LEONARDO HELICOPTERS

SRS-01

Safety Requirements for Suppliers

LEONARDO

SRS-01

Safety Requirements for Suppliers

Approved by Head of SSG R.Pias

Issue Date: September 2022 Issue: 00

CHANGES LOG

Issue	Approval Date	Main changes	Interested Paragraphs
00	September 2022	First issue	All

Contents

1. Introduction

1.1 Leonardo S.p.a.

Starting January 1, 2016, Leonardo S.p.a. (formerly Finmeccanica S.p.a.) changed its structure from a holding company to a single company, focused on its core business of Aerospace, Defence and Security, with the goal of becoming stronger and more competitive in an increasingly complex international scenario.

Therefore, pursuant to the Notarial Deed of Partial De-merger executed on the 16th of December 2015, from the 1st of January 2016, Leonardo S.p.a. hold any and all titles to all of the production capability, the entire workforce, the assets and, save for very few, specific exceptions that are not relevant to the Supplier, liabilities and contracts generally held by AgustaWestland S.p.A.

From that date on, by operation of law Leonardo S.p.a. step in most of the rights, obligations and Contracts of AgustaWestland S.p.A., including those entered into between AgustaWestland S.p.A. and Suppliers.

Leonardo S.p.a. is organized into Divisions, also operating through subsidiaries joint ventures and participated legal entities.

Specifically, Leonardo Helicopter Division is focused on research, design, development, production, customer support & training and marketing of an extensive range of modern helicopters for commercial, public service, surveillance, and defence purposes.

1.2 Addresses

Leonardo S.p.a.
Registered Office : Piazza Monte Grappa, 4 - 00195 ROME, Italy.
VAT Identification Number: (IT) 00881841001
Company number at Rome Chamber of Commerce: 00401990585

Leonardo Helicopter Division principal places of business:

Leonardo Helicopters
Via Giovanni Agusta, 520
21017 Cascina Costa di Samarate
(Varese) - Italy

Leonardo UK Ltd,
a company registered in England under no. 2426132, whose registered office is at 1 Eagle Place, St James's, London, SW1Y 6AF, United Kingdom (hereinafter referred to as "LDO UK"), trading as LEONARDO HELICOPTERS with its principal place of business at Lysander Road, Yeovil, Somerset BA20 2YB, United Kingdom

PZL-Świdnik S.A.
Registered Office:
Al. Lotników Polskich nr 1,
21-045 Świdnik, Poland
Place of business:
Świdnik: Aleja Lotników Polskich 1
21-045 – Poland

AgustaWestland Philadelphia Corporation
Registered Office: CT Corporation Trust Centre, 1209 Orange Street – Wilmington – Delaware 19801 (USA)
Place of business: 3050 Red Lion Road PA 19114 - USA

Kopter Group AG
Flugplatzareal 10
8753 Mollis Airport
Switzerland

Throughout this document, **Leonardo S.p.a. is referred to as "LH" to include any, subsidiaries and controlled companies within the Leonardo Helicopters Division**.

1.3 Preamble

Leonardo Helicopter is one of the world's leading helicopters manufacturers which designs, manufactures and supports Aircrafts (commercialized under the brand of AgustaWestland) and associated Products for various Civil and Military Customers to the maximum Safety level.

It is Leonardo Helicopter strong commitment to be "the safest rotorcraft manufacturer and organization in the world".

Safety is a fundamental key that allows LH to maintain its competitiveness in the global market. In accordance with the European regulations, LH has implemented the latest Safety requirements, introducing the Safety Management System (SMS) in its own approved organizations in order to achieve the updated certifications by the Authorities.

LH is expecting from Suppliers a supportive commitment to ensure a high contribution to Safety by collaborating to such Safety approach, the cornerstone for the continuous improvement of Aviation Safety.

Accordingly, LH would require the certification of Suppliers at the highest levels as an important factor for the achievement of Safety objectives.

