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Chapter II

Critical Success Factors for IT Projects

IT managers' careers will rise and fall based on their ability to deliver high quality projects on time.

(J. I. Cash, Harvard Business School)

A key factor leading to the continued failure in IT projects is the lack of identification and appreciation for all the major components of project success. Critical success factors are those things that must be done or handled properly for a project to be successful. A comprehensive model of critical success factors for IT projects permits the development of better management plans, processes, and metrics, particularly for risk, quality, and performance control. In this chapter, general critical IT success factors are identified and techniques for the management of those factors are introduced; later chapters then detail those techniques.

Definition of Success

Cost, time, and quality (often referred to as the *Iron Triangle*) have formed the prime basis for measuring project success for the last 50 years (Atkinson, 1999). However a number of authors in more recent years (Atkinson, 1999; Brandon, 2004; DeLone & McLean, 1992; Lim & Mohamed, 1999; Morris & Hough, 1987; Pinto & Slevin, 1998;) have suggested that other criteria are also important. Some of these other criteria may be less quantitative, more difficult to measure, and some of the criteria may be temporary in that their values may be much more important at some points in the project.

So what is meant by project success? Success needs to be defined *completely* so that the factors that lead to success or failure in a broad perspective can be identified. In the past, success has been too narrowly defined; this definition has typically been confined to scope, cost, and time issues. Handling these particular issues has been well addressed by methods such as earned value analysis (EVA), which have proven successful for accurate performance measurement and control (Brandon, 1999; Fleming & Koppelman, 1994, 1998); earned value is specifically addressed in later chapters of this book.

Originally, Schultz and Slevin (1979) discussed overall implementation success and identified three dimensions to success: technical (Does it work?), organizational validity (Is it what the users want?), and organizational effectiveness (Is it a cost effective solution?). Pinto and Slevin (1998) presented a widely used "10 Factor Model" for success factors involving project mission, management support, planning, client consultation, personnel, technical tasks, client acceptance, project control, project communication, and handling unforeseen issues (Pinto & Millett, 1999; Pinto & Slevin, 1992). Hawkins (2004) determined that the most critical success factors for ERP IT projects were adequate resources, shared and well communicated business justification, open communications, participation by all relevant levels of management, visible and continuous executive sponsorship, being in touch with those most affected, preimplementation training, and structured change management.

Klastorin (2004) illustrated project success in broader terms with the example of the movie *Titanic* (Paramount Pictures, 1997). When that movie was release in 1997, it was well behind schedule and cost almost twice the planned amount. It was, however, the first movie in history to gross over $1 billion, and it received the best picture award for that year.

Lim and Mohamed (1999) also raised the question of "What is a successful project?" and noted that different stakeholders involved with the same project may have different opinions about a project's success. One of their examples concerned the construction of a shopping center that was eventually completed to match the required quality standard, however with significant cost and time overruns. Some stakeholders were very unhappy, depending upon the type of contracts involved and who contractually bears the burden of the cost overruns (i.e., who pays for cost overruns). Other stakeholders (such as mall customers and the merchants renting space in the mall) were all pleased and saw the project as a great success. Lim and Mohamed defined two perspectives, the macro perspective, which involves all the stakeholders, and the micro perspective, which involves only the construction parties such as the developer and contractor(s). The macro perspective is relevant for all phases of a project from conceptualization, through construction, and then operation. The micro perspective is most relevant for the construction phase.

Completion and Satisfaction Criteria

Lim and Mohamed (1999) also defined two types of success criteria: completion and satisfaction. *Completion criteria* include contract-related items such as cost, time, and