Session 2

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CANSO SoE in SMS Framework

SAFETY POLICY AND OBJECTIVES:
Safety Policy
Organisational and Individual Safety Responsibilities

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Safety Policy Components and Elements

- Safety Policy

- Safety Accountabilities

- Coordination of Emergency Response Planning

- SMS Documentation

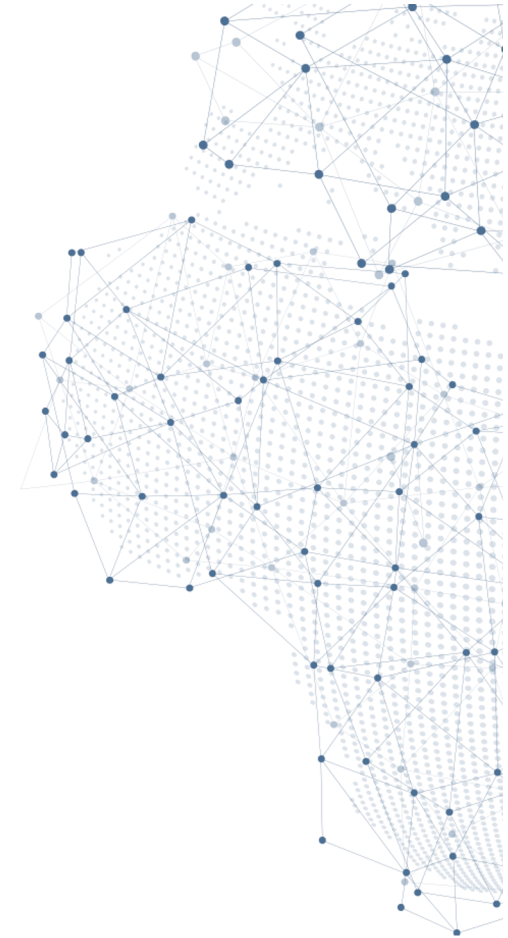- Compliance with International Obligations

Safety Policy Attributes

- Safety Management

- Safety Priority

- Safety Objectives

- Safety Responsibilities

- Safety Leadership

- Safety Resourcing

Safety Accountabilities

Accountable versus Responsible

- **Accountable:** The individual 'accountable' for a task or activity is answerable for its satisfactory completion, regardless of whether he/she directly carries it out.

- **Responsible:** The individual 'responsible' for a task or activity directly carries out that task or activity.

ACCOUNTABILITY
VS
RESPONSIBILITY
(a subtle but very powerful difference)

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# Documenting and Discharging Safety Accountabilities/Responsibilities

- Write down the individual accountability and underpinning responsibilities

- Gain an understanding of what the safety accountability means and what is required to fulfil it

- Identify what form of evidence is required to show that safety accountability is being met

- Change processes and procedures where necessary

- Produce a plan for implementing procedural changes and information-gathering

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Safety Accountabilities/Responsibilities for Managing Safety

- Identify those with safety accountabilities.

- Begin to delegate safety responsibilities from the senior managers to department managers.

- Assure that safety responsibilities are focused on individual business areas to minimise areas of overlap.

- Do not delegate responsibilities to everyone in the organisation

- Design a set of responsibilities

- Responsibility set statement should include both general and safety responsibilities

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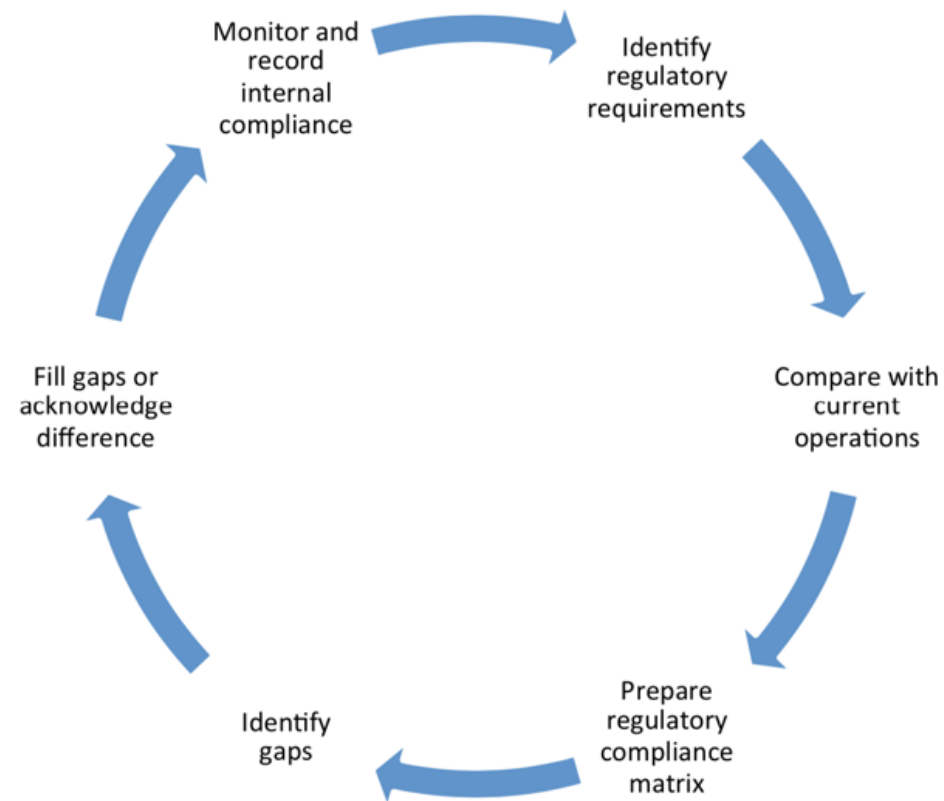## Safety Accountabilities/Responsibilities for Managing Safety

- Develop a matrix so that accountabilities and responsibilities can be easily tracked and maintained.

