Democratic Socialist Republic of Sri Lanka

Civil Aviation Authority of Sri Lanka

Implementing Standards

(Issued under Sec. 120, Civil Aviation Act No. 14 of 2010)

Title: Framework for a Safety Management System (SMS)

Reference No. : CAA-IS-ASM-2021-001 **Date**: 10th Nov 2021

Pursuant to Sec.120 of the Civil Aviation Act No.14 of 2010 which is hereinafter referred to as the CA Act, Director General of Civil Aviation shall have the power to issue, whenever he considers it necessary or appropriate to do so, such Implementing Standards for the purpose of giving effect to any provision in the CA Act, Regulations or Rules made thereunder including the Articles of the Convention on International Civil Aviation specified in the Schedule to the CA Act.

Accordingly I, being the Director General of Civil Aviation do hereby issue the Implementing Standards on **Framework for a Safety Management System** as mentioned in the Attachment hereto (Ref: Attachment No: CAA-IS-ASM-2021-001Att.), for the purpose of giving effect to the Regulation 3 of Civil Aviation Safety Management Regulations of 2018 and elaborating the requirements to be satisfied for the effective implementation of the International Standards and Recommended Practices on "Safety Management" contained in ICAO Annex 19 to the Convention.

This Implementing Standard shall be applicable as specified in Paragraph 3 of this Implementing Standard and shall come into force with immediate effect and remain in force unless revoked.

This Implementing Standard supersedes the Aviation Safety Notice (ASN) 092 dated 09th Nov 2007, issued by the DGCA.

Attention is also drawn to Section 103 of the CA Act, which states inter alia that failure to comply with any Implementing Standard is an offence. Further, if any standard stipulated into this Implementing Standard is not complied with or violated, an appropriate enforcement action will be taken as per the Aviation Enforcement Policy and Procedures Manual, SLCAP 0005 by the Director General of Civil Aviation under Section 102 of the CA Act.

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Enclosure: Attachment No. CAA-IS-ASM-2021-001Att.

PREAMBLE

1. NOTICE TO THE RECIPIENT

1.1. The requirements in this Implementing Standard are based on the Standards and Recommended Practices (SARPs) adopted by the International Civil Aviation Organization (ICAO) and incorporated in the Amendment No. 01 to Annex 19 (2nd edition).

1.2. In pursuance of the obligation cast under Article 38 of the Convention which requires the Contracting States to notify the ICAO of any differences between the national regulations of the States and practices and the International Standards contained in the respective Annex and any amendments thereto, the CAASL will be taking steps to notify ICAO of such differences relating to either a Standard or a Recommended Practice, if any. The CAASL will also keep the ICAO currently informed of any differences which may subsequently occur, or of the withdrawal of any differences previously notified. Furthermore, the CAASL will take steps for the publication of differences between the national regulations and practices and the related ICAO Standards and Recommended Practices through the Aeronautical Information Service, which is published in accordance with the provisions in the Annex-15 to the Convention.

1.3. Taking into account of the ICAO council resolution dated 13 April 1948 which invited the attention of Contracting States of the desirability of using in the State's national regulations, as far as is practicable, the precise language of those ICAO Standards that are of a regulatory character, to the greatest extent possible the CAASL has attempted to retain the ICAO texts in the Annex in drafting this Implementing Standard.

1.4. Status of ICAO Annex components in the Implementing Standard

Some of the components in an ICAO Annex are as follows and they have the status as indicated:

1.4.1.**Standard**: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as necessary for the safety or regularity of international air navigation and to which Contracting States will conform in accordance with the Convention; in the event of impossibility of compliance, notification to the Council is compulsory under Article 38. The ICAO Standards are reflected in the Implementing Standards if they are locally implemented using the normal fonts and recipients are required to conform to such requirements invariably and the DGCA **will take appropriate enforcement action** when those requirements are not complied with.

1.4.2.**Recommended Practice**: Any specification for physical characteristics, configuration, matériel, performance, personnel or procedure, the uniform application of which is recognized as desirable in the interest of safety, regularity, efficiency or environmentally responsiveness of international air navigation, and to which Contracting States will endeavor to conform in accordance with the Convention. The ICAO Recommended Practices are reflected in the Implementing Standards in italic fonts and the Recipients are encouraged to implement them to the greatest extent possible. However, DGCA **will not take enforcement action** when a Recommended Practice is not satisfied by the recipient.

1.4.3.**Appendices:** Comprising material grouped separately for convenience but forming part of the Standards and Recommended Practices adopted by the Council. Enforcement action on such matters will be as in the case of Standards or Recommended Practices.

1.4.4.**Definitions**: A definition does not have independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

1.4.5.Tables and Figures: add to or illustrate a Standard or Recommended Practice, and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

RECORD OF REVISION

Revision No.	Date Entered	Entered By
00-1st Edition	15 June 2020	Mgr/ASM
00- 2nd Edition	10 Nov 2021	DDG/FSR

LIST OF EFFECTIVE PAGES

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HISTORY OF REVISION

Revision No.	Source	Areas Subjected to Change	Effective Date
00	Appendix 2 to the Annex 19 and ICAO Doc 9859	Paragraph 7.1.3 and Appendix 02	10 Nov 2021

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2. GENERAL

This Implementing Standard specifies the framework for the implementation and maintenance of a SMS by the respective organizations which are required to have a SMS in accordance with the Civil Aviation Safety Management Regulations of 2018 and ICAO Annex 19 on Safety Management.

Regardless of the Organization's size and complexity, all elements of the SMS framework shall be applicable to all entities which are required to have a SMS.

In the context of this Implementing Standard as it is applicable to an organization which is required to have a SMS, an "accountability" refers to an "obligation/ responsibility" that cannot be delegated, and "tasks" refers to functions and activities that may be delegated.

3. APPLICABILITY

This Implementing Standard is applicable to;

a) Any training organization approved by DGCA in accordance with Annex 1 to the Convention and applicable local rules and regulations;
b) Any operator of aeroplanes or helicopters authorized by DGCA to conduct international and domestic commercial air transport, in accordance with Annex 6, Part I or Part III, Section II, to the Convention respectively and applicable local rules and regulations;
(Note: When maintenance activities are not conducted by an approved maintenance organization in accordance with Annex 6, Part I, but under an equivalent system as in Annex 6, Part I, or Part III, section II, they are included in the scope of the operator's SMS.)

c) Any approved maintenance organization approved by DGCA to provide services to operators of aeroplanes or helicopters engaged in international and domestic commercial air transport, in accordance Annex 6, Part I or Part III, section II, respectively and applicable local rules and regulations ;
d) Any organization responsible for the type design or manufacture of aircraft, engines or propellers in accordance with Annex 8 and applicable local rules and regulations;
e) Air Traffic Services (ATS) Providers licensed by DGCA in accordance with Annex 11 and applicable local rules and regulations;
f) Any other Aeronautical Services Provider, other than ATS Provider licensed by DGCA in accordance with local rules and regulations;
g) Any operator of aerodrome certified by DGCA in accordance with Annex 14, Volume I and applicable local rules and regulations.
h) When Sri Lanka is the State of Registry, International general aviation operators of large or turbojet aeroplanes certified by DGCA in accordance with Annex 6, Part II Section 3 and applicable local rules and regulations;
i) When Sri Lanka is the State of Operator, the operators of large or turbojet aeroplanes under multiple States of Registry with the approval of DGCA with an AOC issued in accordance with Annex 6, Part I and applicable local rules and regulations; and
j) Any permit holder who is authorised by the DGCA in accordance with the requirements of Annex 18 and Regulations of Safe Handling and Transporting of Dangerous Goods by Air.

4. ACCEPTANCE

In order to be acceptable to the Director General of Civil Aviation, an organization that is required to have SMS shall;

4.1 apply to the Director General of Civil Aviation for the acceptance of the Safety Management System with a printed copy of the Safety Management Manual.

4.2 Before granting the acceptance, the Director General of Civil Aviation must be satisfied that the SMS of the respective organization has been established in accordance with the requirements given in this Implementing Standard and applicable regulations.

4.3 Acceptance of a SMS shall be valid for a minimum of one year and subject to any terms and conditions stipulated with the granting of approval.

4.4 The application for the renewal of the acceptance shall be forwarded to the Director General of Civil Aviation with the new changes introduced to the SMS if any, during the year, before expires the validity period of the acceptance.

