

Chapter 6.12

A Paradox of Virtual Teams and Change: An Implementation of the Theory of Competing Commitments

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ABSTRACT

During a longitudinal participant observation study of a virtual software development team, a strange paradox was noted. A new software development methodology was introduced to the project and the developers were initially committed to its use. Over time, the commitment gradually decreased to the stage where aspects of the new methodology were practically ignored. As the team was a virtual team, with group members rarely congregating as a whole for any length of time, it was hard to explain why this diminishing of commitment occurred. The remoteness and part-time participation of group members meant that the team deciding themselves to ignore aspects of the methodology was not a likely possibility. A review of existing research suggested that the concepts behind the diffusion

of innovations (specifically software process innovations) may have a bearing. Although pertinent to the area of introducing new software development methodologies, diffusion theories did not provide a complete explanation for the decrease in commitment that was observed. The theory of competing commitments was applied, and it was discovered that one cause of the decreased commitment among team members was groupthink. Groupthink should not be a problem with virtual teams as there should be less cohesion—the lack of contact between members dictating the low level of cohesion. Further analysis showed that traditional peer groupthink was not the issue, but hierarchical groupthink influenced by the project manager had a large influence. These findings are in contrast to most expectations regarding virtual teams, including the project management of virtual teams.

INTRODUCTION

Researchers have noted the differences between virtual and face-to-face teams. Discussions on change management and the introduction of change in virtual teams should therefore take these differences into account. The focus of this paper is specifically an examination of why the change to a new software development process, although initially supported by a virtual development team, never materialised. Authors have referred to the escalation of commitment to a failing course of action (Beynon-Davies, 1995; Keil, Mann, & Rai, 2000; Newman & Sabherwal, 1996): this paper describes the de-escalation of commitment to a succeeding course of action in a virtual team.

Change within software development projects is an area of importance to the success of the project, as projects, by their very nature, are about change. Although Cushway and Lodge (1999) emphasise the importance of managing change, their description of change management, is a restrictive one. For them, the concern is in developing strategies and structures. No mention is made of the teams and individuals who will effect, and be affected by, change. The sole mention of employees is a list of expectations, or required behaviours, such as roles must be carried out in a dependable fashion, and there must be innovation in achieving organisational objectives. In the context of a virtual team, there are further considerations regarding change that need to be addressed.

This paper describes a case study undertaken by the authors, that examined the change involved in introducing a software development methodology. The case study is based on a software development project to develop a knowledge management system (KMS) for a European government. A longitudinal study of the development project was undertaken, using participant observation as its primary method. The study concentrates solely on the software project team—a virtual team—as opposed to

involving the various high-level project sponsors. One aspect of agile software development employed in the project to develop a KMS is the use of user stories. Rather than relying on complex design documents, Agile espouses the writing of customer requirements in simple language. The stories should describe what is required of a part of the final software project. The longitudinal research into the software development project highlighted a problem with the change to this new process. The developers in the virtual team were initially committed to its use. Over time, the commitment gradually decreased to the stage where aspects of the new methodology were practically ignored. As the team was a virtual team, with group members rarely congregating as a whole for any length of time, it was hard to explain why this diminishing of commitment occurred. The remoteness and part-time participation of group members meant that the team deciding themselves to ignore aspects of the methodology was not a likely possibility.

The investigation into this dilution of commitment became a two-phase process. In phase 1, to determine the reasons behind this reduction in commitment to the change, Kegan and Lahey's (2001a, b) competing commitments process was followed. This process aims to determine the reasons, often subconscious, why a change that was originally committed to is not successful. These reasons are known as competing commitments as they work against the original commitment to change. Analysis of this competing commitment process was still insufficient in explaining the lack of success of the methodology change. Therefore in phase 2, the output of the competing commitment process was then aligned with observations from the longitudinal case study and existing research literature on groupthink to determine a cause for this lack of success. This cause, the explanation for the failure to adopt user stories, is then elaborated on.

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