during and beyond the reference period and how major investments contribute to performance in each key performance area;

   (d) their business plan referred to in point ATM/ANS.OR.D.005 of Annex III of Commission Implementing Regulation (EU) 2017/373[1];

   (e) information required for the application of Article 28(3);

   (f) data on cost bases and information on the allocation of costs among *en route* and terminal air navigation services, as well as data on revenues from commercial activities and the data on public funds received.

2. Air navigation service providers shall facilitate the activities necessary for the purposes of the monitoring referred to in Article 37(1) carried out by or on behalf of the competent national supervisory authority in accordance with the national law of the Member State of the authority concerned, in particular by providing relevant documents, data, information and oral explanations upon request and, where the national law of that Member State so permits and in accordance with that national law, by giving access to relevant premises, land or vehicles.

Article 5 — Assistance by the Network Manager

Regulation (EU) 2019/317

The Network Manager shall carry out the following tasks related to the detailed functioning of the performance scheme:

(a) support the Commission by providing relevant input for the establishment of Union-wide performance targets before the start of a reference period and for the monitoring of the achievement of those targets during the reference period, including by drawing the Commission's attention, without undue delay, to any circumstances where performance targets

[1] 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.)

are not met or risk not being met or where significant and persistent drops in operational performance are observed;

(b) upon request of the Commission, support the national supervisory authorities by providing relevant input for the preparation of the performance plans and by informing the national supervisory authority concerned, without undue delay, of any circumstances where national performance targets or FAB performance targets are not met or risk not being met or where significant and persistent drops in operational performance are observed;

(c) support the air navigation service providers in reaching national performance targets or FAB performance targets through, in particular, the development and implementation of the Network Operations Plan referred to in Article 9 of Implementing Regulation (EU) 2019/123.

Article 6 — Coordination with the European Union Aviation Safety Agency

Regulation (EU) 2019/317

Pursuant to Article 13a of Regulation (EC) No 549/2004 and in accordance with point (h) of Article 75(2) and Article 93(b) of Regulation (EU) 2018/1139, the Commission and the Member States shall coordinate with the European Union Aviation Safety Agency to ensure that:

(a) safety aspects are properly addressed, including the setting, revision and implementation of key performance indicators and Union-wide performance targets in the key performance area of safety;

(b) the key performance indicators and the performance targets in the key performance area of safety are consistent with the European Plan for Aviation Safety referred to in Article 6 of Regulation (EU) 2018/1139.

CHAPTER III — PERFORMANCE TARGET SETTING

Article 7 — Duration of the reference periods

Regulation (EU) 2019/317

1. The third reference period shall cover the calendar years 2020 to 2024 inclusive.

2. Subsequent reference periods shall each cover five calendar years.

3. The duration of the reference periods specified in paragraphs 1 and 2 shall be without prejudice to Article 10(6).

Article 8 — Key performance indicators and indicators for monitoring

Regulation (EU) 2019/317

1. The key performance indicators and the indicators for monitoring the performance of air navigation services at Union level for each key performance area shall be those established in Section 1 of Annex I.

2. The key performance indicators and the indicators for monitoring the performance of air navigation services at national level or at the level of functional airspace blocks shall be those established in Section 2 of Annex I.

3. The key performance indicators and the indicators for monitoring the performance of the network functions shall be those established in Section 3 of Annex I.

4. Member States may establish key performance indicators and indicators for monitoring in addition to those referred to in paragraph 2 as regards, in particular, civil-military or meteorological aspects.

Article 9 — Union-wide performance targets

Regulation (EU) 2019/317

1. At the latest 19 months before the start of a reference period, the national supervisory authorities shall provide to the Commission initial cost data and information about traffic forecasts referred to in point (f) of Article 10(2) related to the upcoming reference period, as inputs for the setting of Union-wide performance targets.

2. At the latest 15 months before the start of a reference period, the Commission shall publish indicative target ranges for the Union-wide performance targets, consisting of the annual minimum and maximum values within which the Commission intends to set the Union-wide performance targets.

   The Commission shall consult the stakeholders referred to in Article 10(3) of Regulation (EC) No 549/2004, other relevant persons and organisations and, regarding safety aspects, the European Union Aviation Safety Agency on those indicative target ranges.

3. At the latest seven months before the start of a reference period, the Commission shall adopt in accordance with point (a) of Article 11(3) of Regulation (EC) No 549/2004 the Union-wide performance targets for the key performance indicators referred to in Article 8(1).

   For this purpose, the Commission shall:

   (a) take account of the relevant inputs from the Performance Review Body, the Network Manager and the national supervisory authorities;

   (b) use *en route* traffic forecasts, expressed in terms of IFR movements and in service units and based on the latest available Eurocontrol's Statistics and Forecast Service ('STATFOR') base forecast;

   (c) substantiate each Union-wide performance target with a description of the underlying assumptions and rationale for that target, including the use made of inputs referred to in point (a) of this paragraph, the outcome of the consultation referred to in paragraph 2 and other relevant factual data.

4. Together with the adoption of the Union-wide performance targets, the Commission shall establish:

   (a) a Union-wide 'baseline value for determined costs' and a Union-wide 'baseline value for the determined unit cost', for the purpose of setting targets in the key performance area of cost-efficiency for the key performance indicator referred to in point 4.1 of Section 1 of Annex I. Those baseline values shall be calculated in respect to the year preceding the start of the reference period.

   The baseline value for determined costs shall be estimated by using the actual costs available for the preceding reference period and adjusted to take account of latest available cost estimates, traffic variations and their relation to costs.

The baseline value for the determined unit cost shall be derived by dividing the baseline value for the determined costs with the traffic forecast expressed in service units for the year preceding the start of the reference period;

(b) alert thresholds beyond which Member States may request a revision of the performance targets contained in performance plans, in accordance with point (a)(i) of Article 18(1). Those alert thresholds shall be based on the following parameters:

(i) the deviation of the actual traffic from the traffic forecast over a given calendar year, expressed as a percentage of IFR movements;

(ii) the deviation of the actual traffic from the traffic forecast over a given calendar year, expressed as a percentage of service units;

(iii) the variation of the reference values as a result of the seasonal updates of the Network Operations Plan pursuant to point (a) of Article 9(4) and Article 9(8) of Implementing Regulation (EU) 2019/123 in comparison to the reference values from the latest version of the Network Operations Plan available at the time of drawing up the performance plan. This variation shall be expressed as a percentage of variation or as a fraction of minutes of *en route* ATFM delay, depending on the magnitude of the references values;

(c) the comparator groups of air navigation service providers with a similar operational and economic environment, for the purposes of assessing performance targets in the key performance area of cost-efficiency.

Article 10 — Performance plans

Regulation (EU) 2019/317

1. National supervisory authorities shall draw up performance plans, either at national level or at the level of functional airspace blocks.

2. The performance plans shall be drawn up in accordance with the template set out in Annex II and shall include:

(a) binding national performance targets or binding FAB performance targets, set on the basis of the key performance indicators referred to in Article 8(2), including a 'baseline value for determined costs' and a 'baseline value for the determined unit cost' for each charging zone, for the purpose of setting targets in the key performance area of cost-efficiency. Those baseline values shall be calculated in respect to the year preceding the start of the reference period.

The baseline value for determined costs shall be estimated by using the actual costs available for the preceding reference period and shall be adjusted to take account of latest available cost estimates, traffic variations and their relation to costs.

The baseline value for the determined unit costs shall be derived by dividing the baseline value for the determined costs with the latest available traffic forecast expressed in service units for the year preceding the start of the reference period;

(b) determined costs for *en route* and terminal air navigation services set in accordance with points (a) and (b) of Article 15(2) of Regulation (EC) No 550/2004 and with this Regulation;

(c) the incentive schemes established in accordance with Article 11, specifying the parameters of the incentive schemes, the modulation mechanism of pivot values referred

to in Article 11(3) where applicable, as well as measures aimed at achieving the objectives of those incentive schemes;

(d) a description of the main measures aimed at achieving performance targets;

(e) a confirmation that it is consistent with the scope of this Regulation pursuant to Article 1 of this Regulation and Article 7 of Regulation (EC) No 549/2004;

(f) *en route* traffic forecasts, expressed in terms of IFR movements and in service units and based on Eurocontrol's STATFOR base forecast;

(g) terminal traffic forecasts, expressed in terms of IFR movements and in service units, based on Eurocontrol's STATFOR base forecast;

(h) a description of initiatives to support cross-border coordination and the provision of cross-border services which are beneficial to the operational performance or cost-efficiency, or both;

(i) information about:

(i) major investments;

(ii) change management plans for the entry into service of major airspace changes or for ATM system improvements, aimed at minimising any negative impact on the network performance.

However, as regards point (f) and (g), national supervisory authorities may decide to use other *en route* and terminal traffic forecasts than those based on Eurocontrol's STATFOR base forecast. In that case, they shall consult the airspace users' representatives and air navigation service providers concerned and set out the reasons for using the other forecasts in the performance plan. Any differences with the Eurocontrol's STATFOR base forecast shall be related to specific local factors not sufficiently addressed by Eurocontrol's STATFOR base forecast. The same forecasts shall be used for all key performance areas.

3. The performance plans may contain additional performance targets set on the basis of the key performance indicators referred to in Article 8(4). Those targets shall support the achievement of the performance targets referred to in Article 9(3) and in point (a) of paragraph 2 of this Article.

4. In accordance with Article 10(1) and point (b) of Article 11(3) of Regulation (EC) No 549/2004, national supervisory authorities shall consult air navigation service providers, airspace users' representatives and, where relevant, airport operators and airport coordinators on the draft performance plans, including on the performance targets and incentive schemes contained therein.

5. The Network Manager shall draw up the Network Performance Plan. The Network Performance Plan shall be drawn up in accordance with the template set out in Annex III and shall set out:

(a) the value added of the Network Manager in support to the activities of Member States, functional airspace blocks, air navigation service providers and civil and military airspace users towards achieving capacity and environment targets, and set out the contribution of the network functions towards achieving the Union-wide performance targets;

(b) the performance targets and objectives for the Network Manager and for each network function and the measures aimed at achieving those targets.

6. Where as provided in the fourth subparagraph of point (c) of Article 11(3) of Regulation (EC) No 549/2004 the Commission has revised the Union-wide performance targets, Member States shall revise their performance plans and include revised performance targets in accordance with this Regulation.

Article 11 — Incentive schemes

Regulation (EU) 2019/317

1. The incentive schemes contained in the performance plans as adopted by the Member States shall:

   (a) set out incentives of financial nature for the achievement of the performance targets in the key performance areas of cost-efficiency and capacity in an effective and proportional manner;

   (b) apply during the entire period covered by the performance plan;

   (c) be non-discriminatory, transparent and effective;

   (d) apply to *en route* and terminal air navigation services.

2. The incentive schemes on performance targets in the key performance area of cost-efficiency shall be governed by Articles 27 and 28.

3. The incentive schemes on performance targets in the key performance area of capacity shall in addition to the principles set out in paragraph 1, meet the following principles:

   (a) they shall be proportionate to the level of ATFM delay and consist of financial advantages and financial disadvantages having material impact on revenue at risk;

   (b) they shall be set so that the maximum financial disadvantages are at least equal to the maximum financial advantages;

   The national supervisory authority shall define the maximum fixed percentages referred to in the second subparagraphs of points 2.1(a) and 2.2(a) of Annex XIII and in the second subparagraphs of points 2.1(b) and 2.2(b) of Annex XIII for the calculation of the financial advantages and disadvantages, subject to consultation of airspace users' representatives and of air navigation service providers concerned.

   In respect to the maximum fixed percentages referred to in the second subparagraphs of points 2.1(a) and 2.2(a) of Annex XIII for the calculation of the financial advantages, those percentages shall not exceed 2 %;

   (c) for the purpose of calculating the financial advantages or disadvantages, pivot values shall be used;

   The national supervisory authority shall decide, before the start of the reference period, whether those pivot values are to be based:

      (i) on the performance targets at national level, broken down at the level of each individual air navigation service provider; or

      (ii) on modulated performance targets at national level, broken down at the level of each individual air navigation service provider, set annually by the national supervisory authority for the following year in accordance with point 1 of Annex XIII and subject to consultation of airspace users' representatives and of air navigation service providers concerned. The modulation mechanism shall be

defined in the performance plan and shall apply for each year of the reference period and shall not be changed during the reference period.

The national supervisory authority shall inform the Commission about the pivot values annually;

(d) there shall be a symmetric range around the pivot value set by the national supervisory authority, subject to consultation of airspace users' representatives and of air navigation service providers concerned, to ensure that minor variations in ATFM delay do not lead to any financial advantages or disadvantages;

(e) where the actual average ATFM delay per flight in year n is lower than the pivot value set for year n and beyond the range referred to in point (d), this shall result in a financial advantage through an increase of the unit rate in year n+2 in accordance with point 2 of Annex XIII;

(f) where the actual average ATFM delay per flight in year n is higher than the pivot value set for year n and beyond the range referred to in point (d), this shall result in a financial disadvantage through a reduction of the unit rate in year n+2 in accordance with point 2 of Annex XIII;

(g) for the *en route* targets in the key performance area of capacity and where the performance plan is established at functional airspace block level, the following provisions shall apply, in additional to the principles referred to in points (a) to (f):

(i) the national supervisory authorities concerned shall break down the FAB performance target referred to in point 3.1(a) of Section 2 of Annex I at the level of each individual air navigation service provider concerned, for the purpose of setting incentives at national level. The resulting values shall form the basis for pivot values referred to in point (c);

(ii) the national supervisory authorities concerned shall apply the same incentive scheme, in a consistent manner to all air navigation service providers concerned;

(iii) pivot values for the functional airspace block shall also be used in addition to pivot values at the level of each individual air navigation service provider referred to in point (i), and shall be based either:

— on the performance targets at functional airspace block level, or

— on modulated performance targets at functional airspace block level in accordance with point 1 of Annex XIII and subject to consultation of airspace users' representatives and of air navigation service providers concerned;

(iv) by way of derogation from point (c), all national supervisory authorities concerned shall jointly decide on whether the pivot values at the level of each individual air navigation service provider and functional airspace block level are to be modulated or not. This decision shall apply in a uniform manner to all pivot values at the level of each individual air navigation service provider and functional airspace block level, for the entire duration of the reference period;

(v) where performance targets at national and functional airspace block level are to be modulated, the same modulation mechanism shall apply to performance targets at national level and functional airspace block level;

(vi) where the total *en route* ATFM delay per flight in year n at the functional airspace block level is higher than the pivot value set for year n referred to in point (iii) and beyond the range referred to in point (d) of paragraph 3, point (e) of paragraph 3 shall not apply and point (f) of paragraph 3 shall apply only to those air navigation service providers for which the actual ATFM delay per flight in year n is higher than the pivot value set for year n and beyond the range referred to in point (d);

(vii) where the total *en route* ATFM delay per flight in year n at the functional airspace block level is lower than the pivot value set for year n referred to in point (iii) and beyond the range referred to in point (d) of paragraph 3, point (f) of paragraph 3 shall not apply and point (e) of paragraph 3 shall apply only to those air navigation service providers for which the actual ATFM delay per flight in year n is lower than the pivot value set for year n and beyond the range referred to in point (d).

4. The incentive schemes contained in the performance plans as adopted by the Member States may also set out incentives of financial nature for the achievement of the performance targets in the key performance area of environment or for the achievement of the additional performance targets referred to in Article 10(3) in line with points (b) and (c) of paragraph 1, provided that they are effective and proportional. Those incentive schemes should be applied in addition to and independently from the incentive schemes referred to in paragraphs 2 and 3. The aggregated financial advantage or financial disadvantage from those incentive schemes shall not exceed 2 % and 4 % of the determined costs of year n respectively.

CHAPTER IV — ADOPTION, ASSESSMENT AND REVISION OF PERFORMANCE PLANS

Article 12 — Adoption and submission of draft performance plans

Regulation (EU) 2019/317

Each Member State shall adopt a draft performance plan, as drawn up by the national supervisory authority or authorities concerned at national level or at the level of functional airspace blocks, and submit it to the Commission, at the latest three months before the start of the reference period to which it relates. Where the draft performance plan is drawn up at the level of functional airspace block, after all Member States concerned have adopted that plan, it shall be submitted to the Commission.

Article 13 — Verification of completeness of draft performance plans

Regulation (EU) 2019/317

1. The Commission shall verify whether the draft performance plans submitted by Member States in accordance with Article 12 contain all the elements needed to assess compliance with the requirements listed in Article 10(2) and 10(4) and, where applicable, Article 10(3) and 10(5).

2. Where the Commission finds, after having carried out the verification referred to in paragraph 1, that one or several elements are missing, it shall, within one month from the date of receipt of the draft performance plan, request the Member State or Member States concerned to provide an updated draft performance plan, containing the missing element or elements.

In that case, the Member State or Member States concerned shall submit the updated draft performance plan to the Commission without undue delay and in any event within three weeks from the date of the Commission's request.

3. The Commission shall start the assessment referred to in Article 14 of the draft performance plan upon the finding, after having carried out the verification referred to in paragraph 1, that the draft performance plan contains all required elements, or upon the receipt of the updated draft performance plan referred to in paragraph 2, as applicable.

Article 14 — Assessment and revision of draft performance plans and targets

Regulation (EU) 2019/317

1. The Commission shall assess the consistency of the national performance targets or FAB performance targets contained in the draft performance plans with the Union-wide performance targets on the basis of the criteria laid down in point 1 of Annex IV, and taking into account local circumstances. The Commission may complement the assessment by reviewing the draft performance plans in respect to the elements specified in point 2 of Annex IV.

2. Where, based on the assessment referred to in paragraph 1, the Commission finds that the performance targets contained in a draft performance plan are consistent with the Union-wide performance targets, the Commission shall, within five months from the date of the reception of the draft performance plan or, where applicable, of the updated draft performance plan referred to in Article 13(2), adopt a decision notifying the Member State or Member States concerned thereof.

3. Where, based on the assessment referred to in paragraph 1, the Commission finds that one or more performance targets contained in a draft performance plan are not consistent with the Union-wide performance targets, the Commission shall, within five months from the date of reception of the draft performance plan or, where applicable, of the updated draft performance plan referred to in Article 13(2), adopt a decision setting out the recommendations referred to in the second subparagraph of point (c) of Article 11(3) of Regulation (EC) No 549/2004.

   In that case, the Member State or Member States concerned shall, within three months from the date of the adoption of the Commission's decision, revise the performance targets and take appropriate measures to revise the draft performance plan accordingly, taking into account the Commission's recommendations, and submit the revised draft performance plan to the Commission.

Article 15 — Assessment of revised draft performance plans and targets and adoption of corrective measures

Regulation (EU) 2019/317

1. Upon receiving the revised draft performance plan submitted to it in accordance with Article 14(3), the Commission shall assess the revised draft performance plan and the consistency of the revised performance targets contained therein with the Union-wide performance targets, on the basis of the criteria laid down in point 1 of Annex IV, and taking into account local circumstances. The Commission may complement the assessment by reviewing the draft performance plans in respect to the elements specified in point 2 of Annex IV.

2. Where, based on the assessment referred to in paragraph 1, the Commission finds that the revised performance targets contained in the revised draft performance plan are consistent with the Union-wide performance targets, the Commission shall, within five months from the date of the reception of the revised draft performance plan, adopt a decision notifying the Member State or Member States concerned thereof.

3. Where, based on the assessment referred to in paragraph 1, the Commission finds that there are doubts about the consistency of the revised performance targets contained in the revised draft performance plan with the Union-wide performance targets, the Commission shall, within five months from the date of reception of the revised draft performance plan, initiate a detailed examination of those performance targets and the relevant local circumstances, requesting additional information from national supervisory authorities if necessary, and inform the Member State or Member States concerned thereof.

4. Where, after having carried out the detailed examination referred to in paragraph 3, the Commission finds that the revised performance targets contained in the revised draft performance plan are consistent with the Union-wide performance targets, the Commission shall, within five months from the date of the initiation of the detailed examination, adopt a decision notifying the Member State or Member States concerned thereof.

5. Where, having carried out the detailed examination referred to in paragraph 3, the Commission finds that the revised performance targets contained in the revised draft performance plan are not consistent with the Union-wide performance targets, the Commission shall, within five months from the date of the initiation of the detailed examination, adopt a decision setting out the corrective measures which the Member State or Member States concerned are to take, in accordance with the third subparagraph of point (c) of Article 11(3) of Regulation (EC) No 549/2004.

6. Where the Commission has adopted the decision referred to in paragraph 5, the Member State or Member States concerned shall, within three months from the date of the adoption of that decision, communicate to the Commission the measures that they have taken pursuant to that decision, as well as information demonstrating that those measures comply with that decision.

7. On the basis of the information communicated to it in accordance with paragraph 6, the Commission shall assess whether the measures taken by the Member State or Member States concerned are sufficient to ensure compliance with the decision referred to in paragraph 5, in accordance with the requirements of Regulation (EC) No 549/2004 and of this Regulation.

Where the Commission finds that those measures are sufficient to ensure compliance with the decision referred to in paragraph 5, it shall notify the Member State or Member States concerned thereof.

Where the Commission finds that those measures are not sufficient to ensure compliance with the decision referred to in paragraph 5, it shall notify the Member State or Member States concerned accordingly and shall take, where appropriate, action to address the non-compliance, including through actions provided for in Article 258 of the Treaty on the Functioning of the European Union.

Article 16 — Adoption of performance plans

Regulation (EU) 2019/317

Each Member State shall adopt and publish its performance plan in one of the following circumstances, as applicable:

(a) after the Commission has adopted a decision in application of Article 14(2), Article 15(2) or Article 15(4);

(b) after the Commission has adopted a decision pursuant to the second subparagraph of Article 15(7);

(c) after the Commission has adopted a decision following a request of a Member State or Member States concerned to revise during the reference period performance targets pursuant to Article 18(1), provided that the performance plan is adjusted by the Member State concerned in respect of the revised performance targets.

Article 17 — Performance targets or corrective measures adopted after the start of the reference period

Regulation (EU) 2019/317

1. Where, as a consequence of the time needed to complete the procedures referred to in Articles 14 and 15, Member States have not been able to adopt performance plans before the start of the reference period in accordance with Article 16, the performance targets contained in the most recent version of the draft performance plans shall apply on a provisional basis, until the performance plans are adopted.

2. In the situation referred to in paragraph 1, upon the adoption of the performance plans, the performance targets in the key performance area of cost-efficiency shall apply retroactively through an adjustment of the unit rates in accordance with Article 29(5).

Article 18 — Revision of performance targets during a reference period

Regulation (EU) 2019/317

1. During the reference period Member States may revise one or more performance targets contained in the performance plans and adopt performance plans which are amended accordingly, only where both of the following conditions are met:

   (a) the Member State or Member States concerned consider that the intended revision is necessary and proportionate in light of the occurrence of one or more of the following situations:

      (i) at least one of the alert thresholds referred to in point (b) of Article 9(4) is reached and the national supervisory authority or authorities concerned have assessed the situation and have shown that the resulting effects of reaching the alert threshold or thresholds cannot be sufficiently mitigated unless the performance targets are revised;

      (ii) the initial data, assumptions and rationales, including on investments, on the basis of which the performance targets concerned were set are to a significant and lasting extent no longer accurate due to circumstances that were unforeseeable at the time of the adoption of the performance plan, and the national supervisory authority or authorities concerned have assessed the situation and have shown

that the resulting effects cannot be sufficiently mitigated unless the performance targets are revised;

(b) the Commission has, based on a reasoned request by the Member State or Member States concerned, decided that:

(i) it agrees that the intended revision is necessary and proportionate in light of the occurrence of one or more of the following situations referred to in point (a);

(ii) the intended revised performance targets are consistent with the Union-wide performance targets, having assessed those targets on the basis of the criteria laid down in point 1 of Annex IV.

The Commission shall adopt the decision referred to in point (b) within seven months from the date of the submission of the complete request submitted by the Member State or Member States concerned.

2. Any revisions of performance targets adopted in application of this Article shall not apply retroactively.

Article 19 — Approval of the Network Performance Plan

Regulation (EU) 2019/317

1. The Network Manager shall submit the draft Network Performance Plan to the Commission after its endorsement by the Network Management Board as referred to in point (o) of Article 18(1) of Implementing Regulation (EU) 2019/123 at the latest three months before the start of the reference period.

2. The Commission shall assess whether the draft Network Performance Plan meets the criteria laid down in Annex V.

The Commission may request the Network Manager to submit a revision of that draft Network Performance Plan, where this is necessary to ensure compliance with criteria laid down in Annex V.

3. Where the Commission finds that the draft Network Performance Plan meets the criteria laid down in Annex V, it shall adopt the Network Performance Plan.

4. The Network Manager shall publish and implement the Network Performance Plan after its adoption by the Commission pursuant to paragraph 3.

5. Where, as a consequence of the time needed to complete the procedures referred to in paragraphs 2 and 3, the Network Performance Plan has not been adopted by the Commission before the start of the reference period, the most recent version of the draft Network Performance Plan endorsed by the Network Management Board shall apply on a provisional basis, until the Commission adopts the Network Performance Plan.

CHAPTER V — FINANCING OF AIR NAVIGATION SERVICES, ESTABLISHMENT OF CHARGING ZONES, ESTABLISHMENT OF COST BASES FOR CHARGES AND TRANSPARENCY

Article 20 — Principles for the financing of air navigation services

Regulation (EU) 2019/317

1. The determined costs of *en route* air navigation services shall be financed by *en route* charges imposed on airspace users and, where Article 25(3) applies, by other revenue as referred to in that Article.

2. The determined costs of terminal air navigation services shall be financed by terminal charges imposed on airspace users and, where Article 25(3) applies, by other revenue referred to in that Article.

3. Revenues derived from *en route* charges or terminal charges shall not be used to finance commercial activities of air navigation service providers.

Article 21 — Establishment of charging zones

Regulation (EU) 2019/317

1. Member States shall, in the airspace under their responsibility where air navigation services are provided to airspace users, establish one or more charging zones for the purposes of incurring *en route* charges (‘*en route* charging zone’)

   Member States shall consult the airspace users' representatives concerned prior to establishing or modifying those zones.

   Member States shall notify the Commission, and the Central Route Charges Office (‘CRCO’) of Eurocontrol where applicable, about the establishment or modification of those charging zones, at least seven months before the start of the reference period.

2. Member States shall ensure that the geographical scope of charging zones is clearly defined. The charging zones shall be consistent with the provision of air navigation services, and may include services provided by an air navigation service provider established in another Member State in relation to cross-border airspace.

3. Where air traffic services related to the approach and departure of aircraft are provided jointly for a group of airports, Member States may establish a specific terminal charging zone within the terminal area concerned.

4. Where Member States decide to establish *en route* charging zones or terminal charging zones which extend across the airspace for which more than one Member State is responsible, or where Member States decide to establish a common charging zone, the Member States concerned shall ensure consistent and uniform application of this Regulation to the provision of air navigation services in the airspace concerned.

   Member States shall, without delay, inform the Commission and the CRCO of Eurocontrol about any such decision.

5. Member States may modify or establish a new terminal charging zone during a reference period, provided that they:

   (a) consult the airspace users' representatives and air navigation service providers concerned prior to the modification;

   (b) notify, without undue delay, the Commission and the CRCO of Eurocontrol of the modification;

   (c) provide the Commission, without undue delay, with all of the following:

      (i) the relevant cost and traffic data adequately reflecting the situation before and after the modification;

      (ii) the comments of airspace users' representatives and air navigation service providers consulted in accordance with point (a);

      (iii) an assessment of the expected impact of the modification on the achievement of the national performance targets or FAB performance targets in the key performance area of cost-efficiency and on performance monitoring;

      (iv) an update of the performance plan with the relevant data.

6. Member States shall not modify an *en route* charging zone during a reference period.

Article 22 — Establishment of the cost base for charges

Regulation (EU) 2019/317

1. The cost base for *en route* and terminal charges shall consist of the determined costs related to the provision of air navigation services in the charging zone concerned.

   Determined costs stemming from new ATM systems and major overhauls of existing ATM systems shall only be included in the cost base where those systems are consistent with the implementation of the European ATM Master Plan, and, in particular, with the common projects referred to in Article 15a(3) of Regulation (EC) No 550/2004.

   Member States may decide to include in the cost base the following determined costs incurred in relation to the provision of air navigation services, in accordance with the second sentence of point (b) of Article 15(2) of Regulation (EC) No 550/2004:

   (a) determined costs incurred by competent authorities;

   (b) determined costs incurred by the qualified entities referred to in Article 3 of Regulation (EC) No 550/2004;

   (c) determined costs stemming from the Eurocontrol International Convention relating to cooperation for the safety of air navigation of 13 December 1960 as last amended.

2. Without prejudice to Article 18, the determined costs included in the cost bases for *en route* and terminal charges shall be set prior to the start of each reference period as part of the performance plan in real terms and specified for each calendar year of that period in real terms and in nominal terms, with the exception of the determined costs referred to in the third subparagraph of paragraph 1 and the determined costs referred to in points (c) and (d) of paragraph 4, which shall be set in nominal terms where historical cost accounting is applied.

3. Determined costs included in the cost bases for *en route* and terminal charges shall be calculated in national currency. Where a common charging zone with a single unit rate has been established, the Member States concerned shall ensure conversion of determined costs into a single currency, which may be the euro or another national currency of one of the Member States concerned to ensure a transparent calculation of the single unit rate in application of Article 25(4).

4. The determined costs included in the cost bases for *en route* and terminal charges shall consist of:

   (a) staff costs;

   (b) operating costs other than staff costs;

   (c) depreciation costs;

   (d) cost of capital;

   (e) exceptional costs;

   As regards point (a), staff costs shall include gross remuneration, overtime payments, and employers' contributions to social security schemes, as well as pension costs and costs of other benefits. Pension costs shall be calculated using prudent assumptions based on the applicable pension scheme or on national law, as appropriate. Those assumptions shall be specified in the performance plan.

   As regards point (b), operating costs other than staff costs shall include costs incurred for the purchase of goods and services used to provide air navigation services, including outsourced services, material, energy, utilities, rental of buildings, equipment and facilities, maintenance, insurance costs and travel expenses.

   As regards point (c), depreciation costs shall include costs related to the total fixed assets in operation for the purpose of providing air navigation services. The value of fixed assets shall be depreciated in accordance with their expected operating life, using the straight-line method applied to the costs of the assets being depreciated. Historical or current cost accounting shall be applied for the calculation of the depreciation. The methodology used to calculate depreciation costs shall not be altered during the duration of the depreciation and shall be consistent with the cost of capital applied, that is to say nominal cost of capital for historical cost accounting and real cost of capital for current cost accounting. Where current cost accounting is applied, the cost of capital shall not include inflation and the equivalent historical cost accounting figures shall also be provided to allow for comparison and assessment.

   As regards point (d), the cost of capital shall be equal to the product of the following elements:

   (i) the sum of the average net book value of fixed assets in operation or under construction and possible adjustments to total assets determined by the national supervisory authority and used by the air navigation service provider and of the average value of the net current assets, excluding interest-bearing accounts, that are required for the purposes of providing air navigation services;

   (ii) the weighted average of the interest rate on debts and of the return on equity. For air navigation service providers without any equity capital, the weighted average shall be

calculated on the basis of a return applied to the difference between the total of the assets referred to in point (i) and the debts.

For the purpose of establishing the cost of capital, the factors to which weight is to be given shall be based on the proportion of financing through either debt or equity. The interest rate on debts shall be equal to the weighted average interest rate on debts of the air navigation service provider. The return on equity shall be that provided in the performance plan for the reference period and shall be based on the financial risk incurred by the air navigation service provider.

Where air navigation service providers incur costs from leasing fixed assets, those costs shall not be included in the calculation of cost of capital.

As regards point (e), exceptional costs shall consist of non-recurring costs relating to the provision of air navigation services, including any non-recoverable taxes and customs duties.

5. The determined costs shall be allocated in a transparent way to the charging zones in respect of which they are incurred. Determined costs that are incurred in respect of several charging zones shall be allocated in a proportional way, on the basis of a transparent methodology.

To this end, national supervisory authorities shall lay down, before the start of each reference period, the criteria used to allocate determined costs to charging zones, including in respect of points (b) and (c) of this paragraph, and the criteria to allocate the determined costs between *en route* and terminal services, and shall include this information in the performance plan in accordance with point 3.3(d) of Annex II.

The determined costs included in the cost bases for terminal charging zones shall cover the cost of the following services:

(a) aerodrome control services or aerodrome flight information services which include air traffic advisory services and alerting services;

(b) air traffic services related to the approach and departure of aircraft within a certain distance of an airport which shall be defined on the basis of operational requirements;

(c) the proportional part of the air navigation services common to *en route* and terminal services.

6. The determined costs incurred for flights exempted in accordance with Article 31(3) to (5) shall be composed of:

(a) the determined costs of exempted VFR flights, calculated through a marginal cost methodology;

(b) the determined costs of exempted IFR flights, calculated as the product of the following elements:

(i) the determined costs incurred for IFR flights, which shall consist of the total determined costs less the determined costs of VFR flights;

(ii) the ratio of the number of exempted service units to the total number of service units which shall consist of the service units in respect of IFR flights and, where they are not exempted, of VFR flights.

The determined costs of exempted VFR flights shall be separated from the determined costs incurred for IFR flights for the purpose of calculating the unit rate.

7. The national supervisory authorities shall verify, in respect of each charging zone, that the cost bases for *en route* and terminal charges comply with the requirements of Article 15(2) of Regulation (EC) No 550/2004 and with this Article. For this purpose, the national supervisory authorities shall examine the relevant accounting documents, including any asset book and other material relevant to the establishment of the cost base for charges.

Article 23 — Actual costs

Regulation (EU) 2019/317

The provisions of Article 22 shall apply *mutatis mutandis* to the establishment of actual costs.

Article 24 — Transparency of costs

Regulation (EU) 2019/317

1. Member States shall establish cost bases for charges for each charging zone in a transparent manner.

2. At the latest four months before the start of the reference period, Member States shall, in a coordinated manner, consult air navigation service providers, airspace users' representatives, and, where relevant, airport operators and airport coordinators on the intended establishment of the determined costs included in the cost base for *en route* and terminal charges, new and existing investments, service unit forecasts and charging policy for the reference period concerned.

   Member States shall also do so during a reference period, where they intend to request a revision of performance targets in the key performance area of cost-efficiency in accordance with Article 18(1).

