

Requirements Engineering

for Distributed Project Teams in EPIC

Guidelines for Requirement Handling

Guidelines are organized by requirements deliverables per Project stages. For fulfillment of these guidelines you may use other materials for students available in Eduspace.

Stage 1: Project seminar

Deliverable	How to create it	How the deliverable looks like
Project (product) stakeholder list	Project stakeholder is any persons (or representatives of a group of persons) who might be positively or negatively affected by the project (product), or just are interested in the product. Make sure all stakeholders are identified!	The list of stakeholders (and) a stakeholder diagram. See the example of List of stakeholders For diagramming purposes, you can use the onion diagram , see the example at https://www.researchgate.net/publication/284411602
The list of business requirements (BR)	State, what the company expects from the project. This can be stated as a list of generic requirements.	Statements that shows: 1) what product has to be delivered from the point of view of the company 2) What are the acceptance criteria for this product See the example of a business requirement
The list of end-user requirements (US)	Learn how the end users will use the product	The list of user stories. See the user story examples at https://www.atlassian.com/agile/project-management/user-stories
Other stakeholder requirements regarding the product (OSR)	Examine all stakeholders and see what they expect from the product which your team will build	The list of other stakeholder requirements. The requirements can be stated in a free form. See the example

Deliverable	How to create it	How the deliverable looks like
The list of initial functional requirements of the product (FR)	Find out what the product should do to fulfill the stakeholder requirements	The list of initial functional requirements that state what the functions to be performed are and what are their inputs and outputs of each of it. See the example
The list of initial non-functional requirements (NFR)	Find out what are the preconditions, that the product would really fulfill the expectations of stakeholders. See such issues as performance speed, product outlook, security, etc. For the possible categories of non-functional requirements visit https://www.volere.org/templates/volere-requirements-specification-template/ and see Section 10-17	You can use Volere template for stating these requirements https://www.volere.org/templates/volere-requirements-specification-template/
Requirements dependency map	List all requirements and examine how they depend one on another. Record the dependencies	The dependencies can be represented in table, see the example
The list of prioritized requirements	Prioritize the requirements using any requirements prioritization method. See the methods in https://businessanalystlearnings.com/blog/2016/8/18/a-list-of-requirements-prioritization-techniques-you-should-know-about	The list of requirements with priorities (may be included in the responsibility map)
Responsibility map	The responsibility map shows, which project member is responsible for fulfillment of which requirement. “Responsible for “ means – “makes sure that the requirement is fulfilled (not necessarily fulfills it by himself or herself)”. All requirements should have one responsible person for their fulfillment.	The responsibility map. See the example where The list of prioritized requirements is amalgamated with the responsibility map in one table

Stage 2: Distributed project work

1. Make sure, that all deliverables of the Stage 1 are available in the project working area in Slack.
2. Provide a specific document where each project member can suggest requirement changes in periods between project meetings.
3. In each project meeting check what changes in the deliverables should be made.
4. Agree upon all the changes with the client.

5. Keep the record of all versions of requirements engineering deliverables, so that you can trace them back historically, if necessary.

Stage 3: Submission of final report

You may include the lists of fulfilled and not fulfilled requirements in the deliverable. These lists will ease the further development of the product.

A fragment of the list of stakeholders:

Stakeholder Name		Stakeholder position	Stakeholder contact information	The stake
John Smith		Company contact person in EPIC project	John.smith.@rrr.ll	Is responsible for communicating project needs to students
Company X		Client of the project	Via John Smith John.smith.@rrr.ll	Wants to get new sales opportunities
Company T		The client of X	-	Expects to have a comfortable interface with Company X (the stake must be confirmed later during the project)
University Y		Home university of project member Jan Fozzy	Represented by teacher Julia Brocs Julia. brocs@uni.it	The university requirements regarding the deliverable the student has to submit to his/her university are fulfilled on time
...				
...				

Business requirement example:

The product should provide a mobile interface between Company X and Company T

Acceptance criteria:

- 1) The product meets all functional and non-functional requirements agreed upon with Company X.
- 2) It is possible to demonstrate the product to Company T

Other stakeholder requirements:

N	Stakeholder	Requirement
FR1	Company T	The new information should be available in English and Portuguese
FR2	University Y	The interface must be built according to the newest scientific knowledge on adaptive interfaces
...		
...		

Initial functional requirements:

N	Input	Function	Output
1	Information from the webpage user that the list of all products is requested	List all available products	The list of all products available on the screen
2	Information from the webpage user that the particular product details are requested	Display the detailed information about the particular product	Product details available on the screen

Requirements Dependency Map (a fragment):

Note: it might be useful to reflect the text of a requirements in the first column, too:

Requirement	Directly Related Requirements (depend on the stated requirement)
BR1	BR2, FR1, ..., FR6
BR2	UR1, OSR3
UR1	FR1, ... NFR1, ..., NFR7
UR2	FR4, NFR 7
OSR1	NFR9
...	
FR1	FR13
....	
NFR1	FR25, NFR3
...	
...	

Responsibility map (with requirement priorities):

Project members are John, Maria, and Jacek

Requirements		John	Maria	Jacek
Requirement	Priority			
BR1	MUST	X		
BR2	MUST		X	
UR1	SHOULD			X
UR2	SHOULD			X
....				
OSR1	MUST	X		
OSR2	COULD	X		
...				
FR1	MUST			X
FR2	MUST	X	X	
...				
NFR1	MUST		X	
NFR2	COULD		X	
...				
...				