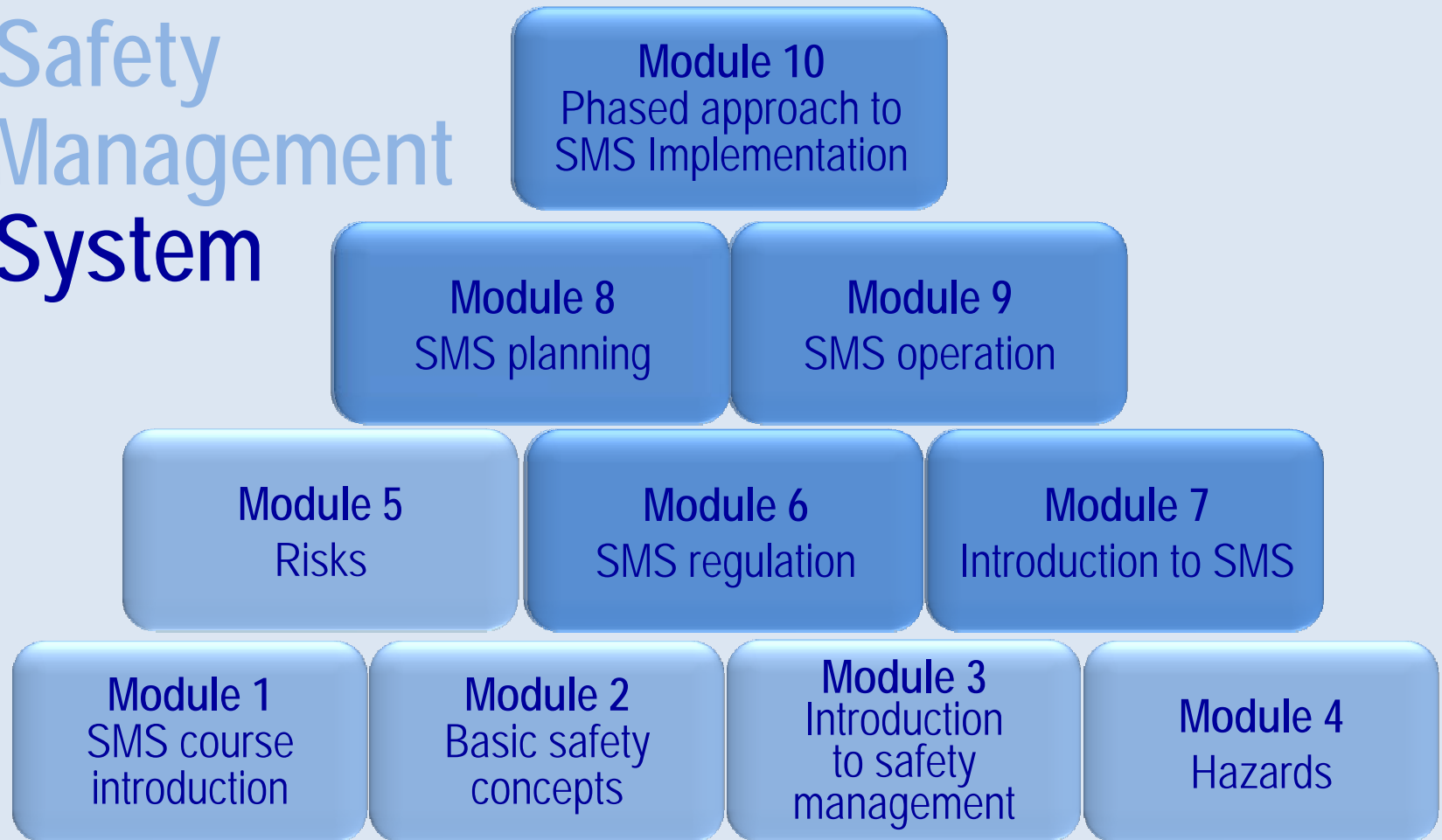


Safety Management Systems (SMS) Course

Module N° 6 – SMS regulation

Building an SMS

Safety Management System



Objective

- ❖ *At the end of this module participants will be able to describe the safety management requirements included in Annexes 6, 11 and 14, including the relationship between a safety programme and an SMS.*