   Member States shall provide the reporting tables and the information required in Annexes VII and IX to the entities invited to the consultation at least three weeks before the consultation.

3. During the reference period, Member States shall on an annual basis, in a coordinated manner, and in accordance with point 1 of Annex XII, consult air navigation service providers, airspace users' representatives, and, where relevant, airport operators and airport coordinators on the actual costs incurred during the previous year and the difference between the actual costs and the determined costs contained in the performance plan.

   Member States shall provide the reporting table and information required in Annex VII to the entities invited to the consultation at least three weeks before the consultation.

4. Member States shall provide the information referred to in the last subparagraph of paragraphs 2 and 3 to the Commission at the date when it is provided to the consulted parties. Member States shall also inform the Commission about the outcome of the consultation.

CHAPTER VI — CALCULATION OF UNIT RATES AND CHARGES

Article 25 — Calculation of unit rates

Regulation (EU) 2019/317

1. Member States shall calculate the *en route* and terminal unit rates before the start of each year of the reference period.

2. Those rates shall be calculated by dividing the forecast number of total *en route* or terminal service units for the relevant year, calculated in accordance with points 1 and 2 of Annex VIII respectively, into the algebraic sum of the following elements:

   (a) the determined costs, expressed in nominal terms, for the relevant year as set in the performance plan;

   (b) the adjustments for inflation in accordance with Article 26;

   (c) the adjustments resulting from the application of the traffic risk sharing mechanism in accordance with Article 27(2) to (5);

   (d) the adjustments resulting from the application of the cost risk sharing mechanism in accordance with Article 28(4) to (6);

   (e) the adjustments resulting from the application of the financial incentive schemes in accordance with Article 11(3) and (4);

   (f) the adjustments resulting from the modulation of air navigation charges in accordance with Article 32;

   (g) the adjustments resulting from traffic variations, in accordance with Article 27(8);

   (h) the adjustments resulting from traffic variations, in accordance with Article 27(9);

   (i) a deduction of other revenue, in accordance with paragraph 3 of this Article;

   (j) cross-financing between *en route* charging zones, or between terminal charging zones, in accordance with point (e) of Article 15(2) of Regulation (EC) No 550/2004;

   (k) adjustments for differences in revenue resulting from the temporary application of the unit rate in accordance with Article 29(5);

   (l) adjustments relating to previous reference periods.

3. For the purpose of point (i) of paragraph 2, the following revenues of air navigation service providers obtained in year n shall be deducted from the determined costs as ‘other revenue’:

   (a) public funds obtained from public authorities, including financial support from Union assistance programmes;

   (b) revenue obtained from commercial activities, where the Member State or Member States concerned have decided that those revenues are to be deducted;

   (c) with regard to terminal air navigation services, revenue obtained from contracts or agreements concluded between air navigation service providers and airport operators, where the Member State or Member States concerned have decided that those revenues are to be deducted.

   As regards point (a), public funds covering staff costs and other operating costs shall be deducted from the determined costs no later than in year n+2. Public funds covering

depreciation costs shall be deducted from the determined costs in accordance with the depreciation schedule of the financed asset (duration and annuity). A Member State may decide not to deduct from determined costs an amount related to the administrative costs incurred for the reporting on the funding agreement if these administrative costs are not included in the cost base for charges. Equally, a Member State may decide not to deduct from determined costs public funds received to cover costs not known at the time of drafting the performance plan and therefore not included in the cost base for charges. Airspace users shall not be charged for the costs covered by public funds.

As regards points (b) and (c), the revenue referred to in those points shall be deducted from the determined costs no later than in year n+2.

4. Unit rates shall be calculated in national currency.

Where Member States decide to establish a common charging zone in accordance with Article 21(4), the unit rate shall be calculated in a single currency, which may be the euro or another national currency of one of the Member States concerned. The Member States concerned shall notify the Commission and the CRCO of Eurocontrol of the applicable currency.

Article 26 — Inflation adjustment

Regulation (EU) 2019/317

For each year of the reference period, the determined costs included in the cost bases for *en route* and terminal charges of year n expressed in nominal terms shall be adjusted on the basis of the difference in percentage between the actual inflation index and the forecast inflation index for that year n and included as an adjustment for the calculation of the unit rate for year n+2.

The determined costs referred to in the third subparagraph of Article 22(1), and the determined costs referred to in points (c) and (d) of Article 22(4) where historical cost accounting is applied, shall not be subject to any inflation adjustment.

Article 27 — Traffic risk sharing mechanism

Regulation (EU) 2019/317

1. In respect of the incentive schemes referred to in Article 11(2), a traffic risk sharing mechanism shall be applied. Under that mechanism, the risk of revenue changes due to deviations from the service unit forecast set out in the performance plan shall be shared between air navigation service providers and airspace users, in accordance with the provisions of this Article.

2. Where, over a given year n, the actual number of service units deviates from the forecast included in the performance plan for that year n by no more than 2 %, the resulting additional revenue or the resulting revenue loss shall be borne in full by the air navigation service provider or providers concerned.

3. Where, over a given year n, the actual number of service units exceeds the service unit forecast included in the performance plan for that year n by more than 2 %, 70 % of the resulting additional revenue obtained by the air navigation service provider or providers concerned in excess of 2 % of the difference between the actual service units and that forecast shall be passed on to airspace users through adjustments of the unit rates in year n+2.

Where, over a given year n, the actual number of service units falls below the service unit forecast included in the performance plan for that year n by more than 2 %, 70 % of the resulting revenue loss incurred by the air navigation service provider or providers concerned in excess of

2 % of the difference between the actual service units and that forecast shall be recovered from airspace users, through adjustments of the unit rates in year n+2.

4. Where, over a given year n, the actual number of service units is lower than 90 % of the service unit forecast included in the performance plan for that year n, the amount of the revenue loss incurred by the air navigation service provider or providers concerned in excess of 10 % of the difference between the actual service units and that forecast shall be recovered in full, from airspace users, through adjustments of the unit rates in year n+2.

   Where, over a given year n, the actual number of service units exceeds 110 % of the service unit forecast included in the performance plan for that year n, the additional revenue obtained by the air navigation service provider or providers concerned in excess of 10 % of the difference between the actual service units and that forecast shall be passed on in full, to airspace users, through adjustments of the unit rates in year n+2.

5. National supervisory authorities may adapt the values of the parameters of the traffic risk sharing mechanism laid out in paragraphs 2 and 3. When adapting those values, the national supervisory authorities shall:

   (a) consult on the intended values the airspace users' representatives and air navigation service providers concerned;

   (b) ensure that the resulting risk exposure of the air navigation service providers is not lower than the maximum revenue at risk under the mechanism laid out in paragraphs 2 and 3;

   (c) consider the variation of costs of capacity provision by the air navigation service provider concerned due to variation in traffic.

6. The following determined costs shall not be subject to the provisions of paragraphs 2 to 5:

   (a) the determined costs established in accordance with the third subparagraph of Article 22(1);

   (b) the determined costs for meteorological services.

7. Member States may exempt from the application of paragraphs 2 to 5 the determined costs of providers of air navigation services which have received permission to provide air navigation services without certification, in accordance with Article 7(5) of Regulation (EC) No 550/2004.

8. In respect of the determined costs referred to in paragraph 6 and, if applicable, in paragraph 7, any additional revenue in year n due to differences between actual service units and the service unit forecast included in the performance plan for that year shall be passed on to airspace users, and any revenue loss shall be recovered from airspace users, through an adjustment of the unit rate in year n+2.

9. The adjustments to the unit rates referred to in points (b), (c), (d), (e), (f), (g), (h), (i), (j), (k) and (l) of Article 25(2) shall not be subject to the provisions of paragraphs 2 to 5. In respect of the adjustments referred to in points (b), (c), (d), (e), (f), (g), (i), (j) and (k) of Article 25(2), any additional revenue in year n due to differences between actual service units and the service unit forecast included in the performance plan for that year shall be passed on to airspace users, and any revenue loss shall be recovered from airspace users through an adjustment of the unit rate in year n+2.

Article 28 — Cost risk sharing mechanism

Regulation (EU) 2019/317

1. In respect of the incentive schemes referred to in Article 11(2), a cost risk sharing mechanism shall be applied. Under that mechanism, differences between determined costs included in the performance plan and actual costs shall be shared between air navigation service providers and airspace users, in accordance with the provisions of this Article.

2. The differences referred to in paragraph 1 shall be shared as follows:

   (a) where, over the whole reference period, actual costs fall below the determined costs, the air navigation service provider or the Member State concerned shall retain in full the resulting difference;

   (b) where, over the whole reference period, actual costs exceed the determined costs, the air navigation service provider or Member State concerned shall cover in full the resulting difference.

3. Paragraph 2 does not apply if the differences between determined costs and actual costs result from at least one of the following changes:

   (a) unforeseen changes in costs of new and existing investments;

   (b) unforeseen changes in costs referred to in the third subparagraph of Article 22(1);

   (c) unforeseen and significant changes in pension costs established in accordance with Article 22(4) resulting from unforeseeable changes in national pensions law, pensions accounting law or unforeseeable changes in financial market conditions, on the condition that such changes in pension costs are outside the control of the air navigation service provider and, in the case of cost increases, that the air navigation service provider has taken reasonable measures to manage cost increases during the reference period;

   (d) unforeseen and significant changes in costs resulting from unforeseeable changes in interest rates on loans that finance costs arising from the provision of air navigation services, on the condition that such changes in costs are outside the control of the air navigation service provider and, in the case of cost increases, that the air navigation service provider has taken reasonable measures to manage cost increases during the reference period;

   (e) unforeseen and significant changes in costs resulting from unforeseeable changes in national taxation law or other unforeseeable new cost items not covered in the performance plan but required by law.

   The determined costs relating to the costs referred to in this paragraph shall be identified and categorised in the performance plan, in accordance with point 3.3(h) of Annex II.

   The differences between determined and actual costs referred to in this paragraph shall be identified and explained annually in accordance with Annex VII and Annex IX.

4. In respect of the unforeseen changes in costs referred to in point (a) of paragraph 3, the differences between determined costs and actual costs shall be shared as follows:

   (a) where, over a calendar year or over the whole reference period, actual costs fall below the determined costs, the air navigation service provider or the Member State concerned shall reimburse the resulting difference to airspace users, through a reduction of the unit rate in year n+2 or in the following reference period, unless, based on a detailed justification of the air navigation service provider, the national supervisory authority

decides, after consultation with airspace users' representatives, that the air navigation service provider shall not reimburse a part of the resulting difference;

(b) where, over a calendar year or over the whole reference period, actual costs exceed the determined costs by not more than 5 %, Member States may decide that the resulting difference is recovered from airspace users by the air navigation service provider or the Member State concerned, through an increase of the unit rate in year n+2 or in the following reference period, subject to the approval by the national supervisory authority of a detailed justification provided by the air navigation service provider in particular as regards the need to increase capacity and after consultation with airspace users' representatives.

Where, during the reference period, air navigation service providers intend to add, cancel or replace major investments with respect to information on major investments identified in the performance plan in accordance with point 2.2(b) of Annex II, these changes shall be approved by the national supervisory authority, after consultation of airspace users' representatives.

5. In respect of the unforeseen changes in costs referred to in point (b) of paragraph 3, the differences between determined costs and actual costs shall be shared as follows:

(a) where, over a calendar year, actual costs fall below the determined costs established for that calendar year, Member States shall reimburse the resulting difference to airspace users through a reduction of the unit rate in year n+2;

(b) where, over a calendar year, actual costs exceed the determined costs established for that calendar year, Member States shall recover the resulting difference from airspace users through an increase of the unit rate in year n+2.

6. In respect of the unforeseen changes in costs referred to in points (c), (d) and (e) of paragraph 3, the differences between determined costs and actual costs shall be shared as follows:

(a) where, over a calendar year or over the whole reference period, actual costs fall below the determined costs, the air navigation service provider or the Member State concerned shall reimburse the resulting difference to airspace users through a reduction of the unit rate in year n+2, in the following reference period or in the following two reference periods if the amounts to be recovered impact the unit rate in a disproportionate manner;

(b) where, over a calendar year or over the whole reference period, actual costs exceed the determined costs, Member States may decide that the resulting difference is recovered from airspace users by the air navigation service provider or the Member State concerned, through an increase of the unit rate in year n+2, in the following reference period or in the following two reference periods if the amounts to be recovered impact the unit rate in a disproportionate manner.

7. National supervisory authorities shall verify annually whether air navigation service providers apply correctly the provisions of this Article. National supervisory authorities shall draw up a report by 1 September of year n+1 on the changes in costs referred to in paragraph 3 which occurred in year n. The report shall be subject to consultation of airspace users' representatives.

National supervisory authorities shall also include in the report which is due by 1 September of the year following the final year of the reference period the balance over the whole reference period in respect of the unforeseen changes in the costs referred to in points (a), (c), (d) and (e) of paragraph 3.

Article 29 — Setting unit rates for charging zones

Regulation (EU) 2019/317

1. Member States shall set a unit rate for each charging zone on an annual basis in accordance with Article 25. Without prejudice to paragraph 3, unit rates shall not be modified in the course of a year.

2. Member States shall set a unit rate for year n for each charging zone in line with the following requirements:

   (a) national supervisory authorities shall submit, on behalf of their respective Member State, the calculated unit rate to the Commission and to the CRCO of Eurocontrol by 1 June of year n-1. This submission shall include the reporting tables and additional information set out in Annex VII and Annex IX;

   (b) before 1 November of year n-1, if needed, national supervisory authorities shall update the calculated unit rate referred to in point (a), following consultation with airspace users. They shall submit this calculated updated unit rate, on behalf of their respective Member State, to the Commission and the CRCO of Eurocontrol, at the latest by 1 November of year n-1;

   (c) Member States shall set the unit rate for year n at the latest by 20 December of year n-1 and inform the Commission and the CRCO of Eurocontrol of that rate.

3. The Commission shall verify that the unit rates referred to in paragraph 2 are calculated in compliance with the requirements set out in Article 25(2).

   Where the Commission finds that a unit rate does not comply with the requirements set out in Article 25(2), it shall notify the Member State concerned and invite it to submit a revised unit rate.

   Where the Commission finds that the revised unit rate are calculated in compliance with the requirements set out in Article 25(2), it shall notify the Member State concerned accordingly.

4. Where, as a consequence of the time needed to complete the procedure referred to in paragraph 3, a unit rate for year n is revised after the start of the year to which it relates and such revision causes a difference in revenues, the unit rate shall be adjusted as follows:

   (a) a first adjustment of the unit rate in the year following the revision of the unit rate, and

   (b) a final adjustment of the unit rate two years after that year.

5. If Member States have not adopted a performance plan before the start of the reference period, or where the performance plan is revised in accordance with Article 18 during the reference period, the unit rates shall, where necessary, be recalculated and applied as soon as possible on the basis of the adopted performance plan or adopted revised performance plan.

   Where a performance plan is adopted after the start of the reference period, any difference in revenue due to the application of the unit rate or unit rates calculated on the basis of the draft performance plan, instead of the unit rate or unit rates calculated on the basis of the adopted performance plan, shall result in a first adjustment of the unit rate in the year following the adoption of the performance plan and a final adjustment of the unit rate two years after that year. The provisions of Articles 27 and 28 shall be applied on the basis of the adopted performance plan and shall apply retroactively as from the first day of the reference period.

   Where a performance plan is revised during the reference period in accordance with Article 18, any difference in revenue due to the application of the unit rate or unit rates calculated on the

basis of the adopted performance plan, instead of the unit rate or unit rates calculated on the basis of the adopted revised performance plan, shall result in a first adjustment of the unit rate in the year following the adoption of the revised performance plan and a final adjustment of the unit rate two years after that year. The provisions of Articles 27 and 28 shall be applied on the basis of the adopted revised performance plan and shall apply retroactively as from the first day of the year to which the revised performance plan applies.

6. By derogation from Article 25(2), Member States may decide to set the unit rate referred to in paragraph 1 at a level lower than the unit rate calculated in accordance with Article 25(2). In that case, they shall include that lower unit rate in the reporting tables on unit rates calculation in accordance with the template of Table 2 of Annex IX. The resulting difference in revenues shall not be recovered from airspace users.

Article 30 — Transparency of unit rates

Regulation (EU) 2019/317

1. Member States shall, by 1 August of each year, in a coordinated manner, consult the air navigation service providers, airspace users' representatives, and, where relevant, airport operators and airport coordinators on essential elements relating to the implementation of this Regulation as set out in point 2 of Annex XII. This consultation may be conducted together with the consultation referred to in Article 24(3).

   Member States shall provide the reporting tables and the information required in Annex IX to the consulted parties at least three weeks before the consultation.

2. Member States shall provide the information referred to in the second subparagraph of paragraph 1 to the Commission on the same day when it is provided to the consulted parties. Member States shall inform the Commission about the outcome of the consultation.

Article 31 — Calculation of charges

Regulation (EU) 2019/317

1. The *en route* charge for a given flight in a given *en route* charging zone shall be equal to the product of the unit rate established for that *en route* charging zone and the *en route* service units for that flight.

2. The terminal charge for a given flight in a given terminal charging zone shall be equal to the product of the unit rate established for that terminal charging zone and the terminal service units for that flight.

   For the purpose of calculating the terminal charge, the approach and departure of a flight shall count as a single flight. The unit to be counted shall be either the arriving or the departing flight.

3. Member States shall exempt the following flights from *en route* charges:

   (a) flights performed by aircraft with a maximum authorised take-off weight which is less than two metric tons;

   (b) mixed VFR/IFR flights in the charging zones where they are performed exclusively under VFR and where an *en route* charge is not levied for VFR flights;

   (c) flights performed exclusively for the purpose of transport, on official mission, of reigning Monarchs and their immediate family, heads of state, heads of government and government ministers, where it is substantiated by the appropriate status indicator or remark on the flight plan that the flight is performed exclusively for that purpose;

(d) search and rescue flights authorised by the appropriate competent body.

4. Member States may exempt the following flights from *en route* charges:

(a) military flights performed by aircraft of a Member State or any third country;

(b) training flights performed solely within the airspace of the Member State concerned and exclusively for the purpose of obtaining a licence, or a rating in the case of cockpit flight crew, where it is substantiated by an appropriate remark on the flight plan that the flight is performed exclusively for that purpose;

(c) flights performed exclusively for the purpose of checking or testing equipment used or intended to be used as ground aids to air navigation, excluding positioning flights by the aircraft concerned;

(d) flights terminating at the airport from which the aircraft has taken off and during which no intermediate landing has been made;

(e) VFR flights;

(f) humanitarian flights authorised by the appropriate competent body;

(g) customs and police flights.

5. Member States may exempt from terminal charges the flights referred to in paragraphs 3 and 4.

6. Member States shall cover the costs for the services that air navigation service providers have provided to flights exempted from *en route* charges or terminal charges in accordance with paragraph 3, 4 or 5.

Article 32 — Modulation of air navigation charges

Regulation (EU) 2019/317

1. Member States may, on a non-discriminatory and transparent basis, modulate air navigation charges for airspace users to:

(a) optimise the use of air navigation services;

(b) reduce the environmental impact of flying;

(c) reduce the level of congestion of the network in a specific area or on a specific route at specific times.

(d) accelerate the deployment of SESAR ATM capabilities in anticipation of the time period set out in the common projects referred to in Article 15a(3) of Regulation (EC) No 550/2004, in particular with a view to giving incentives to equip aircraft with systems included in those common projects.

Member States shall ensure that modulation of charges in respect of points (a) to (c) of this paragraph does not result in any overall change in annual revenue for the air navigation service provider compared to the situation where charges would not have been modulated. Over- or under recoveries shall result in an adjustment of the unit rate in year n+2.

2. Modulation of air navigation charges shall be applied in respect of the *en route* charge or the terminal charge, or both.

Before the application of the modulation of charges, Member States shall consult airspace users' representatives and air navigation service providers concerned on such intended modulation.

3. National supervisory authorities shall monitor the proper implementation of the modulation of air navigation charges by air navigation service providers and report in accordance with Article 37(1).

Article 33 — Collection of charges

Regulation (EU) 2019/317

1. Member States may collect charges through a single charge per flight. Where charges are billed and collected on a regional basis, the billing currency may be the euro and an administrative unit rate for billing and collection costs may be added to the unit rate concerned.

2. Member States shall ensure that the amounts collected on their behalf are used to finance the determined costs in accordance with the provisions of this Regulation.

3. Airspace users shall promptly and fully pay all air navigation charges incurred in accordance with this Regulation.

4. Member States shall ensure that effective, and proportionate enforcement measures for the collection of air navigation charges are applied where necessary. Those measures may include denial of services, detention of aircraft or other enforcement measures in accordance with the law of the Member State concerned.

CHAPTER VII — SPECIAL PROVISIONS

Article 34 — Simplified charging scheme

Regulation (EU) 2019/317

1. Subject to the conditions set out in paragraph 2, Member States may decide to establish and apply a simplified charging scheme for the duration of an entire reference period in respect of:

   (a) one or more *en route* and one or more terminal charging zones;

   (b) one or more air navigation service providers providing services in the charging zone or zones referred to in point (a).

2. Member States may decide to establish and apply a simplified charging scheme referred to in paragraph 1 only if all of the following conditions are met:

   (a) a Commission decision adopted pursuant to Article 14(2), Article 15(2) or Article 15(4) confirms that the performance targets set by the Member State in the draft performance plan referred to in Article 12 are consistent with the Union-wide performance targets;

   (b) the performance targets in the key performance areas of safety, capacity and environment have been met in the three years preceding the adoption of the draft performance plan referred to in Article 12;

   (c) the performance plan includes an incentive scheme on capacity targets as required in Article 11;

   (d) the air navigation service providers concerned and the airspace users concerned have been consulted on the intended decision and airspace users representing at least 65 % of the IFR flights operated in the airspace where the Member State or Members States

concerned are responsible for the provision of air navigation services agree with the intended decision.

3. If Member States decide to establish and apply a simplified charging scheme pursuant to paragraph 2, they shall not apply:

(a) the traffic risk sharing mechanism referred to in Article 11(2) and Article 27. By not applying the traffic risk sharing mechanism, the traffic risk is therefore borne in full by the air navigation service provider;

(b) the provisions of Article 28(4) to (6) related to the cost risk sharing mechanism;

(c) the over or under recoveries resulting from the modulation of air navigation charges pursuant to Article 32.

Any carry-over from the years preceding the reference period to which the simplified charging scheme is applied, shall still be taken into account in the calculation of unit rates.

4. If Member States decide to establish and apply a simplified charging scheme pursuant to paragraph 2, they shall specify and substantiate their decision in the performance plan, in accordance with point 1.7 of Annex II.

Article 35 — Terminal air navigation services and CNS, MET and AIS services and ATM data services subject to market conditions

Regulation (EU) 2019/317

1. Subject to the provisions of this Article, Member States may decide, either before or during a reference period, that the provision of some or all of the terminal air navigation services, CNS, MET, AIS services or air traffic management ('ATM') data services provided in their charging zones established in accordance with Article 21 is subject to market conditions.

2. Where a Member State or Member States decide to apply paragraph 1, for the upcoming reference period or, as the case may be, for the remaining duration of the reference period and in respect of the services concerned they shall not:

(a) apply cost-efficiency targets, including the setting of determined costs, for the key performance indicators referred to in point 4.1 of Section 2 of Annex I;

(b) apply traffic risk sharing and cost sharing mechanisms in accordance with Articles 27 and 28;

(c) set financial incentives in the key performance areas of capacity and environment in accordance with Article 11;

(d) calculate terminal charges in accordance with Article 31(2);

(e) set terminal unit rates in accordance with Article 29;

(f) be subject to the consultation requirements specified in Article 24(3).

Points (d) to (f) apply only to terminal air navigation services.

Where, during a reference period, a Member State decides to apply paragraph 1, it shall also revise its performance plan in accordance with Article 18(1) in respect of the services concerned.

3. A Member State shall decide to apply paragraph 1 only after having completed all of the following steps:

(a) its national supervisory authority has found, on the basis of a detailed assessment in accordance with the conditions laid down in Annex X, that the provision of the services concerned is subject to market conditions;

(b) it has consulted the airspace users' representatives concerned on the intended decision and on that assessment, and has taken account of their comments where appropriate;

(c) it has made its intended decision and that assessment publicly available;

(d) it has submitted its intended decision and that assessment to the Commission and received the agreement of the Commission.

As regards point (d), the Member State shall submit the assessment no later than 12 months before the start of a reference period or, in the event of an assessment during the reference period, without undue delay upon having completed the assessment. The Commission shall notify the Member State concerned whether it agrees that the assessment has been carried out in accordance with the conditions laid down in Annex X. The Commission shall do so without undue delay. Where necessary, the Commission shall request additional information from the Member State concerned, which that Member State shall provide without undue delay.

4. If a Member State decides to apply paragraph 1, its national supervisory authority shall assess regularly whether the conditions laid down in Annex X continue to be met.

If the national supervisory authority finds that those conditions are no longer met, the Member State shall, without undue delay, revoke its decision, after having completed the steps set out in points (b) to (d) of paragraph 3.

Upon that revocation, the Member State shall, for the upcoming reference period or, as the case may be, for the remaining duration of the reference period, not apply the exemptions listed in the first subparagraph of paragraph 2 in respect of the services concerned. If the revocation occurs during the reference period, the Member State concerned shall also revise its performance plan in accordance with Article 18(1).

5. If the services subject to the application of paragraph 1 are provided in a common charging zone set up in accordance with Article 21(4), the Member States concerned may decide to establish that the provision of some or all of those services are subject to market conditions only jointly. In that case, they shall jointly ensure that the requirements of this Article are respected.

6. If a Member State decides to apply paragraph 1, it shall submit to the Commission the information specified in Annex XI in the first year of each reference period. The Commission shall not make that information publicly available.

CHAPTER VIII — PROVISION OF INFORMATION, MONITORING, AND PUBLICATION OF INFORMATION

Article 36 — Provision of information

Regulation (EU) 2019/317

1. For the purpose of monitoring in accordance with Article 37, national supervisory authorities, air navigation service providers, airport operators, airport coordinators, airspace users and the Network Manager shall provide to the Commission the data referred to in Annex VI in accordance with the specific requirements applicable to each party set out in that Annex. The data shall be provided free of charge in an electronic format.

   With respect to airspace users, this Article shall only apply to those users which operate more than 35 000 flights per year in European airspace, calculated as the average over the previous three years.

2. Where the parties referred to in paragraph 1 already provided some or all of that data to Eurocontrol or the European Union Aviation Safety Agency, they shall not be required to provide the data concerned to the Commission, provided that they inform the Commission about data they already provided, when they provided it and whether they provided it to Eurocontrol or to the European Union Aviation Safety Agency.

3. The parties referred to in paragraph 1 shall each take the necessary measures to ensure the quality, validation and timely transmission of the data that they are to provide in accordance with paragraph 1. They shall, upon request by the Commission, provide information on their quality checks and validation processes in respect of that data.

Article 37 — Monitoring and reporting

Regulation (EU) 2019/317

1. The national supervisory authorities shall monitor the performance of air navigation services provided in the airspace under their responsibility, with a view to assessing whether the performance targets contained in the performance plans are met.

   If a national supervisory authority finds that those targets are not met, or risk not being met, it shall immediately inform the Commission thereof. Without undue delay, the Member State or the national supervisory authority concerned shall, in order to rectify the situation and achieve the targets set in the performance plan, apply the appropriate measures they have defined, taking into consideration the remedial measures referred to in Article 10(2) of Implementing Regulation (EU) 2019/123. They shall communicate those appropriate measures to the Commission without undue delay.

   Not later than 1 June of each year, the national supervisory authorities shall report to the Commission on the results of the monitoring referred to in the first subparagraph in the preceding year.

2. The Commission shall monitor the performance of the network functions and assess whether the performance targets contained in the Network Performance Plan are met.

   If the Commission finds that the performance targets contained in the Network Performance Plan are not met or risk not being met, it shall request the Network Manager to define

appropriate measures in order to rectify the situation and achieve those targets. The Network Manager shall communicate those measures to the Commission without undue delay.

3. On the basis of the reports referred to in the last subparagraph of paragraph 1, its own monitoring referred to in paragraph 2, and the analysis of data received in accordance with Article 36(1), the Commission shall monitor the performance of the provision of air navigation services and network functions and carry out regular assessments of the achievement of the performance targets. The Commission shall inform Member States of its monitoring activities at least once a year.

Article 38 — Publication

Regulation (EU) 2019/317

1. Member States shall make publicly available, in particular by electronic means, the following information:

   (a) any decisions which they have taken pursuant to Article 1(4) and (5);

   (b) any decisions which they have taken pursuant to point (c) of Article 35(3);

   (c) their draft performance plans referred to in Article 12;

   (d) their adopted performance plans referred to in Article 16;

   (e) their reporting tables referred to in Articles 24, 29 and 30.

2. The Network Manager shall make publicly available, in particular by electronic means, the following information:

   (a) the draft Network Performance Plan referred to in Article 19(1);

   (b) the adopted Network Performance Plan referred to in Article 19(3).

3. The Commission shall make publicly available, in particular by electronic means, the reports and supporting material produced by the Performance Review Body regarding the assistance provided by this Body in accordance with Article 3.

CHAPTER IX — FINAL PROVISIONS

Article 39 — Reasoning and appeal of national decisions

Regulation (EU) 2019/317

Member States shall ensure that decisions taken by their competent national authorities pursuant to this Regulation are duly reasoned and are subject to effective judicial appeal in accordance with national law.

Article 40 — Repeal

Regulation (EU) 2019/317

Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013 are repealed with effect from 1 January 2020. However, those Regulations shall continue to apply for the purposes of the implementation of the performance and charging schemes pertaining to the second reference period.

Article 41 — Entry into force

Regulation (EU) 2019/317

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 11 February 2019.

For the Commission

The President

Jean-Claude JUNCKER

ANNEXES TO REGULATION (EU) 2019/317

ANNEX I — KEY PERFORMANCE INDICATORS (KPI) FOR TARGET SETTING AND INDICATORS FOR MONITORING

Regulation (EU) 2019/317

SECTION 1 — KPIs for Union-wide target setting and indicators for monitoring at Union level

1. SAFETY

1.1. **Key performance indicators**

The minimum level of the effectiveness of safety management to be achieved by air navigation service providers certified to provide air traffic services. This KPI measures the level of implementation of the following safety management objectives:

(a) safety policy and objectives;

(b) safety risk management;

(c) safety assurance;

(d) safety promotion;

(e) safety culture.

1.2. **Indicators for monitoring**

(a) The rate of runway incursions at Union level with a safety impact calculated in accordance with point 1.2(a) of Section 2;

(b) The rate of separation minima infringements at Union level with a safety impact calculated in accordance with point 1.2(b) of Section 2.

2. ENVIRONMENT

2.1. **Key performance indicators**

This KPI measures the average horizontal *en route* flight efficiency of the actual trajectory, calculated as follows:

(a) the indicator is the comparison between the length of the *en route* part of the actual trajectory derived from surveillance data and the achieved distance, summed over IFR flights within or traversing the airspace as defined in Article 1, hereinafter referred to as 'European airspace';

(b) '*en route* part' refers to the distance flown outside a circle of 40 NM around the airports;

(c) where a flight departs from or arrives at an airport outside the European airspace, the entry or exit points of the European airspace are used for the calculation of this indicator as the origin or destination respectively, rather than the departure or destination airport;

(d) where a flight departs from and arrives at an airport inside the European airspace and crosses a non-European airspace, only the part inside the European airspace is used for the calculation of this indicator;

(e) 'achieved distance' is a function of the position of the entry and exit points of the flight into and out of each portion of airspace for all parts of the trajectory. Achieved distance represents the contribution that those points make to the great circle distance between origin and destination of the flight;

(f) the indicator is calculated for the whole calendar year and for each year of the reference period, as an average. When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.

2.2. **Indicators for monitoring**

(a) The average horizontal *en route* flight efficiency of the last filed flight plan trajectory, calculated as follows:

(i) the difference between the length of the *en route* part of the last filed flight plan trajectory and the corresponding portion of the great circle distance, summed over all IFR flights within or traversing the European airspace;

(ii) '*en route part*' refers to the distance flown outside a circle of 40 NM around the airports;

(iii) where a flight departs from or arrives at an airport outside the European airspace, the entry or exit points of the European airspace are used for the calculation of this indicator as the origin or destination respectively, rather than the departure or destination airport;

(iv) where a flight departs from and arrives at an airport inside the European airspace and crosses a non- European airspace, only the part inside the European airspace is used for the calculation of this indicator.

(v) the indicator is calculated for the whole calendar year and for each year of the reference period, as an average. When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.

(b) The average horizontal *en route* flight efficiency of the shortest constrained trajectory, calculated as follows:

(i) the indicator is the difference between the length of the *en route* part of the shortest constrained route available for flight planning,as calculated by the path finding algorithms and flight plan validation systems of the Network Manager, measured between the exit and entry points of two terminal manoeuvring areas, and the corresponding portion of the great circle distance summed over all IFR flights within or traversing the European airspace;

(ii) this indicator considers the airspace restrictions on days with and without military activities published in the Route Availability Document issued by the Network Manager and the actual status of conditional routes at the time of the last filed flight plan;

(iii) '*en route* part' refers to the part outside a circle of 40 NM around the airports;

(iv) where a flight departs from or arrives at an airport outside the European airspace, the entry or exit points of the European airspace are used for the

calculation of this indicator as the origin or destination respectively, rather than the departure or destination airport;

(v) where a flight departs from and arrives at an airport inside the European airspace and crosses a non- European airspace, only the part inside the European airspace is used for the calculation of this indicator;

(vi) the indicator is calculated for the whole calendar year and for each year of the reference period, as an average. When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.

(c) The effective use of reserved or segregated airspace calculated as the ratio of the initial requested allocated time for reservation or segregation from general air traffic, and the final allocated time used for the activity requiring such segregation or reservation. The indicator is calculated for all airspace allocations notified to the Network Manager.

(d) The rate of planning via available airspace structures, including reserved or segregated airspace and conditional routes, for general air traffic calculated as the ratio of aircraft filing flight plans via such airspace structures and the number of aircraft that could have planned through those airspace structures.

(e) The rate of using available airspace structures, including reserved or segregated airspace, conditional routes, by general air traffic calculated as the ratio of aircraft flying via such airspace structures and the number of aircraft that could have planned through these airspace structures.

