



NIGERIA CIVIL AVIATION AUTHORITY

Advisory Circular

NCAA-AC-GEN006

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SAFETY MANAGEMENT SYSTEMS – GUIDANCE TO ORGANISATIONS

1.0 PURPOSE

This Advisory Circular (AC) is issued to give information and guidance to provide guidance on the implementation of Safety Management Systems (SMS) for Air Operator's Certificate (AOC) holders, Continuing Airworthiness Management Organisations, Maintenance Organisations, Air Navigation Service Providers, Aerodromes and Approved Training Organisations.

2.0 REFERENCE

2.1 Parts 3,6,9,12,14 and 20 of the Nigerian Civil Aviation Regulations.

3.0 GUIDANCE AND PROCEDURES

The purpose of this document is to provide guidance on the implementation of Safety Management Systems (SMS). It has been developed to give sufficient understanding of SMS concepts and the development of management policies and processes to implement and maintain an effective SMS. It applies to Air Operator's Certificate (AOC) holders, continuing airworthiness management organisations, maintenance organisations, air navigation service providers, aerodromes and approved training organisations.

This document meets ICAO Annex 19 requirements and Nig. CARs Part 20 requirements. We will assess for compliance and effectiveness of an SMS using the NCAA SMS evaluation tools that can be found on the NCAA website.

A safety management system is a systematic and proactive approach for managing safety risks. As with all management systems, SMS includes goal setting, planning, and measuring performance. An effective safety management system is woven into the fabric of an organisation. It becomes part of the culture; the way people do their jobs.

Safety management goes beyond compliance with prescriptive regulations, to a systematic approach where potential safety risks are identified and managed to an acceptable level. SMS adopts a business-like approach to safety, similar to the way that finances are managed, with safety plans, safety performance indicators and targets and continuous monitoring of the safety performance of the organisation. It enables effective risk-based decision making processes across the business.

It is important to recognise that SMS is a top down driven system, which means that the accountable manager of the organisation is responsible for the implementation and continuing compliance of the SMS. Without the wholehearted support and ownership of the accountable manager the SMS will not be effective. However, safety is a shared responsibility across the whole organisation and needs the involvement of all staff.

There is not a 'one size fits all' model for SMS that will cater for all types of organisations. Organisations should tailor their SMS to suit the size, nature and complexity of the operation, and the hazards and associated risks inherent with its activities. Where an organisation is part of a group that has several approvals a single Group SMS may be developed provided that there is clear accountability between the group and the subsidiary companies.

4 SAFETY MANAGEMENT SYSTEM

4.1 Introduction

SMS is a proactive and integrated approach to managing safety including the necessary organisational structures, accountabilities, policies and procedures. It is more than a manual and a set of procedures and requires safety management to be integrated into the day to day activities of the organisation. It requires the development of an organisational culture that reflects the safety policy and objectives.

At the core of the SMS is a formal risk management process that identifies hazards and assesses and mitigates risk. It is important to recognise that even with mitigations in place, some residual risk will remain and an effective SMS will enable organisations to manage this.

Risks generated by contracted activities and other third parties should also be considered. Therefore, when the organisation has a formal agreement with another organisation this should include provisions for the management of safety. This should also include reporting procedures for safety related matters.

4.2 Safety Management System Implementation

For many organisations there will be some elements of an SMS already in place so carrying out a gap analysis is the first step. The NCAA Phase 1 SMS Gap Analysis is NCAA Form AC-GEN006 and forms the basis of the NCAA's initial assessment of an organisation's SMS.

Where gaps have been identified these should be included in an implementation plan. The plan should detail the gaps and the actions to be taken (what, when and by whom) to implement an SMS. The plan should be developed to allow prioritising

of the different elements over a period of time. Building an SMS overnight will be far too challenging and a step by step approach will deliver a more effective SMS in the end.

