



Safety Management System Manual

Annex "G" to CKIA and ORIA Aerodrome Manuals

Version 4.0 | 20th March 2019

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Chapter 1. Safety Management System

1. Purpose and Scope

- 1.1 Written to provide a systematic approach to the safe operations of Charles Kirkconnell and Owen Roberts International Airports, this Cayman Islands Airports Authority (CIAA), Safety Management System Manual describes the systems and processes needed to comply with the safety requirements of the International Civil Aviation Organization requirements of Annexes 10, 11, 13, 14, 19 and Document 9859.
- 1.2 The scope of the CIAA Safety Management System:
- a) Provides details on the CIAA's approach to safety.
 - b) Documents the airport safety policy, objectives, procedures and individual safety accountabilities;
 - c) Outlines the organisational safety management structure at CIAA Airports;
 - d) Provides details of safety related committees;
 - e) Describes the safety risk management and accident/incident investigation process;
 - f) Describes the safety performance monitoring and measurement process;
 - g) Details safety promotion methodology; and
 - h) Provides information on the coordination of emergency response planning.

2. Safety Principles

- 2.1 Safety management within the CIAA is achieved through the implementation of the following principles:
- 2.1.1 **Policy:** An effective Safety Policy that is established to ensure that the highest standards of safety are maintained at all times. This policy is contained within the Safety Policy Statement found on page 11.
- 2.1.2 **Organising:** An effective management structure that is established to ensure that the Safety Policy is achieved. The Policy ensures clear lines of accountability so that it is apparent to all where safety responsibilities persist. Interaction and communication between all airside operators with regard to safety is essential, as is close liaison between each airport and the Civil Aviation Authority of the Cayman Islands.
- 2.1.3 **Planning:** A planned and systematic approach to implementing the Safety Policy that is achieved through an effective safety management system. The planning process will identify the safety priorities and objectives together with training, equipment and other resource requirements. The CIAA requires all companies operating airside to follow industry best practice and have written safe working and operating procedures.
- 2.1.4 **Investigation:** A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions,

including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

- 2.1.5 **Measuring performance:** Performance that is measured against agreed standards to assess when and where improvement is needed. Safety committees discuss and address all matters relating to airside safety so that safe, efficient operations is maintained and enhanced.
- 2.1.6 **Auditing and reviewing performance:** Safety audits are one of the principle methods for fulfilling the safety performance monitoring functions. Safety audits are performed internally and also externally by the Civil Aviation Authority of the Cayman Islands.

3. [Applicability](#)

- 3.1 To fulfil the requirements of ICAO Annex 19, the material herein is aimed at personnel who are responsible for designing, implementing, managing, and performing safety activities, namely:
- a) CIAA officials with responsibilities for compliance with local and international civil aviation aerodrome regulations;
 - b) CIAA operational staff;
 - c) Management of operational organizations, such as operators, ATS providers, concessionaires, maintenance organizations, contractors;
 - d) Safety practitioners, such as safety managers and advisers; and
 - e) Managers and staff of organizations conducting operations with the potential to affect safety at the airport.
- 3.2 Application of the material herein is not limited to operational personnel. Rather, it is relevant to the full spectrum of CIAA employees, Airport Partners and their Staff, Contractors and their Staff, and anyone else conducting business at the Airports.
- 3.3 The CIAA Safety Management Systems Manual is Annex "G" to the Charles Kirkconnell and Owen Roberts International Airport Aerodrome Manuals and any proposed change to this manual will be reviewed to establish impact on the Aerodrome Manuals or any of their other Annexes.

4. [Quality Management and Safety Management Systems](#)

- 4.1 Although Quality Management and Safety Management Systems are separate and distinct processes, they are also inseparable. For that reason, whenever the term SMS is used in this manual, it should be taken to mean all safety components that are built into our processes and procedures and the methods used to verify compliance with these and regulations that are applicable to airport operations and their functions.
- 4.2 Quality Management is a Pro-Active safety assessment that ensures process control and regulatory compliance through constant verification by audit and surveillance

process. Quality Management ensures a constant upgrading of systems based on the results of audits.

- 4.3 Safety Management facilitates continuous improvements in safety through a similar system of auditing processes and procedures to ensure correct application and relevancy.

5. Distribution, Review and Amendment Procedures

1. The CIAA and its management are committed to the on-going process of improving its Safety Management System and therefore updating the Safety Management System Manual when changes are identified. The latest version of this Safety Management System Manual is maintained by the Chief Safety Management Officer and the list of recipients in the following tables will be notified by e-mail when amendments to the manual are issued.

5.1.1 Aerodrome and Regulatory Personnel

CIAA Chief Executive Officer	Chief Safety Management Officer
Director General of Civil Aviation	Chief Security Officer
Chief of Commercial Services	Manager Air Traffic Control
Chief Airport Operations Officer	Manager Aeronautical Information Systems
Manager Facilities & Projects	ORIA Rescue and Fire Fighting Service
Manager Communication and Navigation Services	Airport Operations Command Centre
Chief Financial Officer	Airport Operations Manager
CKIA Rescue and Fire Fighting Service	Airport Manager (CKIA)
CKIA Air Traffic Control Tower	Quality and Compliance Manager
ORIA Air Traffic Control Tower	

5.1.2 Airlines and Handling Agencies

Air Agencies Ltd.	Air Canada
American Airlines	British Airways
Cayman Airways Ltd. / Cayman Express	Cayman Islands Helicopters
FedEx	DHL
Jet Blue Airlines	Delta Airlines
RCIPS Air Unit	Island Air Ltd.
Southwest Airlines	UPS
Sprint Services	United Airlines
WestJet	

5.1.3 Ground Services Agents

Air Agencies	Sol Petroleum Ltd.
Airport Professional Services	Goddard Catering Services
Cayman Dispatch Services	Flowers Air Dispatch Services
Flowers Security Services	Reliable Industries Ltd.

Rubis Fuels Ltd.	
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5.1.4 Government Agencies

Civil Aviation Authority of the Cayman Islands	Office of the Governor
Department of Agriculture	H.M. Customs Department
Department of Tourism	Cayman Islands Fire Service
MRCU	H.M. Department of Immigration
Postal Department	Royal Cayman Islands Police

5.1.5 Other Partners

Bodden Funeral Home	Churchill's Funeral Home
Fosters	Progressive Distributors Ltd
Jacques Scott	

6. Distribution Policy, Review and Amendment Procedure

6.1 The Chief Safety Management Officer is responsible for the production of and amendments to the CIAA Safety Management System Manual.

6.2 When the manual is to be amended, one electronic copy of the amended version will be emailed to the Civil Aviation Authority of the Cayman Islands along with details of the amendment. Once the amended manual is approved by the Civil Aviation Authority of the Cayman Islands, a copy of the manual will be returned to the Chief Safety Management Officer. The Chief Safety Management Officer will then distribute the approved version to manual recipients and make it available on the CIAA website <http://www.caymanairports.com>

6.3 All master documents are published and promulgated in an electronic format and are republished in its entirety at its next version. Printed versions are not controlled. Amendments to the original manual will:

- a) Be listed in an amendment record;
- b) Be recorded in the next version number;
- c) Be dated in the page footer together with the current version number; and
- d) Be marked with a vertical bar next to the amended text.

7. Record of Amendments

- Amendments to this manual will be made to comply with the requirements of the AN (OT) O 2013 (as amended) Part 19 (Article 155) and OTAR 139(139.51) Issue 7. Subpart C and CIAA/QMS/LOP/002.

Manual Version	Date	Subject	Revised By
Version 3.0	10 April 2017	Changes made to the CIAA Safety Policy; updated CIAA website address and Manual Distribution Policy & Amendment Procedure section; changes to MOR reporting policy and changes made to Safety Committee attendees.	Andrew McLaughlin
Draft Version 3.1	25 October 2018	Manual reformatted to meet CIAA Document Revision and Amendment Procedures found in CIAA/QMS/LOP/002; inserted new information on hazard investigation process in Chapter 5 and additional information added on hazard risk analysis procedures.	Andrew McLaughlin

8. Definitions

Airside Personnel	Persons assigned duties on airside that are either employees of the airport operator or those persons employed by third-party airside operators, including fixed-base operators, ground handling agencies, airlines and other organizations that perform activities independently at the airport in relation to flight or aircraft handling.
Cost	Activities, both direct and indirect, involving any negative impact, including money, time, labour, disruption, goodwill, political and intangible losses.
Hazard	A source of potential harm or a situation with a potential to cause loss.
Incident	Means an occurrence, other than an accident, associated with airside operations which affects, or would affect, the safety of operation.
Likelihood	Used as a qualitative description of probability or frequency.
Monitor	To check, supervise, observe critically, or record the progress of an activity or system on a regular basis in order to identify change.
Operational Personnel	Personnel involved in aviation activities who are in a position to report safety information. Note.— Such personnel include, but are not limited to: flight crews; air traffic controllers; aeronautical station operators; maintenance technicians; personnel of aircraft design and manufacturing organizations; cabin crews; flight dispatchers, apron personnel and ground handling personnel.
Potential Risk	Operational risks occurring due to human error and failure of internal procedures of the organization.
Probability	The likelihood of a specific outcome.
Quality Assurance	All those planned and systematic actions necessary to provide adequate confidence that a system, component, or facility will perform satisfactorily in service.
Risk	The chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood.
Risk analysis	A systematic use of available information to determine how often specified events may occur and the magnitude of their consequences.

Risk Assessment	The overall process of risk analysis and risk evaluation.
Risk Evaluation	The process used to determine risk management priorities by comparing the level of risk against predetermined standards, target risk levels or other criteria.
Risk Identification	The process of determining what can happen, why and how.
Risk Level	The level of risk calculated as a function of likelihood and consequence.
Risk Management	The culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects.
Safety	The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.
Safety Deficiency	Means an unsafe condition or underlying factor with risks for which the defences are less than adequate.
Safety Management System (SMS)	A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.
Safety Performance	A State or a service provider's safety achievement as defined by its safety performance targets and safety performance indicators.
Safety Performance Indicator	A data-based parameter used for monitoring and assessing safety performance.
Safety Performance Target	The planned or intended objective for safety performance indicator(s) over a given period.
Safety Risk	The predicted probability and severity of the consequences or outcomes of a hazard.
Serious Incident	Means an incident involving circumstances indicating that an accident nearly occurred.

9. Abbreviations

AN (OT) O	Air Navigation (Overseas Territories) Order
ATC	Air Traffic Control
CAA	Civil Aviation Authority of the Cayman Islands
CAOO	Chief Airport Operations Officer
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHRO	Chief Human Resource Officer
CIAA	Cayman Islands Airports Authority
CKIA	Charles Kirkconnell International Airport
CNS	Communications Navigation Surveillance
CSMO	Chief Safety Management Officer
ICAO	International Civil Aviation Organization
MFP	Manager Facilities and Projects
ORIA	Owen Roberts International Airport
OTAR	Overseas Territories Aviation Requirements
SMS	Safety Management System

Chapter 2. Safety Policy and Objectives

1. Safety Policy

Safety is one of our core business functions. We are committed to developing, implementing, and improving strategies, and processes to ensure that all our aviation activities uphold the highest level of safety performance and where possible meet or exceed national and international standards. We will report incidents, train staff on safety management procedures, and strive to make continuous proactive improvement to the overall level of safety performance in our organization. All levels of management and all employees are accountable for the delivery of this highest level of safety performance, starting with the Chief Executive Officer.

Our commitment is to:

- a) Support the management of safety by creating an organizational “**Just Culture**” atmosphere of trust in which people are encouraged, even rewarded, for providing essential safety related information – but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.
- b) Enforce the management of safety as the **primary** responsibility of all managers and employees.
- c) Clearly define for all staff, managers and employees alike, their accountabilities and responsibilities under the safety management system.
- d) Establish and operate hazard identification and risk management programs, including a hazard reporting system, in order to decrease or eliminate hazards resulting from our operations or activities. At a minimum - drive hazard levels to an Acceptable Level of Safety.
- e) Ensure that no action will be taken against any employee who discloses a safety concern through the hazard reporting system unless such disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or wilful disregard of regulations or procedures.
- f) Comply with, and wherever possible exceed, legislative and regulatory requirements and standards.
- g) Ensure sufficient number and training of personnel to a level of competency to be able to implement safety strategies and processes, and are allocated only tasks commensurate with their skills.
- h) Establish and measure our safety performance against realistic safety performance indicators and safety performance targets.
- i) Continually improve our safety performance through management processes that ensure relevant safety action is taken and is effective.
- j) Ensure externally supplied systems and services to support our operations are delivered meeting our safety performance standards.
- k) Review our Safety Policy annually or as required to ensure alignment with our strategic objectives.



