Chapter 6
Information and Communication Technology Projects and the Associated Risks

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ABSTRACT
Organisational reliance on Information and Communication Technology (ICT) continues to increase. This is informed and triggered by the premise that ICT will help them to yield solutions that will fulfil or exceed their expectations, thereby making the organisation realise the required return on investment. In order to realise return on ICT investment, many organisations deploy ICT solutions through projects. However, not all ICT projects realise their goals and objectives, due to associated risks. Unfortunately, risks are never easy to identify or managed. This chapter explores and examines the risks factors in the deployment of ICT projects in organisations. Using the case study method, the research employs actor-network theory in the analysis of the data to understand the factors that manifest themselves into risks during the deployment of ICT projects in organisations. The study reveals that factors, such as knowledge base, performance contract, and communicative structure, are used to enable and support and at the same time to constrain the deployment of ICT projects in organisations.

INTRODUCTION
There is an increasing demand for Information and Communication Technology (ICT) solutions by organisations, including government administrations, financial institutions, higher institutions of learning, and insurance companies (Clancy, 2004). Some of these organisations process high volumes of data at high rates. The effectiveness and efficiency of their operations depend on the capability and capacity of the ICT solutions. The ICT
solutions get obsoletes faster as a result of changes in the business environment and rapid development of ICT artefacts. The changes are driven by the business objectives and strategies (Lee & Xia, 2003). This suggests that there is a need to deliver the solutions early while they are still relevant and value-adding to the business. Many of the ICT solutions are employed through ICT projects.

ICT projects are aimed at enabling business processes and activities in order to deliver business benefits and competitive advantage. ICT projects follow project management principles like any other project in other disciplines and professions. They must be delivered on time, on schedule, with expected performance functionality and they must add value to the business. Such ICT projects have inherent risk like any other projects (PMBOK, 2004). What makes them different from other projects is that they deliver intangible products and solutions.

ICT projects have an element of uncertainty and therefore carry inherent risk. According to Ferguson (2004), risk is defined as an uncertain event that could cause an uncertain impact on project schedule, cost, or quality. Many ICT projects are prone to fail (Labuschagne et al, 2008) and this suggests that these are high-risk projects that need project risk management that can effectively improve the project outcome. Risk management is a crucial practice in attaining the successful delivery of IT projects (Tuman & Remenyi, 1999).

Risk management is a systematic process to identify, evaluate and address risks on a continuous basis to prevent such risks from having a negative impact on the institution’s service-delivery capacity (Baccarini et al, 2004). Risk management is necessary in the deployment and management of projects and activities.

**ICT PROJECTS AND RISK**

Information and communication technology (ICT) solutions are often deployed through projects, for organisational processes and activities. According to Morris (2004), projects are a means to yield solutions that include infrastructure, networks, applications, databases or a combination of these. Each deployment is guided by sets of requirements, of both technical and non-technical (business). The requirements are intended to provide opportunities and advantages. However, each requirement does carry potential risk, some visible, and other could be hidden. To manage risk, it must first be identified. According to Taylor (2006), risks are difficult to manage in IT projects if they are not identified when requirements are gathered.

Unfortunately, some project managers seem to focus more on technology artefacts. Kutsch (2008) argued that avoidance, ignorance, delay of risk response actions, and denial of uncertainty by ICT project managers have some influence on the effectiveness of project risk management. However, it is difficult to manage the unknown. Hence identification of risk is foremost, and critical. According to Hillson & Murray-Webster (2004), the attitude of individuals and organisations has a significant influence on whether risk management delivers what it promises. In Ferguson (2004), risk identification and classification are prerequisites for effective risk management.

Identification of risks which are associated with the ICT projects is a major challenge for managers. This can be attributed to the fact that there are numerous ways in which they can be described and categorised. Tesch, Kloppenborg & Frolick (2007) conducted a study to gain better understanding of risk