Using Evolutionary Project Management (Evo) to Create Faster, More Userfriendly and More Productive Software. Experience Report from FIRM AS, a Norwegian Software Company

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1 About the Company

FIRM was established in 1996, and has 70 employees in 4 offices (Oslo, London, New York and San Francisco). FIRM delivers one software product: Confirmit. Confirmit is a web-based application which enables organizations to gather, analyze and report key business information across a broad range of commercial applications. Confirmit can be applied to any information-gathering scenario, but its three main data sources are: Customer Feedback, Market Feedback and Employee Feedback.

The FIRM R&D department consist of about 20 people, including a Quality Assurance department of 3 people. These people are mainly involved in product development of Confirmit, but we also do custom development for clients who fund new modules of the software.

2 Development Background and History

In the very beginning, when FIRM only had a couple of clients, our development was very ad-hoc and customer driven. We didn't follow a formal development process. The software was updated nearly on a daily basis based on client feedback. You can say that we had one of the important elements in Evo: Deliver stakeholder value fast.

This ad-hoc development resulted in nice features for the few dedicated clients we had, but it also resulted in a lot of defects, long stressful nights, and little control.

As our client base grew, we felt a need to introduce more-formal processes in order to increase our quality standards. Larger clients started to ask questions regarding our development processes.

We formalised the development process according to a waterfall model, and started climbing the CMM ladder. The reason for choosing the waterfall model was that it was the only development process we knew about.

After a few years with the waterfall model, we experienced aspects of the model that we didn't like:

- Risk mitigation was postponed until late stages.
- Document-based verification postponed until late stages.

F. Bomarius and S. Komi-Sirviö (Eds.): PROFES 2005, LNCS 3547, pp. 216 – 223, 2005.

- Attempts to stipulate unstable requirements too early: change of requirements is perceived as a bad thing in waterfall.
- Operational problems discovered too late in the process (Acceptance testing)
- Lengthy modification cycles, and much rework.
- Most important; the requirements were nearly purely focused on functionality, not on quality attributes.
- Our experiences is backed up by statistics
  - In a study of failure factors on 1027 IT projects in the UK, scope management related to waterfall practices was cited to be the largest problems in 82% of the projects. Only 13 % of the projects didn't fail. (Thomas, M.2001. "IT project Sink or Swim," British Computer Society Review)
  - A large study showed that 45 % of requirements in early specifications were never used (Johnson, J. 2002. Keynote speech, XP 2002, Sardinia, Italy).

3 The Shift of Focus: From Waterfall to Evolutionary Development

Peter Myklebust, FIRM CTO, and I heard Tom Gilb speak about evolutionary project management (Evo) at a software conference autumn 2003. We had just released a new version of our software that contained a lot of new nice features, but it had limitations with respect to usability, productivity and performance (e.g. throughput and response time). We found the ideas very interesting, and Tom and Kai Gilb offered to give a more detailed introduction to the concept. They spent one day in our offices, giving a very compressed introduction to Evo. We saw that Evo attacked many of the flaws in our wa-terfall process; most importantly the high focus on quality attributes that we felt could have been better in our latest release.

We decided to do an Evo pilot with a development phase of 3 months. We decided to do a literature study ourselves and then use Evo as best as we could for the next release (Confirmit 8.5), without further Evo courses.

3.1 FIRM's Interpretation of Evo: Basis for the 3 Month Trial Period

Evo is in short: Quickly evolving towards stakeholder values & product qualities, while learning through early feedback. The beauty lies with the simplicity of the method, combined with advanced methods of measurement and control.

After the one day crash course with Tom and Kai Gilb and a literature study ("Competitive Engineer-ing" by Tom Gilb and other material on the subject), our overall understanding of Evo was this:

- Find stakeholders (End users, super-users, support, sales, IT Operations etc)
- Define the stakeholders' real needs, and the related product qualities
- Identify past/status of product qualities and your required goal level (how much you want to im-prove).
- Identify possible solutions for meeting your goals
- Develop a step-by-step plan for delivering improvements via the identified solutions, with respect to Stakeholder Values & product quality goals: