Software Quality Systems, S.A.

QA Plan meeting

Izaskun de la Torre

Braunschweig, 8th of October 2013

QA Plan meeting

- Agenda and objectives
- Introduction to the QA Plan
- Review of the QA Plan
- Pending aspects
- QA Plan in practice
- Other open issues and proposals

Agenda and Objectives

Time	Type	Description	Speaker
14.45 - 15.00	Introduction	Agenda and Objectives of the meeting	*Izaskun de la Torre*
15.00 - 15.30	Presentation	**QA Plan** • Key subjects covered • Sections included • Procedures defined • Doubts	*Izaskun de la Torre*
15.30 - 17.15	Review	**Review of all sections** • During the meeting the participants shall propose improvements and additions • Section 1. Introduction (*10 min.*) • Section 2. Project organization (*10 min.*) • Section 3. Life Cycle (*10 min.*) • Section 4.Roles (*10 min.*) • Section 5. Methods, measures and tools for quality assurance (product + open ETCS software + Tools chain) (*10 min.*)	*All / Addressed by Izaskun de la Torre*

Agenda

Time	Type	Description	Speaker
15.30 - 17.15	Review	**Review of all sections** • Section 6. Documentation (*10 min.*) • Section 7. Documentation control (*10min*) • Section 8. Tracking and tracing of deviation (*10 min*) • Section 9. Supplier Control (*10 min*) • Section 10. Publishing Guideline (*10min*)	
17.15 - 17.30	Discussion	**Pending aspects** • Open issues in the *Issue Tracker* • Monitoring activities • Adaptation of the QA Plan to Eclipse	
17.30 - 17.45	Discussion	**QA Plan in practice** • Implementation of activities and deadlines • Research and Tools	
17.45 - 18.00	Round table	**Other open issues and proposals**	
18.00	END		

Introduction to QA Plan

- **The QA Plan covers the following aspects:**
  - Define the processes, methods and tools that will be used to develop the OpenETCS project and provide a complete, consistent and integrated view of the development process at both project and product level
  - Describe the activities to monitor and manage quality:
    - Compliance to standards and requirements, identification and addressing of non-conformances, status feedback
  - Present QA functions, responsibilities and specific monitoring and control activities
  - Meet the ITEA requirements, follow Open Source principles and practices and apply the SCRUM Methodology

Introduction to QA Plan

- **The QA Plan addresses all the stakeholders**
- **It has been conceived as a reference document**
  - Descriptions of procedures, guidelines, methods and/or tools will not necessarily be included in the document but adequately referenced (chapter 1.5).
  - The authors are responsible for keeping them updated.
  - The QA manager monitors such activities and guarantees that the changes are appropriately reflected in the QA Plan.
  - The QA Manager maintains the QA Plan backlog in the Wiki.
  - Major revisions → Committers to the Management.
  - Minor review process → Participation of the external community.

Introduction to QA Plan

- **Responsibilities**
  - QA Manager
    - Reports to the Project Coordinator
    - Identification, supervision and control of all the processes, procedures, methods and tools required to meet the quality targets of the project
    - Maintains the QA Plan Backlog
    - Performs periodical audits of the maturity of the different projects
    - Participates in the review processes of different work products
    - Collaborates with the PO in the identification of gaps and Training
    - Maintains a set of metrics for all the processes and produces the quality reports.

Introduction to QA Plan

- **Responsibilities**
  - Top-project/WP leader
    - Establishes and publishes the specific required competence matrix for the Top-Project/WP. This matrix shall be updated when required
    - Develops the most appropriate communities of users, adopters, contributors and committers as required by the Top-Project/WP.
    - Maintains periodically a database that contains the coordinates of the expert, his/her role in the project and a basic explanation of adequacy.
    - The required core competences as well as the expected contribution of each of the identified communities are described in *Chapter 4*.
  - Committers
    - Have write-access to the project resources.
    - Becoming a committer requires of the acceptance of the project leader and of the rest of the project committers.

