

GUIDANCE ON DEVELOPMENT OF AN SMS MANUAL

1.0 PURPOSE

This Advisory Circular (AC) is issued to guide operators and organization in their compilation of a top-level SMS manual to define their SMS framework and its associated elements. The manual can be a stand-alone SMS manual or be integrated as a consolidated SMS section/chapter within an appropriate approved manual of the organization (e.g. the organization's exposition manual or company manual).

Using the suggested format and content items in this advisory circular and adapting them as appropriate is one way in which an organization will develop its own top-level SMS manual. The actual content items will depend on the specific SMS framework and elements of the organization. The description under each element will be commensurate with the scope and complexity of the organization's SMS processes.

The manual will serve to communicate the organization's SMS framework internally as well as with relevant external organizations. The manual shall be subject to acceptance by the Authority as evidence of the acceptance of the SMS.

Note. — A distinction is to be made between an SMS manual and its operational supporting records and Documents. The latter refers to historical and current records and documents generated during implementation and operation of the various SMS processes. These are documentary evidence of the ongoing SMS activities of the organization.

2.0 REFERENCE

The Civil Aviation (Safety Management) Regulations 2015 as amended.

3.0 BACKGROUND

3.1 Regulation 18 and 22 of the Civil Aviation (SMS) Regulation requires that a service provider shall, as part of the SMS documentation, develop and maintain a safety management system manual (SMSM), to communicate the service provider's approach to safety throughout the organization. The regulation requires that the SMSM developed by the service provider be accepted by the Authority. This AC provides guidance for the development of an SMSM that will meet the acceptance requirements.

3.2 One explicit feature of an SMS is that all safety management activities are required to be documented and visible. It follows that documentation is an essential element of an SMS. SMS documentation must include and make reference to, as appropriate, all relevant and applicable Civil Aviation Regulations. It must also include SMS-specific records and documentation, such as hazard reporting forms, lines of accountability, responsibility and authority regarding the management of operational safety, and the structure of the safety management organization. It must furthermore document explicit guidelines for records management, including handling, storage, retrieval and preservation. The most important piece of documentation of an SMS is the SMS Manual (SMSM).

- 3.3 The SMSM is a key instrument for communicating the service provider’s approach to safety to the whole organization. It documents all aspects of the SMS, including the safety policy, objectives, procedures and individual safety accountabilities.

4.0 CONTENTS OF AN SMS MANUAL

- 4.0 Regulation 22(2) of the civil aviation (SMS) regulations requires that the SMS Manual shall document all aspects of the SMS, and that its contents shall include-

- a) Document control;
- b) SMS regulatory requirements;
- c) Scope and integration of the safety management system;
- d) Safety policy;
- e) Safety objectives;
- f) Safety accountabilities and key personnel;
- g) Safety reporting and remedial actions;
- h) Hazard identification and risk assessment;
- i) Safety performance monitoring and measurement;
- j) Safety-related investigations and remedial actions;
- k) Safety training and communication;
- l) Continuous improvement and SMS audit;
- m) SMS records management;
- n) Management of change; and
- o) Emergency/contingency response plan.
- p) Control of contracted activities

Each section shall be described by “section heading “which is a description of the “objective” for that section, followed by its “criteria” and “cross- reference documents”. The “objective” is what the organization intends to achieve by doing what is described in that section. The “criteria’ defines the scope of what should be considered when writing that section. The “cross-reference documents” links the information to other relevant manuals or SOPs of the organization which contain details of the element or process as applicable.

4.1 Document control

The manual(s) should describe how will be kept up to date and how the organization will ensure that all personnel involved in safety-related duties have the most current version.

Operators shall maintain;

- a) Hard copy or controlled electronic media and distribution list.
- b) The correlation between the SMS manual and other existing manuals such as the maintenance control manual (MCM) or the operations manual.
- c) The process for periodic review of the manual and its related forms/documents to ensure their continuing suitability, adequacy and effectiveness.

- d) The manual's administration, approval and regulatory acceptance process.

4.2 SMS regulatory requirements;

Regulation 22 (1) of the civil aviation (SMS) regulations require service providers to develop, as part of the SMS documentation, develop and maintain a safety management system manual (SMSM), to communicate the organization's approach to safety throughout the organization.

4.3 Scope and integration of the safety management system;

The manual should describe the scope and extent of the organization's aviation-related operations and facilities within which the SMS will apply. The scope of the processes, equipment and operations deemed eligible for the organization's hazard identification and risk management (HIRM) programme should also be addressed.