Outline

- ❖ AGA, ATS and OPS/AMO safety management
- ❖ What is a safety programme?
- ❖ What is an SMS?
- ❖ Acceptable level of safety – Implementation, scope and legal considerations
- ❖ Protection of sources of safety information
- ❖ Questions and answers
- ❖ Points to remember

The big picture

- ❖ Operation of aircraft
- ❖ Maintenance of aircraft
- ❖ Air traffic services
- ❖ Aerodromes

➤ Two audience groups

- States
- Service providers

➤ Three distinct requirements

- Safety programme
- SMS
- Management accountability



As of 23 November 2006

- ❖ *States shall establish a **safety programme**, in order to achieve an **acceptable level of safety** in:*
 - *The operation of aircraft*
 - *The maintenance of aircraft*
 - *The provision of air traffic services*
 - *Aerodrome operations*
- ❖ *The acceptable level of safety to be achieved shall be established by the State(s) concerned.*

What is a safety programme?

- ❖ *An integrated set of regulations and activities aimed at improving safety.*
- ❖ States are responsible for establishing a safety programme, encompassing the following responsibilities:
 - Safety regulation
 - Safety oversight
 - Accident/incident investigation
 - Mandatory/voluntary reporting systems
 - Safety data analysis and exchange
 - Safety assurance
 - Safety promotion
- ❖ *Further discussed in Module 10*



Definitions

❖ Acceptable level of safety – A concept

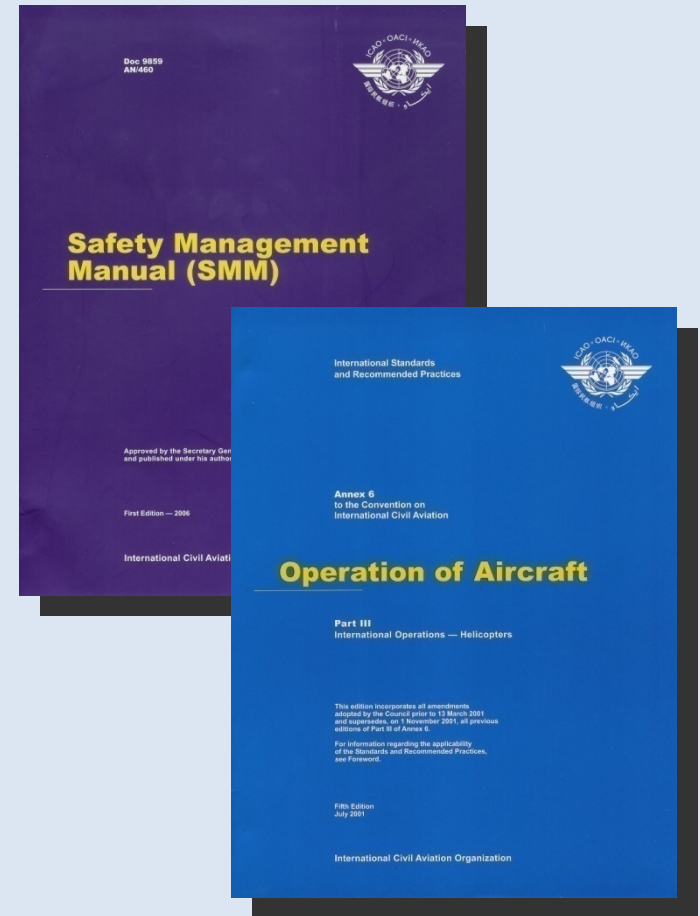
- High level safety management goals of an oversight authority [or a service provider].
- Minimum safety performance that service providers should achieve while conducting their core business functions.
- A reference against which to measure safety performance.