4.5 The Director General of Civil Aviation may suspend or cancel the acceptance of a SMS if there are reasonable grounds to believe that the SMS is not operating in accordance with the requirements given in this Implementing Standard and the applicable regulations.

5. ICAO ANNEX REFERENCES

5.1 Annex 1 - Personnel Licensing

5.2 Annex 6 (Pat I, Part II and Part III) - Operation of Aircraft

5.3 Annex 8 - Airworthiness of Aircraft

5.4 Annex 11- Air Traffic Services

5.5 Annex 14 (Volume 1) -Aerodromes

5.6 Annex 18 – The Safe Transport Dangerous Goods by Air

5.7 Annex 19- Safety Management

5.8 ICAO Safety Management Manual (Doc 9859)

6. DEFINITIONS

6.1 ***Accident***: An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

a) A person is fatally or seriously injured as a result of:

-being in the aircraft, or

-direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or

-direct exposure to jet blast,

except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b) The aircraft sustains damage or structural failure which:

-adversely affects the structural strength, performance or flight characteristics of the aircraft, and

-would normally require major repair or replacement of the affected component,

except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

c) The aircraft is missing or is completely inaccessible.

For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.

An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

6.2 Aeroplane: A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

6.3 Aircraft: Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

6.4 Hazard: A condition or an object with the potential to cause or contribute to an aircraft incident or accident.

6.5 Helicopter: A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

6.6 Incident: An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

6.7 Industry codes of practice: Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organization's Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate.

6.8 Operational personnel: Personnel involved in aviation activities who are in a position to report safety information.
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.

6.9 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.

6.10 Safety data: A defined set of facts or set of safety values collected from various aviation-related sources, which is used to maintain or improve safety.

Safety data is collected from proactive or reactive safety-related activities, including but not limited to:

a) accident or incident investigations;
b) safety reporting;
c) continuing airworthiness reporting;
d) operational performance monitoring;
e) inspections, audits, surveys; or
f) Safety studies and reviews.

6.11 Safety information: Safety data processed, organized or analysed in a given context so as to make it useful for safety management purposes.

6.12 Safety Management System (SMS): The Safety Management System is a systematic approach of managing safety, including the necessary organizational structures, accountabilities, policies and procedures. An SMS can be considered as a "management chain" which defines the essential elements for hazard identification and continuous safety risk assessment. An SMS is created for the development of a positive safety culture in the respective service provider's organization.

6.13 Safety oversight: A function performed by CAA-Sri Lanka or any of the authorized person to ensure that individuals and organizations performing an aviation activity comply with safety-related national laws and regulations.

6.14 Safety performance: Safety achievement of the organization which is required to have SMS as defined by its safety performance targets and safety performance indicators.

6.15 Safety Performance Indicator: A data-based parameter used for monitoring and assessing safety performance.

6.16 Safety performance target: Planned or intended target of CAA-Sri Lanka or organization which is required to have a SMS for a safety performance indicator over a given period that aligns with the safety objectives.

6.17 Safety risk: The predicted probability and severity of the consequences or outcomes of a hazard.

6.18 Serious injury: An injury which is sustained by a person in an accident and which:

a) Requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
b) Results in a fracture of any bone (except simple fractures of fingers, toes or nose); or
c) Involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
d) Involves injury to any internal organ; or
e) Involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or

f) Involves verified exposure to infectious substances or injurious radiation.

6.19 SMS Organization: An organization holding a licence/certificate/ permit or approval issued by DGCA, which is required to have a SMS as per the Civil Aviation Safety Management Regulations of 2018.

6.20 State of Design: The State having jurisdiction over the organization responsible for the type design.

6.21 State of Manufacture: The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

6.22 State of the Operator: The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

6.23 State Safety Programme (SSP): An integrated set of regulations and activities aimed at improving safety.

6.24 Surveillance: The activities by DGCA through which the DGCA proactively verifies through inspections and audits that aviation licence, certificate, and authorization or approval holders continue to meet the established requirements and function at the level of competency and safety required by Sri Lanka.

7. SMS FRAMEWORK

The framework comprises four components and twelve elements as the minimum requirements for SMS implementation.

- SAFETY POLICY AND OBJECTIVES

- Management Commitment
- Safety accountability and responsibilities
- Appointment of key safety personnel
- Coordination of emergency response planning
- SMS documentation

- SAFETY RISK MANAGEMENT

- Hazard identification
- Safety risk assessment and mitigation

- SAFETY ASSURANCE

- Safety performance monitoring and measurement
- The management of change
- Continuous improvement of the SMS

- SAFETY PROMOTION

- Training and education
- Safety communication

7.1 SAFETY POLICY AND OBJECTIVES

7.1.1 MANAGEMENT COMMITMENT

7.1.1.1. The SMS Organization shall define their safety policy in accordance with international and national requirements. The safety policy shall:

a) reflect organizational commitment regarding safety, including the promotion of a positive safety culture. The Safety Policy shall include a commitment to;
   i. continuously improve the level of safety performance;
   ii. promote and maintain a positive safety culture within the organization;
   iii. comply with all applicable regulatory requirements;
   iv. provide the necessary resources to deliver a safe product or service;
   v. ensure safety is a primary responsibility of all managers; and
   vi. ensure it is understood, implemented and maintained at all levels.
   vii. ensure effective data collection and processing system
b) include a clear statement about the provision of the necessary resources for the implementation of the safety policy;
c) include safety reporting procedures to encourage the reporting of safety issues and inform personnel of the disciplinary policy applied in the case of safety events or safety issues that are reported;
d) clearly indicate which types of behaviours are unacceptable related to the SMS Organization's aviation activities and include the circumstances under which disciplinary action would not apply;
e) be signed by the accountable executive of the organization;

f) be communicated, with visible endorsement, throughout the organization; and
g) be periodically reviewed to ensure it remains relevant and appropriate to the SMS Organization.

7.1.1.2. Taking due account of the safety policy, the SMS Organization shall define safety objectives. The safety objectives shall:
a) be short, high-level statements of the organization's safety priorities and should address its most significant safety risks.
b) form the basis for safety performance monitoring and measurement as required by paragraph 7.3.1.3 of this Implementing Standard;
c) reflect the SMS Organization's commitment to maintain or continuously improve the overall effectiveness of the SMS;
d) be communicated throughout the organization; and
e) be periodically reviewed to ensure they remain relevant and appropriate to the SMS Organization.

7.1.2 SAFETY ACCOUNTABILITY AND TASKS

7.1.2.1. The SMS Organization shall:
a) identify the accountable executive who, irrespective of other functions, is accountable on behalf of the organization for the implementation and maintenance of an effective SMS;
b) clearly define lines of safety accountability/ responsibility throughout the organization, including a direct accountability for safety on the part of senior management;
c) identify and define the tasks of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the organization;
d) document and communicate safety accountability/ responsibilities/ tasks / functions and authorities throughout the organization; and
e) define the levels of management with authority to make decisions regarding safety risk tolerability.

7.1.2.2. Accountable Executive;
a) is the person who has ultimate authority over the safe operation of the organization;
b) establishes and promotes the safety policy and safety objectives that instil safety as a core organizational value;
c) shall have the authority to make decisions on behalf of the organization, have control of resources, both financial and human,
d) be responsible for ensuring appropriate actions are taken to address safety issues and safety risks;
e) shall be responsible for responding to accidents and incidents.

7.1.2.3. The Accountable Executive shall ensure there is an appropriate organizational structure to manage and operate the SMS.

7.1.2.4. Safety management tasks/functions shall be delegated where necessary to the senior management team and other key safety personnel. Although tasks/functions for the day-to-day operation of the SMS can be delegated, the Accountable Executive cannot delegate accountability/responsibility for the system nor can decisions regarding safety risks be delegated.

7.1.2.5. A SMS Organization is responsible for the safety performance of external organizations where there is an SMS interface. The SMS Organization is held Accountable for the safety performance of products or services provided by external organizations supporting its activities even if the external organizations are not required to have an SMS. It is essential for the SMS Organization's SMS to interface with the safety systems of any external organizations that contribute to the safe delivery of their product or services.

7.1.3 APPOINTMENT OF KEY SAFETY PERSONNEL

7.1.3.1. The SMS Organization shall appoint a safety manager who is responsible for the implementation and maintenance of the SMS.

