

Safety Management System Structure

What is a SMS?

- It is based on leadership and accountability;
- It builds unrelated processes into one coherent structure;
- It makes safety management an integral part of risk management;
- It requires proactive hazard identification, risk management, information control, auditing and training.
- It integrates operations and technical systems with financial and human resource management to manage risks;
- It is a business-like approach to safety;
- It deals with organizational safety rather than the usual workplace health and safety concerns;
- It provides for goal setting, planning, and measuring performance;
- It becomes the way people do their jobs;

Questions to Consider:

1. **If you have already developed a Company Safety Manual, do you need a SMS?**
 - A SMS deals with organizational safety rather than the conventional health and safety concerns in the workplace
2. **What should a SMS consist of?**
 - A coordinated, comprehensive set of processes designed to direct and control resources to optimally manage safety
 - Takes unrelated processes and builds them into one coherent structure to achieve a higher level of safety performance
 - It makes safety management an integral part of overall risk management.
 - It is based on leadership and accountability.
 - Includes incident and accident investigation and analysis.
 - Requires proactive hazard identification, risk management, information control, auditing and training.

Why a SMS?

- It facilitates the proactive identification of hazards and management of risk
- It fosters development of a better safety culture
- It helps modify attitudes and actions of personnel in order to make a safer work place
- It helps managers build a business case to justify controls that will reduce risk to acceptable levels.
- It ties all elements of the organization to safety both laterally and vertically
- It helps ensure appropriate allocation of resources to safety issues

How is a SMS Structured?

- Generally consists of 6 elements:
 1. The Plan itself
 2. Documentation & Data Management
 3. Safety Oversight (Hazard ID and Risk Management)
 4. Training
 5. Quality Assurance
 6. Emergency Preparedness and Response

The Plan

- Safety policy
- Policy statements
- Mission statement
- Just Culture
- Non-punitive safety reporting policy
- Safety promotion
- Safety principles
- Safety duties & responsibilities
- Safety communication
- Safety planning
- Performance measurement
- Management reviews
- Rewarding people/Safety promotions
- Employee feedback system

Documentation / Data Mgt.

- Identification & Maintenance of Applicable Regulations (compliance with standards)
- Intentional non-compliance with standards
- SMS Documentation
- SMS Manual
- SMS Resource Materials
- Records Management
- Documentation & Data Information Control
- Safety Performance Reports
- Safety Promotion in SMS Manual
- Data Mgt
- Resource Materials

Hazard ID / Risk Mgt.

- Reactive Processes Reporting
- Proactive Process –Hazard ID
- Occurrence Investigation
- Proactive Process- Risk Management
- Safety Assurance Oversight Programs
- Management of Change
- Evergreen Assurance
- Hazard Tracking & Resolution

Training

- Training Awareness & Competence
- Safety Management Tracking Requirements
- Competency Requirements
- Resource Material

Quality

- Operational Quality Assurance
- Performance Management & Measures

Emergency Preparedness

- Emergency Preparedness
- Emergency Response

Safety Management Plan

According to the joint Helicopter Safety Team at an International Helicopter Safety Symposium in Quebec in 2007 'A SMS Management Plan should clearly define safety objectives, how the organization intends to execute and measure the effectiveness of the SMS, and how the SMS will support the organization's business plan and/or objectives. The plan should:

- 1. Express management's commitment to safety and clearly state the policies, objectives and requirements of the SMS*
- 2. Define the structure of the SMS as well as the responsibilities and authority of key individuals for managing the SMS*
- 3. Define each element of the SMS*
- 4. Convey the expectations and objectives of the SMS to all employees*
- 5. Explain how to identify and maintain compliance with current safety regulatory requirements'*

Example: Safety holds the key to this organization's future and affects everything we do. This SMS Manual defines the organization's Safety Management Plan. The Safety Management Plan is the tool used to define how SMS supports the organization's Operations Plan. Organization management is committed to the SMS, and is required to give leadership to the program and demonstrate through everyday actions, the commitment to safety and its priority in the achievements of the organization.