As of 23 November 2006

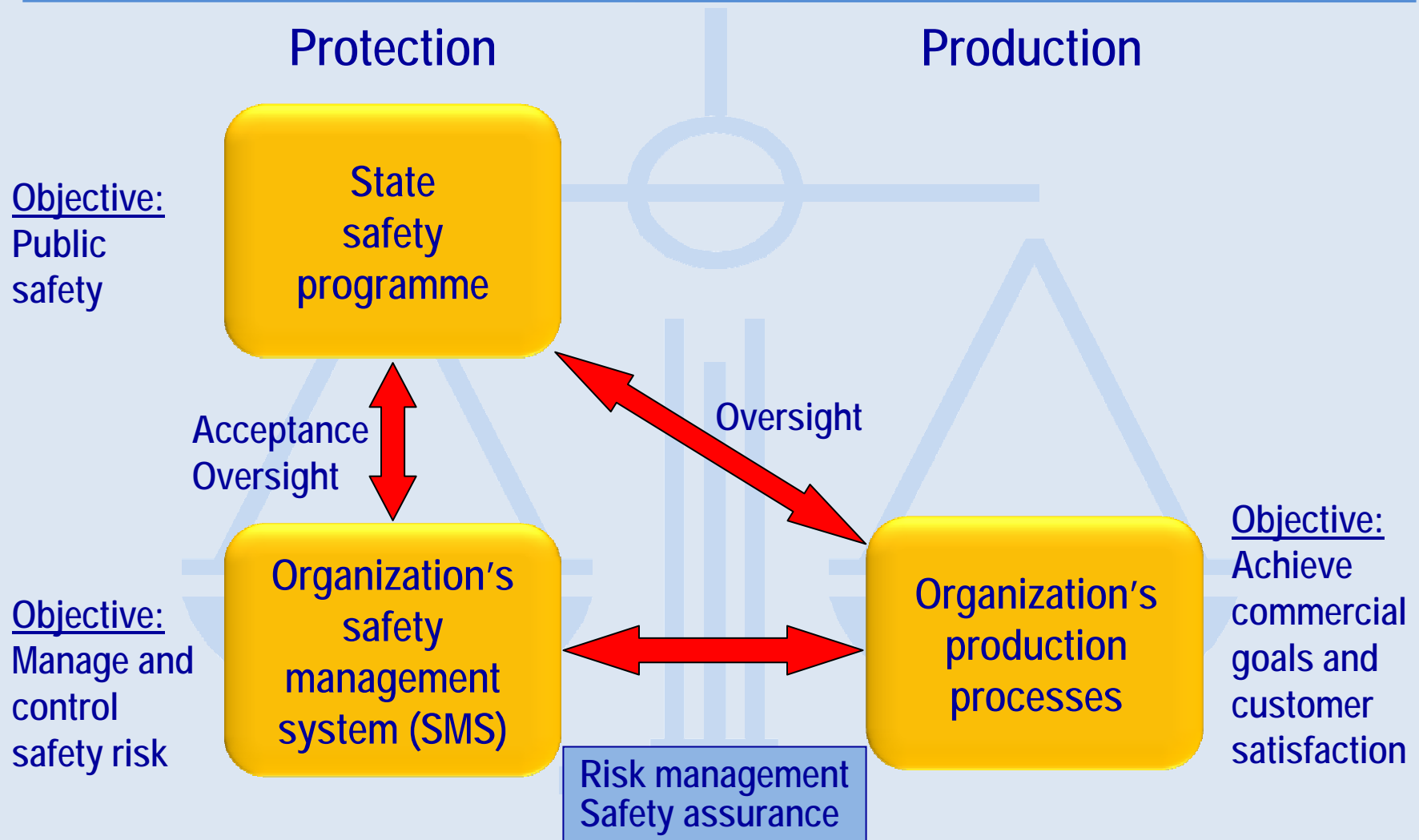
- ❖ *States shall require, as part of their safety programme, that an [operator, maintenance organization, ATS provider, certified aerodrome] implements a **safety management system** accepted by the State that, as a minimum:*
- *Identifies safety hazards.*
 - *Ensures that remedial action necessary 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.*

What is an SMS?

- ❖ *A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.*
- ❖ Providers are responsible for establishing an SMS.
- ❖ States are responsible of the acceptance and oversight for providers' SMS.



State's safety programme – SMS relationships



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] organization, including **direct accountability for safety on the part of senior management**.*

(Accountability – Obligation or willingness to account for one's actions)

Acceptable level of safety

❖ Implementation

- The concept of acceptable level of safety is expressed in practical terms by two measures or metrics:
 - *safety performance indicators*
 - *safety performance targets*
- It is delivered through various tools and means:
 - *safety requirements.*
- ...