In fact, the absence of such certifications represents additional workload, responsibilities and consequently cost for LH since these Suppliers with no certification will need to work under the scope of approval of an LH certified organization. LH will therefore consider this aspect as a maximum priority in the selection of Suppliers.

LH will regulate the frequency of its Surveillance activity and flow down of Safety requirements based also on the certification held by Suppliers.

1.4 Right of Access

LH shall have the right of access to any Supplier involved with LH Products and Services, included any Sub-tier Supplier.

The Supplier shall provide LH Customers (or the Customers authorized representatives) and/or Regulatory Authorities rights of access to premises where LH work is being performed. Such access shall be used to verify that the activities being undertaken meet the requirements of the LH contracts/orders. The Supplier shall provide suitable accommodation facilities and assistance.

Suppliers shall notify LH when an LH Customer (or Customer representative) requests access to the Supplier's facilities. In all cases, access at the Customer's shall be arranged by LH only. LH reserves the right to accompany any Customer during a Supplier visit.

All access and Products acceptance requirements shall be coordinated by LH.

1.5 Customer Communication

The Supplier shall appoint a specific member of the organization management, identified as Safety Representative, who shall be the principal link between the Supplier and LH SMS organizations. This shall be the interface on all matters affecting the safety of Products and Services submitted to LH.

All other communication required by a program shall be as specified and agreed by LH by the Contract and, when needed by a specific Interface Safety Document.

1.6 Language and communication

The Supplier shall be able to manage written and spoken communication with LH in English or by use of the local Country language as appropriate, based on circumstances and personnel involved.

The Documentation delivered to LH shall be in English, unless differently requested by LH or agreed with the LH contact person.

Where needed to allow understanding of Supplier's internal documentation written in other language (i.e. for explanation, verification, auditing purposes) the Supplier shall provide appropriate translation where requested by LH.

2. Scope

LH Safety Requirements for Suppliers are defined in this document.

This document is intended to enable the Suppliers to implement LH Safety requirements consistent with Annex 19 (Second Edition - Amendment 1) to the Convention on International Civil Aviation, as adopted by the International Civil Aviation Organization's (ICAO). Where ICAO Annex 19 establishes Standards and Recommended Practices

(SARPs) applicable to safety management functions related to, or in direct support of, the safe operation of aircraft.

ICAO Annex 19 prescribes that each State must require organizations under its authority to implement an SMS (e.g., organizations responsible for the type design or manufacture of aircraft, engines or propellers in accordance with Annex 8, approved maintenance organizations providing services to operators of airplanes or helicopters engaged in international commercial air transport, in accordance with Annex 6, Part I or Part III, Section II, respectively).

National Aviation Authorities will continue to promulgate SMS regulations applicable to organizations identified in ICAO Annex 19 and these organizations will be required to respond consistent with their State's requirements.

SMS is being introduced for the purpose of continuous improvement in Aviation Safety.

The purpose of an SMS is also to provide organizations with a systematic approach to managing safety. It is designed to continuously improve safety performance through:

- the identification of hazards;
- the collection and analysis of safety data and safety information; and,
- the continuous assessment of safety risks.

The SMS seeks to proactively mitigate safety risks before they result in aviation accidents and incidents. It allows organizations to effectively manage their activities, safety performance and resources, while gaining a greater understanding of their contribution to aviation safety.

SMS is a decision-making system, based on the collection and analysis of information that encompasses both reactive and proactive measures. It also aims to maintain or improve the safety performance of organizations by establishing and fostering a positive safety culture. Such a safety culture should be present at all levels, and be reflected in an active and visible management commitment as well as by individuals' awareness of their role and influence on safety.

The complete set of LH Safety requirements that each Supplier is required to fulfil for providing Products and/or Services are described in this main document (SRS-01 Safety Requirements for Suppliers) and its associated modules. For purpose of clarity the associated modules to this document are intended to be applied to the Suppliers taking into account the Supplier category type/approval.

The entire set of documents is collectively identified as SRS-01 and represents the LH Safety Requirement for Suppliers, which can be downloaded from the Leonardo Helicopter website at the supplier section.

