|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirement identification** | **Expected Output** | **D** | **Suggested**  **tailoring** | **Notes and discussion** |
| 5.2.2.1a. | Specification of system requirements allocated to software | Y | Y |  |
| 5.2.2.1a.-a. | Functions and performance system requirements allocated to software | Y | Y |  |
| 5.2.2.1a.-b. | Verification and validation product requirements | Y | Y |  |
| 5.2.2.1a.-c. | Software operations requirements | Y | Y |  |
| 5.2.2.1a.-d. | Software maintenance requirements | Y | Y |  |
| 5.2.2.1a.-e. | Requirements for in flight modification capabilities | Y | N | Does not apply, the FAQAS framework is not in-flight software. |
| 5.2.2.1a.-f. | Requirements for real-time | Y | N | Des not apply, the FAQAS framework is not a real-time system. |
| 5.2.2.1a.-g. | Requirements for security | Y | N | Does not apply, the FAQAS framework is not in-flight or ground software. |
| 5.2.2.1a.-h. | Quality requirements | Y | Y |  |
| 5.2.2.2a. | System and software observability requirements | Y | Y |  |
| 5.2.2.3a. | HMI requirements | Y | Y |  |
| 5.2.3.1a. | Verification and validation process requirements | Y | Y |  |
| 5.2.3.2a. | Validation requirements and scenario | Y | Y |  |
| 5.2.3.3a. | Installation and acceptance requirements at the operations and maintenance sites | Y | Y |  |
| 5.2.4.1a. | Association of requirements to versions | Y | N | Does not apply because the requirements to be targeted by the two software release will be discussed in D2. |
| 5.2.4.1b. | Deliver content and media | Y | Y |  |
| 5.2.4.2a. | System level integration support requirements | Y | Y |  |
| 5.2.4.3a. | External interface requirements specification | Y | Y |  |
| 5.2.4.4a. | System database content and allowed operational range | Y | N | Does not apply, the FAQAS framework is not expected to use a database. |
| 5.2.4.5a. | Design and development constraints | Y | N | Customer constraint are not foreseen. |
| 5.2.4.6a. | OBCP requirements | Y | N | Does not apply, the FAQAS framework is not an OBCP. |
| 5.2.4.7a. | Requirements for software to be reused | Y | Y |  |
| 5.2.4.8a. | Software safety and dependability requirements | Y | N | Does not apply, safety and dependability requirements are not foreseen for the FAQAS framework. |
| 5.2.4.9a. | Format and delivery medium of exchanged data | Y | N | Does not apply because integration with database is not foreseen. |
| 5.2.5a. | SRR (system requirement review) | Y | N | The review of documents is part of the milestone review process for the FAQAS activity. For this reason, an additional review will not be scheduled. |
| 5.3.2.1a. | Software life cycle definition | Y | Y |  |
| 5.3.2.1b. | Software life cycle definition | Y | Y |  |
| 5.3.2.1.c | Development strategy, standards, techniques, development and testing environment. | Y | Y |  |
| 5.3.2.1d. | Software life cycle definition | Y | Y |  |
| 5.3.2.2a. | Identification of interface between development and maintenance | Y | Y |  |
| 5.3.2.3a. | Software procurement process documentation and implementation | Y | N | Does not apply because the list of potential third-party software products to be integrated in the FAQAS framework has been provided in the ITT proposal and will be discussed in deliverable D2. |
| 5.3.2.4a. | Automatic code generation | Y | N | The project does not include traditional automatic code generation tools. |
| 5.3.2.4b. | Automatic code generation management | Y | N | See 5.3.2.4a. |
| 5.3.2.4c. | Automatic code generation management | Y | N | See 5.3.2.4a. |
| 5.3.2.4d. | Automatic code generation management | Y | N | See 5.3.2.4a. |
| 5.3.2.4e. | Automatic code generation configuration manager | Y | N | See 5.3.2.4a. |
