Phased approach to SMS implementation

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The big picture

- **Operation of aircraft**
- **Maintenance of aircraft**
- **Air traffic services**
- **Aerodromes**
States shall require, as part of their safety programme, that:

- an [operator, maintenance organization, ATS provider, certified aerodrome operator] implements a safety management system accepted by the State that, as a minimum:
  - Identifies safety hazards
  - Ensures that remedial action necessary to maintain an acceptable level of safety is implemented
  - Provides for continuous monitoring and regular assessment of the safety level achieved
  - Aims to make continuous improvement to the overall level of safety
As of 23 November 2006

- An accepted safety management system shall clearly define lines of safety accountability throughout the [airline, maintenance, ATS provider, certified aerodrome operator] organization, including direct accountability for safety on the part of senior management.
ICAO SMS FRAMEWORK

1. Safety policy and objectives
   1.1 – Management commitment and responsibility
   1.2 – Safety accountabilities of managers
   1.3 – Appointment of key safety personnel
   1.4 – SMS implementation plan
   1.5 – Coordination of the emergency response plan
   1.6 – Documentation

2. Safety risk management
   2.1 – Hazard identification processes
   2.2 – Risk assessment and mitigation processes
   2.3 – Internal safety investigations

3. Safety assurance
   3.1 – Safety performance monitoring and measurement
   3.2 – The management of change
   3.3 – Continuous improvement of the safety system

4. Safety promotion
   4.1 – Training and education
   4.2 – Safety communication
Why a phased approach to SMS?

- To provide a manageable steps in implementing an SMS.
- To effectively manage the workload associated with SMS implementation.
- To pre-empt a “ticking boxes” exercise.
- Four implementation phases are proposed.
- Each phase is based upon the introduction of specific SMS elements.
Phase 1 (Operators)

- Provides a blueprint on how the SMS requirements will be met and integrated in the organization’s work activities.

- Provides an accountability framework for the implementation of the SMS.
Phase 1 (Operators)

- Identify the accountable executive and the safety accountabilities of managers

- Identify the person (or planning group) within the organization responsible for implementing the SMS

- Describe the system (Air operator, ATC services provider, approved maintenance organization, certified aerodrome operator)
Phase 1 (Operators)

- Conduct a gap analysis of the organization’s existing resources compared with the national and international requirements for establishing an SM

- Develop documentation relevant to safety policy and objectives

- Develop and establish means for safety communication
Phase 2 (Operators)

Puts into practice those elements of the SMS implementation plan that refer to:

**Safety risk management component:**

- Reactive processes
- Investigation and analysis
- Hazard identification and risk management
Phase 2 (Operators)

Training relevant to:

- The SMS implementation plan components.
- The safety risk management component (Reactive processes).

Documentation relevant to:

- The SMS implementation plan components.
- The safety risk management component (Reactive processes).
Phase 3 (Operators)

**Puts into practice those elements of the SMS implementation plan that refer to:**

- **Safety risk management component**
- **Proactive and predictive processes**
- **Investigation and analysis**
- **Hazard identification and risk management**
- **Training relevant to proactive and predictive processes**
- **Documentation relevant to proactive and predictive processes.**
Phase 4 (Operators)

**Operational safety assurance:**

- Development of acceptable level(s) of safety.
- Development of safety indicators and targets.
- **SMS** continuous improvement.
- Training relevant to operational safety assurance.
- Documentation relevant to operational safety assurance.
CAAs – Four implementation steps

STEP 1

➢ State’s safety programme

- Conduct a gap analysis vis-à-vis the current status in the State of the following:
  - Safety regulation
  - Safety oversight (capabilities and planning)
  - Accident/incident investigation
  - Mandatory/voluntary/confidential reporting systems
  - Safety data analysis
  - Safety promotion

- Develop the State safety programme around four components of the ICAO SMS framework.
STEP 2

- **Implementation SMS SARPs:**
  - Develop SMS regulations for operators/service providers.
    - The SMS components and elements are covered in the ICAO SMS training course.
  - Prepare guidance material for the implementation of SMS.
    - Refer to ICAO Doc 9859 and the ICAO SMS training course.
  - Operators/service providers may need to use third party assistance to implement their SMS.
CAAs – Four implementation steps

STEP 3

- **CAA training programme:**

  - Develop a training programme for CAA officers to:
    - provide knowledge of safety management concepts and ICAO SARPs on safety management in Annexes 6, 11 and 14, and related guidance material; and
    - develop knowledge to certify and oversee the implementation of key components of an SMS, in compliance with the national regulations and relevant ICAO SARPs.
CAAs – Four implementation steps

STEP 4

➢ CAA enforcement policy:

- Revision of enforcement policy.

  - Operators/service providers allowed to deal with deviations/minor violations internally, within the context of the SMS, to the satisfaction of the authority.

  - Gross negligence, willful deviation and so forth to be dealt through established enforcement procedures.
Safety assurance

- Ensuring that the operation of service providers SMS follows established controls (standards / requirements)
  - Oversight, inspections and audits
  - Data tracking and analysis
    - Data driven targeting of oversight on areas of greater concern/need.
State safety programme components

Safety promotion

Support the integration of the State safety programme with the operation of service providers SMS

- Training, communication and dissemination of safety information
- Dual-track promotion
  - Within the CAA
  - Among service providers it oversees
The final objective – Integration

Safety programme + SMS = State integrated safety management

**Protection**

- **State safety programme**
  - Objective: Public safety

- **Organization’s safety management system (SMS)**
  - Objective: Manage and control safety risk

**Production**

- **Organization’s production processes**
  - Objective: Achieve commercial goals and customer satisfaction

Acceptance

Oversight

Risk management

Safety assurance

**Conclusion**

SMS seminar - Yerevan, Armenia
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THANK YOU

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