All managers and supervisors, who, through planning and review, must continue to drive efforts for continuing improvement in safety and safety performance. The term "Safety Management" should be taken to mean safety, health, and environmental management. The key focus is the safe operations of airworthy aircraft. Safety audits are essential components of the Safety Management Plan. They review systems, identify safety issues, prioritize safety issues, must involve all personnel, and enhance the safety of operations."

Within the Safety Management Plan:

- Policies, objectives and requirements of the SMS are published*
- Organizational structure and key individuals and responsibilities are defined*
- Elements of the SMS are defined*
- Expectations and objectives of the SMS are conveyed to employees*

Elements within a SMS should include:

1. The plan itself

Some of the elements in the plan would be:

1. The safety policy

The policy is information which establishes a basic requirement for how the organization functions (what you want to do). It should be short and to the point. Customers should also know what the organization's policies are so they can base their expectations on them. Policies guide the development of procedures.

2. Policy statements

For example, an organization may establish a supply management policy to avoid inventory emergencies”

Example: Management is committed to providing safe, healthy, secure work conditions and attitudes with the objective of having an accident-free workplace. The organization’s owner/CEO is committed to:

- *ongoing pursuit an accident free workplace, including no harm to people, no damage to equipment, the environment and property*
- *A culture of open reporting of all safety hazards in which management will not initiate disciplinary action against any personnel who, in good faith, discloses a hazard or safety occurrence due to unintentional conduct.*
- *A culture of open reporting of all safety hazards*
- *Support for safety training and awareness programs*
- *Conducting regular audits of safety policies, procedures and practices*
- *Monitoring industry activity to ensure best safety practices are incorporated into the organization*
- *Providing the necessary resources to support this policy*
- *Requiring all employees to have the duty to maintain a safe work environment*

3. Mission statement

Example: The Mission is to provide quality service to our customers. This includes: (describe the missions you perform).

4. Just culture (process)

“Description: One key to the successful implementation of safety regulation is to attain a “just culture” reporting environment within aviation organizations, regulators and investigation authorities. This effective reporting culture depends on how those organizations handle blame and punishment.

Only a very small proportion of human actions that are unsafe are deliberate (e.g. criminal activity, substance abuse, use of controlled substances, reckless noncompliance, sabotage, etc.) and as such deserve sanctions of appropriate severity. A blanket amnesty on all unsafe acts would lack credibility in the eyes of employees and could be seen to oppose natural justice. A “no-blame” culture per se is therefore neither feasible nor desirable.

What is needed is a “just culture”, an atmosphere of trust in which people are encouraged, even rewarded, for providing essential safety-related information - but in which they are also clear about where the line must be drawn between acceptable and unacceptable behavior.

There is a need to learn from accidents and incidents through safety investigation so as to take appropriate action to prevent the repetition of such events. In addition, it is important that even apparently minor occurrences are investigated, in order to prevent catalysts for major accidents. Safety analysis and investigation is a necessary and effective means of improving safety, by learning the appropriate lessons from safety occurrences and adopting preventative actions. It is therefore important that an environment exists where occurrences are reported; the necessary processes are in place for investigation and for the development of necessary preventative actions such as re-training, improved supervision etc.

Conditions Under Just Culture: “Just Culture” conditions, individuals are not blamed for ‘honest errors’, but are held accountable for willful violations and gross negligence.

People are less willing to inform the organization about their own errors and other safety problems or hazards if they are afraid of being punished or prosecuted. Such lack of trust of employees prevents the management from being properly informed of the actual risks. Managers are then unable to make the right decisions in order to improve safety. However, a totally “no-blame” culture is neither feasible nor desirable. Most people desire some level of accountability when a mishap occurs.

In an attempt to solve that problem, J. Reason described a “Just Culture” as an atmosphere of trust in which people are encouraged, and even rewarded, for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behavior.

