Information Systems and Strategic Planning

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Abstract – In many businesses, strategic information and system planning is a widely established method. Such businesses have in common: discussions with business strategy managers, model architecture of the general information system and projects over several years specified in the document entitled "Strategic Information System Plan." Who requires this document, understands it, and decides on the future development of information systems and how it fulfils existing business demands? Strategic information systems planning (IS) has recently been an important issue for the IS and IT deployment in business systems, both researchers and practitioners. Recent studies have indicated that IT has less influence than was predicted on the efficiency of corporate operations. The evolution of IT and IT systems may thus not only be the challenge for system analyzers and IT specialists but also one of the main issues for the top management. The effectiveness of IT delivery depends on the information system's strategic strategy.

Keywords – Strategic Planning, Information Systems, IT.

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INTRODUCTION

"To provide the opportunity to utilize IP to support the strategic business plans of the firm and to maintain an effective and efficient IT function, employed to cope with complicated business environment," says Strategic Information Systems Planning (SISP). SISP (Premkumar & King, 1994). SISP's main objectives were to improve computer user communication with IS departments, increase computer top administration support, better forecast and allocate information system resource requirements, identify opportunities for IS department enhancement, and identify new and higher reimbursement applications. As a result of the growth of goods and services in the new generation of computer technology and communication technology, investment in IS has expanded dramatically. Leading firms have spent around 1 to 2% of their income on the processing of information. In order for the changes in the wider environment to be reflected in the specific plan to acquire and deploy new systems, hence a formal approach to planning is necessary. SISP therefore assists firms to make innovative use of information systems to establish obstacles to new entries, to modify the foundation for competition, to develop new goods, to incorporate switching costs or to modify the power balance in supplier relations.

Definition of IS strategic planning

In a relatively broad literature covering this topic there is no definitive explanation of the term of "strategic information system planning." So, by evaluating the independent definitions of concepts that are part of this sintagma, we will try to provide the definition. Many writers such as Ansoff (1965), Mintzberg (1979), Quin and Mintzberg (1991), Johnson and Scholes (1993), Robson (1997) and others have been describing corporate strategy. We may state the following to summarise the core of the documents authored by such authors: The strategy decides on the timing and the method the company's total resources are used, depending on the estimate of the possible achievement of the objectives in a few years. Strategic planning reconciles the company's general resources and conditions in its surroundings with the company's demands for complying with the agreed strategy according to the description above. Brumec describes the third notion in its 1996 paper: the information system is a subsystem of an organization whose function is, at an operational, management and decision-making level, to connect processes in order to improve operational efficiency, support for good management and decision-making duality. In addition to this formal description, attention should be paid to changes occurring throughout time in the fundamental

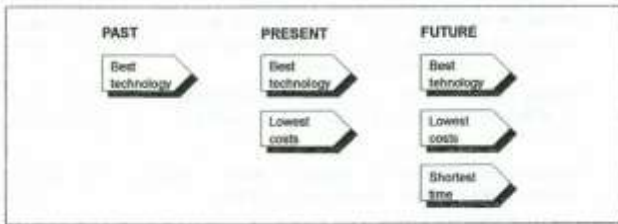content of the strategic plan for this organization as indicated in Figure 1.

Figure 1: Change in the content of organization's strategic planning

Benefits of IS Planning

Although there may be varied motivations for developing an IS strategic plan, the advantages of a strategy are comparable. The strategic planning function has greater value and advantage than many other IS tasks, as demonstrated in Figure 1. The advantages of the IS strategic plans are:

•   Enhanced communication and the interaction between the company and the IS organization - Aligning IS management, priorities with business direction and priorities

•   Effective management of the company's costly and vital asset

•   Identifying technological options for a competitive edge and increasing the company's value the information and process flow planning

•   Allocation of IS resources efficiently and effectively

•   Reduction of labor and money throughout the system life cycle

Approach to IS strategic planning and the use of IT

Strategic planning for organizational IS development as two distinct stages - defining IT strategy - though reciprocally reliant. Reasons include systematic, since in the planning and design of these two strategies distinct methodologies and procedures are employed, but also because the IS strategy is the top priority in hierarchy. While IT strategy starts with business operations and addresses information resources (equipment and applications of hardware and software), IS strategy begins with commercial targets and works with full resources. This involves an equal study of the usage and communication of conventional and computer technologies, approaches to IS development and organizational measures for the management of whole business operations.

The potential relevance for an organization of the IT and computer-supported IS should be determined in a Strategic Development Plan. There are certain objective criteria however discord between the objective significance and the subjective sentiments of the ISIIT expert may cause numerous disappointments and the failure to use ITs without respecting that aspect.