7.1.3.2. Depending on the size of the SMS Organization and the complexity of their aviation products or services, the responsibilities for the implementation and maintenance of the SMS may be assigned to one or more persons, fulfilling the role of safety manager, as their sole function or combined with other duties, provided these do not result in any conflicts of interest.

7.1.3.3. The safety manager report and advises the accountable executive and line managers on safety management matters, and is responsible for coordinating and communicating safety issues within the organization as well as with external members of the aviation community.

7.1.3.4. Functions of the safety manager include, but are not limited to:

a. manage the SMS implementation plan on behalf of the accountable executive (upon initial implementation);
b. perform/facilitate hazard identification and safety risk analysis;
c. monitor corrective actions and evaluate their results;
d. provide periodic reports on the organization's safety performance;
e. maintain SMS documentation and records;
f. plan and facilitate staff safety training;
g. provide independent advice on safety matters;
h. monitor safety concerns in the aviation industry and their perceived impact on the organization's operations aimed at product and service delivery; and
i. coordinate and communicate (on behalf of the accountable executive) with the CAASL and other State authorities as necessary on issues relating to safety.

7.1.3.5. SMS Organization should establish appropriate safety committees that support the SMS functions across the organization. These committees shall monitor or review;

a. effectiveness of the SMS;
b. timely response in implementing necessary safety risk control actions;
c. safety performance against the organization's safety policy and objectives;
d. overall effectiveness of safety risk mitigation strategies;

e. effectiveness of the organization's safety management processes which support:
   i. the declared organizational priority of safety management; and
   ii. promotion of safety across the organization.

7.1.3.6. Once a strategic direction has been developed by the highest-level safety committee, implementation of safety strategies should be coordinated throughout the organization by creating safety action groups that are more operationally focused. These are normally composed of managers and front-line personnel and are chaired by a designated manager. Safety action groups shall:

a. monitor operational safety performance within their functional areas of the organization and ensure that appropriate safety risk management activities are carried out;
b. review available safety data and identify the implementation of appropriate safety risk control strategies and ensure employee feedback is provided;
c. assess the safety impact related to the introduction of operational changes or new technologies;
d. coordinate the implementation of any actions related to safety risk controls and ensure that actions are taken promptly; and
e. review the effectiveness of specific safety risk controls.

7.1.4 COORDINATION OF EMERGENCY RESPONSE PLANNING

The SMS Organization required to establish and maintain an emergency response plan for accidents and incidents in aircraft operations and other aviation emergencies shall ensure that the emergency response plan is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its products and services.

7.1.5 SMS DOCUMENTATION

7.1.5.1. The SMS Organization shall develop and maintain an SMS manual that describes its:

a. Safety policy and objectives;
b. Any applicable regulatory SMS requirements;
c. System description;
d. SMS processes and procedures; and
e. Accountability, responsibilities and authorities for SMS processes and procedures.
f. safety accountabilities and key safety personnel;
g. Voluntary and mandatory safety reporting system processes and procedures;
h. Hazard identification and safety risk assessment processes and procedures;
i. Safety investigation procedures;
j. Procedures for establishing and monitoring safety performance indicators;
k. SMS training processes and procedures and communication;
l. Safety communication processes and procedures;
m. Internal audit procedures;
n. Management of change procedures;
o. SMS documentation management procedures; and
p. where applicable, coordination of emergency response planning

7.1.5.2. The SMS Organization shall develop and maintain SMS operational records as part of their SMS documentation.

7.1.5.3. Depending on the size of the SMS Organization and the complexity of their aviation products or services, the SMS manual and SMS operational records may be in the form of stand-alone documents or may be integrated with other organizational documents (or documentation) maintained by the SMS Organization.

7.1.5.4. SMS documentation also includes the compilation and maintenance of operational records substantiating the existence and on-going operation of the SMS. SMS operational records shall include:

a. hazards register and hazard/safety reports;
b. SPIs and related charts;
c. record of completed safety risk assessments;
d. SMS internal review or audit records;
e. internal audit records;
f. records of SMS/safety training records;
g. SMS/safety committee meeting minutes;
h. SMS implementation plan (during the initial implementation); and
i. Gap analysis to support implementation plan.

7.2 SAFETY RISK MANAGEMENT

7.2.1 HAZARD IDENTIFICATION

7.2.1.1 The SMS Organization shall develop and maintain a process to identify hazards associated with their aviation products or services.

7.2.1.2 Hazard identification shall be based on a combination of reactive and proactive methods.

7.2.2 SAFETY RISK ASSESSMENT AND MITIGATION

The SMS Organization shall develop and maintain a process that ensures analysis, assessment and control of the safety risks associated with identified hazards. The process may include predictive methods of safety data analysis.

7.2.3 SAFETY RISK ASSESSMENTS FOR INTERNATIONAL OPERATIONS

For AOC holders involved in International Operations refer to *Appendix 2 - Safety Risk Assessments for International Operations*.

7.3 SAFETY ASSURANCE

7.3.1 SAFETY PERFORMANCE MONITORING AND MEASUREMENT

7.3.1.1 The SMS organization shall develop and maintain the means to verify the safety performance of the organization and to validate the effectiveness of safety risk controls.

7.3.1.2 An internal audit process is one means to monitor compliance with safety regulations, the foundation upon which SMS is built, and assess the effectiveness of these safety risk controls and the SMS. Guidance on the scope of the internal audit process is contained in the Safety Management Manual (SMM) (Doc 9859).

7.3.1.3 The SMS Organization's safety performance shall be verified in reference to the safety performance indicators and safety performance targets of the SMS in support of the organization's safety objectives.

7.3.2 THE MANAGEMENT OF CHANGE

The SMS Organization shall develop and maintain a process to identify changes which may affect the level of safety risk associated with its aviation products or services and to identify and manage the safety risks that may arise from those changes.

7.3.3 CONTINUOUS IMPROVEMENT OF THE SMS

The SMS Organization shall monitor and assess its SMS processes to maintain or continuously improve the overall effectiveness of the SMS.

7.4 SAFETY PROMOTION

7.4.1 TRAINING AND EDUCATION

7.4.1.1. The SMS Organization shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform their SMS duties.

7.4.1.2. The scope of the safety training programme shall be appropriate to each individual's involvement in the SMS.

7.4.2 SAFETY COMMUNICATION

7.4.2.1. The SMS Organization shall communicate the organization's SMS objectives and procedures to all appropriate personnel. There should be a communication strategy that enables safety communication to be delivered by the most appropriate method based on the individual's role and need to receive safety related information.

7.4.2.2.The SMS Organization shall develop and maintain a formal means for safety communication that:

a. Ensures personnel are aware of the SMS to a degree commensurate with their positions;
b. Conveys safety-critical information;
c. Explains why particular actions are taken to improve safety; and
d. Explains why safety procedures are introduced or changed.

8. SMS GAP ANALYSIS AND IMPLEMENTATION

8.1. Each SMS Organization shall carry out a gap analysis before implementing SMS. This compares the SMS Organization's existing safety management processes and procedures with the SMS requirements as determined by CAASL. The development of an SMS shall build upon existing organizational policies and processes. The gap analysis identifies the gaps that should be addressed through an SMS implementation plan that defines the actions needed to implement a fully functioning and effective SMS.

8.2. The SMS Organization shall submit the initial gap analysis performed by the organization together with the corrective action taken by the organization to fill the gap and the SMS Implementation Plan. A check list for SMS initial gap analysis is provided in Annex 01 of this Implementing Standard.

8.3. The SMS implementation plan should provide a clear picture of the resources, tasks and processes required to implement the SMS. The timing and sequencing of the implementation plan may depend on a variety of factors that will be specific to each organization, such as:

a) Regulatory, customer and statutory requirements;

b) multiple certificates held (with possibly different regulatory implementation dates);

c) the extent to which the SMS may build upon existing structures and processes;

d) the availability of resources and budgets;

e) interdependencies between different steps (a reporting system should be implemented before establishing a data analysis system); and

f) the existing safety culture.

8.4. The SMS implementation plan shall be developed in consultation with the accountable executive and other senior managers. It shall include who is responsible for the actions along with timelines. The plan shall address coordination with external organizations or contractors where applicable.

8.5. The SMS implementation plan may be documented in different forms, varying from a simple spread sheet to specialized project management software. The plan shall be monitored regularly and updated as necessary. It shall also clarify when a specific element can be considered successfully implemented.

