**COMPLIANCE MATRIX**

**UK Regulation (EU) No 2017/373**

**Organisational Requirements**

**ANNEX III – PART ATM/ANS.OR**

**COMMON REQUIREMENTS FOR SERVICE PROVIDERS**

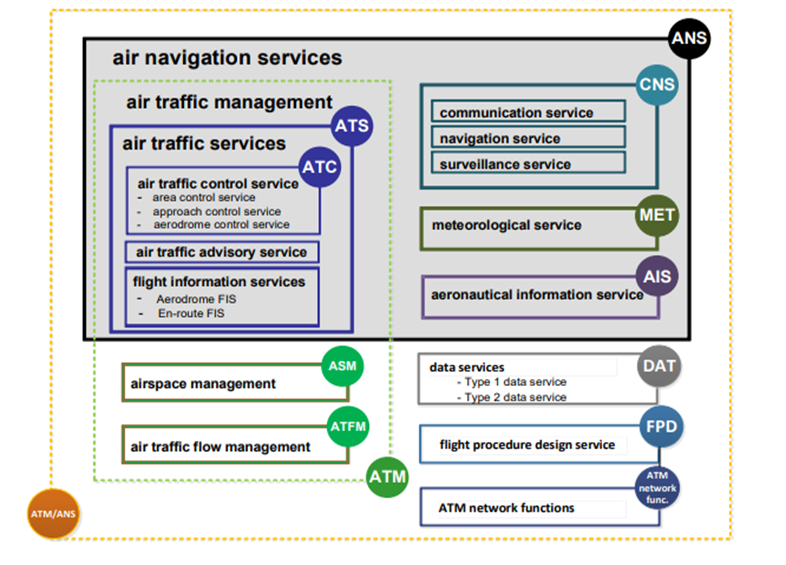
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| **Service Provider** |  | | |
| **Matrix version number** |  | Date |  |

Complete all relevant sections and send the compliance matrix and supporting documents to [ansp.certification@caa.co.uk](mailto:ansp.certification@caa.co.uk)

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| **Amendment record** | | |
| **Issue** | **Date** | **Purpose** |
| 4 | April 2021 | Amended by Statutory Instruments 459 and 694 |
| 5 | September 2022 | Amended by Statutory Instruments 1203, [ORS 9 Decision 13,](https://publicapps.caa.co.uk/docs/33/ORS9CAADecisionNo13WithDatesForSigning.pdf) to rename UK Guidance Material (UK GM) to Compliance Matrix Guidance Notes (CM GN) and include ref to Annex VII Part DAT |
| 6 | August 2023 | Amended to provide Compliance Matrix Guidance Material regarding ATM/ANS.OR.A.080 Provision of aeronautical data, ATM/ANS.OR.A.085 and ATM/ANS.OR.A.090 Common reference systems for air navigation . |
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**General Introduction to the ATM/ANS UK Regulation (EU) No 2017/373 Compliance Matrices**

Regulation (EU) No 2017/373 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018is applicable to all the services and functions shown in the diagram below which has been extracted from the regulation.



The Compliance matrices have been divided into the following Parts:

ANNEX III ATM/ANS ORGANISATIONAL REQUIREMENTS

ANNEX IV AIR TRAFFIC SERVICES

ANNEX V METEOROLOGICAL SERVICES

ANNEX VI AERONAUTICAL INFORMATION SERVICES

ANNEX VII DATA SERVICES

ANNEX VIII COMMUNICATION NAVIGATION OR SURVEILLANCE SERVICES

ANNEX IX AIR TRAFFIC FLOW MANAGEMENT

ANNEX X AIRSPACE MANAGEMENT

ANNEX XI PROCEDURE DESIGN

ANNEX XIII AIR TRAFFIC SAFETY PERSONNEL

Note: ANNEX XII Part NM not included.

**The table below indicates which of the compliance matrices must be completed by which type of service provider**

**Service Providers must complete the relevant Compliance Matrices and sections as indicated below**

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| **Compliance Matrix** | **Compliance Matrix Section** | **ATS** | **MET** | | | **AIS** | **DAT** | **CNS** | **ATFM** | | **ASM** | **FPD** |
| **Local only** | **METARS** | **Forecast** | **NATS (En Route)** | **ATS Units** |
| ANNEX III | Section 1 | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Section 2 | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Section 3 | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |  |
| Section 4 | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Section 5 | **X** |  |  |  |  |  |  |  |  |  |  |
| Section 6 | **\*** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| ANNEX IV | Sections 1 to 4 | **X** |  |  |  |  |  |  |  |  |  |  |
| ANNEX V | Section 1 |  | **X** | **X** | **X** |  |  |  |  |  |  |  |
| Section 2 |  | **X** | **X** |  |  |  |  |  |  |  |  |
| Section 3 |  |  |  | **X** |  |  |  |  |  |  |  |
| Section 4 |  |  |  | **X** |  |  |  |  |  |  |  |
| Section 5 |  |  |  | **X** |  |  |  |  |  |  |  |
| Section 6 |  |  |  |  |  |  |  |  |  |  |  |
| Section 7 |  |  |  | **X** |  |  |  |  |  |  |  |
| ANNEX VI |  |  |  |  |  | **X** |  |  |  |  |  |  |
| ANNEX VII |  |  |  |  |  |  | **X** |  |  |  |  |  |
| ANNEX VIII |  |  |  |  |  |  |  | **X** |  |  |  |  |
| ANNEX IX | Section 1 |  |  |  |  |  |  |  | **X** |  |  |  |
| Section 2 |  |  |  |  |  |  |  |  | **X** |  |  |
| ANNEX X |  |  |  |  |  |  |  |  |  |  | **X** |  |
| ANNEX XI |  |  |  |  |  |  |  |  |  |  |  | **X** |
| ANNEX XIII |  |  |  |  |  |  |  | **X\*** |  |  |  |  |
| **\*ANNEX III Section 6 may be applicable to some ATS providers. See notes in Section 6**  **\*The Applicability of ANNEX XIII is dependent upon the type of service provided, refer to Tables 1 and 2 of the ANNEX XIII Matrix** | | | | | | | | | | | | |

**Introduction to Compliance Matrix ANNEX III ORGANISATIONAL REQUIREMENTS**

UK Regulation (EU) No 373/2017 requires that all service providers must comply with the Organisational Requirements.

This Compliance Matrix contains all the Annex III Organisational Requirements (ORs) and Acceptable Means of Compliance (AMC).

It should be noted that some AMCs contain words ‘Should’ and ‘May. Unless an Alternative Means of Compliance (AltMoC) is approved and used, the words ‘Should’ and ‘May’ are to be interpreted as ‘Shall’ and ‘Must’.

The compliance matrix should be used as a checklist to enable you to establish the level of compliance of your organisation with the regulation and to identify areas where further action is required.

A list of the supporting documents referred to in the compliance matrix should be entered into the table below.

This Compliance Matrix is to be maintained and amended when changes are made to the supporting documents.

New applicants are to submit the completed compliance matrices and the referenced supporting documentation including the uniquely identified procedure for change management. (Required by ATM/ANS.OR.B.010 (b) and ATM/ANS.AR. C.030 (b))

**How to complete this Compliance Matrix**

The Matrix is divided into six sections:

**SECTION 1, 2 and 4** - To be completed by all Service Providers. **Section 5** – To be completed by Air Traffic Service providers only. **Section 6** - To be completed by all providers except Air Traffic Service providers. Note: Section 6 may be applicable to some types of Air Traffic Service providers, refer to the notes in Section 6.

**SECTION 3** - To be completed by Air Traffic Service, Communication, Navigation and Surveillance, Meteorological, Aeronautical Information Service, Data and Air Traffic Flow Management providers only.

The Matrix is laid out in the format shown in the example below.

The first column lists the regulation and associated Acceptable Means of Compliance (AMC). Where there is no AMC, compliance must be indicated against the regulation or the part of the regulation that has no AMC associated.

The second column provides a description of the requirements.

The third column provides a link to the actual regulation or AMC so full details of the requirement can be viewed as shown below. After viewing the regulation or AMC clicking on the ‘return link’ will bring you back to where you were in the compliance matrix. The third column also provides links to Compliance Matrix, Guidance Notes (CM GN) where applicable.

The original UK Regulation (EU) No 2017/373 and current AMC and Guidance Material (GM) can be accessed via the CAA web site. [ATM/ANS provision of services | Civil Aviation Authority (caa.co.uk)](https://info.caa.co.uk/uk-regulations/atmans-provision-of-services/) and additional amendments to AMC and GM can be found in [ORS9 Decision 13](https://publicapps.caa.co.uk/docs/33/ORS9CAADecisionNo13WithDatesForSigning.pdf).

The requirements and AMC listed below are in the order shown in the regulation except for SECTIONS 4, 5 and 6 Change Management.

Under each requirement a space is provided to enable you to indicate in which of your organisation’s documents compliance can be demonstrated.

Unless specifically asked for, statements of compliance are not required within the compliance matrix.

Where your organisation is not yet compliant with a requirement enter ‘UNDER DEVELOPMENT’ followed by a target date for completion. This should be no more than 6 months. Items marked as under development will be in the scope of the next routine oversight audit.

Complete all relevant sections and send the compliance matrix and supporting documentation to[**ansp.certification@caa.co.uk**](mailto:ansp.certification@caa.co.uk)

**Example of compliance matrix**

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| **The Regulation and AMC** | **Requirements for all providers (except where indicated)** | **Link** |
| **ATM/ANS.OR.A.055 Findings and corrective actions** | Provide a reference that indicates that your organisation’s management system documents a process for dealing with findings raised by the CAA. Identify root cause and development of corrective action plan *(Note AMC requirements below).* | 373 |
| **AMC1 ATM/ANS.OR.A.055(b) Findings and corrective actions** | The corrective action plan defined by the service provider should address the effects of the non-conformity and its root cause. | 373 |
| **Enter reference(s) where compliance is indicated** | Detailed in Management system procedure MSP.002 Section 6, Audits and Findings |  |

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| **ATM/ANS.OR.A.055 Findings and corrective actions**  After receipt of notification of findings from the competent authority, the service provider shall:  (a) identify the root cause of the non-compliance.  (b) define a corrective action plan that meets the approval by the competent authority.  (c) demonstrate corrective action implementation to the satisfaction of the competent authority within the time period proposed by the service provider and agreed with that authority, as defined in point ATM/ANS.AR. C.050(e). | Return Link |
| **AMC1 ATM/ANS.OR.A.055(b) Findings and corrective actions**  **GENERAL**  The corrective action plan defined by the service provider should address the effects of the non-conformity and its root cause. | Return Link |

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| **Referenced Documents** | | | |
| **Index** | **Title of Document** | **Current Issue No.** | **Date of Issue** |
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| **Referenced Documents** | | | |
| **Index** | **Title of Document** | **Current Issue No.** | **Date of Issue** |
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**Within this compliance matrix some of the requirements are marked as being applicable only to Complex Service Providers or Non-Complex Service Providers.**

Your organisation is a non-complex provider if you only provide air traffic services in one or more of the following categories:

* aerial work.
* general aviation.
* commercial air transport limited to aircraft with less than 10 tonnes of maximum take-off mass or less than 20 passenger seats.
* commercial air transport with less than 10 000 movements per year, regardless of the maximum take-off mass and the number of passenger seats; for the purposes of this provision, ‘movements’ means, in a given year, the average over the previous three years of the total number of take-offs and landings.
* an air navigation service provider providing aerodrome flight information services by operating regularly not more than one working position at any aerodrome

In addition, the following air navigation service providers will also be considered as non-complex:

* an air navigation service provider, other than a provider of air traffic services, with a gross annual turnover of EUR 1 000 000 or less in relation to the services they provide or plan to provide.
* an air navigation service provider providing aerodrome flight information services by operating regularly not more than one working position at any aerodrome.

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| **Is your organisation a Complex or Non-Complex Organisation?** | | | | | | |
| **COMPLEX ORGANISATION** | **YES** |  | **(Click on the appropriate box)** | **NON-COMPLEX ORGANISATION** | **YES** |  |

**Compliance Matrix SECTION 1**

**ANNEX III — Part-ATM/ANS.OR SUBPART A — GENERAL REQUIREMENTS (ATM/ANS.OR.A)**

This section of the compliance matrix contains extracts from the above annexe and subpart of the regulation that are applicable to **all service providers** except where they relate to the management of changes which are contained in Sections 4, 5 and 6 CHANGE MANAGEMENT

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| **The Regulation and AMC** | **Requirements for all providers (except where indicated)** | **Link** |
| **ATM/ANS.OR.A.005 Application for a service provider certificate** | (a) Application for a service provider certificate or an amendment to an existing certificate shall be made in a form and  manner established by the competent authority, taking into account the applicable requirements of this Regulation.  (b) In accordance with Article 6, in order to obtain the certificate, the service provider shall comply with:  (1) the requirements referred to in Articles 40 to 46 of Regulation (EU) No 2015/1139 as applicable to type of service provision.  (2) Deleted.  (3) the specific requirements set out in Annexes IV to XIII, where those requirements are applicable in light of the services  that the service provider provides or plans to provide. | [373](#OR_A_005) |
| **AMC1 ATM/ANS.OR.A.005** **Application for a service provider**  **certificate** | **EXPOSITION — DAT PROVIDERS***On application for a certificate only DAT providers need to comply with the requirements of this AMC.* | [373](#AMC1_OR_A_005) |
|  | Statement Only |  |
| **ATM/ANS.OR.A.020(a) (Means of compliance)** | (a) Means of compliance (MOC) to the AMC adopted by the authority may be used by the service provider to establish compliance with the requirements of this regulation. | [373](#OR_A_020) |
| [CM GN](#UK_GM_OR_A_020_a) |
|  | Statement only |  |
| **ATM/ANS.OR.A.020(b) (Means of compliance)** | When the service provider wishes to use an MOC, it shall, prior to implementing it, provide the competent authority with a full description of the MOC. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating compliance with the requirements of this regulation.  A service provider may implement these means of compliance subject to prior approval by the competent authority and upon receipt of the notification as prescribed in point ATM/ANS.AR. A.015(d). | [373](#OR_A_020) |
| [CM GN](#UK_GM_OR_A_020_b) |
|  | Statement only |  |

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| **ATM/ANS.OR.A.055 Findings and corrective actions** | Provide a reference that indicates that your organisation’s management system documents a process for dealing with findings raised by the CAA. *(Note AMC requirements below).* | [373](#OR_A_055) |
| **AMC1 ATM/ANS.OR.A.055(b) Findings and corrective actions** | The corrective action plan defined by the service provider should address the effects of the non-conformity and its root cause. | [373](#AMC_OR_A_055) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.060 Immediate reaction to a safety problem** | A service provider shall implement any safety measures, including safety directives, mandated by the competent authority in accordance with point ATM/ANS.AR. A.025(c). | [373](#OR_A_060) |
|  | Statement only |  |
| **ATM/ANS.OR.A.065 Occurrence reporting** | Provide a reference that indicates that your organisation’s management system documents a process for reporting to the CAA any accident, serious incident and occurrence as defined in UK (EU) Reg No 996/2010 and No 376/2014. *(Note AMC requirements below).* | [373](#OR_A_065) |
| **AMC1 ATM/ANS.OR.A.065** **Occurrence reporting** | **REPORTING PROCEDURES**  The service provider should establish procedures to be used for reporting to the CAA and any other organisation required which include items (a) to (d) of this AMC. | [373](#AMC1_OR_A_065) |
| **AMC1 ATM/ANS.OR.A.065(a)** **Occurrence reporting** | **GENERAL**  (a) The service provider should submit all reportable occurrences as defined in UK (EU) Reg No 2015/10181.  (b) In addition to the reports required by (a), the service provider should report volcanic ash clouds, encountered by aircraft operators, for which it has become aware of. | [373](#AMC1_OR_A_065a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.070 Contingency plans** | Provide a reference that indicates that your organisation’s management system documents contingency plans for all the services provided in the case of events which result in significant degradation or interruption of its operations. | [373](#OR_A_070) |
| [CM GM](#UK_GM_OR_A_070) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.075 Open and transparent provision of services****. (a) (First Part)** | A service provider shall provide its services in an open and transparent manner.  Provide a reference that indicates how your organisation publish the conditions of access to its services and changes thereto. | [373](#OR_A_075) |
| [CM GN](#UK_GM_OR_A_075a) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.A.075 Open and transparent provision of services. (a) (Second Part)** | Provide a reference that indicates that your organisation has establish a consultation process with the users of its services on a regular basis or as needed for specific changes in service provision, either individually or collectively. *(Note AMC requirement below).* | [373](#OR_A_075) |
| [CM GN](#UK_GM_OR_A_075a_2p) |
| **AMC1 ATM/ANS.OR.A.075(a) Open and transparent provision of services** | **GENERAL — PROVIDERS OF AIR NAVIGATION SERVICES AND AIR TRAFFIC FLOW MANAGEMENT**  Providers of air navigation services and air traffic flow management should consult with the users of their services at least once a year. | [373](#AMC1_OR_A_075a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.075 Open and transparent provision of services. (b)** | A service provider shall not discriminate on grounds of nationality or other characteristic of the user or the class of users of its services in a manner that is contrary to applicable law | [373](#OR_A_075) |
|  | Statement only |  |
| **ATM/ANS.OR.A.080 Provision of aeronautical data** | (a) Provide a reference that indicates that your organisation has established a process to ensure that aeronautical data related to its services is provided in due time to the AIS provider and;  (b) When aeronautical data related to its services is published, the service provider shall:  (1) monitor the data.  (2) notify the AIS provider of any changes necessary to ensure that the data is correct and complete.  (3) notify the AIS provider when the data is incorrect or inappropriate. | [373](#OR_A_080) |
| [CM GN (a)](#UK_GM_OR_A_080_a) |
| [CM GN (b)](#UK_GM_OR_A_080_b1)) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management** **(a)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing or transmitting data to the AIS provider, the service provider shall:  (a) ensure that aeronautical data conforms with the ‘Aeronautical Data Catalogue’ referred to in ICAO PANS-AIM (Doc 10066). | [373](#OR_A_085) |
| [CM GN](#UK_GM_OR_A_085_a) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.A.085 Aeronautical data quality management (b)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (b) ensure that the following data quality requirements are met:  (1) the accuracy of aeronautical data is as specified in the aeronautical data catalogue.  (2) the integrity of aeronautical data is maintained.  (3) based on the integrity classification specified in the aeronautical data catalogue, procedures are put in place so that:  (i) for routine data, corruption is avoided throughout the processing of the data.  (ii) for essential data, corruption does not occur at any stage of the entire process and additional processes are included, as needed, to address potential risks in the overall system architecture to further assure data integrity at this level.  (iii) for critical data, corruption does not occur at any stage of the entire process and additional integrity assurance processes are included to fully mitigate the effects of faults identified as potential data integrity risks by thorough analysis of the overall system architecture.  (4) the resolution of aeronautical data is commensurate with the actual data accuracy.  (5) the traceability of aeronautical data is ensured.  (6) the timeliness of the aeronautical data is ensured, including any limits on the effective period of the data.  (7) the completeness of the aeronautical data is ensured.  (8) the delivered data meet the specified format requirements.  *Note AMC requirements below* | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_b) |
| **AMC1 ATM/ANS.OR.A.085(b)(8) Aeronautical data quality**  **management** | **FORMAT**  The format requirements should be specified in the formal arrangements. | [373](#AMC1_OR_A_085a_8) |
| [CM GM](#UK_GM_OR_A_AMC1_085_b_8) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.A.085 Aeronautical data quality management (c)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing or transmitting data to the AIS provider, the service provider shall:  (c) with regard to data origination, establish specific formal arrangements with the party originating data that contain instructions for data creation, modification or deletion, which include as a minimum:  (1) an unambiguous description of the aeronautical data to be created, modified, or deleted.  (2) the entity to which the aeronautical data is to be provided.  (3) the date and time by which the aeronautical data is to be provided.  (4) the format of the data origination report to be used.  (5) the format of the aeronautical data to be transmitted.  (6) the requirement to identify any limitation on the use of the data. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_c) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (d)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (d) ensure that data validation and verification techniques are employed to ensure that the aeronautical data meets the associated data quality requirements and in addition:  (1) the verification shall ensure that aeronautical data is received without corruption and that corruption does not occur at any stage of the entire aeronautical data process.  (2) aeronautical data and aeronautical information entered manually shall be subject to independent verification to detect any errors that may have been introduced.  (3) when using aeronautical data to derive or calculate new aeronautical data, the initial data shall be verified and validated, except when provided by an authoritative source.  *Note AMC requirements below* | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_d) |
| **AMC1 ATM/ANS.OR.A.085(d)** **Aeronautical data quality**  **management** | **VALIDATION AND VERIFICATION**  (a) The processes implemented to carry out validation and verification should define the means used to:  (a) verify received data and confirm that the data has been received without corruption.  (b) preserve data quality and ensure that stored data is protected from corruption; and  (c) confirm that originated data has not been corrupted prior to being stored.  (b) Those processes should define the:  (1) actions to be taken when data fails a verification or validation check; and  (2) tools required for the verification and validation process | [373](#AMC1_OR_A_085d) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.A.085 Aeronautical data quality management (e)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (e) transmit aeronautical data by electronic means | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_e) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (f)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (f) establish formal arrangements with:  (1) all parties transmitting data to them.  (2) other service providers or aerodrome operators when exchanging aeronautical data and aeronautical information. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_f) |
| **AMC1 ATM/ANS.OR.A.085(f)** **Aeronautical data quality**  **management** | **FORMAL ARRANGEMENTS**  Formal arrangements should include the following minimum content shown in (a) to (k) of this AMC. | [373](#AMC1_OR_A_085f) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (g)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (g) ensure that the information listed in point AIS.OR.505(a) is provided in due time to the AIS provider. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_g) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (h****)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (h) collect and transmit metadata which include as a minimum:  (1) the identification of the organisations or entities performing any action of originating, transmitting, or manipulating the aeronautical data.  (2) the action performed.  (3) the date and time the action was performed | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_h) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (i)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (i) ensure that tools and software used to support or automate aeronautical data and aeronautical information processes perform their functions without adversely impacting the quality of aeronautical data and aeronautical information. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_i) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (j)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (j) ensure that digital data error detection techniques are used during the transmission or storage of aeronautical data, or both, in order to support the applicable data integrity levels. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_j) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.085 Aeronautical data quality management (k)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (k) ensure that the transfer of aeronautical data is subject to a suitable authentication process such that recipients are able to confirm that the data has been transmitted by an authorised source. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_k) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.A.085 Aeronautical data quality management (l)** | Provide a reference that indicates that your organisation has established a process such that when originating, processing, or transmitting data to the AIS provider, the service provider shall:  (l) ensure that errors identified during data origination and after data delivery are addressed, corrected, or resolved and that priority is given to managing errors in critical and essential aeronautical data. | [373](#OR_A_085) |
| [CM GM](#UK_GM_OR_A_085_l) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.090 Common reference systems for air navigation** | For the purpose of air navigation, service providers shall use:  (a) the World Geodetic System – 1984 (WGS-84) as the horizontal reference system.  (b) the mean sea level (MSL) datum as the vertical reference system.  (c) the Gregorian calendar and coordinated universal time (UTC) as the temporal reference systems  *Note AMC requirements below* | [373](#OR_A_090) |
| [CM GM](#UK_GM_OR_A_090) |
| **AMC1 ATM/ANS.OR.A.090(b) Common reference systems for air**  **navigation** | **VERTICAL REFERENCE SYSTEM**  (a) A service provider should use the Earth Gravitational Model — 1996 (EGM-96), as the global gravity model.  (b) When a geoid model other than the EGM-96 model is used, a description of the model used, including the parameters required for height transformation between the model and EGM-96, should be provided in the aeronautical information publication (AIP). | [373](#AMC1_OR_A_090) |
| [CM GM](#AMC1_OR_A_090b) |
|  | Statement only |  |