Hence, a Just Culture supports learning from unsafe acts in order to improve the level of safety awareness through the improved recognition of safety situations and helps to develop conscious articulation and sharing of safety information. Consequently, a Just Culture can be regarded as an enabler, and even indicator of, (a good safety culture)

Statement Outlining Just Culture: People are understandably reluctant to report their mistakes to the organization that employs them or the government department that regulates them. To encourage them to do so, these organizations should publish statements summarizing the fundamental principles of a just culture which they will follow. Additionally, they must ensure that these principles are applied at all levels of their organizations.

Such a statement should cover the following matters:

Confidentiality: People are reluctant to draw attention to errors made by themselves or their colleagues, due to personal embarrassment. They must be confident that their identity, or the identity of any person implicated in the report will not be disclosed without their permission or unless this is required by law. An assurance should also be given that any subsequent safety action taken will, as far as possible, ensure the anonymity of the persons involved.

Punitive Action: A person who breaks the law or breaches a regulation or company procedure through a deliberate act or gross negligence cannot expect immunity from prosecution. However, if the offence was unpremeditated and unintentional, and would not have come to light except for the report, he/she should be protected from punishment or prosecution.”

http://www.skybrary.aero/index.php/Just_Culture#Description

5. Non-Punitive Safety Reporting Policy
6. Safety Promotion
7. Safety Principles

“Example: Management embraces the following safety principles:

- *Always operate in the safest manner practicable*
- *A culture of open reporting of all safety hazards in which management will not*
- *initiate disciplinary action against any personnel, who in good faith, due to*
- *unintentional conduct, disclose a hazard or safety incident*
- *Never take unnecessary risks*
- *Safe does not mean risk free*
- *Everyone is responsible for the identification and management of risk*

- *Familiarity and prolonged exposure without a mishap leads to a loss of appreciation of risk'*

Example: The organization's structure is described in the operations manual. The Owner/CEO is

responsible for the following safety accountabilities:

- *All operations are conducted in the safest manner practicable*
- *Ensuring the safety of all employees, customers, passengers and visitors*
- *Development of long-term safety objectives, including establishment of safety policies and practices*
- *Implementation of management systems that will establish and maintain safe work practices"*

8. Safety Duties & Responsibilities
9. Safety Communication
10. Safety Planning
11. Performance Measurement
12. Management Reviews
13. Rewarding People/Safety Promotions
14. Employee Feedback System

The plan should:

1. Express management's commitment to safety and clearly state the policies, objectives and requirements of the SMS
2. Define the structure of the SMS as well as the responsibilities and authority of key individuals for managing the SMS
3. Define each element of the SMS
4. Convey the expectations and objectives of the SMS to all employees
5. Explain how to identify and maintain compliance with current safety regulatory requirements'

Within the Safety Management Plan:

- Policies, objectives and requirements of the SMS are published
- Organizational structure and key individuals and responsibilities are defined
- Elements of the SMS are defined
- Expectations and objectives of the SMS are conveyed to employees
- A method to identify and maintain compliance with safety and regulatory requirements'

2. Documentation & Data Management

Some of the elements in the plan would be:

1. Identification & Maintenance of Applicable Regulations (compliance with standards)
2. Intentional non-compliance with standards
3. SMS Documentation
4. SMS Manual
5. SMS Resource Materials
6. Records Managements

7. Documentation & Data Information Controls
8. Safety Performance Reports
9. Safety Promotion in SMS Manual
10. Data Management
11. Resource Materials

3. Safety Oversight (Hazard Identification & Risk Management)

Some of the elements in the plan would be:

1. Reactive Processes Reporting
2. Proactive Process –Hazard ID
3. Occurrence Investigation
4. Proactive Process- Risk Management
5. Safety Assurance Oversight Programs
6. Management of Change
7. Evergreen Assurance
8. Hazard Tracking & Resolution
9. Risk Assessment Tools (Safety Case)

4. Training

Elements in the plan would be:

1. Training Awareness & Competence
2. Safety Management Tracking Requirements
3. Competency Requirements
4. Competency Requirements
5. Resource Material

6. Quality Assurance

Elements within quality assurance would include:

1. Operational Quality Assurance and
2. Performance Management & Measure

7. Emergency Preparedness and Response