Following criteria shall be captured;

- a) Spell out the nature of the organization's aviation business and its position or role within the industry as a whole.
- b) Identify the major areas, departments, workshops and facilities of the organization within which the SMS will apply.
- c) Identify the major processes, operations and equipment which are deemed eligible for the organization's HIRM programme, especially those which are pertinent to aviation safety. If the scope of the HIRM-eligible processes, operations and equipment is too detailed or extensive, it may be controlled under a supplementary document as appropriate.
- d) Where the SMS is expected to be operated or administered across a group of interlinked organizations or contractors, define and document such integration and associated accountabilities as applicable.
- e) Where there are other related control/management systems within the organization, such as QMS, OSHE and SeMS, identify the irrelevant integration (where applicable) within the aviation SMS.

4.4 Safety policy;

Regulation 11 of the civil aviation (SMS) regulations states, organization shall describe the organization's intentions, management principles and commitment to improving aviation safety in terms of the product or service provider. A safety policy should be a short description similar to a mission statement.

- a) The safety policy should be appropriate to the size and complexity of the organization.
- b) The safety policy states the organization's intentions, management principles and commitment to continuous improvement in aviation safety.
- c) The safety policy is approved and signed by the accountable executive.
- d) The safety policy is promoted by the accountable executive and all other managers.
- e) The safety policy is reviewed periodically.

- f) Personnel at all levels are involved in the establishment and maintenance of the safety management system.
- g) The safety policy is communicated to all employees with the intent that they are made aware of their individual safety obligations.

4.5 Safety objectives;

Regulation 12 of the civil aviation (SMS) regulations require the operator to describe the safety objectives of the organization. The safety objectives should be a short statement that describes in broad terms what the organization hopes to achieve.

- a) The safety objectives have been established.
- b) The safety objectives are expressed as a top-level statement describing the organization's commitment to achieving safety.
- c) There is a formal process to develop a coherent set of safety objectives.
- d) The safety objectives are publicized and distributed.
- e) Resources have been allocated for achieving the objectives.
- f) The safety objectives are linked to safety indicators to facilitate monitoring and measurement where appropriate.

4.6 Safety accountabilities and key personnel;

Regulation 16 of the civil aviation (SMS) regulations require the operator to describe the safety authorities, responsibilities and accountabilities for personnel involved in the SMS.

- a) The accountable executive is responsible for ensuring that the safety management system is properly implemented and is performing to requirements in all areas of the organization.
- b) An appropriate safety manager (office), safety committee or safety action groups have been appointed as appropriate.
- c) Safety authorities, responsibilities and accountabilities of personnel at all levels of the organization are defined and documented.
- d) All personnel understand their authorities, responsibilities and accountabilities with regard to all safety management processes, decisions and actions.
- e) An SMS organizational accountabilities diagram to be available in, Company exposition manual, SOP manual, administration manual, etc.

4.7 Safety reporting and remedial actions;

Regulation 26 of the civil aviation (SMS) regulations require operator to include both reactive (accident/incident reports, etc.) and proactive/ predictive (hazard reports). Describe the respective reporting systems. Factors to consider include: report format, confidentiality, addressees, investigation/evaluation procedures, corrective/ preventive actions and report dissemination.

- a) The organization has a procedure that provides for the capture of internal occurrences including accidents, incidents and other occurrences relevant to SMS.

- b) A distinction is to be made between mandatory reports (accidents, serious incidents, major defects, etc.), which are required to be notified to the CAA, and other routine occurrence reports, which remain within the organization.
- c) There is also a voluntary and confidential hazard/occurrence reporting system, incorporating appropriate identity/data protection as applicable.
- d) The respective reporting processes are simple, accessible and commensurate with the size of the organization.
- e) High-consequence report sand associated recommendations are addressed to and reviewed by the appropriate level of management.
- f) Reports are collected in an appropriate database to facilitate the necessary analysis.

4.8 Hazard identification and risk assessment;

Regulation 23 and 24 of the civil aviation (SMS) regulations require operators to describe the hazard identification system and how such data are collated. Describe the process for the categorization of hazards/risks and their subsequent prioritization for a documented safety assessment. Describe how the safety assessment process is conducted and how preventive action plans are implemented.

- a) Identified hazards are evaluated, prioritized and processed for risk assessment as appropriate.
- b) There is a structured process for risk assessment involving the evaluation of severity, likelihood, tolerability and preventive controls.
- c) Hazard identification and risk assessment procedures focus on aviation safety as their fundamental context.
- d) The risk assessment process utilizes worksheets, forms or software appropriate to the complexity of the organization and operations involved.
- e) Completed safety assessments are approved by the appropriate level of management.
- f) There is a process for evaluating the effectiveness of the corrective, preventive and recovery measures that have been developed.
- g) There is a process for periodic review of completed safety assessments and documenting their outcomes.

