Mat-2.177 Project Seminar in Operations Research

Product release definition in Nokia Networks

Mid-project report

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1 Project definition

The aim of the project is the same as defined in the project plan. We aim at improving the product release definition decision process. After presenting the plan a few more details have been added to the goals.

The tool being developed for the client is meant for mainly for test use. After the construction of this test version and its use, the needs of the decision-makers will become clearer and they can be more explicitly expressed. The final tool for use must be done with professionals, so that the end-user interface and operation will be practical and well-designed.

2 Actions and results

A review of theoretical background on release definition and release planning in software development has been conducted. Based on this a new theoretical model of the release definition decision process has been developed. It is shown in figure 1. This process model is based on incremental software release planning literature (see Ruhe, Saliu 2005; Amandeep et al 2004; Greer, Ruhe 2004). Each step in the procees is divided into necessary activities. These activities for the problem definition – step are shown in table 1.
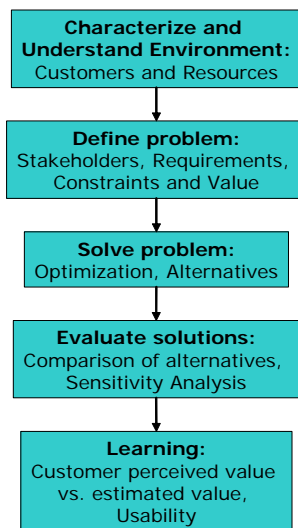
Figure 1 The release definition decision process (Ruhe, Saliu 2005; Amandeep et al 2004)

Table 1 Activities in the problem definition – step of the release definition decision process

Activities
Identify the stakeholders:
sales representatives, users, investors, shareholders, project managers, product managers, developers
Elicit and specify the requirements:
information from different stakeholders
business impact of requirements
Identify the relative importance of stakeholders
Define the constraints
precedence, coupling or resource constraints (includes dependencies between requirements)
Stakeholders assign value to requirements
priority or financial value etc.

After the theoretical process modeling a meeting with the client was held. This meeting was a group discussion aimed at defining the current decision process at the client. Three of the decision process participants were present. During the discussion an understanding of the current process was reached. In addition development plans for the process were discussed. This group discussion will replace the individual interviews planned earlier. An overview of the process is shown in figure 2 and a list of stakeholders in table 2. Based on this model of current practices and the theoretical model the process will be redesigned and improved.
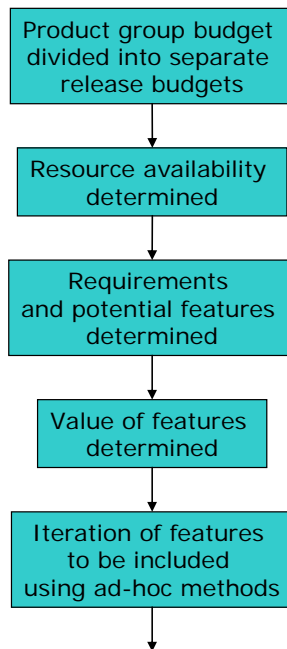
Product group budget
divided into separate
release budgets

Resource availability
determined

Requirements
and potential features
determined

Value of features
determined

Iteration of features
to be included
using ad-hoc methods

Figure 2 The current release definition process at the client

Table 2 Stakeolders in the realease definition process

Stakeholders
R&D engineers
R&D management
Product management
Company management
Marketing and sales
Customers

3 Action plan

The main tasks and distribution of the work between group members remains the same. Two of the group members will concentrate for the literature research and two members for developing the tool. The project manager will work with both pairs to get the better understanding about whole project.

The action plan for the rest of the project is still to find some new literature about the similar processes and start developing the tool. Next the analysis between different computer programs will be made and after that the development of the tool will be started. Last phases of the project will be to verify the tool and write the final report.

4 Risks

We had identified four main risks in the project plan that could have negative effect on our project. Now we go through those again and evaluate possible changes. We start from the risks that we consider being the highest at the moment.

1. Program and methods: At this moment the biggest concern is how to develop a practical tool that could be used by the decision makers of the release process. Although we had a discussion about development of the tool with Nokia Networks and we tried to clarify what kind of tool should be created it's still a bit unclear what kind of tool would be practical and suitable for the real user. Even when we have decided what program will be used and what kind of functions our tool will have the risk remains that we are unable to make a tool in given time where all the dependencies are taken account.

2. Schedule. Other high risk is that we don't have enough time to finish the project if the creation of the tool takes too much time. At the moment we are behind the schedule partly due to the fact that it was difficult to find a date when all the group members and client were able to participate for a meeting.

3. Inadequate data: We are still waiting some test data from Nokia Networks that is needed for to verify the tool. If we don't get this data in time there will be problems in developing and verifying the tool and the tool could become unpractical for the real use cases.

4. Even if we get all the data in time there remains still a slight risk that we are unable to create suitable tool that is easy enough to use.

To make brief conclusion about the risks some of the risks have decreased since we are not anymore dependent that much on getting data from Nokia networks. Some risks have increased since it's still unclear what program is finally used to create the tool and also because we are behind the schedule.

5 References

Amandeep, A., Ruhe, G., Stanford, M.: *Intelligent Support for Software Release Planning* in Bomarius, Iida (Eds.): *PROFES 2004*, LNCS 3009, pp. 248-262, Springer-Verlag 2004.

Ruhe, G., Saliu, M.O.: *The Art and Science of Software Release Planning*, IEEE Software, November/December 2005, pp. 47-53.

Greer, D., Ruhe, G.: *Software release planning: an evolutionary and iterative approach*, Information and Software Technology, 46, 2004, pp. 243-253.

Royce, W.: *Managing the Development of Large Software Systems*, Proceedings of IEEE WESCON, August 1970, pp. 1-9.

Carlshamre, P.: *Release Planning in Market-Driven Software Product Development: Provoking an Understanding*, Requirements Engineering, 7, 2002, pp. 139-151.