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**AIC**  
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## MANAGEMENT AND NOTIFICATION OF CHANGES IN THE ATM/ANS DOMAIN

### 1. APPLICABILITY

This AIC shall apply to service providers or entities providing training for air traffic controllers in the airspace falling under the responsibility of the National Supervisory Authority (NSA) of the Republic of Cyprus.

### 2. PURPOSE

The purpose of this AIC is to establish the administrative procedures and provide guidance in relation to the management and the notification of changes in the organisations mentioned above, regarding organisational, management and functional aspects of their operations and systems, as required by the applicable Single European Sky Regulations, referenced in the next page.

### 3. REFERENCED DOCUMENTS

#### 3.1 Regulations

- 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),
- 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,
- 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,
- Regulation (EU) 2015/340 of 20 February 2015 laying down technical requirements and administrative procedures relating to air traffic controllers' licences and certificates pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, Part ATCO.OR.B.015.

and any amendments thereof.

#### 3.2 Acceptable Means of compliance and guidance material

- EASA's Acceptable Means of Compliance (AMC) and Guidance Material (GM) related to Commission Regulation (EU) 2017/373.
- EASA's Acceptable Means of Compliance (AMC) and Guidance Material (GM) related to Commission Regulation (EU) 2015/340.

Appendix 2 of this circular contains a condensed flow chart of the notification process and Appendix 6 provides additional guidance for the identification of change.

## 4. DEFINITIONS

**“ATM/ANS”** means air traffic management and air navigation services and covers all of the following: the air traffic management functions and services as defined in point (10) of Article 2 of Regulation (EC) No 549/2004; the air navigation services as defined in point (4) of Article 2 of that Regulation, including the network management functions and services referred to in Article 6 of Regulation (EC) No 551/2004, as well as services which augment signals emitted by satellites of core constellations of GNSS for the purpose of air navigation; flight procedures design; and services consisting in the origination and processing of data and the formatting and delivering of data to general air traffic for the purpose of air navigation; [Article 3(5) – Reg. (EU) 2018/1139]

**“Argument”** means a claim that is supported via inferences<sup>1</sup> by a body of evidence;

**“Event”** may variably mean the introduction into service of new functional system and elements thereof, or the change, modification of operational or technical aspects, the upgrade, degradation, removal or decommissioning of systems that are intended for use in the context of ATM/ANS.

**“Functional system”** means 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;

**“Management system”** means a combination of documented procedures, human resources and equipment, organised to ensure that ANS services are provided in a safe and efficient manner and in conformance with all applicable regulations.

**“Operational envelope”** of an event means the functional system or element(s) thereof, as described in the organisation’s management system(s) and/or its relevant operational or technical manuals, together with evidence of:

- Previous experiences in managing or executing the event, and
- Safety assurance of previous usage.

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<sup>1</sup> “Inference” means a conclusion reached on the basis of evidence and reasoning.

**“Organisation”** means either a service provider or an entity providing training for air traffic controllers;

**“Overarching safety argument”** means a safety argument made with regard to a set of individual changes to systems or to their context, coordinated between all service providers involved.

**“Process”** means a set of interrelated or interacting activities which transforms inputs into outputs;

**“Routine changes”** means those changes which have been consistently assessed, implemented and proved safe in the past and, therefore, the competent authority has sufficient confidence that the provider will manage them in a similar manner.

**“Safety considerations”** means a process to determine whether an event should be considered a change by reference to its potential effect on the elements of a functional system (people, procedures and/or hardware/software).

For all other terms used in this AIC, the definitions included in the Commission Implementing Regulation (EU) 2017/373, Regulation (EU) 2018/1139 and Regulation (EC) 549/2004, and any amendments thereof, shall apply.

## 5. ADMINISTRATIVE PROCEDURES

Organisations under the scope of this AIC are required to act as follows:

### 5.1 Changes NOT affecting the ATM/ANS functional system(s)

Organisations shall develop and use a documented procedure or procedures, approved by the NSA, to detail how they shall manage changes NOT affecting their ATM/ANS functional system(s)<sup>2</sup> e.g. changes to the provision of their services, their management system(s) and/or their safety management system (*the latter example for ATS provides only*). **In this respect, the organisations shall submit to the NSA the said procedure(s) for approval<sup>3</sup> before use.**

If and when the above-mentioned approved procedures are not suitable for a particular change, organizations shall:

- (1) make a request to the NSA for an exemption to deviate from the approved procedures;
- (2) provide the details of the deviation and the justification for its use to the NSA;
- (3) not use the deviation before being approved by the NSA.

