



# **ANSP Annex II Questionnaire**

## ANNEX II

### SPECIFIC REQUIREMENTS FOR THE PROVISION OF AIR TRAFFIC SERVICES

#### 1. Ownership

A provider of air traffic services shall make explicit to the national supervisory authority referred to in Article. 7(2) of Regulation (EC) No 550/2004:

- its legal status, its ownership structure and any arrangements having a significant impact on the control over its assets,
- any links with organisations not involved in the provision of air navigation services, including commercial activities in which it is engaged either directly or through related undertakings, which account for more than 1 % of its expected revenue. Furthermore, it shall notify that any change of any single shareholding which represents 10 % or more of its total shareholding.

A provider of air traffic services shall take all necessary measures to prevent any situation of conflict of interests that could compromise the impartial and objective provision of its services.

#### **Explanatory Note**

**N.B** Regulation (EC) No 550/2004 referred to is the Service Provision Regulation.

This requirement concerns corporate governance and the control of assets.

#### **Questions against Annex 2 CR 1:**

1. Please state if your company is registered, and if applicable, provide relevant details.
2. Please provide details of your legal status, ownership structure and any arrangements having a significant impact on control of your assets.
3. Please provide details of your links with other organisations, not involved in the provision of air navigation services, including commercial activities directly or through related undertakings, which account for more than 1% of your expected revenue.
4. What measures do you take to prevent conflicts of interest that could compromise the impartial and objective provision of services?

## 2. OPEN AND TRANSPARENT PROVISION OF SERVICES

In addition to the provision of Annex I, part 8.1 and where a Member State decides to organise the provision of specific ATS services in a competitive environment, a Member State may take all appropriate measures to ensure that providers of these specific air traffic services shall neither engage in conduct that would have as its object or effect the prevention, restriction or distortion of competition, nor shall they engage in conduct that amounts to an abuse of a dominant position in accordance with applicable national and Community law.

### **Explanatory Note**

Where appropriate, the CAA will take any measures necessary to ensure that ATS providers do not pursue practices that are anti-competitive in nature. If the CAA needs to exercise its authority in this respect it will do so against the general background of applicable Community law.

The requirement does not in itself generate the need for questions.

### 3. SAFETY OF SERVICES

#### 3.1. SAFETY MANAGEMENT SYSTEM

##### **Explanatory Note**

Safety must be managed to ensure that potential sources of risk are identified, understood and controlled, and the dependency on stakeholders, ( those parties who supply goods or services that may directly influence safety) must be taken into account.

What is being advocated in this requirement is an explicit and pro-active approach to the systematic management of safety. Derived from a policy that gives specific organisational direction endorsed by the most senior executive, the entire process for managing risks to safety must be formally documented. The Safety Management System (SMS) needs to be derived from the safety policy and safety objective<sup>1</sup> to provide coherent and comprehensive management of risk.

**Note 1:** “a qualitative or quantitative statement that defines the maximum frequency or probability at which a hazard can be expected to occur”.

##### *3.1.1. General safety requirements*

A provider of air traffic services shall, as an integral part of the management of its services, have in place a safety management system ('SMS') which:

ensures a formalised, explicit and pro-active approach to systematic safety management in meeting its safety responsibilities within the provision of its services; operates in respect of all its services and the supporting arrangements under its managerial control; and includes, as its foundation, a statement of safety policy defining the organisation's fundamental approach to managing safety (safety management),

ensures that everyone involved in the safety aspects of the provision of air traffic services has an individual safety responsibility for their own actions, that managers are responsible for the safety performance of their respective departments or divisions and that the top management of the provider carries an overall safety responsibility (safety responsibility),

ensures that the achievement of satisfactory safety in air traffic services shall be afforded the highest priority (safety priority),

ensures that while providing air traffic services, the principal safety objective is to minimise its contribution to the risk of an aircraft accident as far as reasonably practicable (safety objective).

##### **Questions against Annex 2 CR 3.1.1:**

1. Do you have an SMS in place that is compliant with the General Safety Requirements?
2. Is the SMS formalised, explicit, and pro-active towards meeting safety responsibilities?
3. Does the SMS encompass all Air Traffic services provided by your organisation and the

supporting arrangements under its managerial control?

4. Does the SMS include a Safety Policy on the approach to managing safety?
5. Does the SMS ensure that everyone involved in safety aspects of ATS has an individual responsibility, that managers are responsible for the safety performance of their departments, and that the top management carries an overall safety responsibility?
6. Does the SMS ensure that achievement of satisfactory safety is afforded the highest priority?
7. Does the SMS ensure that the principal safety objective is to minimise the contribution to the risk of an accident as far as reasonably practicable?