Introduction to QA Plan

- **Responsibilities**
  - Contributors - Experts
    - Contributors have read-access to the project resources, and acceptance is not required.
    - An expert can contribute to different projects with different roles. The data from different project will be integrated and analysed to detect potential incompatibilities, if applicable (QA Manager)

Introduction to QA Plan

- **Life cycle**
  - Project Life Cycle
    - The project Life Cycle is implemented through a set of WPs broken down into Tasks.
    - WP2, WP4 → address the specification of the work to be developed and the validation of the results to be obtained
    - WP3, WP7, WP5 → address the development itself and the demonstration of the software and the tools chain developed
    - WP1, WP6 → address the project management, the quality assurance and the dissemination of the project.
  - Product Life Cycle
    - OpenETCS Software
    - OpenETCS Tools chain

Introduction to QA Plan

- **Roles**
  - openETCS Roles
    - CAT1: Open Source Development Process Roles
    - CAT2: SCRUM Roles
    - CAT3: CENELEC Roles
  - Roles within the Dev. process of the openETCS Software
  - Roles within the Dev. process of the openETCS Tools Chain
  - QA Manager responsibilities
    - Maintain the Requirements Competence Matrices
    - Performing periodical audits, identify training needs
    - CENELEC related project → evidence of competence and independency between roles

Introduction to QA Plan

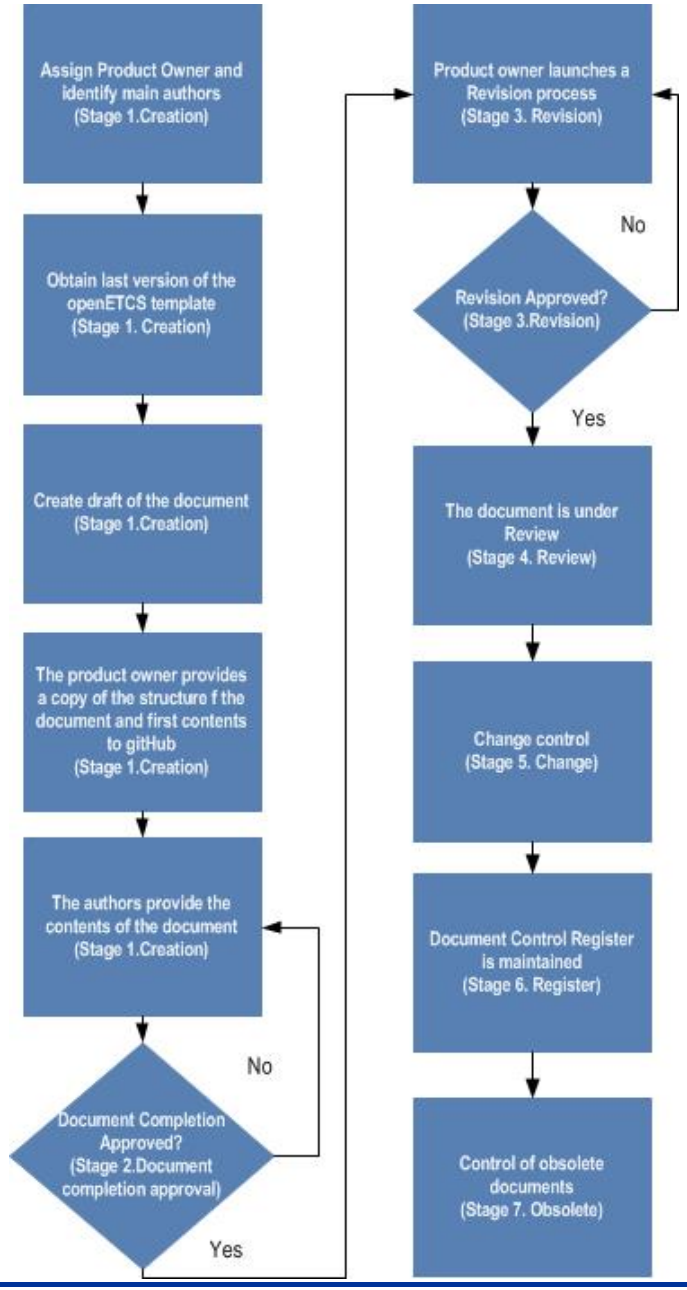
- **Methods, measures and tools for quality assurance (product + open ETCS software + Tools chain)**
  - The selection of methods and tools is based on the state of art established by WP2 (D2.1 and D2.2), the set of requirements defined by WP2 (D2.6-9) and the process definition (D2.3, D2.4, D4.1, D4.2.3).
  - Results of the selection of methods and tools are given in the D7.1 and D7.2 deliverables.
  - Conformance of the methods and tools are going to be discussed in D7.3.