5. THE KEY COMPONENTS OF A SAFETY MANAGEMENT SYSTEM

The SMS should comprise of the following four key components:

- a) Safety policy and objectives;
- b) Safety risk management;
- c) Safety assurance;
- d) Safety promotion.

Whilst the four components above appear to be separate, it is important to recognise that they are all interrelated. They can only function effectively if all four are built on a foundation of a positive safety culture. This should be driven from the top of the organisation by the accountable manager and the senior management team

Each of these four components will now be considered in the following sections.

6. SAFETY POLICY AND OBJECTIVES

The safety policy and objectives can be divided into the following five areas:

- a) Management commitment and responsibility;
- b) Safety accountabilities;
- c) Appointment of key safety personnel;
- d) Coordination of emergency response planning;
- e) SMS documentation.

The safety policy outlines the aims and objectives that the organisation will use to achieve the desired safety outcomes. It should declare the principles and philosophies that lay the foundation for the organisation's safety culture and be communicated to all staff throughout the organisation. The creation of a positive safety culture begins with clear, unequivocal direction and ownership from the accountable manager.

In preparing a safety policy, senior management should consult with the key safety personnel, and where appropriate, staff representative bodies (employee forums, trade unions, for example). Consultation will ensure that the safety policy and stated objectives are relevant to all staff. It will generate a sense of shared responsibility for the safety culture in the organisation. A positive safety culture is one where all staff are responsible for, and consider the impact of, safety on everything they do.

6.1 Management Commitment and Responsibility

6.1.1 The Accountable Manager should have full responsibility and accountability for the SMS and should have:

- (a) Corporate authority for ensuring all activities can be financed and carried out to the required standard;
- (b) Full authority for ensuring adequate staffing levels;
- (c) Direct responsibility for the conduct of the organisation's affairs;
- (d) Final authority over operational matters;
- (e) Final accountability for all safety issues.

6.1.2 Senior Management should:

Senior Management should:

- a) Develop the safety policy, which is endorsed and actively supported by the accountable manager;
- b) Continuously promote the safety policy to all staff and demonstrate their commitment to it;
- c) Specify and allocate necessary human and financial resources;
- d) Establish safety objectives and performance standards for the organisation. Safety Performance Indicators (SPIs) should be established that monitor and measure the safety performance of the organisation and the effectiveness of the SMS.

The safety policy should include a commitment to:

- a) Strive to achieve the highest safety standards;
- b) Comply with all applicable legal requirements, meet all applicable standards and consider best practice;
- c) Provide appropriate resources;
- d) Determining safety as a primary responsibility of all staff especially managers;
- e) Ensure that the policy is implemented and understood at all levels, both internally and externally.

The safety policy should actively encourage effective safety reporting by defining a just culture. This should define the line between acceptable and unacceptable performance and provide fair and just protection to all personnel.

6.2 Safety Accountabilities

The organisation should clearly define the lines of safety accountability throughout the organisation. This should include the direct accountability for safety on the part of the Accountable Manager and senior management. There is also a need to define the safety responsibilities and expected behaviours of key personnel (e.g. Nominated Post-holders, Safety Manager, Safety Officers, Safety committee members). Safety is everyone's responsibility and all staff should be aware of their safety roles and responsibilities. It is essential that safety management is seen as an integral strategic part of the

organisation's business by assigning the highest priority to safety. With this in mind, there has to be a demonstrable Board level commitment to an effective SMS.

The Accountable Manager, together with the Senior Management team, set the standard for the organisation's safety culture. Without this commitment and leadership, SMS will be ineffective.

6.3 Appointment of Key Safety Personnel

Appointment of key safety personnel

Whilst the organisational structure of the SMS should reflect the size, nature and complexity of the organisation it should:

- a) Appoint a safety manager;
- b) Create appropriate safety committees.

6.3.1 The safety manager

The safety manager should act as the focal point and be responsible for the development, administration, maintenance and promotion of an effective safety management system. The safety manager should report directly to the accountable manager. The post should be given appropriate status in the organisation in order to provide the necessary degree of authority when dealing with safety matters.

