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Strategic Information Systems Planning in the Virtual Organisation

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Introduction

To claim that a paradigm shift is occurring with respect to strategic information systems planning (SISP) is perhaps overstating the case, but there appears to be significant, fundamental changes occurring to the scope and importance of SISP in modern organisations. These changes are driven by a number of factors. With important concepts such as globalisation come opportunities for growth and expansion, but also the threat and challenge of increased competition from previously unexpected sources. Thus, new management strategies, new organisational forms and renewed thinking about the nature of competition, collaboration and cooperation all emerge in response to changes in the business environment. A major driver of these changes has been the development and rapid diffusion of telecommunications technologies, which have, in a comparatively short period of time, both driven and facilitated communication and connections within organisations, and between an organisation and its suppliers, customers and business partners.

The effect of these communication technologies, however, has been far more reaching than simply to connect electronically a number of fairly traditionally-structured organisations. This has indeed occurred. But these technologies have also facilitated the emergence of a range of new organisational forms and structures, which are often described under the umbrella term ‘virtual organisations’ (Burn et al. 1999, Marshall et al. 1999). What seems to typify the virtual organisation is a degree of reliance on the internet, WWW, and/or other telecommunications technologies for facilitating core business transactions and activities, some degree of reliance on outsourcing of business activity, and the key notion of flexibility or agility in management style and strategy, the idea that an organisation can respond rapidly to change in its business environment. IT is often seen as an important coordinating and facilitating mechanism in such organisations. The authors would argue that these changes have profound implications for SISP in these virtual organisations.

The Evolution of Strategic Information Systems Planning

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 SISP can be somewhat linked to the spread and development of computer-based IS in organisations. Ward and Griffiths (1996) identify three eras 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 based on economic criteria with little regard to other related systems (Somogyi and Galliers 1994). Thus developed fragmented pockets of automation, with subsequent planning efforts directed towards developing interfaces between these disparate systems (Ward and Griffiths 1996).

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 executive 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, it involved 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). Planning during both the DP and MIS eras was, however, primarily internally orientated (Remenyi 1991).

In addition to existing DP and MIS-type systems, the 1980s and 1990s have seen 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 (Ward and Griffiths 1996). SIS are viewed as flexible, externally focussed, and driven by
business initiatives and requirements (Galliers and Somogyi 1987, in Ward and Griffiths 1996). 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 has been a shift in SISP from essentially planning basic support services using IT, to recognising the potential of IT to offer competitive advantage and relying on SISP as a key enabling factor in the achievement of business strategy (Premkumar and King 1992).

This evolutionary process in SISP is illustrated in Figure 1.

Strategic Information Systems Planning for Virtual Organisations

While the SISP literature written during the 1980s and early 1990s did emphasis the external focus of SIS (Callon 1996, McGee and Prusak 1993, Galliers and Sutherland 1991), there was a definite sense in which SISP remained primarily an internal activity of organisations acting largely in isolation. Various methods, tools and techniques used to guide SISP processes involved members of an organisation scanning their external business environment (for opportunities and threats), in developing an understanding of their customers’ needs and values (with the view to developing systems to provide real benefits to customers), to considering their business strategies (with a view to using IT to help achieve desired objectives and goals), and so on (see Remenyi 1991, for example). Thus, SISP activity acknowledged the external business & IT environment (Ward and Griffiths 1996) and hence became more outward looking, without too much consideration of the potential of various characteristics of the virtual organisation (flexible, temporary structures, heavy reliance on outsourcing of various functions and activities, and interorganisational business processes, for example) to make fundamental changes to the IS requirements of a network of associated organisations. In practice, some consultants sought involvement of external stakeholders in the SISP process, but again this seems to have been geared to ensure that the business strategy and IT initiatives of the organisation were indeed targetted towards value-adding for these various stakeholder groups.

There has been no real sense in which SISP has been viewed or presented as an interorganisational activity, where SISP is taking place simultaneously in a number of organisations whose operations have become highly interdependent and interconnected. With the virtual organisation concept, there seems to be a distinct sense in which SISP cannot sensibly be undertaken in one part of the ‘organism’ or ‘ecosystem’ (Moore 1996, in Tapscott et al. 1998) without also being conducted in other parts of the organism at much the same time. Admittedly some ‘big’ players still use market dominance to stretch their systems outwards into other, smaller players in an industry, simply through enforcing their adoption and compliance, but electronic commerce networks and marketplaces of interconnected small and medium enterprises imply that these might be the exception rather than the norm. Figure 2 is an attempt to represent this notion.
If, as some suggest, (see Goldman et al. 1995, Metes et al. 1998, for example), the model of the virtual organisation or the agile organisation becomes more prevalent, then there are important ramifications for SISP. Notions of organisational boundaries blur, implying that notions of corporate ownership of particular databases may need to be reconsidered, as must the concept of corporate data as an important resource. So too must concepts of business processes change. If organisational boundaries become more 'rubbery' and porous than previously was the case, concepts of internal and external processes, and hence ownership of and responsibility for business processes change. If simultaneously both loose and tight linkages are sought to our suppliers and business partners, to satellite entities to whom former activities have been outsourced, and to our customers, and if we also rely heavily on IT to communicate, coordinate and control activities in this organic structure, then it seems totally inappropriate to continue to regard SISP as something done within a single organisation for reasons of efficiency, effectiveness and competitive advantage, even if this is accomplished through peeping outwards into the external environment.

This paper does not address the issue of how this change in thinking about and performing SISP is to be achieved. But clearly what is being referred to here is no simple or trivial matter. It requires some fundamental rethinking about competition and what it means to succeed, and also about the social, political and cultural value that has been ascribed to the possession or control of information. The authors would argue that the symbolic value of information must not be overlooked in considering SISP for the virtual organisation. Too often the IT profession has erred in adopting an overly rationalistic model of IS in organisations and it seems imperative in an increasingly dynamic, complex and interconnected world that this mistake is not repeated again.