

## Checklist for a Requirements Specification Review

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### 1. Content of the Requirements Specification

- ||| Are all inputs to the software system specified? Is there a description for each input source, data range and resolution, frequency of reading?
- ||| Are all outputs of the software system specified? Is there a description for each output destination, data range and resolution, frequency of writing to the output?
- ||| Are all internal hardware and software interfaces specified?
- ||| Are all communication interfaces and protocols specified? (Error-checking defined?)
- ||| Are all tasks specified that a program user can execute?
- ||| Are all data specified that are required or produced by each of the tasks?
- ||| Are maximum execution or response times for user commands specified?
- ||| Are there further time limitations (processor load, data transfer and transaction rates)?
- ||| Is the maximum data volume specified that the system must be able to handle?
- ||| Are security requirements specified?
- ||| Are there reliability requirements specified? What is the consequence of a software failure?
- ||| Which information needs to be safely stored? Is there an error recovery requirement (e.g. error recognition in a communication through check-sum and graceful degradation recovery)?
- ||| Is the required storage size specified (memory and hard disk)?
- ||| Is the maintainability of the software specified?
- ||| Is there an acceptable trade-off between competing requirements criteria, like robustness and correctness or
- ||| Is there an acceptable balance in mutual influencing requirements (e.g. a compromise between robustness and correctness, or between precision and speed)?
- ||| Is for each functional requirement defined for which cases the execution of that functionality results in a success or failure case?

## 2. Completeness of Requirements

- ||| Are all requirements which need to be further clarified with some of the stakeholders marked as “requirements under construction”. Is described, which information is missing or which actions have to be taken to finalize these requirements.
- ||| Are the requirements complete? I.e. would a customer accept a software which fulfills these requirements?

## 3. Quality of Requirements

- ||| Is the language and description of requirements fully understandable for the customers / users of the software? Do users think that way as described in the requirements?
- ||| Are there conflicts among the requirements?
- ||| Do requirements clearly describe the “what?” and not the “how?” (no solution, no design description in a requirements specification)
- ||| Are all requirements described to a comparable level of detail? Are there requirements that need to be described in more/less detail?
- ||| Are the requirements described clearly enough to serve as an input for the engineering team to derive the software architecture and the design?
- ||| Could you imagine a test for each of the requirements? Will it be possible to check with independent tests if each of the requirements is fulfilled?
- ||| Is already now expected that some of the requirements will change during development? Which of them? What is the probability for change of each of these requirements?
- ||| Are there requirements that are not yet confirmed by the customer? When will they be definitely fixed?