APPENDIX 1 - SMS GAP ANALYSIS CHECKLIST AND IMPLEMENTATION PLAN

1. INITIAL GAP ANALYSIS CHECKLIST

1.1 The initial gap analysis checklist can be used as a template to conduct the first step of an SMS gap analysis. This format with its overall "Yes/No/Partial" responses will provide an initial indication of the broad scope of gaps and hence overall workload to be expected. The questionnaire can be adjusted to suit the needs of the organization and the nature of the product or service provided. This initial information should be useful to senior management in anticipating the scale of the SMS implementation effort and hence the resources to be provided. This initial checklist would need to be followed up by an appropriate implementation plan.

1.2. A "Yes" answer indicates that the organization meets or exceeds the expectation of the question concerned. A "No" answer indicates a substantial gap in the existing system with respect to the question's expectation. A "Partial" answer indicates that further enhancement or development work is required to an existing process in order to meet the question's expectations.

Table 1: Gap analysis checklist

No.	Aspect to be analysed or question to be answered	Answer	Status of implementation
Component 1 — SAFETY POLICY AND OBJECTIVES			
Element 1.1 — Management commitment			
1.1-1	Is there a safety policy in place?	□ Yes □ No □ Partial	
1.1-2	Does the safety policy reflect senior management's commitment regarding safety management?	□ Yes □ No □ Partial	
1.1-3	Is the safety policy appropriate to the size, nature and complexity of the organization?	□ Yes □ No □ Partial	
1.1-4	Is the safety policy relevant to aviation safety?	□ Yes □ No □ Partial	
1.1-5	Is the safety policy signed by the accountable executive?	□ Yes □ No □ Partial	

1.1-6	Is the safety policy communicated, with visible endorsement, throughout the [Organization]?	□ Yes □ No □ Partial	
1.1-7	Is the safety policy periodically reviewed to ensure it remains relevant and appropriate to the [Organization]?	□ Yes □ No □ Partial	
Element 1.2 — Safety accountabilities and responsibilities			
1.2-1	Has [Organization] identified an accountable executive who, irrespective of other functions, shall have ultimate responsibility and accountability, on behalf of the [Organization], for the implementation and maintenance of the SMS?	□ Yes □ No □ Partial	
1.2-2	Does the accountable executive have full control of the financial and human resources required for the operations authorized to be conducted under the operations certificate?	□ Yes □ No □ Partial	
1.2-3	Does the Accountable Executive have final authority over all aviation activities of his organization?	□ Yes □ No □ Partial	
1.2-4	Has [Organization] identified and documented the safety accountabilities of management as well as operational personnel, with respect to the SMS?	□ Yes □ No □ Partial	
1.2-5	Is there a safety committee or review board for the purpose of reviewing SMS and safety performance?	□ Yes □ No □ Partial	
1.2-6	Is the safety committee chaired by the accountable executive or by an appropriately assigned deputy, duly substantiated in the SMS manual?	□ Yes □ No □ Partial	

1.2-7	Does the safety committee include relevant operational or departmental heads as applicable?	□ Yes □ No □ Partial	
1.2-8	Are there safety action groups that work in conjunction with the safety committee (especially for large/complex organizations)?	□ Yes □ No □ Partial	
Element 1.3 — Appointment of key safety personnel			
1.3-1	Has [Organization] appointed a qualified person to manage and oversee the day-to-day operation of the SMS?	□ Yes □ No □ Partial	
1.3-2	Does the qualified person have direct access or reporting to the accountable executive concerning the implementation and operation of the SMS?	□ Yes □ No □ Partial	
1.3-3	Does the manager responsible for administering the SMS hold other responsibilities that may conflict or impair his role as SMS manager?	□ Yes □ No □ Partial	
1.3-4	Is the SMS manager's position a senior management position not lower than or subservient to other operational or production positions?	□ Yes □ No □ Partial	
Element 1.4 — Coordination of emergency response planning			
1.4-1	Does [Organization] have an emergency response/contingency plan appropriate to the size, nature and complexity of the organization?	□ Yes □ No □ Partial	
1.4-2	Does the emergency/contingency plan address all possible or likely emergency/crisis scenarios relating to the organization's aviation product or service deliveries?	□ Yes □ No □ Partial	

1.4-3	Does the ERP include procedures for the continuing safe production, delivery or support of its aviation products or services during such emergencies or contingencies?	□ Yes □ No □ Partial	
1.4-4	Is there a plan and record for drills or exercises with respect to the ERP?	□ Yes □ No □ Partial	
1.4-5	Does the ERP address the necessary coordination of its emergency response/contingency procedures with the emergency/response contingency procedures of other organizations where applicable?	□ Yes □ No □ Partial	
1.4-6	Does [Organization] have a process to distribute and communicate the ERP to all relevant personnel, including relevant external organizations?	□ Yes □ No □ Partial	
1.4-7	Is there a procedure for periodic review of the ERP to ensure its continuing relevance and effectiveness?	□ Yes □ No □ Partial	
Element 1.5 — SMS documentation			
1.5-1	Is there a top-level SMS summary or exposition document which is approved by the accountable manager and accepted by the CAASL?	□ Yes □ No □ Partial	
1.5-2	Does the SMS documentation address the organization's SMS and its associated components and elements?	□ Yes □ No □ Partial	
1.5-3	Is [Organization] SMS framework in alignment with the regulatory SMS framework?	□ Yes □ No □ Partial	
1.5-4	Does [Organization] maintain a record of relevant supporting documentation pertinent to the implementation and operation of the SMS?	□ Yes □ No □ Partial	

1.5-5	Does [Organization] have an SMS implementation plan to establish its SMS implementation process, including specific tasks and their relevant implementation milestones?	□ Yes □ No □ Partial	
1.5-6	Does the SMS implementation plan address the coordination between the SMS Organization's SMS and the SMS of external organizations where applicable?	□ Yes □ No □ Partial	
1.5-7	Is the SMS implementation plan endorsed by the accountable executive?	□ Yes □ No □ Partial	
Component 2 — SAFETY RISK MANAGEMENT			
Element 2.1 — Hazard identification			
2.1-1	Is there a process for voluntary hazards/threats reporting by all employees?	□ Yes □ No □ Partial	
2.1-2	Is the voluntary hazard/threats reporting simple, available to all personnel involved in safety-related duties and commensurate with the size of the SMS Organization?	□ Yes □ No □ Partial	
2.1-3	Does [Organization] SDCPS (safety data collection and processing system) include procedures for incident/accident reporting by operational or production personnel?	□ Yes □ No □ Partial	
2.1-4	Is incident/accident reporting simple, accessible to all personnel involved in safety-related duties and commensurate with the size of the SMS Organization?	□ Yes □ No □ Partial	
2.1-5	Does [Organization] have procedures for investigation of all reported incident/accidents?	□ Yes □ No □ Partial	
2.1-6	Are there procedures to ensure that hazards/threats identified or uncovered during incident/accident investigation processes are appropriately accounted for and integrated into the organization's hazard collection and risk mitigation procedure?	□ Yes □ No □ Partial	

2.1-7	Are there procedures to review hazards/threats from relevant industry reports for follow-up actions or risk evaluation where applicable?	□ Yes □ No □ Partial	
Element 2.2 — Safety risk assessment and mitigation			
2.2-1	Is there a documented hazard identification and risk mitigation (HIRM) procedure involving the use of objective risk analysis tools?	□ Yes □ No □ Partial	
2.2-2	Is the risk assessment reports approved by departmental managers or at a higher level where appropriate?	□ Yes □ No □ Partial	
2.2-3	Is there a procedure for periodic review of existing risk mitigation records?	□ Yes □ No □ Partial	
2.2-4	Is there a procedure to account for mitigation actions whenever unacceptable risk levels are identified?	□ Yes □ No □ Partial	
2.2-5	Is there a procedure to prioritize identified hazards for risk mitigation actions?	□ Yes □ No □ Partial	
2.2-6	Is there a programme for systematic and progressive review of all aviation safety-related operations, processes, facilities and equipment subject to the HIRM process as identified by the organization?	□ Yes □ No □ Partial	
Component 3 — SAFETY ASSURANCE			
Element 3.1 — Safety performance monitoring and measurement			
3.1-1	Are there identified safety performance indicators for measuring and monitoring the safety performance of the organization's aviation activities? [	□ Yes □ No □ Partial	

