CIVIL AVIATION ADVISORY PUBLICATION

CAAP 50

(Issued January 2011)

SAFETY MANAGEMENT SYSTEM

("SMS")

GUIDANCE INFORMATION REGARDING THE SAFETY MANAGEMENT SYSTEM OF OPERATORS AND ORGANSATIONS REQUIRED TO COMPLY WITH CAR PART X

1.   PURPOSE

This Civil Aviation Advisory Circular (CAAP) provides guidance, for applicants for GCAA's SMS Acceptance, on the establishment and implementation of Safety Management Systems (SMS). The guidance is designed to give the reader basic information on SMS concepts and the development of management polices and processes. There is a significant amount of information on the structure and implementation of SMS in various publications, however legislation governing the mandating of SMS is promulgated by the GCAA in the Civil Aviation Regulations (CAR) Part X- "Safety Management Systems Requirements" which is based upon ICAO Document 9859-"Safety Management Manual". Therefore Operators and organisations to whom CAR Part X is applicable are strongly recommended to consider Document 9859 as their principal source of guidance on SMS.

This CAAP is provided for information and guidance purposes only, in case of any conflict between this CAAP and CARs, CARs will prevail. On its own, this CAAP does not change, create, amend or permit deviations from regulatory requirements.

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This CAAP introduces acceptable means of compliance with CAR Part X requirements in establishing and implementing SMS, Different acceptable means of compliance may be designed by applicants provided they are accepted by the GCAA and supported by adequate analysis.

2.   EFFECTIVE DATE

This CAAP applies with immediate effect.

3. CANCELLATION.

This CAAP supersedes CAAP 10 which is considered herein as "cancelled" since the date of this CAAP.

4.   APPLICABILITY

This CAAP is applicable to all UAE based organisations s required to comply with CAR Part X requirements..

In this CAAP, wherever the word "organisation(s)" is used, it shall mean operator(s)/organisation(s) listed above.

5.   REFERENCES

(a)   UAE Federal Civil Aviation Law No. (4) of 1996, Article (7)

(b)   UAE Civil Aviation Regulations (CARs) Part X- " Safety Management System Requirements".

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CHAPTER 1- INTRODUCTION

1.1 SAFETY MANAGEMENT SYSTEMS

1.1.1   An effective SMS is an organised approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures, and forms the primary safety oversight covering the way of managing safety. It also provides an identifiable and easily audited systematic control of the management of safety. By applying lessons learned, an SMS should aim to make measurable improvements to the overall level of safety.

1.1.2 It is important to recognise that SMS are top-down driven systems, which means that the Accountable Manager of the organisation is responsible for the implementation and continuing compliance of the SMS. Without the wholehearted support of the Accountable Manager, an SMS will not be effective.

1.1.3 There is no "one size fits all" model of an SMS that will cater for all types of organisations . Complex SMS are likely to be inappropriate for small organisations, and such organisations should tailor their SMS to suit the size, nature and complexity of the operation and allocate resources accordingly.

1.2   QUALITY MANAGEMENT SYSTEM

The role of the QMS is to monitor compliance with and the adequacy of procedures required to ensure safe operational practices and airworthy aeroplanes. The QMS and SMS have complementary but independent functions with the QMS monitoring the SMS.

1.3   SUBCONTRACTING AND PURCHASING

(a) An organisation may decide to subcontract certain activities to external organizations/ persons.

(b) A written agreement should exist between the organisation and the subcontracted organisation clearly defining the safety related services and quality to be provided.

(c) The subcontracted safety related activities relevant to the agreement should be included in the organisation's "Compliance Monitoring Programme".

(d) The user should ensure that the subcontracted organisation has the necessary authorisation or approval if required, the resources and competence to undertake the task.

CHAPTER 2- FRAMEWORK FOR SMS

An SMS is a management tool for the management of safety by an organisation. This chapter introduces a framework for the implementation and maintenance of SMS by an organisation. The implementation of the framework shall be commensurate with the size of the organisation and the complexity of the services provided.

The framework includes the following four components and twelve elements, representing the minimum requirements for SMS implementation.

1 Safety policy and objectives

1.1 Management commitment and responsibility

1.2 Safety accountabilities

1.3 Appointment of key safety personnel

1.4 Coordination of emergency response planning

1.5 SMS documentation

2 Safety risk management

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3 Safety assurance

3.1 Safety performance monitoring and measurement

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4 Safety promotion

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1 SAFETY POLICY AND OBJECTIVES

The Safety Policy outlines the methods and processes that the organisation will use to achieve desired safety outcomes. The creation of a positive safety culture begins with a clear, unequivocal direction from the Accountable Manager.

In preparing a safety policy, senior management should consult with key staff members in charge of safety-critical areas. Consultation will ensure that the safety policy and stated objectives are relevant to all staff and that there is a sense of shared responsibility for the safety culture in the organisation. A positive safety culture is one where all staff must be responsible for, and consider the impact of, safety on everything they do.

1.1 Management commitment and responsibility

Senior management shall develop the safety policy of the organisation, signed by the Accountable Manager. In general terms, the safety policy shall include a commitment to:

(a)   achieve the highest safety standards;

(b)   observe all applicable legal requirements and international standards, and best effective practices;

(c)   provide all appropriate resources;

(d)   enforce safety as a primary responsibility of all managers; and

(e)   ensure that the policy is understood, implemented and maintained at all levels.

Senior management shall also establish safety objectives, as well as the standards of safety performance for the SMS and, therefore, for the organisation as a whole. The safety objectives must identify what the organisation wants to achieve, in terms of the management of safety, and lay out the steps the organisation needs to take to achieve the objectives.

The organisation shall identify the Accountable Manager, who shall be a single, identifiable person having final responsibility for the effective and efficient performance of the organisation's SMS.

The authorities and responsibilities the Accountable Manager should have in order to properly account for the safety performance of the SMS include, but are not limited to:

(a) full authority for human resources issues;

(b) authority for major financial issues;

(c) direct responsibility for the conduct of the organisation's affairs;

(d) final authority over operations under certificate; and

(e) final responsibility for all safety issues.

The Accountable Manager may assign the management of the SMS to another person (SMS Manager), provided that such assignment is properly documented and described in the organisation's safety management systems manual. The accountability of the Accountable Manager is not, however, affected by the appointment of the management of the SMS to another person, the Accountable Manager retains final accountability for the performance of the organisation's SMS.

1.2 Safety accountabilities

The safety accountabilities of managers should reflect the size, nature and complexity of operations, and to the hazards and safety risks associated with the activities necessary for the delivery of services. This should include the allocation of human, technical, financial or any other resources necessary for the effective and efficient performance of the SMS.

The safety accountabilities, responsibilities and authorities of all departmental heads and/or persons responsible for functional units, and in particular line managers, shall be described in the organisation's safety management systems manual and ideally be graphically depicted in a functional chart showing the interfaces and interrelationships in terms of the management of safety among the various sectors of the organisation.

The terminologies and designations associated with the organisational structure are for guidance only. The organisations can create a structure that is unique to their size, complexity and operation.

1.3 Appointment of key safety personnel

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

(a) appointment of a Safety Manager; and

(b) formation of safety committees.

1.3.1 The Safety Manager

The Safety Manager should be a Senior Management appointment in the organisation in order to provide the necessary degree of authority when dealing with safety matters, and should report directly to the Accountable Manager of the organisation.

The Safety Manager should possess:

(a) operational management experience and have a technical background sufficient to understand the systems that support the organisation;

(b) interpersonal skills;

(c) analytical and problem solving skills;

(d) project management skills; and

(e) oral and written communication skills.