4.9 Safety performance monitoring and measurement;

Regulation 28 of the civil aviation (SMS) regulations require operators to describe the safety performance monitoring and measurement component of the SMS. This includes the organization's SMS safety performance indicators (SPIs).

- a) The formal process to develop and maintain a set of safety performance indicators and their associated performance targets.
- b) Correlation established between the SPIs and the organization's safety objectives where applicable and the process of regulatory acceptance of the SPIs where required.
- c) The process of monitoring the performance of these SPIs including remedial action procedure whenever unacceptable or abnormal trends are triggered.

- d) Any other supplementary SMS or safety performance monitoring and measurement criteria or process.

4.10 Safety-related investigations and remedial actions;

Operator should describe how accidents/incidents/occurrences are investigated and processed within the organization, including their correlation with the organization's SMS hazard identification and risk management system.

- a) Procedures to ensure that reported accidents and incidents are investigated internally.
- b) Dissemination of completed investigation reports internally as well as to the CAA as applicable.
- c) A process for ensuring that corrective actions taken or recommended are carried out and for evaluating their outcomes/effectiveness.
- d) Procedure on disciplinary inquiry and actions associated with investigation report outcomes.
- e) Clearly defined conditions under which punitive disciplinary action would be considered (e.g. illegal activity, recklessness, gross negligence or willful misconduct).
- f) A process to ensure that investigations include identification of active failures as well as contributing factors and hazards.
- g) Investigation procedure and format provides for findings on contributing factors or hazards to be processed for follow-up action by the organization's hazard identification and risk management system where appropriate.

4.11 Safety training and communication;

Regulation 32 and 34 of the civil aviation (SMS) regulations require operators to describe the type of SMS and other safety-related training that staff receive and the process for assuring the effectiveness of the training. Describe how such training procedures are documented. Describe the safety communication processes/channels within the organization.

- a) The training syllabus, eligibility and requirements are documented.
- b) There is a validation process that measures the effectiveness of training.
- c) The training includes initial, recurrent and update training, where applicable.

- d) The organization's SMS training is part of the organization's overall training programme.
- e) SMS awareness is incorporated into the employment or indoctrination programme.
- f) The safety communication processes/channels within the organization.

4.12 Continuous improvement and SMS audit;

Regulation 30 of the civil aviation (SMS) regulations require operators to describe the process for the continuous review and improvement of the SMS.

- a) The process for regular internal audit/review of the organization's SMS to ensure its continuing suitability, adequacy and effectiveness.
- b) Describe any other programmes contributing to continuous improvement of the organization's SMS and safety performance, e.g. MEDA, safety surveys, ISO systems.

4.13 SMS records management;

Operators shall describe the method of storing all SMS-related records and documents.

- a) The organization has an SMS records or archiving system that ensures the retention of all records generated in conjunction with the implementation and operation of the SMS.
- b) Records to be kept include hazard reports, risk assessment reports, safety action group/safety meeting notes, safety performance indicator charts; SMS audit reports and SMS training records.
- c) Records should be traceable for all elements of the SMS and be accessible for routine administration of the SMS as well as internal and external audits purposes.

4.14 Management of change;

Regulation 29 of the civil aviation (SMS) regulations require operators to describe the organization's process for managing changes that may have an impact on safety risks and how such processes are integrated with the SMS.

- a) Procedures to ensure that substantial organizational or operational changes take into consideration any impact which they may have on existing safety risks.
- b) Procedures to ensure that appropriate safety assessment is performed prior to introduction of new equipment or processes which have safety risk implications.
- c) Procedures for review of existing safety assessments whenever there are changes to the associated process or equipment.



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4.15 Emergency/contingency response plan.

Regulation 17 of the civil aviation (SMS) regulations require operators to describe the organization's intentions regarding, and commitment to dealing with, emergency situations and their corresponding recovery controls. Outline the roles and responsibilities of key personnel. The emergency response plan can be a separate document or it can be part of the SMS manual.

- a) The organization has an emergency plan that outlines the roles and responsibilities in the event of a major incident, crisis or accident.
- b) There is a notification process that includes an emergency call list and an internal mobilization process.
- c) The organization has arrangements with other agencies for aid and the provision of emergency services as applicable.
- d) The organization has procedures for emergency mode operations where applicable.
- e) There is a procedure for overseeing the welfare of all affected individuals and for notifying next of kin.
- f) The organization has established procedures for handling the media and insurance-related issues.
- g) There are defined accident investigation responsibilities within the organization.
- h) The requirement for preservation of evidence, securing the affected area, and mandatory/Governmental reporting is clearly stated.
- i) There is emergency preparedness and response training for affected personnel.
- j) A disabled aircraft or equipment evacuation plan has been developed by the organization in consultation with aircraft/equipment owners, aerodrome operators or other agencies as applicable.
- k) A procedure exists for recording activities during an emergency response as described in ERP manual, etc.