3.1-2	Are the safety performance indicators relevant to the organization's safety policy as well as management's high-level safety objectives/goals?	□ Yes □ No □ Partial	
3.1-3	Do the safety performance indicators include alert/target settings to define unacceptable performance regions and planned improvement goals?	□ Yes □ No □ Partial	
3.1-4	Is the setting of alert levels or out-of-control criteria based on objective safety metrics principles?	□ Yes □ No □ Partial	
3.1-5	Do the safety performance indicators include quantitative monitoring of high-consequence safety outcomes (e.g. accident and serious incident rates) as well as lower-consequence events (e.g. rate of non-compliance, deviations)?	□ Yes □ No □ Partial	
3.1-6	Are safety performance indicators and their associated performance settings developed in consultation with, and subject to, the civil aviation authority's agreement?	□ Yes □ No □ Partial	
3.1-7	Is there a procedure for corrective or follow-up action to be taken when targets are not achieved and alert levels are exceeded/ breached?	□ Yes □ No □ Partial	
3.1-8	Are the safety performance indicators periodically reviewed?	□ Yes □ No □ Partial	
Element 3.2 — The management of change			
3.2-1	Is there a procedure for review of relevant existing aviation safety-related facilities and equipment (including HIRM records) whenever there are pertinent changes to those facilities or equipment?	□ Yes □ No □ Partial	

3.2-2	Is there a procedure for review of relevant existing aviation safety-related operations and processes (including any HIRM records) whenever there are pertinent changes to those operations or processes?	□ Yes □ No □ Partial	
3.2-3	Is there a procedure for review of new aviation safety-related operations and processes for hazards/risks before they are commissioned?	□ Yes □ No □ Partial	
3.2-4	Is there a procedure for review of relevant existing facilities, equipment, operations or processes (including HIRM records) whenever there are pertinent changes external to the organization such as regulatory/industry standards, best practices or technology?	□ Yes □ No □ Partial	
Element 3.3 — Continuous improvement of the SMS			
3.3-1	Is there a procedure for periodic internal audit/assessment of the SMS?	□ Yes □ No □ Partial	
3.3-2	Is there a current internal SMS audit/assessment plan?	□ Yes □ No □ Partial	
3.3-3	Does the SMS audit plan include the sampling of completed/existing safety risk assessments?	□ Yes □ No □ Partial	
3.3-4	Does the SMS audit plan include the sampling of safety performance indicators for data currency and their target/alert settings performance?	□ Yes □ No □ Partial	
3.3-5	Does the SMS audit plan cover the SMS interface with subcontractors or customers where applicable?	□ Yes □ No □ Partial	

3.3-6	Is there a process for SMS audit/assessment reports to be submitted or highlighted for the accountable manager's attention where appropriate?	□ Yes □ No □ Partial	
Component 4 — SAFETY PROMOTION			
Element 4.1 — Training and education			
4.1-1	Is there a programme to provide SMS training/familiarization to personnel involved in the implementation or operation of the SMS?	□ Yes □ No □ Partial	
4.1-2	Has the accountable executive undergone appropriate SMS familiarization, briefing or training?	□ Yes □ No □ Partial	
4.1-3	Are personnel involved in conducting risk mitigation provided with appropriate risk management training or familiarization?	□ Yes □ No □ Partial	
4.1-4	Is there evidence of organization-wide SMS education or awareness efforts?	□ Yes □ No □ Partial	
Element 4.2 — Safety communication			
4.2-1	Does [Organization] participate in sharing safety information with relevant external industry product and SMS Organization or organizations, including the relevant aviation regulatory organizations?	□ Yes □ No □ Partial	
4.2-2	Is there evidence of a safety (SMS) publication, circular or channel for communicating safety (SMS) matters to employees?	□ Yes □ No □ Partial	
4.2-3	Are [Organization] SMS manual and related guidance material accessible or disseminated to all relevant personnel?	□ Yes □ No □ Partial	

2. IMPLEMENTATION TASK IDENTIFICATION PLAN

GAQ Ref.	Gap analysis question (GAQ)	Answer (Yes/No/Partial)	Description of gap	Action/task required to fill the gap	Assigned task group/person	SMS document reference	Status of action/task (Open/WIP/Closed)

3. SMS IMPLEMENTATION SCHEDULE

Action/task required to fill the gap	SMS document ref.	Assigned task group/person	Status of action/task	Schedule/timeline								
				1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	etc
				1st Year				2nd Year				

APPENDIX 2 - SAFETY RISK ASSESSMENTS FOR INTERNATIONAL OPERATIONS BY AIR OPERATOR CERTIFICATE HOLDERS OF SRI LANKA

1. GENERAL

1.0 This Appendix specifies the framework for the Implementation and maintenance of a Safety Risk Assessment by the AOC Holders of Sri Lanka who are required to have a Quality Management System.

1.1 In order to maintain the highest standards of Safety on a continuing basis along with constant changes in operations, the Safety Management System provides safeguards to protect the lives and interests of all stake-holders in the aviation world. To this end, the CAASL recommends the workings and outcomes required by a Safety Risk Assessment Committee.

1.2 The framework for a Safety Management System is laid down in this Implementing Standard, and is further elaborated in ICAO Doc 9859. The emphasis of the Safety Risk Assessment is Data-Driven. Airline personnel engaged in safety programs are constantly generating data that's valuable at creating a data driven methodology approach to ensure the safety of the Frontline Personnel.

1.3 The Safety Management System explains in detail about the "Swiss Cheese" Model (James Reason developed a Swiss cheese model of accident causation) and the "SHELL" models etc. It further goes in depth as to the matrices and methods to be used. However, it must be made clear on exactly who is responsible for this evaluation. It would seem incumbent on the regulator to ensure that the assessments are given due credit based on the expertise of the evaluators.

2. APPLICABILITY

2.1 Safety Risk Assessments shall be applicable to any International Airline Operator who is an AOC holder of the CAASL.

3. DEFINITIONS

Change Management: A formal process to manage changes with an organisation in a systematic manner, so that changes which may impact identified hazards and risk mitigation strategies are accounted for, before the implementation of such changes.

Frontline Personnel: The Staff at the frontline of the Operation who are directly involved with the operation, by means of direct contact with the Aircraft, the Passengers or the Cargo operation under assessment. This shall (as applicable) include the following Licence/Certificate holders: Engineers & Technicians, Pilots, Cabin Crew, Flight Operations Officers (Flight Dispatchers) and Load Control Officers as applicable.

Management Representatives: These are personnel who are identified as employed by the AOC Holder who will be ultimately responsible to the Regulator for the safety aspects of the Operation.

Quality Management System (QMS): The Quality Management System is generally defined as the organizational structure and associated accountabilities, resources, processes and procedures necessary to establish and promote a system of continuous quality assurance and improvement while delivering a product or service. It is a collection of business processes focused on consistently meeting customer requirements and enhancing their satisfaction while still being aligned with an organization's purpose and strategic direction. It is expressed as the organizational goals and aspirations, policies, processes, documented information and resources needed to implement and maintain it.

Quality Assurance: Part of the Quality Management System focused on providing confidence that *quality requirements* will be fulfilled and all the planned and systematic activities implemented within the quality system that can be demonstrated to provide confidence that a product or service will fulfil requirements for quality.

Quality Control: Part of the Quality Management System focused on fulfilling *quality requirements* including the operational techniques and activities used to fulfil requirements for quality.

Regulator: The Civil Aviation Authority of Sri Lanka

Risk Mitigation: The process of incorporating defences, preventive controls or recovery measures to lower the severity and/or likelihood of a hazard's projected consequence.

Safety Risk assessment: A safety risk assessment is a systematic and documented procedure for continuously identifying and managing hazards. In a dynamic and ever changing environment the risk assessment needs to be reassessed and updated continuously.

Safety Risk Assessors: These are the Management Representatives and the Frontline Personnel who will submit the Safety Risk Assessment Report with their individual observations and recommendations for evaluation by the CAASL. This also includes those with specialist training capable of assessing various aspects of the Operation.

Safety Action Groups*:* These are a combination of Frontline Personnel and specialised experts and *ex-officio* members of the Management who assess a specific area assigned to their attention in regards to the Operation.

Safety Management System (SMS): The Safety Management System is a systematic approach of managing safety, including the necessary organizational structures, accountabilities, policies and procedures. An SMS can be considered as a "management chain" which defines the essential elements for hazard identification and continuous safety risk assessment. An SMS is created for the development of a positive safety culture in the respective service provider's organization.