Albert Anderson
Chief Executive Officer
Cayman Islands Airports Authority

2. Safety Objectives and Commitment

2.1 To achieve continuous safety improvement as required by the safety policy found on page 13, management is committed to the following safety performance objectives.

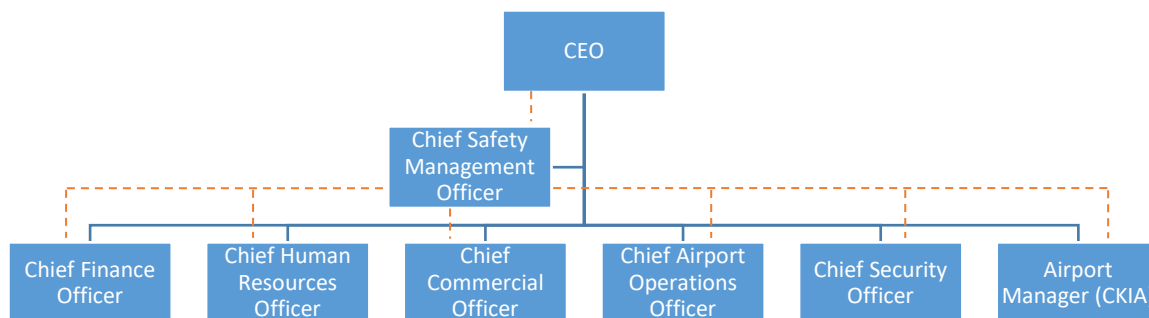
- a) **Safety Management System.** Appoint a Senior Executive for the Safety Management System to oversee the development and implementation of the program and ensure that the application of the SMS is integral to all CIAA aviation activities;
- b) **Safety Culture.** Develop and embed a safety culture in all our aviation activities that recognizes the importance and value of effective aviation safety management and acknowledges at all times that safety is paramount;
- c) **Safety Accountabilities.** Clearly define for all staff their accountabilities and responsibilities for the development and delivery of aviation safety strategy and performance. Ensure that all staff provided with adequate and appropriate aviation safety information and training, are competent in safety matters and are only allocated tasks commensurate with their skills;
- d) **Risk Management.** Minimize the risks associated with aircraft operations to an acceptable level of safety and establish and measure our safety performance against realistic objectives and/or targets;
- e) **Regulatory Compliance.** Actively develop and improve our safety processes to conform to ICAO and OTAR standards. Comply with and, wherever possible, exceed legislative and regulatory requirements and standards. Ensure that externally supplied systems and services that impact upon the safety of our operations meet appropriate safety standards;
- f) **Human Resources.** Ensure that sufficient skilled and trained resources are available to implement this safety policy and continually improve our Safety Performance; and
- g) **Safety Oversight.** Conduct safety audits, including incident and accident investigations, and ensure that relevant mitigation action is taken.

Chapter 3. Safety Accountabilities and Responsibilities

1. SMS Organizational Chart

1.1 A current SMS organization structure is shown in the Organizational Chart below. A full CIAA organizational chart is found in Part 2 of the CIAA CKIA and ORIA aerodrome manuals.

1.2 SMS Organizational Chart



1.3 Safety accountability and responsibility for CIAA roles are defined below. Responsibility and accountability are interlinked. While individual staff members are responsible for their actions, they are also accountable to their supervisor or manager for the safe performance of their functions and may be called on to justify their actions. Accountability is a two-way street. Managers are also accountable for ensuring that their subordinates have the resources, training, experience, etc. needed for the safe completion of their assigned duties. Ultimate responsibility for safety in the CIAA rests with the CEO as the Accountable Manager.

1.3.1 Chief Executive Officer (CEO)

Safety Accountability: The CEO is accountable to the CIAA Board of Directors for the daily operations and management of Owen Roberts International Airport (ORIA) and Charles Kirkconnell International Airport (CKIA) and providing a safe and secure environment for passengers.

Safety Responsibility: In discharging this accountability the CEO is responsible for:

- Authorizing a Safety Policy that indicates the CIAA's commitment to safety;
- Ensuring a Safety Management System is implemented at ORIA and CKIA;
- Assuming the proactive Safety Leadership role and setting the example to ensure commitment throughout the CIAA; particularly at management level, to the safety management policy intent and safety management system requirements;
- Ensuring that ORIA and CKIA Management Team, and Staff are aware and held accountable for their safety performance; and
- Ensuring that CIAA safety management system and operational

performance are evaluated for effectiveness on a regular basis.

1.3.2 Chief Safety Management Officer (CSMO)

Safety Accountability: The Chief Safety Management Officer is accountable to the CEO for:

- Providing advice and assurance relating to safety issues and performance; internal, external and international safety initiatives and requirements;
- Establishing safety policies;
- Establishing a system for safety management education and safety awareness;
- Establishing a safety audit and surveillance system;
- Effective interface with the CAA regarding safety matters; and
- Establishing safety relations with international bodies including ICAO.

Safety Responsibility: In discharging these accountabilities, the Chief Safety Management Officer is responsible for:

- Management of the SMS implementation Plan on behalf of the CEO;
- Establishing and maintaining a safety management system including procedures for identifying, reporting, tracking and correcting safety issues;
- Performing/facilitating hazard identification and safety risk analysis;
- Establishing safety guidelines in accordance with local and international industry standards and publishing them to all ORIA and CKIA users;
- Providing independent advice on safety matters;
- Investigating, analysing and identifying the cause or probable cause of hazards, incidents or accidents, identified by the SMS process to promulgate lessons learned and support the implementation of safety recommendations;
- Monitoring safety concerns in the aviation industry and their perceived impact on the organization's operations aimed at service delivery;
- Preparing monthly report on safety issues for the CEO;
- Reviewing and verifying resolution on Aerodrome inspections and Hazard reports;
- The design, development and management of an effective audit program and record keeping program;
- Developing and promoting SMS training across ORIA and CKIA and monitoring that staff are receiving SMS training, and are qualified and competent to discharge their safety related obligations;;
- Convening the CIAA Safety Committee in the absence of the CEO and maintaining the associated records and action items;
- Ongoing review of interface between ORIA, CKIA, and the CAACI, and other aviation organizations and ensuring improvements are made where required.

1.3.3 Chief Security Officer

Safety Accountability: The Chief Security Officer is accountable to the CEO to:

- Assess and monitor the Airport Security Program;
- Ensure Initial Training and continued certification of all security officers;
- Ensure the Airport Security Plan is in alignment with the National Aviation Security Plan;
- Maintain integrity of safeguards against identified risks;
- Avoid security incidents that could cause human injury, loss of life or damage to property and assets under his/her management.

Safety Responsibility: In discharging this accountability the Chief Security Officer is responsible to:

- Ensure that all work carried is done utilizing the appropriate Personal Protective Equipment and standard Occupational Safety and Health rules and procedures as outlined in the current Cayman Islands Labour Law;
- Ensure that safety issues are reported immediately to Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within the Security department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensure the application of Change Management procedures are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan approved by the Safety Office and disseminated to the appropriate parties affected;
- Ensure that all staff are aware of, and held accountable for, their safety performance by ensuring they are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- Ensure that management of human resources for the Airport Security section is appropriate to facilitate safe operations.

1.3.4 Chief Airport Operations Officer (CAOO)

Safety Accountability: The Chief Airport Operations Officer is accountable to the CEO to:

- Ensure safe and efficient operations of passenger terminals, airside facilities, and cargo operations;
- Ensure Safe delivery of services from:
 - The Communications and Navigation Services section;
 - The Airport Information Services section;

- Air Navigation Services section;
- The Airport Facilities and Maintenance section;
- Airport Operations Command Centre.

Safety Responsibilities: In discharging this accountability, the Chief Airport Operations Officer is responsible for:

- Provision of services and facilities, for customers and stakeholders, for the purpose of the safe navigation of aircraft, within the administered airspace of the Cayman Islands;
- Overseeing the safe performance of daily operations at ORIA to include managing a system to ensure contractors from off- site register all works with Airport Operations prior to commencement;
- Ensure that all work carried is done utilizing the appropriate Personal Protective Equipment and standard Occupational Safety and Health rules and procedures as outlined in the current Cayman Islands Labour Law;
- Ensure that safety issues are reported immediately to Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within all Airport Operations departments ensuring that the methods and systems of work are maintained at an acceptable level of safety;
- Ensure the application of Change Management procedures are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan approved by the Safety Office and disseminated to the appropriate parties affected;
- Ensure that all staff are aware of, and held accountable for, their safety performance by ensuring they are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- Ensure that management of human resources for the Airport Operations section is appropriate to facilitate safe operations.

1.3.5 Chief of Commercial Services Officer

Safety Accountability: The Chief of Commercial Services Officer is accountable to the CEO to:

- Ensure safe and efficient flow of passengers through landside roadways, parking areas and sidewalks;
- Ensure safe and efficient flow of passengers through airport terminals, airside walkways and pavements;
- Ensure Safe delivery of services from:
 - The Airport Customer Service, Airport Marketing, and Business Development sections.

Safety Responsibility: In discharging this accountability the Chief of Commercial Services is responsible for:

- Ensure that all bids or contracts for any construction, installation, repair/renovation, maintenance or improvement contain the necessary verbiage and or clauses to bind the person, company or organization providing said work to include CIAA safety management policies and procedures in all work performed;
- Ensure that all work carried is done utilizing the appropriate Personal Protective Equipment and standard Occupational Safety and Health rules and procedures as outlined in the current Cayman Islands Labour Law;
- Ensure that safety issues are reported immediately to Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within his/her department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensure the application of Change Management procedures are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan approved by the Safety Office and disseminated to the appropriate parties affected;
- Ensure that all staff are aware of, and held accountable for, their safety performance by ensuring they are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- Ensure that management of human resources for the Airport Customer and Commercial Services section is appropriate to facilitate safe operations.

1.3.6 Chief Financial Officer (CFO)

Safety Accountability: The CFO is accountable to the CEO for effective management of the financial resources and timely availability of funds to meet all requirements essential for ensuring operational safety.

Safety Responsibilities: In discharging this accountability the CFO is responsible to:

- Establish the appropriate controls over financial activities to ensure the safety of ORIA and CKIA is not compromised by changes to the financial system;
- Ensure that safety issues are reported immediately to Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within the Finance department ensuring that the methods and systems of work are maintained at an acceptable level of safety (risk can take the form of actions that can cause financial hardship for the organization);

- Ensure that all staff are aware of, and held accountable for, their safety performance by ensuring they are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- Ensure that management of human resources for the Airport Finance section is appropriate to facilitate safe operations.

1.3.7 Chief Human Resource Officer (CHRO)

Safety Accountability: The Chief Human Resources Officer is accountable to the CEO for:

- Development of personnel policies for recruitment, placement and retention of personnel who are highly qualified and most suited for the task, and have the correct attitude towards operational safety;
- Development and maintenance of a performance management system that includes tracking each employees safety record;
- Creation and review of manpower requirements in keeping with ORIA and CKIA overall Safety Performance Goals; and
- Implementation of aviation safety related government policies with respect to general administration matters like restrictions on duty hours etc.

Safety Responsibilities: In discharging these accountabilities, the CHRO is responsible for:

- Ensuring that safety considerations are given the foremost priority in decisions involving personnel management;
- Ensuring that any safety issues are reported immediately to the Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within the HR department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensuring that all HR Division managers, supervisors and staff are trained in SMS in the first 30 days of joining, and attend annual SMS Refresher training thereafter,
- Ensuring that all new CIAA personnel are given the CIAA Commitment to Workplace Safety Form and are appropriately scheduled for the next available SMS Annual training class with the Safety Office within 30 days of joining;
- Ensure the signed Commitment to Workplace Safety form and completion certificates for the class will become a part of each employees personnel record and a copy will be sent to the Safety Office for filing;
- Ensuring the management of CIAA human resources is appropriate to facilitate safe operations.

1.3.8 Airport Manager (CKIA)

Safety Accountability: The Airport Manager CKIA is accountable to the CEO to ensure safe and efficient operations of passenger terminals, airside facilities, and cargo operations at CKIA.

Safety Responsibilities: In discharging this accountability, the Airport Manager CKIA is responsible for:

- Overseeing the safe performance of daily operations at CKIA to include managing a system to ensure contractors from off- site register all works with Airport Operations prior to commencement;
- Ensure that all work carried is done utilizing the appropriate Personal Protective Equipment and standard Occupational Safety and Health rules and procedures as outlined in the current Cayman Islands Labour Law;
- Ensure that safety issues are reported immediately to Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities at CKIA, ensuring that the methods and systems of work are maintained at an acceptable level of safety;
- Ensure the application of Change Management procedures are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan approved by the Safety Office and disseminated to the appropriate parties affected;
- Ensure that all staff are aware of, and held accountable for, their safety performance by ensuring they are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- Ensure that management of human resources for the CKIA Airport Operations section is appropriate to facilitate safe operations.

