

| Safety Leader Training Course Overview |                                    |                            |                                 |                             |
|--|------------------------------------|----------------------------|---------------------------------|-----------------------------|
|  | Day 1<br>SMS for Av Pros           | Day 2<br>SMS Manager       | Day 3<br>SMS Auditor            | Day 4<br>Safety Leader      |
| Time                                   | SMS Principles                     | SMS Eval Tools             | Auditing                        | Safety Culture              |
| 0900-0950                              | Intro and Accident Causation Model | SMICG SMS Eval Tool Review | ISO 19011 Principles            | Safety Culture Discussion   |
| 1000-1050                              | Safety Risk Management             | SMICG SMS Eval Tool Review | Audit Process and Procedures    | Safety Culture Presentation |
| 1100-1200                              | Safety Risk Management             | SMICG SMS Eval Tool Review | Audit Process and Procedures    | Safety Culture Presentation |
| 1300-1350                              | Safety Assurance: IEPs, MoC, IAPs  | SMICG SMS Eval Tool Review | Video: NTSB Report Review       | Leadership & Management     |
| 1400-1450                              | Safety Assurance, SPIs and Targets | SMICG SMS Eval Tool Review | Root Cause Analysis             | Influencing Safety Behavior |
| 1500-1530                              | Safety Promotion, Comm & Training  | SMICG SMS Eval Tool Review | Accident/Incident Investigation | Persuading & Leading Change |
| 1530-1600                              | Review/Quiz                        | Review/Quiz                | Review/Quiz                     | Review/Quiz                 |

### Day 1, Module 1: Introductions and Accident Causation Model

This presentation addresses the need for SMS and how it relates to Total Quality Management and ISO 31000, *Risk Management* and [ISO 9001, Quality Management](#). The instructor provides a background of ICAO Standards and Annexes, to include Annex 19, *Safety Management*, and ICAO Doc 9859, *Safety Management Manual*. The instructor facilitates a discussion related to James Reason’s accident causation model.

### Day 1, Module 2: Safety Risk Management: Hazard Identification

The instructor facilitates a discussion related to Annex 19 requirements for SMS Component 2, Safety Risk Management with a focus on developing and maintaining a process to identify hazards associated with aviation products or services. The trainees learn about hazard identification techniques based on a combination of reactive and proactive methods.

### **Day 1, Module 3: Safety Risk Management: Risk Assessment and Mitigation**

The instructor facilitates a discussion related to Annex 19 requirements for SMS Component 2, Safety Risk Management with a focus on developing and maintaining a process that ensures analysis, assessment and control of the safety risks associated with identified hazards. The discussion also includes techniques for predictive methods of safety data analysis.

### **Day 1, Module 4: Safety Assurance: Internal Evaluation, Management of Change**

The instructor facilitates a discussions related to Annex 19 requirements for SMS Component 3, Safety Assurance with a focus on safety performance monitoring and measurement. The discussions include:

- a) techniques related to developing and maintaining the means to verify the effectiveness of safety risk controls;
- b) internal evaluation process to monitor compliance with safety regulations and the organization's own policies, processes, and procedures.
- c) management of change to ensure that risk controls currently in place will continue to be effective during and after the change.

### **Day 1, Module : Safety Promotion**

The instructor facilitates discussions related to SMS Component 4, Safety Promotion. The discussions include:

- a) Ways for the service provider to develop and maintain a safety training program that ensures that personnel are trained and competent to perform their SMS duties.
- b) Ways to ensure the scope of the safety training program is appropriate to each individual's involvement in the SMS.
- c) Ways to ensure the service provider develops and maintains a formal means for safety communication that:
  - 1) ensures personnel are aware of the SMS to a degree commensurate with their positions;
  - 2) conveys safety-critical information;
  - 3) explains why particular actions are taken to improve safety; and
  - 4) explains why safety procedures are introduced or changed.