Introduction to QA Plan

- **Documentation**
  - Deliverables, which constitute the official outcomes of the different Top-Projects/WPs
  - Contractual documents, with the Commission and among the project partners
  - Periodic Progress Reports, to show progress to ITEA and EC representatives.
  - Supporting Documents, in the form of Templates and Procedures
  - Internal Reports, in the form of Meeting Minutes

Introduction to QA Plan

- **Documentation control**
  - To ensure that the documentation developed is current and suitable for use by the Eclipse community, the project members and the key customers.
  - Activities covered: document creation and review, the approval, dissemination, archiving, modification and update due to a change request or the monitoring of the evolution.

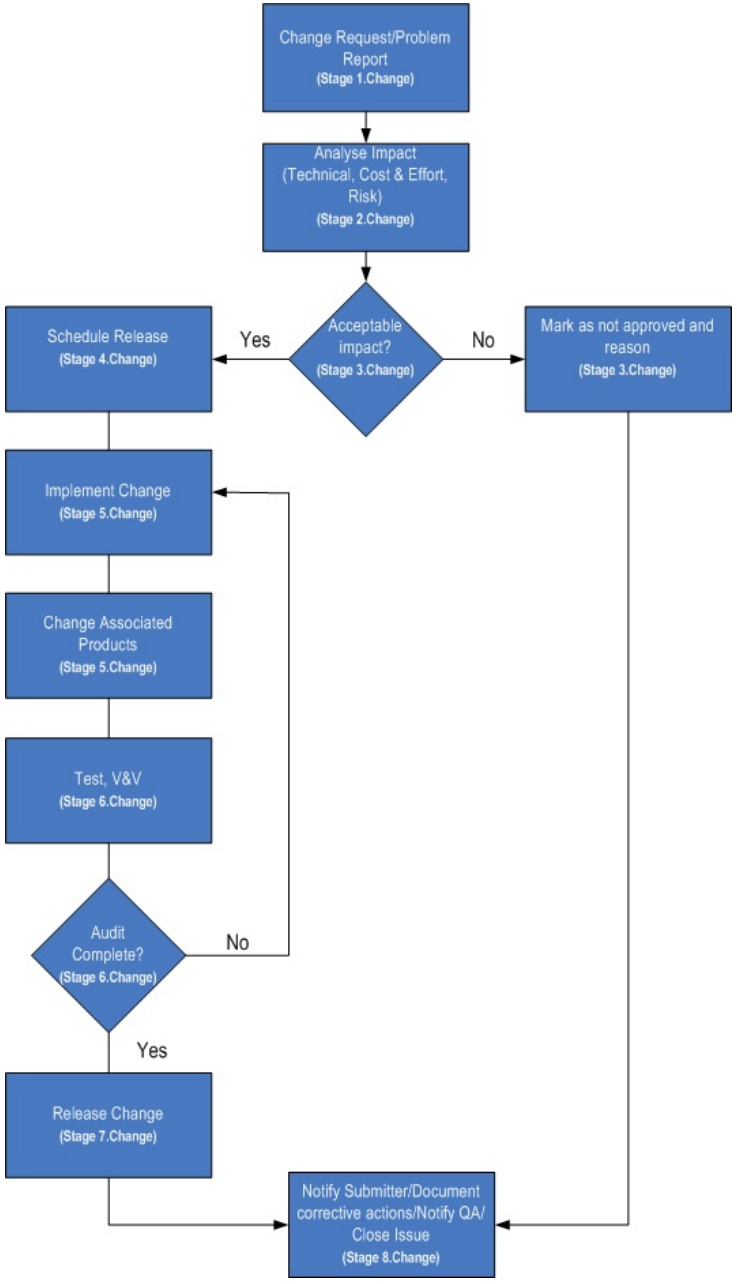


Introduction to QA Plan

- **Tracking and tracing of deviation**
  - Traceability (openETCS software + Tools chain)
    - Provide a description of traceability requirements, as well as how the traceability will be achieved, implement, maintained and verified
  - Configuration Management
    - The SCMP defines the procedures, techniques, and tools that are required to manage the software development, evaluate proposed changes, trace the status of changes, and to support an inventory of the system.
  - Fault Management
    - Faults, failures and errors encountered during the review activities, problems reported, change requests will be reported and managed following the Change/Problem Management Process

Introduction to QA Plan

- **Tracking and tracing of deviation**
  - Grievance Handling
    - A variety of grievance resolutions are available to the PMB. The issues seen during a sprint shall be taken to the sprint retrospective in order to help the team find an easy way in the future.
  - Modification and change control
    - The C/P Management process aims to evaluate and plan the process to ensure that, if a change is made, it is done efficiently, following the procedures and ensuring the quality and continuity.