- Ensure that managers record evidence demonstrating that they are fulfilling their safety responsibilities.

- Safety deliverables should form part of the performance objectives of all staff with safety responsibilities.
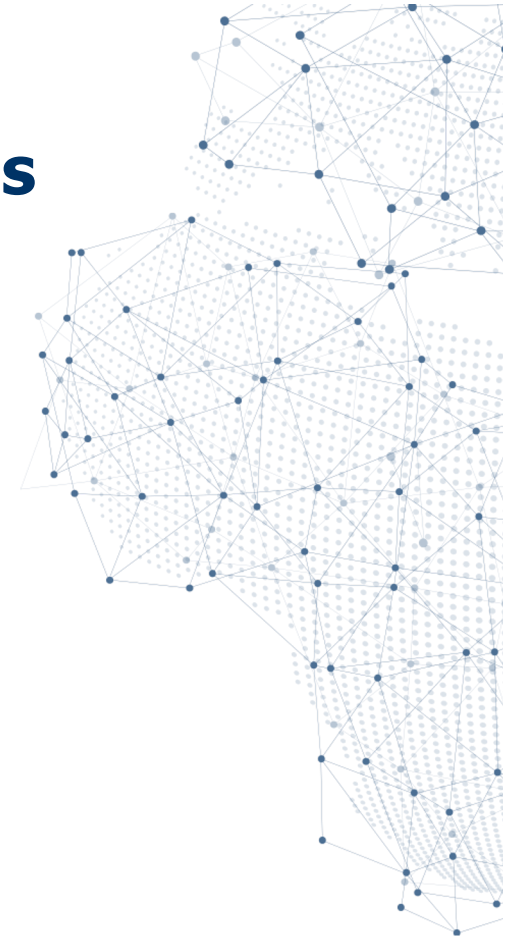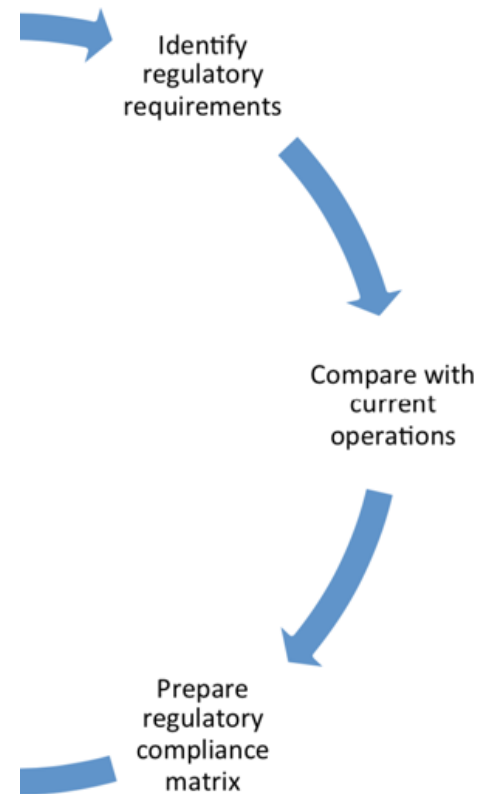
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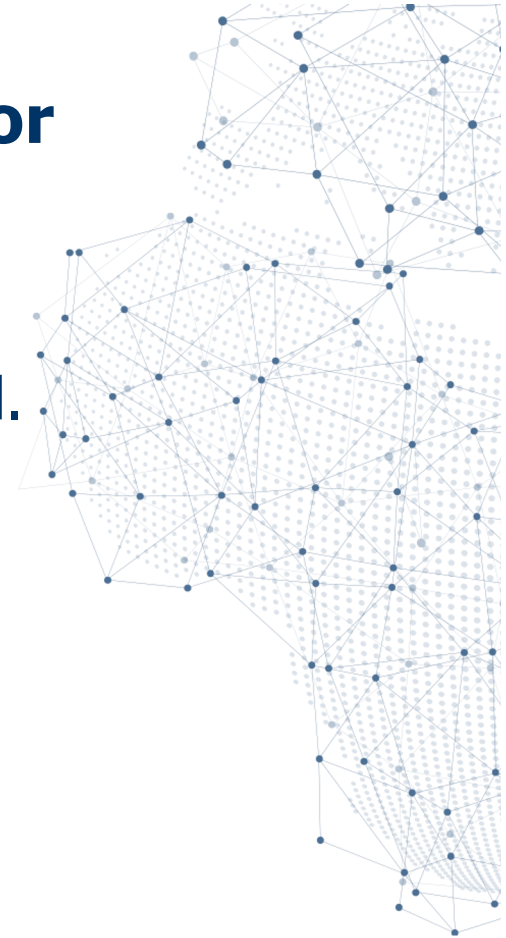
SAFETY POLICY AND OBJECTIVES:
Compliance with International Obligations

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Compliance with International Obligations

Compliance with International Obligations

Identify regulatory requirements

Compare with current operations

Prepare regulatory compliance matrix

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Compliance with International Obligations

