

IAC 2303 Airline Safety Management

UNIT 3

ICAO Framework



Outline

To understand the concept of SMS

To describe the 4 components of SMS

THE IMPORTANCE OF CONVERSATIONS



The iceberg of ignorance



Problems known to top managers **4%**



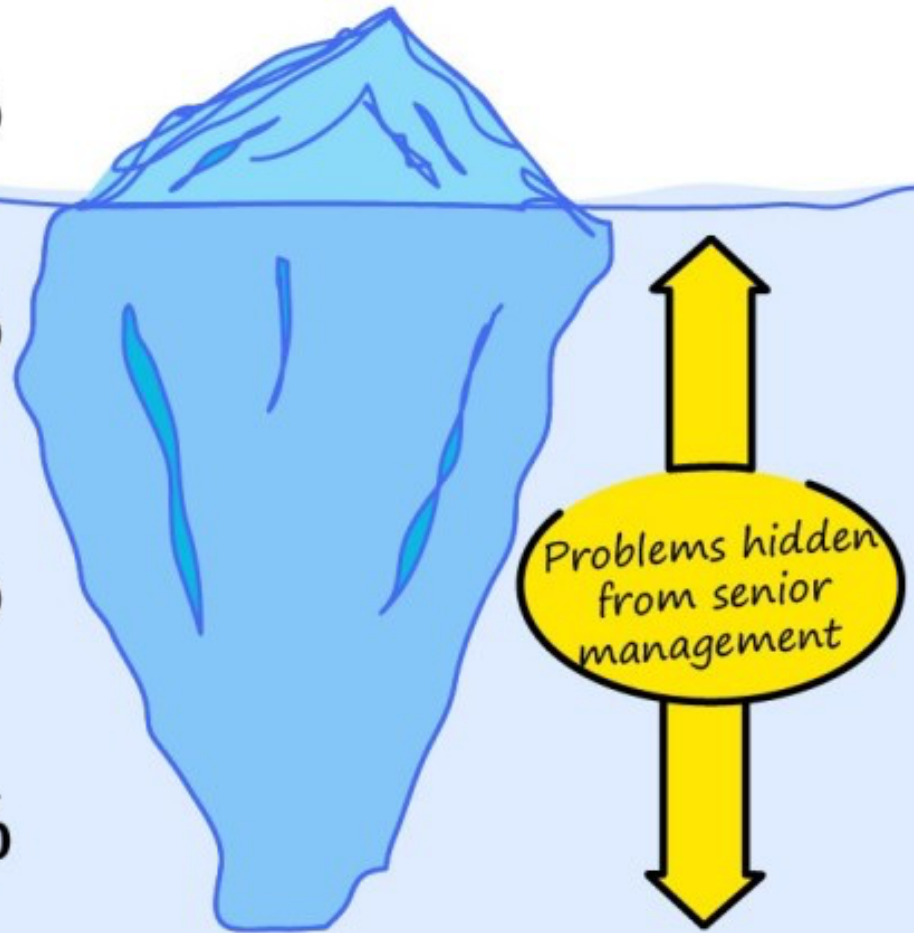
Problems known to middle managers **9%**