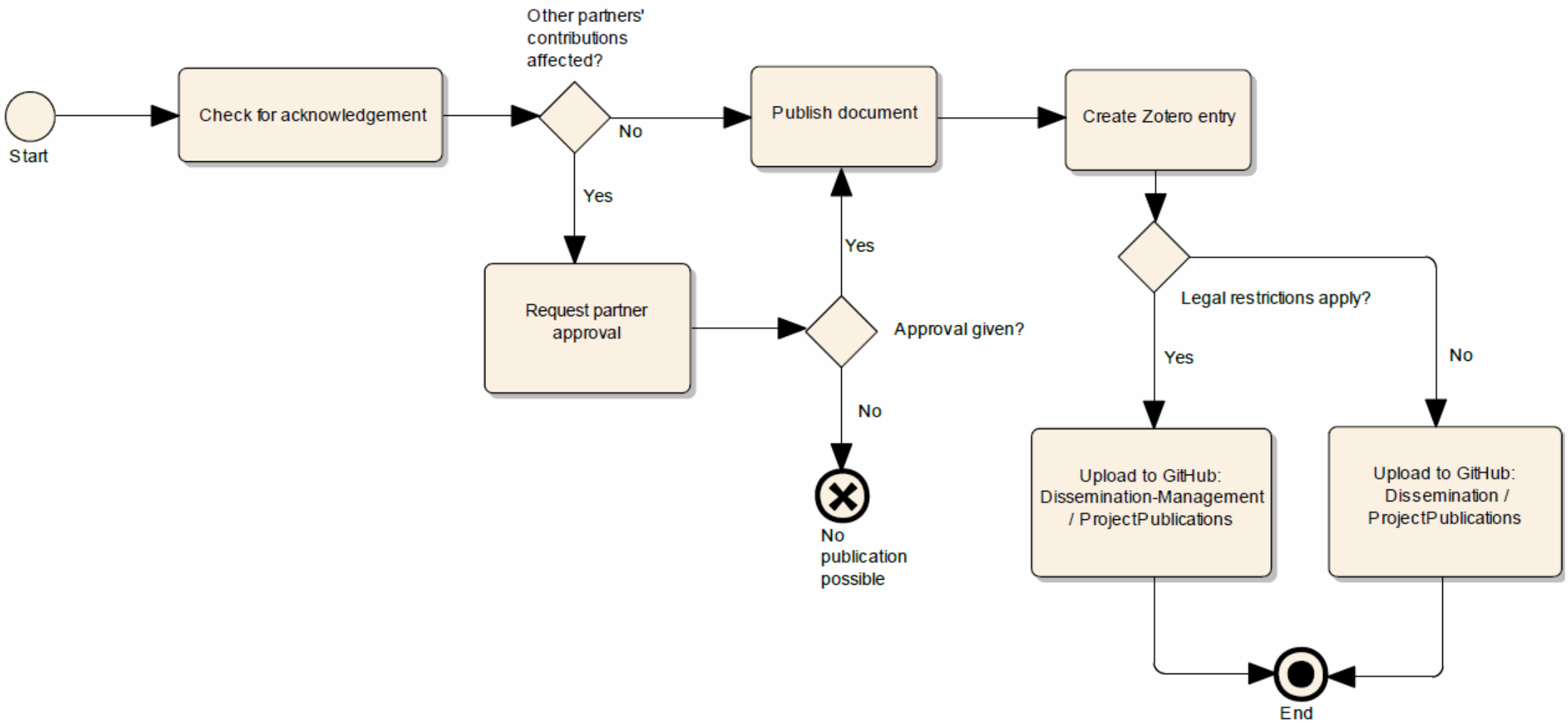


Introduction to QA Plan

- **Supplier Control**
  - It describes what openETCS consortium expects its suppliers to do to ensure that all openETCS products' requirements and expectations are met.
  - It applies to all Suppliers providing openETCS project with materials, products, processing, and related services.
  - The Supplier Approval Process involves
    - Registration
    - Evaluation
    - Certification

