Student Work   Vol.4(2) June 2002

Aspects of the global information society

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1 Introduction

The information world has seen more change in recent years than ever before. The rate at which information is generated and disseminated, using state of the art technology, is a huge challenge for the business sector. The human mind is forced to cope with and continually use vast amounts of available information for the development of business organizations. As a developing country, South Africa must compete with developed countries for the same information, as it would be inappropriate for the country not to participate in the information-sharing world. Therefore, South African business organizations must take charge and put themselves in a better global position to speak the same technological language that is spoken by everybody else.

It is important to highlight the informational and the global aspects of this topic. In an abstract of the Network Paradigm, Castells (1997) looks at the economy being both informational and global. A deduction that can be made from Castells' point of view is that the competition of firms, regions or nations to generate and process electronic information enables them to participate in an information economy. The global aspect of this society incorporates the most important aspects, including financing and production.

The problem that faces South Africa is how it is going to ensure a bigger share of the global information society (GIS), as well as use available information optimally. In researching this problem, business organizations were studied because they are one of the key players in the development of South Africa. Other major players are the government and non-profit organizations.

The business sector must approach the problem of competing in the GIS in a holistic manner.

The different contributing factors must be looked at individually to determine the impact they have on the whole scenario. Therefore, in this article the information society is discussed with reference to political, economical and cultural influences. The latter the cultural aspect and how it impacts on individuals and organizations.

2 Research methods

Most South African business organizations use various types of information systems. Although each sector uses its own system and there are company-wide systems in place to manage information, some areas are still ignored and therefore prevent a solid information-driven strategy. The aim of this study was to determine whether South African organizations are using the same information systems that are used globally. The survey investigated all major businesses in South Africa.

The qualitative analysis method was used to collect data. For various reasons, including the fact that it was not easy to measure the impact of the research, the only tangible results were evident from the literature survey, which gave an indication of whether business organizations did buy into the concept of the GIS.

3 Hypotheses formulation

3.1 Null hypothesis

South African organizations have gained nothing from the concept of the global information society.

3.2 Alternate hypothesis

South African business organizations have learned from and are using the concepts of the global information society.

4 Literature survey

4.1 Influence of the information society on business organizations

In defining the information society, various factors must be taken into account, including economic, political and cultural influences. These factors must not be ignored, as they play a vital role in the world of information. A brief discussion of these factors follows below:

Economic factors
Bell (1997) cited by Salvaggio (1989:9) states that changes in the economic sector are evident. In particular, the postindustrial society is characterized by a service economy rather than a production economy. Bell's statement highlights the fact that the human aspect in the business world plays a major role. The shift from producing goods to servicing people has been marked by the advent of the customer care culture as part of the economic sector. Business organizations are now concerned about whether the service they provide meets their customers' expectations as opposed to whether people are buying their goods. This move has had an impact on the organization's internal systems and how the organization views change.

Political factors
Being part of the information society means being ready to adapt to and become a member of the global society. Castells (1989:21) mentions that when a system changes its goal (or structural principles of performance), it actually becomes a different system. Thus a process of social transformation takes place. South Africa has undergone many changes in its political structure, which has resulted in the country's operational system having to change. It has transformed itself in the past few years, with the aim of learning from the mistakes of the past to build a better country.

Cultural factors
The business culture of each organization determines its standpoint in relation to other businesses. As there is continuous development in the information society, 'we are moving into a different way of life but without full understanding of its characteristics or consequences' (Salvaggio 1989:51).

This is a true statement for any organization that wants to be part of the developing community. Information is now regarded as a basic resource for every society. It is therefore important for business organizations to identify cultural practices that do not promote progressive change.
Most definitions of an information society are concerned with quantitative measures, which fail to consider other important criteria. The shift in focus from quantitative measures to qualitative means that only relevant and up-to-date information is useful. It is of no use having loads of information that is not relevant to the user's needs. In the fundamental conceptual reformulation of the information society, five analytical criteria – technological, economic, occupational, spatial and cultural – are examined.

Salvaggio (1989:3) states that a number of authors view the dominant characteristics of an information society to be of an economic nature. It has been noted that the more advanced the technology becomes, the worse the employment status of most countries becomes. When business organizations invest in their in-house technological equipment to develop their companies, there is a decrease in the demand for people to do the jobs. Most of the jobs will be automated, hence a decrease in staff.

4.2 Extent to which South African business organizations identify with the GIS

While the information society focused on economic, political and cultural factors, the GIS focuses on the developments that have been brought about by technological changes and their impact on the business environment.