The SRS-01 main document (SRS-01 Safety Requirements for Suppliers) and each module shall be applied at their last level of revision. Whenever "SRS-01" is mentioned, it is intended not only the main document but also all the associated "SRS-xxx" module(s) as applicable.

The SRS-01 includes a system of temporary revisions, which are also published in the webpage above.

When the SRS-01 is requested by a Contract/Purchase Order, it shall be applied, together with the relevant associated module(s), at their last revision.

3. Applicability

This document and the relevant SRS modules are applicable to all the types of LH Suppliers, as described in the following categories where the Suppliers are undertaking design, manufacturing or maintenance responsibilities/activities in accordance with a LH Contract/Purchase Order and/or any other associated documentation.

LH has identified three different categories of Suppliers for which the Safety requirements are applicable in accordance with the contents of its associated SRS module. Each Supplier will be required to fulfil to the relevant requirements in accordance with one of these categories.

Suppliers providing Products and/or Services for LH UAS applications are excluded from the implementation of LH Safety Requirements until further notice.

Here is a general description of the SRS modules applicable to different categories of LH Suppliers:

3.1 SRS-100: Suppliers with SMS

This SRS module is applicable to all the LH Suppliers undertaking design, manufacturing or maintenance responsibilities and activities or both as:

- Approved organizations (holding an organization approval, e.g., DAO, DOA, ODA, POA, AMO/MOA)
- Other organizations (holding a certificate for design or manufacturing or both, e.g., TC, PC, PMA holder), including those from the supply chain (i.e., critical system and component suppliers).

ICAO Annex 19 prescribes that each State must require organizations under its authority to implement an SMS.

This module provides a set of SMS requirements consistent with the ICAO framework that shall be implemented by the Supplier in its own organization(s) to support LH SMS organizations.

The LH Safety Requirements shall be flowed-down by the LH Suppliers to all Sub-tier Suppliers involved in the design, manufacturing or maintenance activities, as applicable according with the type and category of the Sub-tier Suppliers and their approval(s).

3.2 SRS-101: Suppliers with no SMS

This SRS module is applicable to all the Suppliers providing Products and Services to LH who have neither an approved organization (e.g., DAO, DOA, ODA, POA, AMO/MOA) nor are certificate holder (e.g., TC, PC, PMA holder), and work under the scope of approval of an LH subcontracting organization.

LH requires these Suppliers to implement a set of Safety rules and tasks in order to support the LH approved organizations and related SMS. In this context, these Suppliers will act as Safety Related Units (SRU) of the LH SMS.

In accordance, this SRS module provides a minimum set of Safety requirements that should be implemented by the Suppliers in its own organization to support LH SMS.

The LH Safety Requirements should be flowed-down by the LH Suppliers to all Sub-tier Suppliers involved in the design, manufacturing or maintenance activities, as applicable according with the type and category of the Sub-tier Suppliers and their approval(s).

3.3 SRS-102: Suppliers providing services at LH premises

This SRS module is applicable to all the Suppliers providing Services to LH who have neither an approved (e.g., DAO, DOA, ODA, POA, AMO/MOA) nor a certificate holding organization (e.g., TC, PC, PMA holder), and work at LH premises under the scope of approval of an LH subcontracting organization.

LH requires these Suppliers to implement a set of Safety rules and tasks in order to support the LH approved organizations and related SMS. In this context, these Suppliers will act as Safety Related Units (SRU) of the LH SMS.

In accordance, this SRS module provides a minimum set of Safety requirements that should be implemented by the Suppliers in its own organization to support LH SMS.

The LH Safety Requirements should be flowed-down by the LH Suppliers to all Sub-tier Suppliers involved in the design, manufacturing or maintenance activities, as applicable according with the type and category of the Sub-tier Suppliers and their approval(s).

4. Effective date

Issue date

5. Reference Documentation

1. ICAO Annex 19, Second Edition-Amendment 1 effective July 2016;
2. Safety Management Manual (Doc 9859 – 4th edition published October 2018);
3. ICAO Annex 13 (Amendment 18, effective July 2020);
4. SMS SM-0001 International Industry Standard, Revision B dated 31 March 2022.