**Compliance Matrix SECTION 2**

**ANNEX III — Part-ATM/ANS.OR SUBPART B — MANAGEMENT (ATM/ANS.OR. B)**

This section of the compliance matrix contains extracts from the above annexe and subpart of the regulation that are applicable to **all service providers except** where they relate to the management of changes which are contained in Sections 4, 5 and 6 CHANGE MANAGEMENT

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| **The Regulation and AMC** | **Requirements for all providers (except where indicated)** | **Link** |
| **ATM/ANS.OR.B.001 Technical and operational competence and capability** | Provide a reference that indicates how your organisation ensures that it is able to provide its services in a safe, efficient, continuous, and sustainable manner, consistent with any foreseen level of overall demand for a given airspace. To this end, it shall maintain adequate technical and operational capacity and expertise. | [373](#OR_B_001) |
| [CM GN](#UK_GM_OR_B_001) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 Management system (a)** | A service provider shall implement and maintain a management system. | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(a*) (Management system)*** | An ISO 9001 certificate, issued by an appropriately accredited organisation, addressing the quality management elements required in this Subpart should be considered a sufficient means of compliance for the service provider. In this case, the service provider should accept the disclosure of the documentation related to the certification to the competent authority upon the latter’s request. | [373](#AMC1_OR_B_005a) |
| **Please supply a copy of the ISO certificate which includes the scope of services it covers. If not certified enter NONE.** |  |  |
| **AMC4 ATM/ANS.OR.B.005(a) Management system** **(a)** | **ONLY NON-COMPLEX PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  Provide a reference that indicates that your organisation’s management system policy includes a commitment to improve towards the highest standards, comply with all the applicable legal requirements, meet all the applicable standards, consider the best practices, and provide the appropriate resources. | [373](#AMC4_OR_B_005a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC4 ATM/ANS.OR.B.005(a) Management system (b)** | **ONLY NON-COMPLEX PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  For Non-Complex providers, the task of compliance monitoring may be carried out by the Accountable Manager, provide a reference that indicates that your organisation’s management system details that the post holder who carries out the compliance monitoring task is required to have the related competence as defined in point (b)(4) of GM1 ATM/ANS.OR.B.005(c). | [373](#AMC4_OR_B_005a) |
| [CM GN](#UK_GM_AMC4_OR_B_005_a_b) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **AMC4 ATM/ANS.OR.B.005(a) Management system (c)** | **ONLY NON-COMPLEX PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  Provide a reference that indicates that your organisation’s management system describes how risk management may be performed using hazard checklists or similar risk management tools or processes, which are integrated into the activities of the service provider. | [373](#AMC4_OR_B_005a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC4 ATM/ANS.OR.B.005(a) Management system (d)** | **ONLY NON-COMPLEX PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  Provide a reference that indicates that your organisation’s management system documents a process to manage associated risks related to changes and to identify external and internal changes. | [373](#AMC4_OR_B_005a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC4 ATM/ANS.OR.B.005(a) Management system (e)** | **ONLY NON-COMPLEX PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.** Provide a reference that indicates that your organisation’s management system identifies persons who fulfil the role of managers and who are responsible with regard to safety, quality, and security of its services, as applicable. | [373](#AMC4_OR_B_005a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (a) (1)** | Provide a reference that indicates how your organisation’s management system clearly defines lines of responsibility and accountability throughout your organisation, including a (the) direct accountability of the accountable manager. | [373](#OR_B_005) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (a) (2)** | Provide a reference that indicates how your organisation’s management system describes of the overall philosophies and principles of the service provided with regard to safety, quality, and security of the services, collectively constituting a policy, signed by the accountable manager. *(Note AMC requirement below).* | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(a)(2)** ***(policy)* (a)** | The policy statement must contain all the requirements of this AMC part (a). | [373](#AMC1_OR_B_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATM/ANS.OR.B.005(a)(2) *(policy)* (b)** | Provide a reference that indicates how senior management comply with the requirements of this AMC parts(b). | [373](#AMC1_OR_B_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.B.005 (a) (3*)*** | Provide a reference that indicates how your organisation’s management system describes the means to verify the performance of the organisation in light of the performance indicators and performance targets of the management system. | [373](#OR_B_005) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATM/ANS.OR.B.005(a)(3)** ***(management of meteorological services performance) (a)*** | **ONLY METEOROLOGICAL PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT**  Provide a reference that indicates how your organisation’s management system provides users with assurance that the meteorological information supplied complies with the stated requirements in terms of geographical and spatial coverage, format and content, time and frequency of issuance and period of validity, as well as the accuracy of measurements, observations and forecasts. | [373](#AMC1_OR_B_005a3) |
| [**CM GN**](#UK_GM_OR_B_005_a_3_a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATM/ANS.OR.B.005(a)(3)** ***(management of meteorological services performance) (b)*** | **ONLY METEOROLOGICAL PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT**  Provide a reference that demonstrates how your organisation’s management system indicates that the meteorological information to be supplied to users does not comply with the stated requirements, and automatic error correction procedures are not appropriate, such information should not be supplied to users unless it is validated with the originator | [373](#AMC1_OR_B_005a3) |
| [**CM GN**](#UK_GM_OR_B_005_a_3_b) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATM/ANS.OR.B.005(a)(3)** ***(management of meteorological services performance) (c)*** | **ONLY METEOROLOGICAL PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  Provide a reference that demonstrates how your organisation’s management system, in regard to the exchange of meteorological information for operational purposes, includes verification and validation procedures and resources for monitoring adherence to the prescribed transmission schedules for individual messages and/or bulletins required to be exchanged as well as the times of their filing for transmission and a process for detecting excessive transit times of messages and bulletins received. | [373](#AMC1_OR_B_005a3) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC2 ATM/ANS.OR.B.005(a)(3*)*** ***(safety performance monitoring and measurement — ATS provider)*** | **ONLY AIR TRAFFIC SERVICE PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  Provide a reference that demonstrates how your organisation’s management system documents a process for safety performance monitoring and measurement that meets the requirements of (a) and (b) of this AMC. | [373](#AMC2_OR_B_005a3) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.B.005 (a) (4)** | Provide a reference that indicates how your organisation’s management system documents a process to identify changes within the service provider's organisation and the context in which it operates, which may affect established processes, procedures and services and, where necessary, change the management system and/or the functional system to accommodate those changes. | [373](#OR_B_005) |
| [CM GN](#UK_GM_OR_B_005_a_4) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (a) (5)** | Provide a reference that indicates how your organisation’s management system documents a process to review the management system, identify the causes of substandard performance of the management system, determine the implications of such substandard performance, and eliminate or mitigate such causes. *(Note AMC requirement below).* | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(a)(5)** ***(assessment of the management system)*** | **ASSESSMENT OF THE MANAGEMENT SYSTEM**  (a) Senior management should assess the service provider’s management system, at planned intervals, to ensure its continuing suitability, adequacy, and effectiveness.  (b) The review should include assessing opportunities for improvement and the need for changes to the management system, including the policy and objectives.  (c) Records from management assessments should be maintained. | [373](#AMC1_OR_B_005a5) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (a) (6)** | Provide a reference that indicates how your organisation’s management system documents a process to ensure that the personnel of the service provider are trained and competent to perform their duties in a safe, efficient, continuous, and sustainable manner. In this context, the service provider shall establish policies for the recruitment and training of its personnel*. (Note AMC requirement below).* | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(a)(6*)*** ***(training and competency)*** | **TRAINING AND COMPETENCY**  A service provider should:  (a) determine the necessary competence for personnel performing activities supporting services provision.  (b) where applicable, provide training or take other actions to achieve the necessary competence.  (c) evaluate the effectiveness of the actions taken.  (d) ensure that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the objectives; and  (e) maintain appropriate records of education, training, skills, and experience | [373](#AMC1_OR_B_005a6) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.B.005 (a) (7)** | Provide a reference that indicates how your organisation’s management system documents a formal means for communication that ensures that all personnel of the service provider are fully aware of the management system that allows critical information to be conveyed and that makes it possible to explain why particular actions are taken and why procedures are introduced or changed*. (Note AMC requirement below).* | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(a)(7)** ***(communication responsibilities)*** | The senior management should ensure that appropriate communication processes are established within the service provider and that communication takes place regarding the effectiveness of the management system. | [373](#AMC1_OR_B_005a7) |
| [CM GN](#UK_GM_AMC1_OR_B_005_a_7) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (b*)*** | Provide a reference that indicates how your organisation’s management system documents a process for making personnel aware of their responsibilities, documentation of key processes and the procedure for the amendment of the management system processes. *(Note AMC requirement below).* | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(b)** ***(service provider’s management system documentation)*** | The process must include all the requirements of this AMC (a) to (g) | [373](#AMC1_OR_B_005b) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (c)** | Provide a reference that indicates how your organisation’s management system documents a process to monitor compliance of its organisation with the applicable requirements and the adequacy of the procedures. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary. | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(c)** ***(compliance monitoring — general for complex service providers)*** | **ONLY COMPLEX PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  The process must include all the requirements of this AMC (a) to (e). | [373](#AMC1_OR_B_005c) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.B.005 (d)** | Provide a reference that indicates how your organisation’s management system documents a process to monitor the behaviour of its functional system and, where underperformance is identified, it shall establish its causes and eliminate them or, after having determined the implication of the underperformance, mitigate its effects *(Note AMC requirement below).* | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(d)** **(*reaction to underperformance of functional systems*)** | **REACTION TO UNDERPERFORMANCE OF FUNCTIONAL SYSTEMS**  If the cause of the underperformance is found to be:  (a) a flaw in the functional system, the service provider should initiate a change to the functional system either to remove the flaw or mitigate its effects.  (b) a flawed argument associated with a change to that functional system, the service provider should either:  (1) provide a valid argument; or  (2) where the service provider considers it more feasible, initiate a change to the functional system. | [373](#AMC1_OR_B_005d) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (e)** | The management system shall be proportionate to the size of the service provider and the complexity of its activities, taking into account the hazards and associated risks inherent in those activities | [373](#OR_B_005) |
| **AMC1 ATM/ANS.OR.B.005(e)**  **(*size, nature, and complexity of the activity)*** | **SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY**  (a) An air traffic services provider should be considered as complex unless it is eligible to apply for a limited certificate and fulfils the criteria set out in ATM/ANS.OR.A.010(a).  (b) An air navigation services provider, other than an air traffic services provider, should be considered as complex unless it is eligible to apply for a limited certificate and fulfils the criteria set out in ATM/ANS.OR.A.010(b)(1). | [373](#AMC1_OR_B_005e) |
|  | Statement Only |  |
| **ATM/ANS.OR.B.005 (f)** | Provide a reference that indicates that your organisation has established formal interfaces with the relevant service providers and aviation undertakings in order to:  (1) ensure that the aviation safety hazards entailed by its activities are identified and evaluated, and the associated risks are managed and mitigated as appropriate.  (2) ensure that it provides its services in accordance with the requirements of this regulation. | [373](#OR_B_005) |
| [CM GN](#UK_GM_OR_B_005_f) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.005 (g)** | In the case that the service provider holds also an aerodrome operator certificate, it shall ensure that the management system covers all activities in the scope of its certificates. | [373](#OR_B_005) |
|  | Statement Only |  |

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| **ATM/ANS.OR.B.015 Contracted** **activities** | Does your organisation contract out any of the services for which it is certified or applying to be certified to provide?  Does your organisation contract another certified ANSP to provide any service for which it is not itself certified? | [373](#OR_B_015) |
| **Indicate which services are contracted out and to whom if any** |  |  |
| **AMC1 ATM/ANS.OR.B.015** ***(responsibility when contracting activities)*** | **RESPONSIBILITY WHEN CONTRACTING ACTIVITIES (NOTE: If you do not contract out services do not complete)**  Provide a reference that indicates how your organisation’s management system documents a process for ensuring that the responsibilities described in this AMC (a) to (c) are complied with when contracting services. | [373](#AMC1_OR_B_015) |
| **provide details and scope of such contracts** |  |  |
| **AMC2 ATM/ANS.OR.B.015** ***(responsibility when contracting activities)*** | **RESPONSIBILITY WHEN CONTRACTING ACTIVITIES**  (a) When the contracted organisation is itself certified in accordance with this regulation to carry out the contracted activities, the service providers’ compliance monitoring should at least check that the approval effectively covers the contracted activities and that it is still valid.  (b) When the service provider is not certified itself to provide the service, it should only contract or purchase services from a certified organisation when so required by this regulation. | [373](#AMC2_OR_B_015) |
|  | Statement Only |  |
| **AMC3 ATM/ANS.OR.B.015**  ***(Safety — ats provider)*** | **ONLY AIR TRAFFIC SERVICE PROVIDERS NEED TO COMPLY WITH THIS REQUIREMENT.**  Provide a reference that indicates how your organisation’s management system documents a process ensures adequate justification of the safety of the externally provided and supplied services, having regard to their safety significance within the provision of its services. | [373](#AMC3_OR_B_015) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.020 Personnel** **requirements (a)** | Provide a reference that demonstrates that an accountable manager has been appointed who has the authority over ensuring that all activities can be financed and carried out in accordance with the applicable requirements. The accountable manager shall be responsible for establishing and maintaining an effective management system. | [373](#OR_B_020) |
| **Enter reference(s) where compliance is indicated** |  | [**CM GN**](#UK_GM_OR_B_020_a) |

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| **ATM/ANS.OR.B.020 Personnel requirements (b)** | Provide a reference that indicates how your organisation’s management system defines the authority, duties, and responsibilities of the nominated post holders, in particular of the management personnel in charge of safety, quality, security, finance, and human resources-related functions as applicable. *(Note AMC requirement below).* | [373](#OR_B_020) |
| **AMC1 ATM/ANS.OR.B.020(b)**  ***(general)*** | **GENERAL**  Senior management should appoint a member of the service provider’s management who, irrespective of other responsibilities, should have responsibility and authority that includes:  (a) ensuring that processes needed for the management system are established, implemented and maintained.  (b) reporting to senior management on the performance of the management system and any need for improvement; and  (c) ensuring the promotion of awareness of performance and service requirements throughout the service provider and of the impact it has on safety. | [373](#AMC1_OR_B_020b) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.025 Facilities** **requirements** | A service provider shall ensure that there are adequate and appropriate facilities to perform and manage all tasks and activities in accordance with the applicable requirements | [373](#OR_B_025) |
|  | Statement Only |  |
| **ATM/ANS.OR.B.030 record keeping** | Provide a reference that indicates how your organisation’s management system documents a process that establishes a system of record-keeping that allows adequate storage of the records and reliable traceability of all its activities, covering in particular all the elements indicated in point ATM/ANS.OR.B.005 and that the format and the retention period of the records are be specified and records are stored in a manner that ensures protection against damage, alteration and theft. *(Note AMC requirement below).* | [373](#OR_B_030) |
| **AMC1 ATM/ANS.OR.B.030 Record-keeping (*general)*** | The records keeping system must meet the requirements of this AMC (a) to (e). | [373](#AMC1_OR_B_030) |
| **AMC1 ATM/ANS.OR.B.030(b) *(retention period)*** | **RETENTION PERIOD**  The records should be kept for a minimum period of at least 5 years unless otherwise specified by the competent authority | [373](#AMC1_OR_B_030b) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.B.035 Operations manuals** **(a)** | Provide a reference that indicates how your organisation’s management system ensures that its operations manuals relating to the provision of its services for the use and guidance of operations personnel are kept up to date. | [373](#OR_B_035) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.B.035 Operations manuals (b)** | Provide a reference that indicates how your organisation’s management system ensures that operations personnel are informed of amendments to the operations manual applying to their duties in a manner that enables their application as of their entry into force. | [373](#OR_B_035) |
| **Enter reference(s) where compliance is indicated** |  |  |

**Compliance Matrix SECTION 3**

***ANNEX III — Part-SUBPART D — SPECIFIC ORGANISATIONAL REQUIREMENTS FOR ANS AND ATFM PROVIDERS (ATM/ANS.OR. D)***

This section of the compliance matrix contains extracts from the above annexe and subpart of the regulation that are applicable to **all ANS (ATS, CNS, MET, AIS) and ATFM service providers** except where they relate to the management of changes which are contained in Sections 4,5 and 6 CHANGE MANAGEMENT.

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| **The Regulation and AMC** | **Requirements for all ATM (ATS, CNS, MET, AIS) and ATFM providers only** | **Link** |
| **ATM/ANS.OR.D.005 Business, annual, and performance plans** **(a) Business plan** | **NOT APPLICABLE TO LIMITED CERTIFICATE HOLDERS**  Air navigation services and air traffic flow management providers shall produce a business plan covering a minimum period of five years. | [373](#OR_D_005a) |
| **Provide a statement that your organisation complies with the above requirement** |  |  |
| **ATM/ANS.OR.D.005 Business, annual, and performance plans (b) Annual plan** | **NOT APPLICABLE TO LIMITED CERTIFICATE HOLDERS**  Air navigation services and air traffic flow management providers shall produce an annual plan covering the forthcoming year which shall further specify the features of the business plan and describe any changes to it as compared to the previous plan. | [373](#OR_D_005b) |
| **Provide a statement that your organisation complies with the above requirement** |  |  |
| **ATM/ANS.OR.D.010 Security** **management (a)** | Provide a reference that indicates that your organisation has developed and established a security management system as an integral part of their management system as required in point ATM/ANS.OR.B.005. | [373](#OR_D_010a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.010 Security management (a) (1)** | Provide a reference that indicates how your organisation’s security management system ensures the security of their facilities and personnel so as to prevent unlawful interference with the provision of services. | [373](#OR_D_010a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.010 Security management (a) (2)** | Provide a reference that indicates how your organisation’s security management system ensures the security of operational data they receive, or produce, or otherwise employ, so that access to it is restricted only to those authorised. | [373](#OR_D_010a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.010 Security management (b) (1)** | Provide a reference that indicates how your organisation’s security management system defines the procedures relating to security risk assessment and mitigation, security monitoring and improvement, security reviews and lesson dissemination. | [373](#OR_D_010b) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.D.010 Security management (b) (2)** | Provide a reference that indicates how your organisation’s security management system defines the means designed to detect security breaches and to alert personnel with appropriate security warnings; | [373](#OR_D_010b) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.010 Security management (b) (3)** | Provide a reference that indicates how your organisation’s security management system defines the means of controlling the effects of security breaches and to identify recovery action and mitigation procedures to prevent re-occurrence. | [373](#OR_D_010b) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.010 Security management (c)** | Provide a reference that indicates how your organisation ensures the security clearance of their personnel, if appropriate, and how coordination with the relevant civil and military authorities to ensure the security of their facilities, personnel and data is achieved. | [373](#OR_D_010bc) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.010 Security management (d)** | Provide a reference that indicates how your organisation takes the necessary measures to protect their systems, constituents in use and data and prevent compromising the network against information and cyber security threats which may have an unlawful interference with the provision of their service. | [373](#OR_D_010d) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.D.015 Financial strength — economic and financial capacity** | **NOT APPLICABLE TO LIMITED CERTIFICATE HOLDERS**  Air navigation services and air traffic flow management providers shall be able to meet their financial obligations, such as fixed and variable costs of operation or capital investment costs. They shall use an appropriate cost-accounting system. They shall demonstrate their ability through the annual plan as referred to in point ATM/ANS.OR.D.005(b), as well as through balance sheets and accounts, as applicable under their legal statute, and regularly undergo an independent financial audit. | [373](#OR_D_015) |
| **Provide a statement that your organisation complies with the above requirement** |  |  |
| **ATM/ANS.OR.D.020 Liability and insurance cover** **(a)(b)** | Ensure adequate insurance cover is in place  New ANSP applicants must provide completed form ATL30 (available from the CAA). | [373](#OR_D_020) |
| **Provide a statement that your organisation complies with the above requirement** |  |  |

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| **ATM/ANS.OR.D.020 Liability and insurance cover (c)** | Air navigation services and providers which avail themselves of services of another service provider shall ensure that the agreements that they conclude to that effect specify the allocation of liability between them. | [373](#OR_D_020) |
| **Provide a statement that your organisation will comply with the above requirement if it becomes applicable** |  |  |
| **ATM/ANS.OR.D.025 Reporting requirements** | **NOT APPLICABLE TO LIMITED CERTIFICATE HOLDERS**  Submit business plans and annual plans referred to in ATM/ANS.OR.D.005 (Business, annual, and performance plans (a) and (b)) and the results of the financial audit required by ATM/ANS.OR.D.015 to the CAA. | [373](#OR_D_025) |
| **Provide a statement that your organisation complies with the above requirement** |  |  |

**Compliance Matrix SECTION 4**

**ANNEX III — Part-ATM/ANS.OR SUBPART A — GENERAL REQUIREMENTS (ATM/ANS.OR. A)**

**ANNEX III — Part-ATM/ANS.OR SUBPART B — MANAGEMENT (ATM/ANS.OR. B)**

**Change Management**

This section of the compliance matrix contains extracts from the above annexes and subparts of the regulation, where they relate to the management of changes that **are applicable to all service providers.**

**Introduction** **to Compliance Matrix Section 4 CHANGE MANAGEMENT**

UK Regulation (EU) No 2017/373 requires that all service providers document a Change Management Procedure and submit this to the CAA for approval.

Completing this compliance matrix will indicate that the submitted Change Management Procedure meets the requirements of the regulation and should be amended as appropriate when any modifications to the approved Change Management Procedure are submitted to the CAA for approval.

Provide a documented Change Management Procedure for approval by the CAA, which details how changes which may require review and acceptance (changes to functional systems) and changes that require approval (modifications to change management procedure) and changes that do not require approval or acceptance (changes to management system and safety management system), are identified and notified to the CAA.

The procedure must also detail how such changes are to be implemented whether approval/acceptance is required or not.

As the Change Management Procedure must be approved by the CAA, it must be a separate and uniquely identified document and not included within any other document such as the Safety Management System or Management System.

The unique identification must include the Document Number, Issue, date, amendment state etc in accordance with your Management System document control process.

Larger more complex organisations may require more than one procedure to manage change. In such situations, to prevent multiple approvals being issued, the procedures are to be grouped under a master change management procedure/index with sub procedures clearly identified such that any modification to a sub-procedure will constitute a modification to the master approved document.

Note: UK (EU) Reg No 2015/340 (Air Traffic Controllers licensing and training) also requires a change management procedure. If your organisation provides an Air Traffic Control service, the requirements of this regulation are to be included in the change management procedure.

