

Streamlining the handling of R&D projects

The business climate is changing faster than ever, and to keep-up with the competition, companies need to be able to apply change during the development process and being flexible to accommodate them. By visualizing the handling of issues within R&D projects, bottlenecks can be predicted and improvements can be made to increase the efficiency.

The aim of this Master thesis was to explore a combination of different charts and tables to increase the efficiency in R&D projects for agile development. This was done by creating and evaluating a prototype and then measuring the usability of it. The first prototype was developed and then tested on the actual target group at a company. The participants evaluated the tool and suggested further development of the prototype. The final prototype was then developed based on the first one. A usability test was conducted on a potential target group, which haven't used similar tools before.

Agile software development

Axis Communications is a Swedish manufacturer of network cameras for use in the field of physical security and video surveillance. In the R&D sector, an agile software development is commonly used in projects. Agile software development is a set of principles that is used within software development in which requirements and solutions evolve through collaboration between self-organizing and cross-functional teams. It promotes process adaptability throughout the life-cycle of a project.

There are many different agile methods, which focus on different aspects of the software development life cycle. Two of these agile methods are Kanban and Scrum, which focus on managing software projects. The prototype of this master thesis was shaped to fit the needs of these two agile methods.

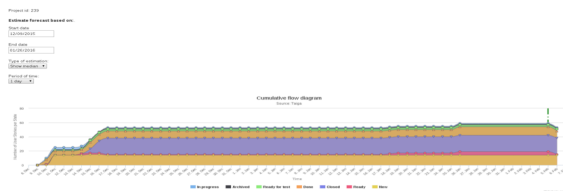


Figure displays a chart in the prototype.

Identify problems

To identify the problems within software development projects, a prototype was made that visualize how the issues currently are handled. By tracking how issues historically have been solved, forecasts can be calculated and bottlenecks can be predicted. Making forecasts and predicting bottlenecks are keys for increasing the efficiency in projects and the base for streamlining the handling of issues.

Different projects use different approaches depending on several parameters like the size of the project, number of participants and level of experience. The prototype consisted of seven different charts and tables so that different projects can use the tool that tailored to their needs (see example in figure).

Usability and Evaluation

Usability can be evaluated on any artefact a human can interact with. From the user's perspective, usability is an important aspect for enjoying the product. Good usability suggests efficiency, easiness to learn and good utility. The term usability testing is often used in user-centred interaction design for evaluating a product by testing it on users.

Conclusions

The conclusion of the final usability test was that there was a high level of usability although the tool was custom made for project using Kanban and Scrum. The tool however, demanded some basic level of knowledge to make it usable.

By Lolita Olesen