



Safe and Explainable
Critical Embedded Systems based on AI

PhOT0004 AI Organizational Chart

Version 2.0

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1 Review / Modification History

Version	Date	Description Change
V2.0	15/02/2024	Changes Applied as a result of TÜV Review 2024-01-19
V1.0	04/12/2023	First version after complete internal review
V0.1	15/09/2023	First draft

*Note: Since Artificial Intelligence - Functional Safety Management (AI-FSM) utilizes templates from both the traditional Functional Safety Management (FSM) and its own templates, this annex distinguishes the AI-FSM templates by color-coding them in **orange** and the traditional FSM templates in **green**. Additionally, the folders' names will be enclosed in quotation marks and the files' names created from the templates are written in **italics and underlined**. These files' names are preceded by "REF_", which should be changed to reflect the specific safety project reference. The paragraphs/name of the project/Rev./Ref./history table in **blue** must be replaced with the information for the specific project. The paragraphs written in **red** are instructions that can be used as a guide, so they must be deleted.*

2 Objective

Traditional FSM provides a guideline (*Ph0G0004_Organizational_chart_guide.docx*) that outlines the relationship between the company organisation and the methodology, identifies the main roles involved in a safety or cybersecurity project, and the relationships between these roles. However, although the sections company description, organizational chart and functional safety employees and cybersecurity employees remain unchanged, some changes should be considered when an artificial intelligence (AI) constituent is integrated into the system. This guideline explains the main changes to be considered through the following sections.

3 Scope

This document is related to all the participants of a safety-related project and the interaction with the rest of the company.

4 AI-FSM Organizational Chart

According to the traditional FSM, the functions that must be performed throughout a safety-related project development are defined in the following diagram:

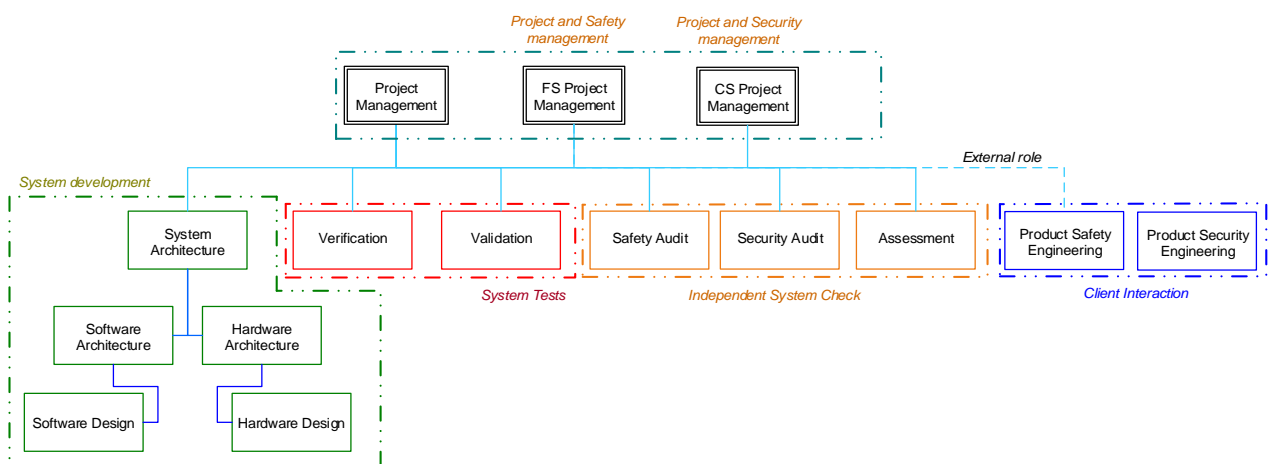


Figure 1. Functions to be performed throughout a safety-related project development¹

However, when the safety system involves the use of AI, the system development differs from the traditional one as follows:"

¹ It is important to highlight that in this figure, the term "validation" pertains to the conventional definition of safety validation.