Service provision or management system(s) changes implemented in accordance with the above-mentioned NSA-approved, procedure(s) **do not require prior approval**, EXCEPT those concerning the legal status of the organization (*only for ATS providers*), the organisation's ownership and the location of its facilities. Nevertheless, they shall still be notified to the NSA **at least thirty (30) working days** before the planned date of implementation of the change via an online software notification system. The submission

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<sup>2</sup> When a change modifies the way “core” ATM/ANS functions are applied or implemented then they are considered to be “**affecting the functional system**”. In such cases, the change should be notified and managed in accordance with the requirements referring to changes to the functional system (i.e. (EU) 2017-373 Part ATM/ANS.OR.A.045). Examples of “core” ATM/ANS functions are: “ATC separation”, “coordination”, “transfer of control”, “A/G voice communication”, “air traffic flow management”, “system/equipment maintenance”, “process to release from, and return into operations CNS equipment”, “MET observations”, “MET forecasts” etc.

<sup>3</sup> It is noted that, as stated in **(EU) 2017/373 - GM1 ATM/ANS.AR.C.030**, the review by the NSA is focused on the change management procedures and not on the project management part of these procedures that are not required by the regulations, even though they may be useful for the smooth execution of the project dealing with the change. Consequently, not all parts of a procedure may be approved by the NSA.

will be done electronically, using a software tool maintained by the NSA<sup>4</sup>. An alternative, paper-based submission system shall also be available if and when needed.

Service provision and/or ATC training or management system(s) changes **NOT** included or implemented in accordance with an approved change management procedure **require prior approval**. Such changes shall be notified to the NSA **at least thirty (30) working days** before the planned date of implementation of the change.

Upon receipt, the NSA shall,

- (1) formally acknowledge the receipt of the notification in writing<sup>5</sup> **within ten (10) working days** and request, in due time, any additional information<sup>6</sup> needed from the service provider to support his decision;
- (2) review the proposed changes **within thirty (30) working days** after the receipt of all the evidence supporting the proposed change; and
- (3) provide a response<sup>7</sup> to the service provider's notification of change **without undue delay** with the associated rationale (if so requested).

Examples of “service provision” and/or “management system(s)” changes which may not affect the functional system are provided in Appendix 1.

In the case when corrective actions for findings raised by the competent authority, also trigger a change to the management system(s), then such actions should be notified to the NSA as “changes”, in the form and manner described in this AIC.

**It is furthermore clarified that the organisations' processes on change management and the process on the prevention of use of psychoactive substances (for ATS providers only) and any changes thereof always require prior NSA approval.**

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<sup>4</sup> The access details to the tool will be communicated to concerned entities via email exchange.

<sup>5</sup> The written acknowledgement may be in the form of an email message.

<sup>6</sup> e.g. the compliance matrix (referred to in **AMC1 ATM/ANS.OR.B.010(a)**), if not already provided by the service provider.

<sup>7</sup> The response may be in the form of an email message

## 5.2 Changes affecting the ATM/ANS functional system(s)

### 5.2.1 General provisions

Organisations shall develop and use documented procedures, approved by the NSA, to detail how they shall manage changes affecting their ATM/ANS functional system(s). **In this respect, the organisations shall submit to the NSA the said procedures for approval<sup>8</sup> before use.**

When the above-mentioned approved procedures are not suitable or adequate for a particular change, organizations shall:

- (1) make a request to the NSA for an exemption to deviate from the approved procedures;
- (2) provide the details of the deviation and the justification for its use to the NSA;
- (3) not use the deviation before being approved by the NSA.

The organisations planning changes to their functional system(s) shall notify the change(s) to the NSA via an online software notification system. The exact manner of submission will be duly communicated to concerned entities before the date of application of this AIC. An alternative, paper-based submission system shall be available if and when needed.

The online software notification system shall contain a database with detailed information related to each change submitted. The information of the database shall conform to the requirements of Reg. (EU) 2017/373 - AMC1 ATM/ANS.OR.A.045 and is listed in Appendix 5 for easy reference.

In case of changes affecting multiple service providers, organisations are encouraged to submit a single, joint notification. In such a case, the entity submitting the joint notification should clearly note this in the above-mentioned online database.

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<sup>8</sup> Procedures for managing functional changes may be integrated with the procedure for management system changes referred to in Section 5.1. Any amendment or update or deviations to these procedures **will require an NSA approval before use.**

It is acknowledged that, in certain cases, a functional change by a non-ATS provider may be transparent to an ATS provider and that the latter entity may not consider the event as a change. In such a case, the ATS provider must be ready to support its assessment with a safety considerations report.

Organisations can also **update, modify or cancel** the previously notified change (*e.g. to change the date of implementation*). The exact manner of updating, modifying or cancelling a notification shall also be duly communicated to organisations before the date of application of this AIC.

Organisations shall be able to view the status of their notification at all times by referring to the above-mentioned database.