1.3.9 Manager Facilities and Projects (MFP)

Safety Accountability: The MFP is accountable to the CEO to ensure the following services under his supervision are performed in accordance with the SMS manual guidelines:

- Maintenance of ORIA and CKIA pavements (runways, taxiways, aprons, etc.), airport terminal electrical systems and other airport services including landscaping;
- Provision of Electrical Engineering and Maintenance at ORIA and CKIA such as elevators, baggage conveyors, air condition systems etc.; and
- Provision of line power and backup power supply to all ORIA and CKIA installations including Communications equipment and Navigational Aids.

Safety Responsibilities: In discharging these accountabilities, the MFP is responsible for:

- Ensuring the application of change management procedures in accordance with SMS policy and procedures in this manual are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan endorsed by the Safety Office and that has been disseminated to the appropriate parties affected;
- Ensure that all work carried out by operational personnel under his charge is done utilizing the appropriate Personal Protective Equipment and standard Occupational Safety and Health rules and procedures as outlined in the Cayman Islands Labour Law;
- Ensuring that safety issues are reported in a timely manner to the Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within his/her department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensuring that all Electrical staff reporting to him receives initial SMS Training within the first 30 days of joining, and annual recurrent SMS training thereafter;
- **Ensuring that management of human resources is appropriate to facilitate safe operations;**
- Ensure that all bids or contracts for any construction, installation, repair/renovation, maintenance or improvement contain the necessary verbiage and or clauses to bind the person or company or organization providing said work to include CIAA safety management policies and procedures in all work performed.

1.3.10 Manager Air Traffic Control (ATC)

Safety Accountability: The Manager ATC is accountable to the CEO for:

- Provision of services and facilities, for customers and stakeholders, for the purpose of the safe navigation of aircraft, within the administered airspace of the Cayman Islands.

Safety Responsibilities: In discharging these accountabilities, the Manager ATC is responsible for:

- Overseeing the safe performance of daily operations in ATC;
- Ensuring the application of change management procedures in accordance with SMS policy and procedures in this manual are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan endorsed by the Safety Office and that has been disseminated to the appropriate parties affected;

- Ensuring that safety issues, incidents, accidents and near-miss incidents are properly reported in a timely manner to the Airport Operations Command Centre and Safety Office;
- Proactively manage risk by conducting Risk Assessments on activities within the ATC department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensuring that all Air Traffic Control, managers, supervisors and staff are aware of, and held accountable for, their safety performance;
- Ensuring that all Air Traffic Control, managers, supervisors and staff are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- **Ensuring that management of human resources is appropriate to facilitate safe operations.**

1.3.11 Manager Communication and Navigational Services (CNS)

Safety Accountability: The Manager CNS is accountable to the CEO for supporting the Safety Management System by:

- Provision of navigational aids and communication, for customers and stakeholders, for the purpose of the safe navigation of aircraft, within the administered airspace of the Cayman Islands.

Safety Responsibilities: In discharging this accountability, the Manager CNS is responsible to:

- Understand and implement company safety policies;
- Provide written Standard Operating Procedures of work methods outlining potential hazards and precautions, and ensure they are complied with;
- Ensuring that safety issues are reported in a timely manner to the Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Proactively manage risk by conducting Risk Assessments on activities within the CNS department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensuring the application of change management procedures in accordance with SMS policy and procedures in this manual are followed and all works that will interfere with the normal operation of the aerodrome or its users is done in accordance with a Works Safety Plan endorsed by the Safety Office and that has been disseminated to the appropriate parties affected;
- Ensure all accident and near-miss incidents are properly reported to the Safety Office in a timely manner and assist with accident investigations where appropriate.

- Ensure all employees and sub-contractors are suitably trained/competent to carry out the prescribed task and that the necessary licenses/certificates of competence are in force and appropriate.
- Ensuring that all CNS managers, supervisors and staff are trained in SMS in the first 30 days of joining, and attend Annual SMS training thereafter;
- Ensuring that management of human resources is appropriate to facilitate safe operations.

1.3.12 All Supervisors/Managers

Safety Accountability: All Supervisors/Managers are accountable to the CEO for supporting the Safety Management System by:

- Ensuring his or her own personal safety and that of all personnel under his or her authority, including others who may be affected by the company's activities.

Safety Responsibilities: In discharging this accountability, Supervisors/Managers are responsible to:

- Understand and implement company safety policies;
- Provide written Standard Operating Procedures of work methods outlining potential hazards and precautions, and ensure they are complied with.
- Ensuring that safety issues are reported in a timely manner to the Airport Operations Command Centre and appropriate corrective actions are taken to address hazards and errors reported;
- Conduct Risk Assessments on activities within their department ensuring that the methods and systems of work are maintained at an acceptable level of safety.
- Ensure accident and near-miss incidents are properly reported and ;
- Ensure all employees and sub-contractors are suitably trained/competent to carry out the prescribed task and that the necessary licenses/certificates of competence are in force and appropriate.

1.3.13 All CIAA Personnel

Safety Accountability: All CIAA Personnel are accountable to the CEO for supporting the Safety Management System by:

- Ensuring that the compliance with safety responsibilities in all working spaces is paramount;
- Delivering all goods and services with the highest level of safety performance;
- Complying with, and wherever possible, exceed legislative and regulatory requirements and standards for safety;
- Ensuring that externally supplied systems and services to support our operations are delivered meeting our safety performance standards.

Safety Responsibilities: In discharging these accountabilities, all CIAA personnel are responsible to:

- Comply with the relevant safety requirements and procedures outlined in:
 - CIAA Safety Management Manual (SMM) and any Supplementary Manuals;
 - Aerodrome Manual and other duly authorised Manuals, Safety Directives, and Safety Advisories;
- To apply system safety measures as required by safety management procedures and instructions;
- To report any situation of potential risk or concern affecting safety via one of the following means:
 - Report directly to their immediate **Supervisor** or the **Airport Operations Command Centre**;
 - Submitting either an Incident/Accident report or a Confidential Report of what has occurred.
- Supporting safety audits as and when they occur; and
- Supporting safety investigations as and when they occur;
- Attend CIAA Annual SMS Training Course each calendar year.

1.3.14 All Airport Partners, Concessionaires, Contractors and Tenants

Safety Responsibilities: All Airport Partners, Concessionaires, Contractors and Tenant Organizations located on or conducting business or operations on the Aerodromes have the following requirements:

- To comply with the relevant CIAA safety requirements and mitigation procedures outlined in:
 - The CIAA Safety Management Manual (SMM) and other CIAA Safety Manuals pertinent to the type of work you are engaged in at the airport (ie. AVOP, Apron Management Manual);
 - The Approved Works Safety Plan for a particular project.
- To attend or provide acceptable proof of receiving relevant safety training as required by the Safety Office;
- To advise the Airport Operations Command Centre or Chief Safety Management Officer immediately of any safety occurrence or system failure and to identify and report any situation of potential risk or concern affecting system safety via one of the following means:

- Report it directly to the CIAA Project Manager or the Chief Safety Management Officer;
 - Submitting either an Incident/Accident report or a Confidential Report by calling 345-244-5835.
- To Submit to safety audits as and when they occur;
 - To provide support for safety investigations as and when they occur;
 - To either develop an acceptable Safety Management System for your organization based on the four guiding principles or provide relevant proof of compliance with the procedures and processes outlined in the CIAA Safety Management Manual via the maintenance of a Company Risk Register identifying all Hazards and Risks associated with their operation.

2. Appointment of Key Safety Personnel

2.1 There are two posts currently required to manage and maintain the Safety Management System at Owen Roberts and Charles Kirkconnell International Airports. They are the Chief Safety Management Officer, and Airport Safety Officer.

2.2 As the SMS program develops and the airports continue to expand, review of these basic billets may be required to ensure adequate manpower requirements are met to provide safety oversight of operations as well as guarantee continuous improvement to the level of safety at both airports. The following is a brief description of each billet and associated duties:

2.2.1 Chief Safety Management Officer

- a) Guides the implementation of the SMS system in all areas at both airports, while providing positive training in SMS to all users;
- b) Is the focal point for all safety policies as well as hazard identification and risk mitigation plans during construction activities;
- c) Provides information and scheduling for airport internal audits, airport fire drills and airport emergency exercises;
- d) Monitors corrective action plans for the internal audit and reports status regularly to the CEO;
- e) Acts as Facilitator for the Airport Safety Committee and Chairman of the Airport Emergency Planning Committee;

2.2.2 Airport Safety Officer

- a) Assists with safety oversight of the airport landside, terminal and airside operations and facilities as required;
- b) Monitors Wildlife and FOD levels, assists with Accident/ Incident Investigations and SMS investigations when needed;
- c) Provides support to the Chief Safety Management Officer in all areas as needed.

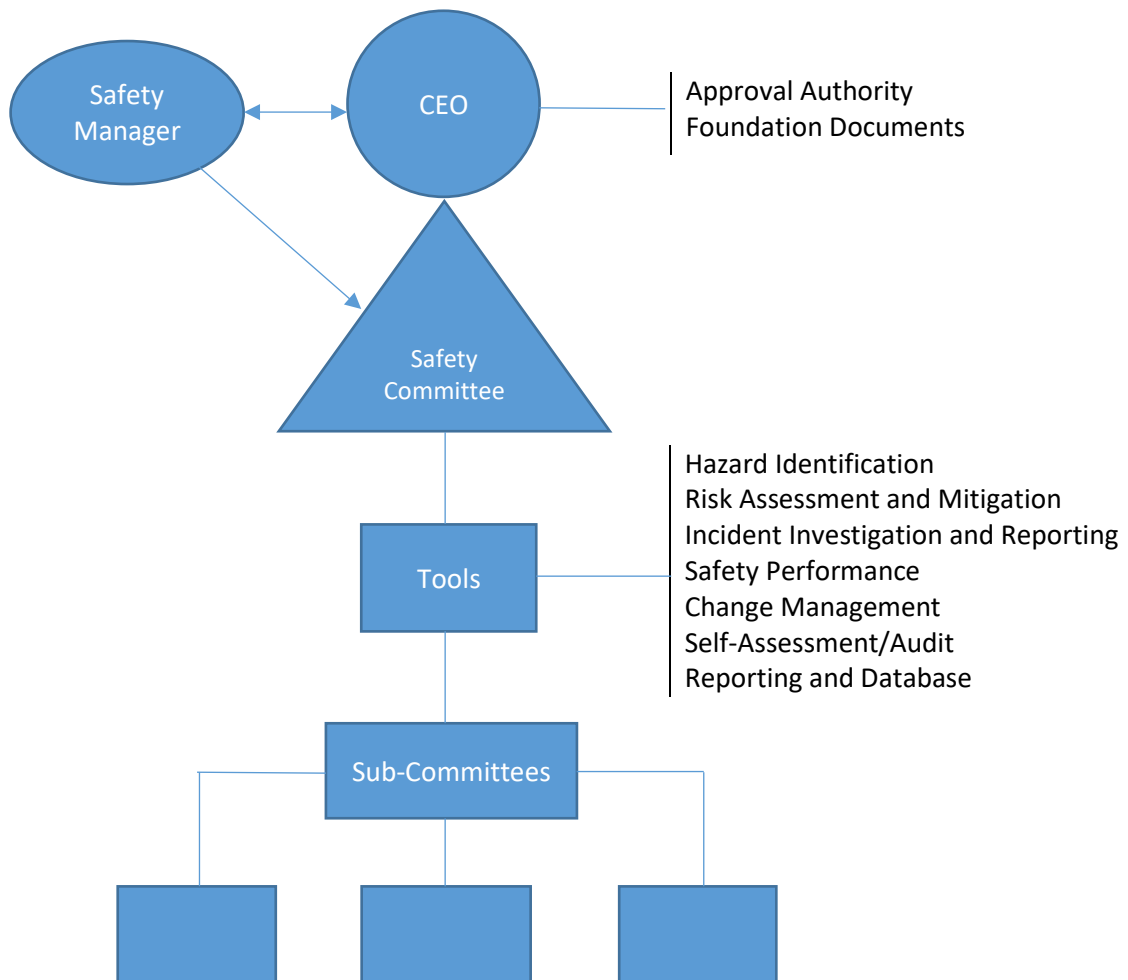
2.3 Coordination of Emergency Response Planning

- 2.3.1 The Chief Safety Management Officer in collaboration with the Chief Airport Operations Officer and Airport Manager CKIA will assist in the development and amendment of the Airport Emergency Plan at both airports. The CSMO will act as Chairman for the Airport Emergency Planning Committee at Owen Roberts and Charles Kirkconnell International Airports. The CSMO, in collaboration with the Chief Airport Operations Officer and Airport Manager CKIA will schedule, plan and orchestrate all emergency exercises in order to test each AEP and judge its effectiveness.

