

Customer Communication Challenges and Solutions in Globally Distributed Agile Software Development

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1 Summary of the Tutorial

Working in the globally distributed market is one of the key trends among the software organizations all over the world. [1-5]. Several factors have contributed to the growth of distributed software development; time-zone independent "follow the sun" development, access to well-educated labour, maturation of the technical infrastructure and reduced costs are some of the most commonly cited benefits of distributed development [3, 6-8]. Furthermore, customers are often located in different countries because of the companies' internationalization purposes or good market opportunities.

Inefficient communication between customers and project teams can have a negative impact on the project outcome [9]. If the customer communication fails, it is likely that software products will be delivered late and over budget without meeting the needs of stakeholders and in particular end users. Customer communication is a significant challenge also in distributed agile software development, and it has been identified as one of the key issues that have to be taken into account [4, 10, 11]. Agile software development relies heavily on informal face-to-face communication over detailed documentation [12]. However, face-to-face communication and active customer involvement proposed by agile approaches do not often work as such in distributed environment. In such an environment, the customer can not necessarily participate in the face-to-face meetings with different stakeholders. Therefore, customer communication problems have tried to be solved by using different communication media, for example videoconferencing [11] and whiteboard software [4]. In addition, also more general level solutions have been proposed e.g. by Layman et al. [4] and Ramesh et al. [13]. These recommendations aim to create a communication rich environment and promote finding a balance between formal and informal communication in distributed agile context.

In spite of the communication challenges, there is not yet much research available focusing on the customer communication aspects of globally distributed agile software development. The purpose of this tutorial is to present some of the highlights related to this topic based on the in-depth, longitudinal research made in large software intensive company of 60000 employees during the years 2008 and 2009. After this introduction, the challenges and solutions of the customer communication will be discussed with the attendants. The discussion will be led based on the presenters' experiences on customer communication from 7 different companies during the years 2005-2009. This tutorial

will increase the knowledge of the attendees on this field and provide them solutions in order to tackle the problems related to customer communication.

2 Audience of the Tutorial

Since the agile methods are been increasingly used in the large globally distributed software development environments, this topic is relevant for all the companies working in this context. On the other hand, many small companies are pursuing for internationalization. One of the first steps in this process is often to find a customer group from international markets. This immediately creates the need for globally distributed customer communication.

Agile methods are also utilized by several consulting companies working in the field of software development. From their point of view, it would be significant to hear what kind of customer communication challenges companies are experiencing and how these challenges could be solved. Since customer communication in the context of agile software development seems to lack empirical knowledge, the topic would be also relevant for research organizations.

Attendees: industries: large and small; consulting companies; researchers.

3 How the Tutorial will be Structured and Run?

The tutorial will be composed of two different sections. During the initial 45 minute introduction, some of the key findings on the communication challenges in distributed agile environment are described. The discussed challenges are based on the empirical findings made by the presenters.

After the presentation, one hour workshop will be held. The goal is first to collect the challenges that the attendants have found of this topic and then discuss of the results together with the whole group. The purpose of the approach is to reveal both challenges and solutions that attendants have related to the customer communication in agile software development. After taking this tutorial, the attendees should have a more comprehensive view to the challenges on customer communication and solutions mitigating the risks related to this field.

During the discussions presenters will give examples based on the experiences of the companies that they have been working with related to this topic.

4 Biographies

Minna Pikkarainen has graduated from the Department of Information Processing Science, University of Oulu and finished her PhD about the topic of improving software development mediated with CMMI and agile practices at 2008. Minna has been working as researcher and project manager in VTT Technical Research Centre of Finland more than 11 years now. During that time she has worked in 18 industrial driven research projects doing close industrial collaboration with 8 organizations in Finland and in Ireland. Minna has participated as a key person for several large

international ITEA project preparation work doing full project proposals and project outlines as collaboration together with large European level company networks (e.g. Flexi and Evolve projects). During 2007 and 2008 Minna has been leading VTT research group of the Large European projects called Agile ITEA (embedded agile software development) and Finnish consortium of ITEI (project about open innovations). So far Minna has provided several agile trainings, workshops with 10 different industries related to agile methods. Minna has been member of Lero, The Irish Software Engineering Research Centre since 2006. For the past 4 years, her work and publications have been focused on research in the area of agile software development.

Mikko Korkala is currently working on his doctoral dissertation on customer communication and collaboration in agile software development. Mikko has been involved with agile development since he started working on his Master's thesis in early summer of 2002. Mikko has worked at VTT Technical Research Centre of Finland as a research scientist since early 2007 and has previously worked at the Department of Information Processing Science and as a software engineer in software industry. In addition to research, Mikko has provided several agile trainings and has held invited agile talks both in Finland and abroad. Mikko has also worked as an onsite agile consultant for management in a large software company and helped to outline agile reference processes for software intensive companies.

5 History of the Tutorial

The tutorial will be based on the research of a large globally distributed software intensive company. Customer communication aspects in agile software development were studied in a longitudinal in-depth case study during the years 2008-2009. Furthermore, the presenters have experiences on customer communication challenges and solutions from 7 different organizations applying agile methodologies during the years 2005-2009. This experience will be utilized when discussing about the topic with the participants.

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