**Item Definition**

Template

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Project:** | ISO 26262: Recommended Practice – SMARTcode | | | | | | | | | **Company:** | n.a. | | | | | | | | | **Document Status:** | Verified | | | | | | | | | **Maturity Level:** | <50% compliant | | | | | | | | |  | | |  | |  | |  | | | **Author:** | | **Company:** | | **Role:** | | **Email:** | | | [author] | | [company name] | | [role] | | [@address] | | |  | |  | |  | |  | | | **Stakeholder:** | | **Company:** | | **Role:** | | **Email:** | | | [stakeholder\_ 1] | | [company name] | | [role] | | [@address] | | | [stakeholder\_ 2] | | [company name] | | [role] | | [@address] | | | [stakeholder\_ 3] | | [company name] | | [role] | | [@address] | | | [stakeholder\_ 4] | | [company name] | | [role] | | [@address] | | | [stakeholder\_ x] | | [company name] | | [role] | | [@address] | | |  | | |
|  |  | | |
|  |  |  |  |

**Change History**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Revision** | **Date** | **Author** | **Chapter(s)** | **Reason** | **Change** |
| *1* | *01-01-2016* | *J. Johnsson* | *1* | *Content out of date* | *Removed completed tasks* |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Table of Contents

[1 To do list 4](#_Toc463359942)

[2 RASI(C) chart 4](#_Toc463359943)

[3 Conventions 5](#_Toc463359944)

[3.1 Document status 5](#_Toc463359945)

[3.2 Maturity level assignment 6](#_Toc463359946)

[4 Abbreviated terms 6](#_Toc463359947)

[5 Purpose and scope 6](#_Toc463359948)

[6 Related documents 7](#_Toc463359949)

[6.1 Input documents 7](#_Toc463359950)

[6.2 Work products 7](#_Toc463359951)

[6.3 Other related documents 7](#_Toc463359952)

[7 ISO26262 compliance 8](#_Toc463359953)

[7.1 Maturity level indication rationale 8](#_Toc463359954)

[7.2 Elements and aspects of this document which are not compliant to ISO26262 8](#_Toc463359955)

[8 Functional and non-functional requirements of the item and the dependencies between the item and its environment 9](#_Toc463359956)

[8.1 Functional concept 9](#_Toc463359957)

[8.2 Operational and environmental constraints 9](#_Toc463359958)

[8.3 Legal requirements, national and international standards 9](#_Toc463359959)

[8.4 Behaviour achieved by similar functions, items or elements, if any 9](#_Toc463359960)

[8.5 Assumptions on behaviour expected from the item 9](#_Toc463359961)

[8.6 Potential consequences of behaviour shortfalls including known failure modes and hazards 9](#_Toc463359962)

[9 The boundaries of the item, its interfaces, and the assumptions concerning its interaction with other items and elements 10](#_Toc463359963)

[9.1 The elements of the item 10](#_Toc463359964)

[9.2 Schematic of the element with its sub-element. 10](#_Toc463359965)

[9.3 The assumptions concerning the effects of the item’s behaviour on other items or elements 10](#_Toc463359966)

[9.4 Interactions of the item with other items or elements 10](#_Toc463359967)

[9.5 Functionality required by other items, elements and the environment 10](#_Toc463359968)

[9.6 The allocation and distributions of functions among the involved systems and elements 10](#_Toc463359969)

[9.7 The operating scenarios which impact the functionality of the item. 10](#_Toc463359970)

[Appendix A – Review form for TSC template (Template only!!!) 11](#_Toc463359971)

# To do list

This chapter shall provide a complete list of known missing elements or actions to reach the desired maturity level of this document.

# RASI(C) chart

Fill in the responsibilities with regards to this document in the RASI(C) chart below.

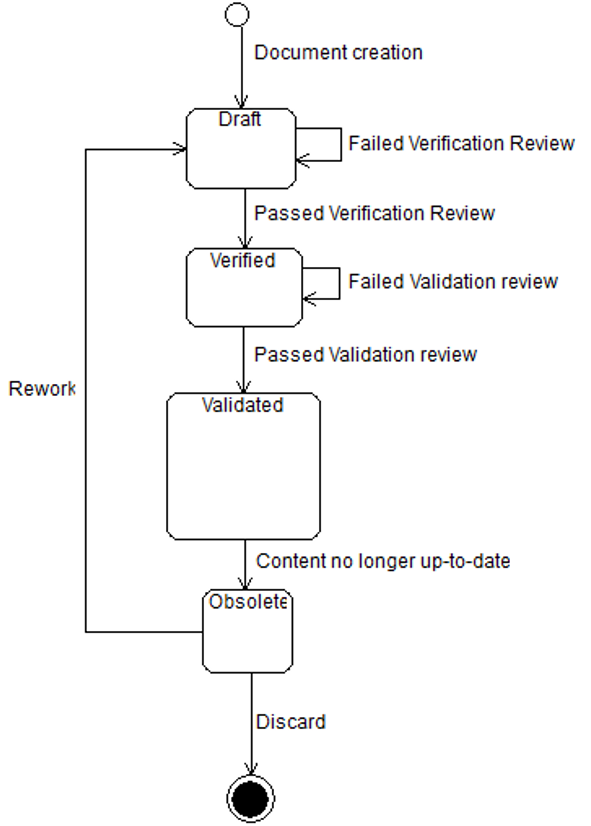
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Name | Tasks/Activities | Company | Email address |
| Responsible | *James Smith* |  | *CompanyX* | *jsmith@companyx.com* |
| Accountable |  |  |  |  |
| Supportive |  |  |  |  |
| Informed |  |  |  |  |
| Consulted (optional) |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Name | Role | Role description |
| *[Example]*  *James Smith* | *FSM* | *Functional Safety Manager, responsible for the conformance of [company / department] to ISO26262.* |
| [name] | [role] | [description] |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| Responsibility | Description |
| Responsible | *The person who is ultimately responsible for the delivery of the work product. This person has to ensure the correctness, completeness, retention and availability of this document.* |
| Accountable | *The person who has ultimate accountability and approval authority. This person is legally responsible for the correct implementation according to ISO26262.* |
| Supportive | *The team or person(s) supporting carrying out the “real” work. They are committed to the completion of the work product.* |
| Informed | *Person(s) who must stay informed regarding results or actions taken but are not involved in final decision-making.* |
| Consulted | *(Optional) Those who can provide valuable input into the development of work products and are capable of determining the quality and correctness of the work product.* |

