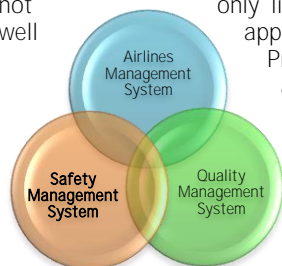


SMS Information and Fact Sheet

What is a Safety Management System?

A Safety Management System (SMS) is a systematic, explicit and comprehensive process for the **Management of Safety Risks** that integrates operations and technical systems with financial and human resource management, for all activities related to an air operator.

The International Civil Aviation Organization (ICAO) has mandated all contracting member states to urge their Operators to implement a Safety Management System. This requirement is not only limited to Airline Operators. It is as applicable to Air Traffic Service Providers and Airport Operators. The art of implementing a fully-fledged Safety Management System is challenging most Airlines and bonding valuable resources over a lengthy time period.



Depending on the size of the organization a SMS Project Implementation plan can take from 6 months up to 2 years.

swiss49 has **extensive experience in implementing and running Safety Management Systems** and is pleased to support your organization during the successful journey of implementing an effective state-of-the-art SMS.

Vital elements of a state-of-the-art SMS

There are several elements of a SMS which are crucial for the effectiveness and optimization of the invested resources. Some of the fundamentals within a Safety Management System are:

- Top Level Management Commitment
- Safety Culture, Policies and Processes, Audits
- Safety Performance Indicators and Objectives
- Hazard Identification, Risk Assessment and Management
- Safety Reviews/Meetings with the Accountable Manager and all nominated Post holders
- Safety Training on all Levels
- Dissemination of Safety relevant Information throughout the Organization
- Continuous planning of Safety Strategies, Resources and evaluation of Safety Tools
- Corporate Safety Risk Management Database
- Flight Data Monitoring System (FDM)

Quantifying Operational Risk

Hazard Identification, Risk Assessment and Risk Control are the core processes in the management of Safety. Hazards can be recorded, reported or monitored.

The identified Hazard is assessed regarding its Safety Risk Severity and Probability, based on a corporate Risk Matrix.

Severity	Catastrophic 5	5	10	15	20	25
	Critical/Hazardous 4	4	8	12	16	20
	Serious/Major 3	3	6	9	12	15
	Marginal/Minor 2	2	4	6	8	10
	Negligible 1	1	2	3	4	5
Probability of Occurrence						
	Improbable 1	Remote 2	Occasional 3	Probable 4	Frequent 5	

Safety Risk Probability is the likelihood that an unsafe event or condition might occur. Safety Risk Severity is the possible consequence of an unsafe event or condition, taking as reference the worst foreseeable situation.

The Risk Tolerability Matrix

In order to draw a sharp conclusion it is of utmost importance to export the obtained Safety Risk Index into a Safety Risk Tolerability Matrix that describes the tolerability criteria for the Organization.

ASSESSMENT RISK INDEX	RISK MANAGEMENT CRITERIA
Risk Value 15 to 25	Unacceptable (Cease Operation and Mitigate/Control Risk)
Risk Value 9 to 12	Undesirable (Mitigate and Control Risk)
Risk Value 6 to 8	Tolerable (Review and Monitor Risk)
Risk Value 1 to 5	Acceptable

It is best Industry Practice to implement the identical Safety Risk/Tolerability Matrix and its associated Risk Management/Control Processes throughout the whole Organization, e.g. within the Quality and Maintenance Departments. This satisfies the requirement to have a standardized company-wide approach to assess and control Risk.

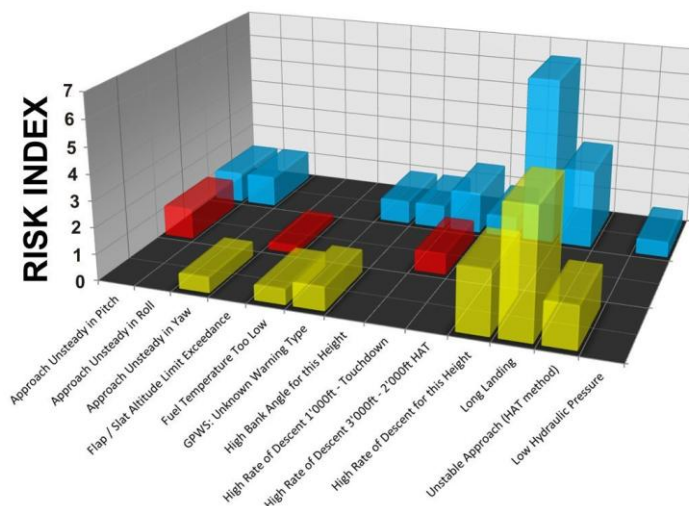
swiss49 FDM Risk Assessment Module

The swiss49 Full-Scale Flight Data Monitoring Service also includes the FDM Risk Assessment Module which has the ability to point out Areas of Risk in your Operation.

Based on Severity and Type of Operation, the Risk Assessment calculation is being calibrated for customer-specific Operations.

Multiplying Risk Severity by Risk Probability equals the Risk Index for a specific unsafe event or condition. As a Manager you are now able to quantify your Operational Risk!

You will also be able to import the FDM Risk Assessment Data-Strip into your Corporate Safety Risk Management Database.



Who is swiss49?

The swiss49 team consists of **experienced and highly qualified Computer Science Engineers and Flight Safety Experts**. The individuals are close to business by holding active Airline Transport Pilots Licenses ATPL or having **long term experience in airline flight operations** including long haul flight services.

Being active and responsible in Safety Management, Flight Data Monitoring and Fuel Ops Efficiency for various Airlines over **12 years of expertise** is accumulated in the swiss49 team. swiss49 ag is an incorporated company founded under Swiss law. Shares are 100% owned by its employees.