Chapter 4
Understanding IT Acquisitions: Associated Models

ABSTRACT

IT acquisition processes are mostly organization specific and there is not enough evidence to establish that a successful acquisition process adopted in an organization would replicate the same scenario in another, but it is experienced that such predictability can be assured to a possible extent if organizations follow some best practices. Research in IT acquisition processes indicate varied results, and there are various models to address overarching issues related to IT acquisition processes showcasing IT preparedness in the organization. This chapter discusses various approaches pursued and models evolved in the area of IT acquisitions, processes to work on the preparedness of the organizations in managing IT infrastructure acquisitions, and their life cycles. This chapter includes discussions on models available for assessing the IT acquisition process, understanding organizational issues, capturing and analyzing user behaviour, and analyzing usability of the IT resources. Various models are also evaluated to understand their roles in capturing capability of the IT users in the organization, IT service providers, and component developers who participate in the acquisition process.

INTRODUCTION

IT acquisition is defined as an organizational activity and it needs to be viewed holistically. Investment in IT in organizations today is quite considerable in financial terms. But the intangible vales including risks, opportunity costs of not choosing the right components and ignoring overall preparedness of end users to accept the IT enabled services are quite phenomenal. It is also quite complex to predict such organizational behavior during IT acquisitions. Thus there is a need to model the preparedness of all stakeholders in the acquisition process. In order to understand the roles and responsibilities of the stakeholders we embarked on defining preparedness of the organization so as to manage the IT acquisition process effectively. A framework was presented in this context to organize this preparedness exercise for IT acquisitions. Application of the framework to understand expected contributions of various stakeholders led to identification of areas of im-

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provement. The areas of improvement included in the IT acquisition process are role of IT acquiring organization through its processes, structures, and systems; role of IT service providers in terms of capabilities to provide products and services; role of users in the context of IT adoption and internalization of IT enabled environment and role of quality management.

The framework used in the preceding chapter raised two important issues. One of the issues is related to examining feasibility of conducting any preparedness exercise. The second issue relates to explore whether there are any existing models that can be benchmarked to support the preparedness exercise. Thus this chapter extends the ambit of the framework discussed in chapter 3. It delves into the literature to identify and present various models related to the realm of the framework and find the necessary direction to conceptualize and develop a model to assess organizational capabilities in managing IT acquisitions. The literature review is taken up with the purviews of the framework and discusses various models available along with their deliverables. Initially models addressing organizational issues and to be more specific, IT acquiring organization's issues are presented. The next section includes identified models that are supporting the capabilities of IT service providers. The following section identifies models related to user centered services, their acceptance, satisfaction and usability of the systems developed with IT. The next section summarizes the deliverables of the models and identifies areas of improvement to support the feasibility of conceptualizing and development of an organizational preparedness assessment model.

MODELS ADDRESSING ORGANIZATIONAL ISSUES

In any IT acquisition process it is the responsibility of the IT service provider to display its credibility on providing required services to the acquiring organization as demanded. In some cases IT service providers guide IT acquiring organization to understand all the aspects of technology and various options. In business computing such credibility and competence are visible in terms of providing turnkey services for implementation of ERP, business intelligence applications and process automations like SCADA.

The acquisition model most often employed is the familiar "waterfall" development model in which well-defined increments of capability or technology are designed, developed, and implemented in a pre-specified order. The "flow" of releases is sequential and variations from the approved sequence are cause for a new baseline for the program. In extreme cases it may cause cancellation. However, as a new baseline generally triggers a complete top-to-bottom review of the program, delays are natural and often approvals at each step up the acquisition approval chain become more difficult to obtain (Melville, Kraemer and Gurbaxani, 2004; Defense Science Board, 2009).

There are various models which attempt to increase the level of understanding the issues and raise the level of expertise in approaching for this type of IT acquisition process. These categories of stakeholders are progressively adopting various quality models on enhancing their roles, and preparedness in acquisition process. Certifying organizations like ISO etc. have effectively worked on various models and also suggested guidelines, procedures that may be adopted by IT-Vendors. Most of these models have focused on process improvements. The reasoning behind developing these models is to effectively put in place a quality system, which can manage the process of acquisition. A standard and audited quality system underwrites three of the most important factors for any buyer which are to "understand the business process", "competence of the supplier to understand the buyer", and "mutual trust". The basic idea behind developing quality system (Humphrey, (1989) is to formalize a process of acquisition, which would be a tool for stakehold-

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