Problems known to supervisors **74%**



Problems known to Staff **100%**



CRM ICEBERG ANALYSIS

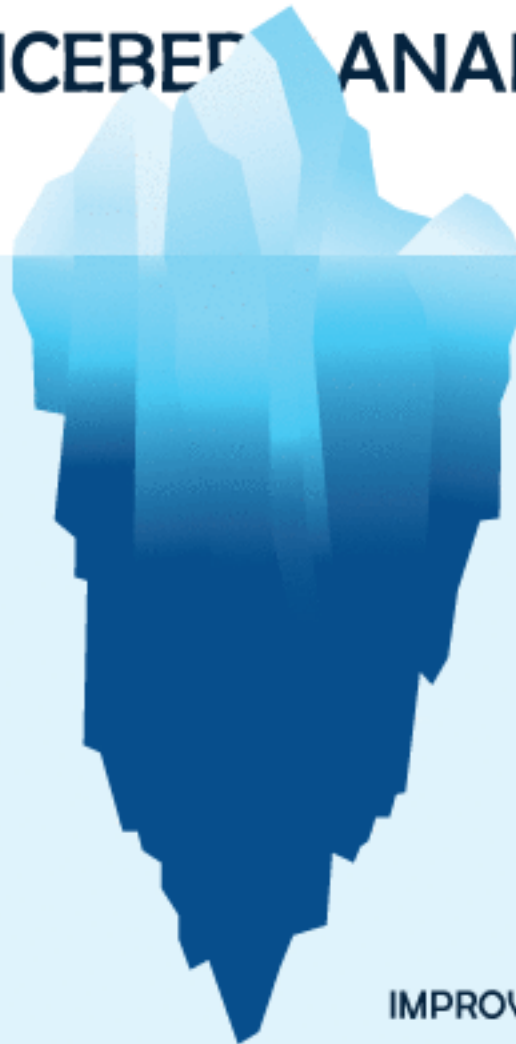
4% PROBLEMS
KNOWN TO EXECUTIVES

9% KNOWN TO
MIDDLE MANAGERS

74% KNOWN TO
SUPERVISORS

100% KNOWN TO STAFF

IMPROVE TOP MANAGEMENT AWARENESS



Top managers are much more concerned with the “serious” problems, and front-line employees are concerned with the minor issues that cause frustration every day.

But the other reality is that most organizations simply don't have a meaningful way for the “minor issues” to go all the way up the communication ladder for top managers to be aware of them.

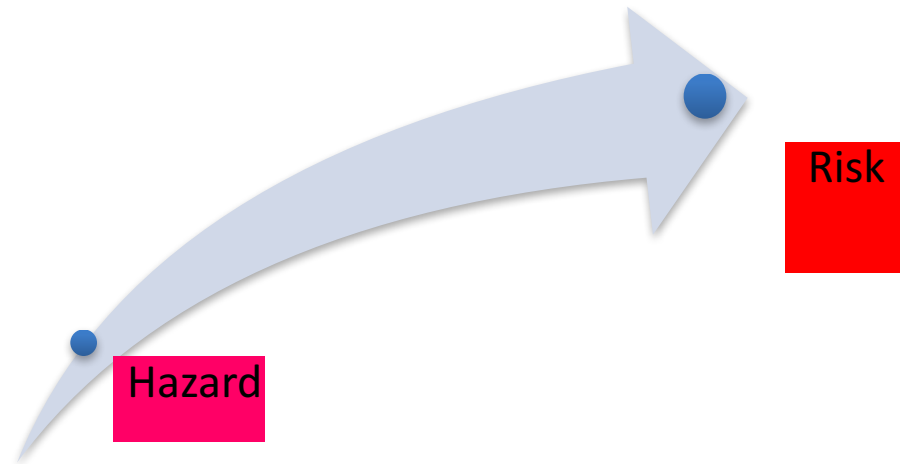
Overcome Iceberg of Ignorance Through Hazard Reporting

Overcome ignorance in your SMS requires:

- Having decision makers be aware of minor problems;
- Having staff and front-line employees see importance of minor problems; and
- Ensuring that front-line employees report these minor problems.

What Hazard is?

A condition or object with the potential of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.



Systems are integrated networks of **people and resources** performing activities that accomplish some mission or goal in an environment.

Management of the system's activities involves planning, organizing, directing, and controlling these assets toward the organization's goals.



ICAO definition of SMS

Safety Management System (SMS): a systematic approach to managing safety, including the organizational structures, accountabilities, policies and procedures.

It provides a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective.