A handwritten signature in black ink, appearing to read 'H. Bruneau', is written over a horizontal line.

Director Safety Regulation

Appendix 1 to TCAA-AC-GEN013A

SAMPLE JOB DESCRIPTION FOR A SAFETY MANAGER

1. OVERALL PURPOSE

Regulation 15 of the civil aviation (SMS) regulations gives the safety manager as responsible person to the accountable executive for providing guidance and direction for the planning, implementation and operation of the organization's safety management system (SMS). The safety manager provides SMS-related services to the certificated, non-certificated and third-party areas of the organization that are included in the SMS and may have delegated responsibilities on behalf of persons holding positions required by regulations.

2. KEY ROLES

Safety advocate

- Demonstrates an excellent safety behaviour and attitude, follows regulatory practices and rules, recognizes and reports hazards and promotes effective safety reporting.

Leader

- Models and promotes an organizational culture that fosters safety practices through effective leadership.

Communicator

- Acts as an information conduit to bring safety issues to the attention of management and to deliver safety information to the organization's staff, contractors and stakeholders.
- Provides and articulates information regarding safety issues within the organization.

Developer

- Assists in the continuous improvement of the hazard identification and safety risk assessment schemes and the organization's SMS.

Relationship builder

- Builds and maintains an excellent working relationship with the organization's safety action group (SAG) and within the safety services office (SSO).

Ambassador

- Represents the organization on government, international organization and industry committees (e.g. ICAO, IATA, CAA, AIB, etc.).

Analyst

- Analyses technical data for trends related to hazards, events and occurrences.

Process management

- Effectively utilizes applicable processes and procedures to fulfil roles and responsibilities.
- Investigates opportunities to increase the efficiency of processes.
- Measures the effectiveness and seeks to continually improve the quality of processes.

3. RESPONSIBILITIES

Among other duties, the safety manager is responsible for:

- Managing the operation of the safety management system;
- Collecting and analysing safety information in a timely manner;
- Administering any safety-related surveys;
- Monitoring and evaluating the results of corrective actions;
- Ensuring that risk assessments are conducted when applicable;
- Monitoring the industry for safety concerns that could affect the organization;
- Being involved with actual or practice emergency responses;
- Being involved in the development and updating of the emergency response plan and procedures; and
- Ensuring safety-related information, including organizational goals and objectives, are made available to all personnel through established communication processes.

4. NATURE AND SCOPE

The safety manager must interact with operational personnel, senior managers and departmental heads throughout the organization. The safety manager should also foster positive relationships with regulatory authorities, agencies and product and service providers outside the organization. Other contacts will be established at a working level as appropriate.

5. QUALIFICATIONS

To qualify as a safety manager it is recommended that a person should have:

- Full-time experience in aviation safety in the capacity of an aviation safety investigator, safety/quality manager or safety risk manager;
- Sound knowledge of the organization's operations, procedures and activities;
- Broad aviation technical knowledge;
- An extensive knowledge of safety management systems (SMS) and have completed appropriate SMS training;



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- An understanding of risk management principles and techniques to support the SMS;
- Experience implementing and/or managing an SMS;
- Experience and qualifications in aviation accident/incident investigation and human factors;
- Experience and qualifications in conducting safety/quality audits and inspections;
- Sound knowledge of aviation regulatory frameworks, including ICAO Standards And Recommended Practices (SARP's) and relevant civil aviation regulations;
- The ability to communicate at all levels both inside and outside the company;
- The ability to be firm in conviction, promote a “just and fair culture” and yet advance an open and non- punitive atmosphere for reporting;
- The ability and confidence to communicate directly to the accountable executive as his advisor and confidante;
- Well-developed communication skills and demonstrated interpersonal skills of a high order, with the ability to liaise with a variety of individuals and organizational representatives, including those from differing cultural backgrounds;
- Computer literacy and superior analytical skills.

6. AUTHORITY

- Regarding safety matters, the safety manager has direct access to the accountable executive and appropriate senior and middle management.
- The safety manager is authorized under the direction of the accountable executive to conduct safety audits.
- Surveys and inspections of any aspect of the operation in accordance with the procedures specified in the safety management system documentation.
- The safety manager is authorized under the direction of the accountable executive to conduct investigations of internal safety events in accordance with the procedures specified in the organization's SMS documentation.
- The safety manager shall not hold other positions or responsibilities that may conflict or impair his role as an SMS/safety manager, shall be a senior management position not lower than or subservient to the production or operational functions of the organization.