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| **The Regulation and AMC** | **Requirements for all providers (except where indicated)** | **link** |
| **ATM/ANS.OR.B.010 Change Management procedures** **(a) (b)** | (a) A service provider shall use procedures to manage, assess and, if necessary, mitigate the impact of changes to its functional systems in accordance with points ATM/ANS.OR.A.045, ATM/ANS.OR.C.005, ATS.OR.205 and ATS.OR.210, as applicable.  (b) The procedures referred to in point (a) or any material modifications to those procedures shall:  (1) be submitted, for approval, by the service provider to the competent authority.  (2) not be used until approved by the competent authority. | [373](#OR_B_010) |
| [CM GN](#UK_GM_OR_B_010_a_b) |
| **Enter the unique details of the Change Management procedure. I.e. Title/Issue#/Issue Date/Amendment status** |  |  |
| **AMC1 ATM/ANS.OR.B.010(a) (***General)* (a) | Provide a reference that indicates how your organisation’s change management procedure covers the complete lifecycle of the change. | [373](#AMC1_OR_B_010a) |
| [CM GN](#UK_GM_OR_B_010_a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATM/ANS.OR.B.010(a) (*general)* (b)** | The service provider should show that the procedures address all the actions and all the evidence needed in order to comply with the requirements laid down in ATM/ANS.OR.A.045, ATS.OR.205, ATS.OR.210, and ATM/ANS.OR.C.005, as appropriate. For that purpose, the service provider should use a compliance matrix, | [373](#AMC1_OR_B_010a) |
|  | There is no requirement to complete a separate compliance matrix. Completing and maintaining this compliance matrix will meet this requirement as detailed below. |  |
| **AMC1 ATM/ANS.OR.B.010(a) (*general)* (b) (First Part)** | Provide a reference that indicates how your organisation’s change management procedure address all the actions and all the evidence needed in order to comply with the requirements laid down in ATM/ANS.OR.A.045 | [373](#AMC1_OR_B_010a) |
|  | **RELEVANT TO ALL SERVICE PROVIDERS** No response required here. Complete requirements of ATM/ANS.OR.A.045 detailed in this section below. |  |

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| **AMC1 ATM/ANS.OR.B.010(a) (*general)* (b) (Second Part)** | | Provide a reference that indicates how your organisation’s change management procedure address all the actions and all the evidence needed in order to comply with the requirements laid down in ATS.OR.205 and ATS.OR.210. | | | | [373](#AMC1_OR_B_010a) |
|  | | **RELEVANT ONLY TO AIR TRAFFIC SERVICE PROVIDERS**. No response required here. Complete the requirements of ATS.OR.205 and ATS.OR.210 detailed in Section 5 of this compliance matrix (ATS providers only). | | | |  |
| **AMC1 ATM/ANS.OR.B.010(a) (*general)* (b) (Third Part)** | Provide a reference that indicates how your organisation’s change management procedure address all the actions and all the evidence needed in order to comply with the requirements laid down in ATM/ANS.OR.C.005. | | | [373](#AMC1_OR_B_010a) | | |
|  | **RELEVANT TO ALL SERVICE PROVIDERS EXCEPT AIR TRAFFIC SERVICE PROVIDERS.**  No response required here Complete the requirements of ATM/ANS.OR.C.005 detailed in Section 6 of this compliance matrix (Non-ATS providers only). | | |  | | |
| **AMC1 ATM/ANS.OR.B.010(a) (*General)* (c)** | Provide a reference that indicates how your organisation’s change management procedure ensures that the roles and responsibilities for the change management processes are identified in the procedures. | | | [373](#AMC1_OR_B_010a) | | |
| **Enter reference(s) where compliance is indicated** |  | | |  | | |
| **AMC1 ATM/ANS.OR.B.010(a) (*General)* (d)** | Procedures should be submitted in a manner agreed between the service provider and the competent authority. Until an agreement is reached, the competent authority will prescribe the means of submission.  Change management procedure to be submitted for approval to. [ansp.certification@caa.co.uk](mailto:ansp.certification@caa.co.uk) | | | [373](#AMC1_OR_B_010a) | | |
|  | Statement Only | | |  | | |
| **AMC1 ATM/ANS.OR.B.010(a) *(General)* (e)** **(1)** | Provide a reference that indicates where your organisation’s change management procedure refers to a point of contact who is in charge of the notification of a change. | | | [373](#AMC1_OR_B_010a) | | |
| **Enter reference(s) where compliance is indicated** |  | | |  | | |
| **AMC1 ATM/ANS.OR.B.010(a) *(General)* (e) (2)** | Provide a reference that indicates how your organisation’s change management procedure describes the means used for notifying changes to the CAA. | | | [373](#AMC1_OR_B_010a) | | |
| [CM GN](#UK_GM_AMC1_OR_B_010_a_e_2) | | |
| **Enter reference(s) where compliance is indicated** |  | | |  | | |
| **AMC1 ATM/ANS.OR.B.010(a) *(General)* (f)** | Provide a reference that indicates how your organisation’s change management procedure includes a change identification procedure. | | | [373](#AMC1_OR_B_010a) | | |
| **Enter reference(s) where compliance is indicated** |  | | | [CM GN](#UK_GM_OR_B_010_a_f) | | |
| **AMC2 ATM/ANS.OR.B.010(a) *(General)* (a)** | Provide a reference that indicates how your organisation’s change management procedure includes a register or links to a register which records the status of a change and links to all associated records in accordance with this AMC. | | | [373](#AMC2_OR_B_010a) | | |
| **Enter reference(s) where compliance is indicated** |  | | |  | | |
| **ATM/ANS.OR.B.010 Change Management procedures (c)** | | | Provide a reference that indicates how your organisation’s change management procedure details a process for making a request to the CAA to deviate from the approved procedures and for providing details of the deviation and justification for its use. | | [373](#OR_B_010) | |
| **Enter reference(s) where compliance is indicated** | | |  | |  | |
| **ATM/ANS.OR.A.040 Changes — (***general)* | | | **GENERAL**  (a) The notification and management of:  (1) a change to the functional system or a change that affects the functional system shall be carried out in accordance with point ATM/ANS.OR.A.045.  (2) a change to the provision of service, the service provider's management system and/or safety management system, that does not affect the functional system, shall be carried out in accordance with point (b).  (b) Any change as referred to in point (a)(2) shall require prior approval before implementation, unless such a change is notified and managed in accordance with a procedure approved by the competent authority as laid down in point ATM/ANS.AR. C.025(c). | | [373](#OR_A_040) | |
|  | | | Statement Only | |  | |
| **AMC1 ATM/ANS.OR.A.040 *(Change of Ownership and/or Location)*** | | | **CHANGE OF THE OWNERSHIP AND/OR THE LOCATION**  A change of the service provider’s ownership and/or the location of its facilities should comply with ATM/ANS.OR.A.040(a)(2) and should not be subject to the procedure identified in ATM/ANS.AR. C.025(c). | | [373](#AMC1_OR_A_040) | |
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| **AMC1 ATM/ANS.OR.A.040(b) *(Procedure for changes requiring prior approval)*** | | | The Change Management procedure must contain details of how a change that requires prior approval before implementation is submitted to the CAA. | | [373](#AMC1_OR_A_040b) | |
|  | | | The type of change that requires prior approval referred to here are changes to the management system and safety management system and they only require mandatory prior approval if the service provider does not have an approved change management procedure. As it is not envisaged that there will be a situation in the UK where an ANSP operates without an approved change management procedure this AMC in not relevant in the UK, as all changes will be notified and managed in accordance with a procedure approved by the competent authority IAW ATM/ANS OR.A.040 (b). To clarify, there will be only one change management procedure for all types of changes. | |  | |

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| **AMC2 ATM/ANS.OR.A.040(b) (*Procedure for changes not requiring prior approval)*** | The Change Management procedure must contain a process for notifying the CAA of changes that do not require prior approval and a process for informing the CAA of changes in personnel specified in ATM/ANS.OR.B.020(b), (All providers) and ATS.OR.200(1)(iii) (ATS providers only) | [373](#AMC2_OR_A_040b) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.045 *(Changes to a functional system) (a).*** | Provide a reference that indicates how your organisation’s change management procedure details a process that meets the following requirements:  (1) notifying the competent authority of the change.  (2) providing the competent authority, if requested, with any additional information that allows the competent authority to decide whether or not to review the argument for the change.  (3) informing other service providers and, where feasible, aviation undertakings affected by the planned change. *(Note AMC requirement below).* | [373](#OR_A_045) |
| **AMC1 ATM/ANS.OR.A.045(a) *(notification*)** | Provide a reference that indicates how your organisation’s change management procedure details the requirements for the notification of a change to the CAA in accordance with the requirements of this AMC. | [373](#AMC1_OR_A_045a) |
| [CM GN](#UK_GM_AMC1_OR_A_045a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATM/ANS.OR.A.045(a)(3)**  ***(notification to users of the service)*** | Provide a reference that indicates that your organisation’s change management procedure includes a requirement to inform other service providers affected by the change, if appropriate and a method of informing affected aviation undertakings | [373](#AMC1_OR_A_045a3) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.045 *(Changes to a functional system) (b).*** | Provide a reference that indicates how your organisation’s change management procedure details a process that meets the following requirements:  (b) Having notified a change, the service provider shall inform the competent authority whenever the information provided in accordance with points (a)(1) and (2) is materially modified, and the relevant service providers and aviation undertakings whenever the information provided in accordance with point (a)(3) is materially modified. *(Note AMC requirement below).* | [373](#OR_A_045) |
| **AMC1 ATM/ANS.OR.A.045(b) (modification of a notified change)** | Provide a reference that indicates that your organisation’s change management procedure includes a process for informing the CAA when a notified change is modified. | [373](#AMC1_OR_A_045b) |
| [CM GN](#UK_GM_AMC1_OR_B_045_b) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATM/ANS.OR.A.045 *(Changes to a functional system) (c).(d)*** | Provide a reference that indicates how your organisation’s change management procedure details a process that meets the following requirements:  (c) A service provider shall only allow the parts of the change, for which the activities required by the procedures referred to in point ATM/ANS.OR.B.010 have been completed, to enter into operational service.  (d) If the change is subject to competent authority review in accordance with point ATM/ANS.AR.C.035, the service provider shall only allow the parts of the change for which the competent authority has approved the argument to enter into operational service. *(Note AMC requirement below).* | [373](#OR_A_045) |
| **AMC1 ATM/ANS.OR.A.045(c); (d) *(entry into operational service of a change selected for review)*** | Provide a reference that indicates that your organisation’s change management procedure includes a process that prevents the implementation of any part of the change that has the potential to affect the safety of the services currently being provided until a valid safety (support) assessment for that part of the change exists and, if the change is subject to competent authority review, it has been approved by the CAA. | [373](#AMC1_OR_A_045cd) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.045 *(Changes to a functional system) (e)*** | Provide a reference that indicates how your organisation’s change management procedure details a process that meets the following requirements:  (e) When a change affects other service providers and/or aviation undertakings, as identified in point (a)(3), the service provider and these other service providers, in coordination, shall determine:  (1) the dependencies with each other and, where feasible, with the affected aviation undertakings,  (2) the assumptions and risk mitigations that relate to more than one service provider or aviation undertaking.  *(Note AMC requirement below).* | [373](#OR_A_045) |
| **AMC1 ATM/ANS.OR.A.045(e) *(changes affecting multiple service providers — overarching safety argument)*** | Provide a reference that indicates that your organisation’s change management procedure includes a process/statement requiring the development an overarching safety argument, coherent with the arguments of the individual changes, that claims the complete change is safe where a change affects more than one service providers functional system, as required by this AMC. | [373](#AMC1_OR_A_045e) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.A.045 *(Changes to a functional system) (f)*** | (f) Those service providers affected by the assumptions and risk mitigations referred to in point (e)(2) shall only use, in their argument for the change, agreed and aligned assumptions and risk mitigations with each other and, where feasible, with aviation undertakings. | [373](#OR_A_045) |
|  | Statement only |  |

**Compliance matrix SECTION 5**

***ANNEX IV — Part-ATS SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF AIR TRAFFIC SERVICES (ATS.OR)***

**Change Management**

This section of the compliance matrix contains extracts from the above annexes and subparts of the regulation, where they relate to the management of changes that are **only applicable to air traffic service providers**.

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| **The Regulation and AMC** | **Additional Requirements for ATS providers** |  |
| **ATS.OR.205 (a)(1)** | Provide a reference that indicates that your organisation’s change management procedure details a process for safety assessment of a change including hazard identification and risk analysis, risk evaluation and verification. | [373](#ATS_OR_205) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATS.OR.205 (a)(2)** | Provide a reference that indicates that your organisation’s change management procedure details a process that provides assurance, with sufficient confidence, via a complete, documented and valid argument that the safety criteria identified via the application of point ATS.OR.210 are valid, will be satisfied and will remain satisfied. | [373](#ATS_OR_205) |
| **AMC1 ATS.OR.205(a)(2) (*form of assurance*)** | **FORM OF ASSURANCE**  The air traffic services provider should ensure that the assurance required by ATS.OR.205(a)(2) is documented in a safety case. | [373](#AMC1_ATS_OR_205a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC2 ATS.OR.205(a)(2) (*completeness of the argumen******t*** | **COMPLETENESS OF THE ARGUMENT**  Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that arguments within safety cases are complete as detailed in this AMC (a) to (g) as applicable. | [373](#AMC2_ATS_OR_205a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC3 ATS.OR.205(a)(2)** | **ASSURANCE – SOFTWARE**  Provide a reference that indicates that your organisation’s software assurance processes provide evidence and arguments to demonstrate that the software behaves as intended. | [373](#AMC3_ATS_OR_205a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC4 ATS.OR.205(a)(2)** | **ASSURANCE – SOFTWARE ASSURANCE PROCESSES**  Provide a reference that indicates that your organisation’s software assurance processes provide evidence and arguments and as a minimum demonstrate that the requirements of this AMC (a) to (e) are met. | [373](#AMC4_ATS_OR_205a2) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **ATS.OR.205 (b)(1)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety assessment referred to in point (a) comprises:  (1) the identification of hazards; | [373](#ATS_OR_205) | |
| **Enter reference(s) where compliance is indicated** |  |  | |
| **AMC1 ATS.OR.205(b)(1) (*completeness of hazard identification)*** | **COMPLETENESS OF HAZARD IDENTIFICATION**  Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the hazard identification of a change is complete and carried out by competent personnel as detailed in this AMC (a) to (c). | [373](#AMC1_ATS_OR_205b1) | |
| **Enter reference(s) where compliance is indicated** |  |  | |
| **AMC2 ATS.OR.205(b)(1) (*hazards to be identified)*** | **HAZARDS TO BE IDENTIFIED**  Provide a reference that indicates that your organisation’s change management procedure details a process for identifying new and existing hazards detailed in this AMC (a) and (b). | | [373](#AMC2_ATS_OR_205b1) |
| **Enter reference(s) where compliance is indicated** |  | |  |
| **ATS.OR.205 (b)(2)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety assessment referred to in point (a) comprises:  (2) the determination and justification of the safety criteria applicable to the change in accordance with point ATS.OR.210; *(Note AMC requirement below).* | | [373](#ATS_OR_205) |
| **AMC1 ATS.OR.205(b)(2) (determination of the safety criteria for the change** | **DETERMINATION OF THE SAFETY CRITERIA FOR THE CHANGE**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that when determining the safety criteria for the change being assessed, the air traffic services provider should, in accordance with ATS.OR.210, ensure that the requirements for safety criteria detailed in this AMC (a) to (e) are complied with. | | [373](#AMC1_ATS_OR_205b2) |
| **Enter reference(s) where compliance is indicated** |  | |  |
| **ATS.OR.205 (b)(3)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety assessment referred to in point (a) comprises:  (3) the risk analysis of the effects related to the change; ATS.OR.210; *(Note AMC requirement below).* | | [373](#ATS_OR_205) |
| **AMC1 ATS.OR.205(b)(3) (*completeness of risk analysis)*** | **COMPLETENESS OF RISK ANALYSIS**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that risk analysis is carried out by trained and competent personnel and that the requirements of this AMC (a) to (d) are complied with. | | [373](#AMC1_ATS_OR_205b3) |
| **Enter reference(s) where compliance is indicated** |  | |  |
| **AMC2 ATS.OR.205(b)(3) (*severity classification of accidents leading to harmful effects)*** | **SEVERITY CLASSIFICATION OF ACCIDENTS LEADING TO HARMFUL EFFECTS**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that when performing a risk analysis in terms of risk, the harmful effects of all hazards are allocated a safety severity category and that where there is more than one safety severity category of harm, any severity classification scheme satisfies the criteria defined in this AMC (a) to (f). | | [373](#AMC2_ATS_OR_205b3) |
| **Enter reference(s) where compliance is indicated** |  | |  |
| **ATS.OR.205 (b)(4)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety assessment referred to in point (a) comprises:  (4) the risk evaluation and, if required, risk mitigation for the change such that it can meet the applicable safety criteria. *(Note AMC requirement below).* | | [373](#ATS_OR_205) |
| **AMC1 ATS.OR.205(b)(4) (*risk evaluation)*** | **RISK EVALUATION**  Provide a reference that indicates that your organisation’s change management procedure details a process of risk evaluation which includes the requirements of the AMC (a) to (c). | | [373](#AMC1_ATS_OR_205b4) |
| **Enter reference(s) where compliance is indicated** |  | |  |
| **AMC2 ATS.OR.205(b)(4) (*risk mitigation)*** | **RISK MITIGATION**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that when the risk evaluation results show that the safety criteria cannot be satisfied the change is either abandoned or additional means of mitigating the risk proposed. If further risk mitigation is proposed, then the procedure should ensure that the requirements of this AMC (1) and (6) listed in ATS.OR.205(b) are complied with. | | [373](#AMC2_ATS_OR_205b4) |
| **Enter reference(s) where compliance is indicated** |  | |  |
| **ATS.OR.205 (b)(5)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety assessment referred to in point (a) comprises:  (5) the verification that:  (i) the assessment corresponds to the scope of the change as defined in point (a)(1);  (ii) the change meets the safety criteria. *(Note AMC requirement below).* | | [373](#ATS_OR_205) |
| **AMC1 ATS.OR.205(b)(5) (*verification)*** | **VERIFICATION**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that the safety assessment verification process is scoped to include the requirements of this AMC (a) to (i). | | [373](#AMC1_ATS_OR_205b5) |
| **Enter reference(s) where compliance is indicated** |  | |  |

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| **ATS.OR.205 (b)(6)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety assessment referred to in point (a) comprises:  (6) the specification of the monitoring criteria necessary to demonstrate that the service delivered by the changed functional system will continue to meet the safety criteria. *(Note AMC requirement below).* | [373](#ATS_OR_205) |
| **AMC1 ATS.OR.205(b)(6) *(monitoring of the introduced change)*** | **MONITORING OF INTRODUCED CHANGE**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that within the safety assessment process for a change, the monitoring criteria, that are to be used to demonstrate that the safety case remains valid during the operation of the changed functional system, are identified and documented. The monitoring criteria for a specific change should meet the requirements of this AMC (a) to (c). | [373](#AMC1_ATS_OR_205b6) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATS.OR.210 Safety criteria****(a)** | Provide a reference that indicates that your organisation’s change management procedure has a process for determining the safety acceptability of a change to a functional system, based on the analysis of the risks posed by the introduction of the change. | [373](#ATS_OR_210) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATS.OR.210 (b)** | Provide a reference that indicates that your organisation’s change management procedure contains a process to assess the safety acceptability of a change by using specific and verifiable safety criteria, where each criterion is expressed in terms of an explicit, quantitative level of safety risk or another measure that relates to safety risk. *(Note AMC requirement below).* | [373](#ATS_OR_210) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC1 ATS.OR.210(a) *(other measures related to safety risk)***  ***(Note this really relates to 210 (b))*** | **OTHER MEASURES RELATED TO SAFETY RISKS**  Provide a reference that indicates that your organisation’s change management procedure has a process which ensures that when safety criteria is employed with reference to another measure that relates to safety risk, it should use one or more of the following:  (a) proxies.  (b) recognised standards and/or codes of practice; and  (c) the safety performance of the existing functional system or a similar system elsewhere. | [373](#AMC1_ATS_OR_210_a) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **AMC2 ATS.OR.210(a) Safety criteria**  ***other measures related to safety risks — proxies***  ***(Note this really relates to 210 (b))*** | **OTHER MEASURES RELATED TO SAFETY RISKS — PROXIES**  Provide a reference that indicates that your organisation’s change management procedure has a process which ensures that when proxies are used for safety risk (used as safety criteria for those parts of the functional system affected by the change), they can only be employed when:  (a) a justifiable causal relationship exists between the proxy and the harmful effect, e.g. proxy increase/decrease causes risk increase/decrease;  (b) a proxy is sufficiently isolated from other proxies to be treated independently; and  (c) the proxy is measurable, quantitatively, or qualitatively, to an adequate degree of certainty.  **NOTE: AS THIS IS A NEW CONCEPT PLEASE REFER TO THE RELEVANT GUIDANCE MATERIAL (GM) IN UK (EU) REG NO 2017/373. IF AFTER READING THE GM THIS CONCEPT IS STILL NOT CLEARLY UNDERSTOOD PLEASE STATE THIS BELOW. THIS WILL ENABLE THE CAA TO JUDGE IF FURTHER GM NEEDS TO BE DEVELOPED** | [373](#AMC2_ATS_OR_210a) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATS.OR.210 (c)** | c) An air traffic services provider shall ensure that the safety criteria:  (1) are justified for the specific change, taking into account the type of change.  (2) when fulfilled, predict that the functional system after the change will be as safe as it was before the change or the air traffic services provider shall provide an argument justifying that:  (i) any temporary reduction in safety will be offset by future improvement in safety; or  (ii) any permanent reduction in safety has other beneficial consequences.  (3) when taken collectively, ensure that the change does not create an unacceptable risk to the safety of the service.  (4) support the improvement of safety whenever reasonably practicable | [373](#ATS_OR_210) |
|  | Statement Only. To be evidenced on submission of a change if appropriate |  |

**Compliance matrix SECTION 6**

**ANNEX III — Part-ATM/ANS.OR SUBPART C — SPECIFIC ORGANISATION REQUIREMENTS FOR SERVICE PROVIDERS OTHER THAN ATS PROVIDERS (ATM/ANS.OR.C)**

**Change Management**

This section of the compliance matrix contains extracts from the above annexe and subpart of the regulation, where they relate to the management of changes and are applicable to **all providers except air traffic service providers. (ATS providers see NOTE below)**

**NOTE: Where an ATS provider is also certified to provide other services i.e. CNS/MET/ATFM/AIS and ASM they should use the safety assessment process to manage all changes to all services provided as required by ANNEX IV Part-ATS SUBPART A above. Where a service, such as CNS, is provided to another service provider it will be necessary to provide that service provider with a safety support assessment of any change made to that service and therefore, this section must be completed by an ATS provider that provides such external services.**

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| **The Regulation and AMC** | **Additional Requirements for Providers Other Than ATS Providers** |  |
| **ATM/ANS.OR.C..005(a)(1)** | Provide a reference that indicates that your organisation’s change management procedure details a process for carrying out a safety support assessment covering the scope of a change to a functional system which meets the requirements of this regulation part (a) (1). (i) to (v). | [373](#OR_C_005) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.C..005(a)(2)** | Provide a reference that indicates that your organisation’s change management procedure details a process for providing assurance, with sufficient confidence, via a complete, documented and valid argument that the service will behave and will continue to behave only as specified in the specified context. *(Note AMC requirement below).* | [373](#OR_C_005) |
| **AMC1 ATM/ANS.OR.C.005(a)(2)**  *(form of assurance)* | **FORM OF ASSURANCE**  Service providers other than air traffic services providers should ensure that the assurance is documented in a safety support case. | [373](#AMC1_OR_C_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC2 ATM/ANS.OR.C.005(a)(2)** *(Completeness of the argument)* | **COMPLETENESS OF THE ARGUMENT**  Provide a reference that indicates that your organisation’s change management procedure details a process for establishing when an argument can be considered complete in the context of a safety support assessment which complies with the requirements of this AMC (a) to (f). | [373](#AMC2_OR_C_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC3 ATM/ANS.OR.C.005(a)(2)** *(determination of the specification of the changed service)* | **DETERMINATION OF THE SPECIFICATION OF THE CHANGED SERVICE**  Provide a reference that indicates that your organisation’s change management procedure details a process for determining the changes in the service specification that have resulted from the change to the functional system and which ensure that the requirements of this AMC (a) and (b) are met. | [373](#AMC3_OR_C_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC4 ATM/ANS.OR.C.005(a)(2)** (*determination of the operational context for the change)* | **DETERMINATION OF THE OPERATIONAL CONTEXT FOR THE CHANGE**  Provide a reference that indicates that your organisation’s change management procedure details a process for determining the operational context for the change that includes the requirements of this AMC (a) and (b). | [373](#AMC4_OR_C_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |

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| **AMC5 ATM/ANS.OR.C.005(a)(2)** (*determination of the operational context for the change)* | **ASSURANCE – SOFTWARE**  Provide a reference that indicates that your organisation’s change management procedure details a process for  the creation of software assurance processes that includes the requirements of this AMC (a) and (b). | [373](#AMC5_OR_C_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **AMC6 ATM/ANS.OR.C.005(a)(2)** (*determination of the operational context for the change)* | **ASSURANCE – SOFTWARE ASSURANCE PROCESSES**  Provide a reference that indicates that your organisation’s software assurance processes provide evidence and arguments and as a minimum demonstrate that the requirements of this AMC (1) to (5) are met. | [373](#AMC6_OR_C_005a2) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.C.005 (b)(1)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety support assessment referred to in point ATM/ANS.OR.005 (a) (1) comprises of the following:  (1) verification that:  (i) the assessment corresponds to the scope of the change as defined in point (a)(1);  (ii) the service behaves only as specified in the specified context.  (iii) the way the service behaves complies with and does not contradict any applicable requirements of this regulation placed on the services provided by the changed functional system. | [373](#OR_C_005) |
| **Enter reference(s) where compliance is indicated** |  |  |
| **ATM/ANS.OR.C.005 (b)(2)** | Provide a reference that indicates that your organisation’s change management procedure details a process for ensuring that the safety support assessment referred to in point ATM/ANS.OR.005 (a) (1) comprises of the following:  (2) specification of the monitoring criteria necessary to demonstrate that the service delivered by the changed functional system will continue to behave only as specified in the specified context.  *(Note AMC requirement below.* | [373](#OR_C_005) |
| **AMC1 ATM/ANS.OR.C.005(b)(2****)** | **MONITORING**  Provide a reference that indicates that your organisation’s change management procedure details a process which ensures that within the safety support assessment process for a change, the monitoring criteria, that are to be used to demonstrate that the safety support case remains valid during the operation of the changed functional system, i.e., that the changed service continues to meet its specification, are identified and documented. These criteria should be such that:  (a) they indicate that the assumptions made in the safety support case remain valid; and  (b) if the properties being monitored remain within the bounds set by these criteria, the service will be behaving as specified | [373](#AMC1_OR_C_005b2) |
| **Enter reference(s) where compliance is indicated** |  |  |

**The UK (EU) Regulations and the AMC and Compliance Matrix Guidance Notes**

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| **ATM/ANS.OR.A.005 Application for a service provider certificate**  (a) Application for a service provider certificate or an amendment to an existing certificate shall be made in a form and manner established by the competent authority, taking into account the applicable requirements of this Regulation.  (b) In accordance with Article 6, in order to obtain the certificate, the service provider shall comply with:  (1) the requirements referred to in Articles 40 to 46 of Regulation (EU) No 2015/1139 as applicable to type of service provision.  (2) deleted  (3) the specific requirements set out in Annexes IV to XIII, where those requirements are applicable in light of the services  that the service provider provides or plans to provide. | [Return OR A 005](#RETURN_OR_A_005) |
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| **AMC1 ATM/ANS.OR.A.005 Application for a service provider certificate**  EXPOSITION — DAT PROVIDERS  (a) The DAT provider should submit to the competent authority an exposition providing the following information:  (1) a statement signed by the accountable manager confirming that the exposition and any associated manuals which define the organisation’s compliance with the requirements will be complied with at all times.  (2) the duties and responsibilities of the manager(s) as required by ATM/ANS.OR.B.020 including matters on which they may deal directly with the competent authority on behalf of the organisation.  (3) an organisational chart showing lines of responsibility and accountability throughout the DAT provider, including a direct accountability of the accountable manager as required by ATM/ANS.OR.B.005(a)(1).  (4) a list of attesting staff as referred to in DAT.TR.100(b).  (5) a general description of manpower resources.  (6) a general description of the facilities of the DAT provider.  (7) a general description of the activities for which the DAT provider’s certificate is requested.  (8) the procedure for the notification of organisational changes to the competent authority.  (9) the amendment procedure for the exposition.  (10) a description of the management system and the procedures as required by DAT.OR.110, and  (11) a list of those contracted organisations referred to in ATM/ANS.OR.B.015(b).  (b) The exposition should be amended as necessary to remain an up-to-date description of the organisation, and copies of any amendments should be supplied to the competent authority. | [Return AMC1 OR A 005](#RETURN_AMC1_OR_A_005) |
| **ATM/ANS.OR.A.020 Means of compliance**  (a) Means of compliance (MOC) to the AMC may be used by the service provider to establish compliance with the requirements of this regulation.  (b) When the service provider wishes to use an MOC, it shall, prior to implementing it, provide the competent authority with a full description of the MOC. The description shall include any revisions to manuals or procedures that may be relevant, as well as an assessment demonstrating compliance with the requirements of this regulation.  A service provider may implement these alternative means of compliance subject to prior approval by the competent authority and upon receipt of the notification as prescribed in point ATM/ANS.AR.A.015(d).  Amended by Statutory Instrument 2019 No 459 | [Return OR A 020 (a)](#RETURN_OR_A_020_a) |
| [Return OR A 020 (b)](#RETURN_OR_A_020_b) |
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| **CM GUIDANCE NOTES. providing guidance on compliance with ATM/ANS.OR.A.020**  It should be noted that the term Means of Compliance (MOC) introduced by Statutory Instrument 459 remains in effect an Alternative Means of Compliance (AltMoC). | [Return OR A 020 (a)](#RETURN_OR_A_020_a) |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.****020**  Your management system should reference the CAA AltMOC notification form SRG 1840. | [Return OR A 020 (b)](#RETURN_OR_A_020_b) |
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| **ATM/ANS.OR.A.055 Findings and corrective actions**  After receipt of notification of findings from the competent authority, the service provider shall:  (a) identify the root cause of the non-compliance.  (b) define a corrective action plan that meets the approval by the competent authority.  (c) demonstrate corrective action implementation to the satisfaction of the competent authority within the time period proposed by the service provider and agreed with that authority, as defined in point ATM/ANS.AR.C.050(e).  Amended by Statutory Instrument 2019 No 459 | [Return OR A 055](#RETURN_OR_A_055) |
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| **AMC1 ATM/ANS.OR.A.055(b) Findings and corrective actions**  **GENERAL**  The corrective action plan defined by the service provider should address the effects of the non-conformity and its root cause. | [Return AMC1 OR A 055](#RETURN_AMC_OR_A_055) |

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| **ATM/ANS.OR.A.060 Immediate reaction to a safety problem**  A service provider shall implement any safety measures, including safety directives, mandated by the competent authority in accordance with point ATM/ANS.AR.A.025(c).  Amended by Statutory Instrument 2019 No 459 | [Return OR A 060](#RETURN_OR_A_060) |
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| **ATM/ANS.OR.A.065 Occurrence reporting**  (a) A service provider shall report to the competent authority, and to any other organisation required by the competent authority where the service provider provides its services, any accident, serious incident and occurrence as defined in UK (EU) Regulation No 996/2010 and UK No 376/2014.  (b) Without prejudice to point (a), the service provider shall report to the competent authority and to the organisation responsible for the design of system and constituents, if different from the service provider, any malfunction, technical defect, exceeding of technical limitations, occurrence, or other irregular circumstance that has or may have endangered the safety of services and that has not resulted in an accident or serious incident.  (c) Without prejudice to UK (EU) Regulation No 996/2010 and UK (EU) No 376/2014, the reports referred to in points (a) and (b) shall be made in a form and manner established by the competent authority and contain all the pertinent information about the event known to the service provider.  (d) Reports shall be made as soon as possible and in any case within 72 hours of the service provider identifying the details of the event to which the report relates unless exceptional circumstances prevent this.  (e) Without prejudice to UK (EU) Regulation No 376/2014, where relevant, the service provider shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future, as soon as these actions have been identified. This report shall be produced in a form and manner established by the competent authority. | [Return OR A 065](#RETURN_OR_A_065) |
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| **AMC1 ATM/ANS.OR.A.065 Occurrence reporting**  **REPORTING PROCEDURES**  The service provider should establish procedures to be used for reporting to the competent authority and any other organisation required which include:  (a) description of the applicable requirements for reporting.  (b) description of the reporting mechanism, including reporting forms, means and deadlines.  (c) personnel responsible for reporting; and  (d) description of mechanism and personnel responsibilities for identifying root causes, and the actions that may be needed to be taken to prevent similar occurrences in the future, as appropriate. | [Return AMC1 OR A 065](#RETURN_AMC_OR_A_065) |

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| **AMC1 ATM/ANS.OR.A.065(a) Occurrence reporting**  **GENERAL**  (a) The service provider should submit all reportable occurrences as defined in UK (EU) Regulation No 2015/10181.  (b) In addition to the reports required by (a), the service provider should report volcanic ash clouds, encountered by aircraft operators, for which it has become aware of. | [Return AMC1 OR A .065 (a)](#RETURN_AMC_OR_A_065a) |
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| **ATM/ANS.OR.A.070 Contingency plans**  A service provider shall have in place contingency plans for all the services it provides in the case of events which result in significant degradation or interruption of its operations. | [Return OR A 070](#RETURN_OR_A_070) |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.070**  Contingency plans are required to mitigate the effects of events which impact on the ANSPs ability to continue to provide a safe service such as a major ATS equipment failure, serious aircraft incident, terrorist incident, fire, bomb threat, pandemic influenza, major IT failures and significant staff shortages etc.  Such situations would normally be considered as part of a business continuity plan requiring specific contingency plans to be drawn up as mitigation.  Contingency plans should detail the responsibilities and accountabilities of all personnel involved.  Contingency plans should detail coordination requirements with the State, the CAA, other service providers, the insurance companies and aerodrome operators etc, as applicable.  Procedures also need to be in place for events that cause operational deficiencies to arise whereby the facilities promulgated in the UK AIP are temporally not available. These should be detailed in MATS Part2 /MAFIS. | [Return OR A 070](#RETURN_OR_A_070) |
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| **ATM/ANS.OR.A.075 Open and transparent provision of services**  (a) A service provider shall provide its services in an open and transparent manner. It shall publish the conditions of access to its services and changes thereto and establish a consultation process with the users of its services on a regular basis or as needed for specific changes in service provision, either individually or collectively.  (b) A service provider shall not discriminate on grounds of nationality or other characteristic of the user or the class of users of its services in a manner that is contrary to applicable law.  Amended by Statutory Instrument 2019 No 459 | [Return OR A 075 (a) First Part](#RETURN_OR_A_075) |
| [Return OR A 075 (a) Second Part](#RETURN_OR_A_075_2p) |
| [Return OR A 075 (b)](#RETURN_OR_A_075_b) |
| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.075 (a)** **First Part.**  Conditions of access/conditions of use are to be published in the UK AIP.  Unlicensed aerodromes do not appear in the UK AIP and other methods of disseminating condition of access to their services need to be established.  These could be published on the ANSPs web site, and it may be appropriate to issue users with hard copies.  They may also be published in other publicly available commercial documents. | [Return OR A 075 (a) First Part](#RETURN_OR_A_075) |
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| |  | | --- | | **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.075 (a) Second Part.**  A method of formal consultation with the regular users of the air navigational services should be documented. This would normally take the form of formal meetings with published agendas and minutes.  Depending on the size and complexity of the ANSPs operations, meetings with all airport users and stakeholders should be arranged. Consider Airline/Airport safety meetings/ flight safety committees or other meetings attended by major/based operators. | | [Return OR A 075 (a) Second Part](#RETURN_OR_A_075_2p) |
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| **AMC1 ATM/ANS.OR.A.075(a) Open and transparent provision of services**  **GENERAL — PROVIDERS OF AIR NAVIGATION SERVICES AND AIR TRAFFIC FLOW MANAGEMENT**  Providers of air navigation services and air traffic flow management should consult with the users of their services at least once a year. | [Return AMC1 OR A 075 (a)](#RETURN_AMC1_OR_A_075a) |

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| **ATM/ANS.OR.A.080 Provision of aeronautical data**  (a) A service provider shall ensure that aeronautical data related to its services is provided in due time to the AIS provider.  (b) When aeronautical data related to its services is published, the service provider shall:  (1) monitor the data.  (2) notify the AIS provider of any changes necessary to ensure that the data is correct and complete.  (3) notify the AIS provider when the data is incorrect or inappropriate.  Amended by Statutory Instrument 2021 No 1203 | [Return OR A 080](#RETURN_OR_A_080) |
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| **CM GUIDANCE NOTES** **providing guidance on compliance with ATM/ANS.OR.A.080 (a) (Provision of aeronautical data.**  The aeronautical data to be provided, dependant on type of service provider, is shown in the ‘UK AIP Authorised Sources and data quality requirements’ as detailed in [CAP1054](http://www.caa.co.uk/cap1054) Annex A.  Management System procedures should ensure adherence to the [AIRAC (Aeronautical Information Regulation and Control) cycle publication schedule](https://nats-uk.ead-it.com/cms-nats/export/sites/default/en/Publications/publication-schedule/Pub-Sched-AIRAC-external.pdf) which is published on the [AIS website](https://nats-uk.ead-it.com/cms-nats/opencms/en/home/).  GM1 ATM/ANS.OR.A.085 URGENT DISTRIBUTION OF AERONAUTICAL INFORMATION should also be consulted in relation to this requirement.  Management System (MS) processes and procedures should allow sufficient time for the AIS provider to process and publish data in the desired AIRAC cycle and must include details of mechanisms to prevent bad practices such as incomplete last-minute submissions, late delivery, or late cancellations. Procedures must include details to ensure that when required, a NOTAM is originated with sufficient lead time for the affected parties to take any required action.  Ensure that Aeronautical Information Management System Activities, relevant to the type of service provision, are properly documented within the management system and cover the above requirements as applicable. | [Return OR A 080](#RETURN_OR_A_080) |

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| **CM GUIDANCE NOTES** **providing guidance on compliance with ATM/ANS.OR.A.080 (b) Provision of aeronautical data. (monitor the data).**  The above requirement is straight forward, and the management system should detail a process for monitoring the data, related to its services, after the data is published by the AIS Provider.  The published data should be periodically reviewed (monitored), and a review cycle should be detailed in the process.  The process should also include the rational for carrying out a review at other times than that required by the review cycle. E.g., immediately after the non-routine data is published by the AIS Provider such as a NOTAM.  The process should also detail the actions to be taken in response to items arising from the review as required by (b) (2) and (3). | [Return OR A 080](#RETURN_OR_A_080) |

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| **ATM/ANS.OR.A.085 Aeronautical data quality management**  When originating, processing or transmitting data to the AIS provider, the service provider shall:  (a) ensure that aeronautical data conforms with the ‘Aeronautical Data Catalogue’ referred to in ICAO PANS-AIM (Doc 10066).  (b) ensure that the following data quality requirements are met:  (1) the accuracy of aeronautical data is as specified in the aeronautical data catalogue.  (2) the integrity of aeronautical data is maintained.  (3) based on the integrity classification specified in the aeronautical data catalogue, procedures are put in place so that:  (i) for routine data as defined in ICAO PANS-AIM, corruption is avoided throughout the processing of the data.  (ii) for essential data, as defined in ICAO PANS-AIM, corruption does not occur at any stage of the entire process and additional processes are included, as needed, to address potential risks in the overall system architecture to further assure data integrity at this level.  (iii) for critical data, as defined in ICAO PANS-AIM, corruption does not occur at any stage of the entire process and additional integrity assurance processes are included to fully mitigate the effects of faults identified as potential data integrity risks by thorough analysis of the overall system architecture.  (4) the resolution of aeronautical data is commensurate with the actual data accuracy.  (5) the traceability of aeronautical data is ensured.  (6) the timeliness of the aeronautical data is ensured, including any limits on the effective period of the data.  (7) the completeness of the aeronautical data is ensured.  (8) the delivered data meet the specified format requirements.  (c) with regard to data origination, establish specific formal arrangements with the party originating data that contain instructions for data creation, modification or deletion, which include as a minimum:  (1) an unambiguous description of the aeronautical data to be created, modified or deleted.  (2) the entity to which the aeronautical data is to be provided.  (3) the date and time by which the aeronautical data is to be provided.  (4) the format of the data origination report to be used.  (5) the format of the aeronautical data to be transmitted.  (6) the requirement to identify any limitation on the use of the data.  (d) ensure that data validation and verification techniques are employed to ensure that the aeronautical data meets the associated data quality requirements and in addition:  (1) the verification shall ensure that aeronautical data is received without corruption and that corruption does not occur at any stage of the entire aeronautical data process.  (2) aeronautical data and aeronautical information entered manually shall be subject to independent verification to detect any errors that may have been introduced.  (3) when using aeronautical data to derive or calculate new aeronautical data, the initial data shall be verified and validated, except when provided by an authoritative source.  (e) transmit aeronautical data by electronic means.  (f) establish formal arrangements with:  (1) all parties transmitting data to them.  (2) other service providers or aerodrome operators when exchanging aeronautical data and aeronautical information.  (g) ensure that the information listed in point AIS.OR.505(a) is provided in due time to the AIS provider.  (h) collect and transmit metadata which include as a minimum  (1) the identification of the organisations or entities performing any action of originating, transmitting or manipulating the aeronautical data.  (2) the action performed.  (3) the date and time the action was performed.  (i) ensure that tools and software used to support or automate aeronautical data and aeronautical information processes perform their functions without adversely impacting the quality of aeronautical data and aeronautical information.  (j) ensure that digital data error detection techniques are used during the transmission or storage of aeronautical data, or both, in order to support the applicable data integrity levels.  (k) ensure that the transfer of aeronautical data is subject to a suitable authentication process such that recipients are able to confirm that the data has been transmitted by an authorised source.  (l) ensure that errors identified during data origination and after data delivery are addressed, corrected or resolved and that priority is given to managing errors in critical and essential aeronautical data.  Amended by Statutory Instrument 2021 No 1203 | [Return OR A 085a](#RETURN_OR_A_085_a) |
| [Return OR A 085b](#RETURN_OR_A_085_b) |
| [Return OR A 085c](#RETURN_OR_A_085_c) |
| [Return OR A 085d](#RETURN_OR_A_085_d) |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (a) Aeronautical data quality management. (Ensure aeronautical data conforms).**  **GM1 ATM//ANS.OR.A.085(a) states** *The ICAO aeronautical data catalogue presents the scope of data that can be collected and maintained by the AIS providers and provides a common terminology that can be used by data originators and service providers.*  *CAA Publication* [*CAP 1054,*](https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=6808) *describes how the ICAO Data Catalogue is implemented in the UK. When originating, processing, or providing data for publication in UK aeronautical information products, reference to* ***CAP 1054, Annex A*** *identifies all data items which are in scope of the ICAO aeronautical data catalogue*.  The Management System processes and procedures must ensure that aeronautical data to be provided to the AIS Provider conforms to the specifications contained in CAP 1054 Annex A including, where applicable, the requirements for accuracy, resolution, and integrity level.  It should be noted that the scope of this requirement not only applies when transmitting data to the AIS Provider but also when originating or processing that data. The management system process should reflect this scope. | [Return OR A 085a](#RETURN_OR_A_085_a) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (b) Aeronautical data quality management. (data quality requirements).**  The previous requirement ATM/ANS.OR.A.085 (a) was about ensuring the data provided to the AIS Provider conforms to the requirements of the Aeronautical Data Catalogue. This section provides considerably more requirements relating to the quality of that data.  The Aeronautical Data Catalogue shown in [CAP 1054 Annex A](https://publicapps.caa.co.uk/modalapplication.aspx?catid=1&pagetype=65&appid=11&mode=detail&id=6808). defines the integrity levels for each item of data required to be provided to the AIS provider. The levels are Routine, Essential, and Critical or in many cases nonapplicable. The catalogue also defines the resolution requirements for relevant items of data.  Service providers should refer to the Aeronautical Data Catalogue shown in CAP 1054 Annex A to ascertain what data they are required to provide to the AIS Provider and the related integrity levels and resolution.  Much of the requirement listed here, relating to ensuring corruption does not occur, are covered in other parts of this legislation. ATM/ANS.OR.A.085 (d) Validation and Verification ATM/ANS.OR.A.085 (j) data error detection and ATM/ANS.OR.A.085 (l) data error correction.  Management System processes and procedures should ensure that when originating, processing, or transmitting data to the AIS provider the aeronautical data conforms to the data quality specifications contained in ATM/ANS.OR.A.085(b).  Data is transmitted to the AIS Provider by the Aurora system and ANSPs must sign the Formal Arrangement provided by AIS provider. The CAA has approved this formal arrangement and therefore the ANSP should, by default, be at least compliant with ATM/ANS.OR.A.085(b)(8) (8).  In addition, AMC1 ATM/ANS.OR.A.085(b)(8) Format, requires that: *The format requirements should be specified in the formal arrangements*. As above, the format will be included in the formal arrangements provided by the AIS Provider*.* | [Return OR A 085b](#RETURN_OR_A_085_b) |
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| **AMC1 ATM/ANS.OR.A.085(b)(8) Aeronautical data quality management**  **FORMAT**  The format requirements should be specified in the formal arrangements.  Included as required by ORS9 Decision 13 | [Return AMC1 OR A 085 (b)(8)](#RETURN_AMC1_OR_A_085b_8) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (c) Aeronautical data quality management. (data origination).**  Where the ANSP is not the sole originator of data to be transmitted to the AIS provider, then formal arrangements with the contracted data originator(s) will be required.  This requirement details the high-level basic content of such formal arrangements More detail on the detailed content of formal arrangement is provided in **ATM/ANS.OR.A.085 (f).**  Examples of potential aeronautical data originators requiring formal arrangements with the ANSP could be the aerodrome operator, apron management services provider, CNS service providers, surveyors, and Airspace Procedure Design Organisations (APDOs) etc.  Ensure Formal Arrangements are documented with all relevant parties and retained. | [Return OR A 085c](#RETURN_OR_A_085_c) |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (d) Aeronautical data quality management. (Validation and verification).**  This section is about verifying and validating that all aeronautical data, either generated by the ANSP or received from other aeronautical data originators (see ATM/ANS.OR.A.085 (c) above) for onward transmission to the AIS Provider, complies with the data quality requirements required in ATM/ANS.OR.A.085 (b). ATM/ANS.OR.A.085 (d) (2) gives particular focus on where data have been entered manually and is therefore assumedly more prone to error.  ATM/ANS.OR.A.085 (b) refers to the Aeronautical Data Catalogue where integrity levels are required for specific types of aeronautical data provided to the AIS Provider.  Based on the integrity requirements the ANSP should have documented processes in place to ensure that the data to be provided to the AIS Provider has been verified and validated before being sent. Differing integrity levels may require differing levels of verification and validation.  The verification and validation process should cover the requirements of AMC1 ATM/ANS.OR.A.085(d) (a) to (c).  Refer to GM1 ATM/ANS.OR.A.085 (d) for examples of verification and validation techniques. Slightly better information on this is provided GM1 AIS.OR.220 Validation and verification.  EXPLANATORY NOTE: ATM/ANS.OR.A.085 (d) (3) refers to an ‘authoritative source’ when calculating new aeronautical data. An authoritative source is defined in UK regulation (EU) 2017/373 Annex 1 (32) as being (a) the competent authority: or (b) an organisation formally recognised by the competent authority to originate and/or publish data which meets the data quality requirements (DQRs) as specified by the Secretary of State. Such sources could be Aeronautical data and aeronautical information provided by surveyors, procedure designers, and airspace designers. | [Return OR A 085d](#RETURN_OR_A_085_d) |
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| **AMC1 ATM/ANS.OR.A.085(d) Aeronautical data quality management**  **VALIDATION AND VERIFICATION**  (a) The processes implemented to carry out validation and verification should define the means used to:  (a) verify received data and confirm that the data has been received without corruption.  (b) preserve data quality and ensure that stored data is protected from corruption; and  (c) confirm that originated data has not been corrupted prior to being stored.  (b) Those processes should define the:  (1) actions to be taken when data fails a verification or validation check; and  (2) tools required for the verification and validation process  Included as required by ORS9 Decision 13 | [Return AMC1 OR A 085 (d)](#RETURN_AMC1_OR_A_085d) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (e) Aeronautical data quality management. (Transmitting data).**  The transmission of aeronautical data and aeronautical information may be done by various electronic means (GM1 **ATM/ANS.OR.A.085(e)**. In the case where no direct electronic network connection is available between parties in the data chain, other than with the AIS Provider, CAP1054 (Chapter 5, Paragraph 5.43) notes that it is acceptable to use e-mail if the following conditions can be met:   * Aeronautical data and aeronautical information are provided in an attached file that can be automatically ingested into the recipient’s system without the need for manual input. * Receipt of the data can be confirmed to the sender.   Ensure that the process of transmitting data is adequately documentedwhichever method is used. | [Return OR A 085e](#RETURN_OR_A_085_e) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (f) Aeronautical data quality management. (Formal arrangements)**  **ATM** **/ANS.OR.A.085 (c**) has already established the requirements for formal arrangements to be in place with data originators *all parties transmitting data to them.* This requirement also requires formal arrangements to be in place with *other service providers or aerodrome operators when exchanging aeronautical data and aeronautical information.*  Your management System should detail the requirements for the establishment of Formal Arrangements with all parties transmitting data to them and with other service providers or aerodrome operators when exchanging aeronautical data and aeronautical information as applicable.  The management system should define the content of the Formal Arrangements such as to comply with the requirements of **AMC1 ATM/ANS.OR.A.085(f).**  The detailed content of formal arrangement is listed in **AMC1 ATM/ANS.OR.A.085 (f),** However; **GM1 ATM/ANS.OR.A.085(f).** states that:  *ATM/ANS providers may use the predetermined template ‘Data Provision Agreement’ developed by* [*EUROCONTROL (ADQ Formal Arrangement Template*](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.eurocontrol.int%2Fsites%2Fdefault%2Ffiles%2F2023-06%2Ffa-template-ed-2.0-jun2023.docx&wdOrigin=BROWSELINK)*, version 1.1. issued on 22 February 2016). This is available to download from Eurocontrol.*  Ensure that formal arrangements are in place with all relevant parties and are retained and available. | [Return OR A 085f](#RETURN_OR_A_085_f) |