Organizations shall not commence the implementation of any part of a change that the NSA has decided to review until:

- a valid safety (or safety support) assessment for that part of the change exists<sup>9</sup>,
- the argument(s) for the proposed change have been reviewed and approved by the NSA, and
- until the NSA provided a response to the organisation.

In case of a rejection of the argument(s) of the change, the NSA shall provide the rationale of its decision to the concerned entities.

It is clarified that the NSA review may include on-site audits and inspections in order to verify the organisation's compliance with any applicable requirements.

In the case when corrective actions for findings raised by the competent authority, also trigger a change to the functional system, then such actions should be notified to the NSA as “changes”, in the form and manner described in this AIC.

Routine functional ATN/ANS changes may be notified and reviewed in an alternate form and manner, other than the one described in this AIC, subject to ad-hoc formal agreements between the NSA and the concerned ANSPs.

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<sup>9</sup> The safety (or safety support) assessment process should be included in the approved procedures for managing changes to the functional system.



## 5.2.2 New functional systems or major<sup>10</sup> changes to existing functional ANS/ATM systems

The organisation planning a **major change** to its functional system(s) shall notify the details of the proposed change to the NSA at least **thirty (30)** working days<sup>11</sup> before the planned date of implementation of the change<sup>12</sup>.

Within **ten (10)** working days of receiving the notification, the NSA shall formally acknowledge its receipt in writing<sup>13</sup>.

**The NSA shall ALWAYS review major changes and, in this respect an approval of the argument(s) for the proposed change is necessary before implementation.** The review will typically require the submission<sup>14</sup> of a safety assessment (by ATS providers) or a safety support assessment (by non-ATS providers), nevertheless the NSA may request the provision of any additional information needed from the concerned service provider(s).

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<sup>10</sup> The categorisation of a change as “major” or “minor” shall be in accordance with the assessment criteria of Appendix 3.

<sup>11</sup> Early and accurate notification facilitates the interactions between the provider and the competent authority and, thus, maximises the likelihood of introducing a change into service in due time and according to the service provider’s initial schedule when the competent authority has decided to review an assurance case. [(EU) 2017-373, Part GM1 ATM/ANS.OR.A.045(a) – (b) Changes to a functional system]

<sup>12</sup> Service providers are reminded that, in accordance with Article 28 of (EU) 2019-317 (*the Performance scheme regulation*), when they intend to add, cancel or replace major investments which have been included in the National Performance Plan then these changes require prior approval by the NSA.

<sup>13</sup> The written acknowledgement may be in the form of an email message.

<sup>14</sup> The submission may be in paper or electronic form, using an appropriate software tool which has been accepted by the NSA.

### 5.2.3 Minor<sup>15</sup> changes to existing functional ANS/ATM systems

The organisation planning a **minor change** to its functional system(s) shall notify the details of the proposed change to the NSA at least **twenty (20)** working days before the planned date of implementation of the change.

The NSA shall, within **ten (10)** working days, formally acknowledge the receipt of the notification in writing<sup>16</sup>.

The NSA will not normally review minor changes and, in this respect, **no approval is necessary before implementation**. Nevertheless, it is clarified that the service provider should still develop a valid safety (ATSPs) or safety support (non-ATSPs) assessment for the change, in accordance with its approved change management procedure. In addition, the NSA retains the right to review minor changes as well, if considered necessary or appropriate. In such cases, the concerned organisations shall be duly notified within **ten (10)** working days of the date of submission and must wait for NSA approval before implementation. The NSA may request the provision of any additional information<sup>17</sup> needed in order to decide or not to review the argument(s) for the proposed change.

### 5.2.4 Urgent/unforeseen changes

In exceptional cases, due to urgent and unforeseen circumstances beyond their control, organisations might need to implement unplanned changes immediately, without first notifying and/or receiving an approval from the NSA. Such changes may be implemented by organisations, without prior notification to the NSA, provided that they are duly justified with respect to their safety significance and always in accordance with the relevant provisions of the organisation's change management procedure which has been previously approved by the NSA.

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<sup>15</sup> The categorisation of a change as “major” or “minor” shall be in accordance with the criteria of Appendix 3.

<sup>16</sup> The written acknowledgement may be in the form of an email message

<sup>17</sup> The information provided may expedite the decision whether to review or not the proposed change, because it will allow the NSA to gain complete knowledge of the change and, consequently, reduces the need for additional information [(EU) 2017/373 - GM1 ATM/ANS.OR.A.045(a) – (c)]

In all such cases, the organisation must notify the NSA as soon as possible, providing adequate justification as to why it was imperative to take such urgent action without prior notification and approval.