5. Safety Management International Collaboration Group (SMICG) documentation (e.g. SMS evaluation tool, risk based decision, SMS terminology);
6. EU regulation No 2018/1139 (for basic safety aspects);
7. EU regulation No 376/2014 (for reporting aspects) and ASD Just Culture declaration.
8. EU regulation No 1321/2014 (Part-CAMO);
9. EU regulation No 2021/1963 amending Regulation (EU) No 1321/2014 as regards safety management systems to be established by maintenance organizations (Part 145);
10. EU regulation (EU) No 2022/201 amending Regulation (EU) No 748/2012 as regards safety management systems to be established by design and production organizations (Part 21);
11. EASA AMC/GM to Part ORA, Part ORO, Part ATCO AR/OR, Part CAMO.
12. FAA 14 CFR Part 5
13. GAMA/AIA outcomes on SMS for D&M organizations starting with the AIA NAS9927 (1st issue dated May 31, 2016), including the FAA documentation on SMS in other domains;
14. International Standards (EN/AS9100 & EN/AS9110, ISO 31010);
15. ISO/IEC Directives Part 2 – Principles and rules for the structure and drafting of ISO and IEC documents.
16. State Safety Programme - Italy, 4th edition
17. ENAC State Plan for Aviation Safety, 2021-2025 edition
18. ENAC Safety Performance Indicators 2nd edition, July

6. Acronyms, definitions and abbreviations

6.1 Acronyms and abbreviations

AMO Approved Maintenance Organization
ATO Approved Training Organization
CAA Civil Aviation Authority
CAMO Continuing Airworthiness Management Organization
DMM Design Manufacturing & Maintenance
DOA Design Organization Approval
ERP Emergency Response Planning
FDA Flight Data Analysis
FDM Flight Data Monitoring
ICAO International Civil Aviation Organization
LH Leonardo Helicopters
LOSA Line Operations Safety Audit
MOA Maintenance Organization Approval
ODA Organization Designation Authorization
PC Production Certificate
PMA Parts Manufacturer Approval

POA Production Organization Approval
QMS Quality Management System
SA Safety Assurance
SAG Safety Action Group
SARP Standards and Recommended Practices
SM Safety Manager
SME Subject Matter Expert
SMM Safety Management Manual
SMS Safety Management System
SPI Safety Performance Indicator
SPT Safety Performance Target
SO Safety Officer
SRB Safety Review Board
SRM Safety Risk Management
SRU Safety Related Unit
STC Supplemental Type Certificate
SWG Safety Working Group
TC Type Certificate
TCH Type Certificate Holder
UAS Unmanned Aircraft System

6.2 Definitions

The following definitions are based upon those within the documents listed in Section 5 “Reference Documentation”.

Accident
An occurrence associated with the operation of an aircraft which takes place between the times any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

1) A person on board or on ground is fatally or seriously injured.
2) The aircraft sustains damage or structural failure.
3) The aircraft is missing or is completely inaccessible.

(Source: ICAO Annex 13).
Note: In principle this definition is also valid for Unmanned Aerial Systems (UAS) when their operation takes place between the time they become airborne until they land on the ground or in the water.

Aircraft
Manned or unmanned aerial system (with or without pilot).
(Source: SMS SM-0001 Standard).

Climate of SMS
The perceived value placed on safety in an organization at a particular point in time.
(Source: SMS SM-0001 Standard).

Continuing Airworthiness Management
A process by which a type certificated aircraft is thereafter kept in a condition where it remains airworthy, being compliant with the technical conditions fixed to the issue of the Certificate of Airworthiness and kept in a condition for safe operation (technically fit for flight).
Note: This process is under the responsibility of the aircraft operator or its delegated approved organization (e.g., CAMO)
(Source: based on ICAO Document No 9713 – 1998).
Note: Continuing Airworthiness is defined in the European regulation (EC No. 1321/2014 Part M article 2) as follows: All of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation.