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| **AMC1 ATM/ANS.OR.A.085(f) Aeronautical data quality management**  **FORMAL ARRANGEMENTS**  Formal arrangements should include the following minimum content:  (a) the aeronautical data to be provided,  (b) the data quality requirements (DQRs) for each data item supplied according to the aeronautical data catalogue,  (c) the method(s) for demonstrating that the data provided conforms with the specified requirements,  (d) the action to be taken in the event of discovery of a data error or inconsistency in any data provided,  (e) the following minimum criteria for notification of data changes:  (1) criteria for determining the timeliness of data provision based on the operational or safety significance of the change,  (2) any prior notice of expected changes, and  (3) the means to be adopted for notification,  (f) the party responsible for documenting data changes,  (g) data exchange details such as format or format change processes,  (h) any limitations on the use of data,  (i) requirements for the production of data origination quality reports,  (j) metadata to be provided, and  (k) contingency requirements concerning the continuity of data provision.  Included as required by ORS9 Decision 13 | [Return AMC1 OR A 085 (f)](#RETURN_AMC1_OR_A_085f) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (g) Aeronautical data quality management. (Information in due time)**  The reference to **AIS.OR.550(a)** is incorrect and should have referred to **AIS.TR.505 AIRAC (a)**  **ATM/ANS.OR.A.080 (a)** Provision of aeronautical data has already established that Management System procedures should ensure adherence to the AIRAC (Aeronautical Information Regulation and Control) cycle publication scheduler.  The requirement should probably be written as,” ensure that, where applicable, the information listed in point **AIS.TR.505 AIRAC (a)** is provided in due time to the AIS provider”.  **AIS.TR.505 (a)** provides another list of data, some of which is already listed in the Aeronautical Data Catalogue, that the ANSP should consider providing to the AIS Provider  It’s up to the ANSP to work out what is applicable/relevant for them to publish, and the exact requirements will vary by ANSP, and potentially by ANSP type.  The management system should refer to a review of the requirements in **AIS.TR.505 (a)** to ensure appropriate data is being provided to the AIS Provider | [Return OR A 085g](#RETURN_OR_A_085_g) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (h) Aeronautical data quality management. (Collect and transmit metadata)**  When ANSPs transmits data to the AIS provider, the required metadata is collected as a function of the Aurora system and the unit’s management system should have clearly documented procedures for the use of Aurora to submit data and information to the AIS provider.  CAP1054 Chapter, Paragraph 5.46 onwards provides information of mandatory metadata requirements.  The procedures should indicate that metadata is provided to the AIS in accordance with **ATM/ANS.OR.A.085 (h) (1), (2) and (3).** | [Return OR A 085h](#RETURN_OR_A_085_h) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (i) Aeronautical data quality management. (Tools and software)**  GM2 ATM/ANS.OR.A.085(i) simply states:  *Tools can be qualified by meeting point 2.4.5 Aeronautical Data Tool Qualification of EUROCAE ED76A ‘Standards for Processing Aeronautical Data’, dated June 2015*. This is a commercially available document. However, [CAP1054](http://www.caa.co.uk/cap1054) Chapter 6 provides the necessary information as follows:  *6.11 Parties shall ensure that tools (including software) used to support or automate aeronautical data processes perform their functions without adversely impacting the quality of the aeronautical data.*  *6.12 In order to prove that tools used in data processes do not adversely impact on the quality of data, the potential contribution to failure conditions should be assessed and documented.*  *6.13 All parties should identify and document:*  *• Tools used in data processes.*  *6.14 Parties should establish and maintain:*  *• Tool assessment process to determine requirements for:*  *- Tool verification processes.*  *- Tool qualification processes*  Ensure that the management system details:   * That the potential contribution to failure conditions has been assessed and documented. * That tools used in data processes have been identified and documented. * That applicable processes have been established and maintained. | [Return OR A 085i](#RETURN_OR_A_085_i) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (j) Aeronautical data quality management. (Digital data error detection techniques)**  **GM1 ATM/ANS.OR.A.085(j)** provides information of data error and detection techniques.  **GM2 ATM/ANS.OR.A.085(j)** states that more explanation and guidance may be found in Appendix C (Guidance on compliance with data processing requirements) to EUROCAE ED-76A a commercially available document.  However, guidance on data error detection can be found in [CAP1054](http://www.caa.co.uk/cap1054) Chapter 5 as follows:  *5.23 All parties shall ensure that error detection and authentication, reporting, measurement,*  *and corrective actions mechanisms are established, maintained, and included in the*  *Management System.*  *5.25 Parties should establish and maintain:*  *• digital data error detection techniques and authentication process for any data transfer.*  *• data error detection and handling process.*  *• records of identified data errors and the consequential corrective measures taken for errors identified after data delivery to AIS.*  Ensure that the above requirements are detailed within the management system.  Further information is provided in the [EUROCONTROL Guidelines Supporting the Implementation of Aeronautical Information Requirements - the AIR Guide](https://www.eurocontrol.int/publication/eurocontrol-guidelines-supporting-implementation-aeronautical-information-requirements) (although the AIR Guide was developed to help stakeholders understand the regulatory requirements contained in Commission Implementing Regulation (CIR) EU 2017/373 given the similarities between CIR EU 2017/373 and UK Reg (EU) 2017/373 the CAA recommends ANSPs review [the AIR Guide](https://www.eurocontrol.int/publication/eurocontrol-guidelines-supporting-implementation-aeronautical-information-requirements) with particular attention to Chapter 7, Objective 12. Error Reporting, Measurement and Corrective Actions | [Return OR A 085j](#RETURN_OR_A_085_j) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (k) Aeronautical data quality management. (Transfer of aeronautical data)**  The term “Authorised source” has a specific meaning in relation to aeronautical information management activities. It means the party responsible for the provision of aeronautical data to AIS and the person (role) nominated to represent the organization, ultimately accountable for the provision and maintenance of aeronautical data and aeronautical information published by the organisation in the Aeronautical Information Products. (AIP)  **NOTE: CAP 1054 Chapter 3** provides the following information regarding the requirements for authorised sources as follows:  *3.3 Each Authorised Source (In this case an ANSP) must nominate a person (role) acting on behalf of the whole organisation, to be directly responsible for all aeronautical data and aeronautical data activities in the organisation, and who is ultimately accountable for providing specific aeronautical data and aeronautical information to AIS for publication in the AIP. This may be the Accountable Manager, or a* ***competent person*** *formally appointed by the Accountable Manager.*  *3.4 Authorised Sources are required to ensure that their organisation declares whether in scope data meets ‘ADQ’ requirements at the point of submission to the AISP by completing the “compliance/non-compliance” checkbox for each data item with defined ICAO data quality requirements entered in the Aurora Data Originators Portal.*  *3.6 All parties submitting data to the AISP are required to have Formal Arrangements with the AIS Provider for the provision of aeronautical data and aeronautical information and access to the Aurora Data Originators Portal. Formal Arrangements must be signed by the Authorised Source.*  **CAP1054** states *that the Formal Arrangements remain valid once signed and do not need to be re-established as a result of changes to the personnel representing the Authorised Source!*  *3.9 The Accountable Manager (or another formally appointed person) who has signed the Formal Arrangement with the AIS Provider can nominate individuals (‘AIP Sponsors’), who are responsible for submitting changes to Aeronautical Information Products within a clearly defined scope of authorised changes (data items)*  *3.10 The Authorised Source must provide a list of all nominated AIP Sponsors to the AIS Provider*  *(‘AIP Sponsors List’) and is also responsible for notifying the AISP of any changes to the List. There should be a procedure for managing the nomination and maintenance of any AIP Sponsors, and Aurora Portal Login details should not be accessible for unauthorised persons e.g., they should not be physically stored (i.e., written down) or saved on devices.*  *3.11 Once notified to the AISP each individual AIP Sponsor is required to register on the*  *Aurora Data Originators Portal as a portal ‘user’. As a result of the registration process users will be assigned with authorisations and responsibilities in accordance with the details contained in their organisation’s formal arrangement.*  Ensure that the appointed authorised source is ‘a competent person’ i.e., that adequate training has been carried out in accordance with the requirements of **ATM/ANS.OR.B.005** Management System (a) (1) (Responsibilities) and (6) Competencies).  Ensure the responsibilities of the appointed person are detailed in the management system.  Ensure there is a procedure for managing the nomination and maintenance of any AIP Sponsors e.g. including a formal register of current Sponsors and including methods for the protection of all login details (to the data system used by the organisation or to the AIS portal) from unauthorised access. (Login details should not be accessible for unauthorised persons – should not be physically stored (i.e., written down) or saved on devices). | [Return OR A 085k](#RETURN_OR_A_085_k) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.085 (l) Aeronautical data quality management. (Addressing errors)**  **GM1ATM/ANS.OR.A.085(l) (a)** defines ‘error’ as follows: (a) *The term ‘error’ is understood as being defective, degraded, lost, misplaced or corrupted data elements, or data elements not meeting stated DQRs (data Quality Requirements).*  Further guidance on data error handling can be found in [CAP1054](http://www.caa.co.uk/cap1054) with particular reference to Chapter 5 and in the [EUROCONTROL Guidelines Supporting the Implementation of Aeronautical Information Requirements - the AIR Guide](https://www.eurocontrol.int/publication/eurocontrol-guidelines-supporting-implementation-aeronautical-information-requirements)  The Air Guide provides the following steps to manage identified errors:   * Receive error report. * Initial assessment of error. * Perform mitigation action. * Investigate error. * Perform corrective action. * Close error report * Errors need to be reported to the AIS Provider   Ensure that the management system has a documented process in place which requires that identified errors are investigated, rectified and their reoccurrence prevented in a timely manner, whilst keeping the aviation community informed. | [Return OR A 085l](#RETURN_OR_A_085_l) |

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| **ATM/ANS.OR.A.090 Common reference systems for air navigation**  For the purpose of air navigation, service providers shall use:  (a) the World Geodetic System – 1984 (WGS-84) as the horizontal reference system.  (b) the mean sea level (MSL) datum as the vertical reference system.  (c) the Gregorian calendar and coordinated universal time (UTC) as the temporal reference systems.  Included as required by Statutory Instrument 2021 No 1203 | | [Return OR A 090](#RETURN_OR_A_090) |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.A.090 (a,b,c) Aeronautical data quality management. (Common reference systems)**  **GM1 ATM/ANS.OR.A.090(a)** states: *WGS-84 is currently the reference system ICAO requires for georeferencing aeronautical information.*  **AMC1 ATM/ANS.OR.A.090(b**) requires the following:  *(a) A service provider should use the Earth Gravitational Model — 1996 (EGM-96), as the global gravity model.*  *(b) When a geoid model other than the EGM-96 model is used, a description of the model used, including the parameters required for height transformation between the model and EGM-96, should be provided in the aeronautical information publication (AIP).*  **GM1 ATM/ANS.OR.A.090(c**) states:  *ISO Standard 8601 specifies the use of the Gregorian calendar and 24-hour local or UTC for information interchange, while ISO Standard 19108 prescribes the Gregorian calendar and UTC as the primary temporal reference system for use with geographic information.*  Ensure that the management system refers to these mandatory reference systems.  In the unlikely event that **AMC1 ATM/ANS.OR.A.090(b) (b)** applies ensure that the management system contains a description of the model used, including the parameters required for height transformation between the model and EGM-96 and that this is in the AIP. | | [Return OR A 090](#RETURN_OR_A_090) |
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| **AMC1 ATM/ANS.OR.A.090(b) Common reference systems for air navigation**  **VERTICAL REFERENCE SYSTEM**  **(**a) A service provider should use the Earth Gravitational Model — 1996 (EGM-96), as the global gravity model.  (b) When a geoid model other than the EGM-96 model is used, a description of the model used, including the parameters required for height transformation between the model and EGM-96, should be provided in the aeronautical information publication (AIP).  Included as required by ORS9 Decision 13 | | [Return AMC1 OR A 090(b)](#RETURN_AMC1_OR_A_090b) |
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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.A.090 (b) Aeronautical data quality management. (Common reference systems)**  In the unlikely event that AMC1 ATM/ANS.OR.A.090(b) (b) applies ensure that the management system contains a description of the model used, including the parameters required for height transformation between the model and EGM-96 and that this is in the AIP. | | [Return AMC1 OR A 090(b)](#RETURN_AMC1_OR_A_090b) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.001**   |  |  | | --- | --- | | What is implied here is that there should be a sufficient number of adequately trained and experienced staff available to meet the maximum expected demand on the airspace under the ANSPs control.  The ANSP should analyse their expected maximum demand and arrange for a suitable number of Management staff, ATCO/FISO, Engineers and other staff required to meet this demand over the organisations daily operating time.  The staffing levels should also take into consideration abnormal and emergency situations.  Safe Adequately trained staff  Efficient Adequately trained and experienced staff  Continuous Sufficient number of trained staff to maintain service during operating hours  Sustainable Sufficient number of trained staff to maintain service during sickness and absence or in abnormal or emergency situations.   |  | | --- | | The evidence required here is to clearly define how the necessary number of skilled and experienced Air Traffic, Engineering and Management Staff are provided to ensure safe operations over the published operating hours.  The following should be considered:  Watch rosters indicating how coverage is to be maintained during expected operating hours.  The ATCO rostering system required by ATS.OR.320 to be taken into consideration when determining ATCO staffing levels.  Contingency plans for absence and sickness to maintain coverage.  Adequate coverage by engineering staff during operating hours. This can be recorded within an engineering exposition; staff call out or watch rosters.  Where engineering support is provided externally adequate coverage should be defined within Service Level Agreements and/or Contracts.  SLAs are also encouraged where support is provided internally.  Document delegation of authority for management staff during absence or sickness. | | | [Return OR B 001](#RETURN_OR_B_001) |

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| **ATM/ANS.OR.B.005 Management system**   1. A service provider shall implement and maintain a management system that includes:   (1) clearly defined lines of responsibility and accountability throughout its organisation, including a direct accountability of the accountable manager,  (2) a description of the overall philosophies and principles of the service provider with regard to safety, quality, and security of its services, collectively constituting a policy, signed by the accountable manager,  (3) the means to verify the performance of the service provider's organisation in light of the performance indicators and performance targets of the management system,  (4) a process to identify changes within the service provider's organisation and the context in which it operates, which may affect established processes, procedures and services and, where necessary, change the management system and/or the functional system to accommodate those changes,  (5) a process to review the management system, identify the causes of substandard performance of the management system, determine the implications of such substandard performance, and eliminate or mitigate such causes,  (6) a process to ensure that the personnel of the service provider are trained and competent to perform their duties in a safe, efficient, continuous, and sustainable manner. In this context, the service provider shall establish policies for the recruitments and training of its personnel,  (7) a formal means for communication that ensures that all personnel of the service provider are fully aware of the management system that allows critical information to be conveyed and that makes it possible to explain why particular actions are taken and why procedures are introduced or changed.  (b) A service provider shall document all management system key processes, including a process for making personnel aware of their responsibilities, and the procedure for the amendment of those processes.  (c) A service provider shall establish a function to monitor compliance of its organisation with the applicable requirements and the adequacy of the procedures. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary.  (d) A service provider shall monitor the behaviour of its functional system and, where underperformance is identified, it shall establish its causes and eliminate them or, after having determined the implication of the underperformance, mitigate its effects.  (e) The management system shall be proportionate to the size of the service provider and the complexity of its activities, taking into account the hazards and associated risks inherent in those activities.  (f) Within its management system, the service provider shall establish formal interfaces with the relevant service providers and aviation undertakings in order to:  (1) ensure that the aviation safety hazards entailed by its activities are identified and evaluated, and the associated risks are managed and mitigated as appropriate,  (2) ensure that it provides its services in accordance with the requirements of this regulation.  (g) In the case that the service provider holds also an aerodrome operator certificate, it shall ensure that the management system covers all activities in the scope of its certificates. | [Return Link OR B 005 (a)](#RETURN_OR_B_005) | |
| [Return OR B 005 (a) (1)](#RETURN_OR_B_005_a_1) | |
| [Return OR B 005 (a) (2)](#RETURN_OR_B_005_a_2) | |
| [Return OR B 005 (a) (3) NON-MET/ATS](#RETURN_OR_B_005_a_3_NON_MET_ATS) | |
| [Return OR B 005 (a) (3) MET/ATS](#RETURN_OR_B_005_a_3_MET_ATS) | |
| [Return OR B 005 (a) (4)](#RETURN_OR_B_005_a_4) | |
| [Return OR B 005 (a) (5)](#RETURN_OR_B_005_a_5) | |
| [Return OR B 005 (a) (6)](#RETURN_OR_B_005_a_6) | |
| [Return OR B 005 (a) (7)](#RETURN_OR_B_005_a_7) | |
| [Return OR B 005 (b)](#RETURN_OR_B_005_b) | |
| [Return OR B 005 (c)](#RETURN_OR_B_005_c) | |
| [Return OR B 005 (d)](#RETURN_OR_B_005_d) | |
| [Return OR B 005 (e)](#RETURN_OR_B_005_e) | |
| [Return OR B 005 (f)](#RETURN_OR_B_005_f) | |
| [Return OR B 005 (g)](#RETURN_OR_B_005_g) | |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.005 (a) (4)**  **Identifying changes in the organisation and the context in which it operates.**  These changes are often identified by the service provider using business processes, which will be used to identify changes planned for the medium and long term. Such processes can include:  (i) annual business plans,  (ii) strategic safety boards,  (iii) equipment replacement projects,  (iv) airspace reorganisation plans,  (v) introduction of new operational concepts,  (vi) accident and incident investigation reports, and  (vii) safety monitoring and safety surveys.  Further guidance on this requirement is available in **GM1 ATM/ANS.OR.B.005(a)(4) Management system,** which is available on the EASA web site in the easy access version of the regulation at the link below.  [easy-access-rules-air-traffic-management air-navigation](https://www.easa.europa.eu/document-library/general-publications/easy-access-rules-air-traffic-managementair-navigation) | | [Return B 005 (a) (4)](#RETURN_OR_B_005_a_4) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.005 (f)**  Although this requirement is placed upon all service providers the onus is on air traffic service providers to ensure that formal interfaces in the form of service level agreements, letters of understanding or memorandum of cooperation are put in place between the relevant services providers and the air traffic service provider, so that hazards associated with the services provided are identified and the risks assessed and whenever needed mitigated.  In addition, formal interfaces should also be established with the aerodrome operator and the air traffic service provider should participate in the local runway safety teams where applicable. | [Return OR B 005 (f)](#RETURN_OR_B_005_f) |
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| **AMC1 ATM/ANS.OR.B.005(a) Management system**  **GENERAL**  An ISO 9001 certificate, issued by an appropriately accredited organisation, addressing the quality management elements required in this Subpart should be considered a sufficient means of compliance for the service provider. In this case, the service provider should accept the disclosure of the documentation related to the certification to the competent authority upon the latter’s request. | [Return AMC1 OR B 005 (a)](#RETURN_AMC1_OR_B_005_a) |
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| **AMC4 ATM/ANS.OR.B.005(a) Management system *(Non-Complex Only)***  **GENERAL — NON-COMPLEX SERVICE PROVIDERS**  (a) The policy should include a commitment to improve towards the highest standards, comply with all the applicable legal requirements, meet all the applicable standards, consider the best practices, and provide the appropriate resources.  (b) The compliance monitoring task may be exercised by the accountable manager, provided that he or she has demonstrated having the related competence as defined in point (b)(4) of GM1 ATM/ANS.OR.B.005(c).  (c) Risk management may be performed using hazard checklists or similar risk management tools or processes, which are integrated into the activities of the service provider.  (d) A service provider should manage associated risks related to changes, as applicable. Management of changes should be a documented process to identify external and internal changes.  (e) A service provider should identify persons who fulfil the role of managers and who are responsible with regard to safety, quality, and security of its services, as applicable. These persons may be accountable managers or individuals with an operational role in the service provider. | [Return AMC4 OR B 005 (a) (a)](#RETURN_AMC4_OR_B_005_a_a) |
| [Return AMC4 OR B 005 (a) (b)](#RETURN_AMC4_OR_B_005_a_b) |
| [Return AMC4 OR B 005 (a) (c)](#RETURN_AMC4_OR_B_005_a_c) |
| [Return AMC4 OR B 005 (a) (d)](#RETURN_AMC4_OR_B_005_a_d) |
| [Return AMC4 OR B 005 (a) (e)](#RETURN_AMC4_OR_B_005_a_e) |