Monitor and record internal compliance

Fill gaps or acknowledge difference

Identify gaps

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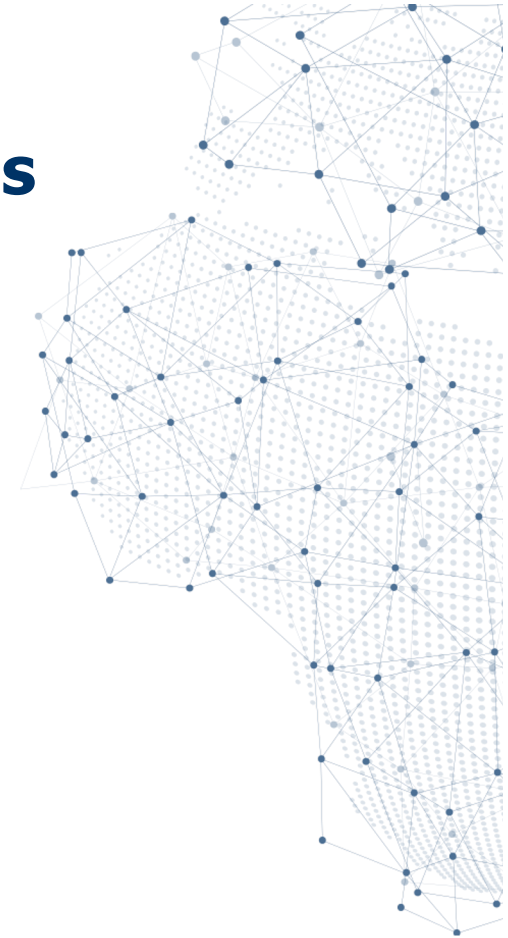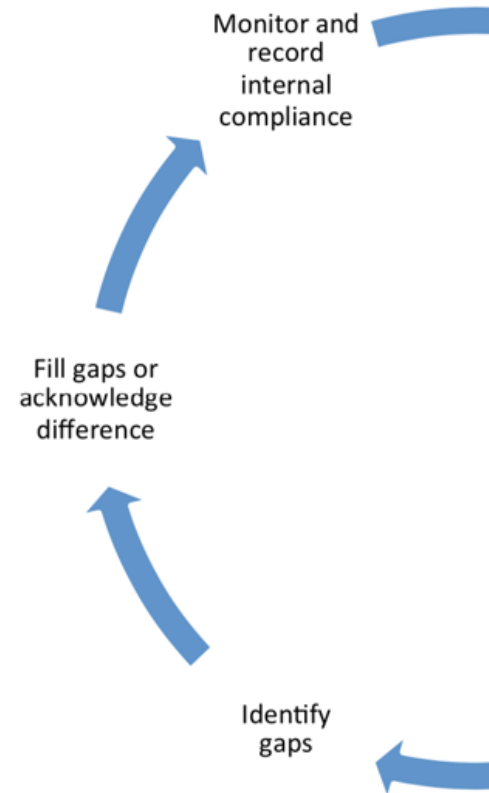
Compliance with International Obligations
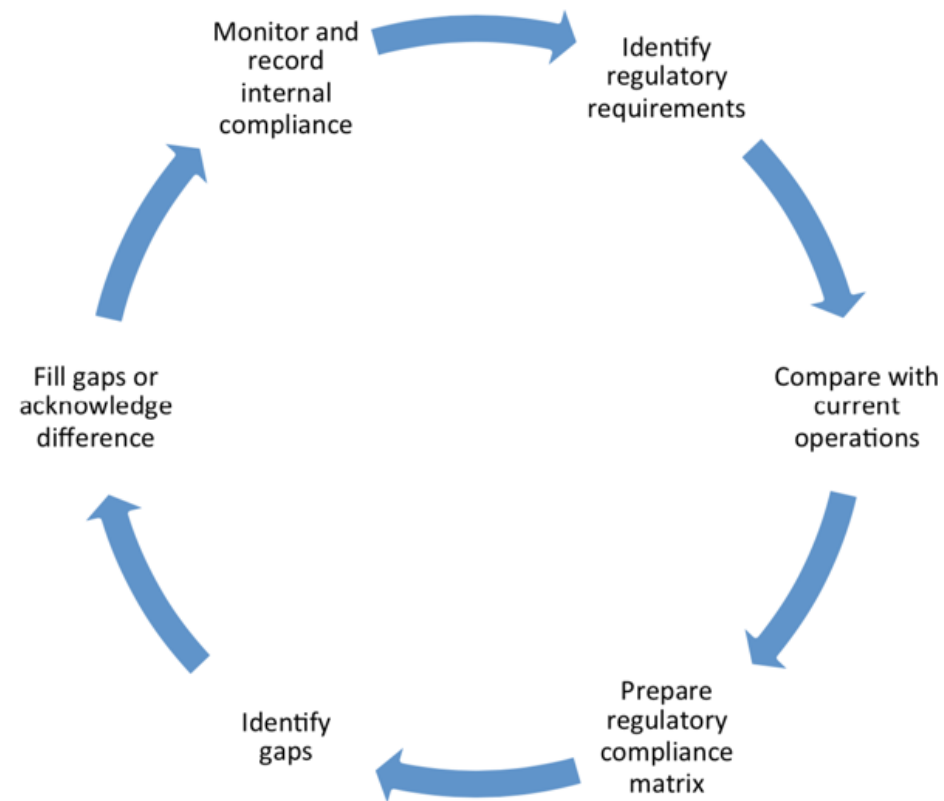
Monitoring Compliance

- Assure that actions to address compliance gaps are implemented and delivered

- Internal audits

- Air safety investigations

- Operational safety surveys and SMS audits

- ICAO safety oversight program

- Regional standardisation inspections (if applicable)

