

Safety Assurance

A “Frontier” of Change

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Professional Resources in System Management

ICAO SMS Framework

Safety Policy and Objectives

- 1.1 Mgt Commitment
- 1.2 Safety Accountabilities
- 1.3 Appointment of safety personnel
- 1.4 Coordination of ERP
- 1.5 SMS Documentation

Safety Risk Management

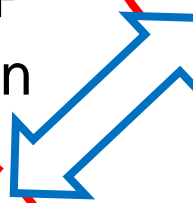
- 2.1 Hazard Identification
- 2.2 Risk Assessment & Mitigation

Safety Assurance

- 3.1 Safety Performance Monitoring & Measurement
- 3.2 Management of Change
- 3.3 Continuous Improvement

Safety Promotion

- 4.1 Training & Education
- 4.2 Safety Communication



IATA SMS Update

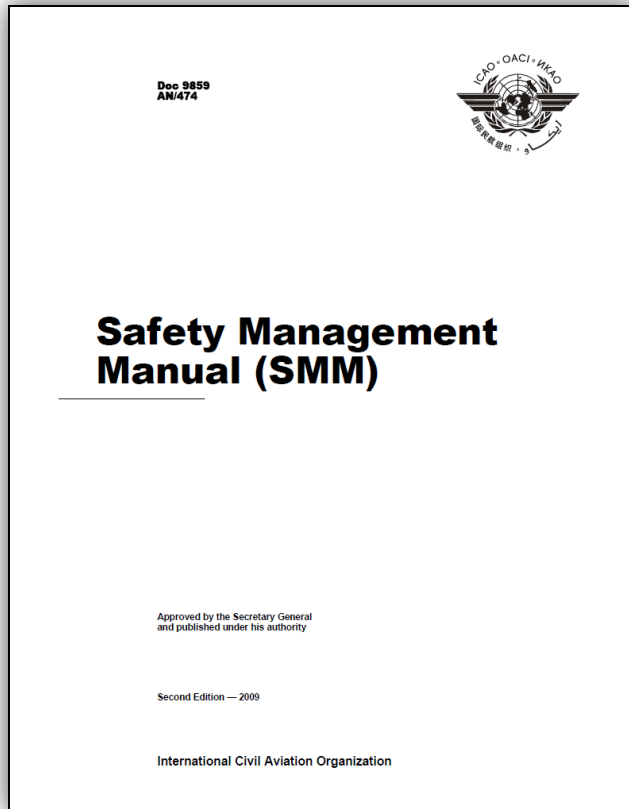
- ⌘ IATA Operational Safety Audit (IOSA) standard
 - ⌘ 3rd Edition IOSA Standards Manual will reflect new ICAO SMS requirements
 - ⌘ Conformity with IOSA standards will result in a “baseline” SMS
 - ⌘ Safety & Quality Manager still a requirement – may be same person
 - ⌘ Publication due March 2010—document in coordination
 - ⌘ State CAAs will trigger SMS
- ⌘ Two new IATA publications – in development
 - ⌘ SMS – An Introduction for Airline Management
 - ⌘ SMS Implementation Guide
 - ⌘ Collection of Industry Best Practices – categorized by element
 - ⌘ Contains a gap analysis for IOSA Operators
 - ⌘ Focus on both “what” and “how”

Safety Assurance

ICAO “Nuggets”

- ✦ “The organization’s choice of title—”quality” or “safety” –for the assurance process is of lesser importance as long as a focus on safety is maintained in the SMS.” (SMM 9.5.6)
 - ✦ Quality Assurance is a recognized function in most carriers
- ✦ Both the service provider and the regulatory authority will perform Safety Assurance
 - ✦ Suggests potential value in collaboration and information sharing between the carrier & FAA
 - ✦ Regulations: Emphasis on “what” to do—not “how” to do it
 - ✦ Does ATOS currently fulfill the SA requirement for the FAA?

Safety Assurance – An Expanded Definition – 3 Elements



3.1 – Safety Performance Monitoring & Measurement

- ✧ ATOS Six Safety Attributes
- ✧ Reporting systems
- ✧ Investigations
- ✧ Performance metrics

3.2 – Change Management

- ✧ Process to identify & manage change
- ✧ Identify potential hazards during planning process
- ✧ Assess & mitigate risk prior to change implementation
- ✧ Example: SRM Panel & BPET

3.3 – Continuous Improvement

- ✧ Internal Evaluations (IEP & QA)
- ✧ Internal Audits (QC by process owner)
- ✧ External Audits (FAA)

Internal Evaluation

- Defined as traditional corporate-level audits –
 - Focus on Continuous Improvement – “CI” (SMM 9.9)
 - Systems oriented – design, documentation, implementation, performance, interfaces, feedback loops, controls, metrics, etc.
 - Regulatory Compliance & hazard identification (on site)
 - Procedural Conformance (Doing what we say we’re doing?)
 - Example tool: ATOS Design Assessment (DA) Checklist
- Challenges
 - Selection & training of staff in use of CI tools
 - Six Sigma (DMAIC), 14 Quality Tools, FMEA, PDCA, etc. etc.
 - Integration of Safety Risk Management & Safety Assurance
 - Alignment of work streams vital to efficiency and harmonization

Internal Audit

Defined as functional-level audits -

- Responsibility of functional manager or process owner
- Safety management is responsibility of those who “own” technical activities (Control Quality – QC)
- Should be CI oriented—how to improve the process?
- Example tool: ATOS Performance Assessment (PA) Checklist

Challenges

- Formal system of internal audits not implemented at many organizations
- How to conduct an internal audit & retain discipline in process?
- How to insert QC audit results into an organization database?
- Additional layer of work that may generate “pushback” because of staffing increases

Issues

✧ Advisory Circulars require consolidation into SMS

- ✧ AC 120-59 Air Carrier Internal Evaluation Program
- ✧ AC 120-66 Aviation Safety Action Program
- ✧ AC 120-79 Continuing Analysis & Surveillance System
- ✧ AC 121-37 Voluntary Disclosure – HAZMAT
- ✧ AC 00-58 Voluntary Disclosure Reporting Program
- ✧ AC 120-82 Flight Operational Quality Assurance
- ✧ AC 120-92 Introduction to Safety Management Systems

✧ SMS Components & Elements must be scalable

✧ Alignment of Certificate Management Office & Operator

- ✧ Differing expectations as to what satisfies SMS standards

Discussion

Enterprise Perspective

ICAO “Nuggets”

- ∞ Recognition of multiple management systems
 - ∞ Examples: SMS, QMS, EMS, SeMS, FMS, OHSMS
 - ∞ ISO 9001:2008 & IOSA refers to Enterprise Management System as the “management system” with multiple components
 - ∞ “SMS should include both safety and quality policies and practices” (SMM 7.6.12)
 - ∞ “Integration of QMS into SMS provides a structured approach to monitor processes and procedures to identify safety hazards and their consequences. . . .” (SMM 7.6.13)
 - ∞ “Aviation organizations should be encouraged to integrate their quality, safety, security, occupational health and safety, and environmental management systems.” (SMM 7.8.3)