The safety manager should possess:

- a) Broad operational knowledge and experience in the functions of the organisation and the supporting systems;
- b) Analytical and problem solving skills;
- c) Effective oral and written communication skills;
- d) An understanding of human and organisational factors;
- e) Detailed knowledge of safety management principles and practices.

It is important to note that accountability for the SMS rests with the accountable manager not the safety manager.

The safety manager should be a full-time employee although in a small complex or non-complex organisation it may be a part time role shared with other duties. They may also be the compliance monitoring / quality manager, but in such cases there will need to be independent compliance monitoring of the SMS.

The safety manager should carry out the following functions:

- a) Manage the SMS implementation plan on behalf of the accountable manager;
- b) facilitate the risk management process that should include hazard identification, risk assessment and risk mitigation;
- c) monitor corrective actions to ensure their accomplishment;
- d) provide periodic reports on safety performance;
- e) maintain safety management documentation;

- f) ensure that there is safety management training available and that it meets acceptable standards;
- g) provide advice on safety matters;
- h) initiate and participate in occurrence / accident investigations;
- i) to collate, understand and disseminate information from other similar organisations, the regulator and contracted organisations.

6.3.2 Safety committees

Safety Review Board (or equivalent safety committee)

The Safety Review Board (SRB) is a high level committee which considers strategic safety functions. The accountable manager should be actively involved in the SRB and normally chairs the meeting. The SRB should normally include the senior management of the organisation. Membership of the board and frequency of meetings should be defined.

The SRB ensures that appropriate resources are allocated to achieve the established safety performance and gives strategic direction to the safety action group. It should also look to the Safety Action Group (SAG) to highlight significant risk issues and provide an input to the high level strategy.

The SRB monitors:

- (a) Safety performance against the safety policy and objectives;
- (b) Effectiveness of the SMS implementation plan;
- (c) Effectiveness of the safety oversight of sub-contracted organisations;
- (d) Necessary corrective or mitigating actions are being taken in a timely manner;
- (e) Effectiveness of the organisation's safety management processes.

6.3.3 Safety Action Group

For larger organisations a safety action group may be established as a standing group or as an ad-hoc group to assist or act on behalf of the SRB. The Safety Action Group (SAG) reports to and takes strategic direction from the SRB. It is comprised of managers, supervisors and staff from operational areas. Membership of the Group and frequency of meetings should be defined. The safety manager may also participate in the SAG.

In very large organisations more than one safety action group may be established that focus on specific areas.

In small complex organisations of less than 20 full time equivalents a single safety committee may be established combining the functions of the SRB and SAG.

The SAG oversees and reviews:

- a) Operational effectiveness of the safety risk management processes;
- b) Appropriate resolution and mitigation of identified risks;
- c) Assessment of the safety impact of operational changes;
- d) Implementation of corrective action plans;
- e) Corrective action is achieved within agreed timescales;

- f) The effectiveness of safety recommendations and safety promotion.
- g) Results of safety data analysis

6.4 Coordination of Emergency Response Planning

An Emergency Response Plan (ERP) should be established that provides the actions to be taken by the organisation or individuals in an emergency. The emergency response plan should be integrated into the SMS and reflect the size, nature and complexity of the activities performed by the organisation.

Where organisations, such as aerodromes, are subject to other ERP requirements these should be adhered to and may be cross referred to. In many cases there will be a need for liaison with other relevant parties to agree coordination of emergency response arrangements and testing of the plan.

The ERP should ensure:

- a) An orderly and efficient transition from normal to emergency operations;
- b) Designation of emergency authority and responsibilities;
- c) Authorisation by key personnel for actions contained in the plan;
- d) Coordination with other organisations;
- e) Safe continuation of operations or return to normal operations as soon as practicable.

The ERP should set out the responsibilities, roles and actions for the various agencies and personnel involved in dealing with emergencies. It may include checklists and contact details and the ERP should be regularly reviewed and tested. Key personnel should have easy access to the ERP at all times.