3. CAPACITY

3.1. **Key performance indicator**

The average minutes of *en route* ATFM delay per flight attributable to air navigation services, calculated as follows:

(a) the *en route* ATFM delay is the delay calculated by the Network Manager, expressed as the difference between the estimated take-off time and the calculated take-off time allocated by the Network Manager;

(b) for the purposes of this indicator:

'estimated take-off time' means the forecast of time when the aircraft will become airborne calculated by the Network Manager and based on the last estimated off-block time, or target off-block time for those airports covered by airport collaborative decision-making procedures, plus the estimated taxi-out time calculated by the Network Manager;

'calculated take-off time' means the time allocated by the Network Manager on the day of operation, as a result of tactical slot allocation, at which a flight is expected to become airborne;

'estimated taxi-out time' means the estimated time between off-block and take off. This estimate includes any delay buffer time at the holding point or remote de-icing prior to take off;

(c) this indicator covers all IFR flights and all ATFM delay causes, excluding exceptional events;

(d) this indicator is calculated for the whole calendar year and for each year of the reference period.

3.2. **Indicators for monitoring**

(a) The average time, expressed in minutes, of arrival ATFM delay per flight attributable to terminal and airport air navigation services and caused by landing restrictions at the destination airport, calculated as follows:

(i) this indicator is the average generated arrival ATFM delay per inbound IFR flight;

(ii) this indicator includes all IFR flights landing at the destination airport and covers all ATFM delay causes, excluding exceptional events;

(iii) this indicator is calculated for the whole calendar year and for each year of the reference period.

(b) The percentage of flights with *en route* ATFM delay greater than 15 minutes, calculated as below:

(i) *en route* ATFM delay calculated in accordance with point 3.1(a);

(ii) this indicator covers all IFR flights and all ATFM delay causes, excluding exceptional events;

(iii) this indicator is calculated for the whole calendar year and for each year of the reference period.

(c) The average time, expressed in minutes, of all cause-departure delay per flight, calculated as follows:

(i) this indicator is the average delay attributable to:

— delays due to airline operations;

— *en route* ATFM delay reported by airspace users;

— reactionary (knock-on) delay;

— airport operations delay, including ATFM airport delay reported by airspace users caused by regulation based on traffic volume which has a reference location classified as Aerodrome Zone or Aerodrome;

(ii) this indicator covers all IFR flights and is calculated for the whole calendar year and for each year of the reference period.

4. COST-EFFICIENCY

4.1. **Key performance indicators**

The year-on-year change of the average Union-wide 'determined unit cost' (DUC) for *en route* air navigation services, calculated as follows:

(a) this indicator is expressed as a percentage, reflecting the year-on-year variation of the average Union-wide DUC for *en route* air navigation services, starting from the baseline value referred to in point (a) of Article 9(4);

(b) this indicator is calculated for the whole calendar year and for each year of the reference period;

(c) the average Union-wide DUC for *en route* air navigation services is the ratio between the *en route* determined costs and the *en route* forecast traffic, expressed in *en-route* service units, expected during each year of the reference period at Union level, as contained in the Commission's assumptions for establishing the Union-wide performance targets in accordance with Article 9(3);

(d) the average Union-wide DUC for *en route* air navigation services is calculated in euro and in real terms.

4.2. **Indicators for monitoring**

The actual unit cost incurred by users separately for *en route* and terminal air navigation services at Union level, calculated as follows:

(a) this indicator is calculated for the whole calendar year and for each year of the reference period as the weighted average of the sum of the DUC for each Member State for air navigation services and of the adjustments in accordance with Article 25(2) stemming from that year;

(b) this indicator is expressed in euro and in nominal terms.

SECTION 2 — KPIs for target setting at local level and indicators for monitoring at local level

1. SAFETY

1.1. **Key performance indicator**

The level of the effectiveness of safety management in accordance with point 1.1 of Section 1.

For the purposes of this indicator, 'local' means at the level of air navigation service providers.

1.2. **Indicators for monitoring**

(a) The rate of runway incursions at airports located in a Member State, calculated as the total number of runway incursions with a safety impact that occurred at those airports divided by the total number of IFR and VFR movements at those airports.

(b) The rate of separation minima infringements within the airspace of all controlling air traffic services units in a Member State, calculated as the total number of separation minima infringements with a safety impact that occurred in that airspace divided by the total number of controlled flight hours within that airspace.

(c) The rate of runway incursions at an airport calculated as the total number of runway incursions with any contribution from air traffic services or CNS services with a safety impact that occurred at that airport divided by the total number of IFR and VFR movements at that airport.

(d) The rate of separation minima infringements within the airspace where the air navigation service provider provides air traffic services, calculated as the total number of separation minima infringements with any contribution from air traffic services, or CNS services with a safety impact divided by the total number of controlled flight hours within that airspace.

(e) Where automated safety data recording systems are implemented, the use of these systems by the air navigation service providers, as a component of their safety risk management framework, for the purposes of gathering, storing and

near-real time analyses of data related to, as a minimum, separation minima infringements and runway incursions.

The indicators for monitoring referred to in this point shall be calculated for the whole calendar year and for each year of the reference period.

For the purposes of the indicators set out in points (a) and (c), 'local' means at airport level. For the purposes of the indicator set out in point (b), 'local' means at national level. For the purposes of the indicator set out in point (d), 'local' means the level of air navigation service providers.

2. ENVIRONMENT

2.1. **Key performance indicator**

The average horizontal *en route* flight efficiency of the actual trajectory, calculated as follows:

(a) this indicator is the comparison between the length of the *en route* part of the actual trajectory derived from surveillance data and the achieved distance, summed over IFR flights within or traversing the local airspace;

(b) '*en route* part' refers to the distance flown outside a circle of 40NM around the origin and destination airports;

(c) where a flight departs from or arrives at an airport outside the local airspace, the entry or exit points of the local airspace are used for the calculation of this indicator;

(d) where a flight departs from and arrives at an airport inside the local airspace and crosses a non-local airspace, only the part inside the local airspace is used for the calculation of this indicator;

(e) 'achieved distance' is a function of the position of the entry and exit points of the flight into and out of the local airspace. Achieved distance represents the contribution that those points make to the great circle distance between origin and destination of the flight;

(f) for the purposes of this indicator, 'local' means at national level or at the level of functional airspace blocks, depending on the level at which the performance plan is established;

(g) the indicator is calculated for the whole calendar year and for each year of the reference period, as an average. When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.

2.2. **Indicators for monitoring**

(a) The average horizontal *en route* flight efficiency of the last filed flight plan trajectory, calculated at local level as follows:

(i) the difference between the length of the *en route* part of the last filed flight plan trajectory and the corresponding portion of the great circle distance, summed over all IFR flights within or traversing the local airspace;

(ii) '*en route* part' refers to the distance flown outside a circle of 40 NM around the airports;

(iii) where a flight departs from or arrives at an airport outside the local airspace, the entry or exit points of the local airspace are used for the calculation of this indicator;

(iv) where a flight departs from and arrives at an airport inside the local airspace and crosses a non-local airspace, only the part inside the local airspace is used for the calculation of this indicator;

(v) the indicator is calculated for the whole calendar year and for each year of the reference period, as an average. When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.

(b) The average horizontal *en route* flight efficiency of the shortest constrained trajectory, calculated at local level as follows.

(i) the indicator is the difference between the length of the *en route* part of the shortest constrained route available for flight planning, as calculated by the path finding algorithms and flight plan validation systems of the Network Manager, and the achieved distance summed over all IFR flights within or traversing the local airspace;

(ii) this indicator considers the airspace restrictions published in the Route Availability Document issued by the Network Manager and the actual status of conditional routes at the time of the last filed flight plan;

(iii) '*en route* part' refers to the part outside a circle of 40NM around the origin and destination airports;

(iv) where a flight departs from or arrives at an airport outside the local airspace, the entry or exit points of the local airspace are used for the calculation of this indicator;

(v) where a flight departs from and arrives at an airport inside the local airspace and crosses a non-local airspace, only the part inside the local airspace is used for the calculation of this indicator;

(vi) 'achieved distance' is a function of the position of the entry and exit points of the flight into and out of the local airspace. Achieved distance represents the contribution that those points make to the great circle distance between origin and destination of the flight.

(vii) the indicator is calculated for the whole calendar year and for each year of the reference period, as an average. When calculating this average, the ten highest daily values and the ten lowest daily values are excluded from the calculation.

(c) The additional time in the taxi-out phase, calculated at local level as follows:

(i) this indicator is the difference between the actual taxi-out time and the unimpeded taxi-out time;

(ii) the unimpeded taxi-out time is the taxi-out time in non-congested periods of low traffic at an airport;

(iii) this indicator is expressed in minutes per departure, calculated for the whole calendar year and for each year of the reference period.

(d) The additional time in terminal airspace, calculated at local level as follows:

(i) this indicator is the difference between the Arrival Sequencing and Metering Area (ASMA) transit time and the unimpeded time based on ASMA transit times;

(ii) the unimpeded time based on ASMA transit times is determined for each group of flights with the same parameters, which are aircraft class, ASMA entry sector and arrival runway, and represents the transit time in non-congested periods of low traffic;

(iii) this indicator is expressed in minutes per arrival calculated for the whole calendar year and for each year of the reference period;

(iv) the ASMA is defined as a cylinder with a radius of 40 NM around the arrival airport.

(e) The share of arrivals applying Continuous Descent Operation (CDO), calculated at local level as follows:

(i) this indicator is the ratio between the total number of arrivals performing a CDO from a reference point at a height above ground, defined by the national supervisory authority, and the total number of arrival operations;

(ii) this indicator is expressed as a percentage, calculated for the whole calendar year and for each year of the reference period.

(f) The effective use of reserved or segregated local airspace, calculated in accordance with point 2.2(c) of Section 1.

(g) The rate of planning via available local airspace structures, calculated in accordance with point 2.2(d) of Section 1.

(h) The rate of using available local airspace structures, calculated in accordance with point 2.2(e) of Section 1.

(i) For the purposes of the indicators set out in points (a) and (b), 'local' means at national level or at the level of functional airspace blocks depending on the level at which the performance plan is established, including cases of delegation of the responsibility for the provision of air traffic services as a result of collaborative cross-border arrangements. For the purposes of the indicators set out in points (c) and (d), 'local' means at airport level with a minimum of 80 000 IFR air transport movements per year. For the purposes of the indicator set out in point (e), 'local' means at airport level. For the purposes of the indicators set out in points (f) to (h), 'local' means at national level with a breakdown at the level of area control centres' area of responsibility, including cases of delegation of the responsibility for the provision of air traffic services as a result of collaborative cross-border arrangements.

3. CAPACITY

3.1. **Key performance indicators**

(a) The average minutes of *en route* ATFM delay per flight attributable to air navigation services, calculated as follows:

(i) the *en route* ATFM delay, calculated in accordance with point 3.1(a) of Section 1;

(ii) this indicator covers all IFR flights traversing the local airspace and all ATFM delay causes, excluding exceptional events; it also covers IFR flights traversing other airspaces, when delay corrections are applied as a result of the post-operations delay adjustment process coordinated by the Network Manager through which operational stakeholders notify the Network Manager of issues that relate to ATFM delay measurement, classification and assignment;

(iii) this indicator is calculated for the whole calendar year and for each year of the reference period;

(iv) for the purposes of this indicator, 'local' means at national level or at the level of functional airspace blocks depending on the level at which the performance plan is established;

(v) for monitoring, the values calculated for this indicator are broken down at national level in case the performance plan is established at functional airspace block level, including cases of delegation of the responsibility for the provision of air traffic services as a result of collaborative cross-border arrangements.

(b) The average time, expressed in minutes, of arrival ATFM delay per flight attributable to terminal and airport air navigation services, calculated at local level as follows:

(i) this indicator is the average arrival delay at the destination airport caused by ATFM regulations per inbound IFR flight;

(ii) this indicator covers all IFR flights landing at the destination airport and all ATFM delay causes, excluding exceptional events;

(iii) this indicator is calculated for the whole calendar year and for each year of the reference period.

(iv) for the purposes of this indicator, 'local' means at national level.

(v) for monitoring, the values calculated for this indicator are broken down at airport level.

3.2. **Indicators for monitoring**

(a) The percentage of IFR flights adhering to their ATFM departure slots at local level calculated for the whole calendar year and for each year of the reference period.

(b) The average minutes of air traffic control pre-departure delay per flight caused by take-off restrictions at the departure airport, calculated at local level as follows:

(i) this indicator is the average air traffic control pre-departure delay per outbound IFR flight;

(ii) this indicator includes all IFR flights taking off at the departure airport and covers delays in start-up caused by air traffic control constraints when the aircraft is ready to leave the departure stand;

(iii) this indicator is calculated for the whole calendar year and for each year of the reference period.

(c) The average time, expressed in minutes, of departure delay from all causes per flight, calculated at local level in accordance with point 3.2(c) of Section 1.

(d) For the purpose of the indicator set out in point (a), 'local' means at national level with a breakdown at airport level. For the purposes of the indicator set out in points (b) and (c), 'local' means at airport level for airports with 80 000 IFR air transport movements or more per year.

4. COST-EFFICIENCY

4.1. **Key performance indicators**

(a) The DUC for *en route* air navigation services, calculated as follows:

(i) this indicator is the ratio between the *en route* determined costs and the forecast traffic in the charging zone, expressed in *en route* service units, expected during each year of the reference period at local level, contained in the performance plans;

(ii) this indicator is expressed in real terms and in national currency;

(iii) this indicator is provided calculated for the whole calendar year and for each year of the reference period.

(b) The DUC for terminal air navigation services, calculated as follows:

(i) this indicator is the ratio between the determined costs and the forecast traffic, expressed in terminal service units, expected during each year of the reference period at local level, contained in the performance plans;

(ii) this indicator is expressed in real terms and in national currency;

(iii) this indicator is calculated for the whole calendar year and for each year of the reference period.

(c) For the purposes of the indicators set out in points (a) and (b), 'local' means at charging zone level.

4.2. **Indicator for monitoring**

The actual unit cost incurred by users separately for *en route* and terminal air navigation services, calculated as follows:

(a) this indicator is calculated for the whole calendar year and for each year of the reference period as the sum of the DUC for air navigation services and of the adjustments in accordance with Article 25(2) stemming from that year;

(b) this indicator is expressed in nominal terms and in national currency.

SECTION 3 — KPIs for target setting and indicators for monitoring of the network functions

1. All the indicators set out in this section shall apply to the geographic area within the scope of this Regulation.

2. SAFETY

2.1. **Key performance indicators**

The level of the effectiveness of safety management of the Network Manager in accordance with point 1.1 of Section 1.

2.2. **Indicators for monitoring**

The ATFM over-deliveries above the capacity limits of a sector declared by the air navigation service provider where ATFM regulations are imposed, calculated as follows:

(a) the ratio between the time that the number of flights exceeds by more than 10 % the capacity limits of a sector declared by the air navigation service provider where ATFM regulations are imposed, and the total time where ATFM regulations are imposed, calculated for the whole calendar year and for each year of the reference period;

(b) for the purposes of this indicator, the regulated time is divided in overlapping hourly slices at every 20-minutes interval.

3. ENVIRONMENT

3.1. **Key performance indicators**

The *en route* flight efficiency improvement generated by the European Route Network Design function related to the last filed flight plan trajectory, expressed as a percentage point of the year-on-year variation of the *en route* flight efficiency of the last filed flight plan trajectory and calculated in accordance with point 2.2(a) of Section 1.

4. CAPACITY

4.1. **Key performance indicators**

(a) The percentage of *en route* ATFM delay savings from the Cooperative Decision-Making network procedures and Network Manager Operations Centre actions, over the total year-on-year *en route* ATFM delay savings, where *en route* ATFM delay is calculated in accordance with point 3.1 of Section 1.

(b) The percentage of arrival ATFM delay savings from the Cooperative Decision-Making network procedures and Network Manager Operations Centre actions, over the total arrival ATFM delay savings, where arrival ATFM delay is calculated in accordance with point 3.2(a) of Section 1.

4.2. **Indicators for monitoring**

(a) The annual percentage of IFR flights with ATFM delay above 15 minutes.

(b) The average, over a calendar year, of the daily number of ATFM regulations that each produces less than 200 minutes of delay.

(c) The average, over a calendar year, of *en route* ATFM weekend delay expressed in minutes of delay per flight.

(d) The annual percentage of first rotation delay due to capacity and staffing for a pre-selection of area control centers/airports with the most significant potential delay reduction as identified annually by the Network Manager.

(e) The effective use of reserved or segregated airspace, calculated in accordance with point 2.2(c) of Section 1.

(f) The rate of planning via available airspace structures, calculated in accordance with point 2.2(d) of Section 1.

(g) The rate of using available airspace structures, calculated in accordance with point 2.2(e) of Section 1.

5. COST-EFFICIENCY

5.1. **Indicators for monitoring**

The unit cost for the execution of the tasks of the Network Manager, calculated as follows:

(a) this indicator is the ratio between the actual costs for the execution of the tasks of the Network Manager and the *en route* traffic, expressed in *en route* service units, during the reference period, at the level of the geographical area where the Network Manager performs its tasks necessary for the execution of the network functions;

(b) this indicator is expressed in euro and in real terms;

(c) this indicator is calculated for the whole calendar year and for each year of the reference period.

ANNEX II — TEMPLATE FOR PERFORMANCE PLANS AT NATIONAL OR FUNCTIONAL AIRSPACE BLOCK LEVEL REFERRED TO IN ARTICLE 10(1)

Regulation (EU) 2019/317

1. INTRODUCTION

1.1. Description of the situation, including scope of the plan in terms of geographical coverage and services, list of air navigation service providers covered and other general information relevant to the performance plan.

1.2. Traffic forecasts referred to in points (f) and (g) of Article 10(2) expressed in IFR movements and in service units underpinning the performance plan based on Eurocontrol's Statistics and Forecast Service (STATFOR) base forecasts. Where the forecasts differ from the STATFOR base forecasts, the reasons that justify the use of a different forecast referred to in points (f) and (g) of Article 10(2) and a justification for the use of these forecasts shall be documented.

1.3. Description of the outcome of the stakeholder consultation on the draft performance plan, including the points of agreement and disagreement as well as the reasons for any such disagreement.

1.4. List of airports subject to the performance and charging scheme, with their average number of IFR air transport movements per year.

1.5. Where applicable, list of services the provision of which has been established to be subject to market conditions in accordance with Article 35.

1.6. As regards performance plans adopted at the level of functional airspace blocks, description of the process followed to develop and adopt the performance plan.

1.7. Indication whether or not the simplified charging scheme referred to in Article 34 applies and if so, a demonstration that the conditions set out in that Article have been met as well as a description of the application of the simplified charging scheme and of its scope in terms of charging zones covered.

2. INVESTMENTS

2.1. Description and justification of the costs, nature and benefits of new and existing investments in fixed assets planned over the reference period.

2.2. The information referred to in point 2.1 shall include in particular:

(a) the determined costs of new and existing investments in respect of depreciation, cost of capital and cost of leasing over the whole reference period and in respect of each calendar year thereof, as required in Annex VII;

(b) description and justification of the major investments, including with regard to the following elements:

(i) total value of each major investment;

(ii) the asset or assets acquired or developed;

(iii) information on the benefit of the investment for airspace users and on the results of the consultation of airspace users' representatives;

(iv) as regards major investments in ATM systems:

— differentiation between investments in new systems, overhaul of existing systems and replacement investments;

— justification of the relevance of each investment with reference to the European ATM Master Plan, and the common projects referred to in Article 15a of Regulation (EC) No 550/2004;

(c) detail of synergies achieved at the level of functional airspace blocks or, through other cross-border cooperation initiatives as appropriate, in particular in terms of common infrastructure and common procurement.

3. NATIONAL PERFORMANCE TARGETS OR FAB PERFORMANCE TARGETS AND MEASURES FOR THEIR ACHIEVEMENT

3.1. National performance targets or FAB performance targets in each key performance area, set by reference to each key performance indicator set out in Section 2 of Annex I, and covering each calendar year of the reference period.

3.2. For all key performance areas, description of the main measures put in place at national level or at the level of functional airspace blocks to achieve the performance targets.

3.3. Additional information to substantiate the national performance targets or FAB performance targets in the key performance area of cost-efficiency:

(a) determined costs for *en route* and terminal air navigation services set in accordance with points (a) and (b) of Article 15(2) of Regulation (EC) No 550/2004 and with this Regulation, for each year of the reference period;

(b) *en route* and terminal service units forecast, for each year of the reference period;

(c) the baseline values for *en route* and terminal cost-efficiency targets referred to in point (a) of Article 10(2) and description and justification of the methodology used to estimate those values for each charging zone;

(d) description and justification of the criteria and methodology used for the allocation of costs to charging zones and allocation of costs between *en route* and terminal services, in accordance with Article 22(5);

(e) description and justification of the return on equity of the air navigation service providers concerned, as well as on the gearing ratio and on the level and composition of the asset base used to calculate the cost of capital comprised in the determined costs;

(f) description and justification of economic assumptions, including:

— assumptions underlying the calculation of pension costs comprised in the determined costs, including a description on the relevant national pension regulations and pension accounting regulations on which those assumptions are based, as well as information whether changes of those regulations are to be expected;

— interest rate assumptions for loans financing the provision of air navigation services, including amounts, duration and other relevant information on loans, and explanation for the weighted average interest on debt used to calculate the cost of capital pre-tax rate and the cost of capital comprised in the determined costs;

— for information purposes only, inflation forecast based on the International Monetary Fund (IMF) Consumer Price Index (CPI);

— adjustments beyond the provisions of the International Financial Reporting Standards adopted by the Union pursuant to Commission Regulation (EC) No 1126/2008[1];

(g) description and explanation of the adjustments resulting from the years preceding the reference period;

(h) identification and categorisation of the determined costs relating to the cost items referred to in Article 28(3);

(i) where applicable, a description of any significant restructuring planned during the reference period;

(j) where applicable, approved restructuring costs from previous reference periods to be recovered.

(k) the reporting tables and additional information required in Annexes VII, IX and XI which to be attached to the performance plan;

3.4. A breakdown of the performance targets set out in accordance with points 2.1 and 3.1(a) of Section 2 of Annex I at the level of each individual air navigation service provider covered by the performance plan and, in respect of performance plans established at the level of functional airspace blocks, reflecting the contributions of each provider concerned to the performance targets at the level of functional airspace blocks.

3.5. Where there is no Union-wide performance target, description and explanation of how the national performance targets or FAB performance targets contribute to the improvement of the performance of the European ATM network.

3.6. Description and explanation of the interdependencies and trade-offs between the key performance areas, including the assumptions used to assess those trade-offs.

4. CROSS-BORDER INITIATIVES AND SESAR IMPLEMENTATION

4.1. Description of the cross-border cooperation initiatives implemented, or planned to be implemented, at the level of air navigation service providers to improve the provision of air navigation services. Identification of the performance gains enabled by those initiatives in the various key performance areas.

4.2. Description of recent and expected progress in the deployment of SESAR common projects referred to in Article 15a of Regulation (EC) No 550/2004, as well as of change management practices in relation to transition plans in order to minimise any negative impact of changes on the network performance.

5. TRAFFIC RISK SHARING ARRANGEMENTS AND INCENTIVE SCHEMES

5.1. In respect of each charging zone concerned, description of the defined values of the traffic risk sharing parameters applicable in accordance with Article 27:

(a) identification of the applicable range referred to in Article 27(2) and of the traffic risk sharing keys referred to in Article 27(3);

[1] Commission Regulation (EC) No 1126/2008 of 3 November 2008 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council (OJ L 320, 29.11.2008, p. 1).

(b) in the event that the national supervisory authority adapts the values of the parameters of the traffic risk sharing mechanism referred to in point (a) in accordance with Article 27(5):

(i) justification of the defined values of the traffic risk sharing parameters;

(ii) description of the consultation process of airspace users and air navigation service providers on the setting of the values of the traffic risk sharing parameters and of the outcome of the consultation.

5.2. In respect of incentive schemes applicable during the reference period in accordance with Article 11:

(a) description and justification of the parameters of the incentive scheme defined in accordance with Article 11(3), including the pivot values, and the modulation mechanism of pivot values where applicable;

(b) identification of the air navigation service providers and charging zones subject to the incentive schemes;

(c) where applicable, description of the additional incentive schemes referred to in Article 11(4).

6. IMPLEMENTATION OF THE PERFORMANCE PLAN

Description of the processes that the national supervisory authorities will put in place, in order to:

(a) monitor the implementation of the performance plan;

(b) address the situation where targets are not reached during the reference period.

ANNEX III — TEMPLATE FOR THE NETWORK PERFORMANCE PLAN REFERRED TO IN ARTICLE 10(5)

Regulation (EU) 2019/317

1. INTRODUCTION

1.1. Description of the situation, including scope of the Network Performance Plan, network functions covered, roles and responsibilities and other general information relevant to the plan.

1.2. Description of the traffic forecast and macroeconomic scenario underpinning the Network Performance Plan.

1.3. Description of the consistency of the Network Performance Plan with the Network Strategy Plan.

1.4. Description of the outcome of the stakeholder consultation on the draft Network Performance Plan, including the points of agreement and disagreement as well as the reasons for any such disagreement, and description of the outcome of the consultation of the Network Management Board.

2. NETWORK MANAGER'S VALUE ADDED

Areas of cooperation to support tasks and activities of Member States, functional airspace blocks, air navigation service providers, airports, civil and military airspace users.

Description of the Network Manager's work on:

(a) the elaboration and harmonisation of network and regional operational concepts;

(b) the development and harmonisation of airspace projects based on network priorities including cross-border airspace design initiatives;

(c) reducing inefficient use of route network and available airspace;

(d) the development of enhanced airspace management and air traffic flow and capacity management processes;

(e) the harmonised capacity planning and measurement of operational performance;

(f) supporting the resolution of air traffic controller shortages across the network;

(g) strengthening technical area coordination including at FAB level and addressing technical interoperability among air navigation service providers' systems and in particular with the Network Manager's systems;

(h) the support to Network Safety and the implementation, monitoring and improvement of local safety performance.

3. PERFORMANCE TARGETS, OBJECTIVES AND MEASURES

3.1. Safety performance of the Network Manager

(a) performance target for the Network Manager on effectiveness of safety management.

(b) description of the measures that the Network Manager puts in place to achieve this target.

(c) description of the measures that the Network Manager puts in place to address ATFM over-deliveries.

3.2. Cost-efficiency performance of the Network Manager

(a) description of the measures that the Network Manager puts in place to improve its cost-efficiency.

3.3. Performance targets and objectives specific to each network function

(a) European Route Network Design (ERND) function:

(i) performance targets for the key performance indicator set out in point 3.1 in Section 3 of Annex I;

(ii) description and explanation of the measures aimed at achieving the performance targets for the ERND function:

— measures related to the design of an efficient airspace structure;

— measures related to a better airspace utilisation by the operational stakeholders;

— measures related the optimisation of the flights.

(iii) other flight efficiency initiatives.

(b) Air Traffic Flow Management (ATFM) function;

(i) performance targets for each relevant key performance indicator set out in point 4.1 in Section 3 of Annex I;

(ii) description and explanation of the measures aimed at achieving the performance targets for the ATFM function:

— nitiatives and actions for reducing the ATFM delay including weekend delays, weather generated delays, minimising individual flight penalties, ATFM efficiency, reactionary delays, over deliveries;

— military dimension of the plan.

(iii) other capacity initiatives.

(c) Coordination of scarce resources functions:

(i) coordination of radio frequencies function:

— description of the support to network capacity;

— description of specific objectives.

(ii) coordination of radar transponder codes function:

— description of the support to network safety;

— description of specific objectives.

4. IMPLEMENTATION OF THE NETWORK PERFORMANCE PLAN

Description of the measures that the Network Manager puts in place, in order to:

(a) assist the monitoring and the reporting of the implementation of the Network Performance Plan;

(b) address the situation where targets are not reached during the reference period;

(c) communicate with the national supervisory authorities.

ANNEX IV — CRITERIA FOR THE ASSESSMENT OF PERFORMANCE PLANS AND TARGETS AT NATIONAL OR FUNCTIONAL AIRSPACE BLOCK LEVEL

Regulation (EU) 2019/317

1. CONSISTENCY ASSESSMENT OF NATIONAL PERFORMANCE TARGETS OR FAB PERFORMANCE TARGETS

1.1. *SAFETY*

Effectiveness of safety management

Consistency of national performance targets or FAB performance targets on the level of effectiveness of safety management with the Union-wide performance targets by which, for each calendar year of the reference period, the level of effectiveness of safety management is equal to, or higher than, the corresponding Union-wide performance targets.

1.2. *ENVIRONMENT*

Average horizontal *en route* flight efficiency of the actual trajectory

Consistency of national performance targets or FAB performance targets with the Union-wide performance targets for each calendar year of the reference period, by comparing the national performance targets or FAB performance targets with the *en route* horizontal flight efficiency reference values set out in latest version of the European Route Network Improvement Plan available at the time of adoption of the Union-wide performance targets.

For the purpose of this paragraph, the '*en route* horizontal flight efficiency reference value' means the estimated value by the Network Manager of the flight efficiency of the actual trajectory at national level or at the level of functional airspace blocks, for the purpose of ensuring that the Union-wide target on horizontal *en route* flight efficiency of the actual trajectory is met.

1.3. *CAPACITY*

Average *en route* ATFM delay per flight

Consistency of national performance targets or FAB performance targets with Union-wide performance targets for each calendar year of the reference period, by comparing the national performance targets or FAB performance targets with the reference values set out in the latest version of the Network Operations Plan available at the time of adoption of Union-wide performance targets.

1.4. *COST-EFFICIENCY*

***En route* determined unit cost**

(a) Consistency of the determined unit cost trend at charging zone level over the reference period with the Union-wide determined unit cost trend over the same period, whereby those trends are expressed as a percentage.

For the purpose of calculating those trends, the applicable Union-wide and local performance target values and the baseline values for the determined unit costs referred to in point (a) of Article 9(4), and in point (a) of Article 10(2) shall be used.

(b) Consistency of the determined unit cost trend at charging zone level over a time period covering both the reference period covered by the performance plan and the preceding reference period ('long term determined unit cost trend') with the Union-wide determined unit cost trend over the same period, whereby those trends are expressed as a percentage.

The long-term determined unit cost trend at charging zone level shall be calculated by using the actual unit cost at charging zone level for the year before the start of the preceding reference period concerned.

(c) Consistency of the determined unit cost level: comparison of the baseline value for the determined unit cost referred to in point (a) of Article 10(2) at the level of the charging zone concerned with the corresponding average value of the charging zones where air navigation service providers have a similar operational and economic environment as defined in accordance with point (c) of Article 9(4).

(d) A deviation from the criteria referred to in points (a) to (c) may be deemed necessary and proportionate in order to:

(i) allow the achievement of the performance targets in the key performance area of capacity set at national level or the level of functional airspace blocks provided that the deviation from the Union-wide determined unit cost trend is exclusively due to additional determined costs related to measures necessary to achieve the performance targets in the key performance area of capacity; or

(ii) implement restructuring measures that lead to restructuring costs referred to in Article 2(18), provided that the deviation is exclusively due to those restructuring costs and that a demonstration is provided in the performance plan that the restructuring measures concerned will deliver a net financial benefit to airspace users at the latest in the subsequent reference period.

2. REVIEW OF DRAFT PERFORMANCE PLANS

2.1. Elements subject to review:

(a) measures for achievement of national or FAB performance targets in each key performance area as referred to in point 3.2 of Annex II;

(b) national or FAB performance targets on average arrival ATFM delay per flight:

(i) comparison with the level and trend of actual performance during the reference period which precedes the reference period covered by the performance plan;

(ii) at airport level, comparison of performance with similar airports;

(c) national or FAB performance targets on terminal DUC:

(i) comparison with the en route determined unit cost trend at local level;

(ii) comparison with the level and trend of actual performance during the reference period which precedes the reference period covered by the performance plan;

(iii) at airport level, comparison of performance with similar airports;

(d) key factors and parameters underpinning the national or FAB performance targets or performance in the key performance area of cost-efficiency:

(i) baseline values and assumptions underpinning the setting of determined costs for the first year of the reference period, in comparison with the latest available actual costs;

(ii) traffic forecasts used in the performance plan and, where the forecasts differ from the STATFOR base forecasts, the justifications provided;

(iii) planned cost of capital with regard to the level and composition of the regulatory assets base, as well as the planned cost of capital pre-tax rate, including the interest rate on debt and the return on equity;

(iv) determined costs of new and existing investments and justifications provided for major investments;

(v) determined pension costs and assumptions underlying their calculation;

(vi) interest rate assumptions for loans financing the provision of air navigation services, including amounts, duration and other relevant information on loans, reconciliation with the weighted average interest on debt used to calculate the cost of capital pre tax rate and the cost of capital comprised in the determined costs;

(vii) methodology used for the allocation of costs between *en route* and terminal services and justifications of any change in the methodology compared to the previous reference period.

(e) values of the traffic risk sharing parameters referred to in Article 27(2) and (3) and, in the event that the national supervisory authority has adapted the values for these parameters in accordance with Article 27(5), justifications provided for those values;

(f) incentive scheme or schemes, referred to in Article 11;

(g) performance benefits and synergies enabled by cross-border collaboration initiatives, including cooperation at the level of functional airspace blocks or through industrial alliances;

(h) in respect to an application of a simplified charging scheme referred to in Article 34, verification that the criteria referred to in Article 34(2) are met.

ANNEX V — CRITERIA FOR THE ASSESSMENT OF THE DRAFT NETWORK PERFORMANCE PLAN

Regulation (EU) 2019/317

(a) Completeness of the draft Network Performance Plan in terms of the elements needed to assess compliance with the requirements listed in Article 10(5) and Annex III;

(b) comprehensiveness of the actions taken by the Network Manager to contribute to network optimisation covering the actions listed in point 2 of Annex III;

(c) consistency of the target on the level of effectiveness of safety management of the Network Manager with the Union-wide performance targets, by which, for each calendar year of the reference period, the level of effectiveness of safety management is equal to, or higher than, the corresponding Union-wide performance targets;

(d) flight efficiency improvement measures generated by the European Route Network Design function;

(e) *en route* ATFM delay savings from the Cooperative Decision-Making network procedures and Network Manager Operations Centre actions;

(f) arrival ATFM delay savings from the Cooperative Decision-Making network procedures and Network Manager Operations Centre actions;

(g) adequacy of the measures aimed at achieving the performance targets for the network functions including the relevance of investments and capital expenditure as regards the European ATM Master Plan, the common projects referred to in Article 15a of Regulation (EC) No 550/2004 and Regulation (EU) No 409/2013, and, where applicable, the Network Strategy Plan.

