LEVERAGING ORGANIZATIONAL COMPETITIVENESS THROUGH THE STRATEGIC ALIGNMENT BETWEEN INFORMATION TECHNOLOGY AND THE BUSINESS

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Abstract

Whether investments in Information Technology (IT) bring tangible benefits to organizations has been the subject of considerable debate for many years (Dedrick et al., 2003.) Yet, more and more organizations have come to realize the positive impact that IT can have on the many aspects of running and managing the organization (Shin, 1997.) Specifically, IT plays a critical role in successful strategic management and planning (Hartono et al. 2003). This research effort is aimed at illustrating the impact IT has on strategic management and planning in organizations. Describe the benefits of such impact on organizational competitiveness.

Introduction

According to Wang and Zionts (1997), organizations today are increasingly investing time and resources in an effort to implement and develop Information Systems that can help them in their efforts to manage and plan strategically. Federal Express and Citibank are examples of such organizations who have Information Technology budgets exceeding $1 billion (Lucas, 1999). Lucas (1999) goes further to indicate that such companies have made the determination that such high budgets are justified in order for them to keep up with demands of fierce competition and the new challenges a global economy. To such companies, IT is a strategic tool that has been utilized as an effective competitive weapon.

The debate over the issue of whether the investments in IT can actually bring visible benefits to the organizations is still a subject of a lot of debate in both the business and the academic worlds. Recent studies about IT investments and its impact on the strategic planning and direction of an organization have showed positive results (Mahmood & Mann, 2000). However, the issue of the high cost that comes with such investments makes some organizations reluctant to making such investments (Mahmood & Mann, 2000). Therefore, it is crucial for both IT and the business managers to be welling to and capable of dealing with justifying resources needed to harvest the positive impacts of IT on the organizations strategic planning and management (Kempis & Ringbeck, 1999).

This research paper will demonstrates the strategic impact of IT on organizations through the implementation and the utilization of Information Systems that are geared

towards helping organization plan and manage strategically. These systems are referred as Strategic Information Systems.

Overview of strategic planning

According to Hill & Jones (1998, Page 35), strategic planning is the "matching organizational objectives and capabilities to the anticipated demands of the environment so as to produce a plan of action that will assure the achievement of objectives." Furthermore, Hill & Jones (1998) indicate that strategic planning as a management process that includes four steps that help the organization to:

1. Develop clear statement of the organization's mission.
2. Identify of the organization's external partners or stakeholders.
3. Characterize of the organization's strategic goals and objectives.
4. Develop strategies to accomplish those goals and objectives

Why plan strategically?

According to Drucker (1989), unlike tactical and operational planning, strategic planning assists organizations in the effort to clarify future focus by involving key stakeholders in prioritizing activities and decision-making. Drucker (1989) indicates that the need for organizations to plan strategically does not deal with future decisions; but rather dealing with the effects and influence that present decisions will have on the future of the organization. What organizations do today must clarify their vision of the external and internal environments in order to be ready to deal with the uncertainty of the future.

Hill & Jones (1998) indicate that other approaches to strategic planning have developed over the past twenty years or so. Starting with the Management by Objective (MBO) which was a popular approach to management used widely used twenty years ago

through participation and team building. While some contemporary paradigms such as TQM provide an integrated approach to management, many effective leaders, managers and consultants utilize an even broader array of tools depending on the demands of the situation (Hill & Jones, 1998). Unquestionably, strategic planning and strategic management are among the most adaptable and widely used approaches available today

Developing a strategic planning process

According to (Thompson & Strickland, 2001), the implementation of strategic planning process consists of the following tasks:

1. Develop a Vision and Mission based on a careful analysis of the organization's internal and external environments. The analysis of the internal environment allows the organization to establish a reliable assessment of its own strengths, weaknesses, and capabilities. Such knowledge will help the organization to concentrate of a specific market in order to maximize profits. Analyzing the external environment will allow for the create the knowledge that the organization needs in order to effectively relate to its industry and its competitors, as well as producing information about other environments that play a big part in the formation of strategy such as legal, economic, social, technological, and political environments.
2. Develop long-term organizational objectives, which put into action the statements that make up the vision and mission statements while focusing on specific performance objectives. The effects and consequences are evaluated to measure the organization's progression toward its mission. Strategic as well as financial

benchmarking is helpful for comparing the organization's performance with its competition.