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| **CM GUIDANCE NOTES providing guidance on compliance with AMC4 ATM/ANS.OR.B.005 (a) paragraph (b)**  This AMC is stating that for Non-Complex providers only, where there may be staffing limitations, the task of compliance monitoring may be carried out by the Accountable Manager. In this case it is not considered that ‘MAY’ means ‘MUST’ and is therefore not a mandatory requirement. Any member of staff may be appointed to carry out the task of compliance monitoring provided they meet the competencies as detailed in (b)(4) of GM1 ATM/ANS.OR.B.005(c) shown below.  *The compliance monitoring manager should be able to demonstrate relevant knowledge, background and appropriate experience related to the activities of the service provider, including knowledge and experience in compliance monitoring.* | [Return AMC4 OR B 005 (a) (b)](#RETURN_AMC4_OR_B_005_a_b) |

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| **AMC1 ATM/ANS.OR.B.005(a)(2) Management system**  **POLICY**  (a) The policy should:  (1) be signed by the accountable manager,  (2) reflect organisational commitments regarding performance of its services and safety, where applicable, and its proactive and systematic management,  (3) include reporting principles, and  (4) include a commitment to:  (i) improve towards the highest performance standards so as to support the achievement of the highest level of safety,  (ii) comply with all applicable regulation and requirements, meet all applicable standards and consider best practices,  (iii) continually improve the effectiveness of the management system,  (iv) provide appropriate resources,  (v) enforce the performance of the service required to support the achievement of the highest level of safety in the airspace where the service is provided as one primary responsibility of all managers, and  (vi) that the purpose of reporting is improvement and not to apportion blame to individuals.  (b) Senior management should:  (1) ensure that the policy:  (i) is appropriate to the purpose of service providers,  (ii) provides a framework for establishing and reviewing objectives in relation to the provision of the service,  (iii) is communicated and understood within the service provider, and  (iv) is reviewed for continuing suitability,  (2) continually promote the policy to all personnel and demonstrate their commitment to it,  (3) provide necessary and appropriate human and financial resources for its implementation, and  (4) establish objectives in relation to the provision of the services and performance standards. | [Return AMC1 OR B 005 (a) (2) (a)](#RETURN_AMC1_OR_B_005a2_a) |
| [Return AMC1 OR B 005 (a) (2) (b)](#RETURN_AMC1_OR_B_005a2_b) |

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| **AMC1 ATM/ANS.OR.B.005(a)(3) Management system**  **MANAGEMENT OF METEOROLOGICAL SERVICES PERFORMANCE**  (a) The management system of the meteorological service provider should provide users with assurance that the meteorological information supplied complies with the stated requirements in terms of geographical and spatial coverage, format and content, time and frequency of issuance and period of validity, as well as the accuracy of measurements, observations and forecasts.  (b) When the management system indicates that the meteorological information to be supplied to users does not comply with the stated requirements, and automatic error correction procedures are not appropriate, such information should not be supplied to users unless it is validated with the originator.  (c) In regard to the exchange of meteorological information for operational purposes, the management system should include verification and validation procedures and resources for monitoring adherence to the prescribed transmission schedules for individual messages and/or bulletins required to be exchanged as well as the times of their filing for transmission. The management system should be capable of detecting excessive transit times of messages and bulletins received. | [Return AMC1 OR B 005 (a)(3) (a)](#RETURN_AMC1_OR_B_005a3_a) |
| [Return AMC1 OR B 005 (a)(3) (b)](#RETURN_AMC1_OR_B_005a3_b) |
| [Return AMC1 OR B 005 (a)(3) (c)](#RETURN_AMC1_OR_B_005a3_c) |
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| **CM GUIDANCE NOTES providing guidance on compliance AMC1 ATM/ANS.OR.B.005(a)(3) Management system (a)**  **MANAGEMENT OF METEOROLOGICAL SERVICES PERFORMANCE**  ANSPs certificated to provide MET services are required to ensure that their management system includes an appropriate level of detail of the meteorological processes which are applicable to the provision of meteorological services. The management system should include a system that assures users that the quality of meteorological information supplied complies with the requirements in EU 2017/373. When the management system indicates that the meteorological information does not comply with the requirements it should not be issued. | [Return AMC1 OR B 005 (a)(3) (a)](#RETURN_AMC1_OR_B_005a3_a) |
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| **CM GUIDANCE NOTES providing guidance on compliance AMC1 ATM/ANS.OR.B.005(a)(3) Management system (b)**  **MANAGEMENT OF METEOROLOGICAL SERVICES PERFORMANCE**  When automatic error detection and correction is not available, how does your management system ensure that corrupt and unvalidated meteorological information is not sent to the user. | [Return AMC1 OR B 005 (a)(3) (b)](#RETURN_AMC1_OR_B_005a3_b) |

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| **AMC2 ATM/ANS.OR.B.005(a)(3) Management system**  **SAFETY PERFORMANCE MONITORING AND MEASUREMENT — ATS PROVIDER**  (a) Safety performance monitoring and measurement should be the process by which the safety performance of the air traffic services providers is verified in comparison to the safety policy and the safety objectives established by the air traffic services provider.  (b) This process should include:  (1) safety reporting,  (2) safety studies encompassing broad safety concerns,  (3) safety reviews including trends reviews, which would be conducted during introduction and deployment of new technologies, change or implementation of procedures, or in situations of structural change in operations,  (4) safety audits focusing on the integrity of the air traffic services provider’s management system, and periodically assessing the status of safety risk controls, and  (5) safety surveys, examining particular elements or procedures of a specific operation, such as problem areas or bottlenecks in daily operations, perceptions and opinions of operational personnel, and areas of dissent or confusion. | [Return AMC2 OR B 005 (a) (3)](#RETURN_AMC2_OR_B_005a3) |
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| **AMC1 ATM/ANS.OR.B.005(a)(5) Management system**  **ASSESSMENT OF THE MANAGEMENT SYSTEM**  (a) Senior management should assess the service provider’s management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness.  (b) The review should include assessing opportunities for improvement and the need for changes to the management system, including the policy and objectives.  (c) Records from management assessments should be maintained. | [Return AMC1 OR B 005 (a) (5)](#RETURN_AMC1_OR_B_005a5) |
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| **AMC1 ATM/ANS.OR.B.005(a)(6) Management system**  **TRAINING AND COMPETENCY**  A service provider should:  (a) determine the necessary competence for personnel performing activities supporting services provision.  (b) where applicable, provide training or take other actions to achieve the necessary competence.  (c) evaluate the effectiveness of the actions taken.  (d) ensure that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the objectives. and  (e) maintain appropriate records of education, training, skills and experience. | [Return AMC1 OR B 005 (a) (6)](#RETURN_AMC1_OR_B_005a6) |
| **AMC1 ATM/ANS.OR.B.005(a)(7) Management system**  **COMMUNICATION RESPONSIBILITIES**  The senior management should ensure that appropriate communication processes are established within the service provider and that communication takes place regarding the effectiveness of the management system. | [Return AMC1 OR B 005 (a) (7)](#RETURN_AMC1_OR_B_005a7) |
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| **CM GUIDANCE NOTES providing guidance on compliance AMC1 ATM/ANS.OR.B.005(a)(7) Management system**  **COMMUNICATION RESPONSIBILITIES**  This would normally be the publication of the minutes of the management review meeting and notification of changes to the management system. | [Return AMC1 OR B 005 (a) (7)](#RETURN_AMC1_OR_B_005a7) |
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| **AMC1 ATM/ANS.OR.B.005(b) Management system**  **SERVICE PROVIDER’S MANAGEMENT SYSTEM DOCUMENTATION**  A service provider’s management system documentation should at least include the following information:  (a) a statement signed by the accountable manager to confirm that the service provider will continuously work in accordance with the applicable requirements and the service provider’s documentation as required by this Part and other applicable Parts.  (b) the service provider’s scope of activities.  (c) the titles and names of nominated post holders referred to in ATM/ANS.OR.B.020(b).  (d) the service provider’s chart showing the lines of responsibility between the persons referred to in ATM/ANS.OR.B.020(b).  (e) a general description and location of the facilities referred to in ATM/ANS.OR.B.025.  (f) procedures describing the function and specifying how the service provider monitors and ensures compliance with the applicable requirements referred to in ATM/ANS.OR.B.005(c); and  (g) the amendment procedure for the service provider’s management system documentation. | [Return AMC1 OR B 005 (b)](#RETURN_AMC1_OR_B_005b) |
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| **AMC1 ATM/ANS.OR.B.005(c) Management system**  **COMPLIANCE MONITORING — GENERAL FOR COMPLEX SERVICE PROVIDERS**  (a) Compliance monitoring  The implementation and use of a compliance monitoring function should enable the service provider to monitor compliance with the relevant requirements of this Part and other applicable Parts.  (1) A service provider should specify the basic structure of the compliance monitoring function applicable to the activities conducted.  (2) The compliance monitoring function should be structured according to the size of the service provider and the complexity of the activities to be monitored, including those which have been subcontracted.  (b) A service provider should monitor compliance with the procedures they have designed to ensure that services are provided with the required safety levels and quality, as applicable. In doing so, they should as a minimum, and where appropriate, monitor:  (1) manuals, logs, and records.  (2) training standards; and  (3) management system procedures.  (c) Organisational set-up  (1) A person should be responsible for compliance monitoring to ensure that the service provider continues to meet the requirements of this Part and other applicable Parts. The accountable manager should ensure that sufficient resources are allocated for compliance monitoring.  (2) Personnel involved in the compliance monitoring should have access to all parts of service provider and, as necessary, any contracted organisation.  (3) In the case the person responsible for compliance monitoring acts also as safety manager, the accountable manager, with regard to his or her direct accountability for safety, should ensure that sufficient resources are allocated to both functions, taking into account the size of the service provider and the nature and complexity of its activities.  (4) The independence of the compliance monitoring function should be established by ensuring that audits and inspections are carried out by personnel not directly involved in the activity being audited.  (d) Compliance monitoring documentation  (1) Relevant documentation should include relevant part(s) of the service provider’s management system documentation.  (2) In addition, relevant documentation should also include:  (i) terminology.  (ii) specified activity standards.  (iii) a description of the service provider.  (iv) allocation of duties and responsibilities.  (v) procedures to ensure compliance.  (vi) the compliance monitoring programme, reflecting:  (A) the schedule of the monitoring programme.  (B) audit procedures.  (C) reporting procedures.  (D) follow-up and corrective action procedures. and  (E) the record-keeping system.  (vii) the training syllabus referred to in (e)(2). and  (viii) document control.  (e) Training  (1) Correct and thorough training is essential to optimise compliance in every service provider. In order to achieve significant outcomes of such training, the service provider should ensure that all personnel understand the objectives as laid down in the service provider’s management system documentation.  (2) Those responsible for managing the compliance monitoring function should receive training on this task. Such training should cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting and recording.  (3) Time should be provided to train all personnel involved in compliance management and for briefing the remainder of the personnel.  (4) The allocation of time and resources should be governed by the volume and complexity of the activities concerned. | [Return AMC1 OR B 005 (c)](#RETURN_AMC1_OR_B_005c) |

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| **AMC1 ATM/ANS.OR.B.005(d) Management system**  **REACTION TO UNDERPERFORMANCE OF FUNCTIONAL SYSTEMS**  If the cause of the underperformance is found to be:  (a) a flaw in the functional system, the service provider should initiate a change to the functional system either to remove the flaw or mitigate its effects.  (b) a flawed argument associated with a change to that functional system, the service provider should either:  (1) provide a valid argument; or  (2) where the service provider considers it more feasible, initiate a change to the functional system. | [Return AMC1 OR B 005 (d)](#RETURN_AMC1_OR_B_005d) |
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| **AMC1 ATM/ANS.OR.B.005(e) Management system**  **SIZE, NATURE AND COMPLEXITY OF THE ACTIVITY**  (a) An air traffic services provider should be considered as complex unless it is eligible to apply for a limited certificate and fulfils the criteria set out in ATM/ANS.OR.A.010(a).  (b) An air navigation services provider, other than an air traffic services provider, should be considered as complex unless it is eligible to apply for a limited certificate and fulfils the criteria set out in ATM/ANS.OR.A.010(b)(1).  (c) An aerodrome flight information services provider should be considered as complex unless it is eligible to apply for a limited certificate and fulfils the criteria set out in ATM/ANS.OR.A.010(b)(2).  (d) A service provider, other than an air navigation services provider, should be considered as complex when it has a workforce of more than 20 full-time equivalents (FTEs) involved in the activity subject to UK (EU) Reg No 216/2008 and its implementing rules. | [Return AMC1 OR B 005 (e)](#RETURN_AMC1_OR_B_005e) |
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| **ATM/ANS.OR.B.015 Contracted activities**  (a) Contracted activities include all the activities within the scope of the service provider's operations, in accordance with the terms of the certificate, that are performed by other organisations either themselves certified to carry out such activity or if not certified, working under the service provider's oversight. A service provider shall ensure that when contracting or purchasing any part of its activities to external organisations, the contracted or purchased activity, system or constituent conforms to the applicable requirements.  (b) When a service provider contracts any part of its activities to an organisation that is not itself certified in accordance with this regulation to carry out such activity, it shall ensure that the contracted organisation works under its oversight. The service provider shall ensure that the competent authority is given access to the contracted organisation to determine continued compliance with the applicable requirements under this regulation. | [Return OR B 015](#RETURN_OR_B_015) |

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| **AMC1 ATM/ANS.OR.B.015 Contracted activities**  **RESPONSIBILITY WHEN CONTRACTING ACTIVITIES**  (a) A contract should exist between the service provider and the contracted organisation clearly defining the contracted activities and the applicable requirements, including training and competences requirements for air traffic safety electronics personnel (ATSEP) employed by the contracted organisation, where applicable.  (b) The contracted activities, performed by an organisation that is not itself certified in accordance with this regulation to carry out such activity, should be included in the service provider’s oversight process. In this context, where the contracted activity requires the ATSEP employed by contracted organisation to undertake any aspect of this activity, the service provider should ensure that those ATSEP have received the applicable training and competences foreseen in Subpart A of Annex XIII.  (c) A service provider should ensure that the contracted organisation has the necessary authorisation, declaration or approval when required, and commands the resources and competence to undertake the task. | [Return AMC1 OR B 015](#RETURN_AMC1_OR_B_015) |
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| **AMC2 ATM/ANS.OR.B.015 Contracted activities**  **RESPONSIBILITY WHEN CONTRACTING ACTIVITIES**  (a) When the contracted organisation is itself certified in accordance with this regulation to carry out the contracted activities, the service providers’ compliance monitoring should at least check that the approval effectively covers the contracted activities and that it is still valid.  (b) When the service provider is not certified itself to provide the service, it should only contract or purchase services from a certified organisation when so required by this regulation. | [Return AMC2 OR B 015](#RETURN_AMC2_OR_B_015) |
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| **AMC3 ATM/ANS.OR.B.015 Contracted activities**  **SAFETY — ATS PROVIDER**  An air traffic services provider should ensure adequate justification of the safety of the externally provided and supplied services, having regard to their safety significance within the provision of its services. | [Return AMC3 OR B 015](#RETURN_AMC3_OR_B_015) |

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| **ATM/ANS.OR.B.020 Personnel requirements**  (a) A service provider shall appoint an accountable manager, who has the authority over ensuring that all activities can be financed and carried out in accordance with the applicable requirements. The accountable manager shall be responsible for establishing and maintaining an effective management system.  (b) A service provider shall define the authority, duties and responsibilities of the nominated post holders, in particular of the management personnel in charge of safety, quality, security, finance and human resources-related functions as applicable. | [Return OR B 020 (a)](#RETURN_OR_B_020_a) |
| [Return OR B 020 (b)](#RETURN_OR_B_020_b) |
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| **CM GUIDANCE NOTES providing guidance on compliance ATM/ANS.OR.B.020 (a) Personnel requirements**  Accountable managers should be accountable for establishing a management system and its content, however; they may not necessarily be responsible for maintaining it. In large organisations the responsibility for the maintenance of the management system may be delegated. | [Return OR B 020 (a)](#RETURN_OR_B_020_a) |
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| **AMC1 ATM/ANS.OR.B.020(b) Personnel requirements**  **GENERAL**  Senior management should appoint a member of the service provider’s management who, irrespective of other responsibilities, should have responsibility and authority that includes:  (a) ensuring that processes needed for the management system are established, implemented and maintained.  (b) reporting to senior management on the performance of the management system and any need for improvement; and  (c) ensuring the promotion of awareness of performance and service requirements throughout the service provider and of the impact it has on safety. | [Return AMC1 OR B 020 (b)](#RETURN_AMC1_OR_B_020b) |
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| **ATM/ANS.OR.B.025 Facilities requirements**  A service provider shall ensure that there are adequate and appropriate facilities to perform and manage all tasks and activities in accordance with the applicable requirements. | [Return OR B 025](#RETURN_OR_B_025) |

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| **ATM/ANS.OR.B.030 Record-keeping**  (a) A service provider shall establish a system of record-keeping that allows adequate storage of the records and reliable traceability of all its activities, covering in particular all the elements indicated in point ATM/ANS.OR.B.005.  (b) The format and the retention period of the records referred to in point (a) shall be specified in the service provider's management system procedures.  (c) Records shall be stored in a manner that ensures protection against damage, alteration, and theft | [Return OR B 030](#RETURN_OR_B_030) |
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| **AMC1 ATM/ANS.OR.B.030 Record-keeping**  **GENERAL**  (a) The record-keeping system should ensure that all the records required in ATM/ANS.OR.B.030(a) are accessible whenever needed. These records should be organised in a way that ensures traceability and retrieval throughout the retention period.  (b) Records should be kept in paper form or in electronic format or a combination of both. Records stored on microfilm or optical disc format are also acceptable. The records should remain legible throughout the required retention period. The retention period starts when a record has been created or last amended.  (c) Paper systems should use robust material which can withstand normal handling and filing.  (d) Computer systems should have at least one backup system which should be updated within 24 hours of any new entry. Computer systems should include safeguards against the probability of unauthorised personnel altering the data.  (e) All computer hardware used to ensure data backup should be stored in a different location from that containing the working data and in an environment that ensures they remain in good condition. When hardware or software changes take place, special care should be taken that all necessary data continues to be accessible at least through the full retention period. | [Return AMC1 OR B 030](#RETURN_AMC1_OR_B_030) |
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| **AMC1 ATM/ANS.OR.B.030(b) Record-keeping**  **RETENTION PERIOD**  The records should be kept for a minimum period of at least 5 years unless otherwise specified by the competent authority | [Return AMC1 OR B 030 (b)](#RETURN_AMC1_OR_B_030b) |

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| **ATM/ANS.OR.B.035 Operations manuals**  (a) A service provider shall provide and keep up to date its operations manuals relating to the provision of its services for the use and guidance of operations personnel.  (b) It shall ensure that:  (1) operations manuals contain the instructions and information required by the operations personnel to perform their duties.  (2) relevant parts of the operations manuals are accessible to the personnel concerned.  (3) the operations personnel are informed of amendments to the operations manual applying to their duties in a manner that enables their application as of their entry into force | [Return OR B 035 (a)](#RETURN_OR_B_035_a) |
| [Return OR B 035 (b)](#RETURN_OR_B_035_b) |
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| **ATM/ANS.OR.D.005 Business, annual, and performance plans (a)** | [Return OR D 055 (a)](#RETURN_OR_D_005a) |
| (a) *Business plan*  (1) Air navigation services providers shall produce a business plan covering a minimum period of five years. The business plan shall:  (i) set out the overall aims and goals of the air navigation services providers, and their strategy towards achieving them in consistency with any overall longer-term plan of the air navigation services provider and with the relevant requirements of applicable law for the development of infrastructure or other technology.  (ii) contain performance targets in terms of safety, capacity, environment and cost-efficiency, as may be applicable in Chapter IV of Part 1 of the Transport Act 2000.  (2) The information listed in points (i) and (ii) of point (1) shall be aligned with “any performance plan that may be required pursuant to  Chapter IV of Part 1 of the Transport Act 2000 and, as far as safety data is concerned, it shall be consistent with the state safety programme referred to in Standard 3.1.1 of Annex 19 to the Chicago Convention in its first edition of July 2013.  (3) Air navigation services providers shall provide safety and business justifications for major investment projects including, where relevant, the estimated impact on the appropriate performance targets referred to in point (1)(ii) investments stemming from the legal requirements associated with the implementation of the Single European Sky ATM Research Programme (SESAR).  Amended by Statutory Instrument 2020 No 694 |

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| **ATM/ANS.OR.D.005 Business, annual, and performance plans (b)**  (b) *Annual plan*  (1) Air navigation services providers shall produce an annual plan covering the forthcoming year which shall further specify the features of the business plan and describe any changes to it as compared to the previous plan.  (2) The annual plan shall cover the following provisions on the level and quality of service, such as the expected level of capacity, safety, environment, and cost-efficiency:  (i) information on the implementation of new infrastructure or other developments, and a statement on how they will contribute to improving the performance of the air navigation services provider, including level and quality of services.  (ii) performance indicators, as may be applicable, consistent with any performance plan that may be required pursuant to Chapter IV of Part 1 of the Transport Act 2000, against which the performance level and quality of service may be reasonably assessed.  (iii) information on the measures foreseen to mitigate the safety risks identified by the air navigation services provider, including safety indicators to monitor safety risk and, where appropriate, the estimated cost of mitigation measures.  (iv) the air navigation services providers expected short-term financial position as well as any changes to or impacts on the business plan.  Amended by Statutory Instrument 2020 No 694 | [Return OR D 055 (b)](#RETURN_OR_D_005B) |
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| **ATM/ANS.OR.D.010 Security management (a)** | [Return OR D 010 (a)](#RETURN_OR_D_010a) |
| (a) Air navigation services providers shall, as an integral part of their management system as required in point ATM/ANS.OR.B.005, establish a security management system to ensure:  (1) the security of their facilities and personnel so as to prevent unlawful interference with the provision of services.  (2) the security of operational data they receive, or produce, or otherwise employ, so that access to it is restricted only to those authorised.  Amended by Statutory Instrument 2020 No 694 | [Return OR D 010 (a) (1)](#RETURN_OR_D_010a1) |
| [Return OR D 010 (a) (2)](#RETURN_OR_D_010a2) |