| 5.3.2.5a | Changes to baseline procedures | Y | N | Changes to the agreed objectives of the FAQAS framework will be discussed during the agreed progress meetings as per Section 4 of SoW. |
| 5.3.3.1a. | Joint review reports | Y | Y |  |
| 5.3.3.2a. | Software project reviews included in the software life cycle definition | Y | Y |  |
| 5.3.3.2b. | Review plan | Y | Y |  |
| 5.3.3.3a. | Software technical reviews included in the software life cycle definition | Y | N | The process will follow the milestones indicated in proposal document. |
| 5.3.3.3b. | Technical reviews process | Y | N | The process will follow the milestones indicated in proposal document |
| 5.3.3.3c. | Software technical reviews included in the software life cycle definition | Y | N | The process will follow the milestones indicated in proposal document |
| 5.3.4.1a. | Approved requirements baseline | Y | N | The review of the requirements is part of the milestone review process for the FAQAS activity (deliverable D2), for this reason deliverable D2 will replace this item. |
| 5.3.4.2a. | Approved technical specification and interface, architecture and plan | Y | N | See 5.3.4.1a. |
| 5.3.4.2b. | Approved technical specification and interface | Y | N | See 5.3.4.1a. |
| 5.3.4.3a. | Approved design definition file and design justification file | Y | N | See 5.3.4.1a. |
| 5.3.4.3b. | Approved detailed design, interface design and budget | Y | N | See 5.3.4.1a. |
| 5.3.4.4a. | Qualified software product | Y | Y |  |
| 5.3.4.5a. | Accepted software product | Y | Y |  |
| 5.3.5.1a. | Confirmation of readiness of test activities for validation an acceptance test activities only | Y | Y |  |
| 5.3.5.2a. | Approved test results for validation and acceptance test only | N | N |  |
| 5.3.6.1a. | Flight software review phasing | Y | N | Does not apply because the FAQAS framework is not flight software. |
| 5.3.6.1b. | Flight software review phasing | Y | N | See 5.3.6.1a. |
| 5.3.6.2a. | Ground software review phasing | Y | N | The review of documents is part of the milestone review process for the FAQAS activity |
| 5.3.7.1a. | Interface management procedures | Y | N | See 5.3.2.1a. |
| 5.3.8.1a. | Technical budgets and margin philosophy for the project | Y | N | Does not apply, the FAQAS framework is a testing tool for engineers and is not supposed to have specific technical budgets (CPU load margins, ram …). |
| 5.3.8.2a. | Technical budgets and margin computation | Y | N | See 5.3.8.1a. |
| 5.3.9.1a. | E40 compliance matrix | Y | N | See 5.3.2.1a. |
| 5.3.9.2a. | E40 compliance matrix | Y | N | See 5.3.2.1a. |
| 5.4.2.1a.-a. | Functional and performance specifications, including hardware characteristics, and environmental conditions under which the software item executes, including budgets requirements | Y | N | There is only one level of requirements, the Requirements Baseline (RB / SSS). |
| 5.4.2.1a.-b. | Operational, reliability, safety, maintainability, portability, configuration, delivery, adaption and installation requirements, design constraints | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-c. | Software product quality requirements (see ECSS-Q-ST-80 clause 7.2) | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-d. | Security specifications, including those related to factors which can compromise sensitive information | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-e. | Human factors engineering (ergonomics) specifications, following the human factor engineering process described in ECSS-E-ST-10-11 | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-f. | Data definition and database requirements | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-g. | Validation requirements | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-h. | Interfaces external to the software item | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.1a.-i. | Reuse requirements | Y | N | See 5.4.2.1a.-a. |