The role of CASE-tools in IS strategic planning

For IS strategic planning formalized processes, the various approaches and approaches may be applied. Some of the systems are used to design and create ISs in information professions, which is why they are incorporated into so-called "Front-end CASE" tools (or Upper CASSE). We may thus argue that this class of CASE-tools is duplicated:

1.   Formalizing IS/IT strategy planning approaches and procedures.

2.   Assistance in the design and development of complicated ISs. There was a lot published about the theoretical and practical function and the technique of employing CASE-tools in reference to the second issue. We will thus address the likely function of the CASE instruments in relation to the first issue in further detail.

More extensive comparative research of the more accessible "Upper CASE tools" demonstrates that none of them have incorporated all the methodologies and procedures that would entirely correspond to the level of complexity of these criteria. Simultaneously, in most cases, roots of one or all of these methodologies already exist and may be expanded to more suitable for IS strategic planning (principally oriented at unique demands of IS designers).

Planning the Flow of Information and Processes

Information is a precious resource, and the company's worth must be maximized. In addition to improving the quality and accuracy of information, organizing and regulating the flow of information across the business helps decrease work, redundancy and incoherence. If systems expand hazardously over time, information islands can occur and the different systems can be maintained. It is vital to widen the IS planning process to examine the customers and other stakeholders using the technology outside in order to enhance process flow. All stakeholders, including consumers, suppliers and partners, will make use of the planning process. For each stakeholder, the process utilized to be aware of the business, to engage in business, and to conclude business must be identified and improved.

Dr. Abdussalam Elmassri Elssaadi[1]* Dr. Naser Abdulhameed Farhat[2]

Key Issues of Information System Strategic Plan

Future development and operation of information system depend on a variety of factors: [1][15][16]

.Manager's strategic orientation, which determines the direction and priorities of the company's future development,

• Future organization of the company (functional and with regard to processes),

• Strategic requirements of users, which determine strategic business rules, important limitations, and approximate functionality of information solutions, which will support their internal and external value chains,

• Spatial diversification of business activities, which influence computer architecture,

• Available information technology, which determines possible computer architecture within a certain temporal framework,

• Global view on company data, which are presented in the strategic plan in the form of strategic – global data model,

• Available information solutions on the market,

• Comparison of information support provided by the competition,

LITERATURE REVIEW

In the previous three decades, research at SISP has through several stages. The initial part of the investigation consisted of those systems and technologies used to boost operational efficiency. This has included research on improved user communication, user need identification, systems design and development, user participation and computer-based IT systems deployment. A number of frameworks have evolved in the first seventies, including Mason & Mitraff (1973) Chervany etal. (1971), Lucas (1973). In the aim of efficiency Ives et al (1980) developed an extensive taxonomy of the environmental factors, information system variables and IS process factors.

IS assistance provided led to two fundamental purposes (Cooper, 1988): operation of the system and modification of the system. Operation of the systems involves the functioning of the information system and generates support for information. The modification in the system entails altering the existing information system in order to ensure successful management, and results in changes in information support. The second function clearly takes into account the long-standing IS fury plans in relation to

efficiency and efficiency. Any long-term planning for IS focused solely on establishing IS objectives with little information on the other problems relating to system planning and execution.

Strategic Advantage of SISP

At the beginning of the 1980s, IS focused on strategic relevance for the company. The impact of utilising IS to achieve functional efficiency led to a surge in employing IS to benefit strategically. Using IS for the strategic benefit (Luftman et al, 1993) suggests that applying IS will allow strategies for improving key elements for success, core competences and/or both. In this regard, IS and the technology behind it complement the selected approach to attain the goals. The strategic advantage is also the IS function's capacity to influence the decisions that establish the organization's architecture and operations.

As the organizational need for IT and the experience of IS management increased, the management of business driven SISP became increasingly concerned, taking account of the organization's strategic needs. The Harvard University Information Systems colloquium in 1984 highlighted four main topics for IS research, the Management Support Systems, Information Technology Systems and the Organization, as well as the steering committee on IS research (McFarlan 1985). Information Systems Resource and Information Systems and Corporate Strategy Management. Not only did these topics highlight actual challenges, but they also considered the changing and increasing role IT plays in the competitive landscape.

Competitive Advantage through It

Several writers have recognised the prospects for the use of informational technology to build a competitive edge (Wiseman & MacMillan 1984; Ives and Learmonth 1984; Porter & Miller 1985; Runge & Earl 1988). The usage of the value added chain to characterize the possible prospects coming from information technology has been presented by Rockart and Scott Morton (1984). In the late eighties, however, IT concern for competitive advantages began (Grindley, 1990). Increasingly, senior managers, strategic planners, and IS Managers have focused on identifying potential for strategic and competitive advantage by means of information systems. The key difference was that the focus changed from efficiency to efficiency and competitiveness.