Chapter 4. SMS Process and Documentation

1. The CEO is the accountable executive for the SMS program and must ensure the elements are in place for an effective program. The diagram in 1.1 below illustrates the interrelationship of the SMS program process. The CIAA’s SMS manual is the key instrument for communicating the approach to safety for the whole of the organisation. It documents all aspects of the SMS, including the safety policy, objectives, procedures and individual safety accountabilities. SMS is dynamic and constantly evolving and therefore the SMS manual is a living document that is reviewed regularly to ensure that it remains accurate and appropriate.

1.1



1.2 In the diagram above the CEO presides over the safety committee. His first requirement is to ensure creation of the foundation documents for which he holds the approval authority. This includes job descriptions, guidelines, directives, agreements, policies and regulatory obligations. All responsibilities and procedures must be described in documents approved by the CEO or the regulator as applicable. This provides a clear commitment to the obligations required for the service provider, the user and the regulating auditor. In addition, records, data and reports produced for or submitted to the airport are retained and made available to interested parties.

1.3 The CEO has the responsibility for chairing the safety committee, a forum for airport management to work with its users and staff to consider and address safety related issues. Membership is open to all interested parties.

1.4 In the absence of the CEO, the Chief Safety Management Officer will serve as his communicator and facilitator and chair the meeting. The general role of that position is to:

- a) Facilitate the SMS program through the operational managers both internally and externally;
- b) Communicate issues, concerns and progress to the CEO;
- c) Advise the CEO when it is necessary to provide authoritative directions; and
- d) Arrange for regulatory assessments and the preparation of reports with recommendations for safety committee review.

1.5 The next illustration in the diagram lists the Safety Management tools expected to be used in this process:

- Hazard Identification
- Incident Investigation and Reporting
- Risk Assessment and Mitigation
- Safety Performance
- Change Management
- Self-Assessment/Audit
- Reporting and Database

1.6 Each of these tools will be discussed in detail in the following sections of this manual.

1.7 The last entity in the diagram refers to subcommittees. From time to time the safety committee will create these subcommittees for focus on specific issues as required. They will be composed of the duty experts in the area under question. Such subcommittees can be created for an ongoing term of reference such as the CKIA Safety Sub-committee or apron management committee, or for a short time just to deal with specific issues.

2. The Aerodrome Safety Committee

2.1 A body which should possess the necessary expertise and experience to provide advice to airport management on safety matters. The Safety Committee is of extreme importance to the SMS process as it provides a forum for Airport Management to work with its users and staff to consider and address safety related issues. The meetings should have a **relaxed and open atmosphere** so as to maximize the learning and development of recommendations to improve safety. Once the committee has voted in majority on a recommendation it will be relayed to the CEO for consideration and if approved will be issued as a Safety Directive or Advisory (depending on the level of importance). Whenever a Safety Directive is issued the compliance period will be clearly indicated.

2.2 **The chairman of the committee shall be the CEO**, assisted by the Secretary. Minutes of meetings will be kept and distributed to those attending. The Secretary will prepare and distribute the meeting minutes and agendas in a timely manner together with any relevant papers for member consideration. All committee members have the ability to submit potential agenda items via the Secretary or Chairman. The Chairman and Secretary will meet to review and finalize the agenda for the upcoming meeting. All documents for the upcoming meeting shall be distributed within a week of the upcoming meeting. **Any actions arising from meetings will be annotated in the Minutes as actionable items with proposed deadlines, and a status will be expected at the next meeting.**

2.3 The Committee may from time to time establish and nominate special Working Groups/Sub-Committees to consider and report on particular safety issues. The Chief Safety Management Officer and his staff will coordinate activities and provide assistance to the Safety Committee and any Sub-Committees that from time to time may be formed. The Safety Committee will meet quarterly **as scheduled in the CIAA Conference room**. The standing agenda will include:

- a) Review of Minutes of previous meetings;
- b) Discussion on matters arising from Minutes;
- c) Review of recent safety reports on incidents and investigations;
- d) Open forum discussion on safety compliance issues and any other matters submitted by members.

2.4 The Safety Committee members shall include at a minimum:

- a) Chief Executive Officer or designate;
- b) The Chief Airport Operations Officer or designate;
- c) Facilities and Projects Manager or designate;
- d) AIS Manager or designate;
- e) Manager CNS or designate;
- f) ATC Manager or designate;
- g) Airport Manager CKIA;
- h) The Senior Customs Officer at the Airport;
- i) The Senior Immigration Officer at the Airport;
- j) The Fixed Base Operator (Island Air) Safety Officer;
- k) RCIPS Air Unit Safety Officer
- l) The Chief Fire Officer or safety designate; and
- m) The Station Manager for each Airline or their safety designate.

2.5 Examples of other attendees could include:

- a) Aircraft Pilots;
- b) Ground Handlers;
- c) Concessionaires;
- d) Tenants;
- e) Fuelling Companies;
- f) Aircraft catering companies;

- g) Aircraft cleaning companies; and
- h) Other service providers at the airport.

2.6 In short, everyone who has something to gain or lose is eligible to submit material through the Safety Manager or to attend the meetings in person.

2.7 The Safety Committee shall:

- a) Discuss airport safety matters affecting the airport and its users;
- b) Conduct periodic reviews of the Safety Management System as detailed in this document to recommend adjustments where required;
- c) Help identify hazards and risks and advise on safety measures to improve safety, for example:
 - Apron congestion;
 - Foreign object debris;
 - Airside vehicle operations; and
 - Noise and jet blasts.
- d) Review safety procedures and recommend any necessary changes, for example:
 - Standard vehicle operating procedures; and
 - Apron management procedures.
- e) Review reports on safety hazards/risks, incidents and accidents and action taken, or proposed;
- f) Receive reports on significant outages and breakdowns concerning airside fixed facilities;
- g) Provide advice on methods to develop and promote apron safety awareness initiatives, such as poster campaigns and safety presentations/exhibitions; and
- h) Provide advice on safety measures to be incorporated into airport expansions or modifications.

2.8 The Chief Safety Management Officer is the administrator for the safety committee, providing support functions, and observing and reporting progress from the group to the CEO. The Chief Safety Management Officer, under the direction of the Safety Committee will:

- a) Receive voluntary/involuntary or confidential hazard reporting forms;
- b) Identify hazards and carry out risk evaluation using the Risk Assessment forms provided in section 2 of this manual;
- c) Identify and document appropriate risk treatment/controls to reduce, eliminate or avoid risks;
- d) Periodically monitor the mitigation status of each identified hazard;
- e) Maintain records of the process described above for at least 7 years and make them available for inspection or audit by the CAA.

2.9 Safety Management System Documentation

2.9.1 Need for Safety Reports

2.9.1.1 Knowledge derived from incidents can provide significant insights into safety hazards. Some safety databases contain a large quantity of detailed information. Safety reports systems should not just be restricted to incidents but should include hazards, i.e. unsafe conditions that have not yet caused an incident. Data from such reports facilitates an understanding of the causes of hazards, helps to define intervention strategies and helps to verify the effectiveness of interventions. Depending on the depth to which they are investigated, incidents can provide a unique means of obtaining first-hand evidence on the factors associated with mishaps from the participants. Incident data can also be used to improve operating procedures, and display and control design, as well as to provide a better understanding of human performance associated with the operation of aircraft, ATC and aerodromes.

2.9.2 Handling Safety Reports

2.9.2.1 The safety reports received will be handled with absolute confidentiality as far as the names and identities are concerned. The reports which are mandatory to be transmitted to DGCA would be transmitted and followed up with a brief investigation report, where applicable. In any case, each report would be investigated, analysed and entered in a database. A trend projection and cause and effect analysis would be carried out and feedback provided to the management concerned and relevant authorities. Based on the above analysis, the need to review or reassess any safety measure will be evaluated, documented and acted upon accordingly. In order to ensure build-up of user confidence in the system, **it is important to provide a feedback to the reporting agency or employee on what action, if any, was taken on the report.** It is important to remember that this feedback is even more important when no action was taken since in the absence of any visible action, the users may lose confidence in the system and stop reporting matters altogether. In the event the report received was anonymous, this feedback may be circulated in the form of a notice board entry/e-mail containing a brief statement of the problem and action taken to resolve the same without referring to the fact that the same was consequential to an anonymous report.

2.10 Data Reporting

2.10.1 The primary objective is to avoid collisions and or strikes involving persons, aircraft or vehicles on the maneuvering area that will result in death or injuries to persons. Success in meeting our goals and implementing our programs will be reported annually to all personnel. To achieve our goals, the CIAA will implement detailed safety policies and practices, as well as training and safety communication programs. Airport Management will monitor the implementation of these through the CSMO and the Safety Committee. Indicators of the implementation of safety programs, practices and training will also be reported annually. Key indicators include, for example:

- a) Number of examinations for airport drivers' permits;
- b) Number and percentage of new airport personnel who received initial SMS training;
- c) Number and percentage of existing airport personnel who received annual SMS refresher training;
- d) The number of incident and accident reports addressed and not addressed within one month;
- e) Dates of the meetings of the Safety Committee and a summary of decisions and actions taken;
- f) A listing of periodic safety bulletins that were issued;
- g) A summary of new or revised safety practices and procedures that were developed and issued;
- h) A summary of communications initiatives taken during the year;
- i) A summary of special safety training seminars such as manual lifting, use of new tugs, etc., that were held and who attended; and
- j) A summary of audit and monitoring reports and actions taken.

2.11 Data Record Keeping

2.11.1 The following records will be kept for seven years:

- a) The original SMS documents and subsequent revisions;
- b) Risk assessments and associated action plans;
- c) Safety Hazard Reports;
- d) Safety Observations Report;
- e) Accident and Incident Analysis Forms;
- f) Minutes of the Meetings of the Safety Committee;
- g) Minutes of the Meetings of Safety Subcommittees;
- h) Annual Safety Reports;
- i) Airport Safety Directives, Policies, Practices and Rules;
- j) Safety Newsletters/Bulletins;
- k) Description of Training Programs, who attended and when;
- l) Operational and maintenance records.

Note- All mandatory incident and accident reports will be kept for at least 7 years. If there is a legal action outstanding or anticipated regarding an incident or accident, then they will be kept until the legal action is completed.

2.12 Introduction to Reporting System

2.12.1 Safety management systems involve the reactive and proactive identification of safety hazards. Accident investigations reveal a great deal about safety hazards; but fortunately, aviation accidents are rare events. They are, however, generally investigated more thoroughly than incidents. Research leading to the 1:600 Rule showed that the number of incidents is significantly greater than the number of accidents for comparable types of occurrences. The causal and contributory factors associated with incidents may also culminate in accidents. Often, only good fortune

prevents an incident from becoming an accident. Unfortunately, these incidents are not always known to those responsible for reducing or eliminating the associated risks. This may be due to the unavailability of reporting systems, or people not being sufficiently motivated to report incidents.

2.12.2 Statutory Requirements

2.12.2.1 ICAO and the CAA require each airport to establish an incident reporting system to facilitate the collection of information on actual or potential safety deficiencies. In addition, personnel are encouraged to submit voluntary incident reports which:

- a) Facilitate collection of information that may not be captured by a mandatory incident reporting system;
- b) Is non-punitive; and
- c) Affords protection to the sources of the information.

2.12.3 Non-punitive Reporting System

2.12.3.1 Non punitive reporting is a cornerstone of any safety management program. Senior management must be open to employee safety concerns and promote and ensure that there is no punitive fallout for the reporting of safety concerns. All employees must feel free to report any safety concerns they have and have an expectation that they will be heard that their concern taken seriously and that their career or employment will not be affected. As part of the education process, the Chief Safety Management Officer will ensure that staff is made aware that they will not be penalized for submitting a report and assurance that their confidentiality will be protected if required.

2.12.4 Reporting of Aircraft Accidents or Serious Incidents

2.12.4.1 The primary objective of occurrence reporting is to monitor, disseminate and record for analysis, critical or potentially critical safety occurrences for the enhancement of safety. It is not to apportion blame. On ORIA and CKIA Aerodromes all Airline personnel, Air traffic Controllers, members of Ground Handling Companies, Service providers and Airport Employees are required to report all aircraft accidents and/or serious incidents to the CAACI immediately. This can be done verbally by calling:

- a) The **Director General of Civil Aviation** at 345-916-6285;
- b) The **Deputy Director General of Civil Aviation** at 345-925-5048;
- c) The **Director of Air Safety Regulation** at 345-925-3640; or
- d) The **Director of Air Navigation Services Regulation** at 345-916-6532.