## **6. ENTRY INTO FORCE**

This AIC, shall apply from the **1<sup>st</sup> of October 2022 onwards.**

**AIC N003/19 dated 9 December 2019 is cancelled on 30/09/2022**

## **APPENDIX 1**

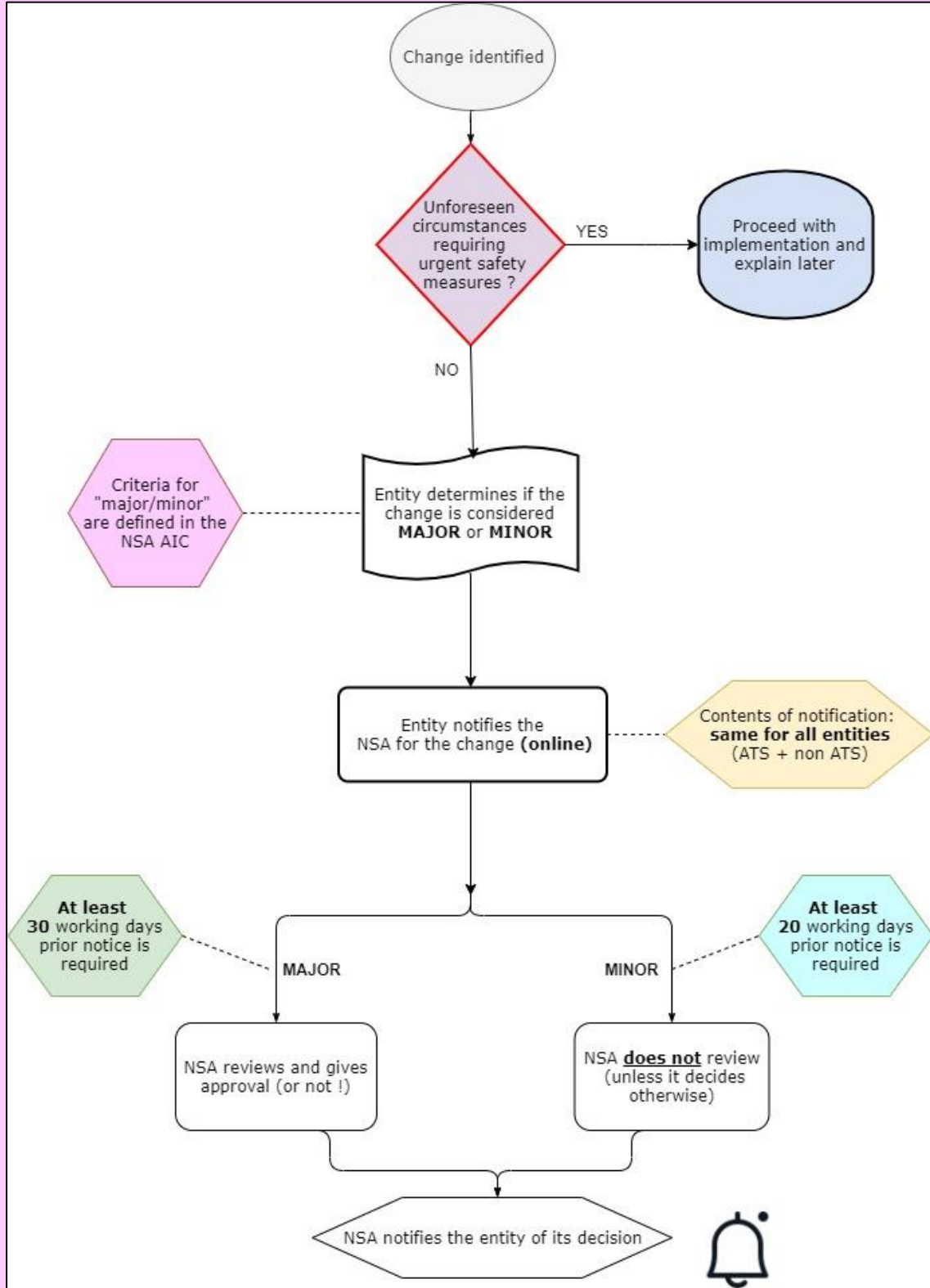
### **EXAMPLES OF CHANGES THAT MAY NOT BE AFFECTING THE FUNCTIONAL SYSTEM(S)**

- (1) the name of the organization;
- (2) the organisation's ownership;
- (3) the organisation's provision of services,
- (4) amendments to the State's Aeronautical Information Publication (AIP);
- (5) the legal status of the organization (*only for ATS providers*);
- (6) the organisation's type(s) of services and/or training;
- (7) the name of the accountable manager, including his or her qualifications;
- (8) the organisation's management system manual(s) or management procedures, UNLESS such changes are of purely editorial or grammatical in nature;
- (9) changes to manuals or procedures or other elements which require approval as per the relevant provisions of (EU) 2015/340 Annex I (e.g. Unit Training Plans, ATCO training courses etc.)
- (10) the nominated post holders, in particular those in charge of operational units, safety (where applicable), quality, security, finance, human resources, training and compliance monitoring related functions, including their qualifications;
- (11) the organisation's change management process(es);
- (12) the organisation's process on the prevention of use of psychoactive substances.