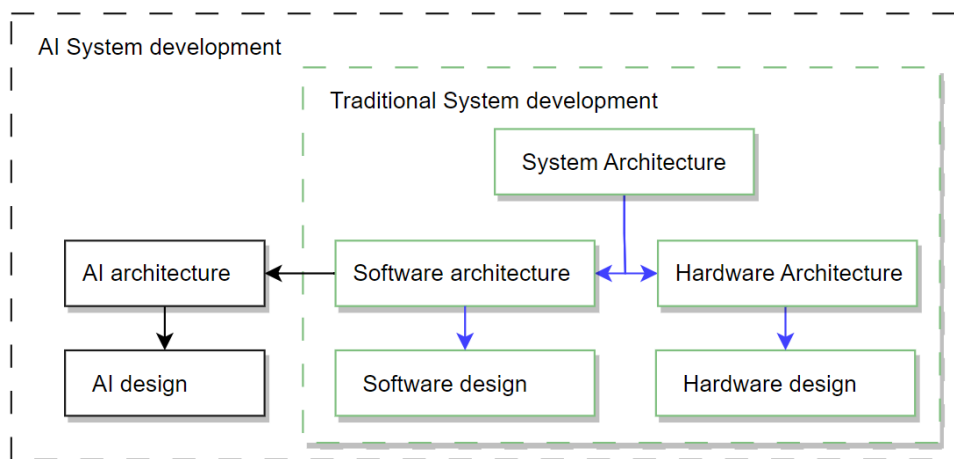


Figure 2. Supplementary functions for AI-inclusive safety-related project development

Here, in those Functional Safety (FS) systems involving the use of AI appear a new rol, with particular responsibilities and competencies.

Table 1. FSM structure versioning information

Role	Responsibilities	Key competencies
AI Design Responsible	<ul style="list-style-type: none"> - Shall be responsible for specifying AI requirements - Shall transform the specified requirements into acceptable solutions - Shall maintain traceability between requirements and design - Shall apply suitable techniques and measures - Shall select appropriate tools - Shall ensure design documents are under change and configuration control 	<ul style="list-style-type: none"> - Shall be experienced in the application's domain - Shall be experienced in AI attributes of the application's domain - Shall understand applicable regulations - Shall understand the requirements of the applicable AI standards - Shall be competent in AI design principles

Furthermore, it is essential to review the key competencies related to understanding relevant sections of applicable standards for all roles, as they currently do not encompass emerging functional safety standards related to AI. This limitation is due to the early stage of development of these standards at the time of writing this document.

5 AI-FS employees

This section compiles the qualifications and expertise of all employees involved in the project, along with the training requirements for participants in the AI-FS project.

5.1 Qualification and Expertise

In case of being a certification for AI and functional safety, it should be defined the qualification and expertise of all the employees involved in the project:

Table 2. AI-FS employees with their qualification and expertise

Name	Certification ID	AI-FS Project Experience	AI-FS Project Manager	AI Engineering	AI-FS Tester	AI-FS Auditor
Javier Fernández	#231/19	NO	NO	YES	NO	NO

5.2 Training

The training requirements for participants in the AI-FS project are as follows:

1. No qualification staff: before starting to work in AI-FS project, shall attend a training program where the required AI, FS or/and AI-FS standards is/are treated. The CV shall be updated after attending any training course.
2. Qualified staff:
 - staff who have not worked on any AI-FS project for at least 5 years must attend a recycling course before starting work on an AI-FS project. The CV shall be updated after attending any training course.
 - Staff who have worked on FS projects shall upgrade FS engineer certificate every 5 years with related experience and attend recycling courses in case of having a different role.

6 Acronyms and Abbreviations

Below is a list of acronyms and abbreviations employed in this document:

- AI – Artificial Intelligence
- AI-FSM – Artificial Intelligence - Functional Safety Management
- FS – Functional Safety
- FSM – Functional Safety Management

7 Bibliography

Add here the reference to used bibliography/references (if any).