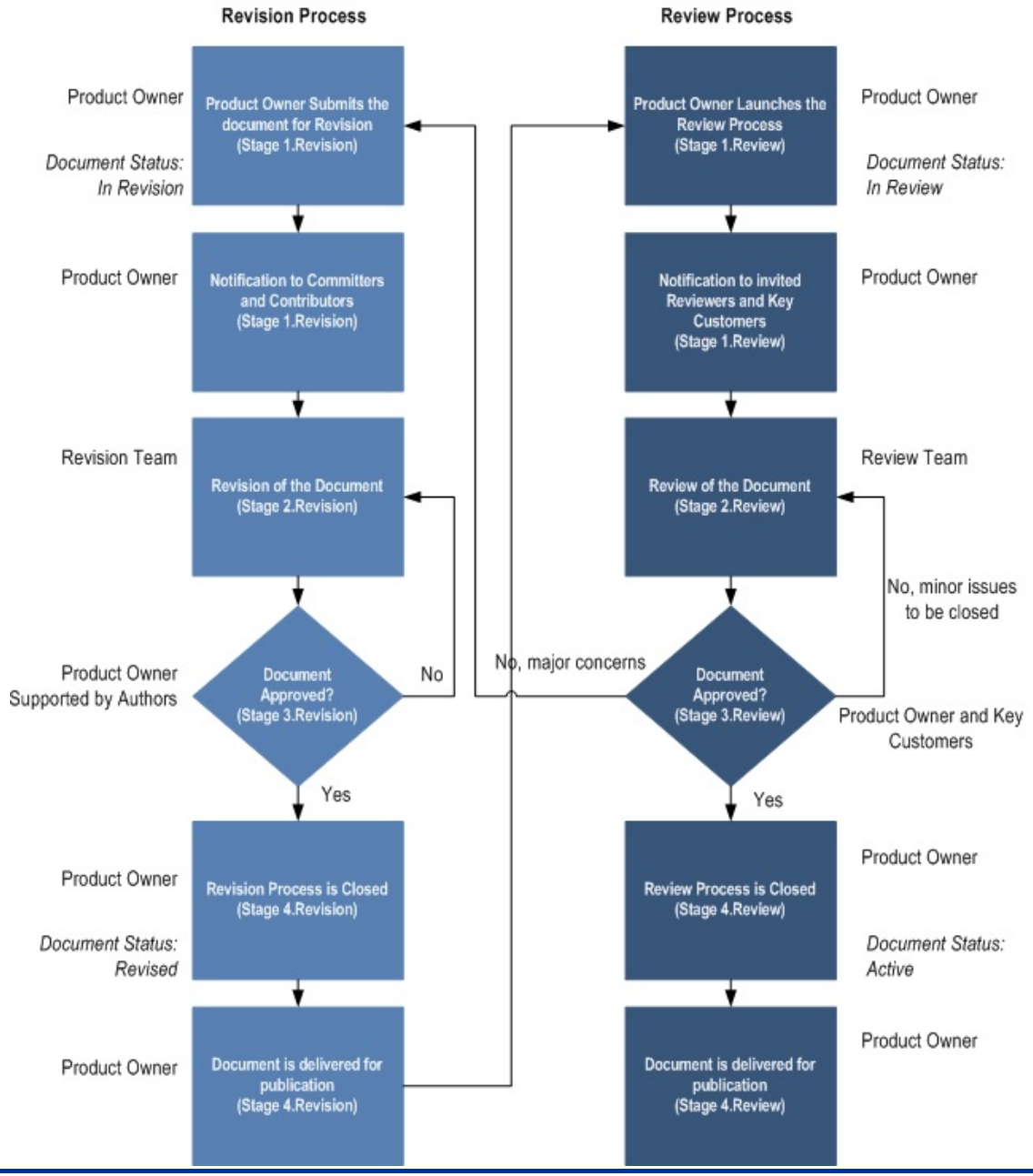
Introduction to QA Plan

- **Publishing guideline**



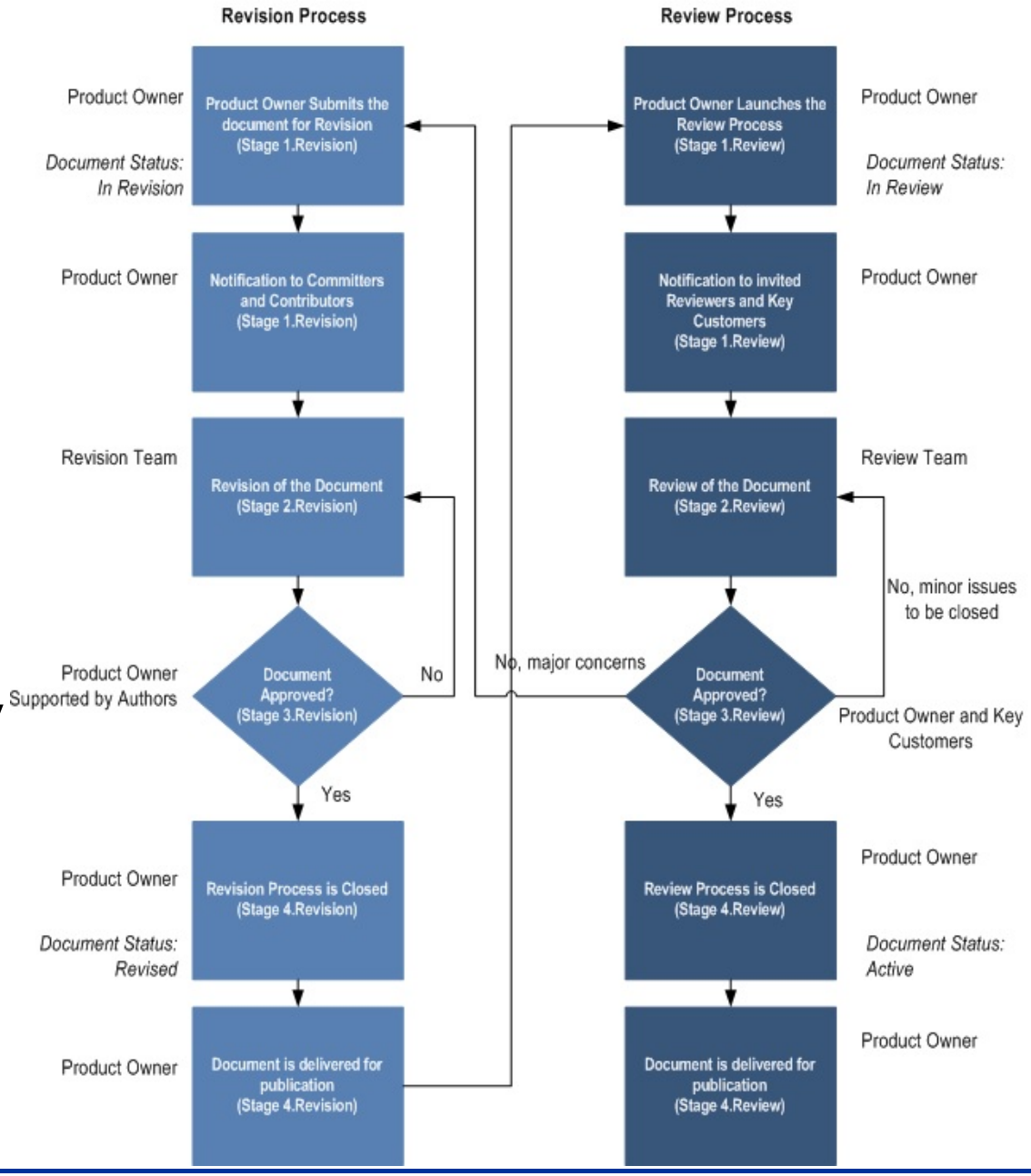
Introduction to QA Plan

- **Revision process**
  - After a first version of the document is created by the authors and when it is plausible significant contributions are still needed to have a complete and publishable document.
  - After a major rework of a document or after a review process in which major improvements /comments have been detected.