It is clarified that the list above should not be considered exhaustive. The examples apply equally for service providers and ATC Training Units.

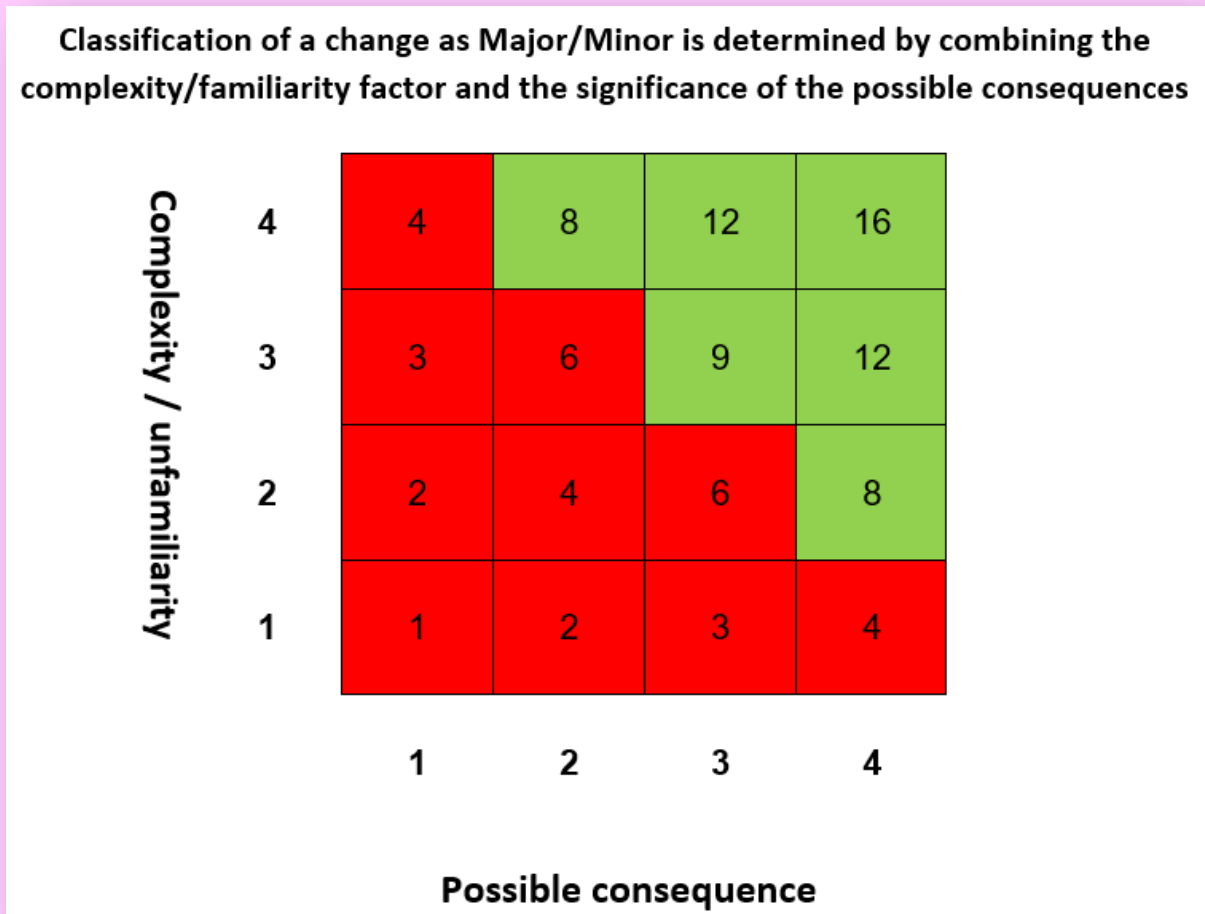
## APPENDIX 2

### FLOW CHART OF THE NOTIFICATION PROCESS FOR FUNCTIONAL CHANGES



### APPENDIX 3

#### CRITERIA FOR THE CATEGORISATION OF A FUNCTIONAL CHANGE AS MAJOR OR MINOR



The change will be characterised as “major” or “minor” by considering the possible consequences of the change to safety and/or the performance of the service or function provided as well as its complexity and/or unfamiliarity factor. The matrix below should be used as the reference for this assessment.

CATEGORY	DESCRIPTION	SCORE
<b>MAJOR</b>	PRIOR APPROVAL REQUIRED	Score <= 6
<b>MINOR</b>	PRIOR APPROVAL <u>NOT</u> REQUIRED	Score >= 8

The tables below associate the characteristics of the change with the quantitative levels to be used in the matrix of the previous page. If there is any doubt as to the categorisation of the change then the entity should consult the NSA prior to submitting its notification.