ANNEX VI — LIST OF PERFORMANCE-RELATED DATA TO BE PROVIDED TO THE COMMISSION FOR MONITORING OF PERFORMANCE IN ACCORDANCE WITH ARTICLE 36(1) AND ARTICLE 37

Regulation (EU) 2019/317

1. DATA TO BE PROVIDED BY NATIONAL SUPERVISORY AUTHORITIES

1.1. National supervisory authorities shall ensure that the following data is provided on a monthly basis:

(a) data used and calculated by the Network Manager as defined in Annex I and Annex II of Implementing regulation (EU) 2019/123, including flight plans for general air traffic under IFR rules, actual routing, surveillance data based on 30 seconds reporting interval, *en route* and arrival ATFM delays, exemptions from ATFM regulations, respect of ATFM slots and frequency of conditional route usage;

1.2. National supervisory authorities shall ensure that the following data is provided on an annual basis:

(a) ATM-related safety occurrences;

(b) information on safety recommendations and corrective actions taken on the basis of ATM-related incident analysis or investigation in accordance with Regulation (EU) No 996/2010 of the European Parliament and of the Council[1] and Regulation (EU) No 376/2014 of the European Parliament and of the Council[2];

(c) information collected by air navigation service providers, airport operators and air transport operators through automated safety data recording systems where available, as a minimum on runway incursions and separation minima infringements;

(d) trends in, as a minimum, separation minima infringements and runway incursions, at all air traffic services units;

2. DATA TO BE PROVIDED BY AIR NAVIGATION SERVICE PROVIDERS

2.1. Air navigation service providers shall provide the following on an annual basis:

(a) the data referred to in the Eurocontrol Specification titled 'Eurocontrol Specification for Economic Information Disclosure', Edition 2.6 of 31 December 2008 with the reference Eurocontrol-SPEC-0117 for the provision of data up to, and including, year 2013, and Edition 3.0 of 4 December 2012 from year 2014 onwards.

This data shall be provided before 15 July of year n+1, except for forward looking data which shall be provided by 1 November of year n + 1;

[1] Regulation (EU) No 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and repealing Directive 94/56/EC (OJ L 295, 12.11.2010, p. 35).

[2] 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).

(b) information required for the purpose of monitoring the key performance indicators and the indicators for monitoring referred to in points 1.1 and 1.2 of Section 2 of Annex I;

This information shall be provided before 1 February of each year.

(c) information on safety occurrences collected through automated safety data recording systems where available;

(d) trends in, at the minimum, separation minima infringements, and runway incursions occurrences at all air traffic services units from both voluntary reports and automated safety data recording systems where available.

2.2. Air navigation service providers shall provide the data referred to in Article 4 upon request.

3. DATA TO BE PROVIDED BY AIRPORT OPERATORS FOR AIRPORTS WITH 80 000 IFR AIR TRANSPORT MOVEMENTS OR MORE PER YEAR

Airport operators shall provide the following:

(a) the data referred to in the Eurocontrol Specification document titled 'Airport Operator Data Flow — Data Specification' version 1.0, 2018.

This data shall be provided on a monthly basis;

(b) information on safety occurrences collected through automated safety data recording systems where available;

This information shall be provided on an annual basis.

4. DATA TO BE PROVIDED BY AIRPORT COORDINATORS

Airport coordinators shall provide the data referred to in points (c) and (d) of Article 4(8) of Regulation (EEC) No 95/93 twice a year, in accordance with the time intervals referred to in Article 6 of that Regulation.

5. DATA TO BE PROVIDED BY AIRSPACE USERS

Airspace Users shall provide the following:

(a) the data referred to in the Eurocontrol Specification document titled 'Air Transport Operator Data Flow — Data Specification' version 1.0, 2018.

This data shall be provided on a monthly basis;

(b) information on safety occurrences collected through automated safety data recording systems where available;

This information shall be provided on an annual basis.

6. DATA TO BE PROVIDED BY THE NETWORK MANAGER

The Network Manager shall provide on a monthly basis the data required for the monitoring of the key performance indicators and the indicators for monitoring referred to in points 2 and 3 of Section 1 of Annex I, points 2 and 3 of Section 2 of Annex I and in Section 3 of Annex I.

ANNEX VII — DETERMINED AND ACTUAL COSTS

Regulation (EU) 2019/317

1. REPORTING TABLE ON TOTAL COSTS AND UNIT COSTS

1.1. A reporting table on total costs and unit costs shall be filled separately for each relevant entity incurring costs in a charging zone using the template of Table 1. In addition, a consolidated reporting table shall be filled using the template of Table 1 aggregating the data from the relevant entities for the charging zone.

In respect of terminal air navigation services, an additional reporting table on total costs and unit costs shall be filled in for each airport subject to this Regulation using the template of Table 1. Where Member States decide to apply the provisions of this Regulation to other airports referred to in Article 1(4), the costs for these airports may be presented in a consolidated table using the template of Table 1, except for the total costs referred to in line 4.2 of the template of Table 1 which shall be provided for each airport separately.

When a charging zone extends across the airspace of more than one Member State, a joint reporting table using the template of Table 1 shall be filled in in accordance with the requirements of consistency and uniformity referred to in Article 21(4).

1.2. The reporting tables on total costs and unit costs referred to in point 1.1 shall be filled in as part of the performance plan for each calendar year of the reference period and shall also be filled in annually to report on actual costs and actual service units. Actual service units shall be established on the basis of the figures provided by the entity that is billing and collecting charges. Any difference from these figures shall be duly justified in the additional information.

Table 1 - Total Costs and Unit Costs

Charging zone name	
Currency	
Entity name	

	Determined costs - Performance Plan - Reference Period					Actual costs - Reference Period				
Cost details	**N**	**N+1**	**N+2**	**N+3**	**N+4**	**N**	**N+1**	**N+2**	**N+3**	**N+4**
1. Detail by nature (in nominal terms)										
1.1 Staff										
of which, pension costs										
1.2 Other operating costs										
1.3 Depreciation										
1.4 Cost of capital										
1.5 Exceptional items										
1.6 Total costs										
Total % n/n-1										
2. Detail by service (in nominal terms)										
2.1 Air Traffic Management										
2.2 Communication										
2.3 Navigation										
2.4 Surveillance										
2.5 Search and rescue										
2.6 Aeronautical Information										
2.7 Meteorological services										
2.8 Supervision costs										
2.9 Other State costs										
2.10 Total costs										
Total % n/n-1										
3. Complementary information (in nominal terms)										
Average asset base										
3.1 Net book val. fixed assets										
3.2 Adjustments total assets										
3.3 Net current assets										
3.4 Total asset base										
Cost of capital %										
3.5 Cost of capital pre tax rate										
3.6 Return on equity										
3.7 Average interest on debts										
3.8 Share of financing through equity										
Costs of common projects										
3.9 Common projects										
Costs of new and existing investments										
3.10 Depreciation										
3.11 Cost of capital										
3.12 Cost of leasing										
Eurocontrol costs										
3.13 Eurocontrol costs (Euro)										
3.14 Exchange rate (if applicable)										
3.15 Eurocontrol costs (national currency)										
4. Total costs after deduction of costs for services to exempted flights (in nominal terms)										
4.1 Costs for exempted VFR flights										
4.2 Total determined/actual costs										
5. Cost-efficiency KPI - Determined/Actual Unit Cost (in real terms)										
5.1 Inflation %										
5.2 Inflation index (1)										
5.3 Total costs real terms (2)										
Total % n/n-1										
5.4 Total Service Units										
Total % n/n-1										
5.5 Unit cost in real terms prices (3)										
Total % n/n-1										

Costs and asset base items in '000 - Service units in '000

(1) Inflation index - Base 100 in N-3

(2) Determined costs (performance plan) and actual costs in real terms

(3) Determined unit costs (performance plan) and actual unit costs in real terms

2. ADDITIONAL INFORMATION TO THE REPORTING TABLES ON TOTAL COSTS AND UNIT COSTS

2.1. The following additional information shall be provided, together with the information to be included in reporting tables on total costs and unit costs referred to in point 1.1 prior to the beginning of a reference period, as part of the performance plan:

(a) a description of the methodology used for allocating costs of facilities or services between different air navigation services, based on the list of facilities and services listed in ICAO Regional Air Navigation Plan, European Region (Doc 7754) as last amended, and a description of the methodology used for allocating those costs between different charging zones;

(b) a description of the methodology and assumptions used to establish the costs of air navigation services provided to VFR flights, when exemptions are granted for VFR flights in accordance with Article 31(3), 31(4) and 31(5);

(c) the criteria used to allocate costs between terminal and *en route* services, in accordance with Article 22(5);

(d) a breakdown of the meteorological costs between direct costs and the costs of supporting meteorological facilities and services that also serve meteorological requirements in general ('MET core costs'). MET core costs include general analysis and forecasting, surface and upper-air observation networks, meteorological communication systems, data processing centres and supporting core research, training and administration;

(e) a description of the methodology used for allocating total meteorological costs and MET core costs referred to in point (d) to civil aviation and between charging zones;

(f) for each entity, description of the composition of each item of the determined costs by nature and by service (points 1 and 2 of Table 1), including a description of the main factors explaining the planned variations over the reference period;

(g) for each entity, a description and justification of the method adopted for the calculation of depreciation costs (point 1.3 of Table 1): historical costs or current costs referred to in the fourth subparagraph of Article 22(4), and, where current cost accounting is used, provision of comparable historical cost data;

(h) for each entity, description and underlying assumptions of each item of complementary information (point 3 of Table 1), including a description of the main factors explaining the variations over the reference period;

(i) for each entity, description of the assumptions used to compute the cost of capital (point 1.4 of Table 1), including the composition of the asset base, the return on equity, the average interest on debts and the shares of financing of the asset base through debt and equity;

(j) description of the determined costs of common projects (point 3.9 of Table 1).

Any changes to points (a) to (j) during the reference period shall be reported together with the information provided in accordance with point 2.2.

2.2. The following additional information shall be provided annually, together with the information to be included in the reporting tables on total costs and unit costs referred to in point 1.1:

(a) for each entity and for each cost item, a description of the reported actual costs and the difference between those costs and the determined costs, for each year of the reference period;

(b) a description of the reported actual service units and a description of any differences between those units and the figures provided by the entity that is billing and collecting charges as well as any differences between those units and the forecast set in the performance plan, for each year of the reference period;

(c) the breakdown of the actual costs of common projects per individual project;

(d) justification of the difference between the determined and the actual costs of new and existing investments of the air navigation service providers, as well as the difference between the planned and the actual date of entry into operation of the fixed assets financed by those investments for each year of the reference period;

(e) description of the investment projects added, cancelled or replaced during the reference period with respect to the major investment projects identified in the performance plan, and approved by the national supervisory authority in accordance with Article 28(4).

ANNEX VIII — REQUIREMENTS FOR THE CALCULATION OF EN ROUTE AND TERMINAL SERVICE UNITS REFERRED TO IN ARTICLE 25

Regulation (EU) 2019/317

1. **Calculation of *en route* service units**

1.1. The *en route* service units shall be calculated as the product of the distance factor and the weight factor for the flight concerned. The total *en route* service units shall consist of the total service units in respect of IFR flights, as well as the service units in respect of VFR flights, where VFR flights are not exempted in accordance with Article 31(3), 31(4) and 31(5).

1.2. The distance factor in respect of a given charging zone shall be obtained by dividing by one hundred the number of kilometres flown in the great circle distance between the aerodrome of departure within, or the entry point into, the charging zone and the aerodrome of arrival within, or the exit point from, the charging zone, according to the actual route flown as recorded by the Network Manager.

The distance to be taken into account shall be reduced by 20 kilometres for each take-off from and for each landing in the charging zone.

1.3. The weight factor, expressed as a figure taken to two decimal places, shall be the square root of the quotient obtained by dividing by fifty the number of metric tons expressed as a figure taken to one decimal in the certificated maximum take-off weight of the aircraft as shown in the Aircraft Flight Manual.

1.4. Where an aircraft has multiple certificated maximum take-off weights, the highest one shall be used.

1.5. Aircraft operators shall declare the composition of their fleet and the certificated maximum take-off weight of each of their aircraft to the body responsible for the collection of the charge whenever there is a modification and at least annually.

Where the weight factor is unknown, the weight factor shall be calculated by taking the weight of the heaviest aircraft of the same type known to exist.

1.6. Where charges are billed on a regional basis, Member States may adopt common modalities of application.

2. **Calculation of terminal service units**

2.1. The terminal service unit shall be equal to the weight factor for the aircraft concerned.

2.2. The weight factor, expressed as a figure taken to two decimal places, shall be the quotient, obtained by dividing by fifty the number of metric tons in the highest maximum certified take-off weight of the aircraft, referred to in points 1.3 to 1.5 of Annex VIII, to the power of 0,7.

ANNEX IX — UNIT RATES

Regulation (EU) 2019/317

1. REPORTING TABLES ON UNIT RATE CALCULATION

   A reporting table on unit rate calculation shall be filled in annually and separately for each relevant entity incurring costs in a charging zone using the template of Table 2. In addition, a consolidated reporting table shall be filled annually using the template of Table 2 aggregating the data from the relevant entities for the charging zone.

2. REPORTING TABLES ON COMPLEMENTARY INFORMATION ON ADJUSTMENTS

   A consolidated reporting table for each charging zone on complementary information on adjustments shall be filled in annually using the template of Table 3.

3. REPORTING TABLES ON COMPLEMENTARY INFORMATION ON COMMON PROJECTS AND ON REVENUES FROM UNION ASSISTANCE PROGRAMMES

   A consolidated reporting table for each charging zone on complementary information on common projects and on revenues from Union assistance programmes shall be filled in annually using the template of Table 4.

Table 2 - Unit rate calculation

Charging zone name	
Currency	
Entity name	

Table 2 A - Adjustments relating to year n	Reference Period N	N+1	N+2	N+3	N+4
A. Cost-sharing					
Determined costs					
1.1 Determined costs in nominal terms - VFR excl. - Table 1 *(Art. 22)*					
Inflation adjustment calculation					
2.1 Determined costs subject to inflation adjustment					
2.2 Forecast inflation index - Table 1					
2.3 Actual inflation index - Table 1					
2.4 Actual / forecast total inflation index (in %)					
2.5 Inflation adjustment relating to year n *(Art. 26)*					
Differences between determined and actual costs referred to in Article 28(4) to 28(6)					
3.1 New and existing investments *(Art. 28(4))*					
3.3 Competent authorities and qualified entities costs *(Art. 28(5))*					
3.4 Eurocontrol costs *(Art. 28(5))*					
3.5 Pension costs *(Art. 28(6))*					
3.6 Interest on loans *(Art. 28(6))*					
3.7 Changes in law *(Art. 28(6))*					
3.8 Differences between determined and actual costs relating to year n *(Art. 28(4) to 28(6))*					
B. Traffic risk sharing					
Traffic risk sharing adjustment					
4.1 Determined costs subject to traffic risk sharing					
4.2 % deviation % referred to in Article 27(2) and 27(5)					
4.3 % additional revenue returned to users referred to in Article 27(3) and 27(5)					
4.4 % loss of revenue borne by airspace users referred to in Article 27(3) and 27(5)					
4.5 % deviation referred to in Article 27(4)					
4.6 Forecast total service units (performance plan)					
4.7 Actual total service units					
4.8 Actual / forecast total service units (in %)					
4.9 Traffic risk sharing adjustment relating to year n *(Art. 27(2) to 27(5))*					
Traffic adjustments					
5.1 For determined costs not subject to traffic risk-sharing *(Art. 27(8))*					
5.2 Adjustments to year n unit rate not subject to traffic risk-sharing *(Art. 27(9))*					
5.3 Traffic adjustements relating to year n *(Art. 27(8) and 27(9))*					
C. Financial incentive schemes on capacity and environment					
Adjustments relating to financial incentives					
6.1 Financial incentives relating to capacity *(Art. 11(3))*					
6.2 Financial incentives relating to environment *(Art. 11(4))*					
6.3 Additional financial incentives relating to capacity *(Art. 11(4))*					
6.4 Financial incentives relating to year n *(Art. 11(3) and 11(4))*					
D. Other adjustments					
Modulation of charges					
7.1 Adjustment to ensure revenue neutrality for modulation of charges in year n *(Art. 32(1))*					
Revision of the unit rate					
8.1 Temporary unit rate applied in year n					
8.2 Difference in revenue due to the temporary application of unit rate in year n *(Art. 29(5))*					
Cross-financing between charging zones					
9.1 Cross-financing to (-) / from (+) other charging zone(s) relating to year n					
Other revenues					
10.1 Union assistance programmes *(Art. 25(3)(a))*					
10.2 National public funding *(Art. 25(3)(a))*					
10.3 Commercial activities *(Art. 25(3)(b))*					
10.4 Revenues from contracts with airport operators *(Art. 25(3)(c))*					
10.5 Total other revenues relating to year n *(Art. 25(3))*					
Application of a lower unit rate					
11.1 Loss of revenue relating to the application of a lower unit rate in n *(Art. 29(6))*					
12 Total adjustments relating to year n					

Table 2 B - Calculation of the unit rate for year n (1)	N	N+1	N+2	N+3	N+4
13.1 Determined costs in nominal terms - VFR excl. *(Art. 25(2)(a))*					
13.2 Inflation adjustment : amount carried over to year n *(Art. 25(2)(b))*					
13.3 Traffic risk sharing adjustment : amounts carried over to year n *(Art. 25(2)(c))*					
13.4 Differences in costs as per Art. 28(4) to (6) : amounts carried over to year n *(Art. 25(2)(d))*					
13.5 Financial incentives : amounts carried over to year n *(Art. 25(2)(e))*					
13.6 Modulation of charges : amounts carried over to year n *(Art. 25(2)(f))*					
13.7 Traffic adjustments : amounts carried over to year n (Art. 25(2)(g) and (h))					
13.8 Other revenues *(Art. 25(2)(i))*					
13.9 Cross-financing between charging zones *(Art. 25(2)(j))*					
13.10 Difference in revenue from temporary application of unit rate *(Art. 25(2)(k))*					
13.11 Grand total for the calculation of year n unit rate					
13.12 Forecast total service units for year n (performance plan)					
13.13 Unit rate for year n as per Art. 25(2) (in national currency)					
13.14 Reduction as per Art. 29(6), where applicable (in national currency)					
14 Applicable unit rate for year n					

Costs, revenues and other amounts in '000 - Service units in '000

(1) Including adjustments relating to previous reference periods (Art. 25(2)(l))

Table 3 - Complementary information on adjustments

Charging zone name

Complementary information on adjustments	Amounts	N	N+1	N+2	N+3	N+4	After RP
Inflation adjustment year n							
Inflation adjustment year n+1							
Inflation adjustment year n+2							
Inflation adjustment year n+3							
Inflation adjustment year n+4							
Total inflation Adjustment (Art. 26)							
Traffic risk sharing year n							
Traffic risk sharing year n+1							
Traffic risk sharing year n+2							
Traffic risk sharing year n+3							
Traffic risk sharing year n+4							
Total traffic risk sharing adjustment (Art. 27(2) to 27(5))							
Difference in investment costs year n							
Difference in investment costs year n+1							
Difference in investment costs year n+2							
Difference in investment costs year n+3							
Difference in investment costs year n+4							
Total adjustment relating to investment costs (Art. 28(4))							
Difference in competent authorities and QEs costs year n							
Difference in competent authorities and QEs costs year n+1							
Difference in competent authorities and QEs costs year n+2							
Difference in competent authorities and QEs costs year n+3							
Difference in competent authorities and QEs costs year n+4							
Total adjustments relating to competent authorities and QEs costs (Art. 28(5))							
Difference in Eurocontrol costs year n							
Difference in Eurocontrol costs year n+1							
Difference in Eurocontrol costs year n+2							
Difference in Eurocontrol costs year n+3							
Difference in Eurocontrol costs year n+4							
Total adjustments relating to Eurocontrol costs (Art. 28(5))							
Difference in pension costs year n							
Difference in pension costs year n+1							
Difference in pension costs year n+2							
Difference in pension costs year n+3							
Difference in pension costs year n+4							
Total adjustment relating to pension costs (Art. 28(6))							
Difference in interest on loans year n							
Difference in interest on loans year n+1							
Difference in interest on loans year n+2							
Difference in interest on loans year n+3							
Difference in interest on loans year n+4							
Total adjustment relating to interest on loans (Art. 28(6))							
Costs relating to change in law year n							
Costs relating to change in law year n+1							
Costs relating to change in law year n+2							
Costs relating to change in law year n+3							
Costs relating to change in law year n+4							
Total adjustment relating to change in law (Art. 28(6))							
Financial incentives year n							
Financial incentives year n+1							
Financial incentives year n+2							
Financial incentives year n+3							
Financial incentives year n+4							
Total financial incentives (Art. 11(3) and 11(4))							
Modulation of charges year n							
Modulation of charges year n+1							
Modulation of charges year n+2							
Modulation of charges year n+3							
Modulation of charges year n+4							
Total adjustment relating to modulation of charges (Art. 32(1))							
Traffic adjustment year n							
Traffic adjustment year n+1							
Traffic adjustment year n+2							
Traffic adjustment year n+3							
Traffic adjustment year n+4							
Total traffic adjustment (Art. 27(8) and 27(9))							

Revenues received from Union assistance programmes in year n							
Revenues received from Union assistance programmes in year n+1							
Revenues received from Union assistance programmes in year n+2							
Revenues received from Union assistance programmes in year n+3							
Revenues received from Union assistance programmes in year n+4							
Total revenues received from Union assistance programmes (Art. 25(3)(a))							
Revenues received from national public funding in year n							
Revenues received from national public funding in year n+1							
Revenues received from national public funding in year n+2							
Revenues received from national public funding in year n+3							
Revenues received from national public funding in year n+4							
Total revenues received from national public funding (Art. 25(3)(a))							
Revenues from commercial activities in year n							
Revenues from commercial activities in year n+1							
Revenues from commercial activities in year n+2							
Revenues from commercial activities in year n+3							
Revenues from commercial activities in year n+4							
Total revenues from commercial activities (Art. 25(3)(b))							
Revenues from contracts with airport operators in year n							
Revenues from contracts with airport operators in year n+1							
Revenues from contracts with airport operators in year n+2							
Revenues from contracts with airport operators in year n+3							
Revenues from contracts with airport operators in year n+4							
Total revenues from contracts with airport operators (Art. 25(3)(c))							
Revenue difference - revision of UR year n							
Revenue difference - revision of UR year n+1							
Revenue difference - revision of UR year n+2							
Revenue difference - revision of UR year n+3							
Revenue difference - revision of UR year n+4							
Total revenue differences from temporary application of UR (Art. 29(5))							

Amounts in '000 (national currency)

Table 4 - Complementary information on common projects and on revenues from Union assistance programmes allocated to the charging zone

Charging zone name	

Amounts received

Project reference (as per Grant Agreement)	Project title	Value of funded project in '000 Euro		Amounts granted (as per GA) in '000 Euro		Common project y/n	Actual amounts received (charging zone) in '000 Euro					
		Total	For the charging zone	Total	For the charging zone		Previous RPs	N	N+1	N+2	N+3	N+4
Total in '000 Euro												
Total in '000 national currency												

Amounts reimbursed to airspace users through other revenues

Project reference (as per Grant Agreement)	Project title	Amounts retained in respect of aministrative costs for the charging zone in '000 Euro	Total to be reimbursed for the charging zone in '000 Euro	Amounts reimbursed to users (charging zone) in '000 national currency					
				Previous RPs	N	N+1	N+2	N+3	N+4	After RP
Total in '000 Euro										
Total in '000 national currency										

4. ADDITIONAL INFORMATION TO THE REPORTING TABLES REFERRED TO IN POINTS 1, 2 AND 3

The following additional information shall be provided together with the information to be included in the reporting tables on unit rate calculation and on complementary information on adjustments, referred to in points 1 and 2:

(a) description and rationale for establishment of the different charging zones, in particular with regard to terminal charging zones and potential cross-subsidies between charging zones;

(b) description of the policy on exemptions and description of the financing means to cover the related costs;

(c) description of adjustments resulting from the traffic risk sharing mechanism in accordance with Article 27;

(d) description of the differences between determined costs and actual costs of year n as a result of the changes in costs referred to in Article 28(3) including description of the changes referred to in that Article;

(e) description of adjustments resulting from unforeseen changes in costs in accordance with Article 28(3) to (6).

(f) description of the other revenues, if any, broken down between the different categories indicated in Article 25(3);

(g) description of the application of the financial incentive schemes referred to in Article 11(3) and 11(4) in year n and the resulting financial advantages and disadvantages; description and explanation of the modulation of air navigation charges applied in year n under Article 32 where applicable, and resulting adjustments.

(h) description of adjustments relating to the temporary application of a unit rate under Article 29(5);

(i) description of the cross-financing between *en route* charging zones, or between terminal charging zones, in accordance with point (e) of Article 15(2) of Regulation (EC) No 550/2004;

(j) information on the application of a lower unit rate under Article 29(6) than the unit rate calculated in accordance with Article 25(2) and the means to finance the difference in revenue;

(k) information and breakdown of the adjustments relating to previous reference periods impacting the unit rate calculation.

The following additional information shall be provided together with the information to be included in the reporting tables on complementary information on common projects and on Union assistance programme referred to in point 3:

(l) information on the costs of common projects and other funded projects broken down per individual project, as well as of public funds obtained from public authorities for these projects.

ANNEX X — CRITERIA FOR THE ASSESSMENT OF WHETHER THE PROVISION OF THE SERVICES REFERRED TO IN ARTICLE 35(1) IS SUBJECT TO MARKET CONDITIONS

Regulation (EU) 2019/317

1. The extent to which service providers can freely choose to enter or withdraw from the provision of those services:

   (a) the existence of any significant legal, economic or other barrier that would prevent a service provider from offering to provide, or continue to provide those services;

   (b) the scope, duration and value of service contracts;

   (c) the existence of procedures allowing tangible and intangible assets, intellectual property and staff to be transferred or otherwise be made available from the incumbent to another party.

2. The extent to which there is a free choice in respect to service provider, including, in the case of airports, the option to self-supply terminal air navigation services:

   (a) the existence of legal, contractual or practical barriers to change service provider, or in the case of terminal air navigation services, to move towards self-supply of air navigation services by airports;

   (b) the existence of a consultation process to take airspace user views into account when altering service provision arrangements.

3. The extent to which a market structure and competition either exists or a credible prospect of competition exists:

   (a) the existence of a public tendering process (not applicable in case of self-supply);

   (b) evidence of credible alternative service providers able to participate in a tendering process and having provided services in the past, including the option of self-supply for the airport.

4. For terminal air navigation services, the extent to which airports are subject to commercial cost pressures or incentive-based regulation:

   (a) whether airports actively compete for airline business;

   (b) the extent to which airports bear the air navigation service charge;

   (c) whether airports operate in a competitive environment or under economic incentives designed to cap prices or otherwise incentivise cost reductions.

5. The extent to which a provider of terminal air navigation services or CNS, MET and AIS services or ATM data services that also provides *en route* air navigation services has separate accounting and reporting.

6. For terminal air navigation services, the assessment in this Annex shall be carried out at each individual airport, or in groups of airports.

ANNEX XI — REPORTING TABLES TO SUPPORT THE COST BASE AND UNIT RATES TO BE PROVIDED TO THE COMMISSION IN ACCORDANCE WITH ARTICLE 35(6)

Regulation (EU) 2019/317

1. THE COSTS OF AIR NAVIGATION SERVICES

1.1. **Reporting tables**

The following instructions shall be followed for the purpose of reporting data in Tables A and B;

(a) the tables shall be filled in for each charging zone. Costs and prices shall be established in national currency;

(b) for Table A, the figures shall be actual figures for year (n-5) until year (n-1) and planned figures for year (n) onwards;

(c) for Table B, the annual price shall reflect the value of the contract. The unit of output considered to determine the value of the contract shall be described and reported in the table by the Member State concerned. As regards terminal air navigation services, Table B shall be filled in separately for each airport where air navigation services are provided under market conditions in the terminal charging zone.

Table A

Table A - Total Costs

Charging zone name **Currency** **Organisation**	**Year n**

	(n-5) A	(n-4) A	(n-3) A	(n-2) A	(n-1) A	(n) F	(n+1) F	(n+2) P	(n+3) P	(n+4) P
Detail by nature (in nominal terms)										
Staff										
Other operating costs										
Depreciation										
Cost of capital										
Exceptional items										
Total costs										

Table B

Table B - Annual Price and Unit Price

Charging zone name **Currency** **Organisation**								**Year n**		
	(n-5)	**(n-4)**	**(n-3)**	**(n-2)**	**(n-1)**	**(n)**	**(n+1)**	**(n+2)**	**(n+3)**	**(n+4)**
Annual Price (a)										
Unit of Output (b)										
Unit Price										

(a) Annual Price in '000 national currency
(b) Unit of Output in <to be specified>

1.2. Additional information

The following additional information shall be provided together with the information to be included in Tables A and B:

(a) description of the unit of output used in Table B;

(b) description of the criteria used for allocating costs of facilities or services between different air navigation services based on the list of facilities and services listed in ICAO Regional Air Navigation Plan, European Region (Doc 7754);

(c) description and explanation of differences between planned and actual figures for years (n-5) to (n-1) in respect to all data provided in Tables A and B;

(d) description and explanation of five year planned costs and investments in relation to expected traffic;

(e) description and explanation of the method adopted for calculating depreciation costs: historic costs or current costs;

(f) justification for the cost of capital, including the components of the asset base;

(g) description of the sources of financing of the air navigation services concerned in respect of each charging zone where services are subject to market conditions.

ANNEX XII — ESSENTIAL ELEMENTS FOR THE CONSULTATIONS REFERRED TO IN ARTICLE 24(3) AND ARTICLE 30(1)

Regulation (EU) 2019/317

1. The consultation referred to in Article 24(3) shall concern in particular the following essential elements related to the transparency of costs:

   (a) actual costs incurred during the previous year and the difference between the actual costs and the determined costs contained in the performance plan;

   (b) evolution of costs referred to in Article 28(3).

2. The consultation referred to in Article 30(1) shall concern in particular the following essential elements related to the transparency of unit rates:

   (a) charging policy, including, inter alia, timing of adjustments to the unit rates and cross financing between terminal charging zones;

   (b) evolution of traffic compared to the traffic forecast set out in the performance plan;

   (c) the application of the traffic risk sharing mechanism referred to in Article 27 and of the incentive scheme or schemes implemented on the basis of Article 11;

   (d) if applicable, intended modifications of terminal charging zones in accordance with point (a) of Article 21(5);

   (e) if applicable, services foreseen to be subject to market conditions in accordance with point (b) of Article 35(3).

ANNEX XIII — SPECIFIC REQUIREMENTS ON INCENTIVE SCHEMES REFERRED TO IN ARTICLE 11(3)

Regulation (EU) 2019/317

1. MODULATION OF PIVOT VALUES

1.1. **For *en route* air navigation services**

Where a national supervisory authority decides to apply a modulation mechanism of *en route* pivot values in accordance with points (c)(ii), (g)(iii) and (v) of Article 11(3), this modulation mechanism may follow one or both of the points below:

(a) enable significant and unforeseen changes in traffic to be taken into account, in which case the pivot value for year n shall be informed by the reference value at the level of each air navigation service provider from the November release of year n-1 of the Network Operations Plan;

(b) limit the scope of incentives to cover only delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual.

1.2. **For terminal air navigation services**

Where a national supervisory authority decides to apply a modulation mechanism of terminal pivot values in accordance with points (c)(ii), (g)(iii) and (v) of Article 11(3), this modulation mechanism may follow one or both of the points below:

(a) enable significant and unforeseen changes in traffic to be taken into account, in which case the pivot value for year n shall be modulated on the basis of objective and transparent principles defined in the performance plan.

(b) limit the scope of incentives to cover only delay causes related to ATC capacity, ATC routing, ATC staffing, ATC equipment, airspace management and special events with the codes C, R, S, T, M and P of the ATFCM user manual.

2. CALCULATION OF FINANCIAL ADVANTAGES AND DISADVANTAGES

2.1. **For *en route* air navigation services**

(a) The financial advantage referred to in point (e) of Article 11(3) shall be calculated as a percentage of the determined costs of year n and recovered from airspace users through an increase of the unit rate in year n+2 where the deviation of the average ATFM delay per flight in year n below the pivot value is greater in absolute value than the lower bound of the symmetric range referred to in point (d) of Article 11(3).

The percentage of the determined costs shall, from the lower bound of the symmetric range up to the alert threshold referred to in point (b)(iii) of Article 9(4), follow a smooth sliding scale with the maximum fixed percentage to be applied where the deviation of the average ATFM delay per flight in year n below the pivot value is in absolute value equal to or greater than the value of the alert threshold.

(b) The financial disadvantage referred to in point (f) of Article 11(3) shall be calculated as a percentage of the determined costs of year n and reimbursed to airspace users through a reduction of the unit rate in year n+2 where the deviation of the average ATFM delay per flight in year n above the pivot value is greater in absolute value

than the upper bound of the symmetric range referred to in point (d) of Article 11(3).

The percentage of the determined costs shall, from the upper bound of the symmetric range up to the alert threshold referred to in point (b)(iii) of Article 9(4), follow a smooth sliding scale with the maximum fixed percentage to be applied where the deviation of the average ATFM delay per flight in year n above the pivot value is in absolute value equal to or greater than the value of the alert threshold.

2.2. **For terminal air navigation services**

(a) The financial advantage referred to in point (e) of Article 11(3) shall be calculated as a percentage of the determined costs of year n and recovered from airspace users through an increase of the unit rate in year n+2 where the actual arrival ATFM delay per flight in year n is smaller than the lower bound of the symmetric range referred to in point (d) of Article 11(3).

The percentage of the determined costs shall, from the lower bound of the symmetric range down to 50 % of the pivot value, follow a smooth sliding scale with the maximum fixed percentage to be applied where the actual arrival ATFM delay per flight in year n is equal to or lower than 50 % of the pivot value.

(b) The financial disadvantage referred to in point (e) of Article 11(3) shall be calculated as a percentage of the determined costs of year n and reimbursed to airspace users through a reduction of the unit rate in year n+2 where the actual arrival ATFM delay per flight in year n is greater than the upper bound of the symmetric range referred to in point (d) of Article 11(3).