SAFETY POLICY AND OBJECTIVES:
Emergency/Contingency Procedures

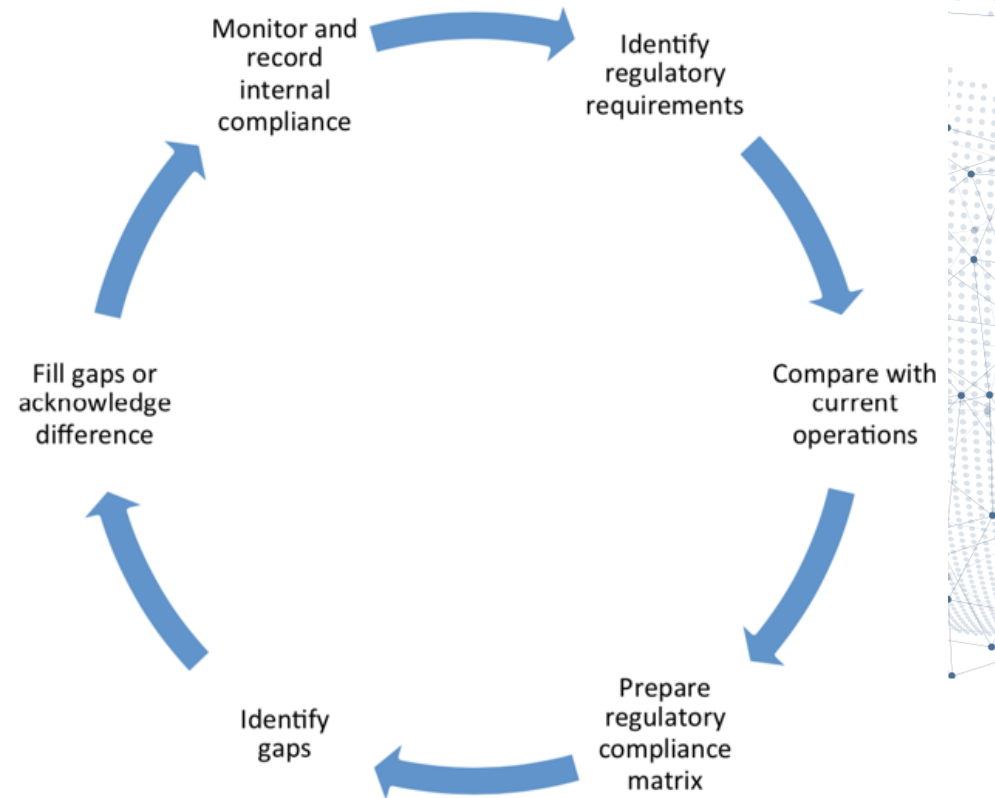# Emergency/Contingency Procedures

- Losses of major air traffic systems

- Losses or failures in support facilities

- Aircraft emergencies

- Disruption of air traffic services

- Closure or zero flow rating of traffic in national airspace as a result of adverse environmental conditions

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Phases of Contingency Lifecycle