Support Units: These personnel are parts of sections that have an operational role to play but are not in direct contact with the Passenger, the Aircraft or the Cargo involved. Their observations will not be evaluated unless raised by the Management Representatives (to whom they are responsible).

4. GENERAL PRINCIPLES

4.1 The primary focus of a Safety Management System is on the Frontline Personnel. When Frontline Personnel are operating in a safe and secure work environment, the beneficiaries of this Safety culture are the Passengers/Customers, Cargo/Freight and all Third Parties.

4.2 With this objective in mind a Safety Risk Assessment is conducted to ensure that all aspects of the operation which can affect the health, safety and performance of the Frontline Personnel are addressed and made aware of, as a pre-emptive measure with reactive monitoring.

4.3 The outcome of a Safety Risk Assessment is a comprehensive report which can be analysed by the CAASL which can responsibly grant an operational approval, being assured that all aspects and hazards have been identified, mitigated and are constantly evaluated.

4.4 The Management Representatives are accountable to the CAASL for the outcome of the Operation.

4.5 The comments of the relevant Frontline Personnel are required in a Safety Risk Assessment to be accepted by the CAASL.

4.6 The concerns & operational requirements of Support Units must be addressed by the relevant Management Representative who shall be held responsible for the functions of those Support Units.

5. ROLE OF QUALITY ASSURANCE

5.1 When an Operation or an Operational change is proposed, the Quality Assurance shall "pro-actively" identify, as to which sections/departments are responsible for the Operation.

5.2 The objective of Quality Assurance during a Safety Risk Assessment assures safety and generates the confidence provided in two aspects: internally to the management and externally to passengers/customers, government agencies, the Regulator, certifiers, and Third Parties.

5.3 The benefits of Quality Assurance being the driving factor in a Safety Risk Assessment has benefits to the AOC Holder in terms of:

a) Improved efficiencies – Possible reduction in the cost of operations by exposing inefficiencies in existing processes and systems. Integration with other internal or external management systems may also save on additional costs.

b) Cost avoidance – Through the proactive identification of hazards and safety risk management (SRM), the cost incurred due to accidents and incidents can be avoided. In such cases, direct costs may include: injuries; property damage; equipment repairs; and schedule delays. Indirect costs may include: legal action; loss of business and damaged reputation; surplus spares; tools and training; increased insurance premiums; loss of staff productivity; equipment recovery and clean-up; loss of use of equipment leading to short-term replacement equipment; and internal investigations.

5.4 The Quality Assurance must be familiar with the Roles, Responsibilities and Functions of all Management Representatives, Frontline Personnel and Supporting Units at all Risk Assessment Committees. It is the responsibility of Quality Assurance to ensure that all those conducting an SRA adhere to their relevant role and function and submit independent assessments as per their function.

5.5 Quality Assurance must also ensure that all assessors are competent within their scope of responsibility for the area being assessed. Quality Assurance should make maximum use of

relevant Safety Action Groups (SAGs) to get in-depth study into various aspects that could affect Frontline Personnel.

5.6 Quality Assurance will then identify the relevant Management Representatives who will be held accountable to the Frontline Personnel and the CAASL.

5.7 Quality Assurance is to guide the Management on all relevant regulations and recommended practices and help to strike a balance between the opposing concerns.

5.8 Quality Assurance is to ensure that the Frontline Personnel selected for the Risk Assessment are those who will be executing the Operation once it is approved.

5.9 Quality Assurance to ensure that all Management Representatives and Frontline Personnel are independent of any unprofessional influence which could detract them from their objective assessments as per their roles as defined in the relevant manuals.

5.10 Quality Assurance shall formulate methods of monitoring and constantly assessing how concerns raised by Frontline personnel can be mitigated.

5.11 Quality Assurance shall monitor the progress of all operations to assess if the threat is escalating, or new threats are emerging during actual and eventual operations.

6. ROLE OF QUALITY CONTROL

6.1 Quality Control shall be responsible *'Reactively'* for the monitoring of all mitigation steps to be implemented. While quality assurance relates to how a process is performed or how a product is made, quality control is more the inspection aspect of quality management.

6.2 Quality Control is to be familiar with the procedures and Operations prior to any changes.

6.3 Quality Control is to note all changes & mitigation steps that are agreed upon and note how those changes are to be reflected in documentation and actual operation.

6.4 The task of constantly auditing, monitoring and evaluating the implementation of the changes without any deviation, is the responsibility of Quality Control.

6.5 If any deviation is required, Quality Assurance and Safety Department must be kept informed and further Assessments shall be carried out.

7. ROLE OF SAFETY DEPARTMENT

7.1 Safety management and quality management are highly complementary and must therefore work together to achieve the overall organizational product or service goals of aviation safety. The Safety Department and Quality Management System should not conflict with each another.

7.2 The Safety Department referred herein is the department identified by the relevant Safety Management System.

7.3 The reactive response to any threat perceived by the Safety Department must be communicated to the relevant Quality Control and Quality Assurance Departments of the Quality Management System.

8. FRONTLINE PERSONNEL

8.1 The Frontline Personnel shall consist of the personnel who are directly affected by the nature of the introduced operation or change, with no intervening layers.

8.2 The Frontline Personnel shall be considered as those who have direct contact with the Aircraft, the Passengers or Cargo involved in an Operation. Primarily these shall be *inter alia* Flight Crew, Cabin Crew, Engineers/Technicians, Flight Operations Officers (Flight Dispatchers) & Load Controllers.

Note: *the above mentioned categories of Frontline Personnel are considered responsible for both actions/documentation that directly affects/impacts the Operation with no other intervention. This is considered the primary focus of the Safety Risk Assessment and shall be the priority of the Risk Assessment Committee.*

8.3 The impacted ranks of the relevant Frontline Personnel must be represented at the Risk Assessment by individuals who are competent in each scope of operation.

Example: an SRA on a flight involving a B777 or A350 fleet, should have a Line Instructor, a Senior Captain, a Junior Captain, a Cruise Pilot and a Senior F/O representing Frontline Personnel of that particular fleet.

Note: *A single person cannot make an assessment for more than one role at an SRA, i.e. an Instructor cannot also represent a Senior Captain.*

8.4 The Frontline Personnel shall be selected by the relevant departments and should be those who will be the first to be impacted/affected and/or scheduled on the new operation.

8.5 *Recommendation:* There should be two "Teams" or "Crew" of Frontline Personnel. An Assessment Team/Crew and a Trial Team/Crew. Their functions would be as follows:

- *The Assessment Team:* These frontline personnel are involved from the design/introduction/change stage. They will be involved in all the table top discussions of the Safety Risk Assessment and analyse their roles as they will be the first to face the Trial run of the new/changed Operation. Ideally these should be the first two or three Teams/Crews to face the new Operation

- *The Trial Team:* The Trial Team/Crew will not participate in the table-top Safety Risk Assessment. These should be equally experienced Frontline personnel, as the Assessment Team/Crew, who will only get involved in the trial stage, (i.e. second crew to be rostered for the flight, controllers to use the new equipment, second group of engineers to be sent to the station, second duty of Flight Dispatchers to use a new system).

- The Trial team will assess the actual trial/real operation as is and submit feedback directly to the Safety Department and Quality Control Department. Depending on their feedback, fresh Safety Risk Assessment may be called for with changes to the operation.

8.6 The Frontline Personnel who participate in the trial period of the operations shall assess the actual trial/real operation as is and submit feedback directly to the Safety Department and Quality Control Department. Depending on their feedback, fresh Safety Risk Assessment may be called for with changes to the Operation.

9. MANAGEMENT REPRESENTATIVES

9.1 The Management Representatives are those persons held accountable for all decisions taken by the respective Section of the AOC holder's organisational structure.

9.2 These shall be those who are ultimately responsible for any changes or introductions made to any system which has an operational affect.

Example: if a flight to a new destination is under assessment, the Management Assessors would be the Director Operations, Chief Pilot of the Fleet, Chief Pilot Training & Standards etc.

9.3 The Head of a Department/Section which takes over-all responsibility for an Operation for which there is a change or introduction shall be present.

9.4 The Managers whose units comprise of the Frontline Personnel shall be present.

9.5 A Management Representative cannot represent a Frontline Personnel even if they may be Frontline Personnel during an operation.

Example: Chief Pilot Training cannot represent the Instructors, nor can the Chief Pilot of the Fleet represent a normal Line Captain.