Continued Airworthiness
The post-certification phase of an aircraft's design life, during which the design approval holder has duties to collect data on "failures, malfunctions and defects" (see 21.A.3) to identify potential threats to the continuing airworthiness of the aircraft, and for which phase the design approval holder is required to make available 'instructions for continued airworthiness' to ensure the safe operation and support the development of the operator's maintenance programs.
(Source: based on EU No 748/2012 Part 21 wording).
Note: The activities in respect of failures malfunctions and defects in EU regulation (Part 21.A.3) are referred to as Continued Operational Safety (COS) in US regulation (14 CFR Part 21.3).

Corporate SMS
Corporate governance, structure and processes to cover some or all elements common across domains (such as accountability, safety policy, hazards identification and safety risks management principles, safety data collection and assessment, safety awareness and training).
Corporate SMS is not compulsory, but could facilitate consistent SMS implementation in companies holding multiple approvals and/or certificates.
(Source: SMS SM-0001 Standard).

Event
Any anomaly in operating an aviation product or in performing an organization's activity.
(Source: SMS SM-0001 Standard).

Foreseeably
Identification of every conceivable or theoretically possible hazard is neither possible nor desirable; therefore, judgment is required to determine the adequate level of detail in hazard identification. Organizations should exercise due diligence in identifying significant and reasonably foreseeable hazards related to their operations.
(Source: NAS9927).
Note: Regarding product design, the term "foreseeably" is intended to be consistent with its use in airworthiness regulations, policy, and guidance.

Hazard
A condition or an object with the potential to cause or contribute to an aircraft incident or accident.
(Source: ICAO Annex 19).

Incident
An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.
(Source: ICAO Annex 13).

Just Culture
A culture where individuals are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training, but where gross negligence, willful violations and destructive acts are not tolerated.
(Source: based on EU No 376/2014).

Management System
A framework of policies, processes and procedures used by an organization to ensure that it can fulfil all the tasks required to achieve its objectives.
(Source: based on ISO 9000:2015).

Occurrence
Any safety-related event which endangers or which, if not corrected or addressed, could endanger an aircraft, its occupants or any other person and includes in particular an accident or serious incident (as defined in ICAO Annex 13).
(Source: EU No 376/2014).

Organization
Any entity, approved or non-approved, independent of size, performing an activity in Design, Manufacturing or Maintenance (DMM) of aircraft, propellers, aircraft engines or parts and appliances. ICAO is making use of the term “organization” for those organizations.
(Source: SMS SM-0001 Standard).
Note: For the purpose of this document, organization is intended as an LH Supplier (see Section 3 Applicability) and its Sub-tier Suppliers working under a Supplier contractual arrangement on LH final Products and Services.

Procedure
A specified way to carry out an activity or a process.
(Source: ISO 9000:2015).
Note: When a procedure is documented, the term “written procedure” or “documented procedure” is frequently used. The document that contains a procedure can be called a “procedure document”.

Process
A set of interrelated or interacting activities which transforms input elements into outputs, respecting constraints, requiring resources, meeting a defined mission, corresponding to a specific purpose adapted to a given environment.
(Source: based on ISO 9000:2015).

Product
A broad term that includes aircraft, aircraft engine, aircraft propeller, aircraft part or appliance or both, their subcomponents (hardware and software) and associated deliverables such as documentation necessary for operation and maintenance (e.g., Instructions for Continued Airworthiness, Aircraft Flight Manual).
(Source: SMS SM-0001 Standard).

Quality escape
Any product released by an internal or external supplier or sub-tier supplier that is subsequently determined to be nonconforming to contract or product specification requirements or both.
(Source: AS/EN/SJAC 9131).

Risk
The combination of predicted severity (criticality) and likelihood (probability) of the potential effect of a hazard.
(Source: NAS9927).

Risk Control
A means to reduce or eliminate the effects of hazards.
(Source: NAS9927).