There are major business drivers behind the vast growing GIS and most South African business organizations are working towards improving themselves through these drivers. An example of such a driver is the *Employment Equity Act*, a government-endorsed system that ensures that equal employment opportunities are given to people. The drivers that are discussed in this study are quoted from Hagel and Armstrong (1997) as cited by Wendy Currie (2000:4). They are:

- Key management concepts
- Enabling technology
- Human resources
- Supplier chain management
- Information technology (IT) sourcing
- Business goal
- Management
- Technical focus
- Customer-supplier relationship

- Financial focus
- Organization structure

Key management concepts

One of the key management concepts during the 1980s was total quality management (TQM). This management system strove to combine the human aspect with processes for a better delivery system to the customer. According to Green (1999), TQM intuitively recognized the importance of bringing together organizations and individuals through teams and processes. These two elements (teams and processes) placed new emphasis on training and technologies. The training aspect of TQM comprised people, while the technology aspect comprised processes. All business organizations aimed at having these two elements (teams and processes) working side by side, if not as one unit. To achieve this, the business envolved through business process engineering, process re-engineering and organizational learning. Consequently, knowledge management and virtual organizations have become key concepts.

The current important question, as mentioned by Sveiby (2001:1), is whether knowledge that has been created by people are used optimally. How does an innovation-enhancing environment get created? Although several processes may be in place to enhance business processes, it is up to individuals to ensure that their contribution is recognized in the organization. Employees should share the knowledge they have acquired and should use it to benefit their organization.

This is a powerful driver that will enable organizations to develop and grow. Before an organization can focus on making a profit and competing, it should ensure that all its internal systems are in place. No organization can be of service to its customers if it is not well organized.

Enabling technology

The development and evolution of the World-Wide Web (WWW), Internet and e-commerce have made life easier for most business organizations and changed the way business is conducted. In South Africa, the same technology is used as in developed countries. This ensures the same business exposure as experienced by other countries. South Africa will therefore be part of the GIS and will reap some of the same benefits.

Human resources

In previous years, multi-tasking and flexibility of employees have been the main emphasis of human resource management in organizations. However, core competencies are now viewed as the lifeblood of an organization, as the reason why it exists. The so-called knowledge workers are a product of organizations' initiatives to develop people. However, Malhotra (1998) states that knowledge workers also need an overall understanding of the business of their organization and how they fit in it. The focus of the business and, consequently, the business engineering process have changed, but the core competencies remain the same.

Supplier chain management

Physical distribution and semi-automated distribution systems have been replaced by electronic distribution. The electronic distribution system can be regarded as time saving because it has done away with some manual processes. Most transactions, such as placing orders, receiving invoices and procuring visual materials, can be done on-line. Information documents like newspapers articles and bank statements and information on flights can be delivered electronically. There will still be a need to deliver some of the goods manually through postal and other systems.

IT sourcing

Business process outsourcing is the buzzword in IT. It has emerged from facilities management, and entails the appointment of a third party to manage some of the IT processes.

This step results in the business organization having more time to spend on improving its core business instead of focusing on time-consuming systems. Systems that can be outsourced include planning, recruitment and some business strategy.

Business goal
The 1980s were marked by the competitive advantage as a main business goal of organizations. This focus changed to customer care in the 1990s, which forced organizations to practise the culture of customer satisfaction. Since 2000, the emphasis has been on consumer choice, which opens the scope for individuals to decide with whom they want to do business with. This largely depends on whether the customer's needs or expectations are satisfied.

Management
Relationship managers have replaced hybrid managers (David Skyrme Associates 1999). Hybrid managers changed from being technologists to being business and organizational orientated. This is still true in the GIS, since the manager still requires a very strong character to carry out the organization's IT application ideas. Job content remains largely unchanged but there is a change of title, and the individual has to be business-orientated in order to execute the company's strategy.

Technical focus
Data capture and information management are slowly disintegrating since the development of intellectual property protection. Intellectual property protection plays an important role in ensuring that the business organization's intangible property remains an asset of that particular organization. Businesses are investing the probability of having property looked after and making profits from them.

Customer-supplier relationship
The inclusion of customers and making them feel part of the system have done away with the non-integrated or distant approach. A customer is likely to come back for future service, if the supplier gave him/her fair treatment. Closing the previous gap between supplier and customer has produced very good results for most organizations. Call centers have improved South African business because they give customers individual attention.

Financial focus
The process of disintermediation adds value to customer services by doing away with the middleman. The customer can request services directly from the supplier. This has led to downsizing in an attempt to minimize costs. The performance management system should not be forgotten because it enables organizations to measure and see whether their output makes any business sense.