### 3.1.2 Requirements for safety achievement

Within the operation of the SMS, a provider of air traffic services shall:

ensure that personnel are adequately trained and competent for the job they are required to do, in addition to being properly licensed if so required and satisfying applicable medical fitness requirements (competency),

ensure that a safety management function is identified with organisational responsibility for development and maintenance of the safety management system; ensure that this point of responsibility is independent of line management, and accountable directly to the highest organisational level. However, in the case of small organisations where combination of responsibilities may prevent sufficient independence in this regard, the arrangements for safety assurance shall be supplemented by additional independent means; and ensure that the top management of the service provider organisation is actively involved in ensuring safety management (safety management responsibility),

ensure that, wherever practicable, quantitative safety levels are derived and are maintained for all functional systems (quantitative safety levels),

ensure that the SMS is systematically documented in a manner, which provides a clear linkage to the organisation's safety policy (SMS documentation),

ensure adequate justification of the safety of the externally provided services and supplies, having regard to their safety significance within the provision of its services (external services and supplies),

ensure that risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of the provision of ATM (risk assessment and mitigation). As far as changes to the ATM functional system are concerned, the provisions of part 3.2 of this Annex shall apply,

ensure that ATM operational or technical occurrences which are considered to have significant safety implications are investigated immediately, and any necessary corrective action is taken (safety occurrences). It shall also demonstrate that it has implemented the requirements on the reporting and assessment of safety occurrences in accordance with applicable national and Community law.

### **Explanatory Note**

Safety achievement is a management responsibility that is subject to audit and review. Organisations need to ensure that their arrangements are under management control and effectively monitored.

### **Questions against Annex 2 CR 3.1.2:**

1. How does your SMS ensure that personnel are adequately trained, competent, and medically fit for the job they are required to do?
2. How is a safety management function identified with organisational responsibility for development and maintenance of the SMS, which is independent of line management, and accountable directly to the highest organisational level?
3. How does your SMS ensure that, wherever practicable, quantitative safety levels are derived and are maintained for all functional systems?
4. How does your SMS ensure that the SMS is systematically documented in a manner, which provides a clear linkage to the organisation's safety policy?
5. How does your SMS ensure adequate justification of the safety of externally provided services and supplies, having regard to their safety significance within the provision of its services?
6. How does your SMS ensure that risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of the provision of ATM?
7. How does your SMS ensure that ATM operational or technical occurrences, which are considered to have significant safety implications, are investigated immediately, and any necessary corrective action is taken?
8. How does your SMS ensure that the requirements on the reporting and assessment of safety occurrences have been implemented in accordance with applicable national and Community law?

### 3.1.3 Requirements for safety assurance

Within the operation of the SMS, a provider of air traffic services shall ensure that:

- safety surveys are carried out as a matter of routine, to recommend improvements where needed, to provide assurance to managers of the safety of activities within their areas and to confirm compliance with the relevant parts of the SMS (safety surveys),
- methods are in place to detect changes in functional systems or operations which may suggest any element is approaching a point at which acceptable standards of safety can no longer be met, and that corrective action is taken (safety monitoring),
- safety records are maintained throughout the SMS operation as a basis for providing safety assurance to all associated with, responsible for or dependent upon the services provided, and to the national supervisory authority (safety records).

#### **Explanatory Note**

A key element in a systematic approach to safety management is the need to monitor and measure performance.

In this context the UK CAA interprets 'Safety Surveys' to mean internal audit, N.B. this does preclude the use of the term, 'safety survey' as a process specifically defined within an ANSP's SMS. Therefore, where the term, 'Safety Survey' is used by an ANSP for purposes other than internal audit, it will be helpful to declare this.

#### **Questions against Annex 2 CR 3.1.3:**

1. What measures ensure internal auditing is routinely carried out?
2. How are internal audit improvement recommendations recorded and implemented?
3. How do you ensure that internal audits provide safety assurance to respective managers?
4. What safety monitoring procedures are in place to detect changes in systems or operations that may indicate failure to meet acceptable standards?
5. What processes are in place to determine corrective actions where safety standards are not being met?
6. What safety records are maintained to provide safety assurance to all associated with, responsible for or dependent upon the services provided by the ANSP, and also the CAA?

### 3.1.4. Requirements for safety promotion

Within the operation of the SMS, a provider of air traffic services shall ensure that:

- all personnel are aware of the potential safety hazards connected with their duties (safety awareness),
- the lessons arising from safety occurrence investigations and other safety activities are disseminated within the organisation at management and operational levels (lesson dissemination),
- all personnel are actively encouraged to propose solutions to identified hazards, and changes are made to improve safety where they appear needed (safety improvement).

