Empirically Examined the Disjoint in Software Deployment: A Case of Telecommunication

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ABSTRACT

Software is intended to enable and support organisations to function effectively and efficiently. Hence its deployment is critically vital. Software deployment involve two primary components, technology and non-technology actors. Both actors offer vital contribution to software deployment. Unfortunately, there has been more focus on the technological actors over the years. This could be attributed to why the same types of challenges persist. The study holistically examined the roles of non-technology actors in the deployment of software in organisations. The lens of actor-network theory was employed in the empirical data.

Keywords: Actor-Network Theory, Deployment, Non-Technology, Software, Technology

INTRODUCTION

Computer software can be defined as a combination of both technical and non-technical resources adopted within the organisational requirement in support of specific needs of business (Bistričić, 2006; Chen et al., 2010). The main components of computer software include people, processes and technology infrastructure. Computer software has been shown to play a very important role in organisations. It plays a vital role in improving the capability of organisations to conduct business and develop new opportunities, as well as enabling them to remain profitable and competitive (Bergeron & Raymond, 1992; Tetteh & Snaith, 2006).

Organisations make a substantial investment in the implementation of systems (software) to help run their businesses effectively so that they achieve their goals, improve efficiency, provide value added service to customers and provide both employee and customer satisfaction (Avison & Fitzgerald, 2006).

Organisations such as financial institutions and retail stores strive to simplify their customers’ needs to save time. For example, they provide them with conveniences such as automatic teller machines (ATM), internet banking, mobile banking and online shopping. It is through the use of communication networks that organisations are able to provide customers with products and services from any location, at any time (Požgaj et al., 2007). There is no longer a need for customers to wait in long

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banking and shopping queues when they can simply do it online. According to Bielski (2008), ATMs and internet banking enable customers to make banking transactions at any time without having to physically present themselves at the bank. Goswami and Raghavendran (2009) argue that with mobile banking, banks are able to offer their customers more convenience, as a result of the provision of banking transactions through cellular phones, at any given time of the day. This allows organisations to carry out their business transactions uninterrupted, twenty four (24) hours a day, seven (7) days a week. Avison and Fitzgerald (2006) posit that trading via the internet (electronic commerce) has made it easier for customers to access worldwide markets and to expand trading hours to twenty four hours a day, seven days a week. Increased competition amongst businesses forces organisations to take advantage of the new technology to provide value added service to fulfill their customers’ needs (Pappa & Stergioulas, 2008).

The purpose of the research was to investigate, from non-technical perspective, the disjoint between the development and implementation of computer software in the organisation. The study took cognisance that those who develop computer software are not necessarily the ones that implement it.

**RESEARCH APPROACH**

A case study is one of the research methods commonly used in social science or other related fields (Yin, 2009). According to Noor (2008) a case study focuses on conducting an in-depth investigation into one or a few cases in order to gain a holistic insight about the phenomenon. Parè (2004, p. 233) defines a case study as “an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.” The case study method was employed for this study mainly because of the nature of the study as well as the features of the case study method.

Letsatsi is a Telecommunication company based in South Africa. The organisation was used in the study mainly for the two reasons: of the eight organisations that were approached, it was only the only one that agreed to participate in the study; and there was a *prima facie* evidence that they had challenges in the development of software in the company.

The organisation had about 625 employees in its Computing department. The computing department was further divided into units such as Infrastructure Services, Customer Relations, Software development, and Project Management.

The semi-structured approach was used in the collection of data. There were two main questions to the study: “What were the processes involved in the software development and implementation?” and “What were the factors influencing the disjoint between software development and implementation in both organisations?” A total of fifteen employees from different units and at various levels were interviewed.

The moments of translation was employed in the data analysis. This is mainly because of strength to focus on negotiation and interactions of actors within networks. Iyamu and Tatnall (2009) posit that actors are allowed to make decisions in the creation of the networks in which they choose to participate. The moments consist of problematisation, interessement, enrolment and mobilisation:

i. **Problematisation.** An Actor-network can be formed to solve a problem or take advantage of a new opportunity. At this stage the focal actor problematizes an issue (Greenhalgh & Stones, 2010).

ii. **Interessement.** At the interessement stage, actors show interest in the problematized issue. This could be through negotiations with the other actors.

iii. **Enrolment.** Actors partake in the tasks that are assigned to them through negotiations. According to Luoma-aho and Paloviita (2010), communication plays a vital role in the enrolment stage because it clarifies
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