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It is important to note that accountability for the SMS lie with the Accountable Manager not the Safety Manager. The Safety Manager is responsible for and is the focal point for the development, administration and maintenance of an effective SMS.

The Safety Manager should carry out at least 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 any corrective action required in order to ensure accomplishment;

(d)   provide periodic reports on safety performance;

(e)   maintain safety documentation;

(f)   plan and organise staff safety training;

(g)   provide independent advice on safety matters;

(h)   advise Senior Managers on safety matters;

(i)   assist Line Managers;

(j)   oversee hazard identification systems; and

(k)   be involved in occurrence/accident investigations.

1.3.2 Safety Committees

Safety Review Board

The Safety Review Board (SRB) is a high level committee which considers strategic safety functions and is applicable to large organisations. The board should be chaired by the Accountable Manager and should normally include the Senior Management of the organisation. Directors of the organisation may be included in the SRB.

The SRB ensures that appropriate resources are allocated to achieve the established safety performance beyond that required for regulatory compliance and gives strategic direction to the Safety Action Group (SAG).

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)   that necessary corrective or mitigating actions are being taken in a timely manner; and

(e)   effectiveness of the organisation's safety management processes.

Safety Action Group

The SAG reports to and takes strategic direction from the SRB. It comprises managers, supervisors and staff from operational areas. The Safety Manager may also be included in the SAG.

The Safety Action Group should:

(a)   oversee operational safety;

(b)   resolve identified risks;

(c)   assess the impact on safety of operational changes;

(d)   implement corrective action plans; and

(e)   ensure that corrective action is achieved within agreed timescales.

The safety action group reviews:

(a)   the effectiveness of previous safety recommendations; and

(b)   safety promotion.

1.4 Coordination of emergency response planning

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

The ERP should ensure:

(a)   an orderly and efficient transition from normal to emergency operations, and back to normal;

(b)   delegation of emergency authority;

(c)   assignment of emergency responsibilities during the co-ordinated activities;

(d)   authorisation by key personnel for actions contained in the plan;

(e)   coordination of efforts to cope with the emergency;

(f)   safe continuation of operations or return to normal operations as soon as practicable; and

(g)   compatibility with other emergency response plans of other organisations it must interface with during the provision of its services

The ERP should set out the responsibilities, roles and actions for the various agencies and personnel involved in dealing with emergencies.

An ERP should take into account considerations such as:

(a)   governing policies;

(b)   organisation;

(c)   notifications;

(d)   initial response;

(e)   additional assistance;

(f)   Crisis Management Centre (CMC);

(g)   records;

(h)   accident site;

(i)   news media;

(j)   formal investigations;

(k)   family assistance;

(l)   post-critical incident stress counselling; and

(m)   post-occurrence review.

The ERP should be detailed or cross referred to in the organisation's SMS.

1.5 SMS documentation

SMS documentation shall include and make reference to, all relevant and applicable national and international regulations. It shall 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 organisation. It shall furthermore document explicit guidelines for records management, including handling, storage, retrieval and preservation. It is always to be understood that the most important piece of documentation of an SMS is the SMS Manual

The SMS Manual is a key instrument for communicating the organisation's approach to safety to the whole organisation. It documents all aspects of the SMS, including the safety policy, objectives, SMS processes and procedures, and individual safety accountabilities.

Typical contents of a SMS Manual include:

(a)   scope of the safety management system;

(b)   safety policy and objectives;

(c)   safety accountabilities;

(d)   key safety personnel;

(e)   documentation and records keeping procedures;

(f)   coordination of emergency response planning;

(g)   hazard identification and risk management schemes;

(h)   safety assurance;

(i)   safety performance monitoring;

(j)   safety auditing;

(k)   management of change;

(l)   safety promotion;

(m)   control of subcontracted activities; and

(n)   revision procedures

2   SAFETY RISK MANAGEMENT

Safety is a condition in which the possibility of harm or damage to people and/or property is limited to an acceptable level. Safety management is centred on a systematic approach to hazard identification and risk management. The hazards creating risk can be identified through safety management system processes. The process of moving from hazard identification to risk assessment and risk mitigation is a risk management process.

RISK MANAGEMENT PROCESS

Hazard identification	Identify the hazards to equipment, property, personnel or the organisation

↓

Risk assessment Severity of occurrence	Evaluate the seriousness of the consequences of the hazard occurring

↓

Risk assessment Probability of occurrence	What is the possibility of it happening?

↓

Risk assessment Acceptability	Is the consequent risk acceptable and within the organisation's safety performance criteria?

YES | **NO**

↓ ↓

Accept the risk	Take action to reduce the risk to an acceptable level (Mitigation)

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2.1 Hazard Identification Processes

A hazard is any situation or condition that has the potential to cause adverse consequences. A hazard identification process is the formal means of collecting, recording, analysing, acting on and generating feedback about hazards and risks that affects the safety of the operational activities of the organisation. In a mature safety management system hazard identification is an ongoing process.

The scope of hazard identification is across the operational activities of the organisation with data derived from reactive and proactive schemes. Reactive schemes include data from accidents, incidents and flight data monitoring. Proactive schemes include voluntary incident reporting, confidential reporting schemes, safety surveys, operational safety audits and safety assessments. Managed group sessions can also be used to identify hazards.

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

Confidential reporting systems should be based on established human factors principles including an effective feedback process.

2.2 Risk Assessment and Mitigation Processes

Following the identification of a hazard a form of analysis is required to assess its potential for harm or damage. This involves three considerations:

(a)   Probability: The probability of the hazard causing adverse consequences.

(b)   Severity: The severity of the potential adverse consequences.

(c)   Exposure: The rate of exposure to the hazard.

Risk assessment and mitigation processes analyse and eliminate or mitigate to an acceptable level, risks that could threaten the capabilities of an organisation.

2.2.1 Risk

Risk is the assessed potential for adverse consequences resulting from a hazard if its potential to cause harm is realised. A hazard has the potential to cause harm while risk is the likelihood of that harm being realised within a specific time-scale **2.2.2 Assessment**

Risk assessment involves taking into account the probability and severity of any adverse consequences resulting from an identified hazard. Mathematical models may give credible results but typically these analyses are supplemented qualitatively by subjective critical and logical analysis of the inter-related facts. A risk matrix is useful for assessing hazard. While the severity of the consequences can be defined, the probability 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.

2.2.3 Risk Mitigation

Risks should be managed to be 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 probability of occurrence or by

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reducing exposure to that risk. Corrective action will take into account any existing defences and their inability to achieve an acceptable level of risk. Corrective action should be subject to further risk assessment in order to determine that the risk is now acceptable and that no further risk has been introduced into operational activities.

The risk assessment process is detailed in Appendix A.

3.   SAFETY ASSURANCE

The three aspects of safety assurance are:

3.1   Safety Performance Monitoring and Measurement

Safety performance monitoring and measurement should be the process by which the safety performance of the organisation is verified in comparison to its safety policies and objectives. This process should include:

(a)   safety reporting;

(b)   safety studies;

(c)   safety reviews including trending of data;

(d)   safety audits; and

(e)   surveys.

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; and

(c)   level of competency and training to operate equipment and facilities and maintain their levels of performance.

Safety surveys examine particular elements or processes of a specific operation and may involve the use of:

(a)   checklists;

(b)   questionnaires; and

(c)   informal confidential interviews

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

3.2The Management of Change

The Management of Change should be a formal process that identifies external and internal change that may affect established processes and services. It utilises the organisation's existing risk management process to 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.

The Management of Change process is detailed in Appendix B.