#### **Questions against Annex 2 CR 3.1.4:**

1. How does the SMS ensure that all individuals are aware of potential safety hazards connected with their duties?
2. How does the SMS ensure that safety lessons learnt are disseminated throughout the organisation?
3. How does the SMS ensure that all personnel are actively encouraged to propose safety improvement solutions to identified hazards, and, that changes are made where needed to improve safety?

### **3.2 Safety Requirements for Risk Assessment and Mitigation with regard to changes**

#### *3.2.1. Section 1*

Within the operation of the SMS, a provider of air traffic services shall ensure that hazard identification as well as risk assessment and mitigation are systematically conducted for any changes to those parts of the ATM functional system and supporting arrangements within his managerial control, in a manner which addresses:

- (a) the complete life-cycle of the constituent part of the ATM functional system under consideration, from initial planning and definition to post-implementation operations, maintenance and de-commissioning;
- (b) the airborne, ground and, if appropriate, spatial components of the ATM functional system, through co-operation with responsible parties; and
- (c) the equipment, procedures and human resources of the ATM functional system, the interactions between these elements and the interactions between the constituent part under consideration and the remainder of the ATM functional System.

#### **Questions against Annex 2 CR 3.2 Sect 1:**

1. Where is the scope of the ATM functional system and supporting arrangements documented?
2. Is hazard identification, risk assessment, and mitigation, systematically conducted for changes to the ATM functional system, and supporting arrangements?
3. Where are change management processes documented?
4. Where are procedures for hazard identification documented?
5. Where are procedures for risk assessment and mitigation documented?
6. Is the complete life-cycle of all the constituent parts of the ATM functional system under consideration addressed?

### 3.2.2. Section 2

The hazard identification, risk assessment and mitigation processes shall include:

- (a) A determination of the scope, boundaries and interfaces of the constituent part being considered, as well as the identification of the functions that the constituent part is to perform and the environment of operations in which it is intended to operate;
- (b) A determination of the safety objectives to be placed on the constituent part, incorporating:
  - An identification of ATM-related credible hazards and failure conditions, together with their combined effects,
  - An assessment of the effects they may have on the safety of aircraft, as well as an assessment of the severity of those effects, using the severity classification scheme provided in Section 4;
  - A determination of their tolerability, in terms of the hazard's maximum probability of occurrence, derived from the severity and the maximum probability of the hazard's effects, in a manner consistent with Section 4;
- (c) The derivation, as appropriate, of a risk mitigation strategy which:
  - Specifies the defences to be implemented to protect against the risk-bearing hazards,
  - Includes, as necessary, the development of safety requirements potentially bearing on the constituent part under consideration, or other parts of the ATM functional system, or environment of operations, and
  - Presents an assurance of its feasibility and effectiveness;
- (d) Verification that all identified safety objectives and safety requirements have been met
  - Prior to its implementation of the change,
  - During any transition phase into operational service,
  - During its operational life, and
  - During any transition phase till decommissioning.

#### **Questions against Annex 2 CR 3.2 Sect 2:**

1. How are hazard identification, risk assessment and mitigation processes documented?
2. How do these processes (see Annex 2, CR 3.2.2, Question 1) include a determination of the scope, boundaries, interfaces of the constituent part being considered, as well as the identification of the functions it is to perform within its operational environment?
3. How do these processes (see Annex 2, CR 3.2.2, Question 1) include a determination of the safety objectives for the constituent part, taking into account credible hazards/failure

conditions, and their combined effects, their effects on aircraft safety, and their severity and tolerability?

4. How is the risk mitigation strategy determined, in order to include defences against hazards and the development of relevant safety requirements, presenting an assurance of its feasibility and effectiveness?
5. What procedures determine verification that all safety objectives and requirements have been met, before, during and after change?

### 3.2.3. Section 3

The results, associated rationales and evidence of the risk assessment and mitigation processes, including hazard identification, shall be collated and documented in a manner which ensures that:

- complete arguments are established to demonstrate that the constituent part under consideration, as well as the overall ATM functional system are, and will remain tolerably safe by meeting allocated safety objectives and requirements. This shall include, as appropriate, specifications of any predictive, monitoring or survey techniques being used,
- all safety requirements related to the implementation of a change are traceable to the intended operations/-functions.

#### **Questions against Annex 2 CR 3.2 Sect 3:**

1. How are arguments and evidence documented to ensure that safety objectives have been achieved?
2. What process ensures the traceability between the safety requirements and the intended operations/functions is documented?

### 3.2.4. Section 4

#### Hazard identification and severity assessment

A systematic identification of the hazards shall be conducted. The severity of the effects of hazards in a given environment of operations shall be determined using the classification scheme shown in the following table, while the severity classification shall rely on a specific argument demonstrating the most probable effect of hazards, under the worst case scenario.