9.6 No Management Representative should be responsible for areas or decisions that they have no jurisdiction over. They should restrict themselves to their scope of responsibility and sphere of competence.

Example: The Chief Pilot of the Fleet should not attempt to answer on behalf of the Training Department or Commercial concerns.

9.7 *Recommendation:* The Management may introduce Managerial representatives from those areas who have required/requested for the change or introduction.

Example: A representative from the Commercial Section who wishes to introduce a flight, or remove a layover or change the frequency etc… may be present at the Safety Risk Assessment to answer to Frontline Personnel.

10. SUPPORT UNITS & SUPPORT PERSONNEL

10.1 Supporting Units are personnel involved in roles that are not directly affected by the Operational introduction or change. These personnel have no direct contact with the Aircraft, the Passengers or the Cargo.

Example: Administration, Fuel Monitoring, Crew Scheduling, Performance, Human Resources etc.

10.2 Supporting Units are those units that report to a Management who are already represented on the Risk Assessment Committee. The concerns of the Supporting Units will be addressed by the Management Representatives who shall take responsibility for any instructions or directions submitted to those Support Units for the Operation under assessment. The concerns of Support Units shall be secondary to those of Frontline Personnel.

10.3 Supporting Staff will become Frontline personnel if they become directly involved in the operation of the Aircraft, interact with the Passengers or handle the cargo.

i. *Example 01: if Security personnel are required to passenger to a destination to enforce certain concerns;*
ii. *Example 02: if a Line Engineer is physically required to fly to a destination for maintenance requirements;*
iii. *Example 03: Ground Staff who have to undertake additional duties normally performed by other Support Units.*

10.4 *Recommendation:* All instructions, directions or procedures submitted to Support Units by the Management should be documented and included in the Risk Assessment and be submitted to the CAASL with the Risk Assessment for evaluation.

11. SAFETY ACTION GROUPS (SAG)

11.1 An operator shall have selected groups consisting of responsible managerial staff and trained Frontline personnel and subject experts to assess the operational implications with a specific focus in a given area i.e. fatigue, flight duty periods, special operations, new regulations etc..

11.2 Safety Action Groups are tactical entities that deal with specific implementation issues in accordance with the strategies developed by the Quality Management System via an SRA.

11.3 Safety Action Groups may:

a) Monitor operational safety performance within their functional areas of the organisation and ensure that appropriate Safety Risk Management activities are carried out;
b) Review available safety data and identify the implementation of appropriate safety risk control strategies and ensure frontline personnel feedback is provided;
c) Assess the safety impact related to the introduction of operational changes or new technologies;
d) Coordinate the implementation of any actions related to safety risk controls and ensure that the actions are taken promptly; and
e) Review the effectiveness of specific safety risk controls.

Note: An assessment done by a Safety Action Group does not constitute a Safety Risk Assessment in relation to the requirements of this manual.

12. RISK ASSESSMENT COMMITTEE ROLES & RESPONSIBILITIES

12.1 The Risk Assessment Committee shall consist of Assessors from the following:

i. Management Representative
ii. Frontline Personnel

12.2 The Risk Assessment Committee shall have the Safety Department and Quality Department representatives to fulfil their guidance and follow-up roles.

12.3 The Management may invite necessary experts in any particular area to advise on certain aspects of the Risk Assessment.

12.4 Each Assessor shall be held responsible for their Assessments to the CAASL according to their scope of responsibility.

12.5 Each Assessor shall be notified as to their scope of responsibility and be sent all available data on the proposed Operation/Operational change prior to the meeting(s) of the Risk Assessment Committee.

12.6 Each Assessor shall prepare according to their scope of responsibility on the submitted data and may at any time request for more operationally pertinent data.

12.7 *Recommendation:* Risk Assessment Committee to use Data-Driven Decision-Making which improves the service provider's ability to gather safety data for the purpose of safety analysis and later evaluation by the Regulator.

12.8 Each Assessor should analyse the particular Operation or Operational Change, from the perspective of their roles and duties defined in the approved manuals that specify their responsibilities and duties.

12.9 A Management Representative cannot make an assessment on behalf of a Frontline Personnel, even if that Management Representative is a frontline personnel at some part of the Operation to prevent a conflict of interest.

Exemption: a Management Representative may give an assessment from a managerial perspective and a frontline perspective in special circumstances.

Example: The HFO cannot give an assessment as a PIC except in situations where it's a special flight, VVIP flights etc. where the HFO will also give an assessment as the PIC.

12.10 *Recommended:* That the assessors follow the Risk Assessment matrix as per ICAO Doc 9859. (See Attachment A)

12.11 Each Assessor will submit/maintain his/her concerns in writing and with references to any applicable documentation for the Report which may be required by the CAASL during the evaluation for verification.

Example: An Assessor representing Senior First Officers who has to assess the impact of the proposed operation on Flight Duty Time Limitations shall make appropriate reference to the relevant manuals and submit details of the calculation in his/her report.

13. RISK ASSESSMENT COMMITTEE REPORT SUBMISSION TO CAASL

13.1 These reports must be in a table format (See Attachments 'A' & 'B' for recommendations).

13.2 The reports are to be filled in by each Assessor according to his/her representative role. The Assessor will independently state any reasons for or against the proposed scheme and submit preferences of options and underlying concerns.

13.3 The Safety Risk Assessment must very clearly state all the details of the proposed Operation/Operational change with all the elements that were put forward for consideration by the SRA Committee.

13.4 A Risk Assessment Committee shall not decide any operational consequence by majority votes. The concerns of every Frontline Personnel must be recorded.

13.5 Every Assessor will submit their individual assessment based on their Role and shall submit full details on any regulatory requirements or calculations considered: i.e. if Flight Duty Periods are considered by a Line Captain (Assessor), he/she will refer to the relevant table and state in full the calculation done and how he/she concluded whether such calculation is satisfactory/unsatisfactory from the perspective of the Line Captain's Role.

13.6 The Report will be submitted by the Director Flight Operations of the Operator and may be accompanied by the comments of the Management Post-holders who can address their concerns and opinions for which they take responsibility.

13.7 All Assessors (Frontline Personnel & Management Representatives) must be identifiable by Name, Designation/Rank, Licence number (if any) etc. to be acceptable to the CAASL.

14. RISK ASSESSMENT REPORT REQUIREMENT & ACCEPTANCE BY CAASL

14.1 The Report shall be sent to the Deputy Director General - Flight Safety Regulations (DDG-FSR) and Manager (Aviation Safety Monitoring) of the CAASL.

14.2 The Report must specify the relevant areas that were considered during the Safety Risk Assessment as affecting the Operation. This would include but is not limited to:

a) Operational nature;
b) Health factors & requirements;
c) Relevant Rules & Regulations;
d) Information submitted to Frontline Personnel (Briefing Documents/Manuals/Notification/Instructions);
e) Any other detail or concern which would impact on the operation or on the performance and decision making of the Frontline Personnel;

14.3 The Assessment Report shall be scrutinised by flight crew & cabin safety inspectors and others as required.

14.4 The CAASL will evaluate all the comments in the Safety Risk Assessment Report and communicate with the concerned operator via the DDG-FSR.

15. RECOMMENDED STEPS OF THE OPERATORS RISK ASSESSMENT COMMITTEE

15.1 The following steps are *recommended* practices and the CAASL advises that Risk Assessment Committees take further Guidance from all relevant ICAO Manuals & SARPS.

