

## Chapter 5

# Conceptualization of IT Acquisition Life Cycle Management Model

### ABSTRACT

*Models are expected to present near real life situations and possible effects on the deliverables based on given input environment. However, models do not necessarily indicate the true solutions and provide scope to work on them incrementally. As discussed earlier, organizations may not follow similar paths to acquire IT and may not even derive desired results despite adopting one. This chapter considers it important to include IS as critical input to managing IT acquisition life cycles and delves further into the IT life cycle management principles to conceptualize a model to specific contributions to assess organizational preparedness for IT acquisitions. This model largely includes discussions on IS centric models and argues in favour of assessing the preparedness across three phases, pre-acquisition, acquisition, and post-acquisition. Each phase considers specific inputs with expected deliverables for successful assessment of the preparedness of the organization in that phase.*

### INTRODUCTION

It is important to note that role of IS is quite critical input to managing IT acquisition life cycles. Purviews of systems are founded on IS management and it reflects systemic and systematic behaviors in the organization. With this perspective, the chapter delves further into the IT life cycle management

principles followed by model specific contributions in this area to prepare the foundations for organizational preparedness assessment. In the following section, the framework is presented in detail with the support of related works done so far. The framework posits that whole exercise for assessment of organizational preparedness to manage IT acquisition life cycle is conducted in three phases having distinct roles to contribute. These three phases are pre-acquisition, acquisition, and post-acquisition. These are subsequently discussed

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in detail to support the framework conceptualized for overall assessment. Each phase of the framework is supported with various models discussed in previous chapters to build on the strengths.

## **IT ACQUISITION LIFE CYCLE**

The best practices for managing, budgeting, and funding IT solutions persist to evolve. Organizations have realized that IT is a consumable asset, unlike a commercial vehicle. As a particular IT asset ages, it generally requires more maintenance and support, because of its age and more importantly due to relentless progression in technology innovations. Hence, alike other consumable assets, IT assets need to be renewed regularly. In this context creation of a technology life-cycle management plan that produces a framework to fund, renew, and retire IT equipment is rapidly emerging as an industry best practice. Moreover, higher levels of funding that is required to sustain the IT infrastructure, combined with the need to regularly renew assets, has led many organizations to utilize a range of leasing and financing options.

IT infrastructure has emerged as the critical communication, collaboration, and information facilitator of the modern enterprise, broadly enabling most business processes, decision making, practices, and innovation initiatives. To deliver these capabilities, organizations have evolved their roles beyond supporting a collection of servers and software into managing a well-defined and comprehensive suite of equipment, technologies, and services, such as the modern IT infrastructure. A major component of the modern organization's expanded technology management role is an expanding requirement to effectively balance financial requirements of acquiring an IT infrastructure, as well as deliver and sustain it in a capable and secured way. Experienced professionals understand well that carefully evaluating and optimizing financial options when acquiring,

purchasing, financing, or leasing IT equipment and services has become more important for sustaining an optimum IT environment. Furthermore, the best practices for managing, budgeting, and funding IT acquisitions continue to evolve. Many organizations have realized that IT is a consumable asset, not unlike a profit-making vehicle. As a particular IT asset ages, it generally requires more maintenance and support, due to its age and more importantly due to technology's inexorable progression. Like other consumable assets, IT assets need to be rehabilitated regularly. Creating a technology life-cycle management plan that produces a framework to fund, renew, and retire IT acquisition is rapidly emerging as an industry best practice. The higher levels of funding required to sustain the IT infrastructure, combined with the need to regularly renew assets has led many organizations to utilize a range of leasing and financing options (Pucciarelli and Waxman, 2008).

The challenge for every organization is to provide an appropriately robust IT infrastructure that facilitates business processes and recommends effective tools for communicating and collaborating while minimizing total cost. It is noted that optimum solution to this complex situation is for organizations to focus on maximizing the value of their IT resources collectively, as a portfolio, rather than attempting to optimize each piece of equipment separately. In this aspect, the first and most important step in this process is to establish a life-cycle model for each major category of equipment, which provides a method to establish a planned useful life; incorporate actual performance and repair information, and establish criteria regarding when equipment should be refreshed or upgraded. However, the challenge is to establish a life-cycle planning model that looks across two or three equipment cycles and minimizes the total cost for the portfolio across multiple cycles (for example, conducting portfolio analysis). By doing so, planners are challenged to consider the interaction of individual assets,

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