3.3 Continuous Improvement of the Safety System

Continuous Improvement:

(a) should determine the immediate causes of below-standard performance and their implications in the operation of the SMS; and

(b) should rectify situations involving below-standard performance identified through safety assurance activities.

Continuous Improvement should be achieved through:

(a) evaluation of facilities, equipment, documentation and procedures through safety audits and surveys;

(b) evaluation of an individual's performance to verify the fulfillment 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; and

(d) tracking organisational changes to ensure that they are effective.

4. SAFETY PROMOTION

The two aspects of safety promotion are:

4.1 Training and education

(a) All staff should receive safety training as appropriate for their safety responsibilities. In particular all Operational Staff, Managers, Supervisors, Senior Managers and the Accountable Manager should be trained and be competent to perform their SMS duties.

(b) Operational Staff - Operational staff should have an understanding of the organisation's safety policy and an overview of the fundamentals of SMS.

(c) Managers and Supervisors - Managers and supervisors should understand the safety process, hazard identification, risk management and the management of change.

(d) Senior Managers - Senior Managers should understand organisational safety standards, safety assurance and the regulatory requirements for their organisation.

(e) Accountable Manager - The Accountable Manager should have an awareness of SMS roles and responsibilities, safety policy, SMS standards and safety assurance.

4.2 Safety communication

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

(a) safety policies and procedures;

(b) newsletters;

(c) presentations;

(d) safety notices; and

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(e)   informal workplace meetings between staff and the Accountable Manager or Senior Managers.

Safety communication should:

(a)   ensure that all staff are fully aware of the SMS and the organisation's safety culture;

(b)   convey safety-critical information;

(c)   explain why certain actions are taken;

(d)   explain why safety procedures are introduced or changed;

(e)   complement and enhance the organisation's safety culture; and

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

APPENDIX A: SUGGESTED RISK ASSESSMENT PROCESS

The purpose of the risk assessment process is to identify risks, assess them in terms of severity and likelihood so that appropriate mitigation measures can be implemented to either eliminate the risk or reduce the risk to as low as reasonably practicable. The assessment process also allows the risks to be ranked in order of risk potential so that priorities can then be established and resources can be targeted more effectively.

The risk assessment process starts with identifying the hazards associated with the aerodrome operation and then the actual risks associated with the hazard. It is important to include people with the relevant expertise and experience in the risk assessment process to ensure the robustness of the process. All risk assessments are reliant on the quality of the information used to make the assessment and the knowledge of the people conducting the assessment.

The hazard/risk identification process should be both proactive and reactive and depending on the size and complexity of the aerodrome the following methods may be useful to identify safety hazards and the risks associated with them:

(a) Brainstorming, where any relevant persons meet to identify/review potential hazards and associated risks at the aerodrome. This may be required for a range of items or to consider a specific risk.

(b) Aerodrome incident reports.

(c) Confidential voluntary reports.

(d) Internal/external audits.

(e) Either internal or external safety assessments/technical inspections.

(f) Liaison with other similar aerodromes.

(g) Generic hazard checklists.

Following the identification of a hazard, the risks associated with the hazard will need to be assessed. The risk should be assessed in terms of severity (the severity of the potential adverse consequences) and probability (the likelihood of the risk causing adverse consequences).

SEVERITY OF CONSEQUENCES		
Aviation definition	**Meaning**	**Value**
Catastrophic	Equipment destroyed. Multiple deaths.	A
Hazardous	A large reduction in safety margins, physical distress or a workload such that the personnel cannot be relied upon to perform their tasks accurately or completely. Serious injury or death to a number of people. Major equipment damage.	B

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Major	A significant reduction in safety margins, a reduction in the ability of personnel to cope with adverse operating conditions as a result of the workload, or as a result of conditions impairing their efficiency. Serious incident. Injury to persons.	C
Minor	Nuisance. Operating limitations. Use of emergency procedures. Minor incident.	D
Negligible	Little consequence	E

Severity of Consequence

Probability of Occurrence		
Qualitative definition	**Meaning**	**Value**
Frequent	Likely to occur many times	5
Reasonably probable	Likely to occur sometimes	4
Remote	Unlikely, but possible to occur.	3
Extremely remote	Very unlikely to occur	2
Extremely improbable	Almost inconceivable that the event will occur	1

Probability of Occurrence

When the levels of severity and likelihood have been defined, a Risk Tolerability Matrix can then be used to assess how tolerable the risk is. While the severity of the consequences can be defined relatively easily, the likelihood of occurrence may be more subjective and rely on a logical, common sense analysis of the inter-related facts.

Probability

Severity	1 Extremely improbable	2 Improbable	3 Remote	4 Occasional	5 Frequent
A Catastrophic	Review	Review	Unacceptable	Unacceptable	Unacceptable
B Hazardous	Acceptable	Review	Review	Unacceptable	Unacceptable
C Major	Acceptable	Review	Review	Review	Unacceptable
D Minor	Acceptable	Acceptable	Review	Review	Review
E Negligible	Acceptable	Acceptable	Acceptable	Review	Review

Risk Tolerability Matrix

From the risk tolerability matrix the risk can then be classified as either acceptable, to be reviewed or un-acceptable allowing a suitable risk mitigation strategy to be developed if required.

Unacceptable: If the risk is unacceptable, major mitigation will be necessary to reduce the severity of the consequences and/or the likelihood of the occurrence associated with the hazard.

Review: If the risk needs to be reviewed the severity of the consequences or the probability of occurrence 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 has been taken it may be that the cost or actions required to reduce the risk further are too prohibitive. The risk may be accepted, provided that the risk is understood and has the endorsement of the individual ultimately accountable for safety at the aerodrome.

Acceptable: If the risk is acceptable the consequence is so unlikely or not severe enough to be of concern; the risk is tolerable. However, consideration should still 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.

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If the level of risk falls into the **unacceptable** or **review** categories, mitigation measures should be introduced to reduce the risk to an acceptable level. Mitigation strategies could include eliminating the risk altogether or taking measures to reduce the severity if the risk occurred or the likelihood of the risk occurring. Risks should be managed to be as low as reasonably practicable, which means that the risk must be balanced against the time, cost and difficulty of taking measures to reduce or eliminate the risk.

Where the risk cannot be further reduced by reasonably practicable means, the following actions are to be taken:

(a) If a high severity risk, the matter is to be brought to the Safety Review Board (SRB). The risk will be reviewed by the SRB, and if accepted will be signed off by the Senior Manager/Accountable Manager. Or if deemed necessary, a more senior director.

(b) For a risk with a less potential severity, the matter should be reviewed by another manager reporting to the Accountable Manager and signed off. The reviewing manager must note the reasons and considerations for accepting the risk.

The final outcomes of the risk assessment process will be recorded and filed.

Example

A hazard may be that an aerodrome allows parachute exercises to take place at the same time as aircraft operations are continuing. A risk associated with this hazard is a collision between an aircraft and a parachute. A risk assessment process would be required to assess how acceptable the risk is to the aerodrome.

The risk assessment process should include the Accountable Manager and people with the relevant expertise and experience. It is also essential to include representatives from the aerodrome user groups involved in aircraft operations and the parachute exercises.

Using the tables provided, the risk assessment process may easily conclude that the severity of a collision between an aircraft and a parachute would be catastrophic; however, calculating the probability (or likelihood) may be more subjective. The risk assessment process may conclude the probability is extremely remote. If the risk is classified as catastrophic but extremely remote, using the risk tolerability matrix would identify that this risk is unacceptable.