6.5 SMS Documentation

Documentation for a SMS should be appropriate to the size, nature, and complexity of the organisation and normally consists of:

- a) SMS records (hazard logs, risk assessments, safety cases, meeting minutes, for example);
- b) Records and documentation management;
- c) SMS manual.

The organisation's SMS manual should be the key instrument for communicating the approach to safety for the whole of the organisation. It should document all aspects of the SMS, including the safety policy, objectives, procedures and individual safety accountabilities. The SMS should be constantly evolving and therefore the SMS manual should be a living document and should be reviewed regularly to ensure that it remains accurate and appropriate. The SMS manual may be incorporated into existing manuals or expositions. Contents should include:

- a) Scope of the SMS;

- b) Safety policy and objectives;
- c) Safety accountabilities;
- d) Key safety personnel;
- e) Documentation control procedures;
- f) Hazard identification reporting and risk management schemes;
- g) Safety performance monitoring;
- h) Incident investigation and reporting
- i) Emergency response planning;
- j) Management of change processes;
- k) Safety promotion;
- l) Contracted activities;
- m) Just culture policy and supporting processes.

7. SAFETY RISK MANAGEMENT

The Safety Risk component of a SMS can be divided into three areas:

- (a) Hazard identification processes;
- (b) Risk assessment and mitigation processes;
- (c) Internal safety investigation.

The safety risk management process starts with identifying hazards affecting aviation safety and then assessing the risks associated with the hazards in terms of severity and likelihood. Once the level of risk is identified, appropriate remedial action or mitigation measures can be implemented to reduce the level of risk to as low as reasonably practicable. The implemented mitigation measures should then be monitored to ensure that they have had the desired effect. It is important to ensure a common standard and process for Hazard Identification Risk Assessment and Control is implemented throughout the organisation. Appropriate training and education will ensure a clear understanding on how to deliver this.

7.1 Hazard Identification

A hazard is any condition that can cause or contribute to an aircraft incident or accident. A hazard identification process enables the collecting, recording, analysing, acting on and generating feedback about hazards that affect the safety of the operational activities of the organisation. In a mature SMS hazard identification is an ongoing process.

There are many sources of hazard identification from reactive events to a more proactive approach.

- Reactive schemes include data from accidents, incidents, flight data monitoring, voluntary and confidential reporting systems.

- Proactive schemes include open hazard reporting systems, LOSA (Line Operations Safety Audit) style normal operation assessments, safety surveys, change management processes and safety risk assessments. Subject matter expert judgement can also contribute to hazard identification through workshops and safety committee meetings. Organisations should carry out an initial hazard identification exercise on its current operations to create a baseline safety case or an initial risk register. Hazard identification then becomes an ongoing activity and hazard logs and risk registers should be continuously reviewed and updated. Organisations should look externally for possible hazards from accident reports, MOR publications, industry trade associations or the CAA Safety Plan.

7.1.2 Safety Reporting

A confidential reporting system should be established to encourage safety reporting. This should be supported with a just culture providing appropriate protection for the reporter. This should also include an effective feedback process to the individual and to the wider organisation where appropriate. This approach should encourage staff at all levels to proactively report errors, near misses and hazards. Staff need to have confidence in the just culture and the reporting system. They must know that confidentiality will be maintained and that the information they submit will be acted upon, otherwise they will decide that there is no benefit in their reporting.

