The Four SMS Functional Components

The essential idea of any SMS — be it a product/service provider's SMS or the SMS of the regulator responsible for safety oversight — is to provide for a systematic approach to achieving acceptable levels of safety risk. SMS is comprised of four functional components, including an intangible, but always critical, aspect called safety culture.

1. Safety Policy

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

◦ Establishes management commitment to safety performance through SMS

◦ Establishes clear safety objectives and commitment to manage to those objectives

◦ Defines methods, processes, and organizational structure needed to meet safety goals

◦ Establishes transparency in management of safety
  ■ Fully documented policy and processes
  ■ Employee reporting and resolution system
  ■ Accountability of management and employees

◦ Builds upon the processes and procedures that already exist

◦ Facilitates cross-organizational communication and cooperation

2. Safety Risk Management (SRM)

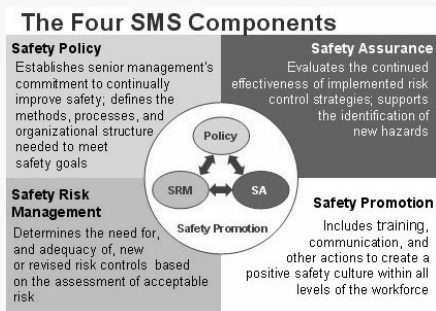Determines the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk.

◦ A formal process within the SMS composed of:
  ■ Describing the system
  ■ Identifying the hazards
  ■ Assessing the risk
  ■ Analyzing the risk
  ■ Controlling the risk

◦ The SRM process may be embedded in the processes used to provide the product/service

3. Safety Assurance (SA)

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

◦ SMS process management functions that systematically provide confidence that organizational outputs meet or exceed safety requirements

◦ AVS SMS has a dual safety assurance focus:
  ■ AVS organizations
  ■ Product/service providers

◦ Ensures compliance with SMS requirements and FAA orders, standards, policies, and directives
  ■ Information Acquisition
  ■ Audits and evaluations
  ■ Employee reporting
  ■ Data Analysis
  ■ System Assessment

◦ Provides insight and analysis regarding methods/opportunities for improving safety and minimizing risk

◦ Existing assurance functions will continue to evaluate and improve service

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Safety Risk Management — Determines the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk

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4. Safety Promotion

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

◦ Safety promotion activities within the SMS framework include:

■ Providing SMS training

■ Advocating/strengthening a positive safety culture

■ System and safety communication and awareness

■ Matching competency requirements to system requirements

■ Disseminating safety lessons learned

◦ Everyone has a role in promoting safety

Interfaces Between SRM and SA

Safety Risk Management (SRM) and Safety Assurance (SA) are the key processes of the SMS. They are also highly interactive. The flowchart below may be useful to help visualize these components and their interactions. The interface attribute concerns the input--output relationships between the activities in the processes. This is especially important where interfaces between processes involve interactions between different departments, contractors, etc. Assessments of these relationships should pay special attention to flow of authority, responsibility and communication, as well as procedures and documentation..

Between SRM & SA - Design & Performance