The risk would therefore need some form of mitigation to reduce the probability of the risk occurring (the severity would always remain the same in this case). One mitigation measure would be to ban either aircraft operations or parachuting from the aerodrome thus eliminating the risk entirely. This solution may be unacceptable for the aerodrome or some of its users, so other mitigation measures may be required. Examples of further mitigation could include operational procedures to reduce the probability of a collision. Although the risk may have been mitigated to as low as reasonable practicable it must be accepted by the Accountable Manager and aerodrome user groups that a level of risk still remains.

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An example of a simple risk assessment

Significant Hazards identified	Severity Value	Probability Value	Tolerability of Risk	Control Measures to be Implemented (Mitigations)	Action By:	Severity Value	Probability Value	Revised Tolerability of Risk
Mixed activities: Parachuting and aircraft operations: Potential collision between aircraft and parachutist – mid air Potential collision between aircraft and parachutist on landing	Catastrophic	Remote	Unacceptable	Review of: Circuit direction Location of Drop zone ATC procedures Parachuting procedures		Catastrophic	Improbable	Review
Person Responsible for conducting the Safety Assessment:								
Name of Persons involved in the Safety Assessment:								
Date of Review:								
Name of Accountable Manager/Responsible Manager:		Signature:						

The person named as responsible for conducting the Safety Assessment is the person designated to carry out the safety assessment and responsible for coordinating with,where appropriate interested parties and arranging follow-up meetings.

The Accountable Manager (or maned responsible person) is the person accepting any resdidual risk.

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Tolerability of Risk Key:

Acceptable Region:
Acceptable

Review Region:

Acceptable based on risk mitigation, requiring management decision and acceptance of residual risk with stated review period

Unacceptable Region:

Unacceptable under the exiting circumstances

APPENDIX B- MANAGEMENT OF CHANGE

There is inevitably a possibility of increased risk whenever there are any organisational changes. An adhoc approach is unacceptable in that it may fail to provide for every element affected by the change process.

Therefore an objective of the safety management system is to provide a framework for managing change and addressing risks when introducing or changing:

(a)   Equipment

(b)   Systems

(c)   Procedures

(d)   Personnel structures

All such changes must be adequately addressed to ensure that safety is not degraded during or as a consequence of such changes and that wherever practical, safety is enhanced by such changes.

Responsibility

The appropriate departmental manager is responsible for:

(a) Introducing new equipment, procedures and/or personnel structures in such a manner as to enable operational requirements to be met during and subsequent to any changes.

(b) Identifying operational requirements during any process of change.

(c) Ensuring that a change of procedure plan is devised and followed prior to and during the introduction of any new equipment, procedures or personnel.

(d) Following the risk assessment process.

(e) Involving relevant staff in a critical analysis and ranking identified risks.

(f) Taking action as necessary to improve service quality or provide any training requirements identified as a result of the proposed changes and in order that changes are integrated in a managed fashion.

(g) Monitoring the effects of any change process to identify weaknesses.

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CHANGE OF PROCEDURES PROPOSAL FORMS

PART 1: PROPOSAL Reference No: [number/year]
Person Responsible for conducting the Safety Assessment:
Names and Title of those involved with assessment:
Target date for implementation:
Reason for change:
Details of change:
Interested parties:
Preliminary hazard identification Hazard 1:   Hazard 2:
Additional hazards
Originator/comment

Accountable Manager:	Manager/Responsible	Signature:	Date:

PART 2: PROCEDURE HAZARD ANALYSIS
Reference No: [number/year]
Person Responsible for conducting the Safety Assessment:
Names and Title of those involved with assessment:
Hazard 1:
Incident sequence:
Severity/probability Tolerability of risk:
Safety requirement:
Mitigation:
Mitigated severity/probability Tolerability of risk:
Summary:

Accountable Manager:	Manager/Responsible	Signature:	Date:

PART 3: REVIEW OF ACTIONS		
Reference no: [number/year]		
Title:		
File reference:		
Person Responsible for conducting the Safety Assessment:		
Names and Title of those involved with assessment:		
Action summary		
Remarks:		
Person Responsible for conducting the Safety Assessment:	Signature:	Date:
Remarks (if required):		
Accountable Manager/Responsible Manager:	Signature:	Date:

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APPENDIX C- IMPLEMENTATION OF THE SMS

IMPLEMENTATION OF THE SMS
This appendix introduces, but does not mandate, a model of a phased implementation of an organisation SMS which encompasses four phases as described hereunder.

Phase 1
Planning should provide a blueprint on how the SMS requirements will be met and integrated to the organisation's work activities, and an accountability framework for the implementation of the SMS:

1.Identify the accountable executive and the safety accountabilities of managers;

2.Identify the person (or planning group) within the organisation responsible for implementing the SMS;

3.Describe the system (Air operator, ATC services provider, approved maintenance

organisation, certified aerodrome operator, Flight training organisation, Production or design

organisation);

4.Conduct a gap analysis of the organisation's existing resources compared with SMS establishing

requirements (GAP analysis guidance is provided in appendix D of this CCAP);

5.Develop an SMS implementation plan that explains how the organisation will implement the SMS on

the basis of national requirements and international SARPs, the system description and the results

of the gap analysis together with the timelines

6.Develop documentation relevant to safety policy and objectives; and

7.Develop and establish means for safety communication.

Phase 2
should put into practice those elements of the SMS implementation plan that refer to the safety risk management reactive processes:

1.hazard identification and safety risk management using reactive processes;

2.training relevant to:

    (a)   SMS implementation plan components; and

    (b)   safety risk management (reactive processes).

3.documentation relevant to:

    (a)   SMS implementation plan components; and

    (b)   safety risk management (reactive processes).

Phase 3

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Proactive and predictive processes should put into practice those elements of the SMS implementation plan that refer to safety risk management based on proactive and predictive processes:

1.hazard identification and safety risk management using proactive and predictive processes

2.training relevant to:

    (a)   SMS implementation plan components; and

    (b)   safety risk management (proactive and predictive processes).

3.documentation relevant to:

    (a)   SMS implementation plan components; and

    (b)   safety risk management (proactive and predictive processes).

Phase 4
should put into practice operational safety assurance:

1.   development of an agreement on safety performance indicators and safety performance targets;

2.   SMS continuous improvement;

3.   training relevant to operational safety assurance;

4.   documentation relevant to operational safety assurance; and

5.   develop and maintain formal means for safety communication

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APPENDIX D- SMS GAP ANALYSIS

From the perspective of an SMS, a gap analysis is basically an analysis of the safety arrangements already existing within the organisation as compared to those necessary for the SMS to function. The gap analysis is important because the basic organisational structures necessary to start developing an SMS may already exist in the organisation: it will seldom be necessary to build an SMS from scratch because most organisations will have various activities related to an SMS in place and functioning. The development of an SMS should take advantage of and build upon existing organisational structures.

Once the gap analysis is complete and fully documented, the resources, structures and arrangements that have been identified as missing or deficient will form, together with those already existing, the basis of the SMS implementation plan. Organisations may format their SMS implementation plan to suit their individual needs.

Appendix 2 to Chapter 7 of ICAO Document 9859 provides GAP Analysis guidance

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APPENDIX E:

1.1 Process and Regulatory methods for SMS acceptance and demonstrating safety adequacy

1.1.1 General

1.1.1.1 Regulation of organisations and technical elements of associated services is achieved through the grant of Approvals, and auditing and inspecting the subsequent systems and service provision.

1.1.1.2 The term 'approval' is used generically in the following descriptions to mean any relevant form of regulatory approval, certification or grant of a licence.

1.2 Acceptance of a Safety Management System

1.2.1 The mechanism for the regulation of an organisation is the granting of GCAA approval or certificate.

1.2.2 Before an organisation is regulated under a Safety Management System (SMS) regime, the supporting documentation and the implementation plan must be submitted to the GCAA.