ICAO SMS MODEL



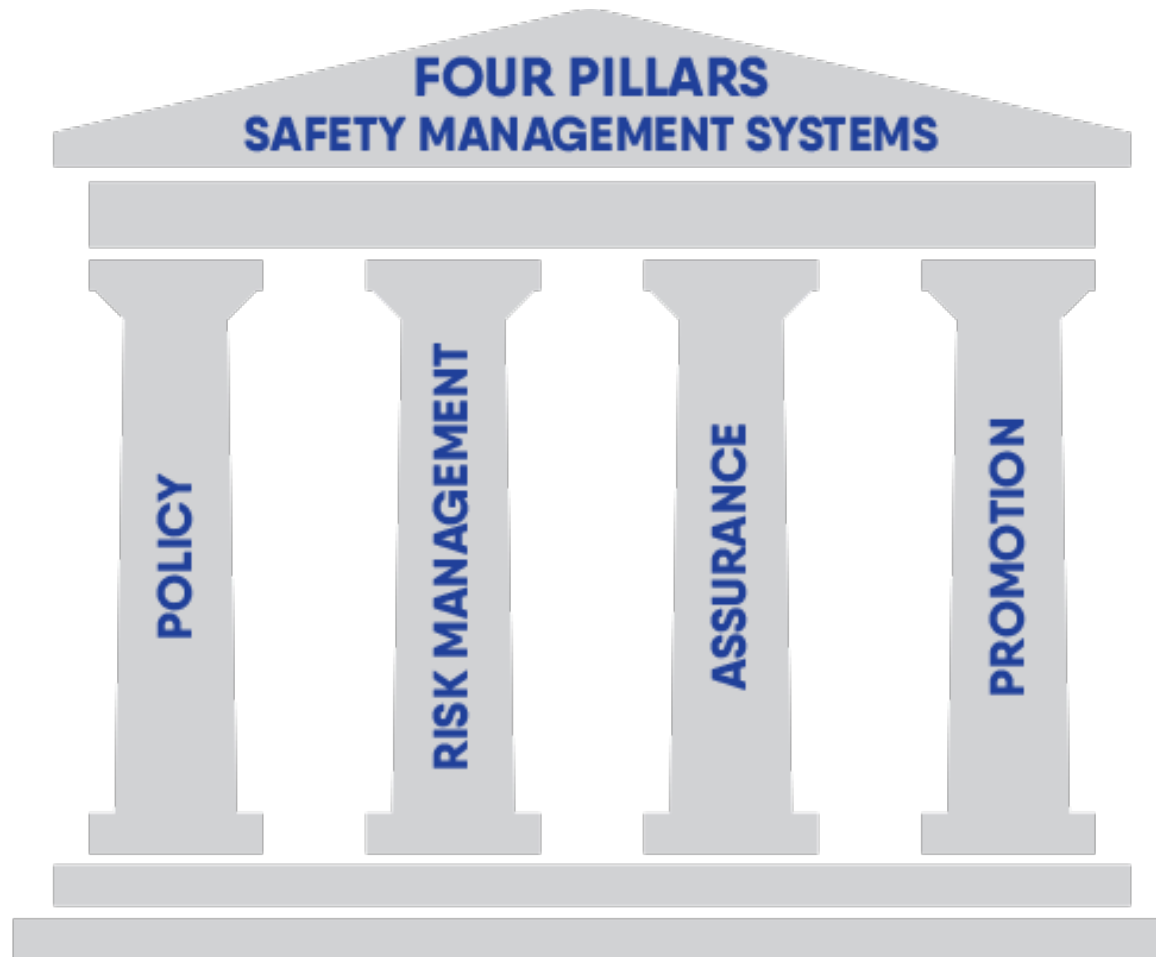
- The International Civil Aviation Organization (ICAO) is a United Nations specialized agency established in 1944 to manage **the planning and development of international air transport, including safety standards.**
- As part of this task, the organization requires member states to make it mandatory for aviation companies to implement safety management systems that comply with ICAO standards.

SMS FRAMEWORK (ICAO)

The SMS Framework is organized around four components or **pillars** of safety management which required by ICAO.

These four components are essential for a safety-oriented management system ,they come directly from the SMS principles.

4 pillars of SMS



Pillar 1) Safety Policy and Objectives

1) Management commitment and responsibility.

The commitment of the **senior management** to safety is reflected in a policy statement, to providing the necessary resources, following procedures for reporting incidents and supplying information to employees where needed which is signed by the Accountable Executive.



