

## FAQAS Framework

### SPAP

## Software Product Assurance and Planning

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# **Chapter 1**

## **Introduction**

The SPAP shall contain a description of the purpose, objective, content and the reason prompting its preparation.

## **Chapter 2**

# **Applicable and reference documents**

- D1 - Mutation testing survey
- D2 - Study of mutation testing applicability to space software

## Chapter 3

# Terms, definitions and abbreviated terms

- FAQAS: activity ITT-1-9873-ESA
- FAQAS-framework: software system to be released at the end of WP4 of FAQAS
- D2: Deliverable D2 of FAQAS, *Study of mutation testing applicability to space software*
- KLEE: Third party test generation tool, details are provided in D2.
- MLFS: Mathematical Library for Flight Software
- SUT: Software under test, i.e, the software that should be mutated by means of mutation testing.
- WP: Work package

## **Chapter 4**

# **System Overview**

The SPAP shall include or refer to a description of the system and software products being developed



## **Chapter 5**

# **Software product assurance program implementation**

**5.1 Organization**

**5.2 Responsibilities**

**5.3 Resources**

**5.4 Reporting**

**5.5 Quality models**

**5.6 Risk management**

**5.7 Supplier selection and control**

**5.8 Methods and tools**

**5.9 Process assessment and improvement**

**5.10 Operations and maintenance (optional)**

## **Chapter 6**

# **Software process assurance**

**6.1 Software development cycle**

**6.2 Projects plans**

**6.3 Software dependability and safety**

**6.4 Software documentation and configuration management**

**6.5 Process metrics**

**6.6 Reuse of software**

**6.7 Product assurance planning for individual processes and activities**

**6.8 Procedures and standards**

## **Chapter 7**

# **Software product quality assurance**

## **Chapter 8**

# **Compliance matrix to software product assurance requirements**