1.2.3 Following submission, the SMS descriptive and supporting documentation (e.g. items listed in phase 1 of the implementation plan as detailed in Appendix C of this CAAP) will be reviewed. Any areas that are deficient will be identified. If the documentation is acceptable, the organisation will be advised that his implementation plan is acceptable. If the documentation is not acceptable, the organisation should make amendments to address the identified deficiencies and resubmit as necessary.

1.2.4 When an organisation is satisfied that its SMS is sufficiently developed and that its implementation will result in a service that continues to be safe, the organisation should submit the SMSM and any associated documentation to the GCAA for assessment, if not already submitted. This should be done at the deadline agreed between the organisation and the GCAA as per the SMS implementation plan.

1.2.5 An acceptable Safety Management System should address all the principles described below and will document the strategies by which the stated objectives are to be achieved:

(a) ensures a formalised, explicit and pro-active approach to systematic safety management in meeting its safety responsibilities within the provision of the service.
(b) includes, at its foundation, a statement of safety policy defining the organisation's fundamental approach to managing safety.
(c) ensures that everyone involved in the safety aspects the service provision has an individual safety responsibility for their own actions , and that managers are responsible for the safety performance of their own sections
(d) ensures that while providing the service, the principal safety objective is to minimise the organisation's contribution to the risk of an aircraft accident as far as is reasonably practicable

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(e) ensure that staff are adequately trained, motivated and competent for the job they are required to do, in addition to being properly licensed if so required.

(f) Safety Management Responsibility.

Within the operation of the SMS, the organisation:

(i) shall ensure that a safety management function is identified with organisational responsibility for development and maintenance of the safety management system.

(ii) shall ensure that this point of responsibility is, wherever possible, independent of line management and accountable directly to the highest organisational level.

(iii) shall ensure that, in the case of small organisations where combination of responsibilities may prevent sufficient independence in this regard, the arrangements for safety assurance are supplemented by additional independent means.

(iv) shall ensure that the highest level of the organisation plays a general role in ensuring safety management.

(g) Quantitative Safety Levels-
Within the operation of the SMS, the organisation shall ensure that, wherever practicable, quantitative safety levels are derived and maintained.

(h) Risk Assessment and Mitigation

Within the operation of the SMS, the organisation:

(i) shall ensure that a risk assessment and mitigation is conducted to an appropriate level to ensure that due consideration is given to all aspects of operation.

(ii) shall ensure that changes to the operation are assessed for their safety significance.

(iii) shall ensure appropriate mitigation of risks where assessment has shownthis to be necessary due to the safety significance of the change.

Note: Risk assessment involves, in broad terms, hazard identification, hazard assessment for severity and frequency of occurrence, risk tolerability assessment and risk removal or mitigation.

(i) SMS Documentation-

Within the operation of the SMS, the organisation shall ensure that the SMS is systematically documented in a manner which provides a clear linkage to the organisation's safety policy.

Note: The organisation **should define the Structure, Contents, Authorities, Responsibilities and Mechanisms for SMS Documentation**.

(j) External/subcontracted Services

Within the operation of the SMS, the organisation shall ensure adequate and satisfactory justification of the safety of the externally provided services, having regard to their safety significance within the provision of the service. The organisation should establish criteria for evaluating the subcontracted services

(k) Safety Occurrences-

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The organisation shall ensure that its operational or technical occurrences which are considered to have significant safety implications are investigated immediately, reported to the GCAA and any necessary corrective is taken.

(l) Safety Surveys-

The organisation 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 conformance with applicable parts of their Safety Management Systems.

(m) Safety Monitoring-

The organisation shall ensure that methods are in place to detect changes in 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.

(n) Safety Records-
An acceptable SMS should have a document control and record keeping procedure.

The organisation shall ensure that the 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 GCAA

(o) Lesson Dissemination-
The organisation shall ensure that lessons arising from safety occurrence investigations and other safety activities are disseminated widely within the organisation at management and operational levels.

(p) Safety Improvement-

Within the operation of the SMS, the organisation:

(i)   ensures that all staff are actively encouraged to propose solutions to identified hazards;

(ii)   ensures that changes are made to improve safety where they appear Needed.

(q) Staffing Levels and Training-

There should be a policy and arrangements in place that define the person responsible and the process to be followed that ensure that an adequate number of suitably trained and rated staff are available in respect of safety functions.

(r) Procedures should cover Risk and Hazard Assessment and hazard and risk assessment of changes.

(s) Changes to the SMS-

Changes in the organisational structure of the organisation that change the safety accountabilities of individuals defined in the SMS should be considered as a change to current operations and assessed by the organisation. GCAA's acceptance is required.

(t) Co-ordinated Emergency Response Planning.

(u) Address co-ordination between the organisation's SMS and the SMS of the other organisations the organisation works with during the provision of its services.

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1.2.6   If the SMS is assessed as satisfactory it will be deemed to be 'accepted' and the organisation will be authorised to operate in accordance with the procedures and processes in its SMS.

After a suitable period of SMS operation, during which time the organisation will be gathering evidence of the application of the SMS and recording the results of applying the relevant processes, the GCAA will conduct a baseline audit. The initial baseline audit may involve an assessment of the SMS on a line-by-line basis.

1.2.7   If the baseline audit finds that the SMS meets the relevant requirements and that the application of the SMS is resulting in the provision of a service that is safe, the organisation's Approval/Certificate will be amended to require the organisation to operate in accordance with its accepted SMS. The SMS approval process is now subsumed into the certification process required under the relevant CARs. If the SMS implementation is considered not to be appropriate with respect to one or more of the key criteria, additional guidance will be provided.

Note: Subject to the Principal Inspector's acceptance and depending on how quick an organisation **is in the implementation of the SMS plan, steps 1.2.4 through 1.2.7 may be combined together.**

1.2.8   Subsequent audits will be conducted by the GCAA on a routine basis over a two-year cycle, and in some cases, in response to safety-related changes that take place at the unit.

1.3 Safety Management System Regulatory Method

1.3.1 The primary point of contact between an organisation and the GCAA is the Principal inspector.

1.3.2 The GCAA Inspector is responsible for gaining assurance that all appropriate regulatory requirements are being implemented by the organisation and that the resulting operation is safe. This will normally be achieved through audits of the organisation's SMS and of the overall provision of the services, and of any changes to those services or supporting facilities.

1.3.3 Organisational audits are normally conducted over a two-year cycle, such that all requirements are checked over a two-year period. These audits may be conducted in conjunction with other regulatory audits. The GCAA may, however, implement additional audits, checks, and examinations as considered necessary to address areas of regulatory concern. These activities will include audits of individual projects and changes to the operation and sampling of the internal audits.

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This Safety Management System (SMS) Manual has been developed to direct all personnel in the safe operations of the organisation. The manual defines the policy that governs the operation of the organisation.

SMS is a pro-active, integrated approach to safety management. SMS is part of an overall management process that the organisation has adopted in order to ensure that the goals of the organisation can be accomplished. It embraces the principle that the identification and management of risk increases the likelihood of accomplishing the mission. Hazards can be identified and dealt with systematically through the Hazard Reporting Program that facilitates continuing improvement and professionalism. Auditing and monitoring processes ensures that aircraft are operated in such a way as to minimize the risks inherent in flight operations.

Safety Management Plan

Safety holds the key to this organisation's future and affects everything we do.

This SMS Manual defines the organisation's Safety Management Plan. The Safety Management Plan is the tool used to define how SMS supports the organisation's Operations Plan. Organisation management is committed to the SMS, and is required to give leadership to the program and demonstrate through everyday actions, the commitment to safety and its priority in the achievements of the organisation.

