Conceptualising Information Systems Planning Across Strategic Business Networks

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Given the pervasiveness and importance of information technology (IT) in modern organisations, it is somewhat surprising that senior management often feel unsure about the business value of their IT investment. It is sometimes suggested that more careful planning of the IT resource and a more deliberate intention to align IT strategies and investments with business strategies may help ensure an adequate return on investment. The authors of this paper accept this premise. However, of interest and concern, is the issue of whether current approaches to strategic information systems planning (SISP) have kept pace with contemporary business environments. The argument that will be developed in this paper will suggest that this is not the case: that current approaches to SISP are somewhat lacking and inadequate in the increasingly interconnected business environments which are currently emerging. In addition, the authors will present a revised framework for SISP within the dynamic environment of dynamic trading networks or of what will be referred to as strategic business networks (SBNs).

INTRODUCTION

As the use of computers and telecommunications have changed over time, so too have the approaches to planning the utilisation of an organisation’s information, information systems (IS), and information technology (IT). The portfolios of information systems suitable to an era of inward-focused automation of basic activities are unlikely to be suited to an age which focusses on information to support executive decision making, or to an age where a major role of IS is to connect the organisation to other organisations in the business environment. Thus, the business and IS/IT planning approaches that were appropriate in the era of hierarchical integrated organisations of the 1960s are unlikely to be appropriate in the emerging, interconnected business environments of the 1990s and the new millennium, composed of highly interdependent firms each focussing on core competencies, and increasingly dependent on IS/IT to support and manage core business activities. There are a number of factors in contemporary business environments that indicate a need for new forms of business and IS/IT planning. One of these factors is the growth in the number and complexity of interorganisational systems (IOS) (Applegate, et al., 1996; Konysnki, 1996; Tapscott, 1995) which as their name implies, stretch between two or more organisations with distinct and probably different structures, strategies, business processes, IT infrastructures and organisational cultures. Another factor centres on the business realities and philosophies concerning extended enterprises with important alliances and linkages to suppliers and business partners (Konysnki, 1996; Tapscott, 1995). These factors, together with the significant changes involving globalisation, electronic commerce, new technological developments, and the like, mean that new approaches to planning and envisioning the future of organisations that are appropriate to and effective in contemporary business environments are critically needed.

New approaches to planning, both business and IS/IT, seem to be lagging behind both contemporary business practice and thinking. While it may have almost become fashionable in some quarters to suggest that businesses should not indulge in planning at all (suggested in Allaire and Firsrotu, 1989), the argument could be made that the extreme volatility and uncertainty that characterise modern business environments imply an even greater need for some form of strategic thinking and planning. Claims may be made that the whole notion of planning is an anathema in contemporary business environments, suggesting that the need for responsiveness, flexibility, and agility, so often touted as the hallmarks of success in the new ‘e-environment’ of business, are the antithesis of formal planning. Such planning is typically dismissed as being too ponderous and bureaucratic, and too
much based on an unchanging, forecastable future to be of much help (Allaire and Firsorotu, 1989). However, there is little empirical evidence offered to support such claims, and indeed arguments could be raised to suggest that unplanned, whimsical, capricious decision making with respect to future directions is just as damaging as more traditional, bureaucratic modes of planning.

This paper focuses on the task of developing an IS/IT planning framework relevant for the new millennium. The authors note that while there has been some work done on planning IOS (Applegate et al., 1996; Konsynski, 1996), no overall approach to IS/IT planning has been developed for enterprises with increasingly fuzzy organisational boundaries and many vital interconnections among an ecology of interdependent organisations.

**EVOLUTION OF INFORMATION SYSTEMS PLANNING IN ORGANISATIONS**

For the purposes of this paper, the authors adopt the view that SISP involves planning to achieve the optimal impact from information, IS and IT in an organisation. The authors concur with the opinion of Wilson (1989) who writes that “an IS strategy brings together the business aims of the company, an understanding of the information needed to support those aims, and the implementation of computer systems to provide that information. It is a plan for the development of systems towards some future vision of the role of IS in the organisation.”

The evolution of IS planning is somewhat linked to the spread and development of computer-based IS organisations. Ward and Griffiths (1996) identify three eras or stages of computing in organisations: the first was the data processing (DP) era, dating back to the 1960s, where the emphasis was primarily on automating basic business transactions and hence on achieving efficiency gains for the organisation. Typically, this process of automation took place function by function, and thus notions of planning were primarily based on a project-by-project basis (Ward and Griffiths, 1996), with systems being developed according to economic criteria with little regard to other related systems (Wiseman, 1985; Somogyi and Galliers, 1987). Thus fragmented pockets of automation developed in organisations, and this in turn led to subsequent planning efforts directed towards developing interfaces between these disparate systems (Ward and Griffiths, 1996).

The deployment of IT was generally in the category of “localised exploitation” (Venkatraman, 1998).

As more data became stored across the organisation and with the advent of more flexible and user-friendly tools, managers were empowered to access data and manipulate it to suit their own needs, through what were called management information systems (MIS). Improving the effectiveness of managerial performance and decision making was highlighted, with IS planning focussing more on developing a portfolio of information systems that supported and facilitated management decision making and the effective monitoring and control of employee activities, as well as continuing the task of business process automation characteristic of the DP era. In addition, IS planning came to involve the development of organisational policies to prioritise organisational information requirements and to coordinate the roles of empowered end users and the IT department in an increasingly complex IT environment (Ward and Griffiths, 1996). IS planning was thus concerned with an explicit attempt to integrate at both a technical and informational level, and thus changes envisaged for the organisation would involve elements of internal integration (Venkatraman, 1998).

It is important to note that planning during both the DP and MIS eras was primarily internally oriented (Remenyi, 1991).

In addition to existing DP and MIS-type systems, the 1980s and 1990s saw the advent of strategic IS (SIS), systems geared to improving an organisation’s competitive position, to changing the way business is conducted, and/or to establishing close links to business partners and customers (Turban, 1999). SIS are viewed as flexible, externally focussed, and driven by business initiatives and requirements (Somogyi and Galliers, 1987). The emphasis in planning thus shifts to understanding customer requirements and the business environment, with efforts directed to aligning IT efforts with the articulated business strategy. Thus there was a shift in ISP from essentially planning basic support services using IT, to recognising the potential of IT to offer competitive advantage and relying on ISP as a key enabling factor in the achievement of business strategy (Premkumar and King, 1991; Peppard, 1993; Tozer, 1996). Another important shift involved the recognition that process design considerations would often be an essential aspect of the business strategy-IS strategy nexus, with the transformational impacts of IT becoming more evident.

Thus SISP during the SIS era changed significantly. Although it was still primarily internally focussed, for the first time, planners were encouraged to look outwards from their organisation into the external business and IT environments. The external environments were believed to offer insights into appropriate developments to protect, defend and reposition the organisation, and also to take advantage of particular opportunities that may be available. External forces could sometimes even have the effect of initiating an investment decision. ISP was now underpinned by the recognition that business success in the modern business environment might now be contingent upon strategic and appropriate IS/IT investments (Earl, 1993; Peppard, 1993; Tozer, 1996), with particular consideration given to the role of IT in effecting transformation of existing business processes (Venkatraman, 1998). This evolutionary process of SISP is illustrated in Figure 1. It is worth noting in passing that although SISP planners thus made gestures of concern regarding the external environment, they did not usually or
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