7.2 Risk Assessment and Mitigation

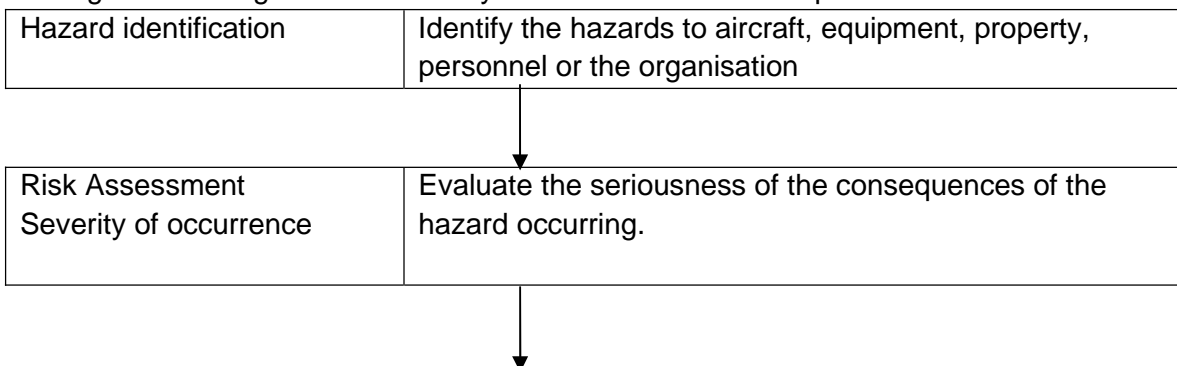
7.2.1 Risk

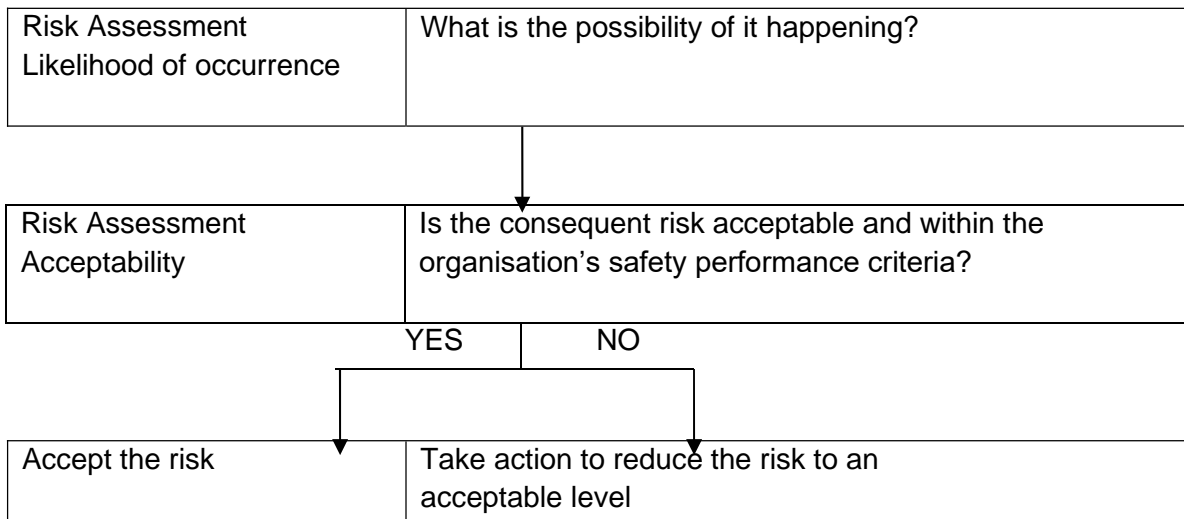
Risk is the assessed potential in terms of severity and likelihood of the consequences of a hazard considering the worst case scenario. A hazard has the potential to cause harm while risk is the likelihood of that harm being realised within a specific time-scale. Following the identification of a hazard, a risk assessment is carried out to determine the potential for harm or damage. This involves the following considerations:

- (a) Severity: The severity of the possible consequences of an unsafe event or condition;
- (b) Likelihood: The likelihood that an unsafe event or condition will occur.

Risk Assessment and Mitigation Processes analyse and eliminate or mitigate to an acceptable level, risks that could threaten the capability of an organisation to undertake its activities in a safe manner.

A diagram showing the hazard analysis and risk assessment process is shown below:





A system should be developed for assessing and analysing the data collected or derived from the actions outlined above. Information provided by the analysis should be distributed to those with a responsibility for operational safety in the organisation.