15.2 *Recommended* Standard Steps to be Covered:

a. Gather details of the Operation/Operational Change
b. Identify which sections are responsible for the Operation
c. Identify the Frontline Personnel (preferably the first shifts/crews that will have to execute the operation)
d. Identify the Support Units associated with the Operation
e. Send all Operational Data to Management Representative to prepare for the Risk Assessment.
f. Send all Operational Data to Frontline Personnel with instructions on their role and scope of responsibility. (This includes subject experts on matters relating to Aero Medical matters and Crew Fatigue)
g. Send all Operational Data to Support Units to report back to Management Representatives.
h. Call for Safety Risk Assessment with only Management Representatives & Frontline personnel. Support Units & Experts may be observers.
i. Minutes of all meetings to be kept on record.
j. Brief all details of proposed operation/operational change.
k. Brief on Management Goals, Targets and Expectations.
l. Identify Hazards to Frontline Personnel and follow ICAO Doc 9859 Section 2.5 on Safety Risk Management
m. Monitor and note all operational Pro-Active Hazard Identification methods
n. Monitor and note all operational Reactive Hazard Identification methods
o. Frontline Personnel to propose Hazard mitigation methods & options.
p. Management Representatives to consider mitigation options and submit counter-proposals with reasons.
q. Quality Assurance to cross-check legality and standards compliance of mitigation actions and to consider if this affects other Frontline personnel or Management areas not present at the Risk Assessment.
r. Monitor all pros and cons brought to light during the risk assessment and formulate monitoring methods.
s. Formulate methods of ensuring that normal procedures and any special procedures adopted as mitigations are complied with.
t. Frontline Personnel – Assessors to document their comments (for & against)
u. Management Rep – Assessors to document their comments (for & against)
v. Document all instructions to be submitted to Support Units and which Management representative is responsible for compliance.

w. All instructions, briefing notes, procedural or policy documents that are to be issued to Frontline Personnel as part of the mitigation to be documented and added to the Safety Risk Assessment Report for CAASL Approval
x. All instructions, briefing notes, circulars, procedural or policy documents that are to be issued to Support Units to be documented and responsible Management Representatives to be identified for their compliance.
y. Risk Assessment Report to be sent to CAASL for Approval.
z. Constantly monitor compliance and emerging hazards from the operation/operational change.

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16. ICAO REFERENCES

ICAO Doc 9859 - Safety Management Manual
ICAO Doc 10002 – Cabin Crew Safety Training Manual

Referred Annexes to the Convention on International Civil Aviation
Annex 1 — Personnel Licensing
Annex 6 — Operation of Aircraft
Part I — International Commercial Air Transport — Aeroplanes
Part II — International General Aviation — Aeroplanes
Annex 8 — Airworthiness of Aircraft
Annex 13 — Aircraft Accident and Incident Investigation
Annex 14 — Aerodromes
Volume I — Aerodrome Design and Operations
Annex 18 — The Safe Transport of Dangerous Goods by Air
Annex 19 — Safety Management

ISO 9000 – Quality Management Principles
ISO 9001 – Quality Management Systems - Requirements
ISO 10011 – Guidelines for Auditing Quality Systems

PANS
Procedures for Air Navigation Services (PANS) — Aerodromes (Doc 9981)
Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444)

ATTACHMENT- A TO APPENDIX 2

1. Safety Risk Assessment Hazard Identification & Mitigation Action Table

Recommended: (Standard form and Matrix – See ICAO Doc 9859 & IS 070 matrix)

Safety Risk		*Severity*				
Probability		*Catastrophic A*	*Hazardous B*	*Major C*	*Minor D*	*Negligible E*
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

Note.— In determining the safety risk tolerability, the quality and reliability of the data used for the hazard identification and safety risk probability should be taken into consideration.

ATTACHMENT B TO APPENDIX 2

(Sample Format)

1. Risk Assessment Committee Report Format (*Recommendation only)*

SAFETY RISK ASSESSORS REPORTS

DESIGNATION	REASONS IN FAVOUR	REASONS AGAINST	DECISION
MANAGEMENT			
Head of Flight Operations	1) Commercially viable sector 2) No limitations during day operation 3) Night Operation with 4x Flight Crew feasible 4) Crew can submit Fatigue Reports	1) Night Operation timing critical on FDP 2) Not less that 4x Flight Crew	A330 weekly service with local departure 2100 and Arrival 0600 local in Belgrade feasible with: 4 Flt Crew (2 crew shifts in cruise) 12 Cabin Crew Layover in Belgrade
Manager Flight Safety	1) FDP has been checked 2) Layover mitigates the fatigue 3) Cruise fatigue mitigated by two sets of crew (four flight crew)	1) Not safe for Training 2) Experienced Crew Only 3) MEL restrictions for Icing 4) Engineer and Relief Crew must have seats for rest	In favour of operation as proposed by HFO
Chief Pilot A330	1) FDP has been checked and there is a 30minute window (See workings attached) 2) 4x flight crew with relief in cruise mitigates fatigue 3) Night operation poses less weather hazards on arrival	1) Not for training 2) Crew to be with minimum 1000hrs on type 3) Ukrainian Airspace and Azerbaijan Airspace to be avoided. 4) Layover mandatory 5) Performance critical take off from Belgrade 6) Destination Alternate Weather critical	In favour of proposal as per HFO Require more fuel for Destination Alternates when Wx affects Budapest and Bucharest Route not to be adjacent to Prohibited and Restricted Areas.
Chief Pilot Training	1) No critical factors or special training required 2) All segments of Operation are safe and feasible	1) Colombo-Belgrade Sector not to be used for Training. 2) Can be used for Route Check	In favour of proposal by HFO

Cabin Safety Training Manager	1) No fatigue and no FDB issues	1) Minimum number of Crew required. 2) Pax profile for sector have high number of Wheelchair/Blind pax.	In favour but require full crew complement.
Head of Engineering	1) Layover needed to mitigate fatigue 2) Engineering support adequate in Belgrade 3) seat for both sector with minimum disturbance	1) Winter equipment 2) No Sat connectivity 3) Belgrade fuel issues	In favour of proposal by HFO
FRONTLINE PERSONNEL	**REASONS IN FAVOUR**	**REASONS AGAINST**	**DECISION**
Line Instructor A330	1) Feasible for Route checks but workload could be excessive for Training on Approach to Belgrade	1) Recommend not for Training except BEL-CMB sector	In favour of proposal by HFO
Line Captain	1) Layover needed to mitigate fatigue	1) Too many prohibited areas 2) No proper rest in BC for relief crew with other pax during COVID19 restrictions 3) Return Flt Crew fatigue conditions not calculated in FDP (See attached calculations)	Against proposal by HFO
Cruise Pilot	1) Layover need to mitigate fatigue	1) Agree with Line Captain and concur on calculations of FDP (see attached calculations)	Against proposal by HFO
Senior F/O	1) Layover needed to mitigate fatigue	1) FDP on the margin (see calculation attached below) 2) Workload for cruise F/O very high during graveyard shift resulting in more fatigue	(Example)
On-Board Engineer	1) Layover needed to mitigate fatigue 2) Engineering support adequate in Belgrade 3) seat for both sectors	1) Winter equipment 2) No Sat connectivity 3) Belgrade fuel issues	In favour of proposal by HFO subject to Engineering checks of Belgrade facilities.
CC Instructor	1) Needed on board to carry out safety audits.	1) Not commercially viable, as extra	In favour as it is a regulatory requirement.

		expenditure occurred.	
CC Purser	1) Layover needed to mitigate fatigue	1) FDP In The Margin	In favour of proposal by HFO
CC Leading S	1) Layover needed to mitigate fatigue	1) FDP In The margin	In favour of proposal by HFO
CCM	1) Layover needed to mitigate fatigue	1) FDP In The Margin	In favour of proposal by HFO
On-Board Flight Operations Officer (Flight Dispatcher)	1) Proficiency and adequacy of flight dispatch	1) Systems available are not compatible to the airline requirements	In favour of proposal by HFO
On-Board Load Control Officer	1) (Example)	1) (Example)	

Head of Flight Operations: (Signature)

Considering all the points brought out it is proposed that a 4 crew (relief inflight) with an 18hr layover is sufficient to mitigate the concerns of the Flight and Cabin Crew (see their calculations attached below)

Manager Flight Safety: (Signature)

Having checked all the risk factors I am satisfied that the mitigation methods will reduce the risks considerably. Crews are being encouraged to file fatigue reports and these will be reviewed on a weekly basis with the Chief Pilot A330. Assessment Crews to report back after first flights and then Trial Crew reports to be sent to Quality Control for further evaluation.

Manager Quality Assurance: (Signature)

All aspects of the operation have been checked to be compatible with Company Policies and relevant CAASL regulations.

Manager Quality Control: (Signature)

All concerns noted. Follow up mechanism in place with Assessment Team (crew have been rostered accordingly) and have instructed Trial Teams to report back. Will keep Safety in copy.

Chief Pilot A330: (Signature)

Rostering have been instructed to allocated crews accordingly and Dispatch have been advised to avoid certain routing and to prepare more Destination alternates. Copies of FSI's to crew are attached. Workings of Fatigue calculations are attached. Trial Crew have been rostered immediately after Assessment Team/Crew have done the first flights.

Attachments:

1. FDP Calculations
2. Flight Safety Instructions
3. Cabin Safety Instructions
4. Company Notices
5. Draft Procedure with Current Procedures