## Day 2 Module: SMICG SMS Evaluation Tool

The instructor facilitates discussions related to the use of the Safety Management International Collaboration Group SMS Evaluation Tool. Understanding this tool is essential for Safety Managers to determine the degree to which they have implemented an effective SMS. The discussions describe how effectiveness looks in all domains, for example:

- a) The SMS is working in an effective way and is striving for continuous improvement.
- b) The organization is continuously identifying hazards and understands its biggest risks and is actively managing them; this can be seen in their safety performance. Safety Risk Management is proactive.
- c) The organization assures itself that it has an effective SMS and is managing its risk through audit, assessment, and monitoring of its safety performance.
- d) Senior management are clearly involved in the SMS and the safety policy sets out the organization's intent to manage safety. This is clearly evident in day to day operations.
- e) The organization puts considerable resources and effort into training its people and publicizing its safety culture and other safety information and monitors the effectiveness of its safety promotion.
- f) Human Factors are integrated into the SMS and the operations of the organization. All staff including management are aware of Human Factors and apply it in the way they work.

**Day 3, Module 1: Audit Principles** During this module, the trainee reviews key audit terms and principles based on ISO 19011, Guidelines for Auditing Management Systems. The trainee discusses the values of integrity, fairness, confidentiality, independence, and evidence-based conclusions. Population sampling is discussed, along with the principles of audit scope and objectives. The trainee is presented with various audit criteria which can be applied to a wide variety of organizations, each one having a focus on safety risk management.

**Day 3, Module 2: Audit Process and Procedures.** The six steps of the audit process are presented and discussed to include: initiating, preparing, conducting, audit report preparation, completion, and follow-up. Each step is broken down into its elements so the trainee can appreciate the amount of work involved in conducting internal or external audits. The module presents an example of industry tools utilized to conduct safety audits to include the ICAO, FSF, IBAC and FAA.

### **Day 3, Module 3: Root Cause Analysis**

This module explores the various techniques of root cause analysis, to include the US Department of Energy Root Cause Analysis Guidebook. The techniques presented and discussed include: Events and Causal Factor Analysis (ECFA), Change Analysis, Barrier Analysis, 5-Whys, and the Ishikawa Fish Bone Diagram utilizing 8-Ms. Practical examples are provided and discussed, to include a Fishbone example related to a runway excursion.

### **Day 3, Module 4: Incident/Accident Investigation**

This module explores the purpose and how to investigate following an incident. It examines an OSHA incident/accident investigation guide book and covers the essential elements to include: evidence collection, interviewing witnesses and involved employees, determining and examining contributing factors. This provides the trainee with an understanding of the interplay between errors, deviations, and causal factors.

**Day 4, Module 1: Measuring Safety Culture.** This module explores the relationship between SMS performance and organizational culture. Trainees learn about the characteristics of a safety culture and how that relates to an organization's overall culture. Key attributes of a safety culture are presented and discussed to include: reporting, informed, just, flexible, and learning. Scholarly research is cited which describes the correlation between trust, information, and incident rates. Finally, the trainee is presented with a variety of ways to assess the culture of their organization.

**Day 4, Module 2: Management Versus Leadership.** This fascinating module explores the differences between the concepts of management and leadership. As both sides of one coin are considered, the trainee is reminded that successful leaders must manage and successful managers must lead. This training is a clear and refreshing reminder that anyone can be a leader and leadership is not just for those who hold higher titles. Finally, the four pillars of the SMS are studied which clarifies which components require leadership and which require effective management.

### **Day 4, Module 3: Influencing Safety Behavior**

The instructor facilitates discussions related to the human behavior to include:

- Emotional Intelligence
- Theory of Planned Behavior
- Decision Making Model

### **Day 4, Module 4: Persuading and Leading Change**

The instructor facilitates discussions related to a change framework that represents the five building blocks of successful change:

- Awareness of the need for change
- Desire to participate and support in the change
- Knowledge of what to do during and after the change
- Ability to realize or implement the change as required
- Reinforcement to ensure the results of a change continue