- Normal Operations

- Emergency Situations

- Degraded Modes of Operation

- Service Continuity

- Recovery to Normal Operations

- Back to Normal Operations
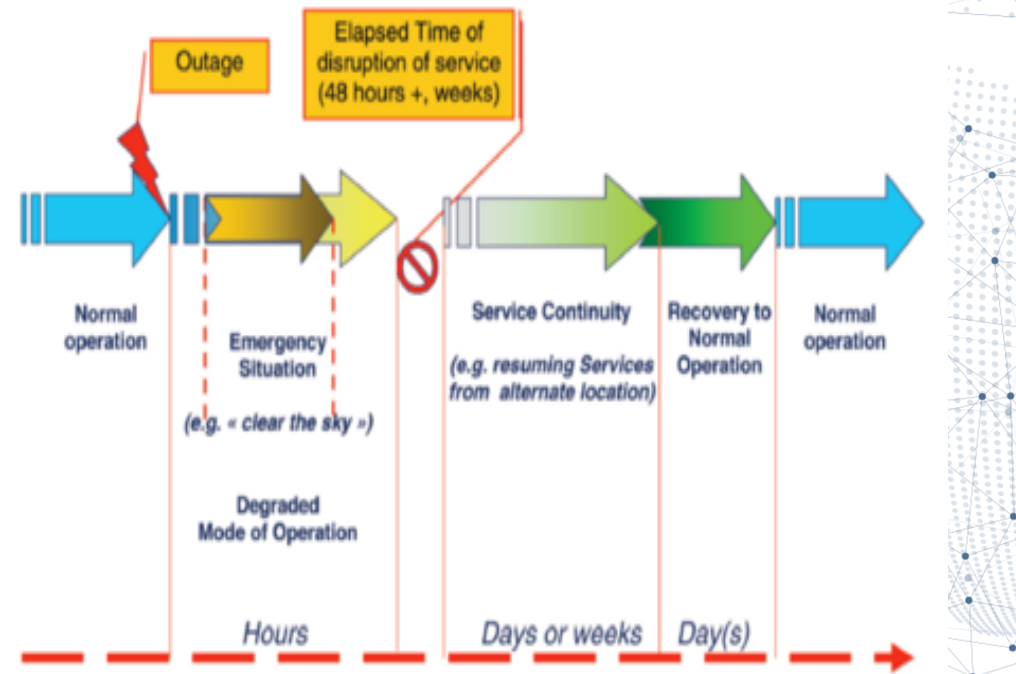
Assurance of Emergency/Contingency Procedures
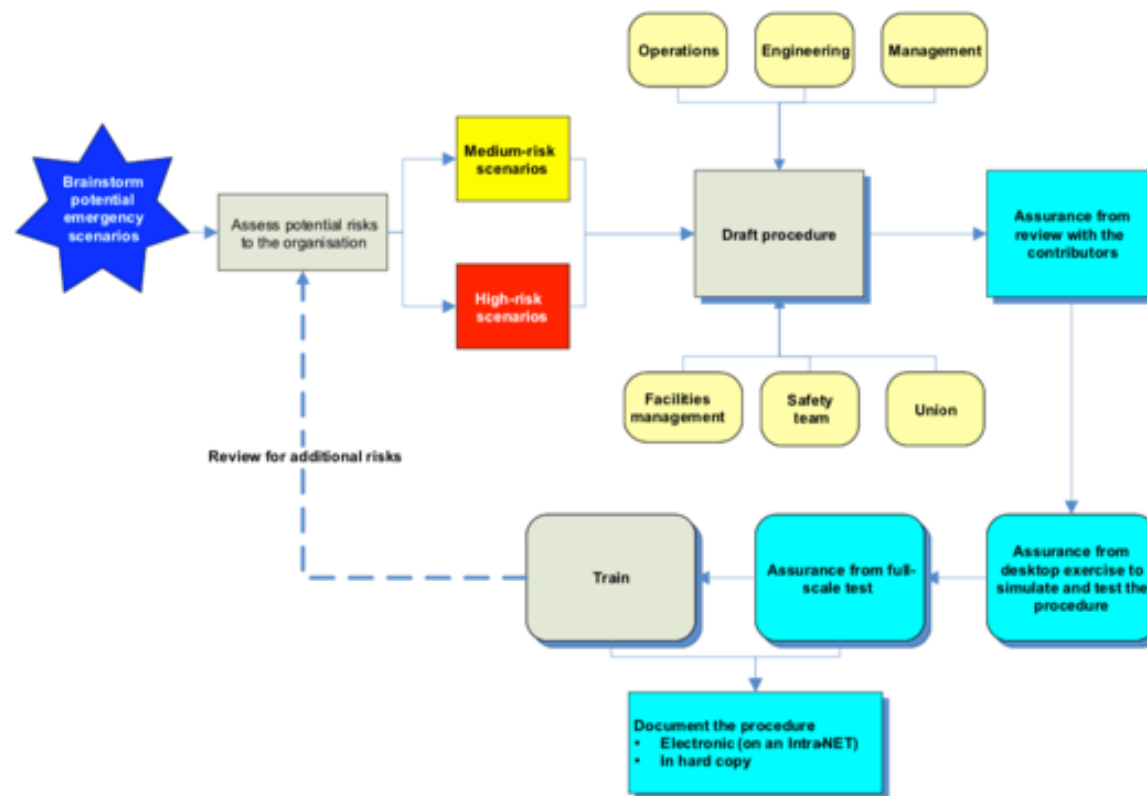
Emergency Response Plan

- Provides for the orderly and efficient transition from normal to emergency/contingency operations and the subsequent return to normal operations.

- Must be properly coordinated with the emergency response plans of those organisations that it must interface with during the provision of its services.

- Outlines what actions should be taken following an accident and who is responsible for each action

SAFETY POLICY AND OBJECTIVES:
Management System Documentation

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Safety Management Systems (SMS)

- Scope SMS Requirements

- Perform Gap Analysis

- Determine SMS Framework

- SMS Framework Regulatory Compliance

- SMS Implementation Plan

- Documenting a SMS

Understanding SMS Requirements

In order to ensure the SMS meets all applicable safety and regulatory requirements, it is necessary to understand the scope of international and domestic regulations

- *ICAO Annex 19* details the SARPs applicable to the safety management functions related to, or in direct support of, the safe operation of aircraft

- *Additional SMS* requirements my be placed on ANSPs by their state or other regulatory or advisory organisations
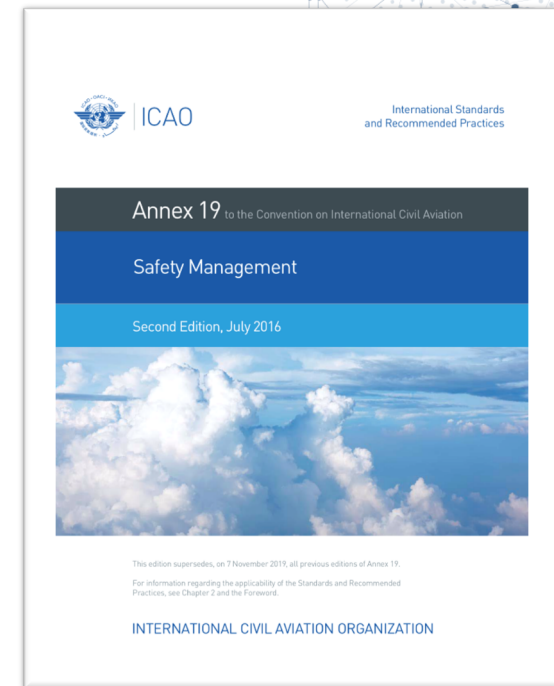
Perform a Gap Analysis

Illustrates the current state versus the desired state regarding the various regulatory requirements placed on your organisation

Can also be used to:

- Develop a compliance matrix in which all regulatory requirements are mapped against existing practice

- Support the development of a business case to justify the resources and effort required to implement an SMS

