



## System Certification of the 'SIL'



### Safety integrity levels:

Safety Integrity Levels (SIL 1, 2, 3 or 4) are used in safety instrumented systems as a measure of dependability and safety performance.

For CML's overall approach, refer to the information sheet '**The CML approach to functional safety certification**'.

### Overview of system certification:

The purpose of system certification is to evaluate the system integration activities, from a defined starting point (a safety requirements specification for the system and functional safety data for each purchased element) through to either factory or site acceptance test (FAT or SAT) in accordance with IEC 61508 or related standard.

Typically, this certification is relevant to system integrators.

### A typical programme:

An assessment plan is always created to suit the needs of a client's particular project. Typically, it will have several stages and may look something like the example over the page. Gaining certification by the most straightforward route is the overall objective, getting there in manageable steps.

The initial stage usually involves information gathering by correspondence or a face to face meeting, as convenient. The information will concern the application and safety function(s), technologies involved and the system integration procedures used.

The starting point (which is reviewed for suitability) is a defined safety requirements specification and the manufacturer's claims of functional safety suitability for the elements that are used to form the system. The scope will cover the system design and integration aspects (including the application software) from IEC 61508 or related standard such as IEC 61511 or IEC 62061. This includes all the planning, procedures, application program development, test specifications, etc, and functional safety management for the project.

Throughout the process, the client can request more or less support from CML as required at each stage.

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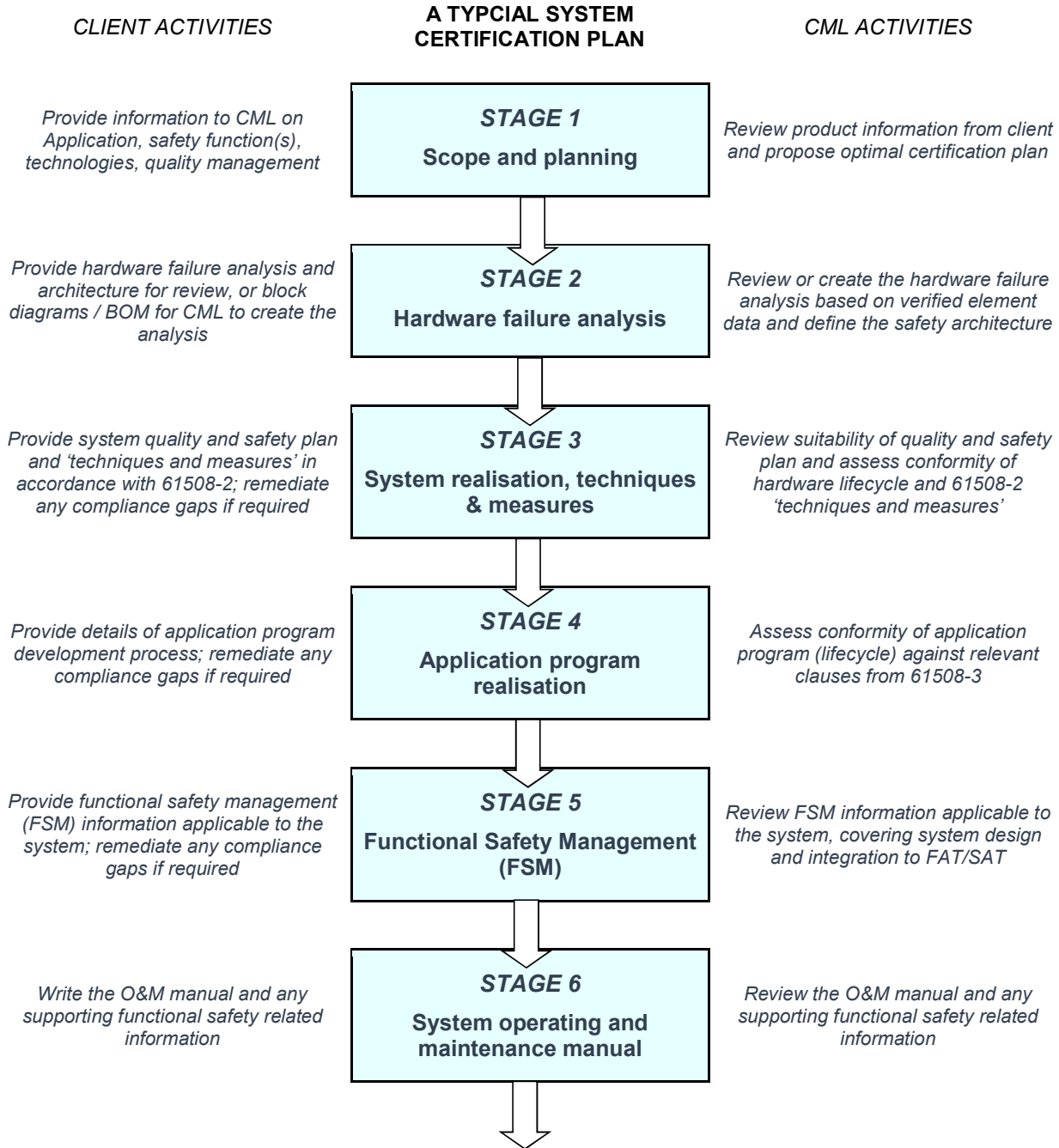
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*Complete any remaining remedial actions*

**STAGE 7**  
**Assessment report**

*Complete the functional safety assessment report*

*None*

**STAGE 8**  
**Technical check and certification**

*Technical check of report;  
Draft, review and issue certificate*

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