

2. Present business drivers (one page)

Include

- The system's most important functions
- Any relevant technical, managerial, economic or political constraint
- The business goals and context as they relate to the project
- The major stakeholders
- The architectural drivers, i.e. the major non-functional quality attribute goals that shape the architecture).

3. Present the architecture (max. two pages, diagrams preferred)

Describe how you plan to meet the business driver. Include interactions with other systems and technical constraints, e.g. OS, middleware. Do not dive too deep into a single aspect. Assume a decent technological knowledge (e.g. you don't have to explain how a browser or SSL is working). Consider to include diagrams, e.g. context diagram, module view, sequence diagram, deployment view).

4. Identify architectural approaches

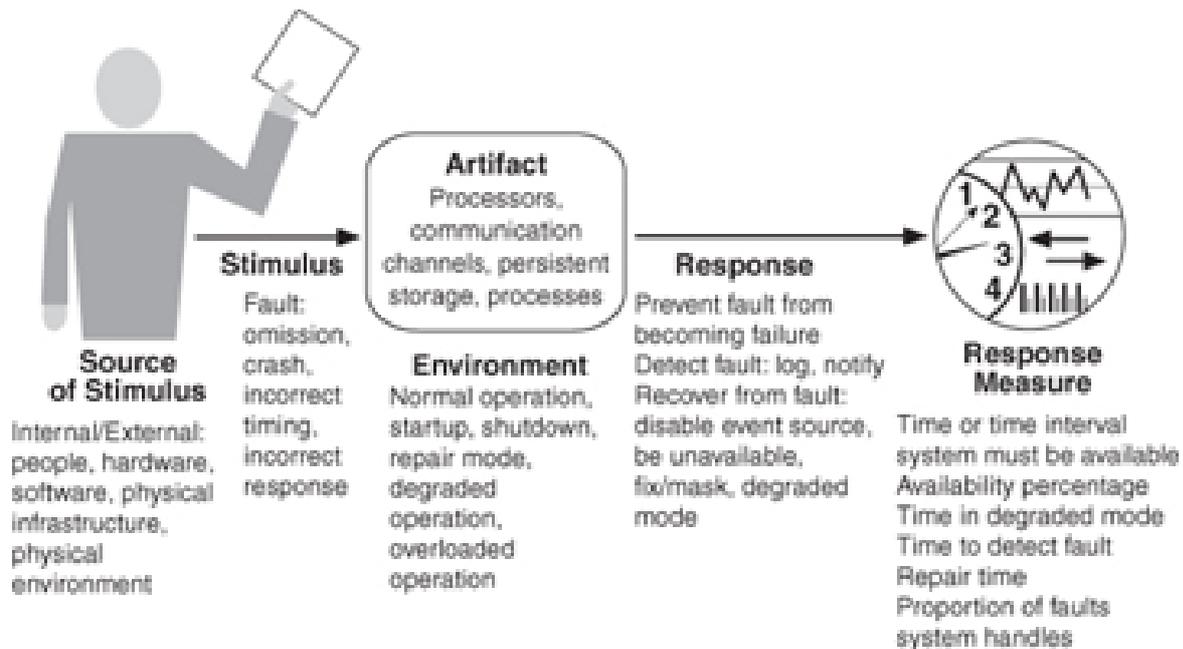
Describe in more detail how you meet the architectural driver introduced in step 2.

Fill in a table like follows:

Architectural driver	Quality attribute	Architectural approach
System must be available 24/7	Availability	Heartbeat mechanism to get an alarm ones the system fails, active redundancy to switch to another node, process monitor to be able to prevent faults, ...
System must support custom plugins	Modifiability	Modularized structure, well-defined API for plugins, use of OGSi...
System must react in 2 seconds to user interaction	Performance	Increase hardware resources, introduce concurrency, monitor performance over time, ...
System must only interact with authorized users	Security	Limit access by hardware, limit access by software, audit trail to recover, ...
System must support different languages and UIs	Usability	Separate interface from implementation, responsive design, model-view-controller, ...
All system interfaces must be tested automatically	Testability	Separate interfaces from implementation, separate test data from live data, distribute different versions to different users (A/B testing) etc.

5. Generate quality attribute utility tree (max three pages):

For each architectural driver, generate quality scenarios like the following:



Then compile a tree:

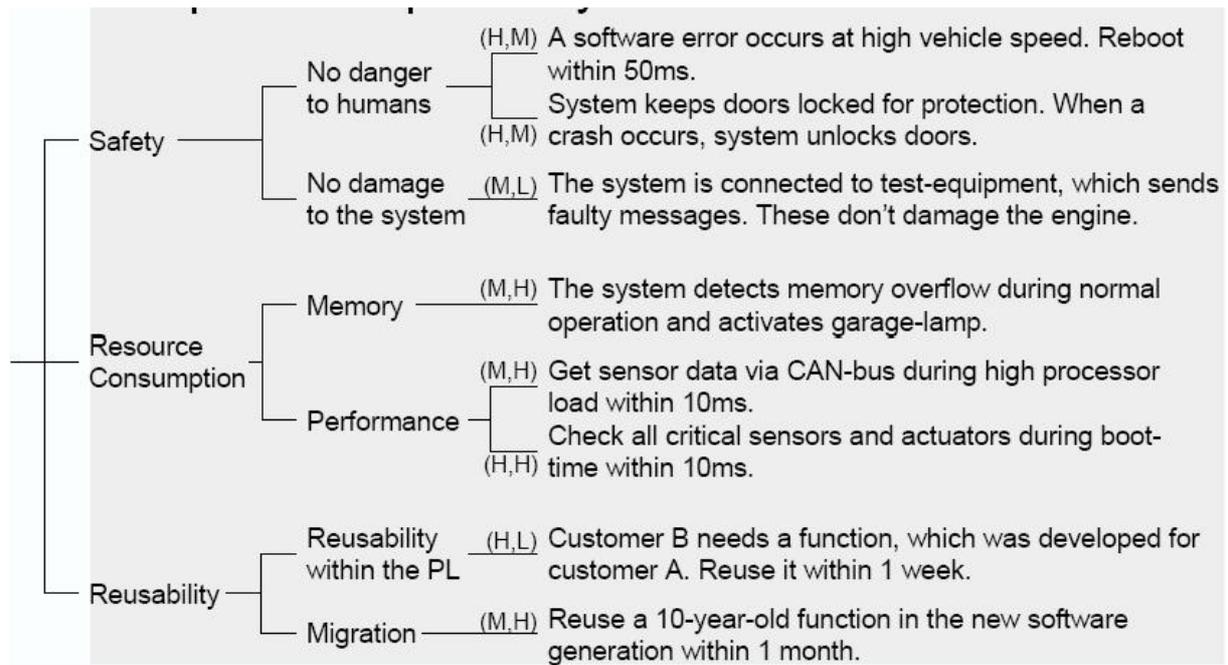
Quality attribute 1 (e.g. availability)

- Scenario 1
- Scenario 2
- Scenario 3

Quality attribute 2 (e.g. performance)

- Scenario 1
- Scenario 2
- Scenario 3

Afterwards prioritize your scenarios by importance (High, Medium, Low) and difficulty (High, Medium, Low). You can summarise your scenarios in the tree. The final tree should look roughly like this:



Please hand-in your results to dominik.rose@interface-ag.de until Thursday, 20th November.