2) Safety accountabilities

A statement of accountabilities clearly defines the safety responsibilities of managers and employees at different levels in the organization.

This should include the appointment of key safety personnel.

3) Coordination of emergency response planning

Service providers implement an **Emergency Response Program (ERP)** that includes contingency plans to ensure proper response throughout the organization when an emergency situation arises.

4) SMS Documentation

Safety management activities must be documented appropriately and be available to all employees.



Pillar 2) Safety Risk Management (SRM)

A formal system of hazard identification and SRM is essential in controlling risk to acceptable levels.

This pillar is about taking a proactive approach to safety

5) Hazard identification

The airline must maintain processes to ensure that operational hazards are identified for **all operational activities**.



6) Risk assessment and mitigation

Individual hazards are analyzed; their consequences are assessed and communicated throughout the organization.

Mitigation actions must be developed for those hazards presenting unacceptable operational risk.



Pillar 3) Safety Assurance

Is the core of the SMS that aviation service providers (including aircraft operators) shall implement in order to meet ICAO [SARPS](#) and regulatory requirements.

Safety assurance is the mean to demonstrate that organizational arrangements and processes for safety achievement are **applied and continue** to achieve their intended objectives.

It ensures that the safety management system is constantly being evaluated and adapted to new challenges.

The system should be continuously assessed, situational changes addressed, and improvements made according to feedback or audits.

7) Safety performance monitoring and measurement

- Focus on assessing the safety of the organization.
- Set a specific goals for improvements in all areas for all senior operational managers.
- Safety assurance include monitoring of external sources of safety information and include participation in regional safety groups or safety data sharing organizations



8) Management of Change

- External or internal changes may introduce new hazards to operational activities. Processes must manage organizational responses to regulatory changes, major changes in operational procedures, or new activities such as new airport destinations.
- Safety reporting systems should have processes established to identify new risks and actively monitor performance in new areas of the operation.

9) Continuous improvement of the SMS program

- Safety assurance utilizes quality tools such as internal evaluations or independent audits to assess organizational health from a safety perspective.
- Onsite assessments of operational management systems on a recurring basis provide opportunities for continuous improvement of processes and procedures for each functional area of the airline.

Pillar 4) Safety Promotion

This means effective safety communication of all relevant matters to all levels of management and employees

10) Training and education

- Operators must identify safety training requirements for each level of management and each employee group.
- Safety training for operational personnel should address safety responsibilities, complying with all operating and safety procedures, recognizing and reporting hazards, and ensuring that employees have the knowledge and skills to safely complete work activities.

11) Safety communication

- Communication of safety information is a key responsibility of the Safety Manager. Continuous improvement and learning through the investigations, hazard report analysis, and operational safety assessments.
- Feedback to operational personnel, such as examples of procedural improvements as a result of safety reports, is an essential feature of safety communications.

The Four SMS Components

Safety Policy

Establishes senior management's commitment to continually improve safety; defines the methods, processes and organizational structure needed to meet safety goals.

Safety Assurance

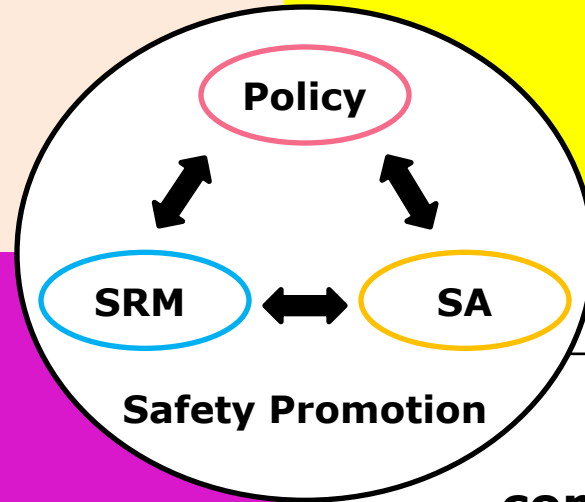
Evaluates the continued effectiveness of implemented risk control strategies; supports the identification of new hazards.