<b>SIGNIFICANCE OF POSSIBLE CONSEQUENCE</b>	<b>Effect on safety/service/function</b>	<b>LEVEL</b>
<b>VERY HIGH</b>	Loss of life OR catastrophic damage to infrastructure and equipment	<b>1</b>
<b>HIGH</b>	Non-compliance with applicable safety standards OR loss of critical systems/services/ATM functions, requiring full application of contingency measures.	<b>2</b>
<b>MEDIUM</b>	Temporary deviation from applicable safety standards OR partial loss of critical systems/services/ATM functions, requiring partial application of contingency measures.	<b>3</b>
<b>LOW</b>	Some deviation from normal/routine operations may be needed	<b>4</b>

<b>Complexity/unfamiliarity</b>	<b>LEVEL</b>
Multiple system elements affected, many stakeholders are involved and/or very rarely done or never be done before	<b>1</b>
More than one system element affected, two or more external stakeholders are involved and/or change rarely done	<b>2</b>
Specific to one system element, only one other stakeholder is involved and/or a similar change was done before.	<b>3</b>
Very simple and/or routine change, no other stakeholders involved	<b>4</b>

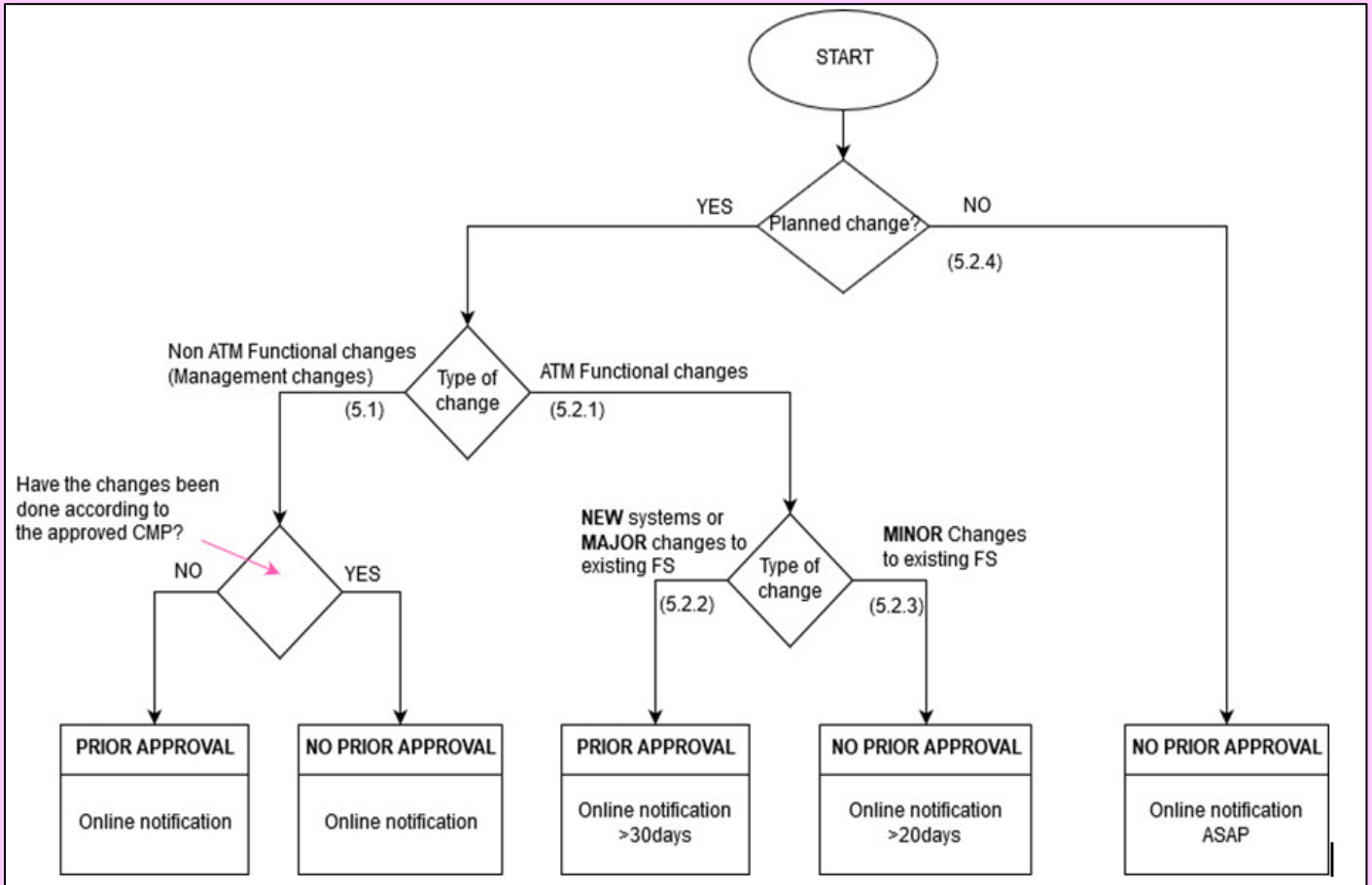
Organisations are advised to adopt a practical approach when considering the criteria mentioned above:

- with regards to the meaning of 'complex', consider the number of the affected system elements (technology, procedures, human factors training etc.) and/or the number of stakeholders involved and/or whether it appears to require extensive mitigations;
- with regards to the meaning of an 'unfamiliar argument', consider how many similar changes the service provider has implemented in the past;



## APPENDIX 4

### DO I NEED AN APPROVAL OR NOT ?



It is clarified that the organisation’s processes on change management and the process on the prevention of use of psychoactive substances *(for ATS providers only)* and any changes thereto always require prior NSA approval.

## **APPENDIX 5**

### **CONTENTS OF THE DATABASE WITH CHANGES AFFECTING THE FUNCTIONAL SYSTEM**

The functional changes database includes, as a minimum the following items:

- a) Name of the organisation notifying the change;
- b) The type of ANS or ATM function(s) provided
- c) Unique identifier of the change (expressed as a unique reference number for each new notification or for each updated version to a previous notification).
- d) Title of the change;
- e) Date of the submission of the change notification;
- f) Scheduled date of entry into service (even if only approximate);
- g) Details of the change and its impact, including:
  - A categorisation of the change as “major” and “minor”<sup>18</sup>.
  - A brief description (i.e. purpose) of the change
  - The reason for the proposed change (justification)
  - The functional environment<sup>19</sup> of the change (scope)
  - The system elements<sup>20</sup> affected by the change
- h) The list of the service providers and other aviation undertakings that are affected by the change as identified in ATM/ANS.OR.A.045(a)(3) (where feasible and if applicable)
- i) Organisation in charge of the overarching safety argument (if other than the organisation submitting the notification); and
- j) Point of contact for formal communication with the NSA.

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<sup>18</sup> The categorisation of a change as “major” or “minor” shall be in accordance with the criteria of Appendix 3.

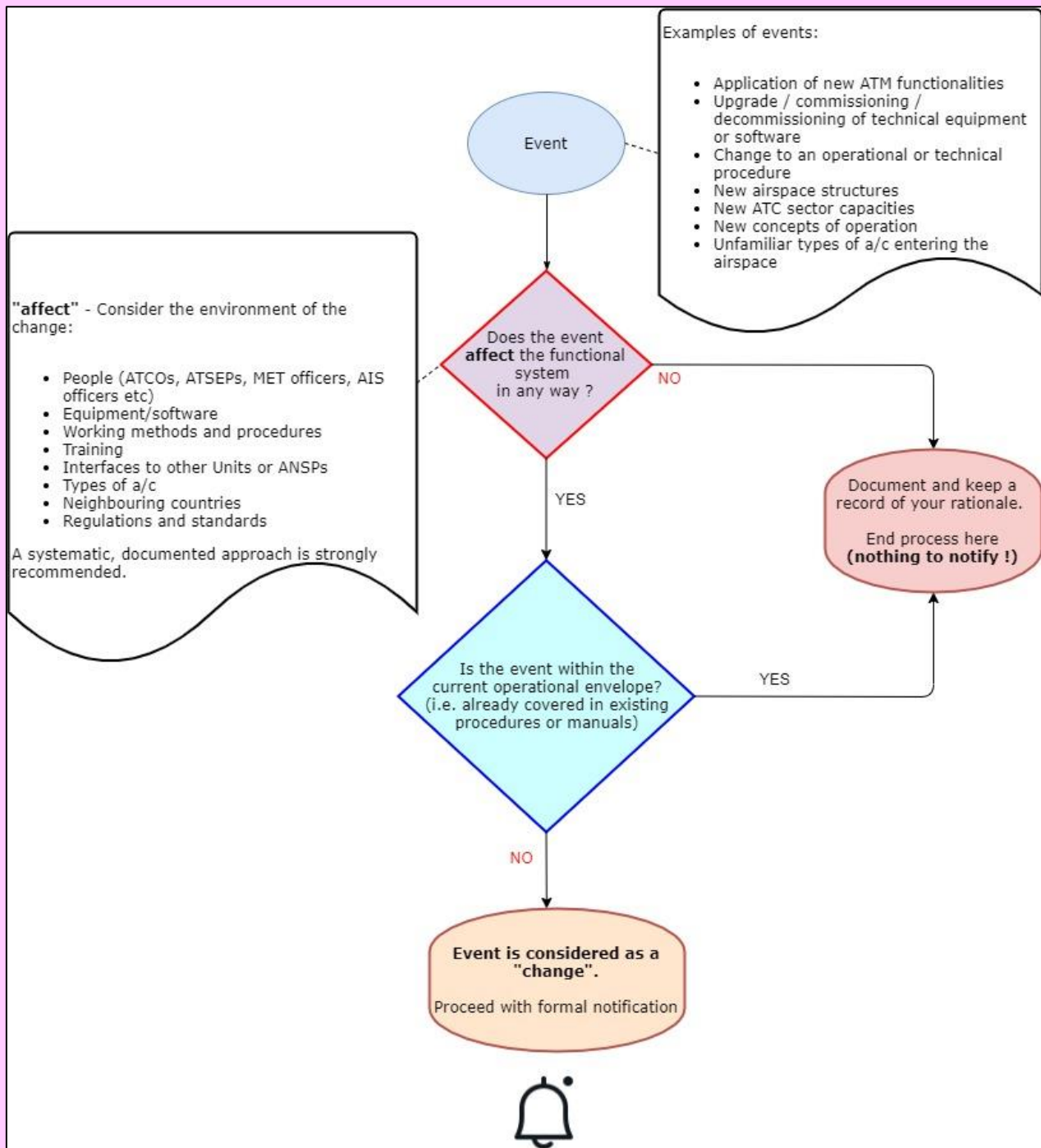
<sup>19</sup> “Functional environment” is understood to mean the physical location, times and organisations, or parts thereof, relevant to the change, including external services