| 5.4.2.2a. | Specifications for in flight software modifications | Y | N | Does not apply because the FAQAS framework is not flight software. |
| 5.4.2.3a. | Software logical model | N | N |  |
| 5.4.2.3b. | Software logical model method | N | N |  |
| 5.4.2.3c. | Behavioural view in software logical model | N | N |  |
| 5.4.2.4a. | SWRR | Y | N | The review of documents is part of the milestone review process for the FAQAS activity |
| 5.4.3.1a. | Software architectural design | Y | Y |  |
| 5.4.3.2a. | Software architectural design method | Y | Y | The document will consist only of the description of the static and dynamic architecture diagram (object oriented), with software elements and their relationships. |
| 5.4.3.3a. | Computational model | Y | N | It is not a real time software |
| 5.4.3.4a. | Software behaviour | N | N |  |
| 5.4.3.5a.-a. | Preliminary external interfaces design | Y | Y |  |
| 5.4.3.5a.-b. | Preliminary internal interfaces design | Y | Y |  |
| 5.4.3.6a. | Software intended for reuse – justification of methods and tools | Y | Y | Our documentation will concern only the code developed by us not the code of third-party tools. |
| 5.4.3.6b. | Software intended for reuse – evaluation of reuse potential | Y | Y | Our documentation will concern only the code developed by us not the code of third-party tools. |
| 5.4.3.6c. | Software architectural design with configuration data | Y | N | The toolset does not use mission data |
| 5.4.3.7a. | Justification of reuse with respect to requirements baseline | Y | Y |  |
| 5.4.3.8a. | Software integration strategy | N | N |  |
| 5.4.4a. | PDR | Y | N | Does not apply because the review of documents is part of the milestone review process for the FAQAS activity |
| 5.5.2.1a. | Software components design documents | Ye | Y | Only high-level design diagrams will be provided. |
| 5.5.2.1b. | Software components design documents | Ye | Y |  |
| 5.5.2.1c. | Software components design documents | Ye | Y |  |
| 5.5.2.2a.-a. | External interfaces design (update) | Y | Y |  |
| 5.5.2.2a.-b. | Internal interfaces design (update) | Ye | Y |  |
| 5.5.2.3a.-a. | Software static design model | Ye | Y |  |
| 5.5.2.3a.-b. | Software dynamic design model | Ye | N | Does not apply because the FAQAS framework is a test toolset |
| 5.5.2.3a.-c. | Software behavioural design model | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.4a. | Software design method | Y | Y | Only high-level design diagrams of the components integrated by the framework will be provided. Documentation of the internal components of third party software will not be provided. |
| 5.5.2.5a. | Real-time software dynamic design model | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.5b. | Real-time software dynamic design model | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.5c. | Real-time software dynamic design model | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.5d. | Real-time software dynamic design model | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.5e. | Real-time software dynamic design model | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.6a. | Software behavioural design model techniques | Ye | N | See 5.5.2.3a.-b. |
| 5.5.2.7a. | Compatibility of real-time design methods with the computational model | Y | N | See 5.5.2.3a.-b. |
| 5.5.2.8a. | Software user manual | Y | Y |  |
| 5.5.2.9a. | Software unit test plan | Y | Y |  |
| 5.5.2.10a. | DDR | Y | N | The review of documents is part of the milestone review process for the FAQAS activity |
| 5.5.3.1a.-a. | Software component design documents and code (update) | Ye | Ye |  |