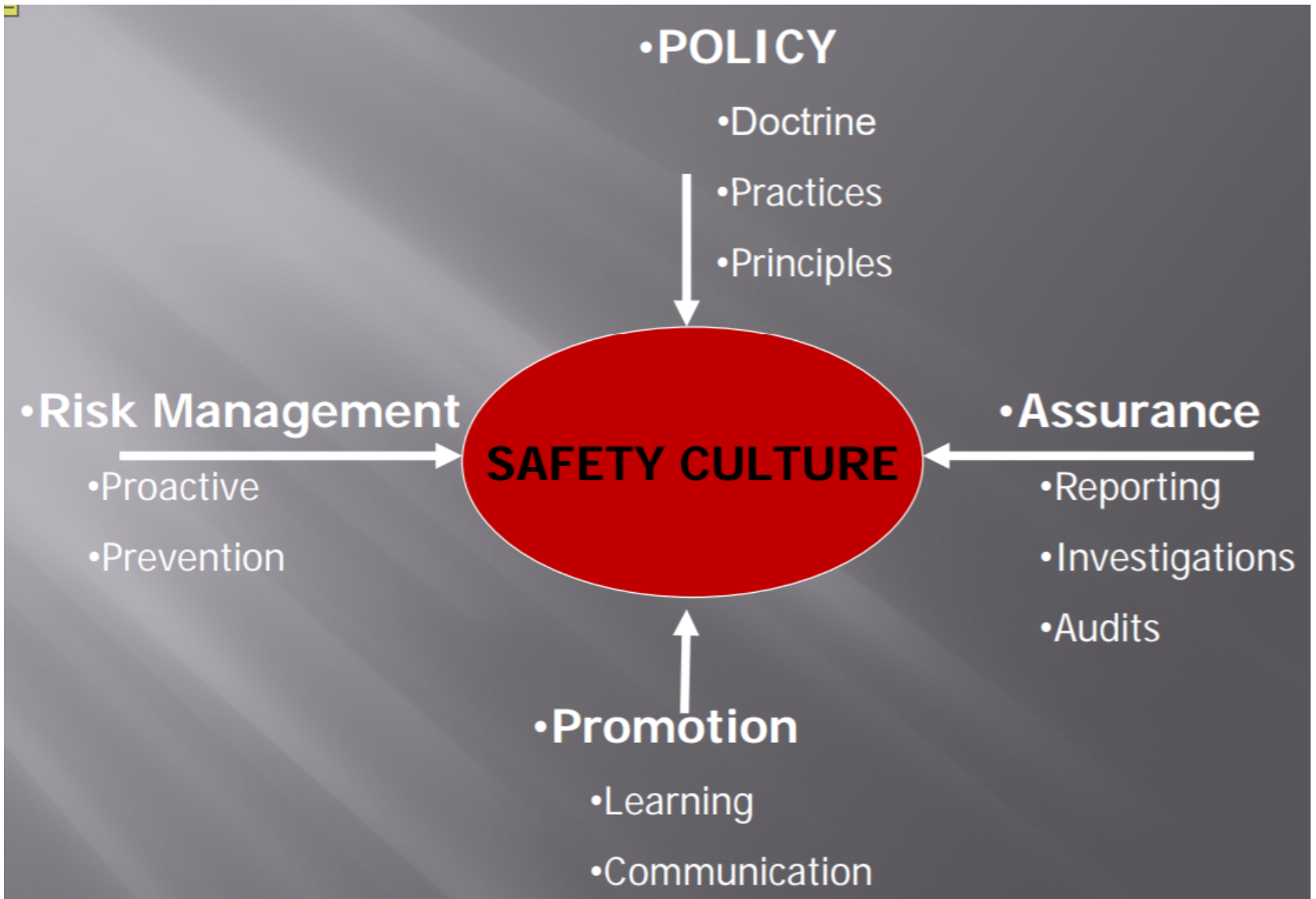
Safety Risk Management

Determines the need for and adequacy of, new or revised risk controls based on the assessment of acceptable risk.

Safety Promotion

Includes training, communication and other actions to create a positive safety culture within all levels of the workforce.





- Training
- Reporting

Reference

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