Risk Mitigation
The process of incorporating defenses or preventive controls to lower the severity or likelihood of a hazard's projected consequence or both.
(Source: ICAO Doc. 9859 SMM).

Safety
The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.
(Source: ICAO Annex 19).
Note: risks of harm to persons or damage to property are to be considered.

Safety Assurance (SA)
Processes within the SMS that function systematically to ensure the performance and effectiveness of safety risk controls and that the organization meets or exceeds its safety objectives through the collection, analysis, and assessment of information.
(Source: NAS9927).

Safety Culture
A set of enduring values, behaviors, and attitudes regarding safety management, shared by every member at every level of an organization.
Note: The objective of safety culture is to enhance the organization employees' understanding of their role in safety, to share and promote safety values and to encourage the positive behavior and mind-set to address any identified safety related questions or concerns in an environment of trust and mutual respect. A strong safety culture goes beyond mere compliance to the rules and regulations (i.e., initial and continuing airworthiness requirements)

(Source: based on ICAO SMM).

Safety data
Data recorded for further use in SMS activities (e.g., events reports, safety risk assessments).
Such safety data is collected from proactive or reactive safety-related activities, including but not limited to:

- Accident or incident investigations.
- Safety reporting.
- Continuing airworthiness reporting.
- Product operational performance monitoring.
- Inspections, audits, surveys.
- Safety studies and reviews.

Some Safety data can be used as SMS data.
(Source: based on ICAO Annex 19).

Safety information
Safety data processed, organized or analyzed in a given context so as to make it useful for safety management purposes.
(Source: based on ICAO Annex 19).

Safety Management System (SMS)
A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.
(Source: ICAO Annex 19).

SMS data
Data used to measure SMS performance.
Examples:

- Hazards report register and samples of reports.
- Outputs of risk assessments.
- Safety performance indicators and related charts.
- Record of completed or in-progress safety assessments.
- SMS internal review or audit records.
- Safety promotion records.
- Personnel SMS/safety training records.
- SMS/safety committee meeting minutes.
- SMS implementation plan (during implementation process).

(Source: SMS SM-0001 Standard).

Safety objective
A measurable goal or desirable outcome related to safety.
(Source: NAS9927).

Safety performance
Realized or actual safety accomplishment relative to the organization’s safety objectives.
(Source: NAS9927).

Safety policy
An organization's fundamental approach for managing safety that is to be adopted within an organization and further defines the organization management's commitment to safety and overall safety vision.
(Source: SMICG Terminology).

Safety promotion
A combination of training and communication of safety information to support the implementation and operation of an SMS in an organization enhancing its safety culture.
(Source: based on SMICG Terminology).

Safety Risk Management (SRM)
A process within the SMS identifying the hazard, analyzing, assessing and controlling related risks.
(Source: based on SMICG terminology).
Note: SRM is one of the recognized and equivalent names used for the Safety Risk Management/Mitigation process and related tools (e.g. excel spreadsheet). Other common names are:
- SA = Safety Assessment
- SRA = Safety Risk Assessment
- HIRA = Hazard Identification & Risk Assessment
- HIRM = Hazard Identification & Risk Mitigation

Service Provider (or product and service provider)
Any organization providing aviation products and/or services. The term thus encompasses approved maintenance organizations and organizations responsible for type design and/or manufacture of aircraft.
(Source: SMS SM-0001 Standard).

Substantive Change
A change (internal or external) involving matters of major or practical importance to an organization that could have a consequential impact on product safety. Substantive changes include modification, expansion or contraction of the nature and scope of an organization's structure, operating environment, roles and responsibilities, policies, processes, procedures, products, operations, facilities, and/or human resources.
(Source: SMS SM-0001 Standard).

System Description
A description of an organizational system including its structure, policies, communications, processes, products and operations to determine the scope and perimeter of the system subject to SRM. This allows the understanding of critical factors or features for the purpose of identifying hazards. It is updated whenever there is a newly introduced element or change to the internal or external situation that could affect safety.
(Source: based on NAS9927).