For an industry to comprehend competition, consumers, suppliers, replacement manufacturing companies and possible entrants must be considered beyond the existing rivals. Companies usually attempt to influence their competition dynamics to acquire competitive advantages

Dr. Abdussalam Elmassri Elssaadi[1]* Dr. Naser Abdulhameed Farhat[2]

compared to competitors. Some general tactics can be used for this purpose. As two such tactics, Porter mentioned the management of costs and product differentiation. He developed a third method, namely the formation of niche markets, comparable to the concept of product diversification but focused on a specialized market. Other tactics may include the exploitation of possible synergies with clients or suppliers of a company or the concept of profiting through negotiation over clients and suppliers.

Operational Efficiency and Functional Effectiveness

The traditional emphasis of IT applications and the support of the company's internal strategy (King & Sabherwal, 1992) is the operational enhancement systems. These systems may also help the company's competitive position in so much as the system can turn into a competitive advantage in terms of innovation for the industry(Sampler, 1998). Usually this necessitates a new application type in their industry, which is applied to the company's core functional areas. In supporting organizational structure and management procedures, operational efficiency opportunities are presented. While it is better to understand possibilities in improving operational efficiency and efficiency, they are also the least studied component of competitive strategy in many organizations (Galliers, 1993).

Co-Operative Information Systems

In the context of inter-organizational information systems, the notion of enhancing operational efficiency and functionality may be extended beyond the limits of a single enterprise. In general, competing tactics to leverage synergy with customers or suppliers focus on greater coordination. Better coordination may be achieved using information systems in which two different companies operate in several functional areas. A company might, for example, integrate a company's production plarming system with its suppliers' order entry system to minimize inventory levels and save cycle time.

Product Innovation

Information technology offers companies new product innovation opportunities (King & Sabherwal, 1992). Information technologies are incorporated into current goods to boost their value in numerous sectors, ranging from car to consumer electronics. Technology provides the creation and delivery vehicle for new service-based goods in several industries, such as banking, insurance and consultancy. The technology may be an essential way to distinguish existing items and build new and distinctive items (Powell & Micallef, 1997). This is a key area with direct effects on the profitability of the organization. When the product's information

intensity is high, application of IT for product innovation is important.

Creation of Bargaining Advantage against Customers And Suppliers

Demos (1986) suggest that uruques and useful information or services are a significant approach to improve the negotiating position regarding clients. This involves major changes in the structure of the client and hence it is tough to convert to a rival. IT can provide novel, previously unavailable and possibly extremely valuable information or service offers to its clients.

Organizations must understand how and when ISS creates sufficient dependence to force a cost switch and how possible possibilities might be found for generating new information services.

Critical Dimensions of SIS Planning and Implementation

Different aspects that impact the overall performance of the SIS method have been described by planning and execution. Significant literature on the important elements of SIS planning and implementation is available. A literature review shows that some writers address the background, process and result factors (Lederer & Sethi, 1992). The generic set of factors affecting SISP have been identified by King & Teo (1994). A series of characteristics that contribute to SISP performance is presented by Segars et al (1998).

Then the variables are organized into five key dimensions. Firstly, the SISP's context dimension, which covers widely environmental and organizational variables affecting the SISP. Secondly, the dimension of the process that characterizes the approach taken by a company in its IS strategy development. Thirdly, the content dimension takes into account the IS strategy components and direction. Fourthly, in the outcome dimension, the IS strategy is implemented and the SISP's success is measured.

SISP in the Indian Context

SISP research is at its earliest stage in the Indian environment. Karim et al. (1994) outlined the rising importance of IT in the Indian setting during their conceptual work and offered a six-step method for the acquisition of company IS. However, the context, process, content and result components of SISP could not be included in this conceptual study. In strategic IS choices, Renganathan (1998) investigated rationality and politics. In making strategic IS decisions, he investigated the effects of the rationality and political conduct of the IS roles. This study gave a list of background factors,

Dr. Abdussalam Elmassri Elssaadi[1]* Dr. Naser Abdulhameed Farhat[2]

processes and results affecting people owing to lack of rationality and political behavior.