| 5.5.3.1a.-b. | Software configuration file – build procedures | Y | Y |  |
| 5.5.3.2a.-a. | Software component design document and code (update) | Ye | Ye |  |
| 5.5.3.2a.-b. | Software unit test plan (update) | Y | Y | Please note that unit testing will concern only the code developed by us on top of existing tools. The code belonging to existing tools will not follow a unit testing procedure but will be validated at system level where the case study systems of the project play the role of acceptance criteria. |
| 5.5.3.2b.-a. | Software component design document and code (update) | Ye | Ye |  |
| 5.5.3.2b.-b. | Software unit test reports | Ye | Ye |  |
| 5.5.3.2c. | Software unit test reports | Ye | Y |  |
| 5.5.4.1a. | Software integration test plan (update) | N | N |  |
| 5.5.4.2a. | Software integration test report | N | N |  |
| 5.6.2.1a. | Software validation plan – validation process identification | Y | Y |  |
| 5.6.2.1b. | Software validation plan – methods and tools | Y | Y |  |
| 5.6.2.1c. | Software validation plan – effort and independence | Y | Y |  |
| 5.6.2.2a. | Independent software validation plan – organization selection | Y | N | The project does not warrant an independent validation effort. |
| 5.6.2.2b. | Independent software validation plan – level of independence | N | N |  |
| 5.6.3.1a. | Software validation specification with respect to the technical specification | N | N |  |
| 5.6.3.1b. | Software validation specification with respect to the technical specification | Y | N | See 5.6.2.1a. |
| 5.6.3.1c. | Software validation specification with respect to the technical specification | Y | N | See 5.6.2.1a. |
| 5.6.3.2a. | Software validation report with respect to the technical specification | Y | N | See 5.6.2.1a. |
| 5.6.3.3a. | Software user manual (update) | Y | Y |  |
| 5.6.3.4a. | CDR | Y | N | Will not be provided since the review of documents is part of the milestone review process for the FAQAS activity |
| 5.6.4.1a. | Software validation specification with respect to the requirements baseline | Y | Y |  |
| 5.6.4.1b. | Software validation specification with respect to the requirements baseline | Y | Y |  |
| 5.6.4.1c. | Software validation specification with respect to the requirements baseline | Y | Y |  |
| 5.6.4.2a. | Software validation report with respect to the requirements baseline | Y | Y |  |
| 5.6.4.2b. | Software validation report with respect to the requirements baseline | Y | Y |  |
| 5.6.4.3a. | Software user manual (update) | Y | Y |  |
| 5.6.4.4a. | QR | Y | N | Will not be provided since the review of documents is part of the milestone review process for the FAQAS activity |
| 5.7.2.1a.-a. | Software product | Y | Y |  |
| 5.7.2.1a.-b. | Software release document | Y | Y |  |
| 5.7.2.2a. | Training material | Y | Y |  |
| 5.7.2.3a. | Installation procedures | Y | Y |  |
| 5.7.2.4a. | Installation report | Y | Y |  |
| 5.7.2.4b. | Installation report | Y | Y |  |
| 5.7.2.4c. | Installation report | Y | Y |  |
| 5.7.2.4d. | Installation report | Y | Y |  |
| 5.7.3.1a. | Acceptance test plan | Y | N | Does not apply because acceptance testing only concerns customer supplier relationships, which is not the case for FAQAS. |
| 5.7.3.2a. | Acceptance test report | Y | N | The outcome of acceptance testing is deliverable D5. |
| 5.7.3.3a. | Software product | Y | N | The outcome of product installation is reported in deliverable D5. |
| 5.7.3.4a. | Joint review report | Y | N | Does not apply because it matches the activities run to provide deliverables D4 and D5. |
| 5.7.3.4b. | Joint review report | Y | N | See 5.7.3.4a. |
| 5.7.3.5a. | Traceability of acceptance test to the requirements baseline | Y | N |  |