An example to illustrate the above is Umgeni Water, a parastatal company situated in KwaZulu Natal. In July 2000, the company embarked on a process of organizational renewal. This process involved the commencement of the organization-wide competency based performance (CPM) initiative (Frost 2001). The purpose of the CPM was twofold: firstly, to redesign core organizational work processes to eliminate waste and optimize value-added customer service output and, secondly, to lay the foundations for competency-based performance management of staff. The company managed to eliminate processes that were not adding value, as can be seen in Figures 1 and 2.

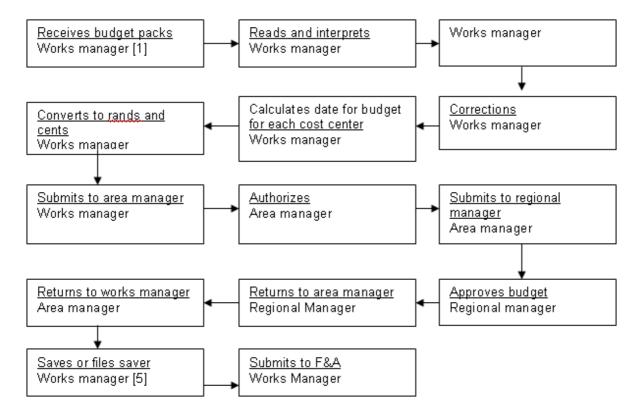**Figure 1 Plant budgeting before the CPM initiative**

Figure 1 (top flowchart)

Receives budget packs Works manager [1]	→	Reads and interprets Works manager	→	Works manager
Converts to rands and cents Works manager	←	Calculates date for budget for each cost center Works manager	←	Corrections Works manager
Submits to area manager Works manager	→	Authorizes Area manager	→	Submits to regional manager Area manager
Returns to works manager Area manager	←	Returns to area manager Regional Manager	←	Approves budget Regional manager
Saves or files saver Works manager [5]	→	Submits to F&A Works Manager		

Figure 2 Plant budgeting after the CPM redesign

Figure 2 (bottom flowchart)

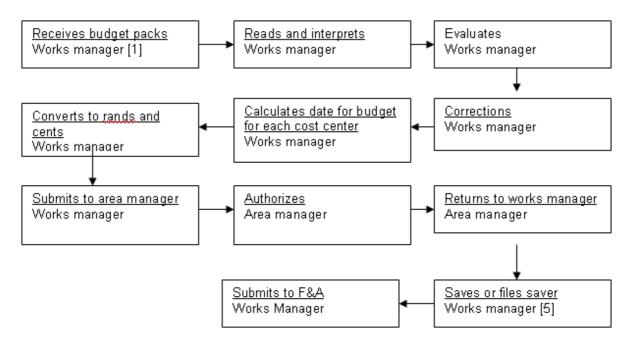| Receives budget packs
Works manager [1] | → | Reads and interprets
Works manager | → | Evaluates
Works manager |
Converts to rands and cents Works manager	←	Calculates date for budget for each cost center Works manager	←	Corrections Works manager
Submits to area manager Works manager	→	Authorizes Area manager	→	Returns to works manager Area manager
		Submits to F&A Works Manager	←	Saves or files saver Works manager [5]

Figure 1 illustrates that before a plant budget could be submitted to the finance department, it had to undergo 14 steps with time delays in between. It is evident from Figure 2 that the process has been reduced to 11 steps and the job is shared between two people as opposed to three. The regional manger has been eliminated from the process.

Organizational structure
The developmental phases that organizations had to undergo to reach a stage where they can communicate or provide a service using the Internet have led to traditional matrix organizations becoming obsolete.

5 Data analysis

The literature survey proved that South African business organizations do buy into the concept of the GIS. This is highlighted by the business drivers, which have all equally affected this industry. Many organizations have put most of the drivers in place, for example enabling technology and key management concepts. The null hypothesis is rejected on the basis that it does not show that South Africa has learned from the GIS. The alternate hypothesis, which states that South African business organizations have learned from and are using the concepts of the GIS is therefore accepted.

6 Conclusion and recommendations

It was not easy to customize this research to a particular organization. However, most South African business organizations can learn from this research since it affects them in a similar way. The research managed to highlight the business drivers that contributed towards the development of the global society. It was also evident that the technological change that has taken place is still continuing.

The research also looked at aspects of the GIS from a global point of view, but tried to limit the scope to the South African industry. Most organizations can learn from the technological developments that the country is undergoing and apply the technology to their normal way of conducting business. The public sector must also stay abreast of developments because it forms part of the information society.

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