2.12.4.2 The detail of the initial report by telephone should be confirmed by submitting the same details on Occurrence Reporting Form- OT 1673 (examples of accidents and serious incidents and the reporting form can be found in the CAA

Manual of Reporting – Part 1, Appendix A-2-3). The report should be forwarded to the CAA by either:

- a) Email to MOR@CAACAYMAN.COM; or
- b) By Fax to 1-345-949-0761

2.12.4.3 A copy of any report should be also forwarded to the CIAA Chief Safety Management Officer at 345-916-5317 or by email to safety@caymanairports.com

2.12.5 Mandatory Occurrence Reporting to the CAA

2.12.5.1 The existence of the Mandatory Occurrence Reporting (MOR) scheme is to achieve the following objectives:

- a) To ensure the CAACI is advised of hazardous or potentially hazardous incidents and defects (Occurrences);
- b) To ensure knowledge of these occurrences is disseminated so that persons and organizations may learn from them;
- c) To enable an assessment to be made, by those concerned, of the safety implications of each occurrence, both in itself and in relation to previous similar occurrences, so that they may take or initiate any necessary action.

2.12.5.2 The overall objective of the CAA's analysis of occurrence reports is to use the information derived to improve the level of safety. It is not to attribute blame.

2.12.5.3 Examples of occurrences that warrant mandatory occurrence reporting to the CAA include:

- a) Any accident or event that results in a fatality, injury or illness to person or damage to property or the environment.
- b) An event which if not corrected would likely endanger people, property or the environment, or an incident involving circumstances indicating that an accident nearly occurred. The following are examples of these types of incidents:
 - Failure or significant malfunction of airfield lighting;
 - Runways or aircraft manoeuvring areas obstructed by aircraft, vehicles or foreign objects, resulting in a hazardous or potentially hazardous situation;
 - Runway incursions;
 - Errors or inadequacies in marking of obstructions or hazards on runway or aircraft manoeuvring areas;
 - Collision between a moving aircraft and any other aircraft, vehicle or other ground object;

- Jet or prop blast incidents that could have resulted in significant damage or serious injury;
- FOD and wildlife on the runway that strikes an aircraft; and
- When an aircraft was, or could have been, endangered by the impairment of any member of ground staff.

2.12.5.4 MOR Submissions

- a) In all cases the report will be submitted as soon as possible, by the quickest means available. When the circumstances of an occurrence are judged to be particularly hazardous, the CAA is to be informed of the essential details immediately by telephone at the numbers listed in the previous section on reportable accidents and incidents. This shall be followed by a written report to the **CAACI and CIAA CSMO within 72 hours of the event.** Notwithstanding the requirements to actually prepare and file a Mandatory Report, it is the responsibility of every person working at ORIA or CKIA who observes or witnesses a mandatory incident or accident to inform the Chief Safety Management Officer, and their respective supervisor or manager of the details of the incident or accident immediately.

2.12.5.5 Voluntary Reporting

- a) Any person working at the airport may and is encouraged to report what they see as a potential safety hazard or concern which could lead to an accident, damage or injury. Examples include a driver not stopping for passengers, inadequate escorts for arriving or departing passengers, airside personnel potentially exposed to jet blast, FOD receptacles not emptied, vehicles left unattended on the apron, confusing signs, poor lighting, etc. The person who wants to make a report may do so by verbally telling the Chief Safety Management Officer, Airport Safety Officer or Airport Duty Officer about his or her concern. This could take place while any of these people are conducting routine safety observations, or by phone to the **Airport Operations Command Centre @ 345-244-5835** or by visiting the Chief Safety Management Officer in his office. The person making the report can further elect whether to use his or her name in relation to the report. The Chief Safety Management Officer will maintain the confidentiality of the person making a report if needed.
- b) Regardless of how the report is received, recommendations will be made or action taken to mitigate the hazard as quickly as possible depending on its severity and perceived risk. Once the report is officially received by the Safety Office the Chief Safety Management Officer will investigate the potential hazard himself or assign someone to this case. The Risk will be analysed and a determination will be made

as to what action, if any, is required. For written reports, where the person has given their name, the Chief Safety Management Officer will provide written feedback to the originator that the concern or potential hazard has been analysed and that appropriate action has been taken, or why no action was taken if appropriate. In cases where a lesson can be learned the feedback will be passed at the next meeting of the Safety Committee.

- c) **Annual Safety Meeting- The CSMO is responsible for preparing an Annual Safety Report that will address the key indicators and how well the Airport has met its safety objectives.**

2.12.5.6 Safety Violations

- a) Although the CIAA supports a “no-blame” accident and incident reporting policy, the CIAA will not tolerate violations of certain safety rules at the airport and “safety infraction tickets” will be issued to individuals. These tickets will be issued against pre-defined offenses and will carry penalty points. A full description of this process and listing of the offenses and pre-determined points is available in the CIAA Apron Management and Procedures Manual.

Chapter 5. Safety Risk Management and Investigation Process

1. Hazard Identification

1.1 The Safety Office plays a big role and is central to the identification of hazards. As a part of their responsibilities, Safety Office staff is expected to spend a portion of their time physically touring the airport and its landside facilities as well as maintaining a presence on airside working areas. While there, the observation of operations, maintenance and construction activities to ensure that safe practices and procedures are being followed is paramount. Safety Office personnel are also expected to talk with any available personnel working on the aerodrome to determine if they have any safety concerns or questions. A combination of this personal approach and a healthy reporting system should identify a large portion of the hazards that exist.

1.2 A structured approach to the identification of hazards may include the use of group brainstorming sessions in which subject-matter experts conduct detailed analysis scenarios. Hazard identification sessions require a range of experienced operational and technical personnel and are managed by the Chief Safety Management Officer. The same group may also be used to assess corresponding safety risks.

2. Hazard Reporting

2.1 In the event that an accident or incident occurs- immediately notify **The Airport Operations Command Centre @244-5835 or 1-800-534-2622 (AOCC)**, who will log the event and dispatch appropriate personnel to assist. The following paragraphs are for information purposes and relate to airside occurrences.

3. Hazard Investigations

3.1 The guidance on investigating any occurrence airside is contained in Annex 13. The sole objective of the investigation of an occurrence shall be for prevention. It is not the purpose of this activity to apportion blame or liability. For aircraft accidents, the Director-General will appoint a local person for the purpose of assisting with such investigations. This person will act as the local Accident Investigation Manager (AIM) and provide assistance to the UK Air Accident Investigation Branch (AAIB) appointed investigator. In addition the Director-General may order the investigation of any serious incident involving an aircraft or a person associated with the maintenance and operation of aircraft, or both. Incidents other than serious incidents shall be investigated at the discretion of the Airport CEO/Chief Safety Management Officer.

4. Hazard Responsibility

4.1 The aerodrome closest to the site of an aircraft accident/serious incident is responsible to report the occurrence to the Air Accidents Investigation Branch (AAIB) of the UK and take immediate reasonable measures to protect the evidence and to maintain safe custody of the aircraft including parts thereof and its contents until the arrival of the lead Inspector

of the AAIB investigation team. Action must be taken for arranging for guarding of the wreckage by the Royal Cayman Islands Police Service (RCIPS) including the preservation, by photographic or other means of any evidence which might be removed, effaced, lost or destroyed. This issue is more completely handled in the Aerodrome Emergency Plan and better defined in ICAO Annex 13.

5. The Investigation Process

5.1 Objectives of the CIAA Investigation process are to:

- a) Ensure that appropriate sections are advised of hazardous or potentially hazardous incidents and defects;
- b) Ensure knowledge of these occurrences is disseminated so that other people and organizations may learn from them; and
- c) Enable an assessment to be made by those concerned of the safety implications of each occurrence, both in itself and in relation to previous similar occurrences, so that they may take or initiate any necessary action.

5.2 Submission of Occurrence Reports

5.2.1 Occurrence reports shall be submitted to the CIAA Safety Office within 24 hours of the event. In the event that it relates to a reportable event the appropriate report must be sent to the CAACI as soon as practicable after the event, but not later than 72 hours after the occurrence.

5.3 Confidential Reports

5.2.1 Confidential reports shall be individually addressed to the person(s) involved in the occurrence and annotated as CONFIDENTIAL. There will be a chain of custody established and each person who views the report will be required to sign a statement acknowledging the sensitivity of the information contained therein.

5.4 The Investigation

5.4.1 Reasons to investigate a workplace accident include most importantly to find out the cause of the accidents and to prevent similar accidents in the future. Incidents that involve no injury or property damage should still be investigated to determine the hazards that should be corrected. The same principles apply to a quick inquiry of a minor incident and to the more formal investigation of a serious event.

5.4.2 The investigation shall be performed by someone experienced in accident causation, investigative techniques, and fully knowledgeable of the work processes, procedures, and environment where the incident took care.

5.4.3 **In all cases the immediate supervisor/manager shall conduct their own investigation. This technical expert will determine if proper procedures were followed in accordance with applicable instructions or manuals. This investigation once completed will be forwarded with any evidence to the appointed Senior Investigator within 30 days of the incident for review and inclusion into a final report to be submitted to CAACI within 90 days of the incident by the Chief Safety Management Officer.**

5.5 Investigation Procedures

5.5.1 The purpose of an investigation is not to apportion blame but rather determine exactly what the root cause of the accident was and modify procedures or create new procedures to avoid any future re-occurrence. The following paragraphs are designed to shed some light on best practices and familiarize investigators with the format of the investigation report and type of information required for a conclusive investigation.

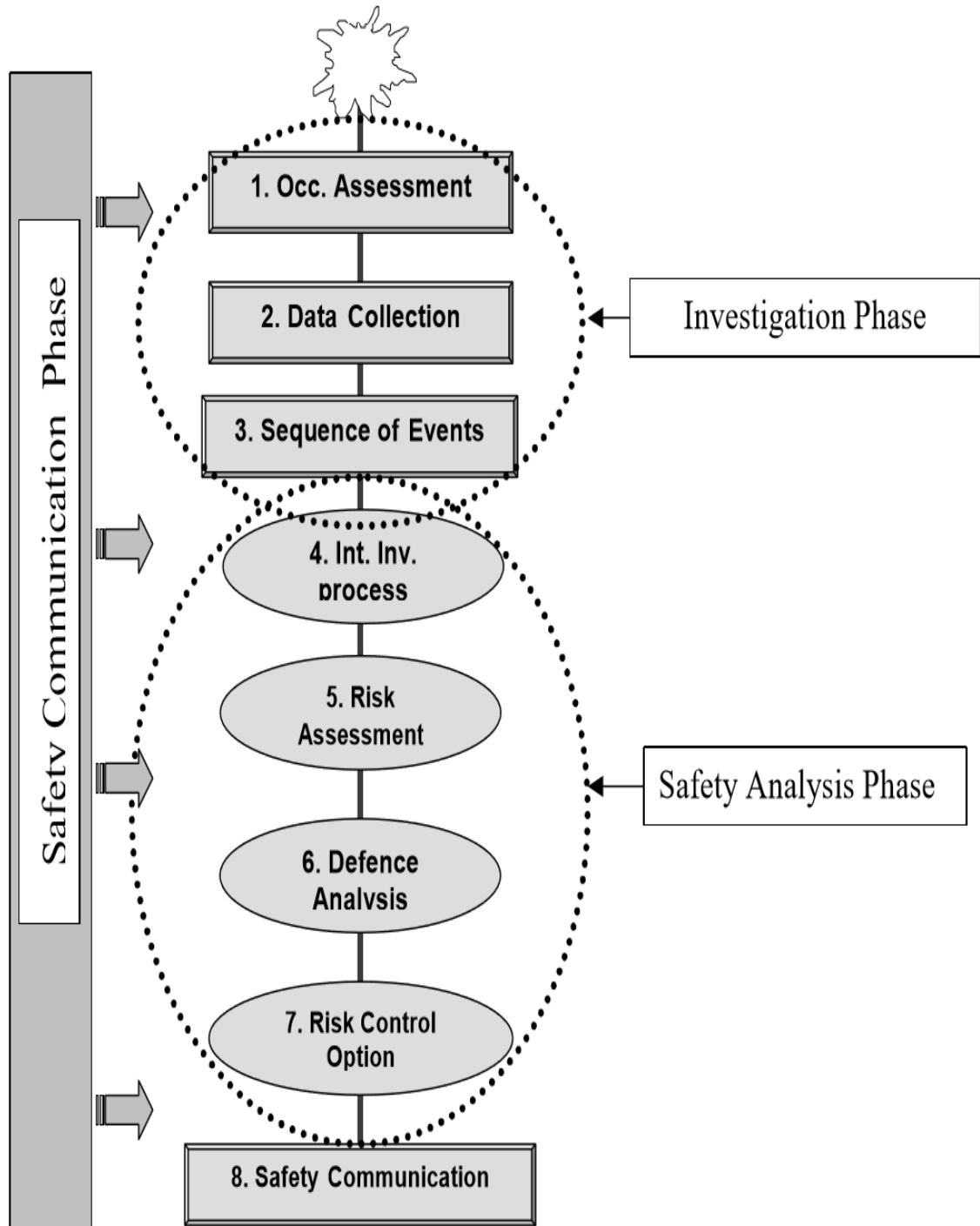
5.5.2 In the event of any accident or incident on airport property it should be made clear to all persons involved who the CIAA appointed investigator is, and the assigned person should not be hampered in any way in retrieving any and all information necessary for the conduct of the investigation.