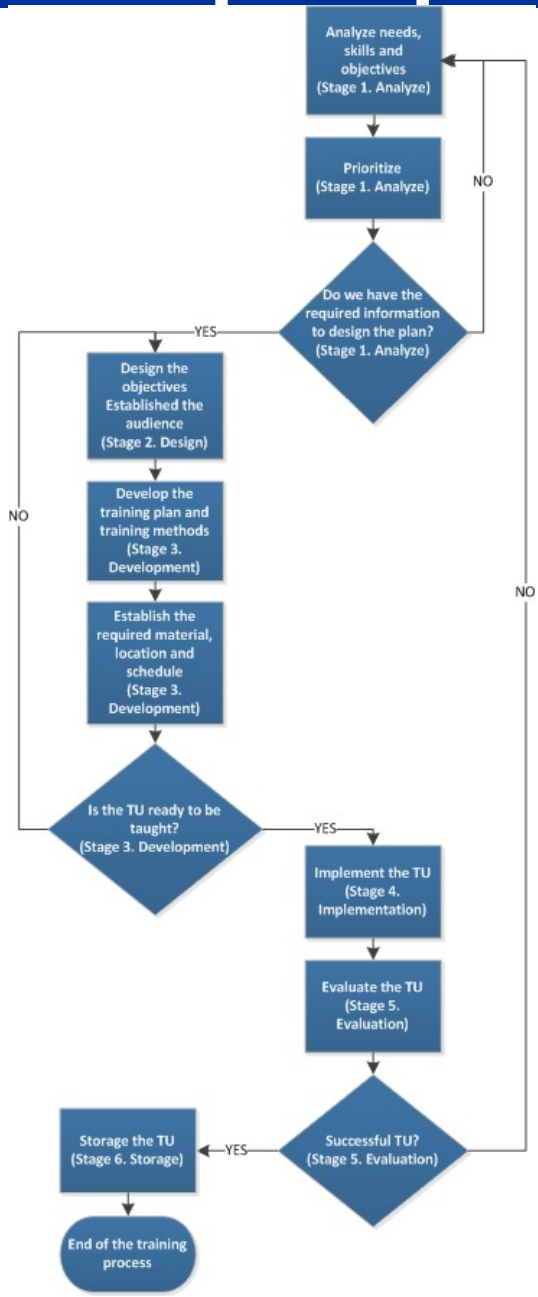
Introduction to QA Plan

- **Review process**
  - Planned Review Process: It is launched by the product owner; there is a deadline for receiving comments. Launched after a Revision Process.
  - Open Review Process: At any time, an expert can make comments and suggest improvements. Comments will be assessed by the Product Owner.



Introduction to QA Plan

- **Training process**
  - To identify the training needs and ensure that entire workforce has necessary knowledge and skills to carry out their activities.
  - To enable all stakeholders to reach their full potential.
  - To improve efficiency and effectiveness of all openETCS activities.
  - To enable new techniques and skills to be introduced in a timely manner.



Review of the QA Plan

- **Section 1. Introduction**
  - 1.1 Purpose
  - 1.2 Goals of the openETCS project

Review of the QA Plan

- **Section 1. Introduction**
  - 1.3 Intended Audience
  - 1.4 Evolution

Review of the QA Plan

- **Section 1. Introduction**
  - 1.5. References, Guidelines and Standards
  - 1.6 openETCS Terminology

Review of the QA Plan

- **Section 1. Introduction**
  - 1.5. References, Guidelines and Standards
  - 1.6 openETCS Terminology

Review of the QA Plan

- **Section 2. Project Organization**
  - 2.1 openETCS project organisation

Review of the QA Plan

- **Section 2. Project Organization**
  - 2.1.1 Compliance with ITEA Requirements
  - 2.1.2 Compliance with Open Source Principles

Review of the QA Plan

- **Section 2. Project Organization**
  - 2.1.3 Compliance with SCRUM Requirements
  - 2.1.4 Compliance with software management and organisation according to EN50128:2011

Review of the QA Plan

- **Section 2. Project Organization**
  - 2.2 Committers assignment and responsibilities
  - 2.3 Project QA Management

Review of the QA Plan

- **Section 3. Life Cycle**
  - 3.1 Project Life Cycle

Review of the QA Plan

- **Section 3. Life Cycle**
  - 3.2 Product Life Cycle
  - 3.2.1 Life Cycle of the OpenETCS Software