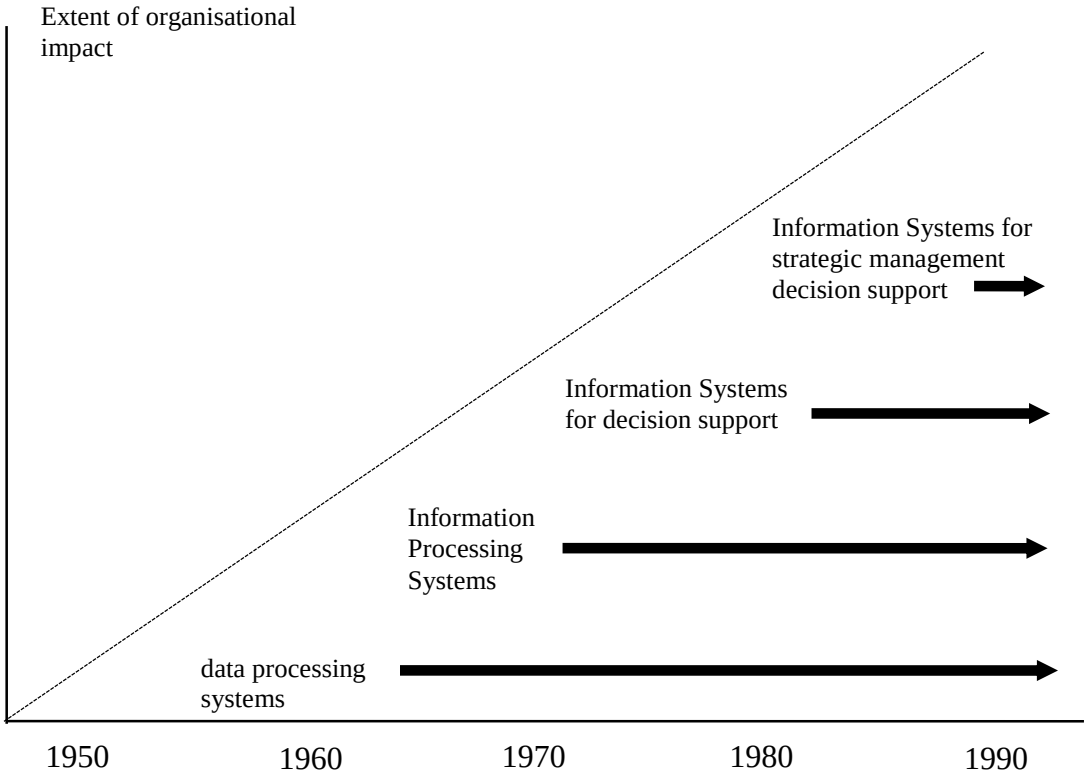
3. Create an elaborate strategy to achieve the long-term measurable goals upon which the business model will be built starting with an elaborate marketing plan. Such variables as product mix, compensation cost, and human resources are carefully considered and planned for. According to Thompson and Strickland (2001), for a business model to be profitable, it must take advantage of the increasing market opportunities while applying the organization's best internal strengths. This will boost the organization's effectiveness over its competitors, maximizing its profits in the process.
4. Management must select the alternatives they feel offer the greatest likeliness of success. Once these strategic alternatives are identified, the organization then implements a detailed and comprehensive plan of action. To accomplish that effectively, such plan must be communicated to all employees who should be rewarded and motivated to accomplish objectives that are related to the mission.
5. The organization must continue monitor the environment, measure progress toward goals, and modify the strategy to adapt to competitive forces. Management must be constantly vigilant. Changes in technology, as well as changes in the environment, will require the organization to adapt on a regular basis. In addition, missed targets may trigger the need for management to modify the strategy. Therefore, the business strategy must be flexible. Variance analysis combined with feedback and adjustments are a necessity at this stage. Strategic planning is complex, laborious, and time consuming. Accordingly, an organization must

allocate resources and time to the strategic planning process. It is worth the effort since a good game plan will hold an organization together as it pursues its mission. Now that the strategic planning process has been summarized, e-commerce will be defined and reviewed.

Strategic planning is a complicated and an extensive process that consumes substantial time and resources. Therefore, an organization must be welling to dedicate the resources and the time it takes to implement an effective and successful strategic planning process.

A brief look at the history of Information Systems

Information Technology has been a significant contributing factor in the sweeping changes that have occurred in organizational life in the late 20th. Century (Stowell, 1995).



The Impact of Information Systems in Organisation
(Avison & Shah, 1997, page 7)

Many organizational leaders have considered the utilization of information in organizations as a critical factor in assisting organizations to sustain a competitive advantage and increase the efficiency of their operations (Stowell, 1995). Information systems have helped organization achieve such efficiency by increasing the speed of information, enabling better and more effective decision making.

According to Stowell (1995), organizations utilize information systems mainly in three major areas of their operations. These are:

Data Processing Systems:

These systems are used to automate routine tasks in the organization (i.e. payroll systems, data entry systems,). These systems later evolved into the use of computers to make routine decisions for controlling some operational processes

Management Information Systems:

These systems are implemented with the objective of increasing management effectiveness by satisfying their information needs by using data from the data processing systems to produce summary information about business performance.