7.2.2 Risk Assessment

The risk assessment process requires a Risk Tolerability Matrix to be defined for assessing hazards and should be included in the SMS documentation. An example of a risk tolerability matrix and its definitions is provided below. While the severity of the consequences can be defined, the likelihood of occurrence may be more subjective, based on the maturity of the organisation's operational activities. The assessment process should be recorded at each stage to form a substantive record.

Severity of Occurrence	Meaning	Value
Catastrophic.	Aircraft / Equipment destroyed. Multiple deaths	A
Hazardous	A large reduction in safety margins, physical distress or a workload such that organisations cannot be relied upon to perform their tasks accurately or completely. Serious injury or death to a number of people. Major equipment damage	B
Major	A significant reduction in safety margins, a reduction in the ability of organisations to cope with adverse operating conditions as a result of an increase in	C

	workload, or as a result of conditions impairing their efficiency. Serious incident. Injury to persons	
Minor	Nuisance. Operating limitations. Use of emergency procedures. Minor incident.	D
Negligible	Little consequence	E

Safety Risk Severity Table

Likelihood of Occurrence	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely, but may possibly occur (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Safety Risk Probability Table

Safety Risk Tolerability Matrix

Risk probability	Risk severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent 5	5A	5B	5C	5D	5E
Occasional 4	4A	4B	4C	4D	4E
Remote 3	3A	3B	3C	3D	3E

Improbable 2	2A	2B	2C	2D	2E
Extremely Improbable 1	1A	1B	1C	1D	1E

Risk Classification

Acceptable	The consequence is so unlikely or not severe enough to be of concern; the risk is tolerable. However, consideration should be given to reducing the risk further to as low as reasonably practicable in order to further minimise the risk of an accident or incident.	3E, 2D, 2E, 1A, 1B, 1C, 1D, 1E
Review	The consequence and/or likelihood is of concern; measures to mitigate the risk to as low as reasonably practicable should be sought. Where the risk is still in the review category after this action then the risk may be accepted, provided that the risk is understood and has the endorsement of the individual ultimately accountable for safety in the organisation.	5D,5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C
Unacceptable	The likelihood and/or severity of the consequence is intolerable. Major mitigation will be necessary to reduce the likelihood and severity of the consequences associated with the hazard	5A, 5B, 5C, 4A, 4B, 3A

7.2.3 Risk Mitigation

Risks should be managed to as low as reasonably practicable. Risk must be balanced against the time, cost and difficulty of taking measures to reduce or eliminate the risk. The level of risk can be lowered by reducing the severity of the potential consequences, reducing the likelihood of occurrence or by reducing exposure to that risk. Corrective action will take into account any existing defences and their inability to achieve an acceptable level of risk. This may result in a review of previous risk assessments that may have been impacted by the corrective action. Risk mitigations and controls will need to be verified / audited to ensure that they are effective.

7.3 Internal Safety Investigations

The scope of internal safety investigations should include occurrences that are not required to be investigated or reported to the CAA. Though often of a supposed minor nature, they could be indicative of a potential hazard or trend that would only be revealed through systematic investigation and data analysis, ideally undertaken by trained investigators.

7.3.1 Scope of Safety Investigations

The scale and scope of any investigation should be suitable to determine why an event occurred and validate or identify the underlying hazards. The level of investigation should be proportional to the identified hazard and risk.

7.3.2 Investigation Methodology

The investigation process should take place as soon as possible after the event. The objective of the investigation is to understand why an event happened and the contributing causes and not to apportion blame. The investigation may include:

- (a) Review of documentation and processes;
- (b) Operational data monitoring;
- (c) Interviews;
- (d) Root cause analysis
- (e) Data analysis.

7.3.3 Safety Recommendations

An organisation should have procedures to communicate the results of any safety investigations and where appropriate to address hazards as outlined in paragraph 5.2 above. This should include incorporating lessons learnt into policies and procedures.