Note - Any independent investigator hired, or company appointed person, should coordinate all actions with the CIAA Investigator and share all information obtained during the course of the investigation.

5.6 Safety Investigation Methodology

5.6.1 Effective safety management requires an integrated and structured approach to safety investigations. Some occurrences and hazards originate from material failures or occur in unique environmental conditions. However, the majority of unsafe conditions are generated through human errors. When considering human error, an understanding of the conditions that may have affected human performance or decision-making is required. These unsafe conditions may be indicative of systemic hazards that put the entire aviation system at risk. An integrated and structured approach to safety investigations considers all aspects that may have contributed to unsafe behavior or created unsafe conditions. The logic flow for an integrated process for safety investigations is depicted in Figure 1 — Integrated Safety Investigation Methodology (ISIM). Using this type of model can guide the safety investigator from the initial hazard or incident notification through to the communication of safety lessons learned.

Figure 1. — Integrated Safety Investigation Methodology (ISIM).



5.6.2 Effective investigations do not follow a simple step-by-step process that starts at the beginning and proceeds directly through each phase to completion. Rather, they follow an iterative process that may require going back and repeating steps as new data are acquired and/or as conclusions are reached.

5.7 Format of the Final Report and Investigation Forms

- 5.7.1 The format presented in ICAO Annex 13, Aircraft Accident and Incident Investigation, Appendix 1 to Chapter 6 and guidance in ICAO Doc 9756 - Manual of Aircraft Accident and Incident Investigation will be used to investigate, document, and produce final reports for accidents and incidents.
- 5.7.2 The forms shown in Appendix 1 to this manual are used to gather evidence needed to assist with safety hazard investigations and document recommended safety review committee hazard mitigation strategies.

Chapter 6. Safety Risk Assessment and Mitigation

1. Hazard and Risk Identification

1.1 The purpose of identifying hazards and assessing the associated risks is to determine whether enough has been done to prevent an incident or accident that may lead to fatalities, injuries and ill health, and/or damage to aircraft. Risk assessment can also indicate what improvements need to take priority, and thereby assist in developing budgets and business cases. Hazard Identification is the critical first step in managing safety. A formal hazards identification and risk management process will be conducted:

- a) At least once a year;
- b) When major operational changes are planned; and
- c) When new facilities are going to be constructed.

1.2 Hazards may be recognized through actual safety events (accidents/incidents), or they may be identified through proactive processes aimed at identifying hazards before they precipitate an occurrence. Both reactive and proactive processes provide an effective means of identifying hazards.

- a) Reactive method responds to the events that already happened, such as incidents and accidents;
- b) Proactive method looks actively for safety risks through the analysis of the organization's activities; and
- c) Predictive method captures system performance as it happens in real-time normal operations.

1.3 The terms Hazard and Risk often used interchangeably, but they are in fact different concepts.

- a) A hazard, as defined by ICAO, is an object or condition with the potential to cause injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a specific function.
- b) A risk is the predicted probability and severity of the consequences or outcomes of a hazard. It is the likelihood that a hazard's potential to cause harm will be realized.

1.4 Risk management is the identification, analysis and elimination (and/or mitigation to an acceptable or tolerable level) of those hazards, as well as the subsequent risks, that threaten the viability of an organization.

1.5 Having confirmed the presence of a safety hazard, some form of analysis is required to assess its potential harm or damage. Typically, this assessment involves three considerations:

- a) The **probability** of the hazard precipitating an unsafe event (i.e. the probability of adverse consequences should the underlying unsafe condition be allowed to persist).
- b) The **severity** of the potential adverse consequences, or the outcome of an unsafe event;
- c) The **rate of exposure** to the hazard. The probability of adverse consequences becomes greater through increased exposure to the unsafe condition.

1.6 **Probability** is the likelihood that an unsafe event or condition (consequence) will occur.

1.7 **Severity** is the possible effects of a consequence, taking as reference the worst foreseeable (but credible) condition.

1.8 The combination of the **probability** of an event and its potential **severity** defines the risk associated with the event. Basically, safety is defined in terms of risk. **There is no such thing as absolute safety.** The question to ask is whether a system has **an acceptable level of risk** or not. Evaluation of the acceptability of a given risk associated with a hazard must take into account the likelihood of occurrence and the severity of the potential consequences. Some hazards already have risk controls in place but are they adequate? Can the risk be further reduced?

2. Risk Mitigation

2.1 Risk mitigation eliminates the anticipated consequence(s) of the hazard or reduces the probability or severity of the anticipated consequence(s) if it/they materialize. Risk Mitigation Strategies can be classified in four ways:

- a) **Risk Avoidance** – Prevent the occurrence by selecting a different approach or by not participating in the operation, procedure, or system development. For example if there were to be a crane operation in the vicinity of an approach to a runway and there by violate the outer limitation of the approach/departure surfaces, an airport may determine the best course of action to mitigate any risk and possible consequence of a collision between aircraft and crane, may be to close the runway rather than trying to maintain operations by limiting runway surface availability;
- b) **Risk Transfer** – Shift the ownership of risk to another party. Where applicable, transfer the risk primarily to assign ownership to the organization or operation most capable of managing it. Though risk transfer is an acceptable means of dealing with risk it cannot be the only method of mitigation, the airport must still mitigate the safety risk to medium or low. For example an airport may issue a NOTAM advising pilots on hazardous runway conditions, thus the airport leaves the pilot to assess operational safety of landing a particular aircraft on the given current conditions;
- c) **Risk Assumption** – Accepting the likelihood or probability and the consequences associated with the risk's occurrence. For example, if a risk is classified at an

accepted or low level, the participants are assuming that it is low enough that no mitigation action is required; and

- d) **Risk Control** – Options and alternative actions that lower or eliminate the risk. For example would implementing additional policies or procedures, improving training or development of technologies reduce the risk associated with the hazard?

2.2 Once a Risk strategy is chosen, each proposed safety risk mitigation should be examined from the following perspectives:

- a) Effectiveness- The extent to which the alternatives reduce or eliminate the safety risks. Effectiveness can be determined in terms of the technical, training and regulatory defences that can reduce or eliminate safety risks.
- b) Cost/benefit- The extent to which the perceived benefits of the mitigation outweigh the costs.
- c) Practicality- The extent to which mitigation can be implemented and how appropriate it is in terms of available technology, financial and administrative resources, legislation and regulations, political will, etc.
- d) Acceptability- The extent to which the alternative is consistent with stakeholder paradigms.
- e) Enforceability- The extent to which compliance with new rules, regulations or operating procedures can be monitored.
- f) Durability- The extent to which the mitigation will be sustainable and effective.
- g) Residual safety risks- The degree of safety risk that remains subsequent to the implementation of the initial mitigation and which may necessitate additional risk control measures.
- h) Unintended consequences- The introduction of new hazards and related safety risks associated with the implementation of any mitigation alternative.

3. Corrective Action Plans

3.1 Corrective action plans are intended to eliminate or reduce the risk of the identified hazard to reoccur. Based on the risk matrix, corrective action plan strategies should:

- a) Reduce the probability of the occurrence so as to eliminate the risk; and/or
- b) Reduce the severity of consequence so as to mitigate risk (probability has not changed so reoccurrence is likely to be experienced at a lower severity); and/or
- c) Reduce both the probability and severity of the risk to mitigate the occurrence.

3.2 Examples of reducing probability (in no implied order of effectiveness):

- a) Training or awareness campaigns;
- b) Cessation of the activity; and
- c) Operational constraints around the activity that reduces frequency of the activity.

3.3 Examples of reducing severity (in no implied order of effectiveness):

- a) Personal Protective Equipment;
- b) Operational constraints around the activity that reduce energy (speed limits, size limits); and
- c) The provision of engineered solutions (physical or process based) that eliminates the hazard from an activity that will continue to occur at the same rate post-mitigation.

4. The Hazard and Risk Assessment Process:

- Step 1 - Create a new entry in the Risk Register (page 49) by filling in the name (or your name if unknown or “confidential”) and initial date of notification of the hazard;
- Step 2 - Enter a full description of the hazard and all associated risks into the Risk Register (in the event that there is no apparent hazard a Risk Event Statement (“RES”) can be input in the appropriate box on the risk register);
- Step 3 - Using the Risk Analysis Chart (page 48) make an estimation of the severity of the consequences of the hazard and each risk (or “RES”) occurring (based on the information you were given and your knowledge of the system);
- Step 4 - Using the Risk Chart make an estimation of the likelihood of the hazard and each risk occurring (or “RES”) based on the information you were given and any knowledge you have of previous occurrences;
- Step 5 - Use the Risk Matrix to find where the severity (sometimes referred to as “consequence”) and likelihood (sometimes referred to as “probability”) for each risk intersect or cross each other on the chart and this will be the resultant risk value;
- Step 6 - Determine which department or individual will be responsible for tracking resolution of the identified risk and input the name on the risk register.
- Step 7 - If the Resultant Risk Value from Step 5 above is greater than or equal to (Moderate) then a Short Term Mitigation plan should be developed. This can be done in collaboration with the Safety Office if help is needed to develop. A short term mitigation should reduce the residual risk to an acceptable level and should be timely.
- Step 8 - Once the short term mitigation is in place the report should be forwarded to the AOCC and the person responsible to manage the Risk will be notified and review the short term mitigation in place for effectiveness, then develop a proper long term mitigation plan to further reduce, or completely eliminate the RISK.
- Step 9 - If the item is able to be addressed through routine maintenance and resolved before the end of day, the actions taken are entered into the AOCC Maintenance Log, an entry is made in

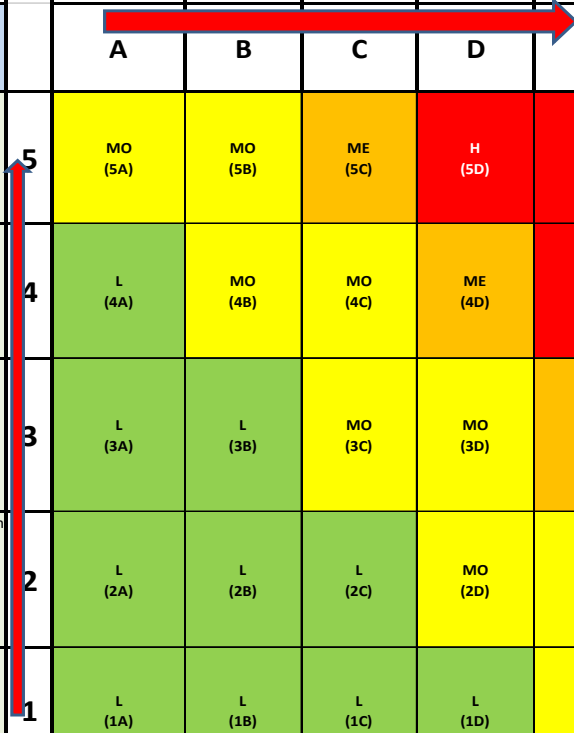
- the end of day report and notification is made to all sections involved that the item is considered closed.
- Step 10 - If the item cannot be resolved before the end of the day and/or represents a **HIGH** risk, an entry is made in the end of day report listing all actions taken so far to resolve, and an updated Risk Register form will be forwarded to the Safety Office, along with a call to Safety personnel to discuss further evaluation of the RISK.
- Step 11 - The Safety Office will enter this item into the CIAA Corporate Risk Register and the appropriate CIAA sections Risk Register and take appropriate actions to mitigate and monitor until final resolution of item can be achieved.