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| **ATM/ANS.OR.D.010 Security management (b)** | [Return OR D 010 (b) (1)](#RETURN_OR_D_010b1) |
| (b) The security management system shall define:  (1) the procedures relating to security risk assessment and mitigation, security monitoring and improvement, security reviews and lesson dissemination.  (2) the means designed to detect security breaches and to alert personnel with appropriate security warnings.  (3) the means of controlling the effects of security breaches and to identify recovery action and mitigation procedures to prevent re-occurrence. | [Return OR D 010 (b) (2)](#RETURN_OR_D_010b2) |
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| **ATM/ANS.OR.D.010 Security management (c)** | [Return OR D 010 (c)](#RETURN_OR_D_010c) |
| (c) Air navigation services providers shall ensure the security clearance of their personnel, if appropriate, and coordinate with the relevant civil and military authorities to ensure the security of their facilities, personnel, and data.  Amended by Statutory Instrument 2020 No 694 |
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| **ATM/ANS.OR.D.010 Security management (d)** | [Return OR D 010 (d)](#RETURN_OR_D_010d) |
| (d) Air navigation services providers shall take the necessary measures to protect their systems, constituents in use and data and prevent compromising the network against information and cyber security threats which may have an unlawful interference with the provision of their service.  Amended by Statutory Instrument 2020 No 694 |
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| **ATM/ANS.OR.D.015 Financial strength — economic and financial capacity** | [Return OR D 015](#RETURN_OR_D_015) |
| Air navigation services and air traffic flow management providers shall be able to meet their financial obligations, such as fixed and variable costs of operation or capital investment costs. They shall use an appropriate cost-accounting system. They shall demonstrate their ability through the annual plan as referred to in point ATM/ANS.OR.D.005(b), as well as through balance sheets and accounts, as applicable under their legal statute, and regularly undergo an independent financial audit.  Amended by Statutory Instrument 2020 No 694 |

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| **ATM/ANS.OR.D.020 Liability and insurance cover** | [Return OR D 020 (a) (b)](#RETURN_OR_D_020ab) | | |
| (a) Air navigation services providers shall have in place arrangements to cover liabilities related to the execution of their tasks in accordance with the applicable law.  (b) The method employed to provide the cover shall be appropriate to the potential loss and damage in question, taking into account the legal status of the providers concerned and the level of commercial insurance cover available.  (c) Air navigation services providers which avail themselves of services of another service provider shall ensure that the agreements that they conclude to that effect specify the allocation of liability between them.  Amended by Statutory Instrument 2020 No 694 | [Return OR D 020 (c)](#RETURN_OR_D_020c) | | |
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| **ATM/ANS.OR.D.025 Reporting requirements** | [Return OR D 025](#RETURN_OR_D_025) | |
| (a) Air navigation services providers shall provide an annual report of their activities to the competent authority.  (b) For air navigation services providers, the annual report may under any requirement pursuant to Chapter IV of Part 1 of the Transport Act 2000, be required to cover their financial results, without prejudice to Article 12 of UK (EU) Reg No 550/2004, as well as their operational performance and any other significant activities and developments in particular in the area of safety.  (d) The annual report referred to in points (a) shall include as a minimum:  (1) an assessment of the level of performance of services provided.  (2) for air navigation services providers, their performance compared to the performance targets established in the business plan referred to in point ATM/ANS.OR.D.005(a), comparing actual performance against the performance set out in any plan required pursuant to Chapter IV of Part 1 of the Transport Act 2000  (4)an explanation for differences with the relevant targets and objectives and an identification of the measures required to address any gaps between the plans and actual performance, any relevant reference period that may be established pursuant to Chapter IV of Part 1 of the Transport Act 2000.  (5) developments in operations and infrastructure.  (6) the financial results, where they are not published separately in accordance with Article 12(1) of UK (EU) Reg No 550/2004.  (7) information about the formal consultation process with the users of its services.  (8) information about the human resources policy.  (e) Air navigation services providers shall make their annual reports available to the competent authority on its request. They shall also make those reports available to the public, under the conditions set by the competent authority in accordance with applicable law.  Amended by Statutory Instrument 2020 No 694 |
| **ATM/ANS.OR.B.010 Change management procedures**  (a) A service provider shall use procedures to manage, assess and, if necessary, mitigate the impact of changes to its functional systems in accordance with points ATM/ANS.OR.A.045, ATM/ANS.OR.C.005, ATS.OR.205 and ATS.OR.210, as applicable.  (b) The procedures referred to in point (a) or any material modifications to those procedures shall:  (1) be submitted, for approval, by the service provider to the competent authority.  (2) not be used until approved by the competent authority.  (c) When the approved procedures referred to in point (b) are not suitable for a particular change, the service provider shall:  (1) make a request to the competent authority for an exemption to deviate from the approved procedures.  (2) provide the details of the deviation and the justification for its use to the competent authority.  (3) not use the deviation before being approved by the competent authority.  Amended by Statutory Instrument 2019 No 459 | [Return OR B 010 (a) (b)](#RETURN_OR_B_010) | |
| [Return OR B 010 (c)](#RETURN_OR_B_010_c) | |
| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.010 (a) and (b)**  **SCOPE OF THE CHANGE MANAGEMENT PROCEDURES**  Where the service provider is also a certified training organisation the management system should encompass the requirements of both 2017/373 and 2015/340 and although not specifically stated in the regulation the CAA requires that this should also apply to the management of changes.  **CHANGE MANAGEMENT PROCEDURES**  • UK Reg (EU) No 2017/373, ATM/ANS.OR.B.010 requires service providers to have an approved change management procedure to manage changes to its functional system.  • UK Reg (EU) No 2017/373, ATM/ANS.OR.A.040 (b) requires service provides to have an approved procedure to manage changes that do not affect the functional system.  • UK Reg (EU) No 2015/340, ATCO.OR.B.015 (e) requires training organisations to have an approved procedure to manage changes that do not require prior approval.  **Continued below** | [Return OR B 010 (a) (b)](#RETURN_OR_B_010) | |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.010 (a) and (b) Cont.**  **CONTENT OF CHANGE MANAGEMENT PROCEDURES**  There is no requirement for the change management procedure to define the process for modifying the change management procedure and for submitting details of the modification to the CAA for approval. This process should be documented within the management system or safety management system document control process and appropriate records maintained.  There is no requirement for the change management procedure to detail a process for identifying the circumstances that will trigger a change. This process should be documented within the management system or safety management system as applicable.  There is no requirement for the change management procedure to establish the criteria for monitoring a change once it is implemented. Such criteria and monitoring process should form part of the service provider’s management system.  The change management procedures should cover the complete lifecycle of a change i.e. From identification of the need for a change to completion of transition into service.  The change management procedure should document the following:   * A change identification process i.e. once a change has been proposed the change identification process should determine if the proposed change is viable, realistic and practical to implement and what are the potential benefits before deciding to initiate the change management process.   **Continued below** | [Return OR B 010 (a) (b)](#RETURN_OR_B_010) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.010 (a) and (b) Cont.**   * A process for assessing if the change management procedure content is suitable for the proposed change or will it be necessary to deviate from the approved procedures to implement the change and a process for requesting an exemption from the CAA to deviate from the approved procedures. * A process for identifying if a training organisation change requires prior approval before implementation. * For changes that affect the functional system a process to determine the scope of the change i.e. which parts of the functional system will be impacted on by the change. * A process for determining if a safety assessment or safety support assessment will be required to manage the change. * The roles and activities for managing the change and for developing the safety assessment or safety support assessment as applicable. * A process for determining if there is sufficient competence available to develop the safety assessment or safety support assessment i.e. will a contracted organisation be required to develop the safety assessment/safety support assessment. * The format and content of safety assessments (ATS.OR.205) or safety support assessments (ATM/ANS.OR.C.005) and any other mitigation methods used. * A means of identifying if other organisations or service users will be affected by the change and a process for communicating details of the change to those affected and for informing the CAA of all parties affected by the change. * Where the change involves one or more service providers a process for consultation and for the development of an overarching safety argument.   ***Continued below*** | [Return OR B 010 (a) (b)](#RETURN_OR_B_010) |

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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.010 (a) and (b) Cont.**   * A process for notifying the CAA of changes that affect the functional system. * A process for notifying the CAA of changes that do not affect the functional system or require prior approval from the CAA. * A process for notifying the CAA of training organisation changes that require prior approval. * A process for ensuring that once the change is notified to the CAA any modifications to the change proposal are also notified to the CAA and to any other service providers affected by the change. * When a notified change is selected for review by the CAA the change management procedure should ensure that the change or any parts of the change cannot be implemented until approval is received from the CAA. * The change management procedure should refer or link to a Change Register as required by **AMC2 ATM/ANS.OR.B.010(a).** | [Return OR B 010 (a) (b)](#RETURN_OR_B_010) |
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| **CM GUIDANCE NOTES providing guidance on compliance with ATM/ANS.OR.B.010 (c).**  This AMC makes reference to a ‘Deviation’ in relation to change management. This is referring to a situation where a proposed change cannot be implemented, for whatever reason, in accordance with the service providers approved change management procedures. In such a situation, it will be necessary to request an exemption to deviate from the approved procedures. Such a request should accompany the change notification form SRG 1430, providing details of the deviation and justification for its use. This should be detailed in your change management procedures. | [Return OR B 10 (c)](#RETURN_OR_B_010_c) |

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| **AMC1 ATM/ANS.OR.B.010(a) Change management procedures**  **GENERAL**  (a) The procedures, and the change of the procedures, used by a service provider to manage changes should cover the complete lifecycle of a change.  (b) The service provider should show that the procedures address all the actions and all the evidence needed in order to comply with the requirements laid down in ATM/ANS.OR.A.045, ATS.OR.205, ATS.OR.210, and ATM/ANS.OR.C.005, as appropriate. For that purpose, the service provider should use a compliance matrix, which shows:  (1) which part of a procedure addresses which part of the regulation (i.e. the requirement of the implementing rule); and  (2) the rationale explaining how the procedures demonstrate compliance with the regulation.  (c) The service provider should ensure that the roles and responsibilities for the change management processes are identified in the procedures.  (d) Procedures should be submitted in a manner agreed between the service provider and the competent authority. Until an agreement is reached, the competent authority will prescribe the means of submission.  (e) The procedure that defines the notification process for changes includes:  (1) the point of contact in charge of the notification of changes, e.g., person, or part of the organisation and the role;  (2) the means used for notification, e.g., fax, email, mail, use of database or others.  (f) The management of change procedures should include a change identification procedure. This procedure, which is a precursor of the change notification process, should seek out potential changes, confirm that there is a real intent to implement them (propose the change) and, if so, initiate the notification process. | [Return OR B 010 (a) (a)](#RETURN_AMC1_OR_B_010a) |
| [Return OR B 010 (a) (b)](#RETURN_AMC1_OR_B_010_a_b) |
| [Return OR B 010 (a) (b) First Part](#RETURN_AMC1_OR_B_010a_b_1P) |
| [Return OR B 010 (a) (b) Second Part](#RETURN_AMC1_OR_B_010a_b_2P) |
| [Return OR B 010 (a) (b) Third Part](#RETURN_AMC1_OR_B_010a_b_3P) |
| [Return OR B 010 (a) (c)](#RETURN_AMC1_OR_B_010_a_c) |
| [Return OR B 0101 (a) (d)](#RETURN_AMC1_OR_B_010_a_d) |
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| [Return OR B 010 (a) (f)](#RETURN_AMC1_OR_B_010_a_f) |

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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.B.010(a) f) Change Management Procedures**  The wording here is confusing as a change identification process has already been established in the management system under the requirements of ATM/ANS.OR.B.005(a)(4). however, the requirement here is different.  This is about assessing the change rather than identifying it.  Once the management system ATM/ANS.OR.B.005(a)(4). has identified a change, it is fed into the change management procedure ‘change identification process’ i.e., once a change has been proposed the change management process should determine if the proposed change is viable, realistic and practical to implement and what are the potential benefits before deciding to initiate the change management process fully. | [Return OR B 010 (a) (f)](#RETURN_AMC1_OR_B_010_a_f) |
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| **AMC2 ATM/ANS.OR.B.010(a) Change management procedures**  **GENERAL**  (a) As part of the change management procedures, the service provider should keep a register of the records of all notified changes. The register should include:  (1) the status of the implementation of the change,  (2) the notification.  (3) (a link to) the location of the actual record, including a reference to all information passed to the competent authority in accordance with ATM/ANS.OR.A.045(a)(2).  (b) In addition, when the changes are selected for review, the register should also include:  (1) the review decision from the competent authority; and  (2) a link to records of the change approval by the competent authority. | [Return AMC2 OR B 010 (a)](#RETURN_AMC2_OR_B_010_a) |
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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.B.010 (a) paragraph (a).**  The complete lifecycle of a change is considered to be from definition to operations including transition into service. | [Return OR B 010 (a)](#RETURN_AMC1_OR_B_010a) |

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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.B.010 (a) paragraph (b) (First Part)** **(ALL SERVICE PROVIDERS)**  To comply with this requirement, you must ensure that your change management procedure, submitted to the CAA for approval, contains the following requirement to address all the actions and all the evidence needed in order to comply with the requirements laid down in ATM/ANS.OR.A.045.   * A process for notifying the competent authority of changes to the functional system. * A requirement to inform other service providers and any aviation undertakings (e.g., aerodrome operator) when they are affected by the change. * A process to ensure that where the change involves one or more service providers a process for consultation and for the development of an overarching safety argument. * A requirement to inform the CAA if the change that has been notified has been materially modified and to inform other service providers and any aviation undertakings (aerodrome operator) when they are affected by the change. * A process to ensure that a functional system change, or parts of that change are not allowed to enter service until notified to the CAA and the CAA’s decision to review or not has been received. * A requirement that ensures that when the change is subject to a review by the CAA that only those parts of the change that have been approved by the CAA are allowed to enter operational service. | [Return OR B 010 (b) First Part](#RETURN_AMC1_OR_B_010a_b_1P) |
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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.B.010 (a) (e) (2)**  This required information is already included in the CAA form SRG1430, therefore a link to the CAA web site would suffice. [Change-management-and-change-notification-process](http://www.caa.co.uk/Commercial-industry/Airspace/Air-traffic-control/Air-navigation-services/Certification-and-designation/Change-management-and-change-notification-process/) | [Return OR B 010 (a) (e) (2)](#RETURN_AMC1_OR_B_010_a_e_2) |

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| **ATM/ANS.OR.A.040 Changes — general**  (a) The notification and management of:  (1) a change to the functional system or a change that affects the functional system shall be carried out in accordance with point ATM/ANS.OR.A.045;  (2) a change to the provision of service, the service provider's management system and/or safety management system, that does not affect the functional system, shall be carried out in accordance with point (b).  (b) Any change as referred to in point (a)(2) shall require prior approval before implementation, unless such a change is notified and managed in accordance with a procedure approved by the competent authority as laid down in point ATM/ANS.AR.C.025(c). | [Return OR A 040](#RETURN_OR_A_040) |
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| **AMC1 ATM/ANS.OR.A.040 Changes — general**  **CHANGE OF THE OWNERSHIP AND/OR THE LOCATION**  A change of the service provider’s ownership and/or the location of its facilities should comply with ATM/ANS.OR.A.040(a)(2) and should not be subject to the procedure identified in ATM/ANS.AR.C.025(c). | [Return AMC1 OR A 040](#RETURN_AMC1_OR_A_040) |
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| **AMC1 ATM/ANS.OR.A.040(b) Changes — general**  **PROCEDURE FOR CHANGES REQUIRING PRIOR APPROVAL**  For changes requiring prior approval, a procedure should define how the service provider should notify the competent authority and obtain an approval issued by that authority:  (a) Notifications should be submitted before any such change is made in order to enable the competent authority to determine continued compliance with UK (EU) Regulation No 216/2008 and its implementing rules and also to amend, if necessary, the certificate and the related conditions attached to it.  (b) Changes should only be implemented upon receipt of approval by the competent authority in accordance with the procedure established by that authority.  (c) The service provider should operate under the conditions prescribed by the competent authority during such changes, as applicable. | [Return AMC1 OR A 040 (b)](#RETURN_AMC1_OR_A_040b) |
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| **AMC2 ATM/ANS.OR.A.040(b) Changes — general**  **PROCEDURE FOR CHANGES NOT REQUIRING PRIOR APPROVAL**  (a) For changes not requiring prior approval, the procedure should define how the service provider should notify and manage the change.  (b) The service provider should inform the competent authority of any changes to nominated persons specified in ATM/ANS.OR.B.020(b) and ATS.OR.200(1)(iii), as applicable. | [Return AMC2 OR A 040 (b)](#RETURN_AMC2_OR_A_040b) |

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| **ATM/ANS.OR.A.045 Changes to a functional system**  (a) A service provider planning a change to its functional system shall:  (1) notify the competent authority of the change.  (2) provide the competent authority, if requested, with any additional information that allows the competent authority to decide whether or not to review the argument for the change.  (3) inform other service providers and, where feasible, aviation undertakings affected by the planned change.  (b) Having notified a change, the service provider shall inform the competent authority whenever the information provided in accordance with points (a)(1) and (2) is materially modified, and the relevant service providers and aviation undertakings whenever the information provided in accordance with point (a)(3) is materially modified.  (c) A service provider shall only allow the parts of the change, for which the activities required by the procedures referred to in point ATM/ANS.OR.B.010 have been completed, to enter into operational service.  (d) If the change is subject to competent authority review in accordance with point ATM/ANS.AR.C.035, the service provider shall only allow the parts of the change for which the competent authority has approved the argument to enter into operational service.  (e) When a change affects other service providers and/or aviation undertakings, as identified in point (a)(3), the service provider and these other service providers, in coordination, shall determine:  (1) the dependencies with each other and, where feasible, with the affected aviation undertakings.  (2) the assumptions and risk mitigations that relate to more than one service provider or aviation undertaking.  (f) Those service providers affected by the assumptions and risk mitigations referred to in point (e)(2) shall only use, in their argument for the change, agreed and aligned assumptions and risk mitigations with each other and, where feasible, with aviation undertakings. | [Return OR A 045 (a)](#RETURN_OR_A_045_a) |
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| [Return OR A 045 (c) (d)](#RETURN_OR_A_045_c_d) |
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| **AMC1 ATM/ANS.OR.A.045(a) Changes to a functional system**  **NOTIFICATION**  The notification of a change should not be considered complete until the following information is provided:  (a) Name of the organisation notifying the change.  (b) Unique identifier of change.  (c) Version number of notification.  (d) Title of the change.  (e) Date of the submission of the original of this change notification.  (f) Scheduled date of entry into service (even if only approximate).  (g) Details of the change and its impact.  (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).  (i) Entity in charge of the assurance case; and  (j) Identity of a point of contact for communications with the competent authority | [Return AMC1 OR A 045 (a)](#RETURN_AMC1_OR_A_045a) |
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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.A.045 (a)**  This required information is already included in the CAA form SRG1430, therefore a link to the CAA web site would suffice. [Change-management-and-change-notification-process](http://www.caa.co.uk/Commercial-industry/Airspace/Air-traffic-control/Air-navigation-services/Certification-and-designation/Change-management-and-change-notification-process/) | [Return AMC1 OR A 045 (a)](#RETURN_AMC1_OR_A_045a) |
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| **AMC1 ATM/ANS.OR.A.045(a)(3) Changes to a functional system**  **NOTIFICATION TO USERS OF THE SERVICE**  Having notified a change, the service provider should:  (a) individually inform all known service providers potentially affected by the notified change; and  (b) inform all aviation undertakings potentially affected by the change either individually or via a representative body of aviation undertakings or by publishing details of the planned change in a dedicated publication of the service provider or aeronautical information publications such as an aeronautical information circular (AIC). | [Return AMC1 OR A 045 (a) (3)](#RETURN_AMC1_OR_A_045a3) |

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| **AMC1 ATM/ANS.OR.A.045(b) Changes to a functional system**  **MODIFICATION OF A NOTIFIED CHANGE**  (a) The service provider should inform the competent authority that was initially notified about any update in the notification data when the information provided in a previous notification about the same change is no longer valid or when information previously missing becomes available. The other service providers and aviation undertakings should also be informed, when they are affected by the new data.  (b) The cancellation of a previously notified change should be considered as a modification of a notified change. Therefore, the service provider should inform about this update the competent | [Return AMC1 OR A 045 (b)](#RETURN_AMC1_OR_A_045b) |
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| **CM GUIDANCE NOTES providing guidance on compliance with AMC1 ATM/ANS.OR.B.045 (b).**  Your change management procedure should indicate that this will require the resubmission of the change notification form SRG 1430 with an updated version number. Must also include the requirement for informing the CAA when a notified change is cancelled and all other affected entities. | [Return AMC1 OR B 045 (b)](#RETURN_AMC1_OR_A_045b) |
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| **AMC1 ATM/ANS.OR.A.045(c); (d) Changes to a functional system**  **ENTRY INTO OPERATIONAL SERVICE OF A CHANGE SELECTED FOR REVIEW**  The service provider should not start the implementation of any part of the change that has the potential to affect the safety of the services currently being provided until a valid safety (support) assessment for that part of the change exists and, if the change is subject to competent authority review, it has been approved by the competent authority. | [Return AMC1 OR A 045 (c) (d)](#RETURN_AMC1_OR_A_045cd) |
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| **AMC1 ATM/ANS.OR.A.045(e) Changes to the functional system**  **CHANGES AFFECTING MULTIPLE SERVICE PROVIDERS — OVERARCHING SAFETY ARGUMENT**  A change as defined in ATM/ANS.OR.A.045(e) may involve more than one service provider changing their functional systems. In this case, the change will consist of a set of changes to different ATM/ANS functional systems or their context. However, no matter how many individual changes to service providers’ functional systems are part of the change, they should be coordinated. An overarching safety argument, coherent with the arguments of the individual changes, that claims the complete change is safe should be provided. | [Return AMC1 OR A 045 (e)](#RETURN_AMC1_OR_A_045e) |

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| **ATS.OR.205 Safety assessment and assurance of changes to the functional system**  (a) For any change notified in accordance with point ATM/ANS.OR.A.045(a)(1), the air traffic services provider shall:  (1) ensure that a safety assessment is carried out covering the scope of the change, which is:  (i) the equipment, procedural and human elements being changed.  (ii) interfaces and interactions between the elements being changed and the remainder of the functional system.  (iii) interfaces and interactions between the elements being changed and the context in which it is intended to operate.  (iv) the life cycle of the change from definition to operations including transition into service.  (v) planned degraded modes of operation of the functional system. and  (2) provide assurance, with sufficient confidence, via a complete, documented, and valid argument that the safety criteria identified via the application of point ATS.OR.210 are valid, will be satisfied and will remain satisfied.  (b) An air traffic services provider shall ensure that the safety assessment referred to in point (a) comprises:  (1) the identification of hazards.  (2) the determination and justification of the safety criteria applicable to the change in accordance with point ATS.OR.210.  (3) the risk analysis of the effects related to the change.  (4) the risk evaluation and, if required, risk mitigation for the change such that it can meet the applicable safety criteria.  (5) the verification that:  (i) the assessment corresponds to the scope of the change as defined in point (a)(1).  (ii) the change meets the safety criteria.  (6) the specification of the monitoring criteria necessary to demonstrate that the service delivered by the changed functional system will continue to meet the safety criteria. | [Return ATS OR 205 (a) (1)](#RETURN_ATS_OR_205a1) |
| [Return ATS OR 205 (a) (2)](#RETURN_ATS_OR_205a2) |
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| **AMC1 ATS.OR.205(a)(2) Safety assessment and assurance of changes to the functional** **system**  **FORM OF ASSURANCE**  The air traffic services provider should ensure that the assurance required by ATS.OR.205(a)(2) is documented in a safety case. | [Return AMC1 ATS OR 205 (a) (2)](#RETURN_AMC1_ATS_OR_205a2) |