The percentage of the determined costs shall, from the upper bound of the symmetric range up to 150 % of the pivot value, follow a smooth sliding scale with the maximum fixed percentage to be applied where the actual arrival ATFM delay per flight in year n is equal to or greater than 150 % of the pivot value.

EASA RP3 SAFETY – SUPPORTING MATERIAL

Measurement of the safety key performance indicator and safety performance indicators in the

SES Performance and Charging Scheme

Supporting Material for the implementation and measurement of the safety key performance indicator (SKPI) and safety performance indicators (SPIs) for the Third Reference Period (RP3) of the SES Performance and Charging Scheme (Commission Implementing Regulation (EU) 2019/317)

SUPPORTING MATERIAL – RP3 SAFETY (K)PI PART (A)

1. ABOUT THIS SUPPORTING MATERIAL

The purpose of this document is to provide technical material to support compliance with Commission Implementing Regulation (EU) 2019/317[1] (the 'performance scheme Regulation') as applicable to RP3 of the SES Performance and Charging Scheme (2020–2024).

The European Commission tasked EASA per Article 75(2)(h) of the EASA Basic Regulation (Regulation (EU) 2018/1139)[2]:

'2. For the purposes of ensuring the proper functioning and development of civil aviation in the Union in accordance with the objectives set out in Article 1, the Agency shall:

(h) contribute, for matters covered by this Regulation, upon request by the Commission, to the establishment, measurement, reporting and analysis of performance indicators, where Union law establishes performance schemes relating to civil aviation;'

and

as per Article 93 'Implementation of Single European Sky'

'The Agency shall, where it has the relevant expertise and upon request, provide technical assistance to the Commission, in the implementation of the Single European Sky, in particular by:

(b) contributing, in matters covered by this Regulation, in cooperation with the Performance Review Body provided for in Article 11 of Regulation (EC) No 549/2004, to the implementation of a performance scheme for air navigation services and network functions;'

[1] Commission Implementing Regulation (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European sky and repealing Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013 (OJ L 56, 25.2.2019, p. 1) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566568320291&uri=CELEX:32019R0317).

[2] Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139).

The European Union Aviation Safety Agency (EASA) developed this material in line with the Basic Regulation and the Rulemaking Procedure[1]. This rulemaking activity is included in the latest European Plan for Aviation Safety (EPAS)[2] under rulemaking task (RMT).0723. The text of this material has been developed by EASA based on the input of the RMT.0723 Rulemaking Group (RMG) and adjusted with consideration given to comments received during the public consultation under EASA NPA 2019 -10.

The comments received on the NPA and the EASA responses to them have been reflected in a CRD.

Subsequent to this tasking, upon advice given to DG MOVE by the European Commission's Legal Service, the Commission advised EASA not to issue an ED Decision. This finalised supporting technical material has been made available by the Commission Services. It is accessible through the Single European Sky (eusinglesky) portal.

2. IN SUMMARY — WHAT AND HOW

2.1. WHAT WE WANT TO ACHIEVE — OBJECTIVES

— To maintain, update and develop, as necessary, the technical material for the implementation and measurement of the SKPI that will be applicable to the Safety Key Performance Area in RP3.

— To maintain, update and develop, as necessary, the technical material for the implementation and measurement of the SPIs that will be applicable to the RP3 Safety Key Performance Area.

2.2. HOW WE WANT TO ACHIEVE IT — AN OVERVIEW

In 2016, at the request of the European Commission, EASA, supported by a working group of experts drawn from Member States' national aviation authorites (NAAs) and industry, developed the RP3 SKPI WG Report, 'Indicator Proposals for RP3' for application in the Safety Key Performance Area (hereinafter referred to as the 'Report'). The contents of this Report, together with inputs from other stakeholders, have been used by the European Commission in drafting the legislative proposal for RP3.

The supporting material follow the conclusions of the Report, as far as they covered the S(K)PIs as required by the performance scheme Regulation.

As a result, the Effectiveness of Safety Management SKPI, applied at ANSP level only, has been developed based on the CANSO Standard of Excellence (hereinafter referred to as 'the SoE') measurement tool. Although it has been adapted to meet the needs of the performance and charging scheme Regulation, modifications have been minimised, in order to deviate as little as possible from the CANSO SoE questionnaire. Nonetheless, some differences have been introduced. The main deviations with respect to the CANSO SoE are as follows:

[1] EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 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).

[2] https://www.easa.europa.eu/document-library/general-publications?publication_type%5B%5D=2467

— Study areas 6, 8, 9, and 10 of the SoE have been removed, as there are no corresponding requirements in the SMS components required by Commission Implementing Regulation (EU) 2017/3731;

— Maturity level E (Optimised) is not used, because this level is intended to set international best practices. Achieving level E in every ANSP or across every study area is unrealistic, and therefore is not targeted;

— Study area 18 has been added as an optional component to capture how the ANSP deals with safety interdependencies, and trade-offs, serving as a proxy of the system resilience of the organisation;

— Study area 1, safety culture, has been completely redrafted to be fit for purpose.

In addition, the Report proposed the reduction of the number of SPIs. These proposed SPIs are separation minima infringements and runway incursions, and they shall be defined as rates normalised by the appropriate exposure data. They shall be defined in such way that their measurement will rely on the data that is collected under Regulation (EU) No 376/20142, which is stored in the European Central Repository. The technical material should define the processes to collect the information that is required to populate the SPIs.

The SPIs, to be measured at Member State, aerodrome or ANSP level, are defined in the performance scheme Regulation. The technical material sets out the definitions of the data to be reported and the collection methods. The indicators have been designed to use the European Central Repository, established under Regulation (EU) No 376/2014, as the source of occurrence data. Data from the Network Manager and the ANSPs are proposed as the source of exposure data.

2.3. WHAT ARE THE EXPECTED BENEFITS AND DRAWBACKS OF THIS SUPPORTING MATERIAL

SKPI — Effectiveness of safety management

It is expected that by aligning with the CANSO SoE, the efficiency of the performance scheme will be greatly improved. In addition, the CANSO SoE has been updated and improved during RP2, thus the proposed means of measuring the effectiveness of safety management reflects more recent experience and modern safety management approaches.

There is not complete alignment with the CANSO SoE, therefore some small additional work will be required for ANSPs in responding to questions on safety culture.

SPIs — The rate of runway incursions and separation minima infringements with a safety impact

In defining the European Central Repository as the data source, the reporting and calculation of these performance indicators involves minimal additional effort on the part of the ANSPs and national supervisory authorities (NSAs). All the occurrence reports required for the performance scheme Regulation are already reportable under Regulation (EU) No 376/2014. Some additional data fields are

[1] 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) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566571320779&uri=CELEX:32017R0373).

[2] 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) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566573102633&uri=CELEX:32014R0376).

needed to efficiently identify the occurrences applicable to the scheme; however, these have been minimised.

In defining safety impact as those occurrences with a high severity RAT-Ground score (ANSP level) or a medium/high risk ERCS score (Member State level), the safety impact will be assessed using a methodology that is already or shortly to be in use by EASA stakeholders. ANSPs have been using the severity classification of the RAT methodology throughout RP2 and Member States will soon be required to risk-classify occurrences using the European Risk Classification Scheme (ERCS) as per Regulation (EU) No 376/2014.

3. AMENDMENTS AND RATIONALE IN DETAIL

The S(K)PIs are described in full in the Annex (please refer to **RP3 Safety - Supporting Material Part (B)**).

4. IMPACT ASSESSMENT(IA)

No impact assessment has been conducted. This is because the S(K)PIs are outlined in the performance scheme Regulation, which has been assessed and consulted on by the European Commission.

5. PROPOSED ACTIONS TO SUPPORT IMPLEMENTATION

Implementation support to ANSPs and Member States is proposed to be managed via the normal activities of the SES Performance and Charging Scheme.

Additional support on coding and analysis will be provided to Member States via the Network of Analysts.

6. REFERENCES

6.1. RELATED REGULATIONS

— Commission Implementing Regulation (EU) No 390/2013 of 3 May 2013 laying down a performance scheme for air navigation services and network functions (OJ L 128, 9.5.2013, p. 1)

— Commission Implementing Regulation (EU) 2019/317 laying down a performance scheme for air navigation services and network functions (OJ L 56, 25.2.2019, p. 1)

— Regulation (EU) No 376/2014 of the European Parliament and of the Council on the reporting, analysis and follow-up of occurrences in civil aviation (OJ L 122, 24.4.2014, p. 18)

6.2. RELATED DECISIONS

— ED Decision 2014/035/R of 16 December 2014 adopting Acceptable Means of Compliance and Guidance Material for point 1 of Section 2 of Annex I to Regulation (EU) No 390/2013 and repealing Decision 2011/017/R of the Executive Director of the Agency of 16 December 2011 — 'AMC and GM for the implementation and measurement of safety (Key) Performance Indicators (S(K)PIs) — Issue 2'

— ED Decision 2015/028/R of 17 December 2015 amending acceptable means of compliance and guidance material for point 1 of section 2 of Annex I to Regulation (EU) No 390/2013 — 'AMC/GM to SKPI — Issue 2, Amendment 1'

6.3. OTHER REFERENCE DOCUMENTS

— Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.08.2018, 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) (OJ L 096, 31.3.2004, p. 1)

— CANSO Standard of Excellence in Safety Management Systems v2.1, Civil Air Navigation Services Organisation, 2015

— EASA RP3 SKPI WG Report 'Indicator Proposals for RP3', European Aviation Safety Agency, 2016

7. QUALITY OF THE DOCUMENT

If you are not satisfied with the quality of this document, please indicate the areas which you believe could be improved and provide a short justification/explanation:

— technical **quality** of the draft proposed rules and/or regulations and/or the draft proposed amendments to them

— text clarity and readability

— quality of the impact assessment (IA)

— others (please specify)

Note: Your replies and/or comments to this section shall be considered for internal quality assurance and management purposes only and will not be published in the related puabished material.

SUPPORTING MATERIAL – RP3 SAFETY (K)PI PART (B)

GM1 SKPI — General

Regulation (EU) 2019/317

A. Purpose

This Annex contains the supporting material for measuring the safety key performance indicator (SKPI) and safety performance indicators (SPIs) in accordance with Commission Implementing Regulation (EU) 2019/317[1] (the performance and charging scheme Regulation) for the Third Reference Period (RP3).

B. Objective

The objective of this Annex is to establish the method for the measurement and verification of the SKPI and SPIs under the performance scheme Regulation:

(a) Effectiveness of safety management (EoSM) by ANSPs, which should be measured through a periodic answering of the questionnaires whose content is provided in the Appendix to AMC2 SKPI, GM3 SKPI and GM4 SKPI. The questionnaires, as completed by the ANSP subject to evaluation, and distributed in accordance with the performance and charging scheme Regulation, should be verified as detailed in AMC2 SKPI and GM4 SKPI;

(b) Monitoring of separation minima infringement and runway incursion occurrence rates, which should be measured as detailed in AMC3 SPI and GM5 SPI;

(c) Monitoring of the use of automatic safety data recording systems for monitoring and recording of separation minima infringements and runway incursions by the ANSPs, which should be measured as detailed in AMC4 SPI and GM6 SPI; and

(d) Monitoring of the air traffic flow management (ATFM) over-deliveries, which should be measured as detailed in AMC5 SPI and GM7 SPI.

C. Definitions and acronyms

Definitions

1. ‘Best (good) practice’ is a method, initiative, process, approach, technique or activity that is believed to be more effective at delivering a particular outcome than other means. It implies accumulating and applying knowledge about what is working and what is not working, including lessons learned and the continuing process of learning, feedback, reflection and analysis.

2. ‘Risk’ refers to safety risk and means the combination of the overall probability or frequency of occurrence of a harmful effect induced by a hazard and the severity of that effect.

3. ‘Safety culture’ means the shared beliefs, assumptions and values of an organisation and is part of the organisational culture.

[1] Commission Implementing Regulation (EU) 2019/317 of 11 February 2019 laying down a performance and charging scheme in the single European sky and repealing Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013 (OJ L 56, 25.2.2019, p. 1) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566812543741&uri=CELEX:32019R0317).

Acronyms	
ACC	area control centre
AMC	acceptable means of compliance
ANS	air navigation service
ANSP	air navigation service provider
APP	approach control unit
ATC	air traffic control
ATCO	air traffic control officer
ATFM	air traffic flow management
ATM	air traffic management
ATS	air traffic services
ECCAIRS	European Coordination Centre for Accident and Incident Reporting Systems
ECR	European Central Repository
EoSM	effectiveness of safety management
ERCS	European Risk Classification Scheme
FAB	functional airspace block
IFR	instrument flight rules
GM	guidance material
KPI	key performance indicator
MO	management objective
MS	Member State
MTCD	medium-term conflict detection
NSA	national supervisory authority
NSA Coordination Platform	NCP
Operational Risk Baseline	It relates to the top safety objective of an organisation “to ensure that its contribution to the risk of aircraft accidents is minimised as far as is reasonably practicable” (from IR (EU) 2017/373 ATS.OR.200 (2) (iii)).
PRB	Performance Review Body
RAT	risk analysis tool
RI	runway incursion
Risk control framework	The combination of all reactive, proactive and predictive measures and actions within the ANSP to collectively and continuously manage identified risks/hazards. (from IR (EU) 2017/373 ATS.OR.200 (2))
RP	reference period
RMZ	radio mandatory zone
SA	study area
Safe Production	Decision making that occurs in any part of the organisation that considers the effects that the decision may have on safety, including the resulting reallocation of resources to or from safety.
SKPI	safety key performance indicator
SLA	service level agreement

SMI	separation minima infringement
SMS	safety management system
SPI	safety performance indicator
TMA	terminal manoeuvring area
TMZ	transponder mandatory zone
TWR	tower control unit
UAC	upper area control centre
VFR	visual flight rules

AMC1 SKPI Measurement of the effectiveness of safety management (EoSM) at ANSP level — General

Regulation (EU) 2019/317

GENERAL DESCRIPTION

The EoSM indicator should be measured by verified responses to questionnaires as contained in this Annex. For each question, the response should indicate the level of implementation, characterising the level of performance of the reporting organisation.

EFFECTIVENESS LEVELS AND EFFECTIVENESS SCORE

When answering the questions, one of the following levels of implementation, A to D, should be selected:

— Level A is ‘Informal arrangements’

— Level B is ‘Defined’

— Level C is ‘Managed’

— Level D is ‘Assured’

The specific requirements to achieve each level, A to D, is indicated for every question, as contained in this Annex. An effectiveness level should be selected only if all the elements described in the questionnaire as described in the Appendix to AMC2 SKPI, GM3 SKPI and GM4 SKPI are fully observed by an ANSP. If an ANSP has identified elements in various adjacent effectiveness levels, then it should take a conservative approach and select the lower effectiveness level for which all elements are covered.

Based on the responses, an overall effectiveness score should be derived from the effectiveness levels selected by the ANSP against each question as described in AMC2, Section B.

GM2 SKPI Measurement of the effectiveness of safety management (EoSM) at ANSP level — General

Regulation (EU) 2019/317

A study area (SA) has been derived and adapted for each of the elements of the safety management system (SMS) as described in ICAO Annex 19, and has been aligned as far as reasonably practicable with Commission Implementing Regulation (EU) 2017/373[1].

For each SA, a question (or a set of questions) has been derived and the levels of effectiveness have been described. The available levels of effectiveness, and their intended meaning, are as follows:

1. *Level A — Informal arrangements:* SMS processes and/or requirements have not been agreed at the organisation level; they are either not routinely undertaken or depend on the individual assigned to the task.
2. *Level B — Defined:* SMS processes and/or requirements are defined but not yet fully implemented, documented or consistently applied.
3. *Level C — Managed:* SMS processes and/or requirements are fully documented and consistently applied.
4. *Level D — Assured:* Evidence is available to provide confidence that SMS processes and/or requirements are being applied appropriately and are delivering positive, measurable results.

The questionnaire has been elaborated using the CANSO Standard of Excellence (SoE) as the basis and adapting it to the needs of the performance and charging scheme Regulation. Modifications have been minimised, in order to deviate as little as possible from the CANSO SoE questionnaire. Nonetheless, some differences have been introduced. The main deviations with respect to the CANSO SoE are as follows:

1. Study areas 6, 8, 9, and 10 of the SoE have been removed, as there are no corresponding requirements in the SMS components required by Commission Implementing Regulation (EU) 2017/373;
2. Maturity level E (Optimised) is not used, because this level is intended to set international best practices. Achieving level E in every ANSP or across every study area is unrealistic, and therefore is not targeted;
3. Study area 18 has been added as an optional component to capture how the ANSP deals with safety interdependencies, and trade-offs, serving as a proxy of the system resilience of the organisation;
4. Study area 1, safety culture, has been completely redrafted to be fit for purpose.

EASA and the Performance Review Body (PRB) will monitor the performance of ANSPs regarding this indicator based on the received answers and on the results of the verification process by national supervisory authorities (NSAs) as presented in Figure 1 in AMC2 SKPI, Section C.

The questionnaire's sole intent is to monitor the performance (effectiveness) of ANSPs regarding ATM/ANS safety management.

[1] 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) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566813407294&uri=CELEX:32017R0373)

In order to facilitate this process for stakeholders, the questionnaire will be made available via an online tool, which will allow respondents to complete and submit their responses to the questionnaires.

ANSPs are expected to provide evidence-based answers to these questionnaires, and a dedicated 'Justification and evidence' field together with a verification field have been provided to facilitate the validation of the claimed level by the NSA. In line with the responsibilities inherent in the system, the NSA of each Member State is responsible for verifying the ANSP responses and for submitting those responses per the requirements given in Commission Implementing Regulation (EU) 2019/137.

The response levels assessed in the completed EoSM questionnaires should be used with the sole purpose of generating recommendations and associated plans for the improvement of safety management. These response levels should not be used to generate findings in the context of standardisation or oversight inspections.

In accordance with the standardisation principles at Member States, if during an oversight inspection a finding is raised by the NSA in relation to the ANSP responses to the EoSM questionnaire, corrective action by the ANSP is required. Further, where a finding identifies that any of the questions in the EoSM questionnaire is scored higher than it should be, the score should be corrected and lowered to the appropriate level of implementation.

The outcome of oversight is not designed to be used for corrections of the scores towards a higher level of implementation.

AMC2 SKPI Measurement of the effectiveness of safety management (EoSM) at ANSP level

Regulation (EU) 2019/317

The answers to the questionnaire should be used to measure the level of effectiveness in achieving the management objectives defined in this AMC.

For each question, ANSPs should provide their NSA/competent authority with information on the level of effectiveness (or level of implementation) and evidence to justify their answer as indicated below.

The questionnaire, which should be filled in by the ANSPs, is detailed in the Appendix to AMC3 SKPI, GM3 SKPI and GM4 SKPI.

A. Components, study areas (SAs)

According to Commission Implementing Regulation (EU) 2019/317, the indicator is stated as follows: 'The minimum level of the effectiveness of safety management to be achieved by air navigation service providers certified to provide air traffic services. This KPI shall be measured by the level of implementation of the following safety management objectives:'

For the sake of coherence in describing the EoSM in this document and the components of the ICAO Safety Management Framework, these safety management objectives are hereinafter referred to in this AMC as 'components', and they are as follows:

(a) safety policy and objectives;

(b) safety risk management;

(c) safety assurance;

(d) safety promotion;

(e) safety culture.

Each component addresses a set of SAs as follows:

1. Component 1: Safety culture
   - SA:
     - Development of a positive and proactive organisational culture
2. Component 2: Safety policy and objectives
   - SAs:
     - Safety policy
     - Safety accountabilities
     - Coordination of emergency response plan
     - Safety management system documentation
3. Component 3: Safety risk management
   - SA:
     - Risk management process
4. Component 4: Safety assurance
   - SAs:
     - Safety reporting
     - Safety surveys and audits
     - Safety performance monitoring
     - Management of change
     - Continual improvement of the SMS
5. Component 5: Safety promotion
   - SAs:
     - Training and education
     - Safety communication

The SAs are further broken down into questions for which the ANSP respondents are expected to choose a level from the predetermined list of maturity levels that best describes the performance of the organisation with respect to the aim of that question. Organisations are reminded that in order to qualify for the chosen maturity level, all requirements as listed in the question must be met. The maturity level of an SA should be assigned considering the minimum maturity level achieved among the questions in that SA. Similarly, the maturity level of a component should be assigned considering the minimum maturity level achieved among the SAs in that component.

B. Scoring

In order to be able to measure quantitatively the overall effectiveness of safety management of the ANSP, the answers to the questions should be quantified.

The responses provided by the ANSP on their questionnaires are assigned a numerical value from 1 to 4, corresponding to levels A to D. Level E is not assessed and has no value assigned. Each question has the same weight over the final overall score. The numerical value of each question should be added from the questionnaire responses and the final overall EoSM score is calculated as a percentage of the maximum score value possible.

	Maturity level				
Questions	**A**	**B**	**C**	**D**	**E**
SA1-Q1	1	2	3	4	n/a
SA1-Q2	1	2	3	4	n/a
SA1-Q3	1	2	3	4	n/a
SA2-Q1	1	2	3	4	n/a
SA2-Q2	1	2	3	4	n/a
SA3-Q1	1	2	3	4	n/a
SA3-Q2	1	2	3	4	n/a
SA3-Q3	1	2	3	4	n/a
SA4-Q1	1	2	3	4	n/a
SA5-Q1	1	2	3	4	n/a
SA5-Q2	1	2	3	4	n/a
SA5-Q3	1	2	3	4	n/a
SA7-Q1	1	2	3	4	n/a
SA7-Q2	1	2	3	4	n/a
SA7-Q3	1	2	3	4	n/a
SA11-Q1	1	2	3	4	n/a
SA12-Q1	1	2	3	4	n/a
SA13-Q1	1	2	3	4	n/a
SA13-Q2	1	2	3	4	n/a
SA14-Q1	1	2	3	4	n/a
SA15-Q1	1	2	3	4	n/a
SA15-Q2	1	2	3	4	n/a
SA16-Q1	1	2	3	4	n/a
SA16-Q2	1	2	3	4	n/a
SA17-Q1	1	2	3	4	n/a
SA17-Q2	1	2	3	4	n/a
SA17-Q3	1	2	3	4	n/a
SA17-Q4	1	2	3	4	n/a

Mathematically, the effectiveness score for an ANSP 'j' is calculated as follows:

$$S_j = \frac{100 * \sum_{k=1}^{q} r_k}{4 * 28}$$

Where:

S_j is the effectiveness score of the ANSP

r_{kj} is the numeric value of the response of an ANSP to question k

q is the number of questions for which responses were provided by the ANSP

Q is the total number of questions in the EoSM questionnaire, i.e. 28

C. Mechanism for verification

The verification of the ANSP questionnaires by the NSA/competent authority should take place before the questionnaires and their results are submitted to EASA. The verification mechanism is presented in Figure 1.

ANSPs should assign a focal point for the purpose of the verification process.

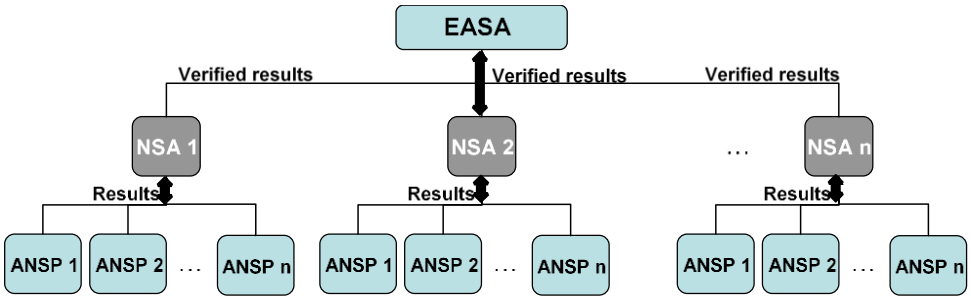


Figure 1: Representation of the verification mechanism

The competent authority/NSA may allocate the detailed verification task to a qualified entity.

GM3 SKPI Measurement of the effectiveness of safety management (EoSM) at ANSP level — Interdependencies

Regulation (EU) 2019/317

The questionnaire has been supplemented with a new component that captures how the ANSP manages interdependencies and trade-offs between safety and other business objectives. The main question to address is how the organisation assigns and distributes resources to ensure safe provision of ATS. This component is not targeted.

— Component 6: Interdependencies, resilient system performance, buffers and trade-offs

1. SA Managing the interdependencies of complex operational environments and competitive business models

GM4 SKPI Measurement of the effectiveness of safety management (EoSM) KPI — ANSP level — Verification mechanism

Regulation (EU) 2019/317

A. VERIFICATION OF THE ANSP EoSM BY THE NSA/COMPETENT AUTHORITY

When verifying the EoSM questionnaires completed by an ANSP, the competent authority/NSA may organise bilateral interview sessions. In these interview sessions, the NSA coordinator may ask the ANSP focal point some additional questions and request some additional evidence in order to verify the correctness of the answers provided for the questionnaire.

It is the responsibility of the ANSP to complete the ANSP-level effectiveness-of-safety-management (EoSM) questionnaire and for the NSAs to verify the evidence submitted. When answering the questions, one out of four (from A to D) levels of implementation is to be selected. The ANSPs will select the implementation level that best describes their organisation, and provide evidence and a justification in support of the level selected.

In order to ensure consistent interpretation of the questions, Table A presents a set of generic principles that are applicable to each maturity level, throughout the questionnaire.

Table A: Generic principles for each implementation level

Level A — Informal arrangements	Level B — Defined	Level C — Managed	Level D — Assured
SMS processes and/or requirements have not been agreed at the organisation level; they are either not routinely undertaken or depend on the individual assigned to the task.	SMS processes and/or requirements are defined but not yet fully implemented, documented or consistently applied.	SMS processes and/or requirements are fully documented and consistently applied.	Evidence is available to provide confidence that SMS processes and/or requirements are being applied appropriately and are delivering positive, measurable results.

In addition, examples of expected outcomes for each question that align with each implementation level, together with additional explanations, are provided at the end of each SA group, where necessary, in the Appendix to AMC3 SKPI, GM3 SKPI and GM4 SKPI.

Respondents are reminded that the answers should be conservative and ALL required elements have to be in place for a certain level. This includes the generic elements from Table A, as well as the particular elements suggested by the questionnaire in the Appendix to AMC3 SKPI, GM3 SKPI and GM4 SKPI. Even if a certain level has only one or two elements still missing, then the lower level with all elements in place have to be selected.

B. COORDINATION BETWEEN THE COMPETENT AUTHORITIES/ NSAs FOR THE VERIFICATION OF THE ANSPs

The competent authorities/NSAs might need better coordination between them in the verification process in order to achieve consistent and comparable results at European level. One potential solution could be the extension of the terms of reference for the NSA Coordination Platform (NCP) in the field of harmonisation of the verification mechanism of the SKPI at ANSP level.

Notwithstanding the above and notwithstanding the fact that NSAs may delegate the verification task to a qualified entity, the responsibility for verification of the SKPI measurement at ANSP level lies with the competent authority/NSA.

AMC3 Safety performance indicators (SPIs) for the monitoring of separation minima infringements (SMIs) and runway incursions (RIs)

Regulation (EU) 2019/317

A. SAFETY IMPACT

For the determination of the occurrences with 'safety impact' that are used for monitoring runway incursions (RIs) and separation minima infringements (SMIs), only a subset of the occurrences that may represent a risk to aviation safety should be selected.

The indicators set out in point 1.2(a) and 1.2(b) of Section 2 of Annex I should include occurrences whose safety risk grade is red or amber in the European Risk Classification Scheme (ERCS) matrix. These are the indicators at Member State level.

The indicators set out in point 1.2(c) and 1.2(d) of Section 2 of Annex I should include occurrences whose risk analysis tool (RAT) ground severity classification is A, B, or C. These are the indicators at airport or ANSP level.

B. EXPOSURE DATA

For the calculation of indicators, the Network Manager should provide to the European Commission controlled flight hours within the Member States' boundaries and controlled flight hours by the ATS units.

The ANSPs should provide to the European Commission IFR and VFR movements at airports.

C. DATA REPORTING AND DATA SOURCE

For the calculation of the indicators related to SMIs and RIs within the scope of Commission Implementing Regulation (EU) 2019/317, Member States should provide the occurrence data making use of the existing safety occurrence data reporting mechanism under Regulation (EU) No 376/2014[1] and submitted to the European Central Repository (ECR).

ANSPs and NSAs should ensure that the information provided through occurrence reporting under Regulation (EU) No 376/2014 contains the information needed to compute the performance indicators for monitoring SMIs and RIs. In particular, they should ensure that the following information is coded and reported:

1. For monitoring SMIs:

   — unambiguously identify the safety occurrences that are SMIs;

   — when the SMI occurred at the arrival or departure at an airport, the location indicator of the airport where it took place;

[1] 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) (https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566816757728&uri=CELEX:32014R0376).

— The ATS unit name, airspace type, class and FIR/UIR name;

— information on whether, in the judgement of the investigators of the occurrence, the ATS or CNS contributed to the SMI, either directly or indirectly or none, as appropriate;

— RAT ground severity associated to the SMI, as obtained by the application of the RAT methodology by the ANSP;

— ERCS risk grade associated to the SMI, as obtained by the application of the ERCS methodology by the State.

2. For monitoring RI:

— unambiguously identify the safety occurrences that are RIs;

— location indicator of the airport where the RI took place;

— the ATS unit name, airspace type, class and FIR/UIR name;

— information on whether, in the judgement of the investigators of the occurrence, the ATS or CNS contributed to the RI, either directly or indirectly or none, as appropriate;

— RAT ground severity associated to the RI, as obtained by the application of the RAT methodology by the ANSP; and

— ERCS risk grade associated to the RI, as obtained by the application of ERCS methodology by the State.

When receiving from EASA an analysis report of the reported occurrence data measuring these performance indicators for the preceding year (January–December), the NSAs should:

3. validate the numbers presented in the report and advise of any identified discrepancies, together with supporting evidence;

4. respond to all the observations in the report; and

5. send a confirmation of the numbers presented and responses to the observations to EASA by the end of May each year.

GM5 Safety performance indicators (SPIs) for the monitoring of separation minima infringements (SMIs) and runway incursions (RIs)

Regulation (EU) 2019/317

The purpose of this GM is to explain the safety performance indicators, the data requirements and the process by which the number of SMIs and RIs will be measured.

A. RUNWAY INCURSION (RI)

The definition of RI is provided in Article 2(19) of Commission Implementing Regulation (EU) 2019/317, which is the same definition as that adopted by ICAO. It is repeated here for ease of reference:

‘“runway incursion” means any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft;’

In order to determine whether an event is a runway incursion or not, the following explanation is provided:

1. the 'incorrect presence' is defined as the unsafe, unauthorised or undesirable presence, or movement of an aircraft, vehicle, or pedestrian, irrespective of the main contributor (e.g. ATC, pilot, driver, technical system).

The 'protected area of a surface designated for the landing and take-off of aircraft' is defined as a minimum the physical surface of the runway and the strip distance out to the holding point appropriate to the visibility conditions at the time of the event.

The RIs included in the indicator are those that occur at the airports included by the Member States in their performance plans, where the airports to be considered are specified. Article 1(3) of Commission Implementing Regulation (EU) 2019/317 establishes the minimum list of airports as those airports in the territory of the Member State with 80 000 IFR movements or more. Additional airports may be included in the performance plans according to Article 1(4) of the same Regulation.

B. SEPARATION MINIMA INFRINGEMENT (SMI)

SMI is defined in Article 2(20) of Commission Implementing Regulation (EU) 2019/317, which is in line with industry practices. It is repeated here for ease of reference:

'"separation minima infringement" means a situation in which prescribed separation minima were not maintained between aircraft;'

It is important to note that both horizontal and vertical separation needs to be lost to trigger an SMI. It is understood that the infringement of the separation standard is between aircraft that are flying under the ATC services of the responsible ANSP.

The SMI-related indicator covers aircraft in en-route, terminal and airport control zones. When the infringement occurs around an airport, only those occurrences attributed to the terminal navigation services around airports that are included in the Member States' performance plans are included. Article 1(3) of Commission Implementing Regulation (EU) 2019/317 establishes the minimum list of airports as those airports in the territory of the Member State with 80 000 IFR movements or more. Additional airports may be included in the performance plans according to Article 1(4) of the same Regulation.

C. LOCAL LEVEL versus UNION-WIDE LEVEL

SPIs for the monitoring of SMIs and RIs at local level are established in Annex I, Section 2, point 1.2, paragraphs (a), (b), (c) and (d) of Commission Implementing Regulation (EU) 2019/317. They include indicators at Member State, ANSP and airport level. They are reproduced here for ease of reference:

'(a) The rate of runway incursions at airports located in a Member State, calculated as the total number of runway incursions with a safety impact that occurred at those airports divided by the total number of IFR and VFR movements at those airports.'

The indicator set out in paragraph (a) is aggregated at airport level. It includes all RIs that have been reported under Regulation (EU) No 376/2014, independently of the main contributor, i.e. individuals, air operators, aerodromes, or ANSPs. As such, this indicator aims to capture trends in RIs at Member State level.

'(c) The rate of runway incursions at an airport calculated as the total number of runway incursions with any contribution from air traffic services or CNS services with a safety impact

that occurred at that airport divided by the total number of IFR and VFR movements at that airport.'

The indicator set out in paragraph (c) is aggregated at airport level. It includes only a subset of RIs that have been reported under Regulation (EU) No 376/2014 for which the ANSP was identified as having a contribution, either direct or indirect. This indicator aims to capture trends in RIs under the influence of the provider of ATC at the airport concerned.

'(b) The rate of separation minima infringements within the airspace of all controlling air traffic services units in a Member State, calculated as the total number of separation minima infringements with a safety impact that occurred in that airspace divided by the total number of controlled flight hours within that airspace.'

The indicator set out in paragraph (b) is aggregated at Member State level. It includes all SMIs that have been reported under Regulation (EU) No 376/2014, independently of the main contributor, i.e. air operators or ANSPs. This indicator captures all SMIs that occur within the geographical boundary of a Member State, irrespective of which ANSP is providing the ATC service.

'(d) The rate of separation minima infringements within the airspace where the air navigation service provider provides air traffic services, calculated as the total number of separation minima infringements with any contribution from air traffic services, or CNS services with a safety impact divided by the total number of controlled flight hours within that airspace.'