The processes in place in the Safety Management Plan include the active involvement of all managers and supervisors, who, through planning and review, must continue to drive efforts for continuing improvement in safety and safety performance. The term "Safety Management" should be taken to mean safety, security, health, and environmental management. The key focus is the safe operations of airworthy aircraft.

The processes in place in the Safety Management Plan include the active involvement of all managers and supervisors, who, through planning and review, must continue to drive efforts for continuing improvement in safety and safety performance. The term "Safety Management" should be taken to mean safety, health, and environmental management. The key focus is the safe operations of airworthy aircraft.

Safety audits are essential components of the Safety Management Plan. They review systems, identify safety issues, prioritize safety issues, must involve all personnel, and enhance the safety of operations.

Mission Statement

The Mission is to provide quality service to our customers. This includes: (describe the missions you perform).

Safety Policy

Management is committed to providing safe, healthy, secure work conditions and attitudes with the objective of having an accident-free workplace. The organisation's owner/CEO is committed to:

(a) Ongoing pursuit an accident free workplace, including no harm to people, no damage to equipment, the environment and property

(b) A culture of open reporting of all safety hazards in which management will not initiate disciplinary

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action against any personnel who, in good faith, discloses a hazard or safety occurrence due to unintentional conduct.

(c) A culture of open reporting of all safety hazards

(d) Support for safety training and awareness programs

(e) Conducting regular audits of safety policies, procedures and practices

(f) Monitoring industry activity to ensure best safety practices are incorporated in to the organisation

(g) Providing the necessary resources to support this policy

(h) Requiring all employees to have the duty to maintain a safe work environment through adherence to approved policies, procedures, and training, and shall familiarize themselves, and comply with safety policies and procedures

(i) All levels of management are accountable for safety performance, starting with the owner/CEO. To be a good leader, you must be a good safety leader

(j) The organisation is strengthened by making safety excellence an integral part of all activities

Safety Principles

Management embraces the following safety principles:

(a) Always operate in the safest manner practicable

(b) A culture of open reporting of all safety hazards in which management will not initiate disciplinary action against any personnel, who in good faith, due to unintentional conduct, disclose a hazard or safety incident

(c) Never take unnecessary risks

(d) Safe does not mean risk free

(e) Everyone is responsible for the identification and management of risk

(f) Familiarity and prolonged exposure without a mishap leads to a loss of appreciation of risk

Organisation Structure and Safety Responsibilities

The organisation's structure is described in the operations manual. The Owner/CEO is responsible for the following safety accountabilities:

(a) All operations are conducted in the safest manner practicable

(b) Ensuring the safety of all employees, customers, passengers and visitors

(c) Development of long-term safety objectives, including establishment of safety policies and practices

(d) Implementation of management systems that will establish and maintain safe work practices

The chief pilot is responsible for the following safety accountabilities:

(a) Ensuring all flight operations personnel understand applicable regulatory requirements, standards, and organisation safety policies and procedures

(b) Identification and development of resources to achieve safe flight operations

(c) Observe and control safety systems by monitoring and supervision of aircrews

(d) Measure aircrew performance compliance with organisation goals, objectives and regulatory

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requirements

(e) Review standards and the practices of organisation personnel as they impact flight Safety

The chief of maintenance is responsible for:

(a) Ensuring all flight maintenance personnel understand applicable regulatory requirements, standards, and organisation safety policies and procedures

(b) Identification and development of resources to achieve safe maintenance operations

(c) Observe and control safety systems by monitoring and supervision of maintenance personnel

(d) Measure maintenance personnel performance compliance with organisation goals, objectives and regulatory requirements

(e) Review standards and the practices of maintenance personnel as they impact flight Safety

Compliance with Standards

All personnel have the duty to comply with approved standards. These include organisation policy, procedures, aircraft manufacturer's operating procedures and limitations, and government regulations. Research shows that once you start deviating from the rules, you are almost twice as likely to commit an error with serious consequences.

Breaking the rules usually does not result in an accident; however, it always results in greater risk for the operation, and the organisation supports the principle of, "NEVER take unnecessary risks."

Intentional Non-compliance with Standards

Behavior is a function of consequences. Management is committed to identifying deviations from standards and taking immediate corrective action. Corrective action can include counseling, training, discipline, grounding or removal. Corrective action must be consistent and fair.

Organisation management makes a clear distinction between honest mistakes and intentional non-compliance with standards. Honest mistakes occur, and they should be addressed through counseling and training.

Research has shown that most accidents involve some form of flawed decision-making. This most often involves some form of non-compliance with known standards. Non-compliance rarely results in an accident; however, it always results in greater risk for the operation.

Organisation policy agrees with the following conclusions:

(a) Compliance with known procedures produces known outcomes

(b) Compliance with standards helps guarantee repeatable results

(c) Bad rules produce bad results

(d) Complacency affects the safe operation of the aircraft and cannot be tolerated

(e) Standards are mechanisms for change

(f) The hardest thing to do, and the right thing to do are often the same thing

Rewarding People

Reward systems are often upside down. Reinforced bad behavior breeds continued bad behavior. This is

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unacceptable. This organisation is committed to the principle that people should be rewarded for normal, positive performance of their duties that complies with organisation standards. Personnel will not be rewarded for accomplishing the mission by breaking the rules.

Safety Promotion

Safety is promoted as a "core value." Procedures, practices and allocation of resources and training must clearly demonstrate the organisation's commitment to safety. We must change the perception that the mission is what's most important no matter the risk. The following methods are used to promote safety:

(a) Posting the Safety Policy in prominent locations around the base of operations

(b) Starting meetings with a comment or review about safety issues

(c) Having a safety bulletin board

(d) Having an employee safety feedback process

Document and Data Information Control

All safety documents are controlled through the technical library. This includes the SMS, operations, maintenance and training manuals. Change control procedures are incorporated into each of these documents.

The safety officer is responsible for maintaining and safekeeping safety related data, including the minutes of safety meetings, information on hazard and risk analysis, risk management, remedial action, incident and accident investigations, and audit reports.

Hazard Identification and Risk Management

Risk management is the identification and control of risk. It is the responsibility of every member of the organisation. The first goal of risk management is to avoid the hazard. The organisation should establish sufficient independent and effective barriers, controls and recovery measures to manage the risk posed by hazards to a level as low as practicable. These barriers, controls and recovery measures can be equipment, work processes, standard operating procedures, training or other similar means to prevent the release of hazards and limit their consequences should they be released. The organisation should ensure that all individuals responsible for safety critical barriers, controls, and recovery measures are aware of their responsibilities and competent to carry them out. The organisation should establish who is doing what to manage key risks and ensure that these people and the things they should do are up to the task.

The systematic identification and control of all major hazards is foundational. The success of the organisation depends on the effectiveness of the Hazard Management Program.

Below are suggested tables to be used when assessing risks.

For further guidance, ref to APPENDIX A of this CAAP

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Risk Assessment Forms

RECORD OF ASSESSMENT		
Ref. No.		
Base: Section/Department:	Type of harm:	
Work Activity:	Injury	
Team:	Damage to environment	
Assessor Name:	Signature:	
Date of Assessment:	Review date:	
Employees at risk:		
Others who may be at risk:		
IF ADDITIONAL CONTROL MEASURES ARE REQUIRED, CAN THEY BE IMPLEMENTED IMMEDIATELY		YES / NO
IF NO, SUMMARISE ACTION PLAN BELOW		

Action required:	Target Date	Action by:	Completed by (Name & Date)

Date for full implementation of control measures:
Assessment accepted by: (relevant manager):
Title:
Date:

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Hazards/Risks	Severity	Probability	Risk Rating	Additional control measures required	Residual Risk Rating		

RISK ASSESSMENT

* Including existing physical preventative measures (e.g. interlocks, guards, mechanical controls etc.)