7. ICAO Framework

The LH Safety Requirements for Suppliers are based upon ICAO Annex 19 Appendix 2 framework, fully adopted by LH, which comprises four components and twelve elements forming the minimum requirements as follows:

1. Safety policy and objectives
    - 1.1. Management commitment.
    - 1.2. Safety accountability and responsibilities.
    - 1.3. Appointment of key safety personnel.
    - 1.4. Coordination of emergency response planning.
    - 1.5. SMS documentation.
2. Safety risk management
    - 2.1. Hazard identification.
    - 2.2. Safety risk assessment and mitigation.
3. Safety assurance
    - 3.1. Safety performance monitoring and measurement.
    - 3.2. The management of change
    - 3.3. Continuous improvement of the SMS.
4. Safety promotion
    - 4.1. Training and education.
    - 4.2. Safety communication

ICAO Annex 19 Appendix 2 Note 2 highlights also that interfaces with other organizations can make a significant contribution to the safety of products or services. By identifying and managing these interfaces, either internal or external, the organization will have more control over any safety risks related to the interfaces. Section 9 of this document will further elaborate on Interface Management.

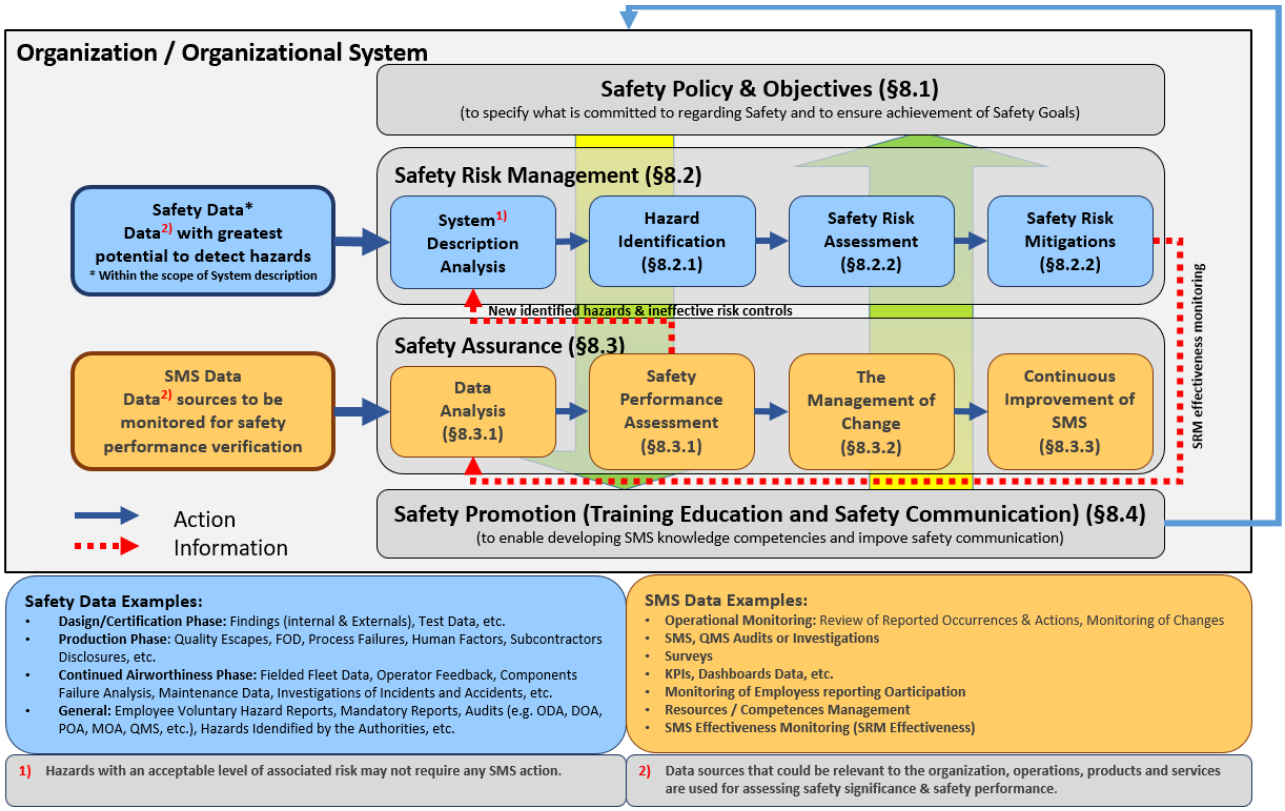
8. SMS Components

This section provides a brief description of the SMS Components.