The indicator set out in paragraph (d) is aggregated at ANSP level. It includes only a subset of SMIs that have been reported under Regulation (EU) No 376/2014, for which the ANSP was identified as having a contribution, either direct or indirect. This indicator captures all SMIs that occur in the area where an ANSP provides its ATC services.

SPIs for the monitoring of SMIs and RIs at Union level are established in Annex I, Section 1, point 1.2, paragraphs (a) and (b). These indicators are determined as the local-level indicators defined in point 1.2(a) and 1.2(b) of Section 2 and differ from them only in the level of aggregation.

D. SAFETY IMPACT

It is anticipated that Member States will classify occurrences in terms of safety risk according to the common European Risk Classification Scheme (ERCS) that the European Commission intends to adopt by means of implementing acts, as prescribed in Article 7 of Regulation (EU) No 376/2014.

ERCS considers four levels of risk associated to occurrences, namely: 'not safety related', 'low', 'medium', or 'high'. Each level is coloured in the ERCS risk matrix: green for 'not safety related' and 'low' risk occurrences, amber for 'medium' risk occurrences, and red for 'high' risk occurrences. The occurrences with safety impact considered in the computation of indicators for monitoring RIs and SMIs at Member State level refer to those that have been classified as 'medium' (amber) and 'high' (red) ERCS risk grade of the ERCS matrix.

It is anticipated that ANSPs will classify occurrences in terms of severity according to the RAT methodology. This methodology classifies the severity of occurrences into five categories: 'serious incident' (A), 'major incident' (B), 'significant' (C), 'not determined' (D), and 'no safety effect' (E).
The occurrences with safety impact considered in the computation of indicators for monitoring RIs and SMIs at ANSP level refer to those classified as ATM ground severity A, B, and C.

The application of severity classification using the RAT methodology was formally introduced within the ATM performance scheme Regulations for RPs 1 and 2. At the end of RP2, the target for the application of severity classification using the RAT methodology by ANSPs was set to 100 % application for all reported SMIs and RIs with ATM ground severity A, B, and C, and it is anticipated that ANSPs will continue to apply it to these occurrences. In order to calculate the correct score and perform a proper analysis of the occurrence, it is good practice to determine both the ATM overall and ATM ground scores.

E. ATS/CNS CONTRIBUTION

There are two indicators, set up in points 1.2(c) and 1.2(d) of Section 2, that consider only those occurrences where, during the occurrence investigation, the ATS or CNS services contributed to the occurrence. This contribution is considered to be any causal or aggravating factor from the ATS or CNS ground services to a situation, in the air or on the ground, where an aircraft/vehicle/person has lost the required safety margins.

In contrast, cases where there is no 'ATS or CNS services contribution' are: when the investigation shows evidence that there was no kind of causation/contribution/aggravation from the ATS or CNS ground services; and there was at no point in time any chance for the ATS or CNS ground services to detect and resolve a sudden/potential conflict in advance of a loss of required safety margins.

F. EXPOSURE DATA

The indicators for monitoring SMIs and RIs are normalised using the following exposure data:

For RIs, the number of IFR and VFR movements at the airport is calculated with the sum of take-offs and landings performed under both IFR and VFR at that airport. Complete exposure data cannot be obtained from the Network Manager, which includes mainly IFR movements but a small portion of VFR flights. The Network Manager figures need to be complemented by the VFR traffic from the ANSP's tower and airports.

For SMIs, the number of controlled flight hours is measured as hours of flight under IFR that are under the separation control of ANSPs. The Network Manager is best placed to consistently report flight hours of ANSPs across Europe. As some ANSPs provide cross-border services, the measure of flight hours is based on two different measurements depending on the indicator. The indicator in paragraph (b) of Section 1 of Commission Implementing Regulation (EU) No 2019/317 is calculated using flight hours within the Member States' boundaries, while the indicator in paragraph (d) of Section 1 of the same Regulation is calculated using flight hours controlled by a given ANSP.

G. CODING PRACTICE IN ECCAIRS AND DATA COLLECTION PROCESS

All ATM-related safety occurrences are required to be reported to the European Central Repository (ECR) under Regulation (EU) No 376/2014. It is anticipated that the common and specific mandatory data fields applicable to the occurrence will have been completed, in accordance with Annex I to that Regulation. As a minimum, the specific mandatory data fields should include those for aircraft-, air navigation services- and aerodrome-related occurrences.

For the purposes of reporting under the performance scheme Regulation and for the facilitation of the computation of performance monitoring indicators, the following fields need to be coded for each occurrence record to provide the necessary information to allow proper computation of the indicators. The below fields are intended to be used for data extraction from the ECR and computation of the monitoring indicators for monitoring SMIs and RIs.

Within ECCAIRS 5, the following additional fields need to be completed, as appropriate:

Attribute ID	Description	Possible values	Remarks
1049	Applicability SES performance scheme	Yes/No/Unknown	This attribute provides an immediate indication that the occurrence falls within the scope of the performance scheme, and will facilitate data extraction. Failing to code it will require airport information to discriminate whether the occurrence falls within the scope of the performance scheme.
5	Location indicator	A four-letter code group formulated in accordance with the rules prescribed by ICAO	This attribute identifies the airport where the occurrence took place. It is a mandatory data field for RIs. For SMIs, it is also needed as it may serve as filter to detect whether the occurrence falls within the scope of the performance scheme.
1109	ERCS risk grade	Low (green), medium (amber) , high (red)	This attribute provides information about the risk of the occurrence. It is used to identify those occurrences with safety impact at Member State level.
1095	ERCS score	Row/column of the ERCS risk matrix	This attribute provides information about the risk of the occurrence. It is used to identify those occurrences with safety impact at Member State level.
1074	Ground severity	A, B, C, E, D, N	This attribute provides information about the severity of the occurrence. It is used to identify those occurrences with safety impact at ANSP level.
390	Event type	Predefined type of event, i.e. consequential events, equipment, operational, personnel, organisational or unknown	This attribute provides information on the type of occurrence to compute SMIs and RIs. It is a common mandatory data field. For the performance scheme, Level 4 should be provided as follows: For identifying RIs, the following event should be coded: Operational Aircraft flight operations Incursions Runway incursion by a person; Runway incursion by a vehicle/ equipment; or Runway incursion by an aircraft

			For identifying SMIs, the following event should be coded: Operational Aircraft flight operations Airborne conflict Separation minima infringement

EASA will retrieve the data available in the ECR in order to calculate preliminary figures for the SPIs for monitoring SMIs and RIs. Member States will receive an analysis report sent by EASA based on the data submitted and coded by them, containing the number of applicable occurrences in their territory in the previous year (January–December). Observations related to the data extraction may be included. Member States will review this analysis report, confirm the occurrence numbers presented in the report, and respond to the observations.

AMC4 Safety performance indicator (SPI) on automated safety data recording systems

Regulation (EU) 2019/317

ANSPs should report to their competent authorities at the beginning of the application period and subsequently on an annual basis, the use of automatic safety data recording systems for the monitoring and recording of SMIs and RIs.

Where automated safety data recording systems have been implemented, ANSPs should also answer the following questions:

(a) What safety data is captured by the automated safety data recording systems?

(b) How is the data captured used in support of the safety risk management framework?

(c) How are just-culture organisation principles applied in gathering and using the safety data recorded?

(d) How is the monitoring of data sources organised and how is it ensured that available data sources are utilised in a coherent way?

(e) How is the data combined to provide the explanatory power to understand the context that led to safety occurrences and anticipate emerging risks?

(f) How is the information from safety data analyses fed forward to risk assessment processes and to designers of future systems?

(g) How is the information disseminated inside and outside the organisation?

(h) Have obstacles of a technical, operational or cultural nature been identified that prevented the realisation of the full potential of a data-driven safety decision-making process? What are the main issues when using automated safety data recording systems?

GM6 Safety performance indicator (SPI) on automated safety data recording systems

Regulation (EU) 2019/317

A. General

The performance indicator on automated safety data recording systems (where implemented) in point 1.2(e) in Section 2 of Annex I is defined as:

'[…], *the **use** of these systems by the air navigation service providers, as a component of their safety risk management framework, for the purposes of **gathering, storing and near-real time analyses of data related to, as a minimum, separation minima infringements and runway incursions.**'*

Beyond a narrow interpretation of the indicator as supporting a pure binary assessment of the performance, the indicator should be understood as an initiative to foster a proactive approach to safety management, one looking closely at day-to-day performance and including measures other than occurrences to anticipate risk. This is in line with Recommendation 7.1/1 — Data-driven decision-making from the thirteenth ICAO Air Navigation Conference (ANC) to facilitate '[…] data-driven decision-making in support of safety intelligence to support safety risk management'.

This guidance material aims to assist Member States, NSAs and ANSPs in using automated safety data recording systems in the implementation of data-driven safety decision-making processes. The monitoring of this indicator during RP3 will provide key information to the forthcoming development of standardised risk-based decision-making policies and best practices for the design and parameterisation of safety-monitoring tools and models.

B. Digitalisation and moving towards an early-warning capability for ATM

Together with the massive amount of safety-related information that aviation generates today, as well as the increasingly rare accidents and serious incidents from which to learn and mitigate, goes the potential for a fundamental change in the mindset towards a more proactive, meaning-anticipative, collaborative, meaning-sharing, and performance-based approach to safety management. With the impending rise of information technology and overall digitalisation and rising automation of ATM, the pace of data creation can only increase. Obviously, data mining does not replace the technical and operational competencies of the ATM community and while it reduces uncertainty, it does not eliminate it, but it contributes to create safety intelligence. In particular, data helps in identifying and investigating the weak signals that could eventually result in catastrophic events.

Therefore, today, the usage of automated safety data recording systems paves the way towards an early-warning capability for ATM with the aim to:

1. detect unsafe trends and implement changes that remove these threats before a serious event or worse happens;
2. react within a particular timescale that depends on the rate of trend progression;
3. not raise 'false alarms', nor lead to disproportionate focus on low-priority issues, or lead to unanticipated side effects; and
4. reach all those needed to ensure an aviation-system-wide reaction if the problem is generic, or localised reaction if it is a localised issue.

C. Functional model

The sequence of steps or functions (building upon automated safety data recording systems) that are needed for an early-warning function for ATM are as follows:

5. *monitoring* of data sources in ATM in a systematic and coherent way, in particular with respect to the specification of surrogates for accidents and incidents and setting of triggers for identifying adverse events and signals;
6. *filtering*, *i.e.* determining what is a 'signal' and what is 'noise', using statistical and risk-based criteria for deciding when to further analyse a potential trend or key occurrence;
7. *trend identification* to determine the exact nature of the safety issue;
8. *getting sufficient understanding* to estimate the risk priority and to prepare for mitigation measures. This should ensure that disproportionate focus does not occur, and that

undesirable side effects are not generated. 'Deconstructing' the data should rely on a technical-/operational-centred approach to ensure the right balance between a current issue and others that are pending;

9. *developing mitigation measures* to deal with the issue and prevent its recurrence and/or propagation;

10. *disseminating and engaging, i.e.* letting the right people know;

11. *verifying and confirming that the problem has gone away* building upon the never-ending stream of data while paying due attention to the potential 'Hawthorne effect', which means the attention paid to an issue may mean it disappears for a time, then resurfaces;

12. *documenting* thereby ensuring that the whole process for an identified issue has been recorded so that if it recurs or a similar problem arises, the safety 'thinking' and analysis is available for future users/analysts. Documentation at this level also allows deeper 'learning' to occur, e.g. across issues. A larger picture may emerge. It would also save time and resources if problems resurface or 'mutate' into related problems; and

13. *feeding forward* the information from analyses to the risk assessment processes and to designers of future systems.

D. Fundamental components

Four fundamental components in the usage of automated safety data recording systems in support of the 'safety risk management', 'safety achievement', 'safety assurance', and 'safety promotion' elements of the SMS are:

1. the involvement of data analysts, data scientists, predictive modellers, statisticians and other analytics professionals to structure and analyse growing volumes of data to uncover information including hidden patterns, unknown correlations, etc.;

2. the interactive visualisation of the structured safety data to support the safety, technical and operational analyses;

3. the involvement of safety, operational and technical expertise to comprehend the data and prioritise the actions needed to ensure safe ATM operation; and

4. the gathering of the safety data and information in a just-culture organisational environment.

AMC5 Safety performance indicator (SPI) for monitoring ATFM over-deliveries

Regulation (EU) 2019/317

At ATC sector level, the ATFM over-deliveries (OVD) safety performance indicator should be calculated as the ratio of 20-minute slices with over-delivery aircraft in the ATFM regulated sector versus the total number of 20-minunte slices during the ATFM regulated duration. To determine whether an hourly slice is over-delivered, the number of actual flight entries in the regulated sector (NB_FLT_ACTUAL) should be compared with the regulated flight rate for the same time interval (REG_RATE) that is imposed in the ATFM regulation. When the actual entries are above 110 % of the regulated rate, then the slice should be considered over-delivered. The definition should exclude the regulation with a zero rate (e.g. airspace closures) as it makes the comparison meaningless.

The Network Manager (NM) should report to EASA at the beginning of the application period and subsequently, on an annual basis, the OVD SPI aggregated at each ACC and SES areas. The time interval to monitor is each entire year. To aggregate the OVD SPI for the combination of geographical area and yearly interval, the total number of slices with over-delivery are divided by the total number of slices for the regulations within the reporting scope.

GM7 Safety performance indicator (SPI) for monitoring ATFM over-deliveries

Regulation (EU) 2019/317

A. Definition

The purpose of this guidance is to explain the ATFM OVD SPI, its calculation and how it will be monitored.

The OVD SPI is defined in Annex I, Section 3, point 2.2 as:

'The ATFM over-deliveries above the capacity limits of a sector declared by the air navigation service provider where ATFM regulations are imposed, calculated as follows:

(a) the ratio between the time that the number of flights exceeds by more than 10% the capacity limits of a sector declared by the air navigation service provider where ATFM regulations are imposed, and the total time where ATFM regulations are imposed, calculated for the whole calendar year and for each year of the reference period;

(b) for the purposes of this indicator, the regulated time is divided in overlapping hourly slices at every 20-minutes interval.'

An ATFM regulation is a traffic flow measure that aims to protect a node that may potentially be overloaded by limiting the maximum rate of aircraft entering the node. The ATFM regulation is requested by affected ANSPs whenever expected demand exceeds available capacity of the node and will affect a number of flights that enter the node in a time period. Flights entering a regulated sector during the regulation period are subject to that regulation and may be assigned ATFM slots by the Network Manager. An ATFM regulation is, therefore, characterised by a regulated time duration, by the acceptable rate of flights that enter the regulated sector, and the flights affected, also known as traffic volume (TV).

The traffic volume is created based on either a sector in the airspace, in which case falls within the scope of the indicator definition, or a significant point in the airspace or an airport/group of airports, which falls/fall outside the scope.

In order to determine the total regulated time for an ATFM regulation applied on a traffic volume, the method considers the interval between the regulation start time and regulation end. The regulation end is defined as:

1. either the last regulation end time indicated when a regulation is created and at subsequent extensions, if any, when the regulation is not cancelled;
2. or the time at which the regulation was cancelled, when this happens before the declared regulation end time.

The regulated time is further divided in 'overlapping hourly slices at every 20-minute intervals'.

For example, a regulation starting at 10:40 and ending at 11:40 will have 7 overlapping hourly slices defined as illustrated in Figure 2:

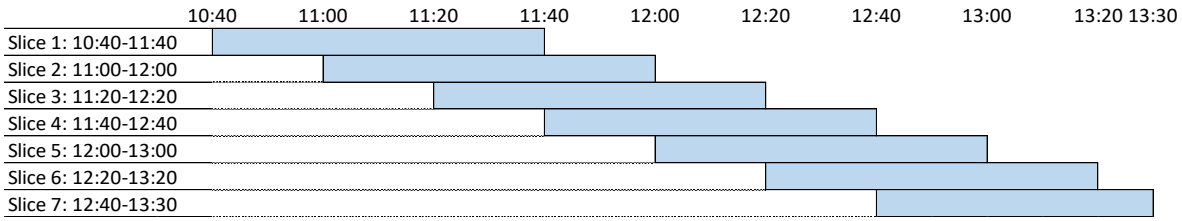


Figure 2: Example of hourly slices of 20-minute intervals of a regulated sector

The last slice is the first hourly slice reaching the regulation end; in the example above it is the 12:40 to 13:30 (this is the only slice that can be less than 1 hour).

B. Example of the OVD calculation indicator

Figure 3 is an example of an ATFM regulation that was imposed over a certain sector with a regulated rate of 35 flights/hour. The ATFM regulation duration applied from 10:40 until 13:30. The orange bars in the graph depict 20-minute slices that were over-delivered, while the green bars depict 20-minute slices where the actual flight entries were below the regulated rate. In this example, the OVD indicator value is OVD = 3/7 = 42.9 %.

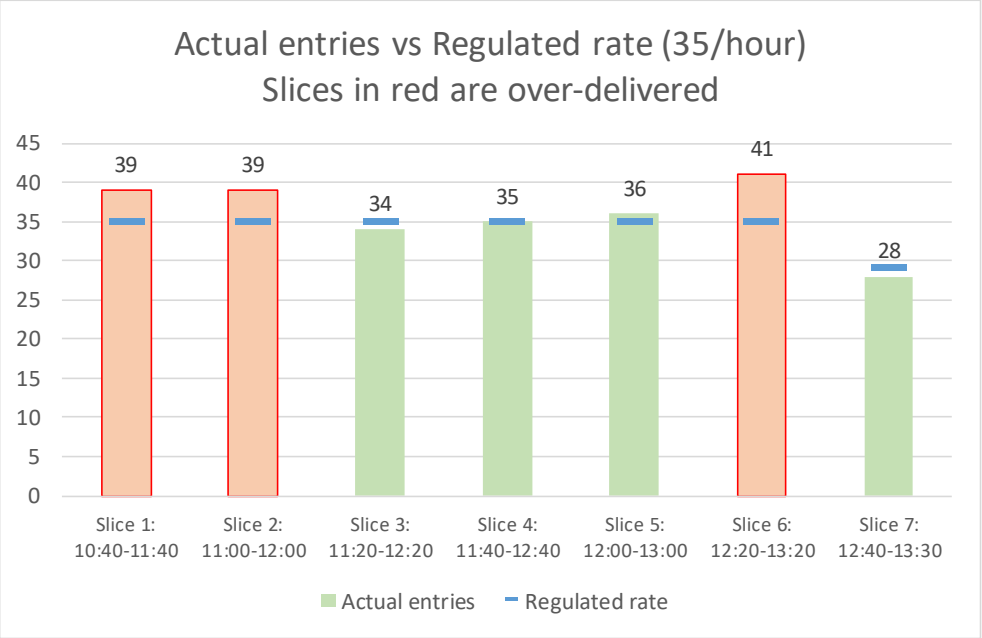


Figure 3: Example of over-deliveries in 20-minute intervals in a regulated sector

The number of actual flight entries in the TV for each 20-minute slice is calculated from the current tactical flight model (CTFM) profile generated by the NM system (whenever a flight fulfils that the CTFM entry time ≥ slice start time and the CTFM entry time < slice end time). To this, a correction will be applied for the airspace un-anticipated flights[1] that, although geographically are crossing the regulated sector, from an operational perspective are not under the control of that sector (non-operational un-anticipated traffic). The objective is to avoid 'false

[1] Airspace un-anticipated traffic are flights that are not planned to enter the TV based on the last filed flight plan but that are actually entering the TV by deviating from flight plan.

positives', i.e. situations when an over-delivery seems to have occurred while in reality there was none . This categorisation will be implemented in the NM reporting system during RP3.

The technical system of the NM generates and archives the data used for OVD monitoring:

1. regulated TVs and associated reference locations;
2. ATFM regulation start, end, and cancellation times;
3. regulated rates;
4. number of actual entries in the regulated TVs for each slice; the categorisation of non-operational un-anticipated traffic will be available during RP3.

C. Level of aggregation of the OVD indicator

The OVD indicator can be determined for any combination of geographical areas (TV, ACC, SES area, NM area) or time intervals (daily, monthly, yearly). To aggregate the OVD indicator for the combination of geographical area and time interval, the total number of slices with over-delivery are divided by the total number of slices for the regulations within the reporting scope.

APPENDICES

Regulation (EU) 2019/317

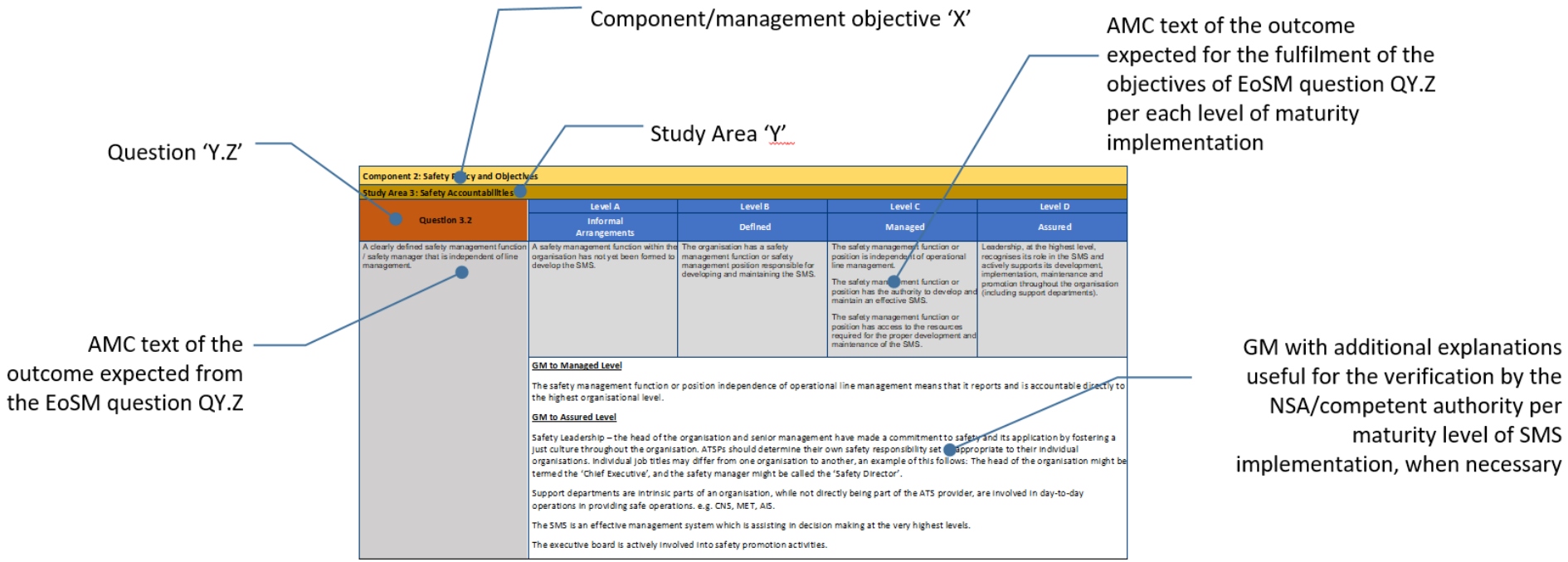
The appendix below will appear as a separate document (sub-NPA 2019-10(C)) to this Annex:

— **Appendix to AMC3 SKPI, GM3 SKPI and GM4 SKPI — Questionnaire for the measurement of the effectiveness of safety management (EoSM) of ATS providers and associated guidance for verification by the NSA/competent authority**

The Appendix contains the AMC of the outcomes expected in each EoSM question associated to the corresponding study area (SA) and component/management objective, together with the expected outcome of the fulfilment of the objectives of EoSM for each level of maturity implementation for each question. These AMC appear in the tables included in the Appendix coloured in the grey cells of those tables.

In addition, each question included in the tables contains guidance material with additional explanations, when necessary, useful for the verification by the NSA/competent authority. These GM appear in the tables included in the Appendix coloured in the white cells of those tables.

The following picture depicts the elements contained in each table:



— Appendix to AMC3 SKPI, GM3 SKPI and GM4 SKPI — Questionnaire for the measurement of the effectiveness of safety management (EoSM) of ATS providers and associated guidance for verification by NSA/competent authority

Note: Please refer to Supporting Material Part (C)

SUPPORTING MATERIAL – RP3 SAFETY (K)PI PART (C)

Appendix to SKPI — Verification of the ANSP EoSM by the NSA/competent authority

Regulation (EU) 2019/317

Component 1: Safety Culture				
Study Area 1: Development of a Positive and Proactive Organisational Culture				
Question 1.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
An intelligent and effective organisational culture (is one which) is responsive to the hierarchical differences in an organisation. Differing functions and roles in an organisation have different views of risk, different risk disposition and they have different values and views about safety.	Concept of Safety: Employees believe that safety goals will be achieved by complying with rules and regulations. People, especially front line staff, are considered the principle cause of accidents and incidents. Sanctions are applied by management when non-compliances are found.	Concept of Safety: Employees contribute to safety by highlighting deficiencies in rules and procedures. The organisation is developing processes to support employees' ability to share safety lessons learned with other teams or groups.	Concept of Safety: The organisation recognises that safe provision of services is something it can achieve through the expertise and experience of its staff, not simply by defining rules and procedures. People focussed safety interventions and campaigns are recognised as having limitations and alternative strategies explored.	Concept of Safety: Management systems acknowledge that change can indirectly impact an organisation's safety performance, potentially causing instability within the organisation. The organisation actively engages and prepares to avoid, or to manage this instability, including the need to prepare people for changes that may affect safety.

***Safety Production**: Decision making that occurs in any part of the organisation that considers the effects that the decision may have on safety, including the resulting reallocation of resources to or from safety.

	Safety Culture Safety culture is informal and applied only in the operational parts of the organization.	Safety Culture Safety culture is applied in both operational and support functions.	Safety Culture The organisation acknowledges the need to consider safety culture and organisational culture together, but still maintains the two as separate concepts. The value of safety in the organisation is recognised and promoted through engagement and consultation with staff. Engagement and consultation values diverse views of safety and respects difficult and challenging questions	Safety culture Safety is understood to be the responsibility of the organisation as a whole. The organisation includes the potential contribution to safety by non-operational areas in its safety planning. Organisational culture and safety culture are considered and managed as the same thing.
	Safety Interventions and enablers Rules and procedures are adapted based on lessons learned from occurrences.	Safety Interventions and enablers In addition to adapting rules and procedures following safety occurrences, the organisation analyses its risks more strategically.	Safety Interventions and enablers The organisation's understanding of safety is built from multiple perspectives – that of employees in different roles in the organisation and especially involving front-line staff	Safety Interventions and enablers The organisation actively seeks diverse views of safety as a means to drive safety interventions. Processes are in place to ensure that a safety concern will be escalated following the issue being raised, explored and consensus reached on the need for action. Safety resources are used in a flexible manner that is targeted and safety activities are resourced and managed within business planning and reporting processes.

	The SMS Only applied on an ad-hoc basis No SMS for non -certified organisations	The SMS There is an awareness that the SMS is a tool to be used and the need for training some roles in safety is identified and begun. Safety is managed in an ad-hoc manner.	The SMS The limitations of the SMS are acknowledged and organisations embark on both, training that supports intelligent use of the SMS (not just applying it) and the evolution of the SMS through progressive change. The organisation trains employees to fulfil their safety responsibilities through developing the capability of those engaged in safety and managers who have an accountability for safety.	The SMS The Safety Management System (SMS) encourages employees to proactively question procedures, practices and people to improve safety performance.
	Guidance — all levels Organisational culture embraces 'safety culture'. Organisational culture includes the organisation as a whole and embraces the way that business decisions cascade through an organisation as well as the existence of subcultures which have their own perspective of safety, values and 'tribal knowledge', for instance the ATCO and engineering communities. Differing functions and roles in an organisation have different views of risk, different risk appetites and, therefore, different perspectives of safety — which is in keeping with the perspective that the organisational culture brings. As a result, differing roles and functions see safety differently with respect to the way that they build safety into their work. The approach to these different values and views of safety, how they are recognised, reconciled and translated into actions provides an indication of the management's approach and commitment to safety. An intelligent and effective organisational culture will embrace diversity, using the perspectives that such views bring to build a richer and deeper understanding of how the organisation performs and delivers safe provision of services. The choices made in managing the business, including safety and safe production, involves trade-offs, the consequences of which influence an organisation's culture. Understanding the decision-making of managers who have both the accountability and the authority to deliver or facilitate the delivery of solutions to safety concerns is one way to explore organisational culture. This includes business decisions about the allocation of resources and budgets in an organisation. These trade-offs reflect policy and business choices made by the ANSP as well as those that are externally driven. For example, the business strategies that ANSPs adopt to meet the requirements for the SES RP3 targets in all Key Performance Areas (KPAs). Guidance for the Defined Level Concept of Safety:			

	The key difference between Level A 'Informal Arrangements' and Level B 'Defined' is that whilst the organisation still 'enforces' safety through adherence to rules and procedures, there is a growing realisation that this approach has limitations. This may be because there are repeated behaviours by people that the organisation attempts to control with very limited effect. In practice, this means that the reliance and underlying belief that only rules and procedures ensure safety is fundamental as is the confidence in behaviour-based safety. Rules and procedures cannot be expected to cover all possible operational eventualities. They are underspecified — they cannot cover all possible situations. As a consequence of this, continuing to add procedures and rules can make an operation less safe. This notion of safety will be beginning to be understood by ANSPs at the 'Defined' level, but not acted upon. Critical to facilitating this understanding is the way that safety departments undertake the investigation of reported occurrences. Arrangements need to be in place that recognise these ways of thinking about safety. Safety Culture Organisational decisions around resources and efficiency lead to consequences which are all perceived as degrading safety such as: • insufficient operational resources to manage demand requiring the imposition of ATFCM measures (leading to delay performance worsening); • changes of watch rosters to adapt capacity to demand that are beyond agreed rostering guidelines; • an increase in additional attendances (overtime); • insufficient slack to enable secondary operational duties to be undertaken; • engineering service level agreements slipping; • training for new projects slipping; • fatigue is perceived as increasing. These issues reinforce the reality that decisions that are made in the non-operational sections of an organisation influence the safe provision of services. An ANSP at the Defined Level begins to listen to the others' views but will have a reluctance to act upon what is heard. Therefore, concerns may be raised, but are rarely if ever pursued by those who the discussions take place with. As a result, the views of risk of those managing and those being managed grow ever greater apart. This will, therefore, shape the safety culture as well as organisational in-house employee surveys. Indications that an organisation is at the 'Defined' level may also include: • safety culture is acknowledged as necessary and is implemented following the relevant regulatory guidelines and management system requirements; • there are no discussions around quality service delivery versus safe provision of services, because it is the perception that there is no point. It is not the place for employees to challenge management. Signs that the organisation is not yet at the 'Managed' level may include: • senior management presence in operational spaces at times when there are delays, but never during safety events; • human error and deviation from rules and procedures is still the principal focus of safety investigations and interventions;

- management does not involve the operational community in identifying ways of improving safety performance;
- people may be stigmatised for repeatedly raising safety concerns that they have;
- training is used as a corrective and disciplinary action;

Investigations seek to determine whether or not procedures were precisely followed as a means of establishing what happened and why, by placing undue emphasis on the procedures at the expense of the context.

Safety Interventions and Enablers

In addition to adapting rules and procedures following safety occurrences, the ANSP analyses its risks more strategically. Safety interventions, or safety mitigating actions, do not include systemic or structural solutions — instead, they just consider human actions or technical failures associated with specific occurrences.

The SMS

ANSPs at this level can be expected to have begun implementing a Safety Management System (SMS). As a result, the internal safety discussion begins to change with the ensuing safety measurement, and safety promotion becomes more visible. The safety discussion will be characterised by a lack of transparency — safety teams and managers, for example, leading the discussion with little structured or formal inclusivity of others in the organisation. Safety improvements are limited to what guidance is given by the SMS. There is an overwhelming confidence that safety will be delivered by following the SMS.

Guidance for the Managed Level

Concept of Safety:

At the 'Managed' level, there is recognition that staff contribute to the safe provision of services through the way that the operational tasks are undertaken, including the way that trade-offs in the operation and beyond are taken. These rely on an intelligent use of strategies that are sensitive to operational risk and that achieve safe provision of services. For example, if ATFCM measures are needed, and it is known that if the need is there to do so, there will be no criticism around the consequences on service provision, but there may be enquiries to gain a broader appreciation of the context. The impact of this evolutionary shift is that there will be a gradual decrease in the use of disciplinary and behavioural means to sustain safety and a shift towards making changes in structural factors in the operational environment that shape safety events. There is a recognition that 'people create safety' in ways that cannot be encapsulated in rules and procedures alone.

More specific activities might include:

- the use of traffic management techniques to allow those involved in an event and who have to file an occurrence report to have the time to do this, and to recover from the event;
- where there are competing demands made for limited operational resources, then safety is an explicit part of decision-making where appropriate — the safe provision of services will be embedded in the trade-offs;
- managers and supervisors develop a view of how the safe provision of services is by engagement with operational staff — leading to an informed discussion that develops confidence in organisational decision-making;

- managers and supervisors actively seek the views of both the operational and non-operational community to gain an informed view about organisational safety, which may lead to a better understanding of how effective safe production* can be enhanced;
- managers and supervisors make themselves available when staff wish to discuss safety concerns with them;
- staff representative organisations meet regularly to discuss and engage about safety;
- organisations accept that procedures and rules cannot fully describe every eventuality. As such, they do not rely on new or additional rules and procedures as the only safety intervention, because they know that this can introduce new risks and without addressing structural issues.

Safety Culture

Indications that an ANSP or organisation has reached Level C 'Managed' can be found in the way that the ANSP has transitioned from the organisation seeing safety culture as a distinct independent entity, towards viewing it as a part of the overall organisational culture. The emphasis in this change can be seen in that the ANSP engages with those who work within it.

At Level C, the value or benefit of safety in an organisation is recognised and promoted by managers and supervisors. Important indications are:

- the use of organisational resources to develop safety education;
- whether safety is integrated into business planning, including provisions for safety in the long-term investment planning;
- the safe provision of services versus quality of services is discussed.