- As a reporting tool against which milestones are tracked as completed

Determining SMS Framework – ICAO Annex 19

Safety Policy and Objectives	Safety Risk Management	Safety Assurance	Safety Promotion
1) Management commitment and responsibilities 2) Safety accountabilities 3) Appointment of key safety personnel 4) Coordination of emergency response planning 5) SMS documentation	1) Hazard identification 2) Risk assessment and mitigation	1) Safety performance monitoring and measurement 2) The management of change 3) Continuous improvement of the SMS	1) Training and education 2) Safety communication

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SMS Framework Regulatory Compliance

Requirements		Existing Practice	SMS Implementation	
ICAO Annex 19	Domestic Regulations		SMS Group and Element	Expected SMS Output
Annex 19 3.1 Safety performance monitoring and measurement **3.3.1** The service provider shall develop and maintain the means to verify the safety performance of the organisation and validate the effectiveness of risk controls.	Not referenced	Loss of separation data are submitted to CANSO annually	Safety Assurance *Safety Performance Monitoring*	Process via which key performance indicators associated with key risk controls are identified and validated by senior management *Document type: procedure* Reporting against the key performance indicators *SMS Output*

Scope Out the Plan Before You Begin

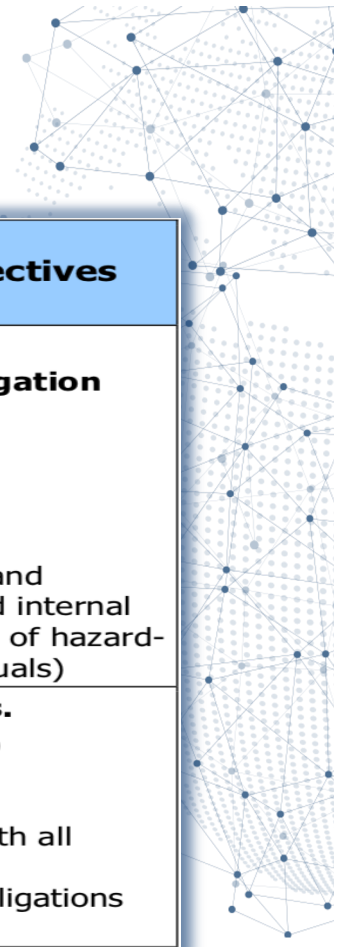| Scope of Implementation Plan		Explanation
What needs to be achieved?	Goals	What needs to be achieved
	Objectives	What actions need to be undertaken to achieve the goal
	Enablers	Organisational processes or facilities that may be required to ensure that the SMS process can be implemented (e.g., a software system to allow automatic reporting of incidents).
Who is responsible?	Accountable executive	It should be clear who is accountable for delivering each goal. He/she should be responsible for identifying the necessary resources, including people, equipment and finances, to deliver on the goal. Underpinning objectives may be delivered by others, responsibilities which should also be clearly documented.
When will work commence?	Phase	In which phase of the SMS the work will commence; this could be specified as a date.

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Round Out the Scoping Plan

Scope of Implementation Plan		Explanation
How will the work be achieved?	Internal resourcing (within the safety department, cross-functional teams, teams outside the safety department) External resourcing (use of consultant)	The organisation may look to a number of resourcing models to assure that the various components of the SMS are implemented. The resource model used will depend on the urgency with which the SMS component is required, the availability and knowledge of internal staff and budget availability.
Milestones	Reporting milestones	Timeframes for the delivery of all goals and objectives should be specified.
Review of outputs	Acceptance into the SMS	It is good practice to nominate an individual responsible for reviewing the outputs and determining if they are of adequate quality for inclusion in the SMS.

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Sample SMS Phased Implementation Plan

Phase, Group and Element of CANSO SoE in SMS	Examples of Associated Goals and Objectives
Phase I Safety Policy *Organisational and Individual Safety Responsibilities*	**Goal 1 — Develop and implement an effective safety organisation.** • Develop safety policy • Document roles, responsibilities and accountabilities in relation to safety and its management • Establish independent safety management function
Phase II Safety Promotion	**Goal 2 — Develop and implement a comprehensive safety education and training programme.** • Undertake a gap analysis of baseline safety knowledge of the corporation • Develop a general-knowledge, corporate-wide safety training session • Develop a targeted safety training programme on operational risk management and human factors (based on gap analyses) • Identify those personnel required to receive targeted safety training • Budget for external safety training (e.g., ICAO)

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Sample SMS Phased Implementation Plan

| Phase, Group and Element of CANSO SoE in SMS	Examples of Associated Goals and Objectives
Phase II Safety Assurance *Safety Reporting, Investigation and Improvement*	**Goal 3 — Develop and implement systems and processes to support safety reporting, investigation and improvement.** • Identify regulated reporting requirements • Identify internal safety data requirements • Develop gap analyses of reporting requirements • Develop a confidential safety reporting system • Develop a system that allows for the collection and dissemination of safety data, both regulated and internal • Develop analysis capabilities based on collection of hazard-based data (including training of specific individuals)
Phase III Safety Policy *Timely Compliance with International Obligations*	**Goal 4 — Comply with international obligations.** • Identify international requirements, (e.g., ICAO) • Identify State (regulator) requirements • Perform gap analyses to determine deficiencies • Develop a template with timelines associated with all international obligations • Assign individuals to respond to international obligations on a timely basis

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Sample SMS Phased Implementation Plan

Phase, Group and Element of CANSO SoE in SMS	Examples of Associated Goals and Objectives
Phases II & IV Safety Culture *Development of a Positive and Pro-active Safety Culture*	**Goal 5 — Pro-actively enhance safety culture.** • Develop a commitment statement to enhance safety culture (approved and signed by the appropriate level in the organisation) • Develop a just culture programme • Promote safety culture and just culture

Phases II, III & IV
Safety Achievement
Safety Interfaces
 	
Safety Promotion
Adoption of best practices within the ANSP
Adoption of best practices external to the ANSP
	Goal 6 — Develop and implement processes for internal and external safety interfaces.
	• Develop the Terms of Reference document for the internal safety planning committee
	• Develop the Terms of Reference for external interfaces with stakeholders, including:
	  – Airports
	  – Air carriers
	  – Regulator
	  – Pilots (commercial, general aviation)
	  – Military
	  – Service-level changes

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Sample SMS Phased Implementation Plan

Phase, Group and Element of CANSO SoE in SMS	Examples of Associated Goals and Objectives
Phase III Safety Assurance *Safety Performance Monitoring*	**Goal 7 – Develop and implement safety performance monitoring capability.** • Identify regulatory performance metrics • Identify international, industry and aviation safety metrics • Develop a safety performance measurement programme
Phase IV Safety Assurance *Operational Safety Surveys and SMS Audits*	**Goal 8 – Develop and implement survey and audit capabilities.** • Establish authority to conduct surveys and/or audits • Develop the survey process, including cycle timeframes • Develop the audit process, including cycle timeframes • Develop analysis, monitoring and feedback processes on identified gaps and/or deficiencies

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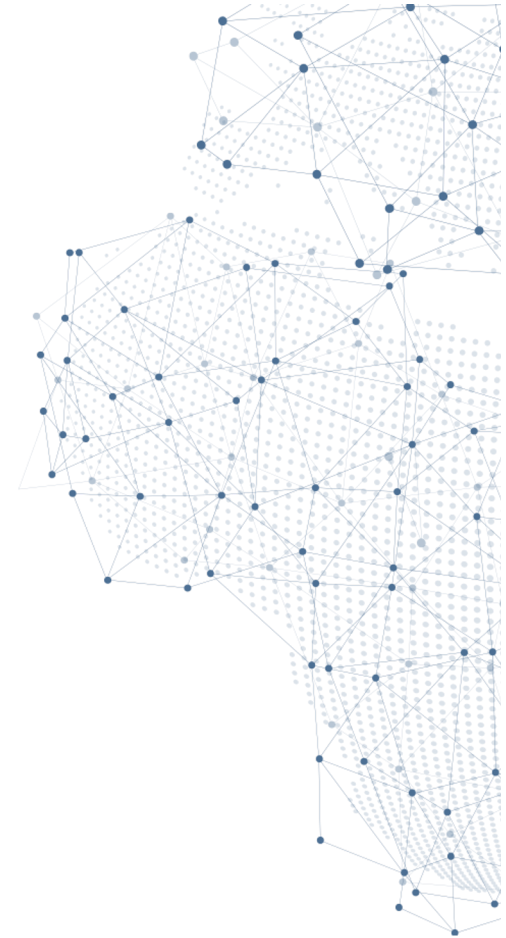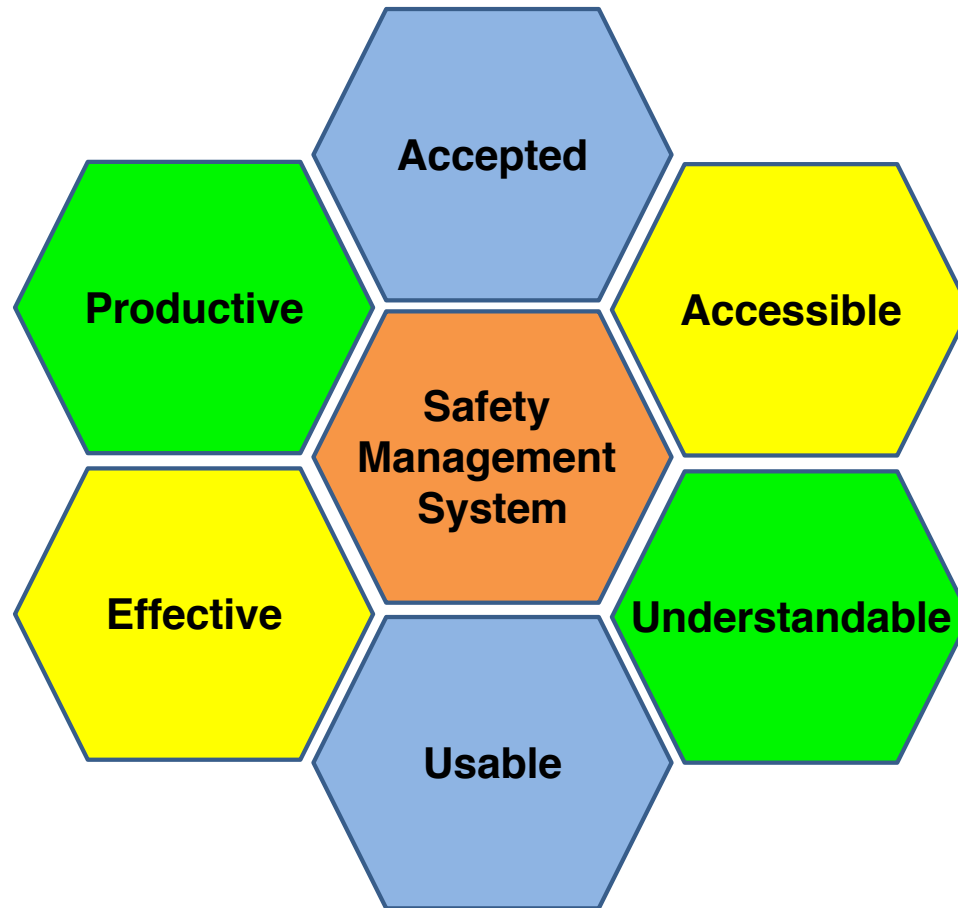
SMS Attributes