Strategic Information Systems:

Such systems emerged because organization were using IS/IT to change how they conducted their business with the direct intent of gaining a competitive edge (Stowell, 1995). SIS systems focus on the long term aims, objectives and goals of the organization.

Information Systems have gone through rapid changes over the last five decades, which had profound impact on the way organizations have been doing business.

Information Systems have been seen as enablers in terms of better organizational responsiveness and flexibility (Certo, & Peter, 1991).

According to Stowell (1995), traditional roles of information systems in the organization were aimed at providing more responsive and flexible methods for managing and conducting their business. Such methods have helped organizations with more efficient and effective method for processing customers' orders, more efficient method for managing inventory, and ways to network with agents and clients in order to provide better support services to them.

Information Systems generations

According to Avison and Shah. (1997), the history of computing is marked by five distinct eras or generations. These are as follows:

1st Generation: 1940's - 1950's

Systems were very large machines, that demanded specific environmental conditions since they were developed using vacuum tubes and electromagnetic relays technologies.

2nd Generation: 1950's

The processing speed of these systems were increased dramatically thanks to the invention of the transistor in 1948. This is the period that also marks the introduction of Payroll Systems

3rd Generation mid 1960's

The development of the integrated circuit board in the middle of 1960's, added even more performance improvement with the advances in computer storage and memory utilization. This has allowed for the introduction of the first true operating system

referred to as DOS (Disk Operating System). The late sixties also introduced the first generation of mainframe systems by IBM.

4th Generation: 1970's – 1980's

This is perhaps the most dramatic and accelerated era in the history of computing. Lightweight, powerful, and cheap computers, the micro-computers, were introduced. This allowed organizations to deploy these computers at many locations in the organization; therefore introducing what we refer to as Office Automation.. This era also introduced the concept of centralized computing environment through the implementations of networks that connect these mini-computers to a central processing computer. This allowed organizations to process large amounts of data by many employees simultaneously.

The late 1980's also introduced the first Personal Computer (PC). These machines were even more powerful and cheaper than mini-computers. As a result, PCs were deployed at almost every employee's desk maximizing efficiency and productivity (Weill & Olson, 1989).

5th Generation: 1990's – present

Thanks to the power and low cost of PCs, software vendors were given more and more computing power to develop software that is robust and hardware demanding. In previous generations of computers, it was the hardware that determined how powerful a software can be. In the 1990's, this concept was shifted were software now puts the demand on PC vendors to come up with more powerful machines in order to meet the demand of their software. This presented us with a race in technology so fast that PCs

that are a year old will be considered obsolete in terms of what the software demands these days (Avison & Shah, 1997).

This era in computing history has also introduced the Internet and World Wide Web. Organizations saw in the Internet a new breeding ground for their business and products. Enter the world of eCommerce and the "dot coms", which made the world a small place. With that came many challenges that we still face today such as privacy and information security (Avison & Shah, 1997).

Realizing the Impact of IS on strategic planning: What must take place first

Strategic Information Systems (SIS) help management in keying out areas where IT can sustain business initiatives and in formulating strategies for applying the appropriate technologies (Boynton & Zmud, 1987). Several frameworks proposed by Chan and Copeland (1997), to measure the contributions that can be realized by implementing SIS as a tool for effective organizational strategic planning. These frameworks make the assumption that a successful alignment between IS plan and the business plan must take place before such contributions can be realized. Such alignment is crucial to ascertain that the investment in IT accurately endorse the organization's initiative and goals (Porter, 1985).

According to Earl (1993) organizations that align business strategies with IS strategies are more likely to identify the benefits and the impact that IT can have on strategic planning. To successfully achieve such alignment, CIOs must gain an understanding of the top management's business plan by participating in the business planning process in order to bridge the gap between the business planning process and that of IS (Premkumar & King 1994). Not only that, but such participation by the CIO

dramatically enhances the understanding by top management of IS and its role in planning effective strategies for the business (Jarvenpaa & Ives, 1991). Such understanding is important for top management to gain in order to realize the worth of the high costs that come with the IS investment (Rockart, 1988).

The Impact of Information Systems on Strategic Planning

According to Earl (1993), any investment in information systems should be closely linked with the strategic direction of the organization. As a result, the rise of Strategic Information Systems (SIS) has become the most visible way in which we can see the impact of IT and IS on the strategic planning of organizations (Reponen, 1993).

A significant presumption of all information systems is that they provide up-to-date, crucial and timely information for the decision maker to utilize (Brown, 1994). The demand for such information depends on the type of decision being made. For example, the operations manager needs real time data to render effective decisions, as opposed to the strategic decision maker who would, not only rely on information, but also forecasting data which Strategic Information Systems (SIS) provide as part of their functionalities (Wiseman, 1988). Such systems have become necessary tools for strategic decision making especially in the marketing field where real-time-data related to market shifts and trends is critical in making decisions about future organizational marketing strategies and directions (Ackoff, 1988).