Safety Interventions and Enablers

ANSPs at the 'Managed' level have evolved processes and mechanisms that use means other than occurrence reporting to assess, understand and manage risks. These processes and mechanisms have evolved beyond relying solely upon the use of the attribution of causal-factor taxonomies from occurrence reporting alone as it is recognised that this alone is limited and provides an incomplete understanding of an organisation's safety because:

- it may not reflect the actual frequency of such events; the processes and mechanisms need evolving to encourage people to report because there is little seen to happen once a report has been filed;
- there might be inconsistencies between incident investigators that lead to a lack of confidence in the causal-factor attribution;
- safety interventions derived solely from causal attribution are seen to yield limited effectiveness or not to be able to find suitable solutions.

The organisation's understanding of safety should be considered from multiple perspectives – that of employees in different roles in the organisation and especially those staff providing the operational service.

As a result, complementary techniques are identified, examined, and experimented with and begin to be used in occurrence reporting, although incrementally at first. Some examples of techniques that may be used are:

- the inclusion of human factors investigation narratives;
- the use of 'second stories' to gain an understanding of not just 'what' happened but 'how' the event occurred;
- exploring 'why did it make sense to them';

	• the scope of the occurrence and incident investigation is broad and encompasses a larger sample of accounts including those outside the ANSP; • the use of aircraft operator narratives and flight data; • an explicit recognition that the operational context is complex and, therefore, what happened can be better understood by exploring the interactions between actors and system components as well as the multiple views that are used to produce a composite view of the event; • using the understanding of the operation that comes from observing safe production* in practice to develop an understanding of typical ATC operations; • the introduction of investigator competence training and inter-investigator consistency schemes along with continuing professional development to enhance investigation skills; • expanding the organisation's understanding of safety by taking the views of the wider organisation and explore path dependency (history as cause). The SMS A move from strictly following the SMS to an intelligent application of the processes can be seen. This is about understanding the intent of the SMS and ensuring that this is realised rather than just blindly applying its processes. This change may be driven as a result of the experience in applying the SMS to a range of changes within the ANSP, for instance across a range of technical systems with increased complexity. Additionally, there will have been new stakeholders, e.g. engineering teams, change management, business risk, supply chain and software engineering that will contribute to different issues and perspectives. ANSPs can elect to develop proportionate applications of the requirements of an SMS so that it is not applied uniformly across all projects or within the ANSP's activities, i.e., a risk based approach to safety management. In so doing, progressive and intelligent application of the SMS provides evidence of an ANSP or organisation that is functioning at the 'Managed' level. <u>Guidance for the Assured Level</u> At Level D, 'Assured', safety should be considered as a property that is created within the organisation, not something that the organisation has. Safety is viewed as the domain of the organisation as a whole, not simply a component of operational departments and a selection of non-operational departments. The ability of the organisation to effectively manage change, whether large or small, is a defining feature at this level. The ANSP recognises that non-operational elements of an organisation contribute to the safe provision of services. Concept of Safety: Change brings with it numerous challenges and threats to sustaining performance, as well as to managing resources across the organisation as a whole. Such threats and challenges are necessarily organisation-wide and will involve third parties and many other actors. At the 'Assured' level, the ANSP's SMS is designed around the recognition of the influence, effects and consequences of change on the safe provision of services, including how they affect people. It will make provision for this in business and safety management systems, including assessments and mitigations of change as both business and safety risks. More specific characteristics include the following: • the ANSP is sensitive to the balance between design changes at a late stage and its impact on implementation, including training and user confidence;

	• accountable managers who have to accept the change draw from the widest group of actors and work with them to determine a perspective of how the change is being implemented, as well as the preparations for training and readiness for the change; • processes are used that assess the quality of transition training at all stages of its design and implementation and changes that flow from changes in the design; • the management of change processes extends beyond the actual implementation date and include post-implementation activities, including formal and informal verification of the design, the way that work has changed, review of performance, and adequacy of training; • sustaining an operational service throughout the transition steps will demonstrate preparedness to limit the scale of the operational task until it is agreed to increase the scale of the operational task beyond any restricted levels of service delivery. Safety Culture At this level, the ANSP recognises and implements safety as part of the overall organisational culture. In practice there are inevitable trade-offs between production–efficiency–safety–business planning. The ANSP will have evidence of formal and informal processes that accord an appropriate priority to safety. It is in the decisions that are made that balance and reconcile these conflicting demands, and reconcile the resource implications, that the value of safety can be seen. For example: • situations that are assessed to influence safety are seen as opportunities to develop a stronger and more effective safe service delivery process; • the need to pursue a strategy that is perceived as threatening safety by the operational community is managed in ways that are transparent and open to challenge; • it recognises the need to gather the knowledge behind fears, concerns and perceptions, and to meaningfully engage with the organisational view that this brings. Safety Interventions and Enablers Organisational approaches to learning lessons recognise that there are limitations to classic and current approaches to safety processes. An organisation that is sensitive to this recognises that there is a learning potential in examining the formal processes and system of lessons learned at each step of the life cycle of an occurrence report. For example: • initial filing of the occurrence report; • the way that the reporter and others involved in the event were managed and cared for; • the process of managing those people at the time of the event, i.e. release from an operational position; • the quality and value of the initial occurrence report; • formal investigation processes and systems; • recommendation generation; • feedback loops; • safety oversight and review committees; • safety data propagation.

	To support learning from safety occurrences, investigators should be provided with dedicated continuous professional development to enhance both their understanding of safety and their investigation techniques. Investigators should be aware of the models of accident causation that they are using. The SMS The SMS will encourage challenge and critique as part of its contribution to a safer and more effective ANSP. Challenge and constructive critique are means of a feedback loop that can provide fundamental information about how the work system is behaving and ways to make structural changes. The SMS will emphasise the limitations of safety mechanisms and provide a clear evaluation of the strengths and weaknesses of the orthodox safety interventions.

Component 1: Safety Culture				
Study Area 1: Development of a Positive and Proactive Organisational Culture				
Question 1.2	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
A just and open climate for reporting and investigating occurrences Note: A thorough reporting and investigation process should begin with notification, data gathering, reconstruction, analysis, safety recommendation and implementation of remedial actions, resulting in final reporting, exchange of lessons learned and effective monitoring.	Just Culture Management does not see the need for any activity or dialogue with the staff in this area. The value of reporting The value to individuals of reporting occurrences is seen as low, because the risk of consequences is high. There is a perception that there is no contribution to safety by filing an occurrence.	Just Culture Management and employees recognise the need to have Just Culture, in order to encourage reporting. Management and employees enter internal dialogue including the union and the staff association. It is common for human biases to be present in the investigation and interpretation of occurrences, in particular fundamental attribution error. The difference between acceptable and unacceptable behaviour is misunderstood and misapplied. The value of reporting There is recognition that reporting occurrences has the potential to contribute to safety. However, this is limited to circumstances where: • an occurrence will not bring criticism or consequences upon the reporter, or	Just Culture The organisation has established policies and procedures to support Just Culture principles. After initial training and education across the organisation, continuation training and education is provided. Where decisions around 'acceptable' and 'unacceptable' behaviour are made, a process is in place that arbitrates such decisions with representatives, trained for the task. Staff conditionally support Just Culture principles and management's commitment towards it. The value of reporting The value of reporting is recognised, but the emphasis in undertaking Just Culture is on the consequences for individual actions in the most part. Reporting and investigation principles and processes are predominantly human-centric in	Just Culture Just culture has evolved through several iterations of development of Just Culture policy, principles, processes and philosophy. The organisation has learnt how to measure the acceptance of Just Culture principles and recognises the limitations of such measurement. There is evidence that the application of Just Culture is unaffected by changes in the organisation. Lessons from within the organisation and across different industry sectors are used to enhance the organisation's approach to Just Culture. The value of reporting Reporting is seen as one source of safety intelligence that contributes to a better understanding of how the operation and organisation functions. The focus of occurrence reporting is around how safe and effective

		• an occurrence is perceived as being of serious safety concern (to the reporter) or to the aggrieved party, who suffers consequences arising as a result of the reported event. The application of just culture is viewed by individuals as inconsistent and unreliable.	their attribution of causes of occurrences. All levels of the organisation are aware and accept the difference between 'acceptable' and 'unacceptable' behaviours.	system performance can be sustained and enhanced. The focus of reporting and investigation is on safe service provision, not as a mechanism for social control that reinforces the need to comply with the rules]. The emphasis of reporting and investigations is on safety and not the consequences of unsafe events
	The Reporting culture The reporting culture is one of 'blame and shame'. Many events go unreported.	The Reporting culture The reporting culture is one where there is an awareness of the need and benefits for reporting but that the trust in the organisation and processes are lacking. Reporting and investigation processes, across the organisation are in the formative state of building a Just Culture. Reporting events is common, but many are unreported.	The Reporting culture An open reporting culture is present where reports are filed. The value of reporting is devalued by the limitations of the reporting and investigation processes themselves e.g. feedback to reporters, quality of recommendations and recommendation tracking (which is not incorporated into ANSP Business Management processes).	The Reporting culture Just culture is seen as in the service of safe service provision. Open reporting is perceived by staff as a means of contributing to safe production* and shaping their future operational environment. A competency scheme for investigators is applied.
	Disclosure Disclosure of occurrences is on an ad hoc basis. Formal policies are not yet in place to address: • Protection of reporters of occurrences • Support to those subject to regulatory or judicial action.	Disclosure Except as provided for in Regulation, disclosure of occurrences to external bodies is identified as a business risk as well as a deterrent to open reporting. Internally, disclosure of occurrence reports and investigations is limited.	Disclosure Within legal limits, the organisation's safety data are sufficiently protected from external interference. Internally, occurrence data is shared widely and anonymously. Policies defining protections and support to reporters have been tested and evaluated, based on feedback from those involved in	Disclosure The ANSP follows a clear and published policy on Just Culture matters that addresses the interfaces with both the judicial authority and the aviation safety regulatory authority.

		Policies have been developed defining protections and support to reporters, in line with Regulation (EU) 376/2014.	occurrence reporting, investigation and follow-up.	

Guidance for all levels

Just culture should not be seen as an isolated, separate phenomenon within the organisation. It is an outcome of open reporting (a prerequisite for a just culture) and it is part of the organisation's overall culture, in much the same way as safety culture. Just culture is fundamentally concerned with safety, with the knowledge that is gained from disclosing information about a reporter's experience and how this is used to derive safety interventions and improvements that lead to more effective system safety.

Evidence for a just and 'open climate' can be sought in a number of different ways that can assess just culture and its effectiveness. An organisation that has a just and 'open climate' will be one that:

- emphasises that the purpose of just culture is to gain access to knowledge of the safe functioning of service provision, and does not place an undue emphasis on 'gross negligence';
- embraces a reporting and investigation process that recognises the value of the reporter's experience and the contribution and value that this knowledge brings to the safe and effective provision of services;
- emphasises the value of knowledge gained from self-disclosure by those involved in an occurrence;
- creates an environment where disclosure does not stigmatise individuals and works with peer groups as well as staff representatives to foster a climate of open discussion about experiences — reporters will share their experiences to increase the learning potential.

To achieve this level of confidence, trust is required within the organisation as a whole, but especially between the safety, supervision, managerial and operational actors. This is sustained by engagement, through an active discussion, and with a shared belief within and across organisational groups that fairness and the safe provision of services is the objective.

Guidance for the Managed Level

Just Culture

At the 'Managed' level, the just-culture principles in an ANSP will have been implemented. For implementation to have taken place, a number of enablers will need to have been established:

1. A just-culture policy will have been developed and adopted. This policy will have evolved through the evolution of a just-culture discussion through engagement between the just-culture decision makers in an ANSP as well as others who can help create the just-culture dialog, e.g. staff associations, professional bodies, supervisory staff. This policy will reconcile how different functions and roles within an organisation understand safety. Understanding the issues and points of conflict between those inside and outside the Operations room and

how differences are managed is one indication of the commitment to just culture within the ANSP by managers, safety teams, and staff associations.

2. The deliberations around what is gross negligence, or, more importantly, what satisfies the provisions of Article 16 point 10 of Regulation (EUNo) 376/2014 with regard to wilful misconduct and manifest disregard of obvious risks will be explored and discussed with all internal stakeholders, e.g. staff associations. The interpretation of these provisions has consequences. An ANSP that is at the 'Managed' level will have developed positions and processes that manage the situations where an occurrence is considered to have breached the thresholds. The context and circumstances of each occurrence will be recognised as being potentially different and thus the different contexts need to be understood. Occurrences will be considered not solely in terms of what the people closest to the event did, but there will be evidence that wider systemic factors are or will be explored and examined, e.g. training, technical system limitations, procedure under-specification, supervisory decisions, the use of ATFCM, etc.

3. A process will be in place that arbitrates and adjudicates decisions with regard to the determination of what is deemed as 'acceptable' and 'unacceptable' behaviour, especially with reference to Article 16 point 10 (a) and (b) of Regulation (EU) No 376/2014.There follows another element of the process where these decisions are covered.

Training and preparation of staff is fundamental to implementing a just culture. The ANSP will have completed some form of initial training, and will then be engaged in delivering further training across the organisation to refresh the policy and process as well as to keep the concept of just culture alive. Attendance will have covered managers, supervisors and others involved with administering just culture. Finally, an ANSP that has achieved the 'Managed' level will recognise that just culture is not a component that is 'stand-alone' or is, and of itself, the 'end point' of safety within an organisation. Just culture is in the service of safety and is an enabler or a necessary part of the evolution to another iteration of system safety. This will be observed in the ANSP's or organisation's dialogue around safety.

The value of reporting

Reporting of occurrences is recognised more as an activity that complies with EU legislation and with the SMS, and a means to enhance safety by deriving a risk landscape driven by a causal-factors scheme. The causal-factor scheme will emphasise an organisation's understanding of safety that reflects the human as the cause of events. These will be derived by an investigation process that is predominantly focused on 'what' happened as opposed to 'how'. 'Why' it happened is expressed in terms of human behaviour, i.e. human performance. Some events will be found to defy explanation in these terms and lead to some investigations being undertaken with an alternative perspective, but it is not widespread. Options may include: a view of what happened based on second stories; human error as the start of the investigation as human error is a symptom of a deeper problem within the system; a view of what happened from the local rationality of those involved (i.e. why did it make sense to them to do what they did?); and a system's view of what happened: multiple perspectives from those involved including the wider organisational view.

What is 'acceptable' and 'unacceptable behaviour' will be something, at the 'Managed' level, that will still be inferred from the investigation. Examples are micro-matching what people did with the view of what should have been done as defined in rules, procedures,

manuals; consequences of individual decisions and actions are emphasised, representing a narrative that is close to the proximity of the event; causal explanations will emphasise the human as cause despite some exploration of the context surrounding the event.

There is evidence, therefore, that the limitations of the human-centric approach are recognised and is evidenced in both the investigation narrative and recommendations.

The Reporting culture

An ANSP at the 'Managed' level will use the monthly counts of occurrence reports filed as an indication of open reporting, but will recognise that the nature of the reports filed or the quality of the process is contributing to a reluctance to report by those who are expected to report. In some cases, this may be directly related to the consequences of just culture. It is known that when consequences (e.g. disciplinary action, retraining, or the application of organisational justice) that result from an occurrence report being filed, there can be a marked reduction in the level of occurrences reported.

The ANSP or the organisation will have put in place occurrence-reporting mechanisms that will support the willingness to report. For example:

- feedback to those who report that is timely and meaningful;
- growing recognition that those who report have unique knowledge and understanding of the operational situation and event that can contribute to making the operational environment safer and/or more effective;
- the reporting processes and methods, and the way that investigations are conducted are consistent with the just-culture policy and principles;
- the value of reports is acknowledged and the safety interventions or improvements that flow from reporting are fed back to reporters;
- recommendations for safety improvements have 'owners' who have the authority to enable the recommendations to be fulfilled.

Disclosure

Regulation 376/2014 requires that organisations shall not make available or use information on occurrences for any purpose other than the maintenance or improvement of aviation safety. Nevertheless, disclosure of safety data to external sources can expose those reporting as well as the organisation to, amongst other things, criticism, potential legal action and unwarranted interference. As a result, processes should be developed, tested and re-evaluated based on feedback from those involved in the occurrence reporting system. Such processes should protect both those who do disclose as well as facilitate the occasions where there is a legitimate reason for disclosure. They should be clear to all those involved.

In some cases, ANSPs may have proactively engaged in discussions with external stakeholders, e.g. NSAs, to establish working arrangements to protect safety data that is disclosed to them or other external bodies that have a legitimate claim to safety data and received assurances through protocols or agreements to protect from unwarranted use of release into the public domain of such data.

Note that Article 15 of 376/2014 "confidentiality and appropriate use of information" applies in all cases.

Guidance for the Assured level

Just Culture

An ANSP that has evolved to the assured level will have overcome many of the problems associated with the implementation of Just Culture. This means that it has navigated its way through the tensions and conflicts that are a natural part of a change in the relationships between the many stakeholders with an interest in Just Culture. These tensions and conflicts are primarily involve the occurrence reporting and investigation process.

Evidence that an ANSP has matured or demonstrates that it has attained level D can be found in diverse ways:

- Processes that support the development and implementation of Just Culture have evolved through experience which has in turn led to a base of knowledge that shapes solutions that support the ANSPs specific needs.
- As a result, Just Culture is undertaken with a critical understanding that is accessible and used to explain the evolution of Just Culture within the ANSP.
- There is less variation in the interpretation and operationalisation of Just Culture by managers and the operational community do not misinterpret a “no blame culture” as being a Just culture
- Underpinning these facets is the ANSP’s active and persistent commitment to arrangements surrounding disclosure of occurrence reports including, but not limited to, informal and formal cooperation with the judiciary and NCA.

The value of reporting

At the assured level, occurrence reporting can be expected to have evolved in ways that have developed confidence within the organisation’s commitment to the safety benefits that the underlying philosophy of Just Culture is intended to facilitate. As a result, there is a source of safety data from within the organisation that is multi-faceted as well as diverse.

It can therefore be expected that an ANSP manages safety occurrence reporting and investigation in a manner that values the understanding that discussing operational experiences brings. This understanding leads to different questions, perspectives and lines of investigation that draw out safety interventions that will go beyond the usual scope of investigations e.g.

- Managers and those who actively receive and use the output of investigations, acknowledge that an outcome of an investigation leads to new knowledge and questions to ask about how the work system undertakes its daily provision of services function.
- At the assured level, the ANSP’s occurrence report narratives and summaries explore and present findings about what and how events occurred, not who was responsible. There will be evidence of investigators using investigation techniques such as second stories and narratives that make use of views of local rationality of actors.
- This is enabled by the investigation and safety functions emphasis on structural features of the operational environment that shape safe provision of services

As a consequence, there will be demonstrable evidence that investigation narratives use language that is neutral and will include narratives from multiple perspectives that lead to a broader narrative.

The reporting culture

If a permissive reporting climate exists, reporters will submit occurrence reports that are more useful and insightful than that of a less permissive reporting climate. Such a change may be enabled because fears or consequences of disclosure are reduced (not eliminated) which facilitates disclosure of events that would once have led to recriminations and stigmatisation.

- The occurrence reporting and investigation process will have contributed to the confidence of operational and non-operation staff in the reporting and investigation process.

	• There will be qualified recognition by staff, but not a belief, that occurrence reporting and investigation is in the service of safety and a safe production* function. • The ANSP will demonstrate that the value of occurrence reporting from all staff is meaningful and this is reinforced and remains prominent in the day to day undertakings between management and staff; dialogue around Just Culture is one that emphasises safety and not consequences • It is recognised that practitioners have a relevant and meaningful contribution in the understanding that is gained from occurrences and incidents. This leads to a constructive involvement in occurrence reporting and consequential safety interventions for those who submit reports. • There will be evidence that safety interventions have been informed by those involved in the events or by groups closely involved in operations relating to particular events. • Many of those (but not all) subject to investigation as well as the wider organisation have the prevailing view that occurrence reporting leads to accurate and meaningful reports and that the ANSP uses this to implement relevant safety improvement. The use of safety promotion is constrained internally in favour of safety interventions or further exploration of the event from different perspectives e.g. second stories Disclosure At the assured level, an ANSP has developed diverse relationships with a variety of actors with legitimate interests in the disclosure. • ANSPs will expect that there will be circumstances where organisational culture will be tested, when events invoke consideration of Just Culture and have been disclosed. • ANSPs at the assured level will be able to demonstrate with confidence that all stakeholders (internal and external) see that a just and open climate for reporting rarely leads to consequences involving or behavioural or social control. • Staff have confidence in the arrangements surrounding the disclosure of information, which are within the constraints of Article 15 of 376/2014 “confidentiality and appropriate use of information.” • There will be evidence of confidence in the organisation’s ability to protect the legitimate interests of employees, but also a recognition that there are vested interests that can have an influence outside and beyond that of the ANSP. There will be evidence that an ANSP at the assured level will be aware and have made some preparations for these eventualities. The associated policies will be clearly understood and published.

Component 1: Safety Culture				
Study Area 1: Development of a Positive and Proactive Organisational Culture				
Question 1.3	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Regular assessment of safety culture and an improvement programme.	The organisation does not see the need to have a safety culture assessment mechanism in place. No improvement programme is necessary as there is no belief that safety culture makes a contribution to safe production*	At a given moment, the organisation evaluates or learns how employees understand safety, in the belief that this is an assessment of safety culture. The safety culture assessment method is limited to simple binary questions (such as yes/ no). The organisation is treated as a single group of respondents; it does not recognise sub-cultures. The assessment (preparation, collection, data analysis) is conducted in an informal manner. Analysis of the results is limited to simple statistical measurements.	The organisation undertakes periodic assessments of safety culture, based on the organisation's need. The assessment method is questionnaire based. The questionnaire is developed using the body of knowledge from safety culture studies and includes stratified samples where different groups are identified and sampled. Preparation for the assessment is made formally including a commitment and endorsement from the executive. Analysis of the results is undertaken using structured approaches that are able to contrast the views of different organisational groups and sub-cultures. The results are communicated to the wider organisation. The output of the assessment is used by management in improvement programmes.	The organisation undertakes assessments of safety culture, keeping in mind the risk of staff disengagement if these assessments are carried out too frequently. The assessment methodology is multi-faceted. • Questionnaires are designed around areas of interest for the executive/management as well as what matters to staff. • The design of the questionnaire is trialled and involves staff associations. • The limitations of questionnaire-based assessments are resolved by using focus groups or other such mechanisms. • This provides an understanding of the results as well as meaningfully and purposefully engaging with staff. Analysis of results is structured and explores the differences between different sub-groups/cultures of the organisation.

				Analysis is designed to explore the underlying meaning of responses. The emphasis in assessments is to engage and understand what staff have to say. Focus groups are undertaken that use mixed groups of personnel. The results are communicated widely around the organisation, and are discussed with informants, for example through briefings. The output of the assessment is used by management in improvement programmes developed from the results in a collaborative manner with staff and staff associations. The results are benchmarked with external organisations.
	Guidance for all levels Measuring and assessing safety culture is a practice that allows organisations, if undertaken in a systematic and structured way, to gauge the state and strength of their safety culture and to identify the stressors that are influencing it. There are numerous and varied ways to assess and measure safety culture. All have strengths, weaknesses and limitations. Therefore, organisations that undertake measurement and assessment of the safety culture will need to demonstrate an understanding of these and explain how: • the choice of the assessment method was influenced by consideration of strengths, weaknesses and limitations; • these were considered when analysing and reviewing result data; • these were used to determine the safety culture. One of the most popular instruments for assessing and measuring safety culture is through a 'Safety Culture' questionnaire. A safety-culture questionnaire can be defined as a means to conduct a survey that aims to elicit the views and attitudes of respondents about safety in an organisation. These can include values (said and done), beliefs, assumptions, and attitudes towards others. These views and attitudes can be grouped into themes that can be drawn from models of organisational safety culture. There are significant caveats around the use of methods such as questionnaires:			

	• They have been described as 'quick and dirty' thus not capturing respondents' views on long-term safety culture but instead the current prevailing safety climate; • Questionnaires alone do not provide the depth required to assess culture; • Safety-culture questionnaire results cannot be reliably interpreted or used at a generic level. • Unwanted influences on questionnaire respondents cannot be controlled. • Safety climate and safety performance have been found to be weakly correlated. • No distinction between perceptions and attitudes can be undertaken thus obscuring results obtained from a safety-culture survey questionnaire. • The questionnaires may not recognise and measure the safety culture variations between operations, technical and support functions. • If the analysis is limited to simple statistical measures they will not provide tangible explanations of the questionnaire results. <u>Guidance for the Managed Level</u> For ANSPs at the 'Managed' level, a safety-culture assessment will be carried out consistent with the 'quick and dirty' administration of safety-culture surveys. The frequency of such assessments will be compliant with ICAO Annex 19 and other documented processes (e.g. provisions of the SMS, included in unit safety plans, or as a follow-up to an earlier safety-culture assessment). The development of the assessment tool for an ANSP will be questionnaire based using both closed and open questions. The questionnaire will be designed in a formal and structured way and will be piloted to calibrate the results as well as to assess the scope for misinterpretation of questions and checking the sense of questions. It will target specific groups of staff in the ANSP allowing different views from different groups across the organisation as the basis for understanding different concerns as well as perspectives of safety. The results are openly shared and provide the opportunity to discuss these with senior managers. Before the administration of the questionnaire, there will have been engagement with staff associations for comments and subsequent agreement. The ANSP will have achieved senior management commitment to the safety-culture assessment prior to the administration. This commitment leads to an endorsement and promotion of the safety-culture assessment by managers at all levels. ANSPs at the 'Managed' level can be expected to use structured approaches to analyse survey assessment data. The results will be descriptive and will be able to compare and contrast the views of different groups' answers to the questions. Data from open questions will be found to be of particular use, but no provision will be made for following up the results within the assessment methodology. Where an ANSP has access to statisticians or operational research teams, more sophisticated statistical techniques may be used, for example, multi-variant techniques, non-discriminant statistics. At this level, ANSPs will not use techniques such as focus groups for follow-up discussions initially preferring to accept the interpretation of the analysis and results, with its acknowledged limitations, by management teams. However, there may be use of meetings where the results are presented back to staff who provide managers with feedback on the results. There will be limited use made of what is learnt. Safety improvements and interventions are driven and constructed by managerial teams. However, the experience and what is learnt from the assessment is seen as a valuable source of knowledge of the state of the organisation. This is a catalyst for change in the safety dialogue as well as its acceptance as a tool for managerial action to improve efficiency of

	operations and safety. The nature of the resultant safety interventions and improvements will be naturally superficial and very few if any that lead to changes within the operational environment. Results are published and fed back within the organisation but not shared externally. Guidance for the Assured Level At the 'Assured' level, the ANSP will be aware of the issue of staff disengagement if these assessments are too frequent and recognise that the frequent administration of the survey method does not allow interventions and improvements to have full effect such that it will change the respondents' perceptions and attitudes.

Component 2: Safety Policy and Objectives				
Study Area 2: Safety Policy				
Question 2.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
The safety policy of the organisation presents the organisation's commitment to both safety and its resourcing. The priority of safety within the organisation is also articulated.	The need for a safety policy has been recognised but one does not exist.	The organisation has drafted a safety policy. The draft safety policy is available for review within the organisation. The safety policy reflects the priority of safety in the organisation.	The safety policy has been signed by the most senior manager in the organisation (e.g. CEO) and has been formally published. The organisation conducts reviews of its safety policy at least once every five years to ensure that it continues to be relevant and appropriate. The organisation has sufficient staff and resources to implement its safety policy and related procedures. The safety policy has been communicated to employees throughout the organisation.	The safety policy is subject to ongoing review and improvement (e.g., when a new executive becomes accountable for safety or when there are indications that the policy does not adequately address the adequate level of commitment to safety). The organisation compares its safety policy to those of other ANSPs. If changes are made to safety policy, the organisation has a process to ensure that the SMS is updated to meet the amended requirements of the policy. Updates to the safety policy are communicated throughout the organisation.
	<u>Guidance for the Managed Level</u> The safety policy is formally published, either internally or externally, as appropriate and in accordance with the organisation's SMS. The concept of reviews is an ICAO requirement and good practice would be to publish internally, as a minimum, using local mechanisms and ensure that staff are aware of the policy and how to access it. There is a defined period of review within the organisation's safety policy. Everyone understands the role they play in delivering operational safety performance and they have the capability to discharge their role.			

Component 2: Safety Policy and Objectives				
Study Area 2: Safety Policy				
Question 2.2	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
The safety policy addresses key attributes of the organisation's approach to safety. These attributes will most likely include culture, visible endorsement, communication and safety reporting.	The organisation is considering which key attributes of its approach to safety should be included in its safety policy.	The organisation's approach to safety is reflected in its developing safety policy or related procedures.	There is a clear relationship between the organisation's safety policy and its SMS. The organisation's safety policy or related procedures determine how safety management is implemented throughout the organisation. The organisation's safety policy or related procedures define the procedures for safety reporting, including the types of behaviours that are acceptable and the specific circumstances under which disciplinary action might apply.	The organisation conducts periodic reviews of its approach to safety management and, where necessary, updates its safety policy and related procedures.
	Guidance for the Managed Level Safety policy is used to set safety accountabilities for senior management. There is a clear relationship between the safety policy and the procedures in the SMS. With respect to disciplinary actions, organisations need to consider the impact of such disciplinary actions on establishing and maintaining a just and open reporting culture. They should consider the protections afforded by Regulation (EU) No 376/2014, and specifically Article 16, points 9 and 10. Organisations need to clearly state in their safety policy the circumstances and reasons why actions might be considered to fall within the scope of point 10.			

Component 2: Safety Policy and Objectives				
Study Area 3: Safety Accountabilities				
Question 3.1	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
An approved, clearly documented, and recognised system for the management of safety. Management structure, responsibilities, accountabilities and authorities are clearly defined and documented.	No formal designation of responsibilities, accountabilities or authorities for the management of safety exists.	The organisation has identified its safety responsibilities, accountabilities and authorities. Line managers accept responsibility for management of safety.	The organisation has defined and documented authorities, responsibilities and accountabilities for safety management. The organisation has an accountable executive who has ultimate responsibility for the management of the SMS. The wider leadership team takes responsibility for the application of the SMS. The organisation reviews safety responsibilities after significant organisational changes.	The organisation reviews safety authorities, responsibilities and accountabilities at least once every five years to determine whether they are suitable and effective.
	Guidance for the Defined Level Line management is usually responsible for the implementation of procedures or practices which are required by the SMS, with specific responsibility for the development and application of the SMS. These responsibilities are not yet formally defined. Guidance for the Managed Level The wider leadership team is the team of people who report directly to the accountable executive.			

Component 2: Safety Policy and Objectives				
Study Area 3: Safety Accountabilities				
Question 3.2	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
A clearly defined safety management function / safety manager that is independent of line management.	A safety management function within the organisation has not yet been formed to develop the SMS.	The organisation has a safety management function or safety management position responsible for developing and maintaining the SMS.	The safety management function or position is independent of operational line management. The safety management function or position has the authority to develop and maintain an effective SMS. The safety management function or position has access to the resources required for the proper development and maintenance of the SMS.	Leadership, at the highest level, recognises its role in the SMS and actively supports its development, implementation, maintenance and promotion throughout the organisation (including support departments).
	Guidance for the Managed Level The safety management function or position independence of operational line management means that it reports and is accountable directly to the highest organisational level. Guidance for the Assured Level Safety leadership — the head of the organisation and senior management have made a commitment to safety and its application by fostering a just culture throughout the organisation. Air traffic service providers (ATSPs) should determine their own safety responsibility set as appropriate to their individual organisations. Individual job titles may differ from one organisation to another, an example of this follows: The head of the organisation might be termed the 'Chief Executive', and the safety manager might be called the 'Safety Director'. Support departments are intrinsic parts of an organisation; while not directly being part of the ATS provider, are involved in day-to-day operations in providing safe operations, e.g. CNS, MET, AIS. The SMS is an effective management system which assists decision-making at the very highest levels. The executive board is actively involved into safety-promotion activities.			

Component 2: Safety Policy and Objectives				
Study Area 3: Safety Accountabilities				
Question 3.3	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Safety management accountabilities and responsibilities are understood clearly and accepted by all relevant staff and contracted staff.	Knowledge of the principles underpinning SMS among all staff and contractors is negligible.	Relevant staff and contractors apply rules and procedures to their tasks. Relevant staff and contractors are at least partially aware of their roles and accountabilities in the SMS.	Relevant staff and contractors are aware of how their actions affect the safety of the wider operation. Relevant staff and contractors are aware of how the actions of others affect safety. Accountability for safety in the organisation is understood by all relevant staff and contractors.	Relevant staff and contractors throughout the organisation have responsibility for promoting and improving safety. The organisation reviews and assesses documented safety management responsibilities at least once every five years. Relevant staff and contractors take proactive, day-to-day action to have rules and procedures changed where they identify a potential safety benefit.
	Guidance for the Defined Level Relevant staff and contractors are those whose activities can impact on the safety of operations. Relevant contractors are those who are required to apply the organisation's SMS. For example, in the case of contracted staff that clean the OPS room, the supervisor would have accountability for ensuring the staff are appropriately briefed. The staff themselves would not have the accountability. Guidance for the Assured Level Staff and contractors believe that it is their responsibility to take action to have rules and procedures changed where they identify a potential safety benefit. The documented safety management responsibilities are the responsibility of the safety manager and probably need to be endorsed by a safety review board (SRB). The internal SRB provides internal governance for the organisation. The members of the SRB are typically the senior managers accountable for the safety of the organisation. This SRB will, for example: • assure that safety risks and safety issues are proactively identified and effectively managed; • measure safety performance against safety targets and assure that appropriate action is taken; • assure that safety improvement actions across the organisation are prioritised and coordinated effectively, and that responsibility for follow-up action is allocated;			

	• own and support SMS development; specifically, review safety policy at least once every 5years, taking into account best safety practices in similar industries; • provide direction for the continuous improvement of safety, including the recognition of best practices and implementation of lessons learned from internal and external sources; • assure that the safety accountability and responsibilities of the head of the organisation are reviewed regularly and maintained; • coordinate and track actions and recommendations arising from the Safety Oversight.