Further details on SMS Components and Elements are included in the associated SRS-xxx modules.

Figure 1 provides an overview of the SMS components and the interactions among them, with a specific focus on Safety Risk Management and Safety Assurance.

Figure 1: SMS Overview and Interactions between SMS Components



8.1 Safety Policy and Objectives

The first components of the SMS framework focus on creating an environment where safety management can be effective. It is based on a safety policy and objectives that describe management's commitment to safety, its goal and the related organization.

Management commitment and leadership is specifically asserted through the safety policy and safety objectives and demonstrated through management decision-making and allocation of resources. Consistency of decisions and actions with safety policy and safety objectives will help to cultivate a positive safety culture.

8.2 Safety Risk Management

The second component of the SMS framework is Safety Risk Management (SRM), which include hazard identification, safety risk assessment and safety risk mitigation.

The SRM process identifies hazards that exist within the context of providing products and/or services. Hazards may results from systems that are deficient in their design, technical function, human interface or interaction with other processes or systems. They can be the result of failure of existing processes or the result of changes of the operating environment.

Having a detailed system description will help to understand the operating environment and its interfaces. In fact, hazards may be identified through all the operational life cycle and from internal and external sources.

Safety risk assessment and safety risk mitigation will need to be continuously reviewed to ensure they remain effective.

8.3 Safety Assurance

The third component of the SMS framework is Safety Assurance (SA) that consists of processes and activities undertaken to determine whether the SMS is operating according to expectations and requirements.

The SA continuously monitors processes as well as the operating environment to detect changes or deviations that may introduce emerging safety risks or the degradation of the existing safety risk controls. Such changes or deviations may then be re-addressed through the SRM process.

Safety assurance activities include the development and implementation of actions taken in response to any identified issues having a potential safety impact, and continuously improve the performance of the SMS.

8.4 Safety Promotion

The fourth component of the SMS framework is Safety Promotion that encourages a positive safety culture and helps to achieve the safety objectives through the combination of training and education, effective communication, and information-sharing.

Senior management provides the leadership to promote the safety culture throughout an organization, since effective safety management cannot be achieved solely by mandate or strict adherence to policies and procedures.

Safety promotion affects both individual and organizational behavior, and supplements the organization’s policies, procedures and processes, providing a value system that supports safety efforts.

9. Interface Management

The organization's interfaces with other organizations can make a significant contribution to the safety of its products or services.

Safety risks faced by the organizations are affected by interfaces, either internal or external. By identifying and managing these interfaces the organizations will have more control over any safety risks related to the interfaces.

9.1 Interface Principles

Organizations do not operate in isolation, and any management system (e.g., safety management system, quality management system, environmental management system) has to take into account interactions with others. The term "Interface" is used to describe in generic terms the interaction between organizations, and includes the occasions when the interface is formalized, and offers the opportunity to exchange information.

In most cases, organizations directly interfacing with each other are expected to formally define the interactions through contractual arrangements, for instance a typical case is the arrangements made between a customer and a supplier. The contract is the means to define the exact nature of the activities being performed by one party for the other, and duties to be performed for Safety across the interface may therefore be defined within the formal contractual agreements. This can include, as appropriate, defining the items to be exchanged when both parties have an SMS, or more specific requirements for one party to support the needs of the other's SMS even if such party is not required to have an SMS.

Piazza Monte Grappa, 4
00195 Roma
T +39 06324731
F +39 063208621

leonardo.com