Severity Class	Effect on Operations
1 [Most Severe]	Accident <sup>(1)</sup>
2	Serious incident <sup>(1)</sup>
3	Major incident associated with the operation of an aircraft, in which safety of aircraft may have been compromised, having led to a near collision between aircraft, with ground or obstacles.
4	Significant incident involving circumstances indicating that an accident, a serious or major incident could have occurred, if the risk had not been managed within safety margins, or if another aircraft had been in the vicinity.
5 [Least Severe]	No immediate effect on safety
<sup>1</sup> as defined in Council directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of civil aviation accidents and incidents (OJ L 319, 12.12.1994, p.14).	

In order to deduce the effect of a hazard on operations and to determine its severity, the systematic approach/-process shall include the effects of hazards on the various elements of the ATM functional system, such as the air crew, the air traffic controllers, the aircraft functional capabilities, the functional capabilities of the ground part of the ATM functional system, and the ability to provide safe air traffic services.

#### Risk classification scheme

Safety objectives based on risk shall be established in terms of the hazards maximum probability of occurrence, derived both from the severity of its effect, and from the maximum probability of the hazard's effect.

As a necessary complement to the demonstration that established quantitative objectives are met, additional safety management considerations shall be applied so that more safety is added to the ATM system whenever reasonable.

**Questions against Annex 2 CR 3.2 Sect 4:**

1. Where are the effects of hazards identified and severity assessments fully documented?
2. Where do risk assessment procedures make use of a severity classification table?
3. When establishing risk based safety objectives, what procedures make use of likelihood and severity in risk classification?
4. What procedures ensure that safety improvement action is taken whenever reasonable?

**3.3. Safety requirements for engineering and technical personnel undertaking operational safety related tasks**

A provider of air traffic services shall ensure that technical and engineering personnel including personnel of subcontracted operating organisations who operate and maintain ATM equipment approved for its operational use have and maintain sufficient knowledge and understanding of the services they are supporting, of the actual and potential effects of their work on the safety of those services, and of the appropriate working limits to be applied.

With regard to the personnel involved in safety related tasks including personnel of subcontracted operating organisations, the provider of air traffic services shall document the adequacy of the competence of the personnel; the rostering arrangements in place to ensure sufficient capacity and continuity of service; the personnel qualification schemes and policy, the personnel training policy, training plans and records as well as arrangements for the supervision of non-qualified personnel. It shall have procedures in place for cases where the physical or mental condition of the personnel is in doubt.

A provider of air traffic services shall maintain a register of information on the numbers, status and deployment of the personnel involved in safety related tasks. The register shall:

- (a) identify the accountable managers for safety related functions;
- (b) record the relevant qualifications of technical and operational personnel, against required skills and competence requirements;
- (c) specify the locations and duties to which technical and operational personnel are assigned, including any rostering methodology.

**Questions against Annex 2 CR 3.3:**

1. How do you ensure that personnel, either directly employed or sub-contracted, have sufficient knowledge and competence to deliver the operation and maintenance of the services that you provide?

2. How is the adequate competence of personnel documented?
3. How do you document any roster arrangements?
4. What policy governs personnel qualifications? Are there schemes in place?
5. Is there a personnel training policy?
6. How do you maintain training plans and records?
7. What arrangements are there for the supervision of non-qualified personnel?
8. What procedures are in place that would enable the care of personnel whose physical or mental condition is in doubt?
9. Is there a register showing the numbers, status, and deployment of personnel involved in safety related tasks?
10. Is the identity of accountable managers documented?
11. Are the individual qualifications against skills and competence requirements documented?
12. Are the specification of assigned locations and duties documented?

#### **4. WORKING METHODS AND OPERATING PROCEDURES**

A provider of air traffic services shall be able to demonstrate that its working methods and operating procedures are compliant with the standards in the following Annexes to the Convention on International Civil Aviation as far as they are relevant for the provision of air traffic services in the airspace concerned:

- Annex 2 on rules of the air (10<sup>th</sup> edition, July 2005),
- Annex 10 on aeronautical telecommunications, Volume 2 on communication procedures (6<sup>th</sup> edition, October 2001 including all amendments up to No 79),
- Annex 11 on air traffic services (13<sup>th</sup> edition, July 2001 including all amendments up to No 43).

##### **Questions against Annex 2 CR 4:**

UK CAA requirements are based on ICAO SARPs (with notified differences)

1. Do you hold an ANO Article 100 approval? ( ICAO Annexes 2 & 11)
2. Do you hold ANO Article 124 approvals? ( ICAO Annex 10)
3. Do you hold ANO Article 125 approvals? (recording) ( ICAO Annex 10)