Component 2: Safety Policy and Objectives				
Study Area 4: Coordination Emergency Response Plan				
Question 4.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Emergency response procedures and an emergency response plan that documents the orderly and efficient transition from normal to emergency operations and the return to normal operations.	The organisation has sound primary air traffic management systems but does not have redundant capabilities or back-up systems The organisation has procedures and at least some redundant capabilities and resources to manage some abnormal and unexpected situations.	Emergency response procedures have been developed, documented and distributed to the appropriate staff.	The organisation both rehearses and updates emergency response procedures at least once per year. The organisation's emergency response plan has been properly coordinated with the emergency response plans of other organisations that it must interface with during the provision of services (ICAO Annex 11 – 1.4).	The organisation's emergency response procedures and emergency response plan have been rehearsed through live or simulated exercises at least once in the past three years. The organisation uses indicators to assess the effectiveness of its emergency response procedures, as tested during the regular exercises and rehearsals.
	Guidance for the Defined Level There are procedures and resources to cope with abnormal and unexpected situations. Guidance for the Managed Level The organisation ensures that emergency response procedures are updated at least once per year, e.g. contact information. To achieve the managed process, organisations should have a defined and documented process that has been shown to work. Emergencies include sudden system failures or other abnormal or unexpected situations, such as: • the loss of major air traffic systems, (e.g. radar display picture, electronic flight progress strip system, standby and emergency communications on multiple frequencies due to external interference); • the loss or failure in support facilities (e.g. power, air conditioning, building integrity); • aircraft emergencies (e.g. emergency descent, hijack, air defence security); • disruption of air traffic services (e.g. emergency dispersal of traffic, closure of an adjacent air traffic centre, runway closure leading to mass diversion). The 'plan' should encompass what is to be done, including the interactions with other organisations (e.g. police, emergency services) and the 'procedure' should describe how it is to be done. See requirement ATS.OR.200(1)(iv). For example, Letters of Agreement or any other form of service agreement are in place with organisations and support the emergency response plan. Guidance for the Assured Level			

	To reach the 'Assured' level, the organisation should be able to measure the output by running a simulation assessed by a combination of qualitative and quantitative indicators. The simulated exercise may include, for example, aircraft accident, hijacking events, environmental disaster, access to the OPS room, bomb threat, etc.

Component 2: Safety Policy and Objectives				
Study Area 5: SMS Documentation				
Question 5.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
A formal SMS that meets all applicable safety and regulatory requirements.	There is no SMS in place. There may be deviations from safety regulatory requirements. The need for an SMS implementation plan is recognised.	The organisation has started to implement its SMS. The organisation has developed an implementation plan to ensure that its SMS will meet regulatory requirements.	The organisation's SMS meets all safety regulatory requirements. The organisation has completed all work required in implementing the SMS and meets all safety regulatory requirements.	The organisation exceeds minimum compliance requirements by operating at a higher standard of safety management.
	Guidance for the Managed Level There is a defined function responsible for ensuring that the SMS continues to meet regulatory requirements. There is a document in the SMS that maps the SMS against current regulatory requirements and shows that those requirements have been satisfied.			

Component 2: Safety Policy and Objectives				
Study Area 5: SMS Documentation				
Question 5.2	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Clearly defined and documented safety standards and processes.	Operations manuals do not contain specific safety management procedures.	The SMS implementation plan includes requirements for: • Safety policy and objectives • SMS requirements • SMS processes and procedures • Accountabilities, responsibilities and authorities • Outputs such as investigation reports, performance trend reports and safety documentation to support changes to service delivery	SMS is implemented. Safety management documentation is readily available to appropriate staff.	The organisation monitors its SMS processes and outputs regularly to identify any problems employees may have in applying the SMS. Measures are taken without delay where there is a safety impact.
	Guidance for the Managed Level The organisation has published the necessary procedures, processes (e.g. SMS policy/framework) and tools (e.g. collecting hazards/deficiencies, feedback, lesson dissemination). Guidance for the Assured Level There should be evidence to show that relevant SMS processes and outputs (at least safety policy, SMM, occurrence reporting and investigation procedures) are reviewed on an annual basis (e.g. internal audits, peer review, safety board meetings), and measures are taken without delay when a safety relevant impact from the investigation processes or performance reports have been identified.			

Component 2: Safety Policy and Objectives				
Study Area 5: SMS Documentation				
Question 5.3	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Safety management documents are regularly reviewed, assessed and maintained.	There is no formal process that maintains the SMS, nor is there an identified authority (or authorities) responsible for the updates.	The organisation has an informal process to address amendments to its SMS. Someone within the organisation is responsible for updating the SMS.	The organisation has a formal process for maintaining all safety management processes and procedures. The organisation's SMS is regularly reviewed and updated.	The organisation conducts formal reviews of any organisational changes that could affect safety and/or the safety management framework. The organisation assesses the usability and accessibility of its SMS processes and documents.
	Guidance for the Managed Level 'Formal process' means that the description of the responsibilities, input, output, activities, etc., put in place by the organisation for maintaining its safety management processes and procedures is formalised (documented) in the SMS documentation and is up to date. 'Regularly reviewed' means that the SMS is reviewed and, if needed, updated at least at the following occasions: • whenever there is an organisational change or a change in the provision of services that can have in impact on the SMS; • when analysing the outcomes of the safety monitoring system and SMS audits; and in any case every 5 years (in line with point 14.1). Guidance for the Assured Level The types of justifications include the following: • evidence and/or outputs stemming from the formal review process; • feedback on its SMS processes and documents from staff working within the SMS procedures.			

Component 3: Safety Risk Management				
Study Area 7: Risk Management Process				
Question 7.1	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Hazards to operations are reported and assessed.	Hazards to operations are not highlighted by either managers or staff. However, risks to operations are recognised.	The organisation is developing processes to assist in the identification and reporting of hazards. The organisation is developing processes to assess the risk that hazards pose to operations. The organisation is developing processes to document the existence of hazards and their risk levels.	The organisation has a sufficient number of qualified employees to assist in identifying and assessing hazards. The organisation has taken reasonable steps to identify all hazards affecting its operations. The organisation's hazard identification process is based on a combination of reactive, proactive and predictive methods of safety data collection. The organisation regularly includes stakeholders in its identification and assessment processes. The organisation addresses identified hazards as part of its process to improve safety performance.	The organisation reviews and updates its hazard identification and analysis processes at least once every five years. The organisation monitors whether the hazard identification process is appropriately applied.
	Guidance for the Managed Level To identify threats, an ANSP should present a range of risk/hazard identification techniques to assist staff in identifying potentially unsafe events. In simple terms, this means determining what events can happen and when, where and why. There are a range of techniques that can be used to determine these elements. The technique used will depend upon the scenario under development and the life cycle stage at which the risk management activity is being undertaken. The organisation ensures that it dedicates sufficient resources to assist in the identification and assessment of hazards, and that these staff are adequately trained in efficient techniques to identify and assess hazards and their risks. These techniques of hazard identification includes combination of reactive, proactive and predictive safety data collection and measurement. Lagging indicators are reactive measures whereas leading indicators are proactive measures: • Reactive: mitigate severity of safety events and threats;			

	• Proactive: identify safety concerns before safety events happen; and • Predictive: inputs to and outputs from the safety system are used to predict future outcomes, and anticipate future exposure based on past performance data. See Regulation (EU) 2017/373, and GM1 ATS.OR.200(3)(i). The organisation involves all relevant stakeholders in the hazard identification and assessment process, including internal (e.g. operational staff) and external stakeholders (e.g. users of its ATC services or providers of services used in the provision of ATC services) setting up multidisciplinary teams, when needed. Guidance for the Assured Level Given the central role that risk management plays in an ANSP's SMS, it is essential that practices, processes, tools and policy are monitored and improved or updated as necessary. Such continuous improvement is supported by an effective review and monitoring cycle that may include the following: • measure risk management performance against established indicators; • measure progress against the goals set in the Risk Management Implementation Plan; • review the framework in light of internal experience and external benchmarking; • expand risk techniques based on industry experience (e.g. adopt the barrier model); • test compliance with the requirements of the risk management process; • report on how effective the organisation has been in meeting the objectives described in its risk management and safety policies. Emerging risks may include drone operations, commercial space launches, etc.

Component 3: Safety Risk Management				
Study Area 7: Risk Management Process				
Question 7.2	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Assessed risks are mitigated or controlled.	There is limited understanding of the need to mitigate or control risk, even when risks are recognised.	The organisation acknowledges the need to mitigate and control risks. The organisation has proposed the level of risk that individual managers can approve. The organisation is establishing processes to document how appropriate controls and mitigations should be selected.	The level of analysis, assessment, mitigation and control of risk being undertaken is proportionate to the risk. The organisation documents and enforces the level of risk that its managers can accept.	The organisation reviews the level of risk it can accept at least once every five years on the basis of its performance. The organisation reviews its level of risk to ensure it is in line with the risk tolerance level of its governing body (e.g., Board).
	Guidance for the Defined Level The organisation is establishing processes to document how appropriate controls and mitigations should be selected, for example, through the hazard identification process. Controls are preventative mitigations and/or recovery mitigations. Guidance for the Managed Level This level of risk that can be approved when it is documented. When an individual or organisation accepts a risk, it does not mean that the risk is eliminated (i.e. some level of risk always remains, called residual risk). Rather, the individual or organisation accepts that the residual risk is sufficiently low. There is a less demanding process for analysis, assessment, mitigation and control when the resulting risk is minor. The organisation ensures that managers can only accept risk levels that have been determined and documented. Guidance for the Assured Level The organisation uses actual operational performance data to review its risk criteria, meaning the level of risk that the organisation can accept. To achieve this level, at least 5 years of performance data are required to be used in the review. This level of risk is ensured to be in line with the risk-tolerance level defined for the safety board of the organisation.			

Component 3: Safety Risk Management				
Study Area 7: Risk Management Process				
Question 7.3	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Risk controls** are monitored for effectiveness, and remedial action is taken if controls are not working effectively.	There is little understanding of what constitutes a risk control** at either a system or local level. The effectiveness of these controls is not evaluated.	There is a reasonable understanding of risk controls** in the organisation. The organisation is developing processes to identify, assess and control operational risks.	The organisation has formally documented its risk control** processes. The organisation is implementing risk control processes. The organisation is identifying and documenting operational risk controls. The organisation has implemented processes and practices that allow it to measure its operational risk baseline***.	The organisation regularly monitors the effectiveness of risk controls**. Where deviations or deficiencies are identified, the organisation has proposed improvements to the risk control framework. The organisation's long-term investment programme provides for improvements in safety that address key risks (e.g., safety tools, additional staff, training). The organisation identifies and manages performance deviations and deficiencies from its operational risk baseline***.

	Guidance for the Defined Level Risk control, also known as hazard control, is a part of the risk management process in which methods for neutralising or reducing identified risks are implemented. Controlled risks remain potential threats, but the probability of an associated incident or the consequences thereof have been significantly reduced. Risk controls come in different types, such as procedures, technological (either software or hardware), or training. In other words, risk controls can be design changes to the functional system aiming to control safety risks (or hazards) that have been identified by the organisation. Sometimes, risk controls can be integrated into pre-existing parts of the systems, for example, risk-specific information can be added to pre-existing regular briefing sessions. **Risk control framework is the combination of all reactive, proactive and predictive measures and actions within the ANSP to collectively and continuously manage identified risks/hazards. (from IR (EU) 2017/373 ATS.OR.200 (2)) ***Operational Risk Baseline relates to the top safety objective of an organisation “to ensure that its contribution to the risk of aircraft accidents is minimised as far as is reasonably practicable” (from IR (EU) 2017/373 ATS.OR.200 (2) (iii)). Guidance for the Managed Level The ATS organisation has to develop risk-control processes to identify, assess and control safety risks. These processes should be documented as part of its SMS processes, and the organisation will effectively apply them. These processes may be embedded in the wider processes of monitoring the behaviour of its functional system within its context of operation and the management of changes to the functional system of the ATS organisation. They will aim to identify, manage and mitigate associated risks to the behaviour of the ATS in the context where it is provided and to any change to the functional system that is proposed for implementation, to an acceptable level, as appropriate, by using specific and verifiable safety criteria. The resulting risk controls need to be clearly identified and documented to allow a proper monitoring of their effectiveness. Guidance for the Assured Level When these risk controls are monitored periodically, the level ‘Achieved’ will enable the ANSP to claim the ‘Assured’ level. The organisation should be able to demonstrate when was the last time that the review took place, and that it was in line with the stated periodicity. Deviations or deficiencies identified in the monitoring should be part of the risk-control process, and it should trigger changes to the risk controls. This means that the risk-control process should include a process to develop corrective actions, e.g. Further changes to the functional system. There is a formal responsible within the organisation to ensure improvements in the risk-control framework. There is a corrective-action procedure that monitors performance deviations and deficiencies from its operational risk baseline.

Component 4: Safety Assurance				
Study Area 11: Safety Reporting				
Question 11.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
A continuing organisation-wide process to report and investigate safety occurrences and risks.	There is an informal system in place for reporting safety occurrences, but reports are not reviewed systematically. The reporting system is not organisation-wide. Investigation is done on an ad hoc basis with little or no feedback.	The organisation investigates incidents, even if there is no formal investigation process. The organisation provides feedback to staff on investigation findings.	The organisation has a formal reporting and investigation system. The organisation keeps formal records of all incident and accident reports and related information. Investigations result, if necessary, in corrective and preventive action. Staff reporting safety occurrences can also suggest ways to solve problems identified in their occurrence reports. The organisation provides feedback to those who report occurrences or hazards of any corrective actions taken as a result of their report.	The organisation checks to ensure that all required occurrences have been reported. The organisation monitors the number of reports that require investigation but are yet to be investigated. The organisation measures the quality and effectiveness of its investigations.

	Guidance for the Defined Level The feedback provided to staff in the 'Defined' level is of general nature and it is done on an ad hoc basis. Guidance for the Managed Level The organisation has a formal reporting and investigation system, including both mandatory and voluntary occurrences. The distinction between mandatory and voluntary reports is given in Regulation (EU) No 376/2014. There is a formal process in place to ensure that corrective and preventive actions are monitored and managed. The occurrences and related investigation information is recorded and personal data are secured. De-identified information can be disseminated within the organisation, as required. Personal details are protected and only used to investigate occurrences with a view to enhancing safety. Staff are allowed, and even encouraged, to provide solutions either during the initial reporting or during the incident interview, as appropriate. The occurrence-reporting system has formal ways to provide feedback to occurrence reporters, as a minimum, either with the result of investigations or corrective actions to be implemented. Guidance for the Assured Level The organisation actively reminds staff and promotes the reporting of occurrences, either by safety-promotion campaigns, surveys and/or audits that emphasise the importance of occurrence reporting. The organisation measures the quality and effectiveness of its investigation process. This concerns more the quality of the process, and less to the effectiveness of the investigation output. In particular, the number of open occurrences that require investigation, thereby monitoring the time taken to close the investigation. Good practices include, for example, to apply a moderation process to ensure consistency of the investigations and that the data are recorded, stored, and are of adequate quality and available for future analysis. Notifications on relevant ATM/ANS-related occurrences that have been reported by other organisations (e.g. operators/pilots) are included in the investigation process of the ATS provider. They may also be used for random testing that these occurrences are reported internally by its staff. Where available, automated safety data recording systems are applied and information used in the identification and investigation of occurrences. The quality of the investigation process is reviewed in the course of internal audits, surveys and peer-review meetings (e.g. safety experts from adjacent ANSPs). The results from external oversight activities are used in order to improve not only the quality but also the effectiveness of the investigation process. Safety-promotion activities (e.g. briefings, safety days, leaflets in the OPS room) focusing on mandatory occurrences are conducted regularly.

Component 4: Safety Assurance				
Element 12: Safety Surveys and Audits				
Study Area 12.1	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Internal and independent (external) safety surveys and SMS audits.	There is no plan to conduct systematic safety surveys and SMS audits. Safety surveys, SMS audits, and gap assessments are conducted on an ad hoc basis.	The organisation has a plan either in place or under development to formalise how SMS audits are conducted. The organisation has carried out any SMS audits.	The organisation has a formal process describing how to conduct SMS audits. The organisation conducts internal SMS audits at least annually. SMS audits have resulted in the development and implementation of improvement plans.	The organisation carries out safety surveys in addition to SMS Audits. The organisation's safety surveys are carried out systematically. The organisation has established a process to analyse trends arising from safety surveys and SMS audits. Where appropriate, the organisation conducts reassessments to confirm that any implemented recommendations arising from safety surveys and SMS audits have been successful. The organisation commissions external surveys and SMS audits at least once every five years. The outputs from safety surveys and SMS audits are incorporated (as appropriate) into operations or the SMS. The organisation has established a process that requires external data (e.g., pilot non-conformance with ATC instruction trend information) to be considered when selecting topics for operational safety surveys and SMS audits.

	Guidance for the Assured Level Safety audits focus on the integrity/compliance of the entire SMS whereas safety surveys proactively concentrate on particular elements of the SMS or procedures of specific operations (e.g. problem areas, areas of confusion). The surveys are used to identify 'what goes right' and 'what needs to improve'. Safety surveys provide a systematic review to recommend improvements where needed, to provide assurance of the safety of current activities, and to confirm conformance with applicable parts of the SMS. During safety surveys, auditors examine procedures or processes related to a specific operation to identify weaknesses and/or areas for safety improvement within the aviation service provider's organisation. Safety surveys are conducted on the basis of a safety survey plan. The safety survey's results are documented in a survey report that also includes the actions to be taken. Lessons learned from safety surveys are disseminated and the actions identified are carried out within the defined time frame. The follow-up is conducted in a systematic way; in addition, the organisation is aware to what extent the lessons learned drive changes into the SMS. External surveys and SMS audits are carried out by an independent body (e.g. EUROCONTROL, SMS experts, and competent personnel from other ANSPs). The topics for safety surveys and SMS audits may be identified by means of safety performance (e.g. indicators, trends) as well as through suggestions from members of staff and occurrence notifications from different reporters/reporting entities (e.g. ATCOs, pilots, aerodrome personnel, operators). A risk-based approach can be applied if deemed necessary. Data gathered in the course of meetings (e.g. between ANSPs and operators, international best-practice exchange) may also be used to trigger a safety survey or SMS audit. External data could also be gained from stakeholders' 'complaints'.

Component 4: Safety Assurance				
Study Area 13: Safety Performance Monitoring				
Question 13.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
An established and active monitoring system that uses and tracks suitable safety indicators and associated targets (e.g., lagging and leading indicators).	There are no indicators, thresholds or formal monitoring systems in place to measure safety achievements and trends.	The organisation has a plan in place or under development to implement a safety performance monitoring system. The organisation has established safety indicators.	The organisation has implemented and formally documented a safety performance monitoring system. The organisation's safety performance targets are meeting all applicable regulatory requirements.	The organisation has developed targets to reflect its safety policy and risk tolerance. The organisation analyses trends for safety improvement purposes. The organisation has safety indicators covering all aspects of the system or operation. The organisation uses leading indicators to increase the range of safety metrics for measuring its performance. Safety management processes require that any negative trends in safety performance indicators be addressed.
	Guidance for the Managed Level Targets should not be set arbitrarily. Consideration needs to be given to: (a) the variation and sensitivities in the data monitored thus far; (b) the potential impact of system changes; and (c) the forecast impact of planned safety improvements. Set a realistic target that is based on the organisation's current performance with reference to previous performance, which results in a long-term view for the organisation. Indicators and targets have been set limited to meeting the safety regulatory requirements to verify the safety performance of the organisation. Statistical measures can be used to identify trends. Consideration also needs to be given to metrics that are not changing when they should be, or to risks that may be reducing but not quickly enough. Safety indicators need to cover the full scope of the organisation's operation and should consider all aspects of the SMS. Examples of safety indicators cover a range of metrics, such as safety incidents and associated risk monitoring, surveys, staff attendance and sickness, or implementation rates of safety policies, procedures and equipment. Leading indicators are early-warning measures that detect a change in the risk levels. For example, falling staffing levels can for a time be absorbed by longer working hours, but eventually more tired controllers may be more error prone. Hence monitoring			

	staffing levels can provide an indication of a change in the risk levels. Other examples include organisational finances and staff sickness rates. Safety improvements may also be forecast via implementation of new safety equipment — although care needs to be taken to include the risks associated with the change and to avoid being too optimistic. Either positive or negative, changes in the trends or outputs of performance indicators should be investigated and understood. Examples of leading indicators of safety may include: • sickness levels, • staffing levels, • staff turnover, • critical incident SM, • workload measures, • failure to comply with regulations, • unmitigated high-level risks, • observational methods (normal operation safety surveys). <u>Guidance for the Assured Level</u> A mature safety performance monitoring system will contain the following elements: monitoring, filtering, trend identification, analysis, mitigation-measure development, dissemination, verification, document, and feedforward. Note that 'feedforward' is meant to use leading indicators that put emphasis on anticipated or expected disturbances associated to risks as opposed to feedback that focuses, instead, on actual outcomes.

Component 4: Safety Assurance				
Study Area 13: Safety Performance Monitoring				
Question 13.2	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Methods to measure safety performance, which is compared within and across ANSPs.	Ad hoc safety performance data related to individual incidents is available, but there is no systematic approach for measuring safety performance.	At least some parts of the organisation have implemented safety performance measurement processes.	The organisation has implemented qualitative techniques to measure safety performance (e.g., opinion surveys, observational techniques, and overload reports). The organisation has implemented quantitative techniques to measure and verify safety performance. The organisation has implemented measures to validate the effectiveness of risk controls and mitigations.	The organisation conducts internal comparative analysis. The organisation works with stakeholders to conduct external comparative analysis. The results of the organisation's safety performance activities influence the operational safety survey and SMS auditing programme.
	Guidance for the Managed Level Quantitative techniques should cover more than the simple counting of events. They are used to establish genuine changes in the system performance and in implementing safety interventions, where appropriate. The organisation uses occurrence reports and investigation reports when evaluating the effectiveness of risk controls and mitigations. Due consideration is given to the contributing factors identified in occurrences and investigation reports. Guidance for the Assured Level Both internal and external comparisons of safety performance should be carefully designed to ensure that differences in the nature and size of the operation, or the data-collection methodologies, are identified and accounted for. Organisations should be proactive in identifying partner organisations with which to conduct comparative analyses. In addition to high-level comparisons, these partnerships may include monitoring where a particular unit or type of operation has no internal equivalent and thus is compared with a unit or type of operation at the other organisation. The aim of such comparisons is to highlight differences that should be examined in more detail in order to understand their causes. The staff should have the opportunity to review the comparative performance analysis of their unit.			

Component 4: Safety Assurance				
Study Area 14: Management of Change				
Question 14.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Documentation and reporting mechanisms are in place to ensure that internal and external stakeholders understand how safety risks introduced during and/or following implementation of change are managed and mitigated.	There are no change management processes in place even though the organisation recognises that impacts of change must be managed.	The organisation is developing change management processes to assess and quantify the risks of change. The organisation is developing change management processes that require the involvement of stakeholders.	The organisation's change management processes determine whether a change should be authorised. The organisation's stakeholders, including its regulator, are aware of these processes and their purpose. The organisation assesses the safety impact of changes and associated mitigations before they are introduced.	The organisation's change management processes are reviewed and updated at least every five years (e.g., from internal experience, external lessons learnt). The organisation assesses the performance of its risk controls and mitigations as part of its change management processes. The organisation's change management processes define and report transitional risk. The organisation's change management processes involve all relevant internal stakeholders. The change management processes are tailored for the importance and the resources needed for the change.
	Guidance for the Defined Level The organisation does inform other organisations and, where feasible, stakeholders affected by the planned change. Furthermore, the organisation and these other organisations, in coordination, shall determine: (1) the dependencies with each other and, where feasible, with the affected stakeholders; and (2) the assumptions and risk mitigations that relate to more than one organisation or stakeholder. Guidance for the Managed Level The organisation’s change management processes consider the changes to functional systems, i.e. a combination of procedures, human resources and equipment, including hardware and software, organised to perform a function within the context of ATM/ANS and other ATM network functions. The organisation should not start the implementation of any part of the change that has the potential to affect the safety of the services until a valid assessment for that part of the change exists and, if applicable, it has been authorised by the regulator. Guidance for the Assured Level			

	A total system approach to the management of change is employed. The ATM system is considered as a whole rather than focusing on the human element. There is a strong relationship between in-service monitoring and design. Change assessments employ a common set of operational hazards and they are monitored in service to confirm the effectiveness of the risk controls and mitigations. Besides, monitoring criteria tailored to the change implemented are part of the change management processes. These criteria are specific to each change and hence ensure that the change will remain acceptably safe for as long as it is in operation. Transitional risks are risks linked to the transition from the current functional system to the changed functional system. These might be mitigated, e.g., by training depending on the nature of the change and the transitional risk associated to it.

Component 4: Safety Assurance				
Study Area 15: Continual Improvement of the SMS				
Question 15.1	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
An integrated planning process drives the continual improvement of the SMS.	An ad hoc or non-existent safety planning process is utilised by the organisation. Safety goals and objectives have not been identified or documented for the implementation of an SMS.	The organisation is preparing to develop a plan to show how it will improve the implementation and management of safety.	The organisation has established formal planning processes to drive improvement of its SMS. The organisation regularly evaluates the effectiveness of these planning processes.	The organisation has a plan to improve the management of safety risks. The organisation's plan to improve its SMS includes measurable safety management goals and targets.
	Guidance for the Managed Level The formal planning process to drive improvement of its SMS is aligned with other business planning processes. The organisation aligns its planning with the SSP and EPAS actions related to the improvement to its SMS, if any. The results of the evaluation on the effectiveness of the planning processes are documented. Guidance for the Assured Level The improvement plan includes the key risks and high-level mitigations; trend analysis of safety data is used when identifying these key risks.			

Component 4: Safety Assurance				
Study Area 15: Continual Improvement of the SMS				
Question 15.2	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
A structured approach to gather and share information on operational safety and SMS best practices from the industry.	There is no structured approach to gather best practices from the industry. The organisation can identify and adopt industry best practices on an ad hoc basis. There are no plans to release and share best practices with industry stakeholders.	The organisation gathers information on operational safety and SMS. The organisation gathers information on internal best practices to improve safety management.	The organisation has formal processes in place to identify best practices from throughout the industry that can be used to improve the SMS. The organisation shares its best practices with industry stakeholders (e.g., ANSPs, airlines, regulators).	The organisation reviews, assesses, and adopts industry best practices. The organisation has carried out an impact assessment to determine whether the best practices have been effective in improving safety.
	Guidance for the Managed Level A mechanism has been established on how to share best practices with industry stakeholders (not limited to aviation stakeholders), and it may include health care, nuclear, etc. Guidance for the Assured Level A best practice is one that proves to be more effective and efficient in producing positive results in terms of safety management. Best practices are determined through peer review by a number of organisations. The organisation has established a formal process to review and assess industry best practices. The impact assessment should be evidence based and adaptable to the organisation's SMS. The results of the impact assessment are documented.			

Component 5: Safety Promotion				
Study Area 16: Training and Education				
Question 16.1	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Staff, and contractors where appropriate, are educated and trained in safety and safety management, and where required, licensed.	Staff, and contractors where appropriate, are provided with training for safety and safety management activities on an ad hoc basis.	The organisation regularly provides staff and contractors with training and education in safety and safety management. The organisation provides staff and contractors with training and education to help them apply required safety management practices and procedures.	The organisation has an annual planning process for safety management training. The organisation's annual training plan ensures that appropriate staff are aware of all safety management practices and procedures that are applicable to their roles. The organisation's annual training plan ensures that staff are aware of the organisation's approach to safety.	Those who receive training are given an opportunity to provide feedback on the effectiveness of the training. The organisation's training programmes are updated on the basis of that feedback. The organisation uses indicators to measure the effectiveness of its training programme. The training is adapted to include identified risks and address shortcomings (highlighted through, for example, feedback from courses).
	Guidance for all levels This objective is primarily focused on ATC, engineering and senior staff who have the ability to affect the safety of the operational service. Contractors should receive safety training when their activities have an impact on the provision of (provider's) services. The safety training should be appropriate to the safety responsibilities of the individual. See requirement ATM/ANS.OR.B.005(a)(6) and ATS.OR.200(4)(i).			

Component 5: Safety Promotion				
Study Area 16: Training and Education				
Question 16.2	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Staff are competent to conduct their obligations under the SMS.	There are no formal competency methods (including proficiency, licensing and training)	The organisation is developing competency methods.	Competency methods are designed and applied to ensure that staff, where appropriate, are educated, trained and competent to perform the specific duties required of them by the organisation's SMS. Records of competence training are kept and maintained. Additional training is delivered to address gaps in competence (e.g., for staff who change roles).	The means by which competency standards are determined is subject to review and improvement.
	Guidance for all levels This is applicable only to staff with SMS obligations. Guidance for the Assured Level An evaluation of the effectiveness of the SMS training is not necessarily linked to the competence in a licensed role (e.g. ATCO, ATSEPs).			

Component 5: Safety Promotion				
Study Area 17: Safety Communication				
Question 17.1	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Staff are informed about the safety and safety management standards relevant to their positions.	Staff have limited knowledge of SMS processes and procedures.	Relevant staff are informed when safety actions or new safety management procedures are introduced. The organisation issues internal staff communications that focus on safety and safety management.	Safety is a key focus of internal communications. Staff are informed when procedures have changed. The organisation tailors its safety communications to meet the recipients' needs.	The organisation regularly assesses the effectiveness of its communication, and addresses any deficiencies.

	Guidance for the Assured Level The organisation describes the process of how the assessment takes place and the corresponding reporting/correction process, including the date of the last review of the effectiveness of safety communication.

Component 5: Safety Promotion				
Study Area 17: Safety Communication				
Question 17.2	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Organisational-wide methods to record and disseminate lessons learned and time-critical safety information exist.	Safety lessons learned are known only to those who experience them.	The organisation intends to record and share lessons learned throughout the organisation.	The organisation has a formal process for systematically sharing operational safety lessons learned with appropriate staff. The organisation disseminates safety-related information to all appropriate staff.	The organisation systematically shares all safety lessons learned throughout the organisation at all appropriate levels. The organisation regularly reviews its lessons-learned dissemination process. Staff are given the appropriate means to react to communications and alert the organisation of any perceived problems. This is to be considered as outside of the regular occurrence reporting system.

	Guidance for the Managed Level Examples of safety-related information are: • supplementary instructions; • temporary operating instructions; • safety notices. Guidance for the Assured Level In order to establish a track record, at least two reviews of the lessons-learned dissemination process are required to meet the requirement of this question. Alternatively, there should be a continuous monitoring process in place. In addition, the process should be formal in nature to justify this level. The regularity of the review should be agreed with the competent authority and be performed at least every 5 years. The results of the lessons-learned dissemination process should be used to drive improvement.

Component 5: Safety Promotion				
Study Area 17: Safety Communication				
Question 17.3	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
Appropriate safety information and knowledge is shared with industry stakeholders. Information disclosure complies with agreed publication and confidentiality policies / agreements.	Safety data and information are treated as confidential. There are no plans to disseminate it to any industry stakeholders.	The organisation shares safety data and information externally using informal processes.	When required by regulation, the organisation shares safety data and information nationally. When required by regulation, the organisation shares safety data and information with international bodies.	The organisation encourages the proactive sharing of safety-related information with other parties (including industry stakeholders) to drive safety improvement. The organisation actively shares safety data with international bodies to drive safety improvement. The organisation has established a formal process to receive and act on safety data and information from external stakeholders.

	Guidance for all levels Information disclosure should be consistent with the requirements of Regulation (EU) No 376/2014.

Component 5: Safety Promotion				
Study Area 17: Safety Communication				
Question 17.4	**Level A**	**Level B**	**Level C**	**Level D**
	Informal Arrangements	**Defined**	**Managed**	**Assured**
A general public knowledgeable of the ANSP's performance through routine publication of achieved safety levels and trends.	Safety-related performance information is not made available to the public under any circumstances.	The organisation makes safety-related performance information available to selected authorities.	The organisation makes high-level safety-related performance information available according to regulatory requirements.	The organisation makes safety performance information available to the general public beyond what is required by regulation.
	Guidance for all levels Information disclosure should be consistent with the requirements of Regulation (EU) No 376/2014.			

Component 6: Interdependencies, Resilient system performance, buffers and trade-offs				
Study Area 18 Managing the interdependencies of complex operational environments and competitive business models				
Question 18.1	**Level A** **Informal Arrangements**	**Level B** **Defined**	**Level C** **Managed**	**Level D** **Assured**
Mature ANSPs sustain safe provision of services through managing the organisation in a way that recognises that system safety is at risk from commercial and business models and targets. Such organisations embed safety in organisational processes The ANSP assigns and distributes resources, both in terms of finances and personnel, to support safe provision of services through safety promotion, safety improvement, safety assurance and safety risk management.	Organisational business planning and strategy makes no formal allowance for safe provision of service. Safety benefits are not systematically included in long-term investment decisions, although this may occur on an ad hoc basis. Safety benefits are not systematically included in changes to the functional system (including airspace design changes) other than on an ad-hoc basis. The emphasis in business planning is on cost-efficient service provision.	Organisational business planning and strategy formally takes account of all safety regulatory requirements. The safety consequences of business strategies that emphasise efficiency at the expense of the ability to adapt or limit sources of resilience are not considered. Safety is managed as an independent part of the wider organisation. It is acknowledged that business decisions can influence safe provision of services.	The financial and personnel resources that are needed to support safe production* through safety promotion, safety improvement, safety assurance and safety risk management are reviewed annually. Business plans are adjusted annually to ensure that these needs are met. Resource allocation for safe provision of services is assimilated into corporate business planning for operational and selected non-operational departments. Trade-offs and sacrifices in operational decision making involve managing resource shortfalls with reduced resources within the work system to draw upon to escalate and manage anomaly response. Financial and personnel resources are provided to enable the release of staff for safety activities, such as training.	The organisation integrates safety fully into business planning making provision of safe production*, in a traceable way, accessible and subject to organisational governance. Safety activities are resourced as a normal business activity. Long term investment planning embeds provision of safety activities as a strategic corporate proposition. The assessment of business models and/or business strategies on the dynamics and capability of the organisation to deliver a safe production* takes into account the buffers that are used in operational trade-offs and sacrifices attached to decision-making. Operational trade-offs and sacrifices in decision making are modelled for effects and consequences.

				The organisation identifies and manages eroded buffers and sources of resilience.
•	Guidance for all levels The financial and personnel resources that are needed to support safe production* through safety promotion, safety improvement, safety assurance and safety risk management are reviewed annually. Business plans are adjusted annually to ensure that these needs are met. The financial calculations should include capital expenditure and staff costs (including transcription and support staff) that is budgeted for, allocated, and spent on: • The safety functions the organisation needs to meet its compliance activities; • Safety activities beyond the needs of formal compliance, e.g. forward-thinking safety-promotion and improvement activities.			