8. SAFETY ASSURANCE

Safety assurance assesses the safety performance of the organisation and enables continuous improvement. The three aspects of safety assurance are:

- (a) Safety performance monitoring, measurement and review;
- (b) The management of change;
- (c) Continuous improvement of the safety system.

8.1 Safety Performance Monitoring and Measurement

A key function of the SMS is assurance that the system is working and is effective. This involves:

- The setting and monitoring of Safety Performance Indicators (SPIs) to measure the organisation's safety performance;

- Assessing the effectiveness of the SMS by confirming that the mitigations, controls and defences put in place are working and effective to ensure safe operational practices;
- Monitoring compliance with the appropriate regulations and standards.

Note: These all require safety and quality (compliance monitoring) to be integrated or working closely together.

Safety objectives need to have been established before setting SPIs. This allows the safety performance of the organisation to be measured against its safety policies and objectives. Organisations should review the CAA Safety Plan as this may provide ideas for SPIs.

The following should be considered in setting safety objectives:

- Define what the organisation hopes to achieve.
- It should be a statement of a desired outcome.
- Safety objectives should be short, high-level statements of the safety priorities and should reflect the organisation's safety policy.
- Safety objectives should address the organisation's most significant risks.

Once safety objectives have been set then SPIs can be established. SPIs can be used to measure the performance of the SMS and the operational safety performance. SPIs will require the monitoring of data from various sources such as;

- a) Occurrences and events;
- b) Safety reports;
- c) Safety studies;
- d) Safety reviews including trend analysis;
- e) Audits;
- f) Surveys;
- g) Internal safety investigations.

Safety audits are used to ensure that the structure of the SMS is sound in terms of:

- a) Adequate staff levels;
- b) Compliance with approved procedures and instructions;
- c) Levels of competency and training to carry out specific roles;
- d) Maintaining required levels of performance;
- e) Achievement of the safety policy and objectives;
- f) Effectiveness of interventions and risk mitigations.

Safety and cultural surveys should be carried out as a matter of routine, to provide assurance to managers of safe operational activity. They are used to identify issues or problems in daily operations. They can also be used to gather the views and opinions of operational personnel. Surveys may involve the use of:

- a) Day to day observation checks such as Line Orientated Safety Audits (LOSA);

- b) Questionnaires;
- c) Informal confidential interviews.

Safety culture surveys allow an organisation to identify behaviours and attitudes of staff. This may identify human conditions that can impact an organisation's safety performance.

Survey information is subjective and should therefore be verified before any corrective action is initiated but may provide a valuable source of safety information.

8.2 The Management of Change

The Management of Change should be a formal process that identifies external and internal change that may affect established cultures, processes and services. It utilises the organisation's existing risk management process to identify potential hazards that will ensure that there is no adverse effect on safety. Change can introduce new hazards that could impact the appropriateness and effectiveness of any existing risk mitigation. Organisations should define the types of changes that would require a formal management of change process. This should also include who makes the decision to start the process and who has the authority to sign it off.

8.3 Continuous Improvement of the SMS

- 8.3.1. The organisation should continually seek to improve their safety performance. Continuous improvement should be achieved through:
 - (a) Proactive evaluation of day to day operations, facilities, equipment, documentation and procedures through safety audits and surveys;
 - (b) Evaluation of an individual's performance to verify the fulfilment of their safety responsibilities;
 - (c) Reactive evaluations in order to verify the effectiveness of the system for control and mitigation of risk e.g. incidents, accidents and investigations;
 - (d) Tracking organisational changes to ensure that they are effective.
 - (e) Regular review of the organisation's safety performance and safety action plans.
- 8.3.2 Corrective Action and Followup. The SA process should include procedures that ensure that corrective actions are developed, documented, and tracked in response to findings of audits and evaluations, and to verify their timely and effective implementation. Organizational responsibility for the development and implementation of corrective actions should reside with the operational departments cited in audit and evaluation findings. If new hazards are discovered, the SRM process should be employed to determine if new risk controls should be developed.
- 8.3.3 Management Review. Top management should conduct regular reviews of the SMS, including outputs of SRM, SA, and lessons learned. Management reviews

should include assessing the performance and effectiveness of an organization's operational processes and the need for improvements.

