CHAPTER 1

THE INFORMATION TECHNOLOGY CHANNEL

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1.1 Introduction

1.1.1 Problem statement

South African businesses seem to lag very far behind in the way companies in the first world are now managing their logistical supply chains, especially in the information technology (IT) and other related industries. The current South African business mind-frame continues to concentrate on managing and operating as much as possible of the supply chain in-house, with a fear of outsourcing even non-core business or operational functions. Either the benefits of outsourcing the logistics of non-core business activities are not known, or not understood. This leads to companies not performing at their highest productivity level even in their main areas of core competence. The huge financial and human resource benefits are also an important aspect which seems to then elude the general section of the every day South African IT company.

1.1.2 Objective of the research

The purpose of this dissertation is to research and determine the processes, trends, advantages and disadvantages of logistics management in the information technology industry. The objective behind the research which will be conducted for the purpose of the writing the dissertation, can be examined two-fold:

i. Logistics management.

   Logistical or supply chain elements, such as procurement, warehousing, assembly and distribution will be researched in later chapters. A new concept in complete turn-key supply chain or transaction management, namely *fulfilment*, will also be researched, discussed and explained.

ii. Information technology industry.

The IT industry was chosen as the area in which all research will take place. This industry and its characteristics will be discussed in the first chapter.

1.1.3 The Information technology industry

Information Technology (IT) is one of the most exciting industries currently operating on the world markets. It is new, fast-paced and continuously changing, developing and improving. Many young and dynamic companies are flourishing in IT. This dissertation will briefly discuss this industry as a whole, and then concentrate on the processes, players and future possibilities that has made this industry the success it has become.

Much research is currently being done in and around the IT industry. In its analysis of information technology spending, the *International Data Corporation* (IDC) reveals that worldwide spending on IT products and services totaled US$758 billion in 1998, which is an increase of just more than six percent over the 1997 value for end-user spending. Research from the tenth annual edition of the IDC's 'Worldwide Black Book' reveals local economic setbacks have tempered worldwide average annual IT market growth for the period 1998 to 2003 to nine and a half percent, postponing the market's achievement of the trillion-dollar milestone until the year 2002 (Stevens 2000: 1 – 2).

The IDC further estimated worldwide IT market growth to have been nine percent in 1999, and predicts that it will be even higher at the end of 2000. The stabilisation of troubled economies (such as Thailand, Brazil and some African countries), has definitely strengthened the worldwide IT market. The personal computer and server markets are rebounding, posting solid growth in 1999 and 2000, while growth in software and services markets continues to accelerate. As spending on software and services increases, these technology segments are garnering a larger proportion of the worldwide product mix.

It is clear to see how these and many other forecasts reflect a very healthy local IT demand, although it may be tempered by some global market realities. However, higher worldwide growth is anticipated for 2000 and 2001, with the mentioned compound annual growth rate of nine and a half percent predicted for the five-year period from 1998 to 2003.

1.2 The importance of the IT industry

1.2.1 The changing business environment

Business is continuously changing. On a daily basis, people and their business enterprises are exposed to news and information that challenges their current thinking patterns, and leads to new and improved ways of doing things. To keep up with the pace of change, knowledge of the market place and its latest trends, opportunities and threats are required. There is a varied selection of business software available to the South African business world, many of it relating to the new buzz-words in the industry such as e-commerce, CRM (Customer Relationship Management), ERP (Enterprise Resource Planning) and outsourcing. It is believed by many that there are two key areas that need to be considered for any business to operate effectively and profitably in the years to come: *information technology* and the *people* who use it (Pienaar 2000: 1 – 2).

1.2.2 The people factor

Business enterprises spend money upgrading their systems, introduce new concepts and more efficient methods of doing business – often without paying sufficient attention to the people whom need to use it. Pienaar adds that:

> *"Information Technology is part of our lives. It continues to spread through our society. It has changed how we communicate, conduct our business and view our lives. However, let's not forget people – who create, learn and inspire. Systems make it possible and people make it happen."*

1.3 Worldwide IT trends

1.3.1 The South African situation

According to *Ernst & Young*'s review of merger and acquisition activities in 1999, the IT sector is currently the biggest acquiring industry in South Africa. Their latest Merger & Acquisition Activity (M&AA) booklet published, shows that the IT sector accounted for acquisitions totaling R16.7 billion in 1999 (this is a total of thirteen and a half percent of all deals recorded in 1999). It is not often that one industry makes such a significant contribution to the acceleration of mergers and acquisitions within the South African economy in such a short space of time. In 1991, when the first M&AA booklet was published, the industry sector relating to IT did not even exist as a separate entity! As with most industries that are new to the market, these mergers will continue to take place, as IT companies grow in order to gain the critical mass needed for global success.

The following table contains some very interesting and revealing figures and percentages pertaining to the South African IT market:

Table 1.1 The South African IT market

Total market value in 1999:	R28.7 billion
Predicted market growth per annum 1999 to 2002:	17%
Estimated number of IT channel companies:	600
Average annual IT salary:	R207 913

Source: BMI-T IDC SA, 1999 in *The Weekly Channel* Volume 13, no. 11 04/04/2000.

1.3.2 The African continent

The state of IT in the rest of the African continent unfortunately does not look so bright. At a United Nations forum in July 2000, African nations appealed for crucial investments to ensure that the African continent is not completely bypassed by the technological revolution. Reuters (in *ITWeb* 07/07/2000) reports that President Alpha Oumar Konare of Mali explained to the United Nations Social and Economical Council (ECOSOC) conference on information technology, that money would help bridge a growing digital gap between the world's rich and poor. Unfortunately, this might be a daunting task since forty percent of African adults are illiterate. More than seventy percent of Africa is rural and there are fewer than a hundred thousand internet accounts to the more than seven hundred and fifty million people living outside of South Africa, where communications are far more developed.