# Conventions

## Document status



Document life cycle

|  |  |
| --- | --- |
| Draft | When a new document is created the status “Draft” will be assigned. Only after a positive verification review the document can be promoted to “Verified” by performing a verification review. Also Obsolete documents can be assigned the status “Draft” after changes have been made to update.  *Please refer to ISO26262-2 Table D.1 – Overview of verification reviews.* |
| Verified | Status after a successful verification review according to ISO26262-2 has been performed on a document with status “Draft”. |
| Validated | Status after a successful validation review according to ISO26262-2 has been performed on a document with status “Verified”. |
| Obsolete | The status of the document should be changed to “Obsolete” when its contents no longer match the current state of the Item, System or organization it concerns, **regardless of the former document state.** |

## Maturity level assignment

At every validation review an estimate is made regarding the maturity level of this document. The estimate is based on the amount of ISO26262 requirements this document satisfies in relation to how many still have to be satisfied.

Only the person(s) responsible for the validation review may determine the maturity level of the Safety Case documents.

The maturity level will be assigned based on a scale of 0 – 4:

1. Not compliant
2. <50% compliant, roughly half of the aspects mentioned in ISO26262 are covered
3. <75% compliant, roughly ¾ of the aspects mentioned in ISO26262 are covered
4. <90% compliant, most of the aspects mentioned in ISO26262 are covered
5. >90% compliant, so far to judge every aspect of the ISO26262 is covered

# Abbreviated terms

List all abbreviations here which are used in this document and are not covered by ISO26262-1 Clause 2

# Purpose and scope

The Item Definition provides a detailed description of the safety related item with regards to its functionality, interfaces, environmental conditions, legal requirements, hazards and more.

To do: add scope of item here

# Related documents

The initiation of the validation plan is described in ISO26262-4, clause 5. The refinements of the validation plan are described in ISO26262-4, clause 6.4.6 and clause 9.4.2.

## Input documents

For creating the validation plan:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document title | Internal ID | Revision nr | Status | Resource location |
| Project plan |  |  |  |  |
| Safety plan |  |  |  |  |
| Functional safety assessment plan |  |  |  |  |
| Functional safety concept |  |  |  |  |

For refining the validation plan:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document title | Internal ID | Revision nr | Status | Resource location |
| Technical safety requirements specification |  |  |  |  |
| HARA |  |  |  |  |
| Safety Goals |  |  |  |  |
| Functional Safety Concept |  |  |  |  |

## Work products

The following work products result from a validation activity:

* **Validation plan (refined)**
* **Validation report (as a result of the evaluation of the validation plan)**

## Other related documents

If any other documents are used to create the Validation Plan, please note them here.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Document title | Internal ID | Revision nr | Status | Resource location |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

# ISO26262 compliance

## Maturity level indication rationale

*Which requirements of ISO26262-X clause X are covered and which are not?*

*What is the current requirements-coverage of this document according to ISO26262. Please also describe how this is defined/calculated.*

## Elements and aspects of this document which are not compliant to ISO26262

*Which elements are missing in this document or which elements are not conform ISO26262? Refer to ISO26262 requirements.*

*Provide measures to be taken to enhance compliancy to ISO26262.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement** | **Issue** | **Measure** | **Trigger** |
| *[Example]*  *9.4.4 The results of the validation shall be evaluated.* | *Evaluation is not yet mentioned in this document.* | *Describe evaluation measures.*  *Define the evaluation in the Safety Plan.* | *Put on roadmap* |
|  |  |  |  |

# Functional and non-functional requirements of the item and the dependencies between the item and its environment

## Functional concept

## Operational and environmental constraints

## Legal requirements, national and international standards

## Behaviour achieved by similar functions, items or elements, if any

## Assumptions on behaviour expected from the item

## Potential consequences of behaviour shortfalls including known failure modes and hazards

# The boundaries of the item, its interfaces, and the assumptions concerning its interaction with other items and elements

## The elements of the item

## Schematic of the element with its sub-element.

## The assumptions concerning the effects of the item’s behaviour on other items or elements

## Interactions of the item with other items or elements

## Functionality required by other items, elements and the environment

## The allocation and distributions of functions among the involved systems and elements

## The operating scenarios which impact the functionality of the item.

# Appendix A – Review form for TSC template (Template only!!!)

**Change History**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Revision** | **Date** | **Author** | **Chapter(s)** | **Reason** | **Description** |
| 0.01 | 04-07-2016 | R. vd Boom | All | Increase usability of these documents | Processing general feedback to all template documents |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Review Log**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Revision** | **Date** | **Reviewer** | **Chapter(s)** | **Result** | **Comments** |
| 1 |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Notes to editor**