The definitions of SIS in the literature have been a few to say the least. This paper will, therefore, rely on defining SIS as the set of processes that supply data input, storage and retrieval, mapping and spatial analysis for data in an effort to support the organizational strategic decision making process (Grimshaw 1994).

According to Scott-Morton (1991), the strategic decision making process is considered as part of a wide array of decision making actions that take place in organizations on a daily basis. Strategic information systems are those that support or shape the competitive strategy of the business (Wiseman 1988).

One of the major impacts of IS on organizational strategic planning can be seen in the fact that IS has become the weapon of choice for many organizations that gives them such a competitive advantage (Lederer and Sethi, 1994). In the case of Southwest Airlines, and in an effort to live up to their reputation as efficient, the company developed a strategic system they call Flight Tracking System, which they refer to as Swift. Southwest Airlines developed the Swift in order to allow more than 37 dispatchers the ability to track over 2,200 daily flights (Hoffman, 1996). Hoffman indicates that SWIFT cost the company about $300,000 to develop and implement. However, the great benefits that Swift provided for the company stem from the fact that SWIFT replaced a flow sheet that is over 17 feet long which took hours to analyze (Hoffman, 1996) with a 45 seconds processing time which is more timely and accurate. According to Dave Jordan, Director of Flight Dispatch at Southwest, "We were missing opportunities to protect the customer because there was so much data to look for…" (Hoffman, 1996, Page 25). Hoffman goes on to indicate that Swift furnished more timely and accurate information for such highly important decisions such those of flight dispatch. SWIFT gave Southwest Airlines a competitive advantage over their rivals. Hoffman (1996) concludes that due the effectiveness of the decisions based on the processing power of SWIFT, Southwest Airlines has decided to further integrate SWIFT into their planning and maintenance operations.

Geographic Information Systems (GIS) is another example of SIS, and also a good indicator of the impact of Information Systems on Strategic Planning. According to Mark Darling, Director of Strategic Planning at Isuzu Motors, the accomplishments of strategic business plans should be linked to GIS. To that effort, Darling was the sponsor of the GIS project at Isuzu. The project was first launched in 1989, which had the main objective of increasing productivity. To that end, Darling envisioned reducing marketing costs by 50 million dollars through a more effective method for dealership site selection.

According to Darling (1993), his plan was dependent upon taking advantage of real-time information regarding customer geographic information provided at the dealer level. This was in an effort to align internal organizational functions to correspond with customer values. This visionary thinking which according to Darling is the essence of strategic planning.

Such geographic information is crucial in creating close relations between the customer and the organization. Darling (1993) indicates that such relations can only be developed with a thorough analysis of market segmentation which determines dealership locations. Darling indicates that such analysis can only be done effectively through the use of Information Systems, namely GIS. "It is customer segmentation, targeting, and positioning, synthesized by information technology that will be the flexible bonds to create customer value and a competitive advantage." (Darling 1993:247)

IT, Strategic planning, and competitive advantage

Henderson and Venkatraman (1999) stress the importance of involving IT in the strategic business planning process. They indicate that the successful implementation of such model will immensely improve the competitive advantages for the organization.

According to Hunt (1999), organizational competitiveness depends on the organizational ability to utilize a learning process that can uncover isolated islands of knowledge that have the ability to deliver higher organizational performance. The strategic alignment between IT and the business creates an organizational learning environment that combines business and IT knowledge in order to support business goals and objectives (Reich and Benbasat, 1996). As a result, the impact will be in the form of more effective business strategies which lead to profitability and superior competitive advantage (Hunt, 1999).

Conclusion

This research effort was mainly motivated by the need to demonstrate how Information Systems have been a key player in the strategic planning of organizations. To this effort, this research has identified Strategic Information Systems as clear example of how Information Systems have impacted organizations in a positive way. Strategic Information Systems are those systems that support the goals of the business strategy. Successful utilization of Information Systems as business strategic partner demands a detailed and deep understanding of the current business environment, and the projected organizational and financial impacts of various technologies on the business. This will help in realizing more pragmatic and realistic solutions to business problems by utilizing the capabilities and benefits of Information Systems in the most effective way possible.

Experts in the fields of IT and Strategic Planning agree that in order for organization to realize the positive impact of Information Systems on strategic planning, a successful alignment between IT and the business must take place. Towards that effort, future research will concentrate on how to effectively and strategically align IT with the

business. A key step in that direction lies in the ability of IT and business managers to effectively align the goals of IT with those of the business.

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