

Functional safety management for end user operators

Safety is always a major issue, but with heightened awareness of incidents and the potential for litigation should something go wrong, end users are under increasing pressure to demonstrate that their functional safety management procedures are best-in-class.

Functional safety management

The demands of the safety critical systems market are becoming ever more exacting, with international standards being increasingly used to demonstrate compliance with legal requirements and the increasing need to justify that the required functional safety has been achieved. Guided by their core values of health and safety, successful companies team up with ABB for their functional safety management needs; ensuring they remain centred every step of the way.

Our approach

ABB offers unparalleled experience and expertise in functional safety management covering all phases of the operational safety lifecycle. As part of defining the required levels of protection, end users are facing several management and technical challenges when it comes to the risk reduction contribution to be specifically afforded by a Safety Instrumented System (SIS) and particularly a system that is managed and designed in accordance with good practice standards such as IEC 61508 - 61511. As a key element of our overall life cycle offering, our focused capability and competency for safety instrumented systems covers:

- Undertaking hazard and risk assessments
- Identifying safety needs, protective layers and specifying safety requirements
- Designing and building SIL capable SIS
- Installing and commissioning the SIS
- Operating and maintaining the SIS over the life of the asset and maintaining the safety performance
- Assessing the risk impact of future modifications to plant and equipment



Functional safety management documentation

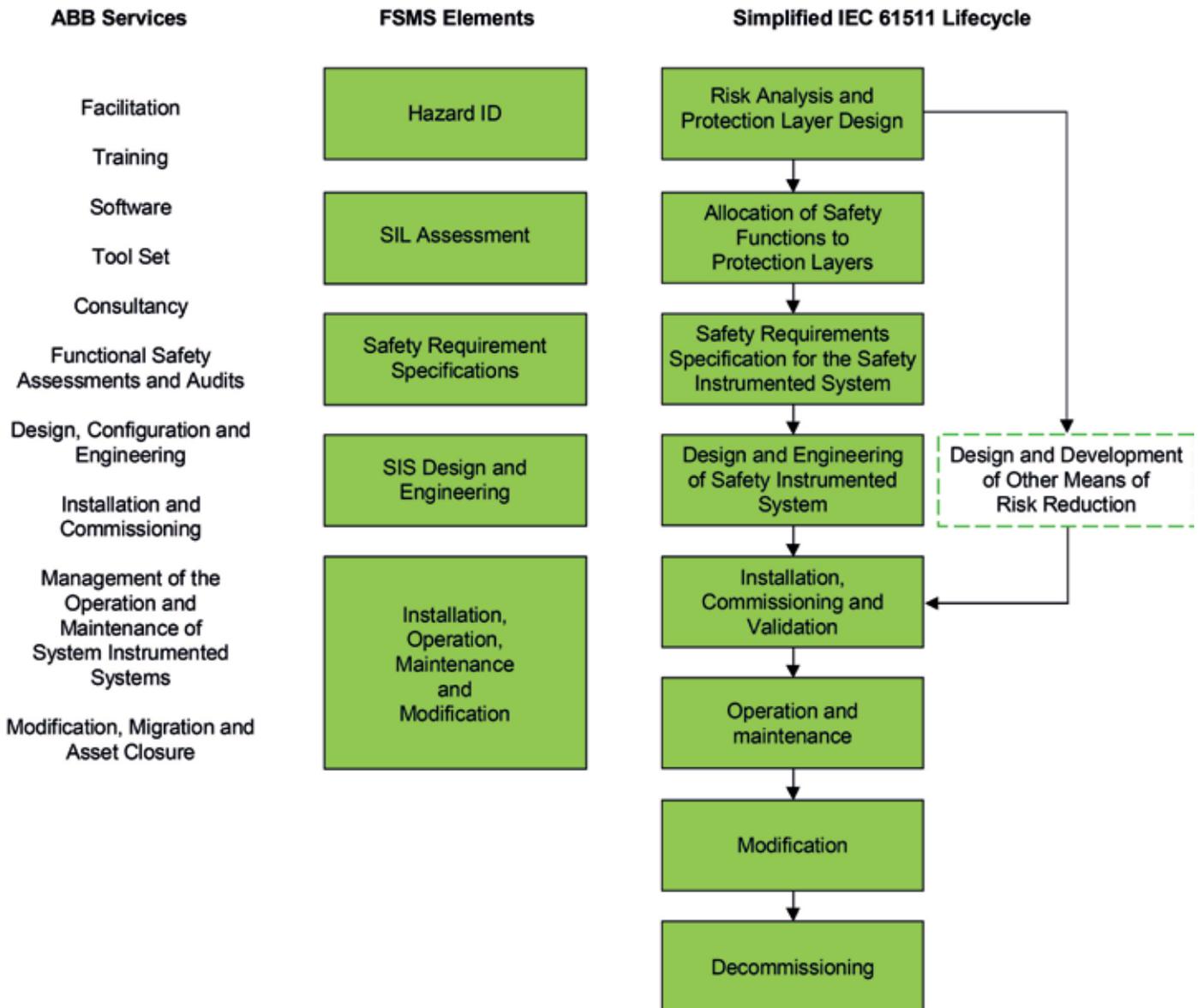
ABB uses IEC 61508 and IEC 61511 functional safety standards as its benchmarks. From these standards, we have developed a comprehensive set of functional safety methodologies and procedures for the full asset/safety lifecycle to ensure that end users meet their social responsibility to protect people, property, the environment, and surrounding community from harm; in addition to complying with national and local regulations.

Why ABB?

ABB offers a portfolio of generic Functional Safety Management System (FSMS) procedures and guides (FSMS's) to cover the functional safety lifecycle, several of which are aligned to the process industries functional safety standards. All can be tailored to meet specific end user requirements. These generic FSMS's can be purchased as a single one-off licence fee or with an extension to cover annual updates in response to changes in standards and industry best practice.

Specifically for SIS, these generic FSMS's consist of proven and validated procedures, methodologies, templates and report outlines, covering those essential elements of hazard and risk assessment; SIL determination; SIS design and SIL capable hardware, SIS installation, SIS commissioning and validation and SIS operations and maintenance.

As part of tailoring the generic FSMS's, ABB can also offer consultancy, training, facilitation and technical software tools which are complementary to the management and delivery of the FSMS documentation as supplied.



Benefits of our approach

A tailored FSMS will enable the end user to demonstrate compliance with good practice international functional safety standards, meeting regulatory and legal requirements, improving profitability and ultimately optimising the cost of safety. Annual updates of the FSMS's supplied ensures that changes to the documents can be efficiently incorporated and through ABB's extensive end user client base, feedback will allow the FSMS to be continuously streamlined and aligned to actual best practice.

Associated consultancy services

- Pressure relief calculation and design
- Bunding and containment
- Fire and gas design and engineering
- Fire risk assessment
- Fire water run off and containment
- Environmental hazard assessment
- Alarm management
- Hazardous area classification

Assured and certified products, services, delivery and execution.

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