| 5.7.3.6a. | AR | Y |  | See 5.7.3.4a. |
| 5.8.2.1a. | Software verification plan – verification process identification | Y | Y |  |
| 5.8.2.1b. | Software verification plan – software products identification | Y | Y |  |
| 5.8.2.1c. | Software verification plan – activities, methods and tools | Y | Y |  |
| 5.8.2.1d. | Software verification plan – organizational independence, risk and effort identification | Y | Y |  |
| 5.8.2.2a. | Independent software verification plan – organization selection | N | N |  |
| 5.8.2.2b. | Independent software verification plan – level of independence | N | N |  |
| 5.8.3.1a. | Requirements baseline verification report | N | N |  |
| 5.8.3.2a.-a. | Requirements traceability matrices | Y | Y |  |
| 5.8.3.2a.-b. | Requirements verification report | N | N |  |
| 5.8.3.3a.-a. | Software architectural design to requirements traceability matrices | Y | Y | We will provide a traceability table with the granularity of components. More precisely, for the features implemented by third party software we will only indicate which software implements them. |
| 5.8.3.3a.-b. | Software architectural design and interface verification report | N | N |  |
| 5.8.3.4a.-a. | Detailed design traceability matrices | N | N |  |
| 5.8.3.4a.-b. | Detailed design verification report | N | N |  |
| 5.8.3.5a.-a. | Software code traceability matrices | N | N |  |
| 5.8.3.5a.-b. | Software code verification report | N | N |  |
| 5.8.3.5b. | Code coverage verification report | Y | N | We verify implementation at the requirements level. |
| 5.8.3.5c. | Code coverage verification report | Y | N |  |
| 5.8.3.5d. | Code coverage verification report | Y | N |  |
| 5.8.3.5e. | Code coverage verification report | N | N |  |
| 5.8.3.5f. | Robustness verification report | N | N |  |
| 5.8.3.6a.-a. | Software unit tests traceability matrices | N | N |  |
| 5.8.3.6a.-b. | Software unit testing verification report | N | N |  |
| 5.8.3.7a. | Software integration verification report | N | N |  |
| 5.8.3.8a.-a. | Traceability of the requirements baseline to the validation specification | Y | Y |  |
| 5.8.3.8a.-b. | Traceability of the technical specification to the validation specification | Y | N | See 5.6.2.1a. |
| 5.8.3.8b.-a. | Validation report evaluation with respect to the technical specification | Y | Y |  |
| 5.8.3.8b.-b. | Validation report evaluation with respect to the requirements baseline | Y | N | See 5.6.2.1a. |
| 5.8.3.9a. | Complement of validation at system level | Y | N | See 5.6.2.1a. |
| 5.8.3.10a. | Software documentation verification report | N | N |  |
| 5.8.3.11a. | Schedulability analysis | N | N |  |
| 5.8.3.11b. | Schedulability analysis (update) | N | N |  |
| 5.8.3.11c. | Schedulability analysis (update) | N | N |  |
| 5.8.3.12a. | Technical budgets – memory and CPU estimation | Y | N | See 5.3.8.1a. |
| 5.8.3.12b. | Technical budgets (update) – memory and CPU estimation | Y | N | See 5.3.8.1a. |
| 5.8.3.12c. | Technical budgets (update) – memory and CPU calculation | Y | N | See 5.3.8.1a. |
| 5.8.3.13a. | Software behaviour verification | N | N |  |
| 5.8.3.13a. | Software behaviour verification | N | N |  |
| 5.8.3.13b. | Software behaviour verification | N | N |  |
| 5.9.2.1a. | Software operation support plan – operational testing specifications | Y | N | Does not apply because the FAQAS framework is a support tool that does not require integration with the operation environment. For this reason, we do not foresee the need for operational testing, support and problem handling. |
| 5.9.2.2a. | Software operation support plan – plans and procedures | Y | N | See 5.9.2.1a. |
| 5.9.2.3a. | Software operation support plan – procedures for problem handling | Y | N | See 5.9.2.1a. |
