

INTEGRATING THE TRANSFORMING ORGANISATION WITH THE GLOBAL MARKET

by

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**To my wife, Rica and
daughter, Céline.**

OPSOMMING

DIE INTEGRASIE VAN 'N TRANSFORMERENDE ORGANISASIE MET 'N WÊRELDWYE MARK

Die nuwe millenium word gekenmerk deur al hoe meer organisasies wat fundamentele veranderinge oorweeg in die wyse waarop hulle besigheid doen. Hierdie studie plaas die soeklig op SCHÜMANN SASOL SA (PTY) LTD, 'n tipiese Suid Afrikaanse chemiese organisasie in 'n derde wêreld land wat sy uitdagings moet trotseer en daarbenewens steeds mededingend kompeteer met buitelandse organisasies van eerste wêreld lande.

Om die suksesvolle integrasie van die transformerende organisasie met sy wêreldwye mark te bewerkstellig, word spesifieke aandag aan 'n dinamiese driedemense benadering gegee. Hierdie driedemense benadering skep 'n dinamiese besigheidsomgewing waar 'n bemarkingskultuur gekenmerk deur entoesiasme, behendigheid en verkenning ondersteun word deur 'n effektiewe voorsieningsketting wat gekoppel is aan 'n wêreldwye digitale senustelsel. Die transformasieproses word beskryf as 'n nimmereindigende proses van ingrypende organisasionele herontwerp en word gedryf deur winsgewindheid in 'n strawwe en uitsers mededingende markomgewing.

“n Gedetailleerde literatuurstudie ten opsigte van die volgende aspekte en onderwerpe is uitgevoer:

- SCHÜMANN SASOL SA (PTY) LTD se transformasieproses en organisasionele herontwerp;
- radikale strategie vir bemarking in die nuwe millenium, insluitend relevante kultuur aspekte;
- die voorsieningsketting en optimiseringsinisiatiewe;
- wêreldwye inligtingsstelsels en netwerke, asook
- klantetevredenheid.

Data insameling het geskied by wyse van informele onderhoude met waardevolle en bydraende belanghebbendes direk betrokke by bemarking, inligtingstechnologie, logistieke en voorsieningsketting aktiwiteite. Formele navorsing is uitgevoer in 'n poging om aanbevelings te kon maak ten opsigte van prosesverbeteringe en oplossings vir die transformasieproses, voorsieningskettingoptimisering, klantetevredenheid en wêreldwye inligtingstelsels.

Spesifieke gevolgtrekkings en 19 aanbevelings gebaseer op die transformasieproses, bemarkingsinisiatiewe, voorsieningsketting en die digitale inligtingssenustelsel sluit hierdie studie af. Die belangrikste aanbevelings kan opgesom word deur te sê dat die transformasieproses gesien moet word as 'n nimmereindigende proses van dramatiese organisasie herontwerp en verandering vir die sukses van SCHÜMANN SASOL SA (PTY) LTD se wêreldwye integrasie.

Dit raak ook onvermydelik vir die transformerende SCHÜMANN SASOL SA (PTY) LTD om integrasie met sy wêreldwye mark suksesvol te bewerkstellig deur die driedemense benadering. Dit vorm die essensiële bestanddele vir die “*kwantum sprong*” wat nodig is vir realisering van die organisasie se strategie.

ABSTRACT

INTEGRATING THE TRANSFORMING ORGANISATION WITH THE GLOBAL MARKET

The new millennium will be characterised by more and more companies attempting fundamental changes in the way they do business. This study focuses on SCHÜMANN SASOL SA (PTY) LTD, a typical South African chemical organisation in a third world country that has to face its challenges and globally compete against organisations of the first world.

To enable the successful integration of this transforming organisation with its global market, specific focus is on a dynamic three tier approach. This three tier approach creates a dynamic business environment where a marketing culture of agility and exploration is supported by a seamless supply chain and connected by a global digital nervous system.

The transformation process is described as a never-ending process of dramatic organisational redesign and driven by competitiveness and fierce competition in an extremely dynamic market environment.

A detailed literature study of the following issues and topics were conducted:

- the transformation process and organisational redesign of SCHÜMANN SASOL SA (PTY) LTD SA;
- radical strategies for marketing in the new millennium including the relevant cultural issues;
- supply chain and optimisation initiatives;
- global information systems and networking; as well as
- customer satisfaction.

Data collection commenced by informal interviews with contributing and critical stakeholders involved with the marketing, information technology, logistics and supply chain activities. Formal research was conducted in an attempt to suggest process improvements and solutions to the transformation process, supply chain optimisation, customer service and global information systems.