Two crucial situations have now been found after conversations and interviews with top IT consultants, technology suppliers and IT management companies. Firstly, each market and product faces competition and firms want to use IT to leverage competitive advantages. Second, the problem of increasing the IS function in order to fulfill expanding business value demands. As causes for the current condition of IS in Indian organizations, the following essential features emerge:

1. For a long time, IT has been used to create functional and process benefits. Recently, IT is being considered as a strategic resource.

2. Traditionally IS function is viewed as a support function. Commitment of the top management for IS, in terms of promoting and maintaining IS organization, and supporting IS projects has been low.

3. Except in a few of the leading organizations, the culture of qualifying and quantifying the benefits of is not prevalent.

OBJECTIVES OF THE STUDY

• To get a better understanding of Indian enterprises' information systems and strategic planning methods, as well as the utilization of IS planning frameworks and models.

• To identify the major factors in information systems and strategic planning, as well as their influence and alignment with business planning, and to quantify their impact.

• To measure outcomes of the major variables, develop propositions for offering knowledge of information systems and strategic planning practice.

• To provide a viable framework that incorporates key process and content characteristics.

RESEARCH METHODOLOGY

Constant technical advances and advancements define the Information Systems (IS) field. The use of information technology for commercial purposes is likewise evolving at a rapid rate. Many developments in IT and its applications in business and industry have occurred in the recent decade. Because of the fast changes in IT and organizational structures, a better knowledge of how IT may be used to improve organizational performance is required. The use of information technology for strategic and competitive advantage has sparked study in this field for the past decade. Process capability, functional efficiency, and organizational effectiveness are all areas of interest in IS planning research. However, the greatest degree of planning for IS is strategic planning, which focuses on methods to leverage IT for strategic and competitive advantage (Venkatraman, 1985).

Research Design

Based on the examples and the requirements of the present study, case research strategy is considered. The essential components of case research design include the following:

1. Study questions

2. Units of analysis

3. Logic linking the data to the study questions

4. Criteria for interpreting the findings

The Unit of Analysis

The analysis unit involves an investigated one to two planning periods of the context, the process, the content and the results of SISP planning and execution. The research also examines the procedures and responsibilities associated with planning and executing the IS including, the organizational competitive position, a business palming methodology and an assessment of IS performance, as the use of information and the underlying technology is overarching.

Site Selection

Initially, three sites for this study are selected based on the high level of information in the product or in the supply chain (Porter & Miller, 1985). The three cases are made up of Indian IT user organizations' production, media, publishing and medical sectors. However, individual firms are picked within the aforesaid sectors on the basis of their leadership in this category. One of the top three organizations in the particular industrial category is selected for the case studies. Second, the degree of IT applications is utilized to determine the site. These firms are recognized for their successes in leveraging IT to profit from business in business journals and in IT periodicals. They are often mentioned for their high IT applications by IT suppliers, professionals and academics. Third, IT organizations such as LAN / WAN that connect many sites and execute on-line applications are chosen.

Dr. Abdussalam Elmassri Elssaadi[1]* Dr. Naser Abdulhameed Farhat[2]

Data Collection

One of the essential components in case research is the linkage of data to the study parameters. In case study, many techniques of data collecting are generally used. Evidence from two or more sources will ideally converge to support the results of the investigation. Yin (1994) highlights a number of evidence sources that function well in case research.

- **Documentation**- written material such as memoranda, newspaper clippings, formal reports etc.

- **Archival of records** - organization charts, service, financial or personnel records.

- **Interviews**- these may be structured or unstructured.

- **Direct Observation**-absorbing and noting details and actions of the key personnel.

- **Physical artifacts**- getting the insights into the technical operations of working IT applications and physical systems used in the information processing and communication.

CONCLUSION

This research constitutes a serious Endeavour to comprehend the IT and strategic planning systems. In this empirical and exploratory study, based on case studies, the major variables that impact on IS strategy creation have been identified and measured. Competition is the main element forcing firms to investigate the use of IT for greater advantages. However, the breadth of strategic IS planning is determined by collaborative IS vision and an awareness of IT needs for competitive benefits. Technology availability in terms of industry-specific technologies, legislative framework for technology application and technology costs appears to have a direct connection with the scope for IT to be used for competitive benefit. The stability and reporting structure of the IS organization, which positively contributes to the success of SIS planning and implementation, play a crucial role in the involvement of the top management process and improved user engagement. IS organization planning processes that allow less formal planning approaches create potential for power/political challenges. This has an influence on the connection between IS strategies and business strategies, which means that senior managers do not adopt IS strategies. Previous good IT and strategic planning systems. Large-scale IS-solutions have affected the management in the succeeding planning periods in order to fulfill competitive criteria. This also leads to the IS strategy process formalization and the connection between I S Planning and Business Planning.

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