Strategic information systems planning

Strategic information systems planning is a crucial component of business in the 21st century. From the smallest of businesses to multi-national corporations, successful use of IT and IS drive fundamental business processes, help business cope with increasing marketplace demands, and form an integral basis for competitive advantage. This paper will discuss strategic information systems planning, information technology, information systems, and how they affect competitive advantage, business planning, and drive change. The paper will also discuss how internal, external, and environmental factors influence strategic information systems planning and the development and use of IT and IS.

According to Kearns and Lederer, information technology has assumed a critical role in many organizations, despite failures and setbacks. High dependence on IT for core business activities have made firms vulnerable to critical impairment. These facts lead Kearns and Lederer to pose several questions such as: who should use SISP, is SISP valid in environmental uncertainty, and how is business performance affected? The answers to these questions have many variables involved. Strategic information systems planning and information technology, according to Kearns and Lederer, should be investments that support business objectives and significantly affect organizational performance.

However, Teubner’s research reveals that in the financial services company he studied, SISP was almost non-existent. IT was focused on the automation of mass data processing and cost reduction, rather than a driving force behind innovation, business process evolution, and competitive advantage. On the other hand, Buhalis’ study shows how information technology and

information systems transformed the airline industry. Information communication technologies have not only changed the way the industry does business, but has completely dominated all aspects of business from sales, marketing, accounting, maintenance, and supplies, as well as management of fleet and personnel.

IT and IS even play a central role in strategic alliances and airline partnerships. Buhalis' study on the airline industry raises a question as to the dependence of companies on IT and IS. Kearns and Lederer environmental uncertainty and information intensity expands the need for IS planning and integration and increased dependence. It seems there is no way around this dependence even though disruptions can cause critical failures to core business processes. One can look to the recent FAA flight plan processing computer problems which effectively grounded all U. S.

flights to see how critically dependent the airline industry is on information communication technology. But if strategic information systems planning is so critical, how is it that there is a distinct disconnect between SISP research and functional practice? Kearns and Lederer state that critics of SISP believe that the methodologies are too rigid to accommodate a dynamic and uncertain environment. Teubner hypothesized that there was a lacking transfer of academic knowledge to practice and that there were deficiencies in the knowledge base itself. Teubner's research concluded that while practitioners were somewhat inspired by academic discussion, it failed to fulfill the challenges that they faced.

They felt it was too theoretical and did not adequately address real world problems. Thus the situational and industry specific knowledge and advice of specialists and consultants is highly valued and is a preferred source of guidance over academic debate and even their own IT personnel. And what about competitive advantage? Kearns and Lederer write that competitive advantage can be achieved by using IT and IS to form organizational links with suppliers and customers, lowering costs, differentiate their products, and leverage certain unique capabilities. Buhalis found that airlines were able to use computer reservation systems to boost their sales at their competitor’s expense.

Most interestingly, as a result of the evolution of the internet and other information systems, strategic alliances, and partnerships of airlines has not only increased competition, but also increased co-operation. However, Teubner’s FSC did not use IT and IS as a catalyst for competitive advantage, but rather used it to support and sustain the competitive advantages that it already possessed. What role should IT and IS play in an organization? Kearns and Lederer believe that strategic information systems planning should integrated into business planning and be a core focus of management. However, Teubner’s FSC seemed to departmentalize IT and IS and use SISP in a reactionary implementation rather than utilize information systems as an organization wide progressive strategy. And in the case of Buhalis’ airline study, information technologies pushed the envelope of what their industry was capable of and were the catalyst behind the evolution of business planning and strategy. It seems that the role that strategic information systems planning, information technology, and information

systems play in an organization varies by industry and internal and external environmental factors.

While IT and IS may have different roles in different organizations, it seems that the goals of IT and IS are fairly consistent. Sales growth, effectiveness, quality, productivity, and most importantly, profitability are all goals that organizations want information technology to help them achieve. However, research cannot find a direct link between IT investment and any of above mentioned goals. Why then invest in information technology? Kearns and Lederer cite that some efforts have noted an indirect and complex relationship between information technology investment and financial performance. Also, they state that IT based competitive advantage comes from the lowering of product costs, creating and expanding links with customers and suppliers, and using some of the firms unique capabilities as leverage. Teubner's FSC found that massive investments in IS and IT with a focus on data processing directly added to their leading cost position.

Lastly, Buhalis' study of the airline industry showed that investments in information communication technology allowed them to reduce or eliminate dependence on intermediaries, reducing costs, and having a direct effect on their partners and strategic alliances. Clearly, while a direct link to profitability and other strategic goals may be lacking, investment in information technology and information systems has a direct and often times dramatic effect on business. So while the investments in IT and IS may not lways have clear results, their impact on business and competition is very real. One last point I would like to discuss is the impact that information systems and information technology have on consumers. As Buhalis points

out, the rise of the internet and e-commerce have radically changed the way the airlines do business. The internet has served to eliminate the middleman in the research, planning, and booking of travel and accommodations.

And to this point, airlines have made massive investments in websites and online ticketing services. IT and IS has allowed customers to take control of their experience and airlines to cut costs and deliver more options and more information. This ability of the internet and IT and IS to connect the consumer with business is not always advantageous, however. As Teubner notes, IT and IS have led to globalization and market saturation.

This leads to increased competition for firms. Those firms that are unwilling or unable to compete in a global market can find themselves negatively affected. And as Kearns and Lederer point out, these environmental factors can lead to further investment in information systems as a coping mechanism and further dependence on IT for critical business processes. While there are negatives to IT and IS, the effective use of Strategic Information Systems Planning can result in improvement of business level performance and an increase in a firm’s competitive advantage. The advantages of good SISP along with investments in IT and IS can be overwhelmingly good.

SISP, IT and IS can also be time consuming, costly and ultimately not worth the money or effort. It hinges on good IT management to analyze business needs and environmental factors to make good choices. In conclusion, Strategic Information Systems Planning, Information Technology, and Information Systems can affect competitive advantage, drive industry and

business change, and be an integral part of business planning. However, design and implementation has numerous variables and environmental influences affect almost every aspect of IT and IS planning. Ultimately, a good Strategic Information Systems Plan is unique and individual and needs to be developed independent of generalizations.