It further requires that the organization provide training and information about risk controls and lessons learned.

9. SAFETY PROMOTION

9.1 Training and Education

All staff should receive safety training as appropriate for their safety roles and responsibilities. In particular all operational staff, managers, supervisors, senior managers and the accountable manager should be trained and be competent to perform their duties. This provides an opportunity to reinforce the safety policy, gain the necessary management buy-in and for establishing the expected attitudes and behaviours for all levels of staff in the organisation. This should involve initial training as well as continued maintenance of competence. Training should include human and organisational factors

- a) Operational staff should have an understanding of the organisation's safety policy and the principles and processes of the organisation's SMS.
- b) In addition to (a) above, managers and supervisors should understand the safety process, hazard identification, risk management and the management of change.
- c) In addition to (a) and (b) above, senior managers should understand organisational safety standards, safety assurance and the regulatory requirements for their organisation.
- d) The accountable manager should have an awareness of SMS roles and responsibilities, safety policy, safety culture, SMS standards and safety assurance.

9.2 Safety Communication

Safety communication is an essential foundation for the development and maintenance of an adequate safety culture. Types of communication may include:

- (a) Safety policies and procedures;
- (b) News letters, safety bulletins and notices;
- (c) Presentations;
- (d) Websites and e-mails;
- (e) Informal workplace meetings between staff and the Accountable Manager or Senior Managers.

9.2.1 Safety communication should:

- (a) Ensure that all staff are fully aware of the SMS and the organisation's safety culture;
- (b) Disseminate safety critical information internally and externally;
- (c) Explain why certain actions are taken;
- (d) Explain why safety procedures are introduced or changed;
- (e) Compliment and enhance the organisation's safety culture;

(f) Contain a process for assessing the suitability of safety communication and its effect on the organisation.

9.3 Safety Cultures.

A safety effort cannot succeed by mandate only or strict implementation of policy. Where individual attitudes are concerned, organizational cultures set by *top management* establishes the tone that enhances the performance and efficiency of the entire SMS. Cultures consist of psychological (how people think and feel), behavioral (how people and groups act and perform) and organizational (the programs, procedures, and organization of the enterprise) elements. An organization's culture consists of the values, beliefs, mission, goals, and sense of responsibility held by the organization's members. The culture fills in the blank spaces in the organization's policies, procedures, and processes and provides a sense of purpose to safety efforts. Dr. James Reason, and other organizational system safety theorists, stresses the need for a reporting culture as an important aspect of safety culture. The organization must do what it can to cultivate the willingness of its members to contribute to the organization's safety efforts. Dr. Reason further stresses the need for a just culture, where employees have the confidence that, while they will be held accountable for their actions, the organization will treat them fairly.

10. SAFETY AND QUALITY.

There are organizations that have implemented Quality Management Systems (QMS) that meet the International Organization for Standardization (ISO) 9001 Standard. While not all organizations maintain a formal QMS, quality management principles are used. Safety management and quality management are complementary and must work together to achieve the overall safety objectives of the organization. It should be the primary objective of an organisation to establish a management system that has processes and procedures in place, so that safety performance is maintained at an acceptable level (safety management) and specified product/operational results are achieved (quality management). SMS requires that the design and implementation of organizational processes and procedures identify safety hazards and control and/or mitigate safety risk in aviation operations. QMS provides a structured approach for assuring that these processes and procedures function as intended, correct non-conformances when they do not, and continually improve their effectiveness. While SMS provides the mechanisms for an organisation to carry out its operations, and continued operational safety management functions within a framework of risk-based decision making, a QMS ensures that this framework is operating in a structured, repeatable fashion and is able to meet its intended objectives. When those objectives are not met, QMS provides the means to improve.