CIAA HAZARD AND RISK ANALYSIS CHART

LIKELIHOOD/PROBABILITY

CONSEQUENCE/SEVERITY

						LIKELIHOOD/PROBABILITY				
						IMPROBABLE	REMOTE	POSSIBLE	PROBABLE	FREQUENT
						Almost impossible to occur (not known to have occurred)	May occur, however highly unlikely	May/has occur(ed) rarely (once a year?)	May/has occur(ed) infrequently (once a month?)	May/has occur(ed) frequently (once a week?)
ENVIRONMENT	OPERATIONS/ EQUIPMENT/ ASSETS	ECONOMIC	REPUTATIONAL	SECURITY	PEOPLE	A	B	C	D	E
Severe Environmental Event- Catastrophic event, with offsite impact to people and environment and previous regulatory exposure	Severe Operational Event- Unable to operate. Long term closure of Airport or major airport facilities and airport access roads	Severe Economic Event - Damages exceeding \$1M. Severe impact to CIAA cash flows. External financial support necessary	Severe Reputational Event- Severe impact to CIAA reputation. External damage control necessary.	Severe Security Event- Event with malicious intent. External security resources activated.	Loss of Life	MO (5A)	MO (5B)	ME (5C)	H (5D)	H (5E)
Substantial Environmental Event- Major event that will require up to a year to clean up, with regulatory exposure	Substantial Operational Event- Operational or technical delays resulting in substantial cost. Short term closure of runway and airport access roads	Substantial Economic Event- Substantial damages from \$250K up to \$1 M. Substantial impact on CIAA cash flows,	Substantial Reputational Event- Substantial impact on CIAA reputation, possible international incident.	Substantial Security Event- Airside access points and AOCC/AEOC entry closed! Full airport security resources activated	Multiple persons injured or critical injury	L (4A)	MO (4B)	MO (4C)	ME (4D)	H (4E)
Significant Environmental Event- Discrepancy that will require up to a month to clean up with potential regulatory exposure	Significant Operational Event- Technical delays resulting from a discrepancy relating to a standard/ regulation. Aircraft and passenger movements impacted	Significant Economic Event - Significant damages from \$50K up to \$250K. Significant impact on CIAA cash flows.	Significant Reputational Event- Significant impact on CIAA reputation, news media on site coverage	Significant Security Event- Intentional bypass of security protocol, detected by electronic surveillance	Lost time from work, significant injuries	L (3A)	L (3B)	MO (3C)	MO (3D)	ME (3E)
Minimal Environmental Event- Could be cleaned up in half a day, guideline or policy exposure	Minimal Operational Event- Minimal effect to normal operations. Technical delays resulting in minimal costs. Detected by electronic surveillance	Minimal Economic Event - Minimal damages from \$10K up to \$50K.	Minimal Reputational Event- Minimal impact on CIAA reputation, CIAA press release to news media	Minimal Security Event- No intention to bypass security protocol and responded to by 2 security officers	No lost time from work, minimal medical attention	L (2A)	L (2B)	L (2C)	MO (2D)	MO (2E)
Minor Environmental Event- No effect or legal exposure	Minor Operational Event- Reported by normal means and responded to with assigned airport staff	Minor Economic Event- Minimal damages up to \$10K.	Minor Reputational Event- Minor or no impact on CIAA reputation	Minor Security Event- Detected by normal means and responded to with 1 Security Officer	None or minor injuries/ stress	L (1A)	L (1B)	L (1C)	L (1D)	MO (1E)
RISK TOLERABILITY	ACTION REQUIRED									
HIGH	Stop Operation, process, or change immediately. Unacceptable under existing circumstances. Sufficient control measures must be out in place before operation, process, or change can continue. <u>Accountable Executive (CEO) approval of risk is required.</u>									
MEDIUM	Caution, <u>Chief of Department approval of Risk required</u> prior to commencement of operation, process, or change with sufficient control measures in place.									
MODERATE	Review existing mitigation in place. <u>Manager of Department approval of the Risk is required</u> prior to commencement of the operation, process or change.									
LOW	Considered acceptable as-is. No Risk mitigation is required. Review for continuous improvement.									



Risk Register

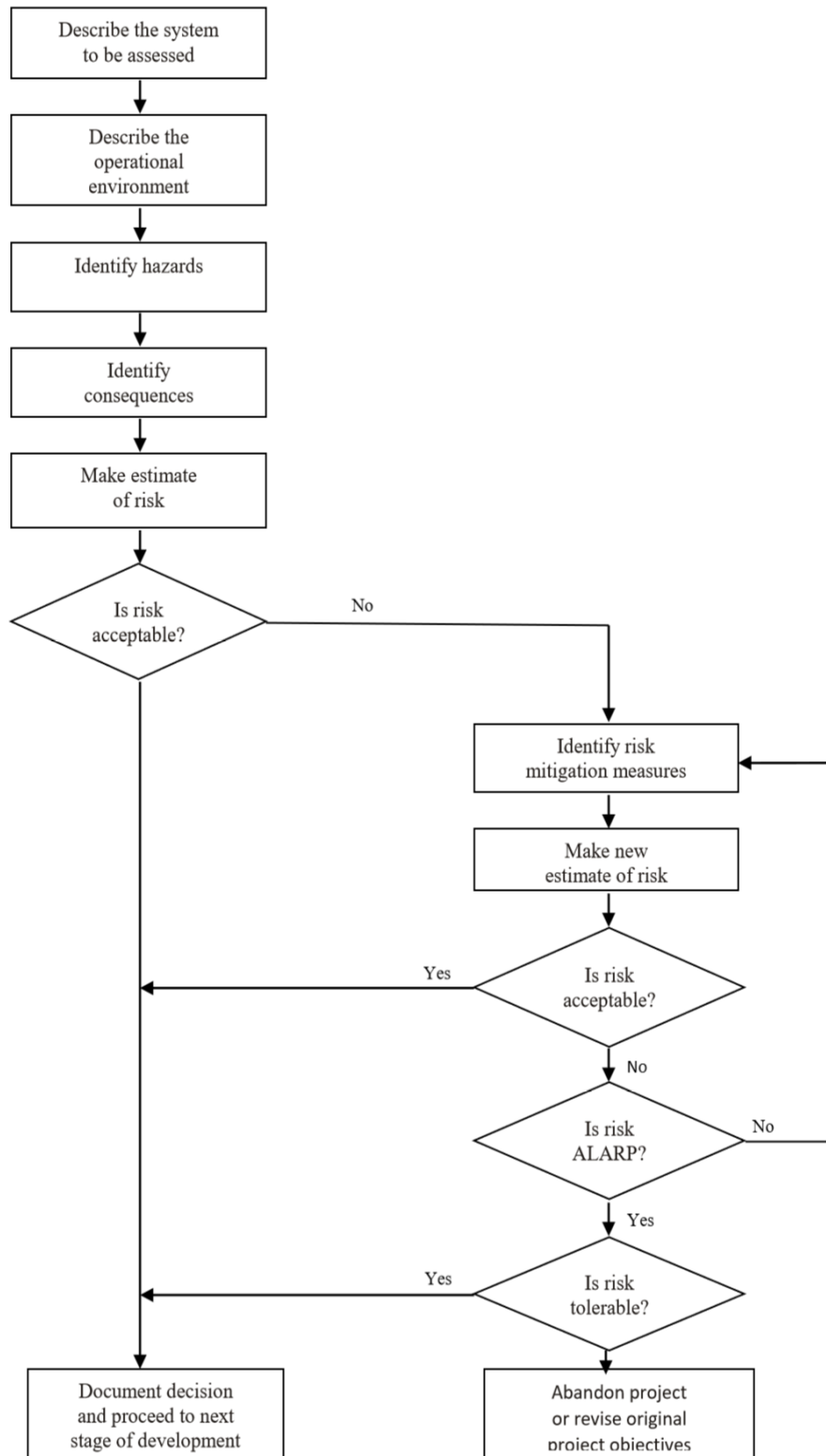
This log is used to record and track hazards and their associated risks. Risks are things that may or may not happen in the future that could have an effect on a organization or a particular project's success.

Hazard is a situation that poses a threat to life, health, property, or environment. **Risk** is defined as the probability that exposure to a hazard will lead to a negative consequence. A hazard therefore, can pose no risk if there is not exposure to that hazard.

High	Stop Operation, process, or change immediately. Unacceptable under existing circumstances. Sufficient control measures must be out in place before operation, process, or change can continue. <u>Accountable Executive (CEO)</u> approval of risk is required.
Med	Caution, <u>Chief of Department</u> approval of Risk required prior to commencement of operation, process, or change with sufficient control measures in place.
Moderate	Review existing mitigation in place. <u>Manager</u> of Department approval of the Risk is required prior to commencement of the operation, process or change.
LOW	Considered acceptable as-is. No Risk mitigation is required. Review for continuous improvement.

Date of entry and Originator	Hazard	Risk Description/ Risk Event Statement	Person Responsible to monitor Risk	Initial Risk Assessment			Short Term Mitigation Plan	Date of Completion	Long Term Mitigation Plan	Person Responsible to manage mitigation	Date of Completion	Risk Assessment after mitigation		
				S	L	R						S	L	R
dd/mm/yyyy	A Hazard can be Physical, Chemical, Biological or Mechanical. "Falling off a ladder" is not a hazard. "Working at heights" is a hazard. If you remove the hazard all risk will go away.	A Risk Event Statement (RES)states what might happen in the future and its possible impact on the organization or project. "Weather" is not a RES. "Bad weather may delay the project" is a RES.	Name and title of person responsible to monitor Risk	S	L	R	List, by date, all actions to be taken to respond to the immediate risk.		List, by date, what will be done to ensure future chance of Risk resurfacing is mitigated	Name and title of person responsible to execute mitigations		S	L	R
				S	L	R						S	L	R

4.1 Risk Management and Safety Assessment SMS Process



Chapter 7. Safety Assurance

1. Introduction to Safety Performance indicators, Targets and Requirements

1.1 In any safety system, it is necessary to set and measure performance outcomes in order to determine whether the safety system is operating in accordance with expectations, and to identify where action may be required to enhance performance levels to meet these expectations. The acceptable level of safety expresses the safety goals (or expectations) of the CIAA and provides an objective in terms of the safety performance that the CIAA plans to achieve while conducting its core business functions.

1.2 In determining an acceptable level of safety, it is necessary to consider such factors as the level of risk applicable, the cost/benefits of improvements to the system, and public expectations on the safety of the aviation industry. In practice, the concept of acceptable level of safety is expressed by two measures/metrics safety performance indicators and safety performance targets. The following explains the use of these terms.

- a) **Safety performance indicators** are a measure of the safety performance of a department. Safety indicators should be easy to measure and be linked to the major components of a company's SMS. Safety indicators will therefore differ between departments, aircraft operators, aerodrome concessionaires or ATS providers;
- b) **Safety performance targets** (sometimes referred to as goals or objectives) are determined by considering what safety performance levels are desirable and realistic for individual departments, operators, concessionaires or service providers. Safety targets should be measurable, acceptable to stakeholders, and consistent with SMS; and
- c) **Safety requirements** are needed to achieve the safety performance indicators and safety performance targets. They include the operational procedures, technology, systems and programmes to which measures of reliability, availability, performance and/or accuracy can be specified.

1.3 The relationship between acceptable level of safety, safety performance indicators, safety performance targets and safety requirements is as follows:

- a) **Acceptable level of safety** is the overarching concept;
- b) **Safety performance indicators** are the measures/metrics used to determine if the acceptable level of safety has been achieved;
- c) **Safety performance targets** are the quantified objectives pertinent to the acceptable level of safety; and
- d) **Safety requirements** are the tools or means required to achieve the safety targets.

1.4 Safety indicators and safety targets may be different (for example, the safety indicator is 0.5 fatal accidents per 100 000 hours for airline operators, and the safety target is a 40 per cent reduction in fatal accident rate for airline operations), or they may be the same (for example, the safety indicator is 0.5 fatal accidents per 100 000 hours for airline

operators, and the safety target is not more than 0.5 fatal accidents per 100000 hours for airline operators).

1.5 The **Safety Indicator for ORIA Passenger Injuries/Incidents** over the past two years is:

- a) 1 injury/incident for every 161,446 passengers.
- b) The CIAA Safety Target is to reduce this rate by 5% in each successive year moving forward.

2. Change Management

2.1 Hazards may inadvertently be introduced in an operation when there is change. Effective safety management requires that hazards be systematically and proactively identified and that risk management strategies be developed, implemented and subsequently evaluated. The objective is to reduce the safety risks resulting from changes to the provision, management or administration, of the Airport Services and products to a level as low as reasonably practical (ALARP). Change management is applied to a wide scope of activities; it is not limited to changes to services and systems but also extends to programs and products. As well, it includes not only technical changes but also management and administration changes such as organization structure, policies and procedures. Change management should be applied whenever:

- a) A major organizational change is being planned;
- b) The Organization is undergoing rapid expansion or contraction;
- c) Introduction of new equipment or facilities is being considered;
- d) Existing equipment is being decommissioned;
- e) Introduction of new procedures is being planned;
- f) Existing procedures are being revised;
- g) Changes to key personnel are taking place; and
- h) There are changes to the legislation that the organization operates under.

2.2 There are five key requirements of the change management process:

- a) Develop the case for change.
 - i. Identify and describe the change on a change form.
 - ii. List the stakeholders.
 - iii. Determine responsibilities relating to the change
- b) Conduct a risk assessment and develop a risk management plan.
 - i. Identify the hazards and controls.
 - ii. Assess and analyze risk.
 - iii. Evaluate risk and identify mitigation activities.
- c) Develop a project plan.
 - i. Translate risk and mitigation activities into tasks.
 - ii. Solicit and analyze stakeholder feedback.
 - iii. Document changes.