Review of the QA Plan

- **Section 3. Life Cycle**
  - 3.2.2 Life Cycle of the OpenETCS Tools chain
  - 3.3 QA Management

Review of the QA Plan

- **Section 4. Roles**
  - 4.1 OpenETCS Roles
  - 4.2 Roles within the Development process of the openETCS Software

Review of the QA Plan

- **Section 4. Roles**
  - 4.3 Roles within the Development process of the openETCS Tools Chain
  - 4.4 QA Activities

Review of the QA Plan

- **Section 5. Methods, measures and tools for quality assurance (product + open ETCS software + Tools chain)**

  - 5.1 Methods, measures and tools for quality assurance OpenETCS Application Software

Review of the QA Plan

- **Section 5. Methods, measures and tools for quality assurance (product + open ETCS software + Tools chain)**
  - 5.2 Methods, measures and tools for quality assurance openETCS Tools chain
  - 5.3 Quality Control and Monitoring Activities

Review of the QA Plan

- **Section 6. Documentation**
  - 6.1 Documentation Structure within the development process of the openETCS Software

Review of the QA Plan

- **Section 6. Documentation**
  - 6.2 Documentation Structure within the development process of the openETCS Tools chain
    - depending of the tool usage and level of qualification required (T1, T2 and T3)
    - T2 and T3:
      - justification for use
      - Potencial failures identification
      - Steps to avoid or mitigate failures
      - Manuals
      - Use Restrictions
    - T3:
      - validation activities on the T3 (tests report)

Review of the QA Plan

- **Section 6. Documentation**
  - 6.2 Documentation Structure within the development process of the openETCS Tools chain
  - 6.3 Quality Control and Monitoring Activities

Review of the QA Plan

- **Section 7. Documentation Control**
  - 7.1 Quality Control and Monitoring Activities

Review of the QA Plan

- **Section 8. Tracking and tracing of deviation**
  - 8.1 Traceability (openETCS software + Tools chain)
  - 8.2 Configuration Management

Review of the QA Plan

- **Section 8. Tracking and tracing of deviation**
  - 8.3 Fault Management
  - 8.4 Grievance Handling

Review of the QA Plan

- **Section 8. Tracking and tracing of deviation**
  - 8.5 Modification and change control

Review of the QA Plan

- **Section 9. Supplier Control**

Review of the QA Plan

- **Section 10. Publishing Guideline**

Review of the QA Plan

- **Other procedures**
  - Revision process

Review of the QA Plan

- **Other procedures**
  - Review process

Review of the QA Plan

- **Other procedures**
  - Training process

Review of the QA Plan

- **Templates**
  - Competence Matrix
  - Traceability Matrix
  - Nomenclature guideline

Pending aspects

- **Open issues in the issue tracker**
  - #64. Needed common type of digital document accepted by the national authorities
  - #61. Description on how to process SRS findings in openETCS

Pending aspects

- **Open issues in the issue tracker**
  - #55. QA_Plan_Version_0.9.5.4.pdf
  - #52. Analyse possible specification findings, define categories and design template for specification findings

Pending aspects

- **Monitoring activities**

Pending aspects

- **Adaptation of the QA Plan to Eclipse**
  - First steps:
    - Read all the eclipse governance documentation -> In progress
  - Second steps:
    - Adaptation
    - Status:
      - Review and revision process adapted

QA Plan in practice

- **Implementation of activities**
- **First steps:**
  - Implementation of list of documents in each repository
  - Implementation of the nomenclature guideline
  - Complete detailed competence descriptions into the competence matrix
  - Start the implementation of process (revision and review process, document control process, training process)
- **Second steps:**
  - Finish the SCMP

QA Plan in practice

- **Implementation of activities**
- **Second steps:**
  - Start the monitoring activities (audits, reports,…)
  - Identify tool for the change request/problem report management process
  - Identify methods, tools for traceability

QA Plan in practice

- **Deadlines**
  - To finish the document: depending on the review issues
  - To implement the processes into the WP
    - 1 month
  - To start monitoring and control activities
    - When the process are implemented

- **Research and Tools**
  - Change Request/Problem Report Management Tool
  - Traceability Tools

QA Plan in practice

- **Other open issues and proposals**