Chapter III

The IT Evaluation and Benefits Management Life Cycle

Judy McKay and Peter Marshall

Edith Cowan University, Australia

INTRODUCTION

It appears that somewhat of a dichotomy exists in many contemporary organisations with respect to the question of investment in information and particularly in information technology (IT). On the one hand, discussions of the new information-based economy and the promise of the new e-business domain leads inevitably to enormous faith being placed in IT, or perhaps more accurately, on the critical, appropriate utilisation of IT to deliver business benefits. Such faith is illustrated by quotes such as: "Across all industries, information and the technology that delivers it have become critical, strategic assets for business firms and their managers" (Laudon and Laudon, 2000). But such enthusiasm is tempered by another view or concern that IT is not delivering on its promises, that it is *"oversold and undelivered"* (Earl, 1994), and that demonstrating the business value of IT investment is difficult in many instances. This concern that managers do not perceive that they are deriving value for money when it comes to IT investments is troubling when information and IT are often presented as the very backbone of the new economy. Such cynicism is reflected in quotes such as: *"There are many different ways to ruin a company. Speculation is the fastest, IT is the most reliable"* (Kempis et al., 1999).

Why do we experience such conflicting attitudes? Why is there so often a gap between aspirations with respect to IT, and the reality of IT implementations in many organisations? More importantly, can a sensible way forward be found, such that managers can develop greater confidence in their IT investment decisions?

Recent research suggests that an alarming proportion of companies (49%) are underperforming in both dimensions of efficiency and effectiveness of IT utilisation (Kempis et al., 1999). Yet in many organisations, investment in IT represents a large proportion of capital outlay, and indeed, IT expenditures often represent the fastest growing category of investment for the organisation (Strassmann, 1997). Thus it seems reasonable to conclude that IT assets (in terms of computer hardware, software, telecommunications facilities and human knowledge capital) are very significant, and therefore entitled to thoughtful management and careful attention to their value and contribution, and return to the organisation (Willcocks, 1994). However, concerns are all too frequently voiced by senior management about the size of their firm's investment in IT, and more specifically, about whether the firm

enjoys adequate returns on this investment (Willcocks, 1996). For example, there is some evidence which suggests that large-scale IT deployment has resulted in replacing old problems with new ones, and that overall, introducing IT can be a huge disappointment since unexpected difficulties and failures are regularly encountered and expected business benefits are frequently not realised (Hochstrasser and Griffiths, 1991; Serle, 1994). Furthermore, several studies point toward fairly static productivity in business despite the rising IT expenditure (Attwell, 1996; Brynjolfsson, 1993; Cavell, 1997; Hochstrasser, 1993; King, 1996; Lillrank et al., 1998; Rai et al., 1997; Sutherland, 1994), giving rise to the notion of a 'productivity paradox' with respect to IT, and suggesting that despite large investments in IT over many years, it has been difficult to determine where the IT benefits have actually occurred, if indeed there have been any (Smyrk, 1994; Willcocks and Lester, 1997). The situation remains somewhat confusing for senior management, as there are conflicting results from research conducted in this area. While arguments are expressed suggesting that IT investment produces negligible benefits, (Weill and Olsen, 1989; Serle, 1994; Strassmann, 1997), there are also views expressed suggesting a marked positive correlation between IT investment and organisational performance (Bender, 1986; Delone and Weill, 1990).

Further research will no doubt help to clarify the situation. However until such time, management faces some real dilemmas with respect to IT. Firstly, for competitive reasons, organisations can rarely exercise a choice *not* to invest substantially in IT, even when economically they cannot find sufficient justification, and current evaluation practice cannot provide strong grounds for making the investment. Secondly, as IT infrastructure becomes an inextricable part of the organisation's processes and structures, it becomes increasingly difficult to separate out the impact of IT (both positive and negative) from that of other assets and activities. Thirdly, it would appear that comparatively few senior executives feel that they understand IT adequately, despite high levels of expenditure (Sprague and McNurlin, 1993; Willcocks and Lester, 1997). The conclusion must be drawn, therefore, that despite misgivings about return on investment and limited understanding, senior management continues to feel pressured into significant investment in IT (McKague, 1998).

A number of reasons can be posited as to why there are concerns and perceptions of an inadequate rate of return on investment in IT. Firstly, it could be that there has been an inappropriate investment in and use of information, information systems (IS) and IT in organisations, and hence concerns about the value of such investments. One often cited example of this stems from a failure to link IS/IT investments with business objectives and strategy initiatives (Edwards et al., 1995; Hochstrasser and Griffiths, 1991). Alternatively, it could be symptomatic of a lack of, or ineffective, business and/or IS/IT planning. Over time, a failure to achieve alignment of IS/IT strategies and business strategies would be argued to contribute to disappointing perceptions of IT's contribution to business performance.

Secondly, it could be that current evaluation processes are either inadequate (or nonexistent in some organisations), or that inappropriate evaluation techniques are being used (Willcocks and Lester, 1997). Perhaps a lack of confidence in the tools available leads to less than satisfactory practices. Nonetheless, if evaluation practice and procedures are inadequate, this may lead to calls for improved tools, and improved practice. Indeed, this has been the case in the IS literature (Remenyi et al., 1997), and in recent years, a proliferation in the nature and number of tools available for evaluation of IT investment has been witnessed (for example, the Balanced Scorecard (Kaplan and Norton, 1996; Olve et al., 1999), IT Investment Mapping (Peters 1994; 1996) and the Evaluation Life Cycle (Willcocks and Lester, 1997). This would be hoped to lead to improvements in practice, and for managers to be

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