



## **GUIDANCE MATERIAL:**

# **PSSA REPORT**

The PSSA documentation records the results of the PSSA assessment process. This document will be updated through the complete system life cycle.

In order to make this document readable and conveying efficiently key messages and results of PSSA, recommendations are:

- To keep the body of the document short (around 15 pages);
- To make this document conclusive: state whether the proposed architecture is able or not to achieve an acceptable risk and clearly and

concisely list the main findings of the PSSA such as main Safety Requirements (including Assurance Levels) and assumptions;

- To include an executive summary;
- To contain the results of detailed analyses in annexes.

A possible structure for the PSSA report is given in Table 5.1.

### **Executive Summary**

It should focus on main messages delivered by PSSA, such as: what are the main Safety Requirements, recommendations and conclusions.

### **Introduction**

This section should describe:

- The objectives of the document.
- The scope of the PSSA (What was addressed in the PSSA process and what was not addressed).
- The structure of the document.

### **System Design Description**

This section should provide an overview of the system design and architecture.

It will cover, or reference, documentation describing:

- The system architecture and design
- The purpose and boundaries of the system;
- The system operational environment (if appropriate, the assumptions made about this operational environment);
- The external interfaces (including technical data).

It will also identify whether the system is new, a replacement or a modification of an existing system.

### **Safety Criteria**

This section should identify the specific safety criteria used to define the Safety Requirements. For example,

- Applicable Safety Regulatory Requirements;
- (International) Standards
- Approach to derive quantitative Safety Objectives into Safety Requirements, when appropriate.

### **Safety Requirements Identification**

The results are usually best presented in a tabular format.

If numerous, this part should focus on the main Safety Requirements and make reference to the complete list in an annex.

### **Summary and Conclusions**

This part should summarise the results of the PSSA process. It should include:

- The updated list of assumptions;
- The list of most demanding Safety Requirements;
- The list of quantitative and/or qualitative Safety Requirements (including Assurance Levels);
- The main conclusions of the PSSA validation, verification and process assurance activities;
- A statement whether the proposed architecture is able or not to achieve an acceptable risk.

This part should also identify any architectural elements or failures or hazards requiring additional analysis, and/or other priorities for further attention in the development/assessment cycle.

### **Annexes**

- Detailed result tables
- Cross-references to other documents produced within the PSSA process, such as the PSSA Plan (as described in PSSA Chapter 2) and the Validation/ Verification and Process Assurance reports (as described in PSSA Chapter 4).
- References to external documents – e.g. regulatory requirements, standards, documentation for systems interacting with the proposed system.
- Detailed results of analyses (FTA, FMEA, CCA, ...)
- Traceability matrices:
  - Safety Objectives <> Safety Requirements
  - Safety Requirements <> System Elements
  - Safety Requirements <> Functions (This can be done via the Safety Objectives)
  - ALs (Assurance Level) <> System Elements

Table 5.1. Structure of the PSSA Report