| 5.9.3.1a. | Operational testing results | Y | N | See 5.9.2.1a. |
| 5.9.3.2a. | Operational testing results | Y | N | See 5.9.2.1a. |
| 5.9.3.3a. | Software product | Y | N | Deliverable SW2 is the software product. |
| 5.9.4.1a. | Software operation support performance | Y | N | The FAQAS framework is not in-flight or ground software. |
| 5.9.4.2a. | Problem and nonconformance report | Y | N | See 5.9.4.1a. |
| 5.9.5.1a. | User’s request record – user’s request and subsequent actions | Y | N | Assistance will be provided through GITLAB issue tracker. |
| 5.9.5.1b. | User’s request record – user’s request and subsequent actions | Y | N | See 5.9.5.1a. |
| 5.9.5.2a. | User’s request record - actions | Y | N | See 5.9.5.1a. |
| 5.9.5.2b. | User’s request record - actions | Y | N | See 5.9.5.1a. |
| 5.9.5.2c. | User’s request record - actions | Y | N | See 5.9.5.1a. |
| 5.9.5.3a. | User’s request record – work around solution | Y | N | See 5.9.5.1a. |
| 5.9.5.3b. | User’s request record – work around solution | Y | N | See 5.9.5.1a. |
| 5.10.2.1a. | Maintenance plan – plans and procedures | Y | Y |  |
| 5.10.2.1b. | Maintenance plan – applicability of development process procedures, methods, tools and standards | Y | Y |  |
| 5.10.2.1c. | Maintenance plan – configuration management process | Y | Y |  |
| 5.10.2.1d. | Maintenance plan – problem reporting and handling | Y | Y |  |
| 5.10.2.1e. | Problem and nonconformance report | Y | Y |  |
| 5.10.2.2a. | Maintenance plan – long term maintenance solutions | Y | Y |  |
| 5.10.3.1a. | Modification analysis report and problem analysis report | Y | Y |  |
| 5.10.3.1b. | Modification analysis report and problem analysis report | Y | Y |  |
| 5.10.3.1c. | Modification analysis report and problem analysis report | Y | Y |  |
| 5.10.3.1d. | Modification analysis report and problem analysis report | Y | Y |  |
| 5.10.4.1a. | Modification approval | Y | Y |  |
| 5.10.4.2a. | Modification documentation | Y | Y |  |
| 5.10.4.3a. | Modification documentation | Y | N | See 5.3.2.1a. |
| 5.10.4.3b. | Modification documentation | Y | N | See 5.3.2.1a. |
| 5.10.4.3c. | Modification documentation | Y | N | See 5.3.2.1a. |
| 5.10.4.3d. | Modification documentation | Y | N | See 5.3.2.1a. |
| 5.10.4.3e. | Modification documentation | Y | N | See 5.3.2.1a. |
| 5.10.5.1a. | Joint review reports | Y | N | The review of documents is part of the milestone review process for the FAQAS activity |
| 5.10.5.2a. | Baseline for changes | Y | N | Changes to the agreed objectives of the FAQAS framework will be discussed during the agreed progress meetings (See section 4 of SoW) |
| 5.10.6.1a. | Migration plan | Y | N | The FAQAS framework is a desktop tool that is not expected to be used on different operating systems that the ones indicated in the requirements. For its nature, newer versions of the operating system should not lead to any problem in the FAQAS framework. |
| 5.10.6.2a. | Migration plan | Y | N | See 5.10.6.1a. |
| 5.10.6.3a. | Migration plan | Y | N | See 5.10.6.1a. |
| 5.10.6.4a. | Migration plan | Y | N | See 5.10.6.1a. |
| 5.10.6.5a. | Migration notification | Y | N | See 5.10.6.1a. |
| 5.10.6.5b. | Migration notification | Y | N | See 5.10.6.1a. |
| 5.10.6.6a. | Post operation review report | Y | N | The review of documents is part of the milestone review process for the FAQAS activity |
| 5.10.6.6b. | Post operation review report | Y | N |  |
| 5.10.6.7a. | Migration plan | Y | Y |  |
| 5.10.7.1a. | Retirement plan | Y | N | As stated in R5-1 the maintenance support is fixed for 12 months after the final review |
| 5.10.7.2a. | Retirement notification | Y | N | See 5.10.7.1a. |
| 5.10.7.3a. | Retirement plan | Y | N | See 5.10.7.1a. |
| 5.10.7.4a. | Retirement plan | Y | N | See 5.10.7.1a. |