



Advisory Circular

AC 171-3(0)

MARCH 2006

GUIDELINES FOR THE PREPARATION OF A SAFETY MANAGEMENT SYSTEM (SMS)

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1. REFERENCES

- 1 This Advisory Circular (AC) should be read in conjunction with the Civil Aviation Safety Regulations – CASR Part 171 – Aeronautical Telecommunication Service and Radionavigation Service Providers, and the associated Manual of Standards (MOS) for Part 171. Those documents are available on the CASA website at: www.casa.gov.au.

2. PURPOSE OF THIS AC

- 4 The CASR Part 171 regulatory standards covering aeronautical telecommunication and radionavigation service providers require for service providers to have Safety Management System processes in place to assess the safety implications and safety hazards involved in their operations, and to determine the action necessary to reduce the risks of those hazards to acceptable levels. (Ref: CASR Part 171.086 and MOS-Part 171 Chapter 3.) This AC provides guidelines for service providers to comply with that requirement.

3. STATUS OF THIS AC

- 5 This is the first issue of AC 171-02. It remains current until re-issued, withdrawn or superseded. These guidelines were originally issued by CASA in CAAP Airways-1 dated February 1998.

Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the Regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.

Where an AC is referred to in a 'Note' below the regulation, the AC remains as guidance material.

ACs should always be read in conjunction with the referenced regulations.

4. CHARACTERISTICS OF AN SMS

4.1 A service provider's Safety Management System (SMS) has the characteristics, and consists of the elements, as defined in this section.

4.2 The SMS establishes the processes and procedures to effectively manage the safety of the functions of the service provider.

4.3 Characteristics

- Ensures a formalised, explicit and pro-active approach to the safety management of the services provided by the service provider.
- Is readily available to, is understood, and is complied with, by staff involved with the direct provision of services.
- Is transparent across operational areas of the service provider, taking into account:
 - boundaries between functional areas;
 - boundaries between safety accountabilities within functional areas.
- Is presented in a clear, concise format that sets out the elements, and the supporting documentation to those elements.

5. ELEMENTS OF AN SMS

5.1 Safety Policy

- Identifies the safety policy of the service provider.
- The safety policy is documented, and maintained.
- Is issued under the authority of the Chief Executive Officer.

5.2 Management Responsibility

- Identifies a safety management function with organisational responsibility for development and maintenance of the SMS. The function is:
 - independent of line management; and
 - directly accountable to the CEO.
- Identifies those personnel having a direct responsibility for the management and the maintenance of safety related functions.
- Identifies the safety accountabilities and/or the responsibilities of those personnel having a direct responsibility for the management and maintenance of safety related function, the safety accountabilities and responsibilities being compatible with the organisational structure.

5.3 Management Review

- Identifies the means by which each element of the SMS is reviewed and evaluated for effectiveness by management.
- Identifies the means by which the results of reviews are acted upon in a timely manner, ensuring the ongoing effectiveness of the SMS.
- Identifies the means by which continuous improvement is carried out.

5.4 Internal Audit

- Identifies the process for internal auditing; the internal audit process being based on a recognised method.

5.5 Management of safety concerns and incidents

- Identifies the means by which staff can report safety concerns.
- Identifies the method by which incidents and safety concerns are investigated, findings determined and managed.
- Identifies a means to provide staff with access to the results of investigations into incidents, safety concerns, and the associated safety related findings.

5.6 Hazard identification/assessment/control and mitigation

- Ensures that existing safety hazards are identified and controlled.
- Establishes methods and procedures for the management (identification/assessment/control or mitigation) of safety hazards in service provision.

5.7 Change management

- Identifies the means by which changes to existing systems will be undertaken.
- See also Section 6 of this AC.

5.8 Establishment of levels of safety

- Identifies, for all approved services and systems, the level of safety to be met.
- Identifies the means by which those levels of safety are monitored and maintained.

5.9 Competency

- Identifies the methods for ensuring staff responsible for the provision of services are trained and competent to perform their functions.

5.10 Documentation

- Identifies the means by which the service provider will manage the documentation associated with the provision of services.

5.11 Interfaces

- Identifies the internal and external boundaries that require formal interface arrangements, including interfaces between systems within the service provider.
- Identifies the means by which those interfaces are reviewed.
- Identifies the scope of the interface arrangements to include:
 - the integrity and reliability of the data or service being provided;

the means by which change to the data or service being provided is notified to the other party.

- Identifies the hazard identification and mitigation processes required when third party arrangements cannot be formally met.
- Identifies the interface arrangements between systems within the service provider.

5.12 Abnormal Operations

- Identifies contingency plans and/or procedures to minimise the impact of abnormal events on service users.

6. CHANGE MANAGEMENT

6.1 The current baseline of the service is described in sufficient detail to allow an understanding of the safety issues. This includes the known functional/performance characteristics of the service prior to the proposed change. The following elements are established in relation to the proposed service change.

- Identifies the impact of change on the existing service configuration.
- Identifies the means for configuration management during the change process.
- States the hazard identification methodology used. (The methodology is described, if different from the standard in the SMS.)
- States the risk analysis and assessment methodology used. (The methodology is described, if different from the standard in the SMS.)
- States the risk control/mitigation process for eliminating or reducing identified risks. (The methodology is described, if different from the standard in the SMS.)
- Describes the safety management arrangements for implementing the change through to commissioning and ongoing safety monitoring.
- Ensures that users of the service are informed during the development and prior to implementing the change.
- Details approval authorities that are linked to the identified safety accountabilities.
- Identifies the means by which users affected by the change are notified, both during the development of the change and prior to the implementation of the change.

Note 1: The means of recording changes should ensure that the status of a change is readily determined at each stage of the lifecycle of the change process.

Note 2: CASA will advise the service provider if further examination of the evidence supporting the safe management of the change is required.

Note 3: Evidence required will normally consist of the planning, assessment, and documentation, of the change.

Note 4: CASA may direct corrective action should a change not be carried out in accordance with the service provider's SMS.

7. SAFETY RISK ASSESSMENT AND DOCUMENTATION

7.1 The SMS includes a process for providing the evidence that introduction of a new service, or a proposed change to an existing service:

- (a) is based on a recognised method for safety risk assessment and management; and
- (b) records the method applied and the outcomes of the Change Management element of the SMS.

7.2 For proposed changes to services, the following are defined and documented:

- (a) the effect of the change, i.e. whether it is a functional change noticeable to users or not, or an equipment replacement/modification, or a minor procedural change, etc. and its safety significance;
- (b) the planning arrangements for the change proposal, including the preparation of evidence and argument to support the change;
- (c) the review process to be applied for assurance of the integrity of the evidence and the arguments supporting the change proposal.

Note 1: The CASA certificate of approval and the service provider's operations manual identify the approved services.

Note 2: The introduction of new services, and those changes to existing services the effect of which would be that the service would no longer be in accordance with the certificate issued to service provider under 171.250, or changes to existing services that require prior notification to CASA because of a requirement to do so in the service provider's SMS, are to be referred to CASA prior to implementation.

Note 3: Other changes to service are to be subject to the same level of internal safety assessment by the service provider, but it is not necessary to submit them to CASA.

Patrick Murray
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