Acceptable level of safety

❖ Safety performance indicators

- Established objectives of a State's safety programme, or an operator/services provider SMS.
- Linked to major components of a State's safety programme, or an operator/services provider SMS.
- Expressed in numerical terms.
 - Example – *No more than 0.8 Cat A and B (most serious) runway incursions per million operations through 2009.*

Acceptable level of safety

❖ Safety performance targets

- Medium or long-term objectives of a State's safety programme, or an operator/services provider SMS.
- Determined weighing what is desirable and what is realistic for an individual State/operator/services provider.
- Expressed in numerical terms.
 - Example – *By 2010 reduce Cat A and B (most serious) runway incursions to a rate of not more than 0.5 per million operations.*

Acceptable level of safety

- ❖ Safety performance indicators and safety performance targets may be different
 - Example – *No more than 0.8 Cat A and B (most serious) runway incursions per million operations through 2009, and reduce Cat A and B (most serious) runway incursions to a rate of not more than 0.5 per million operations by 2010.*
- ❖ Safety performance indicators and safety performance targets may be the same
 - Example – *Maintain 0.8 Cat A and B (most serious) runway incursions per million operations through 2010.*

Acceptable level of safety

- ❖ The **safety requirements** should be satisfied in terms of operational procedures, technology and systems, programmes, and contingency arrangements.
- ❖ Measures of reliability, availability and/or accuracy may be added.
 - *Example – Install Airport Surface Detection Equipment-Model X (ASDE-X) at (three busiest airports) within the next 12 months, with 98% annual availability.*

Acceptable level of safety

❖ Implementation

- An acceptable level of safety will always be expressed by a number of safety performance indicators and safety performance targets, never by a single one.

Acceptable level of safety

❖ Scope

- There will seldom be a single or national acceptable level of safety.
- Most frequently, within each State, different acceptable levels of safety will be separately agreed between the oversight authority and individual operators/services providers.



Acceptable level of safety

❖ ... Scope

- Each agreed acceptable level of safety should be commensurate to the:
 - complexity of individual operator/services provider specific operational context
 - availability of operator/services provider resources to address them.

Acceptable level of safety

❖ Legal considerations – States

- Establishing acceptable level(s) of safety does not replace legal, regulatory, or other already established requirements, but it must support compliance with them.
- Establishing acceptable level(s) of safety for their safety programme leaves unaffected the obligations of States, and does not relieve States from compliance with SARPs.



Acceptable level of safety

❖ ... Legal considerations – Operators and service providers

- Establishing acceptable level(s) of safety for their safety management system leaves unaffected the obligations of operators or services providers and other related parties, and it does not relieve the operator, services providers and other related parties from compliance with SARPs and/or national regulations, as applicable.

Protecting sources of safety information

- ❖ Assembly Resolution A35/17
- ❖ Legal guidance in Annex 13, Attachment E
- ❖ *Safety information must not be used for purposes other than the purposes for which it was collected.*
 - *Introduction and definitions*
 - *General principles*
 - *Principles of protection*
 - *Principles of exceptions*
 - *Responsibilities of the custodian of safety information*
 - *Protection of recorded information*

Why ICAO safety management provisions?

❖ A move from prescription to performance

- **Prescriptive regulations** – Prescribe what the safety requirements are and how they are to be met.
- **Performance based regulations** – Specify the safety requirements to be met, but provide flexibility in terms of how safety requirements are met.



SMS regulation

Questions and answers

Questions and answers

❖ **Q:** What are the main activities in a State safety programme?

❖ **A:**

- Safety regulation
- Safety oversight
- Accident/incident investigation
- Mandatory/voluntary reporting systems
- Safety data analysis and exchange
- Safety assurance
- Safety promotion

Slide number: 7

Questions and answers

❖ Q: What is a safety management system (SMS)?

❖ A:

➤ *A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.*

Slide number: 10

Points to remember

1. *Safety programme.*
2. *SMS.*
3. *Acceptable of level of safety.*
 - a) *Safety performance indicators.*
 - b) *Safety performance targets.*
 - c) *Safety requirements.*
4. *The need to protect the source of information*
5. *Standardised SMS provisions – Prescription vs. performance.*

Safety Management Systems (SMS) Course



Module N° 6 – SMS regulation