African leaders generally agree that rapid changes in the global economy have magnified pressures on economies still largely rooted in subsistence agriculture, to leapfrog several stages of economic development in order to enter the knowledge economy. In the Reuters report, it is further estimated that Africans on average pay more than US$240 a month for internet connections, compared with the less than US$20 that United States internet users pay each month. It is clear that developing African countries will need specific solutions to overcome the delays and high costs of establishing these necessary communication links.

1.4 IT outsourcing

Information Technology outsourcing is back in fashion having recovered from a rather poor reputation during the 1990's, mainly due to naive service contracts and poor service delivery (Chalmers 2000: 1 – 2). Many feel that the outsourcing industry has now matured and is enjoying a renaissance, with many JSE-listed technology companies growing on the strength of massive outsourcing deals. As will be seen in later chapters, there are now sophisticated service level agreements (SLA's) in place that regulate the service providers and protect the consumer. Elaborate techniques are

also applied in order to evaluate potential suppliers and to benchmark service offerings.

In order to determine the viability and profitability of the outsourcing concept, many internal issues need to be considered, such as (Pienaar 2000: 1 – 2):

i. The company's core competency.
ii. The company's primary products.
iii. Future growth of the company.
iv. Collaboration with suppliers and clients.
v. Flexibility.
vi. Timeframes that need to be worked towards for implementation, results and changes in working processes.

1.5 Research methodology

During the research of this dissertation, the attributes of a proper business research process were followed closely:

i. The *objective* of the research is clearly described in the first chapter.
ii. The research *procedures* are explained in the fourth chapter.
iii. Thorough *planning* will be of primary importance throughout the whole research process.
iv. Any faults, shortcomings or *imperfections* of the research process were predicted and estimated. The impact such shortcomings will have on the final conclusions will also be explained.
v. All data was properly and thoroughly *analised* in order to determine its relevance, validity and importance to this study. Data was gathered by circulating questionnaires to supply chain management companies, their clients and suppliers (Questionnaires attached in Appendix). Personal interviews were also conducted with various players in the IT industry. In conjunction to this primary information, many literary sources were also studied in order to obtain relevant secondary information.

vi. *Conclusions and recommendations* will be limited to the information that will be gathered and justified by the research and will be summarised in the last chapter.

The research in this study was done by following seven basic steps, namely:

i. Identify the topic to be researched, which is: *'Logistics Management in the Information Technology industry'*.
ii. Explore and judge the situation, especially the overall South African situation, its players, markets and industries. Where the South African market was lacking in sufficient examples, the international scene was also explored and judged in terms of its validity to be implemented in the current South African situation. Primary information (questionnaires and personal interviews) as well as secondary information (textbooks, publications, scientific articles etcetera) were both utilised.
iii. The design of the research study, which was done in accordance with the prescribed methodology of a proper research proposal as explained above.
iv. Sampling and data capturing of all information gathered from research as well as from interviews with targeted players in the major IT markets.
v. Evaluation of the researched information. All data was scrutinised and reduced to a manageable quantity, whereafter it was used to develop summaries and conclusions.
vi. Writing of the dissertation.
vii. Constant analysis, interpretation and corrections.

1.6 Contents of the dissertation

This dissertation is divided into five chapters. The information included in each chapter is as follows:

Chapter 1: The first chapter contains the problem statement, the purpose of the research and a brief overview of the industry within which all research took place. It explains the importance of the IT (Information

Technology) industry as well as some of the current trends dominating the relevant markets at present. It also includes a summary of the research methodology of the dissertation.

Chapter 2: The second chapter extensively investigates one of the major trends that is occurring in the IT industry in the new millennium: the outsourcing of the supply chain. The importance of managing existing business paradigms and simultaneously evaluating current channel strategies will be discussed. Ways in which value can be added to a business' operations through outsourcing, as well as ways in which to manage this outsourcing process were researched and will be discussed.

Chapter 3: In the third chapter, the new terminology for the process of complete outsourcing, namely fulfilment, will be analysed in great detail. All relevant processes will be defined and discussed (such as procurement, warehousing, assembly, distribution, reporting etcetera).

Chapter 4: The research methodology of the dissertation is explained in detail in the fourth chapter. The properties of the research as well as the steps followed during the conducting of the research are discussed.

Chapter 5: The last chapter firstly contains conclusions which were reached after completion of the research. The characteristics of a fulfilment house, its clients and suppliers are briefly discussed. The second part of the chapter contains recommendations that has been derived from the research and conclusions.

Questionnaires that were used during various interviews are included in the Appendix at the end of the paper.

1.7 Conclusion

In the first chapter the topic and objective of the dissertation is explained. The various characteristics of the worldwide IT industry were then researched – many of these traits and trends will still be discussed in later chapters. In this dissertation the emphasis will however fall on the local South African IT industry, since it is widely believed that this is the industry which can lead to economic growth and other advantageous impacts on the country. This is why the processes discussed and explained in this dissertation, were all researched from the perspective of the South African IT industry: it is widely believed that IT may have the answers to empower the people of this country. While it is unlikely that the local IT industry will ever grow at a rate fast enough to solve all of the country's various economic problems (*e.g.* unemployment and illiteracy), it does have a vital role to play in enabling other industries to grow, which in turn will stimulate employment opportunities in these industries. According to Schofield (2000: 1):

> *"Information Technology forms the backbone of South Africa's ability to develop and grow, and earn a place in the global economy. By developing the appropriate skills to support this backbone, the IT industry will be helping to assure employment for many previously unemployed South Africans."*