SMS Attribute Definitions

Term	Definition in Relation to the SMS	Actions Required for SMS Design and Implementation
Accepted	The SMS is viewed as being appropriate and necessary.	What actions will be taken to promote the benefits of the SMS?
Accessible	The SMS is easy to find.	Where will the documents, tools and software associated with the SMS be located?
Understandable	The SMS is easy to comprehend.	What awareness training will be undertaken to ensure that employees know about the SMS and can undertake the safety tasks associated with their roles? Are documents written such that all staff in the organisation will understand them?

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SMS Attribute Definitions Continued

Term	Definition in Relation to the SMS	Actions Required for SMS Design and Implementation
Useable	The SMS is easy to apply.	What actions will be taken to design documents and tools that will be easy for employees to use?
Effective	The SMS works well; it does not waste time, effort or expense.	How will the organisation assess whether the SMS is working well?
Productive	The SMS assists the organisation in identifying, mitigating and managing its safety risks.	How will the organisation determine if the SMS is affecting safety outcomes?

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Reporting SMS Implementation Plan Progress

Regular updates on the progress of implementation should be provided to the highest levels of the organisation

Reports should include:

- Achievements, including SMS processes that have been implemented and milestones that have been met

- Work programmes underway

- Update timelines

- Potential constraints that could delay successful implementation

SMS Documentation

Document Type	Role and Form
Policy	A policy documents the principles or intent of the organisation in relation to an area of its operations.
Standard	A standard defines the requirements that must be achieved. Achievement of the documented requirements is seen as a means by which the organisation meets the statements of intent listed in its policy.
Procedure	Procedures describe how to do something and may be presented in many forms, from an extensive manual with multiple chapters to a single-page document. Procedures describe the authorised processes, actions, activities and responsibilities for the management or completion of specific processes or tasks. Procedures are used when: • Describing the actions, duties or roles and responsibilities of one or more working groups, work centres or disciplines • Documenting interactions between employees on different teams and the relationships and flow of activities within a process • Documenting complex processes
Guide	A guide is an aid to task completion and may contain illustrations, hints or tips to assist staff in performing a task in the desired manner.
Template	A template is a document designed to capture and record information specific to a task in a standardised and consistent manner.
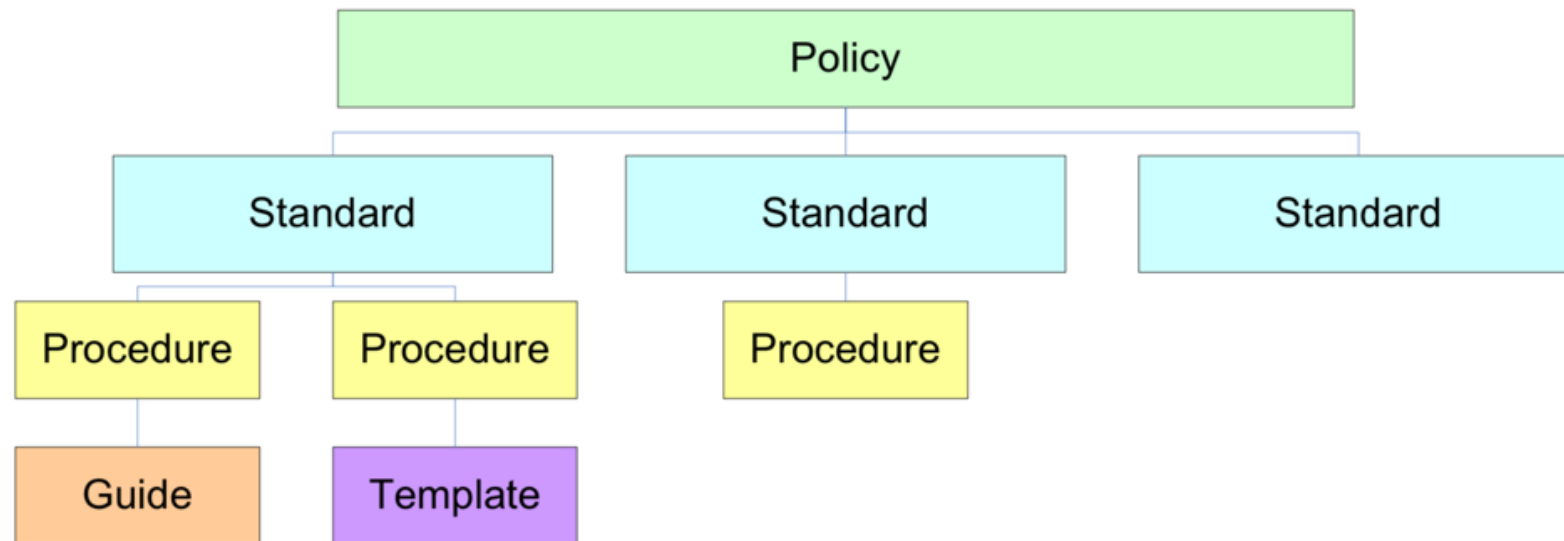
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Typical SMS Hiearchy

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