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| **AMC2 ATS.OR.205(a)(2) Safety assessment and assurance of changes to the functional system**  **COMPLETENESS OF THE ARGUMENT**  The argument should be considered complete when it shows, as applicable, that:  (a) the safety assessment in ATS.OR.205(b) has produced a sufficient set of non-contradictory valid safety criteria.  (b) safety requirements have been placed on the elements changed and, on those elements, affected by the change.  (c) the safety requirements as implemented meet the safety criteria.  (d) all safety requirements have been traced from the safety criteria to the level of the architecture at which they have been satisfied.  (e) each component satisfies its safety requirements.  (f) each component operates as intended, without adversely affecting the safety. and  (g) the evidence is derived from known versions of the components and the architecture and known sets of products, data and descriptions that have been used in the production or verification of those versions. | [Return AMC2 ATS OR 205 (a) (2)](#RETURN_AMC2_ATS_OR_205a2) |

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| **AMC3 ATS.OR.205(a)(2) Safety assessment and assurance of changes to the functional system**  **ASSURANCE — SOFTWARE**  (a) When a change to a functional system includes the introduction of new software or modifications to existing software, the ATS provider should ensure the existence of documented software assurance processes necessary to produce evidence and arguments that demonstrate that the software behaves as intended (software requirements), with a level of confidence consistent with the criticality of the required application.  (b) The ATS provider should use the software experience gained to confirm that the software assurance processes are effective and, when used, the allocated software assurance levels (SWALs) and the rigour of the assurances are appropriate. For that purpose, the effects from a software malfunction (i.e. the inability of a programme to perform a required function correctly) or failure (i.e. the inability of a programme to perform a required function) reported according to the relevant requirements on reporting and assessment of service occurrences should be assessed in comparison with the effects identified for the system concerned as per the severity classification scheme.  Amended by ED Decision 2019/022/R | [RETURN\_AMC3\_ATS\_OR\_205a2](#RETURN_AMC3_ATS_OR_205a2) |

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| **AMC4 ATS.OR.205(a)(2) Safety assessment and assurance of changes to the functional system**  **ASSURANCE — SOFTWARE ASSURANCE PROCESSES**  (a) The software assurance processes should provide evidence and arguments that they, as a minimum, demonstrate the following:  (1) The software requirements correctly state what is required by the software, in order to meet the upper level requirements, including the allocated system safety requirements as identified by the safety assessment of changes to the functional system (AMC2.ATS.OR.205(a)(2)). For that purpose, the software requirements should:  (i) be correct, complete and compliant with the upper-level requirements; and  (ii) specify the functional behaviour, in nominal and downgraded modes, timing performances, capacity, accuracy, resource usage on the target hardware, robustness to abnormal operating conditions and overload tolerance, as appropriate, of the software.  (2) The traceability is addressed in respect of all software requirements as follows:  (i) Each software requirement should be traced to the same level of design at which its satisfaction is demonstrated. AMC and GM to Part-ATS Issue 1, Amendment 1 Annex IV to ED Decision 2019/022/R Page 3 of 7  (ii) Each software requirement allocated to a component should either be traced to an upper level requirement, or its need should be justified and assessed that it does not affect the satisfaction of the safety requirements allocated to the component.  (3) The software implementation does not contain functions that adversely affect safety.  (4) The functional behaviour, timing performances, capacity, accuracy, resource usage on the target hardware, robustness to abnormal operating conditions and overload tolerance, of the implemented software comply with the software requirements.  (5) The software verification is correct and complete and is performed by analysis and/or testing and/or equivalent means, as agreed with the competent authority.  (b) The evidence and arguments produced by the software assurance processes should be derived from:  (1) a known executable version of the software.  (2) a known range of configuration data; and  (3) a known set of software items and descriptions, including specifications, that have been used in the production of that version, or can be justified as applicable to that version.  (c) The software assurance processes should determine the rigour to which the evidence and arguments are produced.  (d) The software assurance processes should include the necessary activities to ensure that the software life cycle data can be shown to be under configuration control throughout the software life cycle, including the possible evolutions due to changes or problems’ corrections. They should include, as a minimum:  (1) configuration identification, traceability and status accounting activities, including archiving procedures.  (2) problem reporting, tracking and corrective actions management; and  (3) retrieval and release procedures.  (e) The software assurance processes should also cover the particularities of specific types of software such as COTS, non-development software and previously developed software where generic assurance processes cannot be applied. The software assurance processes should include other means to give sufficient confidence that the software meets the safety objectives and requirements, as identified by the safety risk assessment and mitigation processes. If sufficient assurance cannot be provided, complementary mitigation means aiming at decreasing the impact of specific failure modes of this type of software, should be applied. This may include but is not limited to:  (1) software and/or system architectural considerations.  (2) existing service level experience; and  (3) monitoring  Amended by ED Decision 2019/022/R | [RETURN\_AMC4\_ATS\_OR\_205a2](#RETURN_AMC4_ATS_OR_205a2) |
| **AMC1 ATS.OR.205(b)(1) Safety assessment and assurance of changes to the functional**  **COMPLETENESS OF HAZARD IDENTIFICATION**  The air traffic services provider should ensure that hazard identification:  (a) targets complete coverage of any condition, event, or circumstance related to the change, which could, individually or in combination, induce a harmful effect.  (b) has been performed by personnel trained and competent for this task; and  (c) need only include hazards that are generally considered as credible. | [Return AMC1 ATS OR 205 (b) (1)](#RETURN_AMC1_ATS_OR_205b1) |

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| **AMC2 ATS.OR.205(b)(1) Safety assessment and assurance of changes to the functional system**  **HAZARDS TO BE IDENTIFIED**  The following hazards should be identified:  (a) New hazards, i.e. those introduced by the change relating to the:  (1) failure of the functional system; and  (2) normal operation of the functional system; and  (b) Already existing hazards that are affected by the change and are related to:  (1) the existing parts of the functional systems; and  (2) hazards outside the functional system, for example, those inherent to aviation. | [Return AMC2 ATS OR 205 (b) (1)](#RETURN_AMC2_ATS_OR_205b1) |

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| **AMC1 ATS.OR.205(b)(2) Safety assessment and assurance of changes to the functional system**  **DETERMINATION OF THE SAFETY CRITERIA FOR THE CHANGE**  When determining the safety criteria for the change being assessed, the air traffic services provider should, in accordance with ATS.OR.210, ensure that:  (a) the safety criteria support a risk analysis that is:  (1) relative or absolute, i.e., refers to:  (i) the difference in safety risk of the system due to the change (relative); or  (ii) the difference in safety risk of the system and a similar system (can be absolute or relative); and  (iii) the safety risk of the system after the change (absolute); and  (2) objective, whether risk is expressed numerically or not.  (b) the safety criteria are measurable to an adequate degree of certainty.  (c) the set of safety criteria can be represented totally by safety risks, by other measures that relate to safety risk or a mixture of safety risks and these other measures.  (d) the set of safety criteria should cover the change. the safety criteria selected are consistent with the overall safety objectives established by the air traffic services provider through its SMS and represented by its annual and business plan and safety key performance indicators. and  (e) where a safety risk or a proxy cannot be compared against its related safety criteria with acceptable certainty, the safety risk should be constrained, and actions should be taken, in the long term, so as to manage safety and ensure that the air traffic services provider’s overall safety objectives are met. | [Return AMC1 ATS OR 205 (b) (2)](#RETURN_AMC1_ATS_OR_205b2) |

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| **AMC1 ATS.OR.205(b)(3) Safety assessment and assurance of changes to the functional system**  **COMPLETENESS OF RISK ANALYSIS**  The air traffic services provider should ensure that the risk analysis is carried out by personnel trained and competent to perform this task and should also ensure that:  (a) a complete list of harmful effects in relation to the identified:  (1) hazards, when the safety criteria are expressed in terms of safety risk, or proxies, when the safety criteria are expressed in relation to proxies. and  (2) hazards introduced due to implementation  is produced. and  (b) the risk contributions of all hazards and proxies are evaluated. and  (c) risk analysis is conducted in terms of risk or in terms of proxies or a combination of them, using specific measurable properties that are related to operational safety risk. and  (d) results can be compared against the safety criteria. | [Return AMC1 ATS OR 205 (b) (3)](#RETURN_AMC1_ATS_OR_205b3) |
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| **AMC2 ATS.OR.205(b)(3) Safety assessment and assurance of changes to the functional system**  **SEVERITY CLASSIFICATION OF ACCIDENTS LEADING TO HARMFUL EFFECTS**  When performing a risk analysis in terms of risk, the air traffic services provider should ensure that the harmful effects of all hazards are allocated a safety severity category and that, where there is more than one safety severity category of harm, any severity classification scheme satisfies the following criteria:  (a) The scheme is independent of the causes of the accidents that it classifies, i.e., the severity of the worst accident does not depend upon whether it was caused by an equipment malfunction or human error.  (b) The scheme permits unique assignment of every harmful effect to a severity category.  (c) The severity categories are expressed in terms of a single scalar quantity and in terms relevant to the field of their application.  (d) The level of granularity (i.e. the span of the categories) is appropriate to the field of their application.  (e) The scheme is supported by rules for assigning a harmful effect unambiguously to a severity category. and  (f) The scheme is consistent with the air traffic services providers views of the severity of the harmful effects covered and can be shown to incorporate societal views of their severity. | [Return AMC2 ATS OR 205 (b) (3)](#RETURN_AMC2_ATS_OR_205b3) |

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| **AMC1 ATS.OR.205(b)(4) Safety assessment and assurance of changes to the functional system**  **RISK EVALUATION**  The air traffic services provider should ensure that the risk evaluation includes:  (a) an assessment of the identified hazards for a notified change, including possible mitigation means, in terms of risk or in terms of proxies or a combination of them.  (b) a comparison of the risk analysis results against the safety criteria taking the uncertainty of the risk assessment into account. and  (c) the identification of the need for risk mitigation or reduction in uncertainty or both. | [Return AMC1 ATS OR 205 (b) (4)](#RETURN_AMC1_ATS_OR_205b4) |

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| **AMC2 ATS.OR.205(b)(4) Safety assessment and assurance of changes to the functional system**  **RISK MITIGATION**  When the risk evaluation results show that the safety criteria cannot be satisfied, then the air traffic services provider should either abandon the change or propose additional means of mitigating the risk. If risk mitigation is proposed, then the air traffic services provider should ensure that it identifies:  (a) all of the elements of the functional system, e.g. training, procedures that need to be reconsidered. and  (b) for each part of the amended change, those parts of the safety assessment *(requirements from (a) to (f))* (Document error. Read as ATS.OR.205 part (b) 1 to 6) that need to be repeated in order to demonstrate that the safety criteria will be satisfied. | [Return AMC2 ATS OR 205 (b) (4)](#RETURN_AMC2_ATS_OR_205b4) |

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| **AMC1 ATS.OR.205(b)(5) Safety assessment and assurance of changes to the functional system**  **VERIFICATION**  The air traffic services provider should ensure that verification activities of the safety assessment process include verification that:  (a) the full scope of the change is addressed throughout the whole assessment process, i.e., all the elements of the functional system or environment of operation that are changed and those unchanged elements that depend upon them and on which they depend are identified.  (b) the way the service behaves complies with and does not contradict any applicable requirements placed on the changed service or the conditions attached to the provider’s certificate.  (c) the specification of the way the service behaves is complete and correct.  (d) the specification of the operational context is complete and correct.  (e) the risk analysis is complete as per AMC1 ATS.OR.205(b)(3).  (f) the safety requirements are correct and commensurate with the risk analysis.  (g) the design is complete and correct with reference to the specification and correctly addresses the safety requirements.  (h) the design was the one analysed. and  (i) the implementation, to the intended degree of confidence, corresponds to that design and behaves only as specified in the given operational context. | [Return ATS OR 205 (b) (5)](#RETURN_AMC1_ATS_OR_205b5) |
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| **AMC1 ATS.OR.205(b)(6) Safety assessment and assurance of changes to the functional system**  **MONITORING OF INTRODUCED CHANGE**  The air traffic services provider should ensure that within the safety assessment process for a change, the monitoring criteria, that are to be used to demonstrate that the safety case remains valid during the operation of the changed functional system, are identified and documented. These criteria are specific to the change and should be such that they indicate that:  (a) the assumptions made in the argument remain valid.  (b) critical proxies remain as predicted in the safety case and are no more uncertain. and  (c) other properties that may be affected by the change remain within the bounds predicted by the safety case. | [Return AMC1 ATS OR 205 (b) (6)](#RETURN_AMC1_ATS_OR_205b6) |

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| **ATS.OR.210 Safety criteria**  (a) An air traffic services provider shall determine the safety acceptability of a change to a functional system, based on the analysis of the risks posed by the introduction of the change, differentiated on basis of types of operations and stakeholder classes, as appropriate.  (b) The safety acceptability of a change shall be assessed by using specific and verifiable safety criteria, where each criterion is expressed in terms of an explicit, quantitative level of safety risk or another measure that relates to safety risk.  (c) An air traffic services provider shall ensure that the safety criteria:  (1) are justified for the specific change, taking into account the type of change.  (2) when fulfilled, predict that the functional system after the change will be as safe as it was before the change or the air traffic services provider shall provide an argument justifying that:  (i) any temporary reduction in safety will be offset by future improvement in safety. or  (ii) any permanent reduction in safety has other beneficial consequences.  (3) when taken collectively, ensure that the change does not create an unacceptable risk to the safety of the service.  (4) support the improvement of safety whenever reasonably practicable. | [Return ATS OR 210 (a)](#RETURN_ATS_OR_210a) |
| [Return ATS OR 210 (b)](#RETURN_ATS_OR_210b) (b) |
| [Return ATS OR 210 (c)](#RETURN_ATS_OR_210c) |
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| **AMC1 ATS.OR.210(a) Safety criteria (*relates to 210 (b))***  **OTHER MEASURES RELATED TO SAFETY RISKS**  When the air traffic services provider specifies the safety criteria with reference to another measure that relates to safety risk, it should use one or more of the following:  (a) proxies.  (b) recognised standards and/or codes of practice. and  (c) the safety performance of the existing functional system or a similar system elsewhere. | [Return AMC1 ATS OR 210 (a)](#RETURN_AMC1_ATS_OR_210a) |
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| **AMC2 ATS.OR.210(a) Safety criteria** ***(relates to 210 (b))***  **OTHER MEASURES RELATED TO SAFETY RISKS — PROXIES**  Proxies for safety risk, used as safety criteria for those parts of the functional system affected by the change, can only be employed when:  (a) a justifiable causal relationship exists between the proxy and the harmful effect, e.g. proxy increase/decrease causes risk increase/decrease.  (b) a proxy is sufficiently isolated from other proxies to be treated independently. and  (c) the proxy is measurable, quantitatively, or qualitatively, to an adequate degree of certainty. | [Return AMC2 ATS OR 210 (a)](#RETURN_AMC2_ATS_OR_210a) |

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| **ATM/ANS.OR.C.005 Safety support assessment and assurance of changes to the functional system**  (a) For any change notified in accordance with point ATM/ANS.OR.A.045(a)(1), the service provider shall:  (1) ensure that a safety support assessment is carried out covering the scope of the change which is:  (i) the equipment, procedural and human elements being changed.  (ii) interfaces and interactions between the elements being changed and the remainder of the functional system.  (iii) interfaces and interactions between the elements being changed and the context in which it is intended to operate.  (iv) the life cycle of the change from definition to operations including transition into service.  (v) planned degraded modes.  (2) provide assurance, with sufficient confidence, via a complete, documented, and valid argument that the service will behave and will continue to behave only as specified in the specified context.  (b) A service provider other than an air traffic services provider shall ensure that the safety support assessment referred to in point (a) comprises:  (1) verification that:  (i) the assessment corresponds to the scope of the change as defined in point (a)(1).  (ii) the service behaves only as specified in the specified context.  (iii) the way the service behaves complies with and does not contradict any applicable requirements of this regulation placed on the services provided by the changed functional system. and  (2) specification of the monitoring criteria necessary to demonstrate that the service delivered by the changed functional system will continue to behave only as specified in the specified context.  Amended by Statutory Instrument 2019 No 459 | [Return OR C 005 (a) (1)](#RETURN_OR_C_005a1) |
| [Return OR C 005 (a) (2)](#RETURN_OR_C_005a2) |
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| **AMC1 ATM/ANS.OR.C.005(a)(2) Safety support assessment and assurance of changes to the functional system**  **FORM OF ASSURANCE**  Service providers should ensure that the assurance is documented in a safety support case. | [Return AMC1 OR C 005 (a) (2)](#RETURN_AMC1_OR_C_005a2) |

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| **AMC2 ATM/ANS.OR.C.005(a)(2) Safety support assessment and assurance of changes to the functional system**  **COMPLETENESS OF THE ARGUMENT**  The argument should be considered complete when it shows that:  (a) the safety support assessment of ATM/ANS.OR.C.005(b) has produced a service specification and context specification where:  (1) the service has been defined in terms of functionality, performance, and the form of the interfaces.  (2) the specification of context correctly and completely records the conditions under which the specification of the service is true.  (3) the interaction of components, under failure conditions or failures in services delivered to the components, have been assessed for their impact on the service and, where necessary, degraded modes of service have been defined. and  (4) the specification encompasses the interaction with the environment.  (b) safety support requirements have been placed on the elements changed and, on those elements, affected by the change.  (c) the behaviour necessitated by the safety support requirements is the complete behaviour expressed by the service specification.  (d) all safety support requirements have been traced from the service specification to the level of the architecture at which they have been satisfied.  (e) each component satisfies its safety support requirements. and  (f) the evidence is derived from known versions of the components and the architecture and known sets of products, data and descriptions that have been used in the production or verification of those versions. | [Return AMC2 OR C 005 (a) (2)](#RETURN_AMC2_OR_C_005a2) |
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| **AMC3 ATM/ANS.OR.C.005(a)(2) Safety support assessment and assurance of changes to the functional system**  **DETERMINATION OF THE SPECIFICATION OF THE CHANGED SERVICE**  When determining the changes in the service specification that have resulted from the change to the functional system, service providers other than air traffic services providers should ensure that:  (a) the properties specified for the service can be observed and measured either directly or indirectly with a degree of certainty commensurate with the level of confidence sought from assurance. and  (b) the specification of the changed service must cover everything that has changed in the service provided when operated within the declared operational context. | [Return AMC3 OR C 005 (a) (2)](#RETURN_AMC3_OR_C_005a2) |

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| **AMC4 ATM/ANS.OR.C.005(a)(2) Safety support assessment and assurance of changes to the functional system**  **DETERMINATION OF THE OPERATIONAL CONTEXT FOR THE CHANGE**  (a) When determining the operational context for the change, service providers other than an air traffic services provider should ensure that:  (1) the specification of the operational context can be shown to be true for all circumstances and environments in which the changed service is intended to operate.  (2) the operational context is completely and coherently specified. and  (3) the specification of the operational context is internally consistent.  (b) The operational context must be specified so that its adherence to (a)(1) and (a)(2) is observable and measurable either directly or indirectly with a degree of certainty commensurate with the level of confidence sought from assurance. | [Return AMC4 OR C 005 (a) (2)](#RETURN_AMC4_OR_C_005a2) |

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| **AMC5 ATM/ANS.OR.C.005(a)(2) Safety support assessment and assurance of changes to the functional system**  **ASSURANCE — SOFTWARE**  (a) When a change to a functional system includes the introduction of new software or modifications to existing software, the service provider should ensure the existence of documented software assurance processes necessary to produce evidence and arguments AMC and GM to Part-ATM/ANS.OR Issue 1, Amendment 1 Annex III to ED Decision 2019/022/R Page 3 of 8 that demonstrate that the software behaves as intended (software requirements), with a level of confidence consistent with the needs of the required application.  (b) The service provider should use feedback of software experience to confirm that the software assurance processes are effective and, when used, the allocated software assurance levels (SWALs) and the rigour of the assurances are appropriate. For that purpose, the effects from software malfunctions (i.e., the inability of a programme to perform a required function correctly) or failures (i.e. the inability of a programme to perform a required function) reported according to the relevant requirements on reporting and assessment of service occurrences should be assessed in comparison with the effects identified for the system concerned as per the service specification demonstration | [Return\_AMC5\_OR\_C\_005a2](#Return_AMC5_OR_C_005a2) |

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| **AMC6 ATM/ANS.OR.C.005(a)(2) Safety support assessment and assurance of changes to the functional system**  **ASSURANCE — SOFTWARE ASSURANCE PROCESSES**  (a) The software assurance processes should provide evidence and arguments that they, as a minimum, demonstrate the following:  (1) The software requirements correctly state what is required by the software, in order to meet the service and safety support requirements, as identified by the safety support assessment (AMC2.ATM/ANS.OR.C005(a)(2)). For that purpose, the software requirements should:  (i) be correct, complete, and compliant with the upper-level requirements. and  (ii) specify the functional behaviour, in nominal and downgraded modes, timing performances, capacity, accuracy, resource usage on the target hardware, robustness to abnormal operating conditions and overload tolerance, as appropriate, of the software.  (2) The traceability is addressed in respect of all software requirements as follows:  (i) Each software requirement should be traced to the same level of design at which its satisfaction is demonstrated.  (ii) Each software requirement allocated to a component should either be traced to an upper-level requirement, or its need should be justified and assessed that it does not affect the satisfaction of the safety support requirements allocated to the component.  (3) The software implementation does not contain functions that adversely affect the satisfaction of the service specification.  (4) The functional behaviour, timing performances, capacity, accuracy, resource usage on the target hardware, robustness to abnormal operating conditions and overload tolerance, of the implemented software comply with the software requirements.  (5) The software verification is correct and complete and is performed by analysis and/or testing and/or equivalent means, as agreed with the competent authority.  (b) The evidence and arguments produced by the software assurance processes should be derived from:  (1) a known executable version of the software.  (2) a known range of configuration data. and  (3) a known set of software items and descriptions, including specifications, that have been used in the production of that version, or can be justified as applicable to that version.  (c) The software assurance processes should determine the rigour to which the evidence and arguments are produced.  (d) The software assurance processes should include the necessary activities to ensure that the software life cycle data can be shown to be under configuration control throughout the software life cycle, including the possible evolutions due to changes or problems’ corrections. They should include, as a minimum:  (1) configuration identification, traceability and status accounting activities, including archiving procedures.  (2) problem reporting, tracking and corrective actions management. and  (3) retrieval and release procedures.  (e) The software assurance processes should also cover the particularities of specific types of software such as commercial-off-the-shelf (COTS), non-developmental software and previously developed software where generic assurance processes cannot be applied. The software assurance processes should include other means to give sufficient confidence that the software meets the service and safety support requirements. If sufficient assurance cannot be provided, complementary mitigation means aiming at decreasing the impact of specific failure modes of this type of software, should be applied. This may include but is not limited to:  (1) software and/or system architectural considerations.  (2) existing service level experience. and  (3) monitoring. | [Return\_AMC6\_OR\_C\_005a2](#Return_AMC6_OR_C_005a2) | |
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| **AMC1 ATM/ANS.OR.C.005(b)(2) Safety support assessment and assurance of changes to the functional system**  **MONITORING**  Service providers other than an air traffic services provider should ensure that within the safety support assessment process for a change, the monitoring criteria that are to be used to demonstrate that the safety support case remains valid during the operation of the changed functional system, i.e., that the changed service continues to meet its specification, are identified and documented. These criteria should be such that:  (a) they indicate that the assumptions made in the safety support case remain valid. and  (b) if the properties being monitored remain within the bounds set by these criteria, the service will be behaving as specified. | [Return AMC1 OR C 005 (b) (2)](#RETURN_AMC1_OR_C_005b2) | | |