Occurrence and Hazard Reporting

All occurrences and hazards identified by an employee shall be reported to the safety officer using the reporting system called the Event Reporting System, or they may report all occurrences and hazards identified on the below Occurrence and Hazard Report.

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Occurrence and Hazard Identification Report

The purpose is to assure that intervention prevents reoccurrence.

____Occurrence Report ____Hazard Identification Report

1. Date:_____

2. Time:_____

3. Location:_____

4. Employee name: _____

5. Event or unsafe act(s) observed: _____

6. Injuries/Illnesses experienced: _____

7. Corrective action(s) taken: _____

8. Occurrence: First   Second   Third

9. Distribution: Employee   Base Manager   VP Safety   B.S.C.

10. Comments/recommendations

11. Comments/Recommendations:

Safety Officer's Signature: _____ Date: _____

Occurrence - Definition

An occurrence is defined as: Any unplanned safety related event, including accidents and incidents that could impact the safety of guests, passengers, organisation personnel, equipment, property or the environment.

Hazard – Definition

A hazard is defined as: Something that has the potential to cause harm to a persons, loss of or damage to equipment, property or the environment.
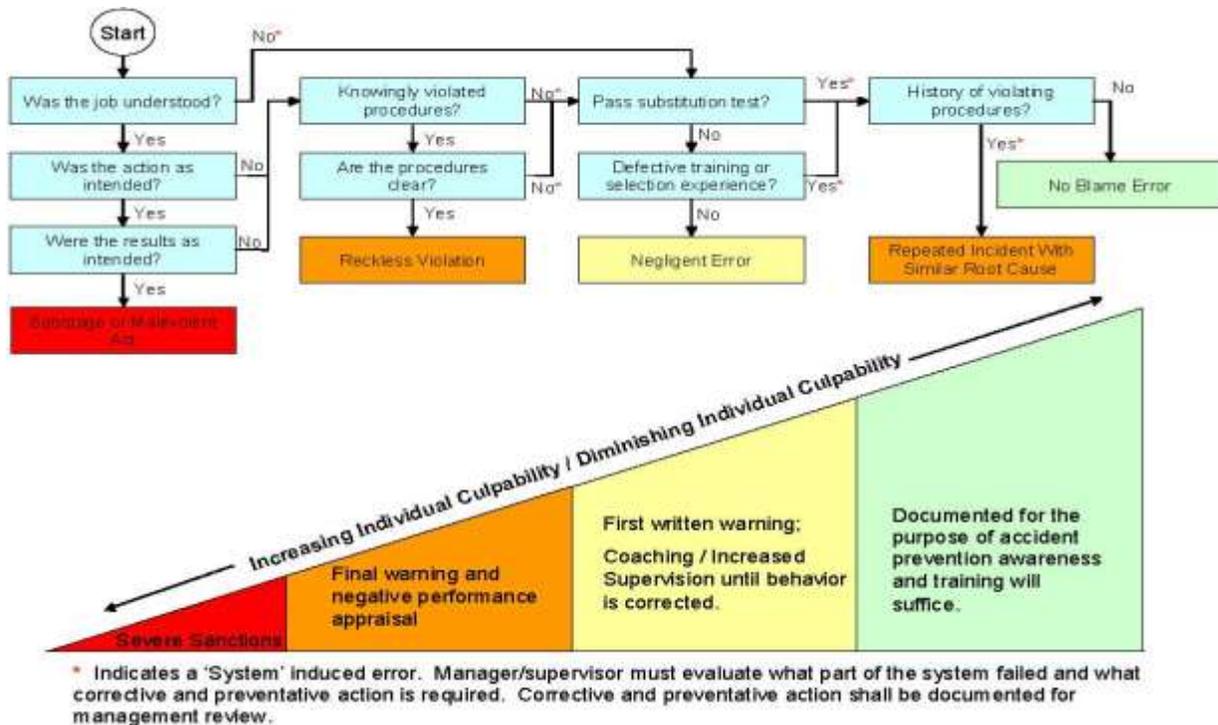
Occurrences

The chief pilot is responsible to ensure all relevant comments from other managers and agreed actions are recorded in the report. Reports are closed when all actions have been taken. Occurrences shall be reviewed in the monthly meeting.

Personnel may anonymously report hazards using the same report.

Personnel who report shall be treated fairly and justly, without punitive action from management except in the case of known reckless disregard for regulations and standards, or repeated substandard performance.

The "Just Culture" Process shown below is used when deciding if disciplinary action is appropriate.

Just Culture Process

* Indicates a 'System' induced error. Manager/supervisor must evaluate what part of the system failed and what corrective and preventative action is required. Corrective and preventative action shall be documented for management review.

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Occurrence Investigation and Analysis

Significant occurrences are investigated by the safety officer or his designee, and shall be reviewed by the owner/CEO.

The safety officer reviews the database for previous occurrences in order to identify trends.

For human error in maintenance operations, the MEDA checklist shall be used. For human error in flight operations, the HFACS checklist shall be used. These checklists are found in ...

Safety Assurance Oversight Programs

The organisation conducts monthly base inspections. Records of base inspections and the resolution of actions are maintained by the safety officer. Issues identified in inspections are included in the agenda of the Safety Meeting. The safety officer is responsible for storing these documents.

The safety officer directs annual audits of the SMS. A sample checklist for audits can be found on ….. Findings and associated corrective actions shall be recorded in the audit.

The safety officer should manage and store audit reports, which include findings and recommended corrective actions. Positive findings should also be recorded. Findings and recommended actions should be communicated to all personnel. A sample audit checklist can be found on ...

Safety Management Training Requirements

Employees shall receive SMS training, including:

(a) Organisation commitment to safety

(b) Organisation's Safety Policy

(c) Employee's role in the SMS

(d) Process for reporting occurrences

(e) Applicable emergency procedures

Minimum Safety Training Requirements

Type of Safety Training	Affected Personnel	Validity
Introduction SMS training	All employees	N/A
First Aid	One attendant per location	2 years
WHMIS	Engineers, stores	2 years
Job Specific Safety Training	Affected Personnel	N/A

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Optional Safety Training Requirements

Fire Fighting (basics)	All personnel
WHMIS	Pilots/crewmembers
Periodic SMS Refresher Training	All employees

Employee training files shall include the below form to record training, the date that training is next due, and the means of demonstrating competency, verbal or written as determined by the chief pilot. Training records shall be kept in the personal file of all personnel. The chief pilot is responsible for reviewing training files in order to ensure recurrent training is conducted on a timely basis.

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Safety and SMS Training Form

EMPLOYEE NAME: _____ BASE: _____

INSTRUCTION DONE BY:_____DATE: _____

1) Course taught:_____

2) Date recurrent training due:_____

3) Method of confirming competency and score:_____

4) Comments and areas for improvement: _____

In signing below, I agree that I have taken _____training

Employee Signature: _____ DATE: _____

Management of Change (MOC)

Procedures are established and maintained to manage changes associated with safety.

The systematic approach to managing and monitoring organisational change is part of the risk management process. Safety issues associated with change are identified and standards associated with change are maintained during the change process.