<sup>20</sup> “system elements” include, inter alia, the people, procedures, technical systems, building infrastructures, airspace and/or the specific interfaces to other organisations or entities which may be relevant to the change, including new/modified functions/services brought about by the change

## APPENDIX 6

### GUIDANCE TO ORGANISATIONS REGARDING THE IDENTIFICATION OF CHANGES TO FUNCTIONAL ANS/ATM SYSTEMS

The following process may be used as an aid to determine when an event is identified as a functional change:



**Note 1:**

The change identification process requires that members of the staff of the organisation under scope who are aware of an event shall assess whether this event is part of the “normal” operations (or, within its “operational envelope”). Such an assessment shall normally rely on staff competence which, in turn, depends on having sufficient knowledge of the organisation’s operations. **Therefore, it is expected that such assessments are made by staff with a recognised professional background and experience.**

Such staff may include:

- **Operational staff , for example:**
  - ATCO for any operational event under his/her responsibility
  - ATC Supervisor
  - MET forecaster
  - AIS officer
  - Air Traffic Flow Manager
  - Airspace Manager
- **Technical staff:**
  - ATSEP
- **Management:**
  - Senior management (e.g. COO)
  - Operational management (e.g. SATCO, Technical Supervisor)
  - Management staff in charge of planning and development

**The assessment of whether an event is considered a change may be documented in a safety considerations report.**

**Note 2:**

Examples of events that are not considered as “changes” in the context of this AIC and do not require a notification are:

- Tactical deviations from the declared ATC Sector capacities (after due consideration to their safety impact)
- Weather changes
- Runway configuration changes due to a change in wind direction
- Putting technical equipment or systems out of service for routine maintenance (after due coordination with affected entities).

Examples of ANS/ATM functional changes requiring a safety case or a safety support case may be: **(the list is indicative and by no means exhaustive)**

- New concepts of operation
- Introduction of a new services or ATM functions
- Changes to operational or technical procedures<sup>21</sup>, **UNLESS** such changes **DO NOT** affect the functional system<sup>22</sup> and/or the changes are of purely editorial or grammatical in nature.
- Modification of air traffic separation standards
- New SIDs/STARs
- New airways or routes or flight procedures
- Modification of airspace structures or traffic volumes
- Changes to nominal ATC sector capacities
- Changes to the rostering system which potentially affects the workload of ATCOs
- Commissioning / decommissioning of technical equipment
- Changes to infrastructure (power supply, temperature control etc.)

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<sup>21</sup> It is clarified that the term “technical procedures” does not include technical manuals which are provided “as is” by system or equipment manufacturers.

<sup>22</sup> Changes to operational or technical procedures are considered to affect the functional system when they refer to the way “core” ATM functions are *performed* (e.g. “coordination”, “transfer of control”, “communication”, “air traffic flow management”, “system/equipment maintenance”, “process to release from, and return into operations CNS equipment”, “MET observations”). It is acknowledged that, on occasions, there could be changes to such procedures which do not affect the functional system. In these cases, such changes could be managed in accordance with the provisions of para. 5.1.

- Changes to the way MET observations or forecasts are produced and disseminated
- Software upgrades
- New entrants in the aviation environment (e.g. drones)

**See EASA guidance material for (EU) 2017-373 (ref. GM1 ATM/ANS.OR.B.005(a)(4)) for additional information on this topic.**