



Evaluation and validation plan

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Executive summary

The purpose of this deliverable is to describe the evaluation and validation process that will be carried out in order to assess the results obtained within PAN-Robots.

The evaluation and validation process is built upon the requirements described in deliverable D3.1 “User needs and requirements” [2], and on the specifications described in deliverable D4.1 “Specification and architecture” [3]. The evaluation and validation process is then defined in order to verify the user needs, the requirements, and the specification, with the final objective of assessing the performance of the PAN-Robots system with respect to the aimed impact, as described in the Technical Annex [1]. The relationships among these deliverables are sketched in Figure 1.

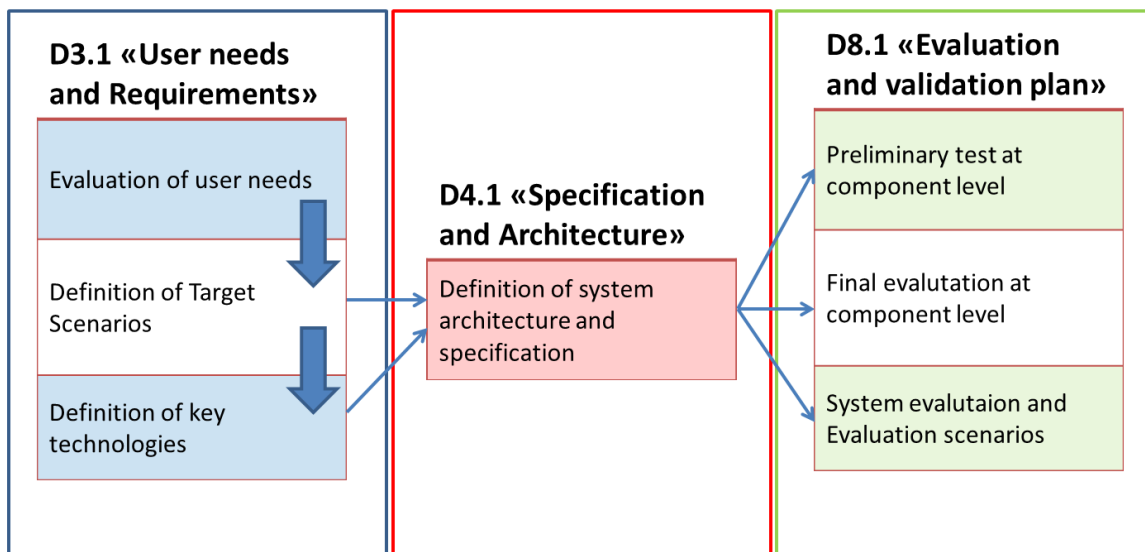


Figure 1: Deliverables connection

The evaluation and the tests have the purpose of assessing the PAN-Robots key technologies with regard to their specifications. The creation and the management of the tests are essential organizational aspects of the process of validation and evaluation. To obtain a prototype system with the characteristics defined in the project proposal, it is fundamental to test each developed component independently, as well as the overall system as a whole. Defining the tests in an early phase of the project will help the development of the technological solutions themselves.

This document is intended as a guide for the partners in understanding what kind of tests are necessary to be performed and how to evaluate the results.

The evaluation and validation procedure will be carried out in the following phases:

- Preliminary tests at component level: carried out in an early development phase. These tests will aim at assessing the performance of the components and interfaces realized within PAN-Robots.
- Final evaluation at component level: these tests will be carried out after the completion of the development of the PAN-Robots components, with the purpose of verifying the achievement of the desired requirements.
- System evaluation: in order to evaluate the overall performance of the PAN-Robots system in a realistic operational environment, these tests will be carried out at the end of the

project, in an appropriately defined evaluation environment, which will be a part of a real manufacturing plant.

Finally, having performed the system evaluation successfully, the impact of PAN-Robots is evaluated.