- d) Implement the change.
 - i. Complete tasks identified in the project plan.
 - ii. Review progress.
 - iii. Review and revise SMS based on impact of the change.
- e) Monitor and review on an ongoing basis.

2.3 Consultation should be sought with the Chief Safety Management Officer on when to apply the change management process. By undertaking these activities, the Cayman Islands Airports Authority will be proactively identifying the hazards and managing the risks before the changes are implemented. Not only does this make sense from a safety perspective; it is also a much more cost-effective to not have to go back to the drawing board and address safety issues that were missed. The diagram below illustrates how all the elements of a SMS work together to create an ever-changing and always improving dynamic safety culture capable of maintaining safety while accepting change.



3. Continuous Improvement of the SMS

3.1 The number one way to ensure correct operation of the organizations SMS program is the audit process. Audits focus on the integrity of the organizations SMS, and periodically assess the status of safety risk controls. Audits are not intended to be in-depth audits of the technical processes but rather they are intended to provide assurance to managers that activities within their areas of responsibility are being conducted safely and conform

to the safety management system requirements. It will also demonstrate to all employees that the management is taking a continuing interest in safety. Employees should not see auditing as a threat but rather as a co-operative activity to improve the level of service.

3.2 There are two types of audits performed on a regular basis. These are:

- a) Internal audits to confirm conformance with the safety management system; and
- b) External audits to confirm conformance with the regulatory requirements.

3.3 The Chief Safety Management Officer will arrange for an annual internal audit of the Safety Management System, including an inspection of the aerodrome facilities and equipment in compliance with OTAR 139.75 (j). The audit shall cover the aerodrome certificate holders own functions.

3.4 The Chief Safety Management Officer will arrange for an external audit and inspection for the evaluation of contractors, sub-contractors or tenants of the aerodrome to comply with OTAR 139.75 (j). The format for these audits will be in compliance with the CAA Audit Policy and Procedure Manual.

3.5 All audits conducted, whether internal or external shall be conducted by a suitably qualified safety expert(s) who shall prepare and sign the report. Credentials shall be furnished in advance to the CIAA CEO and may be forwarded for review to the CAA regulator.

3.6 Related training and direct oversight of third party contractors will be provided by the CIAA based on requirements identified in each respective Work Safety Plan.

4. The Audit Process

4.1 A formal notification of intention to perform the audit is forwarded to the section to be audited in adequate time for any necessary preparations to be made. The section may be requested to provide preparatory material in advance of the actual audit, for example training records. At the opening meeting, the person conducting the audit should briefly present the background for the audit, its purpose, and any specific issues to be addressed by the audit.

4.2 The techniques for gathering the information on which the audit team's assessment will be made include:

- a) Review of records;
- b) Interviews with staff; and
- c) Observations by the audit team.

4.3 The auditor would work systematically through the items on the relevant checklist. Once the audit activities are completed, the auditor would review all observations and compare them against the relevant regulations and procedures. An assessment would be

made of the seriousness of all discrepancies. The audit would not focus only on negative findings. An important objective of the safety audit is also to highlight good practices.

- 4.4 A closing meeting would be held with the management of the section to brief them on the audit observations and any resulting recommendations. At this time a representative of the section would be given a chance to correct any misunderstandings. Dates for issuing an interim audit report and for receiving comments on it would be mutually agreed upon. A draft copy of the final report should be left with management.
- 4.5 At the completion of an audit, planned remedial actions would be documented for all identified areas of concern. **It is the responsibility of the management of the section being audited to develop a corrective action plan setting out the actions to be taken to resolve identified deficiencies or safety shortcomings within an agreed time period.** When completed, the corrective action plan should be forwarded to the Chief Safety Management Officer. The final audit report will include this corrective action plan and detail any follow-up audit action proposed. **The manager of the area being audited is responsible for ensuring the timely implementation of the appropriate corrective actions.**
- 4.6 As soon as possible after completion of the audit, an interim audit report would be forwarded to the manager of the unit or section for review and comments. Any comments received would be taken into consideration in the preparation of the final report, which constitutes the official report of the audit.
- 4.7 An audit follow-up involves management of change. Upon receipt of the final audit report, management needs to ensure that progress is made to reduce or eliminate the attendant risks. The primary purpose of an audit follow-up is to verify the effective implementation of the corrective action plan. Follow-up is also required to ensure that any action taken pursuant to the audit does not in any way degrade safety. In other words, new hazards with potentially higher risks must not be allowed to enter the system as a consequence of the audit. Where a follow-up visit has been made, a further report of this visit will be prepared. This report will clearly indicate the current status of the implementation of the agreed corrective actions. If any non-compliance, deficiency or safety shortcoming remains unresolved, the auditor will highlight this in the follow-up report.

Chapter 8. Safety Promotion

1. Safety Training Education

- 1.1 An organizations safety culture is linked to the success of its safety management training program. All personnel must understand the organization’s safety philosophy, policies, procedures and practices, and they should understand their roles and responsibilities within that safety management framework. Safety training should begin with the initial familiarization of employees and continue throughout their employment. Specific safety management training should be provided for staff who occupies positions with particular safety responsibilities. The training program should ensure that the safety policy and objectives of the organization are understood and adhered to by all staff, and that all staff is aware of the safety responsibilities of their positions.
- 1.2 Safety competency training requirements for each area of work will be documented and training files maintained for each employee, including management, to assist in identifying and tracking employee safety training requirements. Documented competency training policies for each individual functional area can be found in respective functional area competency training manuals.
- 1.3 **The CHRO shall ensure that each staff member is scheduled for initial SMS training within a period of one month from the date of reporting for duty.** At the completion of initial SMS training a signed “**Workplace Commitment to Safety**” form (**Appendix A2**) shall be received from each staff member stating clearly that he/she has read and understood all the provisions of the SMS manual **and understand that they will attend Annual SMS Training as long as they are an employee of the CIAA. No employee will be permitted to work unsupervised on airside until the required training has been completed.**

2. Safety Communication

- 2.1 Safety communication is an essential foundation for the development and maintenance of an adequate safety culture. There are three basic elements used in safety communication- **Safety communication, consultation and reporting.**
- a) **The communications element-** captures the processes used to ensure the open exchange of safety-related information both externally and internally to the company. This element plays a critical role in ensuring that all the risks present in the air navigation system are recognized, registered and mitigated and the information gained, plus improvement measures, are disseminated across the whole company.
 - b) **The consultation element-** requires consulting with all sections of CIAA and our customers and suppliers on all aspects of safety. This is an important element of safety management as it formalizes lines of communication among the respective stakeholders of aviation safety.
 - c) **Reporting** the results of safety investigations, safety reviews, safety audits and overall safety activities and performance to the appropriate audience has many

benefits. It promotes transparency, commitment, and ownership of safety issues. The most important benefit of reporting safety issues and information is that it allows similar problems to be reported but most of all it allows for potential problems or issues to be eliminated before they happen. Prevention is always best.

2.2 The CIAA is committed to ensuring that all personnel working airside are informed about the safety policies and objectives, how well the airport is meeting safety objectives, results of accident and incident investigations, new safety practices, and other matters dealing with safety. Some of the methods used are discussed below.

3. Safety Meetings

3.1 At least once per year, the SMS will hold safety meetings with airport staff and other personnel working at the airport. The purpose of these meetings is to:

- a) Report on safety performance as detailed in section;
- b) Summarize the initiatives and action taken, or planned, to address safety concerns and potential hazards;
- c) Report on lessons learned and action taken as a result of any incidents and accidents, and;
- d) Discuss in an open forum the safety concerns that any of the participants might have.

4. Other Communication Methods

4.1 Safety information is communicated through:

- a) Bulletin Board;
- b) CIAA Safety Newsletter;
- c) CIAA website;
- d) Email to staff; and
- e) Informal workplace meetings between staff and the accountable Manager or Senior Managers

Appendix 1. Safety Report Form

 Cayman Islands Airports Authority	<h2>SMS Safety Report Form</h2>
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Part A to be completed by the person identifying the event or hazard

Date of Event:	Local Time:
Location:	
Name of Reporter:	Section/Organization:

Please fully describe the event or identified hazard:
 Include your suggestions on how to prevent similar occurrences.

In your opinion, what is the likelihood of such an event or similar happening or happening again?

Extremely improbable	Frequent
A	E
B	D
C	

What do you consider could be the worst possible consequence if this event did happen or happened again?

Negligible	Catastrophic
1	5
2	4
3	

Part B To be completed by the Safety Officer

Date the report was entered into the company database:

Name: _____

Signature: _____

Part C To be completed by the Safety Review Committee

Rate the likelihood of the event occurring or recurring:

Extremely improbable

Frequent

A

B

C

D

E

Rate the worst-case consequences?

Negligible

Catastrophic

1

2

3

4

5

What action or actions are required to ELIMINATE, MITIGATE or CONTROL the hazard to an acceptable level of safety?

Resources required:

Responsibility for Action:

Agreed and Accepted by:

Safety Review Committee

Date:

Safety Officer

Date:

Responsible Manager

Date:

Accountable Manager

Date:

Appropriate Feedback given to staff by Safety Officer

Signed: _____

Date:

Follow up action required:

When

Who

Hazard log updated:

When

Appendix 2. Safety Recommendation and Corrective Action Form

 Cayman Islands Airports Authority	SAFETY RECOMMENDATION AND CORRECTIVE ACTION FORM
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Section Head Signature:	Date Assigned:
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Safety Recommendation:

Corrective Action(s) – Implementation and Status: to be updated by assigned CIAA OPI _____ CAP Notification reports to be provided: - on a 30 day cycle from the assigned date; and - any time the status of the CAP changes.

Originator and Date	Picture of Hazard	Hazard	Risk	Initial Risk Assess			Interim Mitigation Plan	Long Term Mitigation Plan	Est. date compl	Final Risk Assess		
				S	L	R				S	L	R

<u>Date</u>	<u>Corrective Action Plan</u>	<u>Investigator remarks</u>

OPI Assigned:	
Signature:	
Date:	Target Completion Date:
Corrective Action Verified by:	
Investigator:	Date Closed:
Signature:	

Appendix 3. Statement on Commitment to Workplace Safety



Safety is one of our core business functions. We are committed to developing, implementing, and improving strategies, and processes to ensure that all our aviation activities uphold the highest level of safety performance and meet national and international standards. We will report incidents, train staff on safety management procedures, and strive to make continuous proactive improvement to the overall level of safety performance in our organization. All levels of management and all employees are accountable for the delivery of this highest level of safety performance, starting with the Chief Executive Officer.

Our commitment is to:

- a) Support the management of safety by creating an organizational **“Just Culture”**, an atmosphere of trust in which people are commended, even rewarded, for providing essential safety related information- but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour.
- b) Enforce the management of safety as the **primary** responsibility of all managers and employees.
- c) Clearly define for all staff, managers and employees alike, their accountabilities and responsibilities under the safety management system.
- d) Ensure that no action will be taken against any employee who discloses a safety concern through the hazard reporting system unless such disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or wilful disregard of regulations or procedures.
- e) Ensure sufficient number and training of personnel to a level of competency to be able to implement safety strategies and processes, and are allocated only tasks commensurate with their skills.
- f) Ensure externally supplied systems and services to support our operations are delivered meeting our safety performance standards.

All Airport employees have the following safety responsibilities:

- a) As a new employee, attend and complete the local 8 hour CIAA SMS Training course **within 30 days of joining**;
- b) Comply with the relevant safety requirements and procedures outlined in;
 - i. The CIAA **Safety Management Manual (SMM)**;

- ii. The CIAA **Aerodrome Manual** and other supplementary Manuals, and Safety Advisories that may arise from time to time.
- c) Advise the **Chief Safety Management Officer** of any safety hazard, occurrence, or system failure and to identify and report any situation of potential risk or concern affecting safety via one of the following means:
 - i. Report directly to their **Supervisor** or the **Chief Safety Management Officer**; and
 - ii. Initiate a **SMS Incident Report**, appropriate accident report, or Confidential SMS Report to the Airport Operations Command Centre (**AOCC**) at **345-244-5835** or **1-800-534-AOCC (2622)**.
- e) Support safety audits as and when they occur;
- f) Support safety investigations as and when they occur; and
- g) **Attend local CIAA SMS 4 hour Annual Refresher Training Course or complete a ICAO/IATA approved SMS course on an annual basis.**

Note: The SMS manual is available in electronic form and can be viewed anytime by accessing our website www.caymanairports.com and selecting the button at the top of the screen for **“at the airports”** and then selecting the link for **“publications”**.

By signing this agreement I acknowledge that I have read and understood all provisions of the SMS Manual. Any questions or concerns may be directed to the Chief Safety Management Officer @ 244-5843.

Employee Signature: _____ Date: _____