

Functional Safety Review: the key to safe plant operation

The safety and availability of your industrial plant are your top priorities. International and national safety and security standards, regulations and guidelines are constantly evolving. When a new plant is built, safety instrumented systems (SIS) are designed and commissioned by safety specialists. However, in the course of their life cycle, plants are optimized, expanded as well as modified and the status in relation to safety is not always well documented or known.

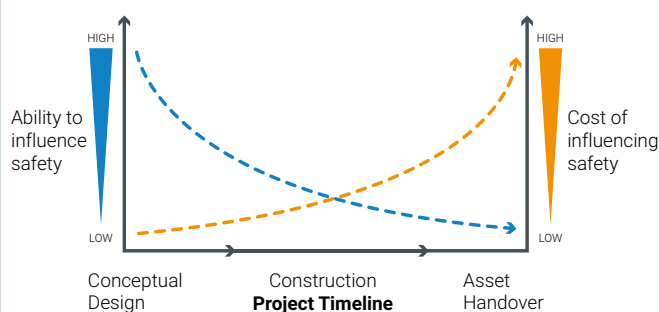
A window into the current position and the implications of change

Every upgrade or modification requires a review of functional safety with regard to the applicable standards and norms. HIMA assists you by conducting an overview before the modification, expansion, change or modernization project. This will help to identify the necessary required measures at an early stage and enable the possibility to influence the safety processes thus avoiding unexpected and therefore expensive rework. As part of the functional safety review, we conduct a review of your safety instrumented systems and related documentation to ascertain the level of compliance with the current standards and norms. This helps you make the right decisions at the right time, also ensuring safe plant operation, optimized change procedures, and minimizing downtime.

Benefits

- Independent overview of the current Functional Safety status with regard to any modernization, expansion, change or modification of an existing system.
- Independent overview of the implications of change with regard to Functional Safety.
- Identify the current level of compliance with all the applicable standards and norms.
- Report the competence levels of staff involved in managing the Functional Safety Lifecycle.
- Basic review of the field devices and the suitability of any device changes.
- Identify possible cost saving opportunities and avoid expensive rework in later stages of the project.
- Provide guidance for future Functional Safety activities to ensure full compliance with relevant standards and norms.

Ability to influence safety procedures and expenditures during the course of the project



Functional Safety Review Objective

The functional safety review identifies if the correct and appropriate procedures and systems are in place in accordance with the functional safety life cycle requirements - subject to the availability of the necessary documentation and personnel. The functional safety engineer will use a structured procedure of questions and review to determine the basis for compliance with the applicable norms and standards (e.g. IEC 61511 Ed. 2). Following the review, a summary report will be produced and a meeting scheduled to review the findings and recommendations than agree a plan for implementation. A separate proposal will be provided to address any areas of non-compliance.

Functional Safety Review Scope

During the functional safety review, an independent functional safety engineer will review and record the following topics:

- The original hazard and risk assessment and subsequent Safety Requirements Specification complies with today's standards
- The documentation is up to date and has been properly maintained.
- A safety manual for operation is existing and the plan to have this updated is available.
- Availability of a strategy for updating the safety assessments & documentation to reflect that upgrades or modification design will achieve the required SIL.
- A plan for the management of ongoing competency assessments is in place
- Available evidence that the current SIS (incl. field instrumentation) and any planned changes, are compliant with the target SIL.

Standards

The functional safety review will consider the requirements of the following standards:

- IEC 61511 - Safety instrumented systems for the process industry sector
- IEC 61508 - Functional safety of electrical/electronic/programmable electronic safety-related systems
- IEC 62443 - Security for industrial automation and control systems
- Industrial application standards such as for burner management systems EN 50156, industrial thermo-processing equipment EN 746-2, turbomachinery and generators VDMA 4315-5:2013-02
- Other specific standards or working practices provided by clients



Smart Safety Services from HIMA

HIMA offers services that cover the entire SIS life cycle. The integration into the management of functional safety, SIS design as well as the realisation, testing and commissioning creates holistic knowledge. This is the prerequisite for the efficient execution of a functional safety review.

Procedure

The functional safety review will require the involvement of the relevant customer personnel and is carried out over a consecutive period of time. The whole review can be conducted on-site or via web sessions; however due to the variety of topics and possibly different customer personnel, site, face-to-face meetings are recommended.

- All relevant safety related documentation needs to be made available in an electronic format
- 1 Day kick-off meeting incl. interviews based on provided documentation
- 3-4 Days evaluation of documentation combined with clarification and report generation.
- 1/2 Day review meeting with all relevant client personnel

Pricing

- Basic fee of 9,340 Euro* for the defined scope and procedure
- Including all preparation, interviews, meetings, and reporting
- Travel costs and accommodation are excluded
- The key to success relies on the availability of client documentation and client personnel, any additional time required will be charged at the applicable day rates.

*Pricing is valid for Europe only. Please contact your regional partner for local pricing.

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