Procedures for managing change include:

(a) Risk assessment

(b) Identification of the goals and objectives and nature of the proposed change

(c) Operational procedures are identified

(d) Changes in location, equipment or operating conditions are analyzed

(e) Maintenance and operator manuals are posted with current changes

(f) All personnel are made aware of and understand changes

(g) Level of management with authority to approve changes identified

(h) The responsibility for reviewing, evaluating and recording the potential safety hazards from the change or its implementation

(i) Approval of the agreed change and the implementation procedure(s)

The MOC process has 4 basic phases: screening, review, approval and implementation. Both the effect of change and the effect of implementing change are considered.

There are methods for managing the introduction of new technology. All personnel should be consulted when changes to the work environment, process or practices could have health or safety implications. Changes to resource levels and competencies associated risks are assessed as part of the change control procedure.

Figure 1-3 describes the MOC process used by this organisation.

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MOC Process

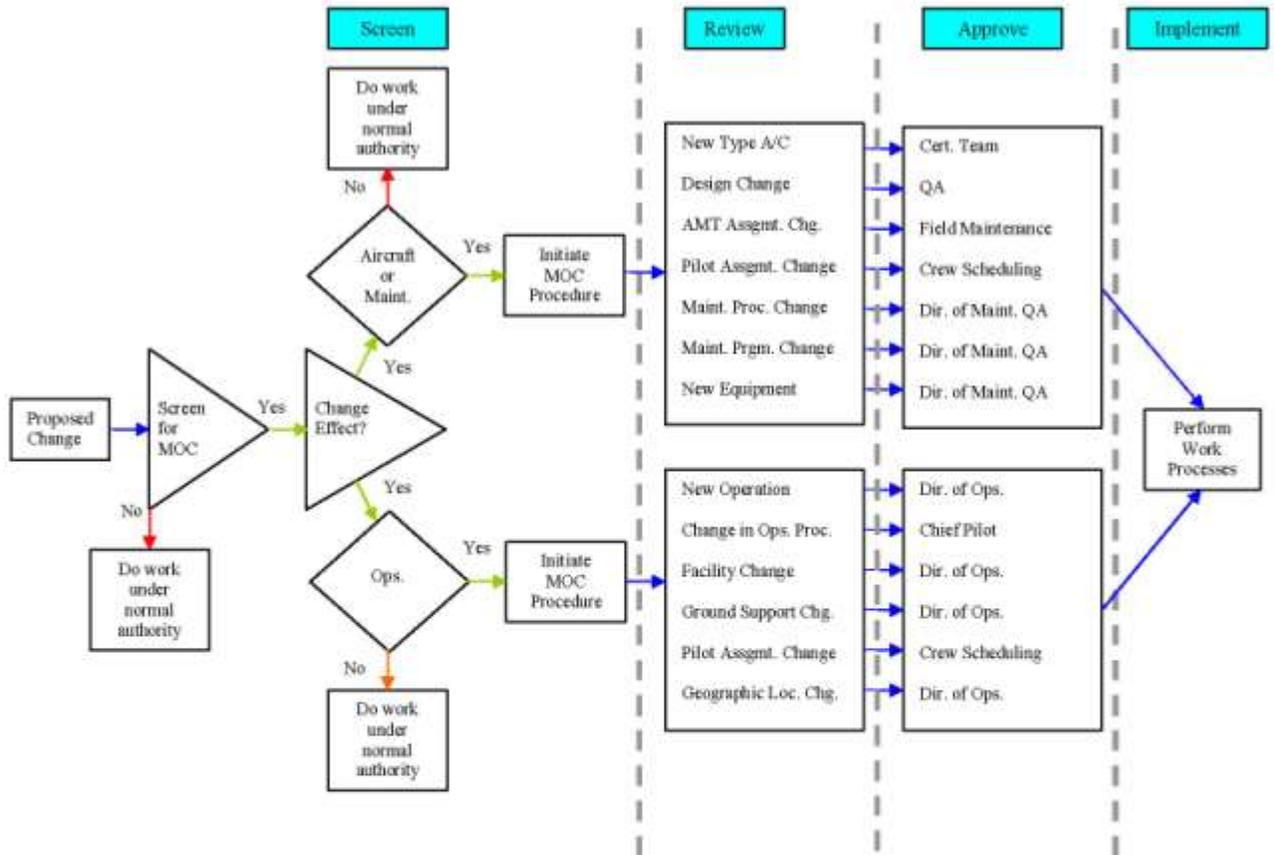
Figure 1 - 3

Emergency Preparedness and Response

The detail of the Emergency Response Plan is contained in the Operations Manual.

The chief pilot is responsible for assuring that all personnel are trained to handle organisation emergencies based on their role in the organization.

Emergency drills shall be conducted at least annually to ensure employees are competent.

Emergency contact numbers shall be posted and kept current at every organisation telephone.

Performance Management

Continual improvement and exemplary service to our customers is a "core value." Safety performance is measured by the following performance measures:

(a) Reduce the number incidents that cause damage and the amount of damage

(b) Reduce the number of incidents per 1,000 hours flown

(c) Reduce the number of injuries to organisation personnel, guests and passengers

(d) Increase the number of actions raised from safety meetings

(e) Reduce the number of "near-miss" events

(f) Reduce the number of non-compliances with standard flight operations procedures as measured by observation or flight data monitoring

(g) Increase compliance with the safety incident management process (reporting, classification, root cause investigation, and implementation of corrective actions)

(h) Reduce the number of non-compliances with standard flight operations procedures as measured by observation or flight data monitoring

(i) Reduce the number of non-compliances with standard flight operations procedures as measured by observation or flight data monitoring.

The chief pilot is responsible for ensuring organisation performance is annually reviewed and employees are adequately informed of the results of the review.

Subcontracted organisations and suppliers

The Safety Manager is responsible for the selection of the subcontracted organisations which offer SMS related services to the organization.

The criteria for the selection are as follows:

1

2

The Quality Assurance manager shall re-evaluate the contracted organisations products/credentials Bi-annually to ensure high quality products standard.

A list of the subcontracted organisation is provided below:

1

2

APPENDIX RESOURCE GUIDE

SMS MANAGEMENT PLAN

(a) Policy Statements

(b) Objectives

(c) Duties and Responsibilities

(d) Competency Requirements

(e) SMS Manual

(f) "Just Culture"

(g) Core Values

(h) Resource Material

SAFETY PROMOTION

(a) Safety Communications (memos, newsletters, posters)

(b) Safety Performance Reports

(c) Employee Feedback System

(d) Safety Training

(e) Resource Material

DOCUMENT and DATA MANAGEMENT

(a) Safety Promotion in SMS Manual

(b) Document Control

(c) Data Management

(d) Resource Material

HAZARD IDENTIFICATION and RISK MANAGEMENT

(a) Change Management

(b) Hazard Tracking and Resolution

RISK ASSESSMENT TOOLS

(a) Safety Case

OCCURRENCE and HAZARD REPORTING

(a) "Just Culture" Process

(b) Reporting Systems, Forms, Feedback

(c) Resource Material

OCCURRENCE INVESTIGATION and ANALYSIS

(a) Investigative Tools

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(b) Resource Material

SAFETY ASSURANCE OVERSIGHT PROGRAMS

(a) Audit Checklists

(b) Audit Report Forms

(c) Communication of Major Findings

(d) Resource Material

SAFETY MEETING TRAINING REQUIREMENTS

(a) Orientation Checklists

(b) Training Tracking System

(c) Safety Meeting Agendas

(d) Resource Material

MANAGEMENT of CHANGES

(a) MOC Flowchart and Form

(b) Resource Material

EMERGENCY PREPAREDNESS and RESPONSE

(a) ERP Checklist

(b) Drill Checklist

(c) Resource Material

PERFORMANCE MEASURES

(a) Key Performance Indicators

(b) Resource Materials

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