Chapter VII

How to Support Agile Development Projects with Enterprise Modelling

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Abstract

This paper analyses the potential of using Enterprise Modelling (EM) in agile information system development projects on the basis of a number of empirical findings. We outline the current issues and challenges that projects using agile development approaches are facing. To address these challenges we analyse what are the objectives of using EM in agile development projects and give recommendations concerning the modelling process and tool support.

Introduction

In the recent years the Information System (IS) development community has been trying out and adopting various agile development approaches such as eXtreme Programming (Beck, 2004), SCRUM (Schwaber & Beedle, 2002), DSDM (Stapleton, 2003). One of the strengths of agile development approaches is their flexibility and ability of dealing with change efficiently. The underlying philosophy of these approaches is development of only those artefacts that are directly related to the software product. These approaches are best suited for small-to-medium size teams and projects. Agile development approaches typically do not prescribe which methods, languages, and tools are to be used. Instead, the main emphasis is on choosing the simplest, most effective and, therefore, the most cost effective ones. In spite of the common misconception that agile development approaches mostly advocate ad hoc coding in a "program first, ask questions later" way, IS requirements are gathered and analysed and system architecture is designed in agile projects. These processes might only look different from the outset, but their main goals are similar to the plan driven system development approaches. Consequently, modelling of requirements and architectures is common in agile development projects.

To support the modelling process on a macro level within the agile development teams Agile Modeling (AM) (Ambler, 2002a) was developed. Agile Modeling provides a set of best practices of "light-weight" modelling. Agile Modeling also requires active stakeholder involvement, which is similar to Participative Enterprise Modelling (Bubenko et al, 2001).

However, gathering requirements in agile methods is targeted exclusively to software development needs (Leffingwell, 2002; Ambler, 2006). The relationship between knowledge of enterprise stakeholders and software artefacts is tacit and contributes only to the software development process, not to the enterprise knowledge development on a larger scale. This phenomenon does no permit to utilize all possible benefits of requirement gathering exercise. Nowadays agility is needed not only in software development processes but in all aspects of organisational performance. Therefore a method that transparently relates software development to other organisational processes is needed.

In this paper we analyse the potential of using Enterprise Modelling (EM) in agile development projects. We have based our findings on a number of qualitative research studies (Persson, 2001; Stirna, 2001; Persson & Stirna, 2001; Jönsson, 2004; Lagerquist et al., 2006).

Enterprise Modelling (EM) is an activity where an integrated and negotiated model describing different aspects of an enterprise is created. An Enterprise

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