Specific conclusions and 19 recommendations based on the transformation process, marketing initiatives, supply chain and the digital information nervous systems concluded this study. The most important recommendations can be summarised by saying that transformation should be seen as a never ending process of dramatic and enthusiastic organisational redesign and change for SCHÜMANN SASOL SA (PTY) LTD to successfully enable its global integration.

It also becomes inevitable for the transforming SCHÜMANN SASOL SA (PTY) LTD to establish proper integration with its global market through the three tier approach in an effort to achieve the “*quantum leap*” it requires to successfully realise its strategy.

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CHAPTER 1

THE NATURE AND SCOPE OF THIS STUDY

1.1 INTRODUCTION

The new millennium will be characterised by more and more companies attempting fundamental changes in the way they do business. Competitive pressures will get even more ruthless and the pace of change in market dynamics will be ever increasing.

The extraordinary changes in South Africa are a macrocosm of much greater changes across the world. This is an age of the most daunting problems and mind-blowing opportunities (Manning, 1997:10).

This is also the future opportunities and problems that a wax related producer, SCHÜMANN SASOL SA (PTY) LTD in Sasolburg will have to deal with. The South African chemicals industry faces enormous challenges in the drive to become a world force.

In the past the South African chemicals industry was shaped by a philosophy of isolation and protectionism which tended to foster an inward looking approach and a focus on import replacement.

The industry's isolation from international competition and the high local prices of raw materials, a result of import protection, led to many of our products not being competitive in the global export market.

The use of coal based technology means the basic inputs for the chemicals, including wax related products, is much more expensive compared to the same products being obtained from crude oil. This is in fact one of the largest predicaments SCHÜMANN SASOL SA (PTY) LTD is currently facing and will be facing in future. This implies that the need to improve competitiveness remains a major business drive for this organisation.

Against this background and also to survive, SCHÜMANN SASOL SA (PTY) LTD embarked on a continuous journey of transformation and developed a new organisational design to enable their strategic plan and also to be prepared for the business dynamics of the new millennium.

As a crucial part of the strategic plan, a marketing strategy for this process driven organisation, will be dependent on and enabled by the following important issues that will form the basis of this study:

- transformation as a never-ending and dynamic change process;
- radical changes in the traditional marketing culture as well as research and development approaches;
- a customer focussed integrated and optimised supply chain; and
- an integrated global digital nervous system as a collaborative information and knowledge network.

A new way of thinking and a different marketing culture supported by a seamless integrated supply chain enabled by a digital information nervous system will be investigated.

The focus will be on the integration and enabling capabilities of each of these domains as they work together in integrating the transforming organisation with the global market.

The process chemicals is a very mature industry and evolved gradually through several stages of growth, especially in business volumes and demand for basic commodity chemicals. The industry has been largely influenced by factors such as globalisation, the need for collaboration and to drive costs down. As a result the complexity of business processes increased significantly and sustainable competitive advantage can only be gained by those organisations that optimise their supplier to customer relationships.

The dynamic environment and fierce competition calls for a radical strategy for this organisation to survive. A radical strategy cannot be successful if radical thinking and radical changes in the way SCHÜMANN SASOL SA (PTY) LTD do business are not radically changed.

Business leaders who succeed will take advantage of a new way of doing business, a way based on the increasing velocity of information and putting new learnings into practice.

1.2 PROBLEM STATEMENT

The reasons for this study is related to important areas of concern at SCHUMANN SASOL SA (PTY) LTD and it is on these issues that this study will focus and are now briefly highlighted.

- SCHUMANN SASOL SA (PTY) LTD finds itself in a highly competitive commodity wax related market. The current trend in the total Fischer-Tropsch wax related market is at a low growth trend of 2 % to 4%. The local market share is 75%. This is in a decreasing total market size of 65 000 metric tons per annum (Mt/a). According to market information obtained, the majority of hard wax products are already in the maturity phases of their product life cycles.

- Logistics expenditures are a significant cost factor influencing the cost structures across the value chain. An observation made at SCHÜMANN SASOL SA (PTY) LTD indicates attractive opportunities waiting to be exploited by optimising the supply chain.
- There are no formal or informal marketing information network or systems available on operational, tactical or strategic level to enable and assist marketing personnel to achieve their strategic objectives through sound market intelligence. Furthermore there is a lack of marketing resources to properly enable the marketing strategy. The culture of exploration and agility is absent among key marketing people as a result of not being totally in control of their markets. Marketing people is also not close to the markets where they do business and even in some potential markets for growth, non-existent.

In summary the problem statement can be categorized into the following three main areas of concern:

- ❖ The lack of a marketing intelligence strategy supported by a radical and creative culture amongst the marketing and new product development teams working in sound collaboration.
- ❖ The supply chain is not totally customer focussed and also not optimised or integrated to the extent that it is possible.
- ❖ No proper, global integrated digital information system or collaborative network to enable market intelligence and the business strategy of SCHÜMANN SASOL SA (PTY) LTD exist.

1.3 OBJECTIVES OF THIS STUDY

The primary objective of this study is to develop a conceptual framework and new radical approach to enable the strategic marketing objectives of SCHÜMANN SASOL SA (PTY) LTD to be achieved.

To achieve this objective, it is necessary that the following aspects are properly addressed:

- a new culture and new way of thinking amongst all people must be created to enable radical marketing strategies through customer focussed supply chain optimisation and adding value with the sharing and collaboration with a proper digital information system;
- to understand the current status of SCHÜMANN SASOL SA (PTY) LTD specifically regarding marketing strategy and culture, customer focussed supply chain and also the information systems to support their marketing efforts; and
- to reach a conclusion and make recommendations that will add value to the efforts of SCHÜMANN SASOL SA (PTY) LTD in achieving their strategic marketing and business objectives.

There are no secondary objectives included to this study.

1.4 THE SCOPE OF THIS STUDY

The scope of this study will be discussed in terms of the organisation that is being investigated and the definition of the fields of study.

1.4.1 The organisation under investigation

SASOL was founded in 1950 and its mandate was to produce oil from coal. For many years SASOL was the world's sole producer of synthetic waxes.

Utilising the low temperature Fischer-Tropsch synthesis, first in the Arge fixed bed reactors and later in the Slurry bed technology, SASOL has acquired the necessary skills to be the leading producer of hard waxes for hot melt adhesives, inks, polishes, plastics and textiles.

A total of 55 000 Mt/a of hard waxes are exported and another 55 000 Mt/a of paraffins are exported to the global chemical industry.

A total of 70 000 Mt/a medium waxes are sold in the local markets for use in the candle and polish applications and the emulsions are used in the chipboard industry.

SCHÜMANN SASOL SA (PTY) LTD became the first and most global joint venture of SASOL with effect from 1 January 1995.

SASOL Chemical Industries (SCI) and the SCHÜMANN group of companies merged their wax related activities into a separate German registered company, SCHÜMANN-SASOL INTERNATIONAL AG. SCI holds a 66.6% interest in the merged group, and Hans Otto SCHÜMANN has a 33.3% interest.

SCHÜMANN SASOL SA (PTY) LTD is geographically split into three production facilities in Sasolburg, Boksburg and Durban where the Boksburg and Durban facilities focus on the production of medium waxes, slackwaxes and emulsions (Leopard News, 1998 : 5).

SCHÜMANN SASOL SA (PTY) LTD launched their transformation process on 24 February 1998 and is commonly known as the Leopard Project amongst all employees.

This project is a total organisational redesign with the main strategic objective, to achieve “15% earnings before interest and tax “ (15% EBIT) by the year 2003.

As will become evident later in this study a modernised and effective global marketing approach supported by supply chain optimisation will be unavoidable to achieve this overall strategic objective.

1.4.2 Defining the field of study

This investigation focuses on the areas that will have a direct impact on the success of the future of SCHÜMANN SASOL SA (PTY) LTD.

These areas are:

- the dynamics of the transformation project;
- radical marketing strategy;
- customer focussed supply chain optimisation; and
- a global digital information nervous system and networking.

Figure 1.1: A dynamic integrated three tier marketing approach



In figure 1.1 we see the three dynamic domains enabled by aligned collaboration with the purpose of achieving the following results for SCHÜMANN SASOL SA (PTY) LTD :

- ❖ accelerated market growth in existing and new product applications;
- ❖ to become the global market leader in wax related products ; and
- ❖ at least 15% EBIT by 2003.

- **A marketing culture for a radical strategy**

On this aspect the main focus will be on the establishment of a culture, attitudes and behavior that will be flexible and competent to take on the marketing challenges for the future SCHÜMANN SASOL SA (PTY) LTD.

- **A customer focussed supply chain optimisation**

Starting with suppliers and service providers on the inbound logistics side, going across the supply chain to end with customer satisfaction. This includes all stakeholders in the supply chain from supplier's suppliers to the customer's customers.

This study will focus on the opportunities of optimising on supply chain structures, productivity enablers and synergy possibilities, increased customer satisfaction levels, inventory, distribution, storage and other high impact logistics aspects in the supply chain.

- **A global marketing information network**

Looking at the current situation from an operational, tactical and strategic view, the focus will be on the information technology and collaborative networks to enable the proper role out of the SCHÜMANN SASOL SA (PTY) LTD SA marketing strategy. Here the focus will fall on aspects like business intelligence, knowledge management, Web Workstyle and a global digital nervous system.

These three areas will be discussed in detail in the later chapters including proposed models, activities and suggestions to achieve the required success.

A goal-orientated approach to this study would lead to effective guidelines and proposed solutions to really assist SCHÜMANN SASOL SA (PTY) LTD SA to achieve their strategic marketing related objectives.

1.5 RESEARCH METHODOLOGY

The clear challenges and opportunities that are currently facing the marketing, logistics and information departments of SCHÜMANN SASOL SA (PTY) LTD SA initiated this study. This will be followed by the causal factors that underlie these specific challenges and opportunities crucial for this company to achieve a desperately needed “*Quantum leap*”.

A detailed literature study of the following issues and topics were conducted:

- the transformation process and organisational redesign of SCHÜMANN SASOL SA (PTY) LTD SA;
- radical strategies for marketing in the new millennium including cultural issues;
- supply chain and optimisation initiatives;
- global information systems and networking; and
- customer satisfaction.

Data collection commenced by informal interviews with contributing and critical stakeholders involved with the marketing, information technology, logistics and supply chain activities.

Formal research was conducted in an attempt to suggest process improvements and solutions to the transformation process, supply chain optimisation, customer service and global information systems.

1.6 LIMITATIONS OF THIS STUDY

The study offers the following limitations:

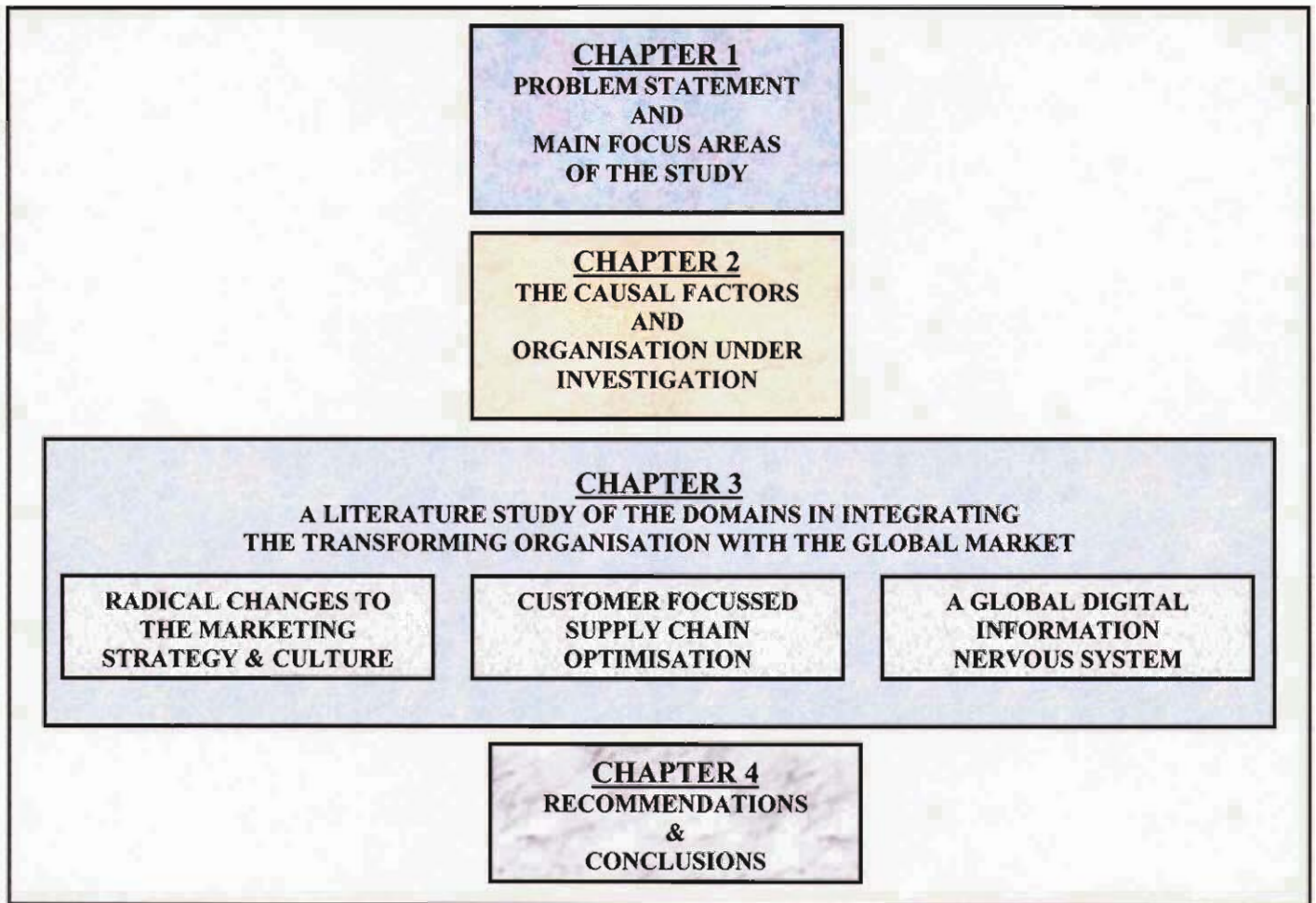
- although this study can be conducted for and applied to other chemical companies in South Africa, it is, for the purpose of defining clear objectives to make it implementable and manageable, confined to SCHÜMANN SASOL SA (PTY) LTD only.
- For strategic and information security reasons not all the information regarding SA SCHÜMANN SASOL SA (PTY) LTD strategies could be disclosed in this study.

However, future researchers and managers of technologically advanced companies may benefit profoundly from the methodological approach followed in this research project. The results are not absolute, but could provide sound guidelines for similar industrial companies.

1.7 DEMARCATION OF THIS STUDY

Figure 1.2 provides a schematic representation of the demarcation of this study on chapter level and also the focus areas of each chapter. Only the main concepts are highlighted and also give the reader a broad overview on the demarcation of this study.

Figure 1.2 : Demarcation of this study on chapter level



Chapter 1 presents the problem statement and the main objectives of this study.

Chapter 2 provides the background information on the organisation SCHÜMANN SASOL SA (PTY) LTD currently being researched as well as the causal factors leading to this study.

The literature study of the following domains in integrating the transforming organisation with the global market is discussed in **chapter 3**.

- The important aspects of the transformation process and closely involved teams involved by this study are addressed.

- Radical changes that are needed to role out and enable the modern marketing strategy for SCHÜMANN SASOL SA (PTY) LTD including modern cultural aspects are discussed.
- Special attention to the supply chain optimisation opportunities to enhance customer service is focussed on.
- The last domain focuses on the global information systems and a collaborative digital nervous system needed to achieve marketing objectives.

Chapter 4 address observations of the current, traditional organisation and relative to the new and modern organisation SCHÜMANN SASOL SA (PTY) LTD should strive to become. The identified opportunities and requirements will form the basis on which the recommendations and conclusions will be formulated. These recommendations have the purpose to assist to role out and implement its global marketing strategy successfully and enhance its. market intelligence

1.8 SUMMARY

The nature and scope of this study evolves around the challenges and opportunities facing the typical chemical industry in South Africa. These are also the areas where the “*quantum Leaps*” that are so desperately needed could be waiting just for the right time and opportunity to be exploited. Every business has its own unique environment in which its interacts with a diversity of stakeholders. SCHÜMANN SASOL SA (PTY) LTD provided the opportunity to conduct this study and to share the learning experiences with the people employed by this company and also with people in similar industrial companies.

Chapter 2 will focus on the causal factors to this study and will also give a clear description of SCHÜMANN SASOL SA (PTY) LTD as the organisation under investigation.

CHAPTER 2

CAUSAL FACTORS TO THE STUDY

2.1 INTRODUCTION

This chapter is divided into two parts of which the first gives a background of SCHÜMANN SASOL SA (PTY) LTD and the Leopard transformation project currently being implemented. The second part focuses in more detail on the important factors that lead to this study.

2.2 THE ORGANISATION UNDER INVESTIGATION : SCHÜMANN SASOL SA (PTY) LTD SASOLBURG / R S A

SCHÜMANN SASOL SA (PTY) LTD is a business unit of the greater SCHÜMANN SASOL INTERNATIONAL AG organisation. SCHÜMANN SASOL INTERNATIONAL AG is a joint venture (JV) between SASOL LIMITED South Africa and HANS OTTO SCHÜMANN in Hamburg, Germany.

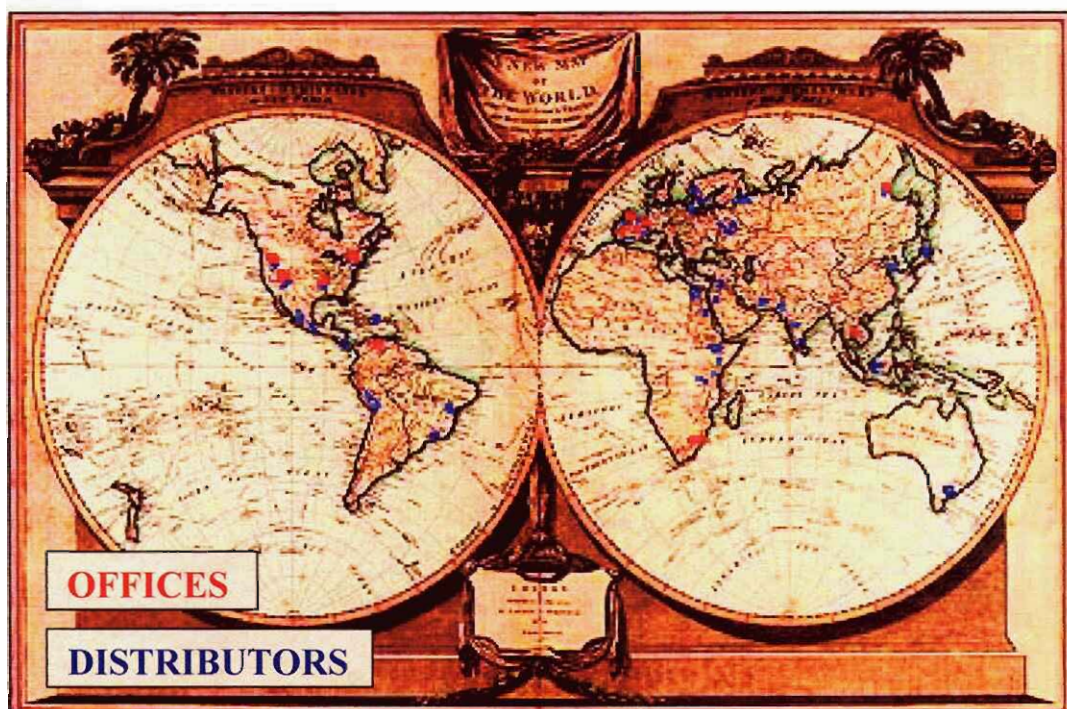
SCHÜMANN SASOL SA (PTY) LTD is the manufacturer of Fischer-Tropsch synthetic waxes. Hard waxes, paraffins and medium waxes are manufactured in Sasolburg, while slackwaxes and petroleum jelly manufactured in Boksburg. Medium waxes, slackwaxes and hydrowaxes are manufactured in Durban.

2.2.1 The history of SCHÜMANN SASOL INTERNATIONAL

SCHÜMANN SASOL is the first and most global joint venture of SASOL.

The long-term business relationship between SASOL WAXES, MOORE & MUNGER, as well as HANS OTTO SCHÜMANN KG through HAVAS alminated in SASOL 's first major joint venture since 1 January 1995.

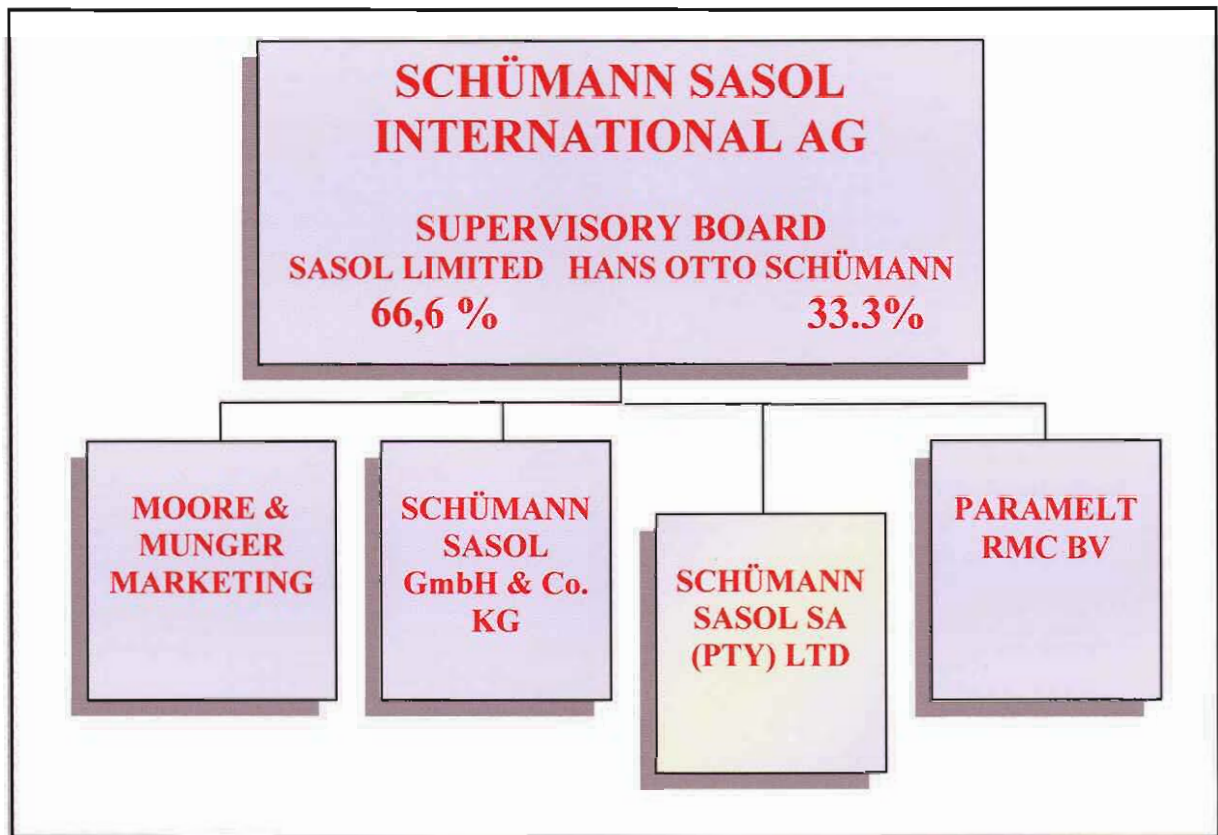
Figure 2.1: A global organisation



SCHÜMANN SASOL INTERNATIONAL AG is based in Hamburg, Germany. This company serves customers all over the world meeting their requirements with a variety of over 500 different wax related products.

SCHÜMANN SASOL combines the strengths of a large integrated oil and chemical company with the flexibility and customer drive of a medium sized family business.

Figure 2.2: SCHÜMANN SASOL SA (PTY) LTD within the total structure of SCHÜMANN SASOL INTERNATIONAL AG



- **SCHÜMANN SASOL SA (PTY) LTD. Sasolburg / RSA**

Utilizing the low temperature Fischer-Tropsch syntheses in the Arge fixed bed and also Slurry bed reactors, SASOL has acquired the necessary skills to be the leading producer of hard waxes for hot melt adhesives, into polishes, plastics and textiles. This is clearly reflected in the 55 000 Mt /a of export sales into the hard wax market.

A total of 55 000 Mt/a of paraffins are sold and used as drilling muds and other applications in the chemical industry worldwide. Out of the plant in Sasolburg, the sweating plant in Boksburg and also the Durban business, the production and sales are 70 000 Mt/a into the medium wax market. Candles and polishes are the main applications for the medium waxes and the emulsions are mainly used in the chipboard industry.

This organisation also started the Leopard transformation project. This is a transformation into a new customer and application focussed organisation. This project along with the single distillation unit (SDU) will form the basis of future growth and competitive advantage.

From the above it becomes clear that SCHÜMANN SASOL PTY (LTD) SA forms an integral and important part of an international company SCHÜMANN SASOL INTERNATIONAL AG.

SCHÜMANN SASOL SA (PTY) LTD is the selected company to form the basis of this study and is the transforming organisation referred to in the title of this thesis. The Leopard transformation project and the impact on global integration will also be discussed in detail.

- **MOORE & MUNGER INC. Shelton, Connecticut**

MOORE & MUNGER is a well established wax distributor in the USA selling US paraffin waxes as well as imports from Germany and Japan into cup wax, candles and other related markets.

Since 1956, MOORE & MUNGER also acted as a distributor for the previously known "SASOL WAXES" in the USA. In 1989, HANS OTTO SCHÜMANN acquired MOORE & MUNGER and the partnership with SASOL started.

Today MOORE & MUNGER sells about 15 000 Mt/a hard waxes and 150 000 Mt/a paraffin waxes. During 1997, the business was widened with the acquisition of Ter Hell Chemicals in Pass Christian, Mississippi, USA to blend and solidify rubber and PVC waxes.

In 1998, the acquisition of 50% of Lux International Inc. Hayward, California increased the wax business in the west of the USA.

- **SCHÜMANN SASOL GmbH & CO KG. Hamburg / Germany**

The company was founded by HANS OTTO SCHÜMANN in 1942 as a petroleum jelly refinery and is operating for more than 100 years. It started a paraffin wax (medium wax) business in 1951 and after tremendous growth, it became Europe's main paraffin wax producer. Today about 350 000 Mt/a are sold into industries like candles, wood treatment, rubber, tyres, paper, plastics, textiles, and polishes. The 15 000 Mt/a will be part of a new joint venture "MERKUR" which is just being established with the German company DEA.

- **PARAMELT RMC BV. Heerhugowaard / Netherlands**

Paramelt has developed into the main European speciality wax blender, serving a great variety of industries and applications with cheese wax, hotmelt adhesives and paper coating with volumes of 35 000 Mt/a.

2.2.2 New business developments

Profitable growth with diversity of highly skilled and motivated members of the global SCHÜMANN SASOL family will be an important driver as the new millennium is

approached. This becomes evident with the development of new business ventures as part of the global SCHÜMANN SASOL family.

- **PHASE CHANGE LABORATORIES, San Diego, California, USA**

SCHÜMANN SASOL holds 46% of this company that focuses on the development and production of phase change materials. This is a new highly sophisticated application of the heat storage capability of waxes, starting with Pizza heaters to energy storage in houses and heating systems.

- **CERAVEN C.A. Caracas / Venezuela**

This is a new venture with the Venezuelan State Oil Company PdVSA. (Petroleos de Venezuela). A 50 000 Mt/a capacity plant will be erected with de-oiling, hydrotreating, blending and solidification facilities next tot the Gordon Refinery.

- **FUSHUN TER HELL SPECIAL WAX PRODUCTS CO. LTD.**

Fushun / China

This is a 50/50 joint venture with Fushun No.1 refinery including tank farm, blending and solidification facilities. They are working hard to sell 6 000 Mt/a of specialty paraffin waxes into markets which are extremely price sensitive.

2.3 THE “LEOPARD” TRANSFORMATION PROCESS AT SCHÜMANN SASOL SA (PTY) LTD

2.3.1 The strategic plan

To survive the attacks from a dynamic, turbulent global market and to accept and exploit all new challenges, SCHÜMANN SASOL SA (PTY) LTD embarked on a total organisational redesign.

This transformation project known as the LEOPARD project by all employees and stakeholders is based on the following overall strategic objective:

“TO ACHIEVE A 15% EARNINGS BEFORE INTEREST AND TAX BY THE BEGINNING OF THE YEAR 2003”

To achieve this overall strategic goal, the following nine strategic priorities were set and will align and guide the strategic management initiatives to:

1. raise productivity levels and reduce costs to meet international benchmarks measured in U S Dollars without negatively affecting competitiveness;
2. establish reliable feedstock sources at competitive prices for all operations;
3. rationalise and align activities, structures, technologies and resources across the value chain in order to effectively meet customer needs;
4. develop a long-term investment plan to streamline and rationalise operational and internal logistics activities in order to enhance cost effectiveness;
5. establish an integrated information technology and business intelligence system to ensure competitiveness across the value chain;

6. eliminate excess product and reduce dependence on Natref by increasing sales in new high value applications and products to 50 000 Mt/a by 2003;
7. sell additional 20 000 Mt/a of hard wax into new applications and markets to offset Shell's return to the market;
8. grow revenue and maximise profits from medium wax by finding new markets and applications whilst maintaining the current candle market; and
9. to build a competent knowledge base to enable the company to develop strategically.

These strategic priorities are the result of an intensive and extensive SWOT analysis across the value chain of SCHÜMANN SASOL SA (PTY) LTD followed by a proper cross impact analysis.

From these strategic priorities, five or more sub strategic objectives were developed and allocated to responsible people and agreed completion dates.

This study will focus in detail on strategic priorities 5, 6, 7 and 9 to the extent where the marketing, information and supply chain activities are addressed against the background of the Leopard project.

To ensure the proper role out and alignment of this strategic plan for SCHÜMANN SASOL SA (PTY) LTD the mission, vision, core values and new organisational structure were established.

2.3.2 The vision of SCHÜMANN SASOL SA (PTY) LTD

SCHÜMANN SASOL SA (PTY) LTD is the renowned world leader, dominating the wax and related markets across the world.

Our multi-cultural and highly competent workforce is energetically and joyfully collecting opportunities through creativity, carrying it to the hives of innovative business units. The full utilisation of the value chain is a way of life. Through these creative efforts we are the cost and productivity pioneer of the industry.

These units are converting a variety of feedstock into world-class quality products, which flow clear from pipelines, prepared with care, pride and dedication. As valued partners we work in harmony with the communities and environments where we do business.

Our product range is frequented by customers attracted by a professional and motivated marketing force. Customers indulge in our special prized products and enjoy its uniqueness. To them our products are critical ingredients for their own successes.

This powerful and elegant leopard of Africa is headed by a management team that knows no limits and accepts all challenges. Running at full speed, it is setting the pace in creating new standards of excellence for conquering the world's markets.

2.3.3 The Mission statement of SCHÜMANN SASOL SA (PTY) LTD

We are a profit driven, customer and application focussed company, achieving sustainable growth by optimising the value chain in supplying Fischer-Tropsch and other wax related products to speciality and commodity markets worldwide.

2.3.4 The five core values of SCHÜMANN SASOL SA (PTY) LTD

An organisation's overall culture develops from a combination of its most salient cultural values. The five core values to guide attitudes, mind sets, beliefs and behavior of SCHÜMANN SASOL SA (PTY) LTD are:

- **Creativity and individual ability**

Growth is essential to attain and preserve a competitive position globally. Growth demands from them creativity and the ability to innovate. They have confidence in the individual and collective ability of their people. They commit themselves towards the encouragement of risk taking and accept also that errors do occur when entering into the unknown.

- **Openness, honesty and integrity**

They realise the importance of this for people who are interdependent and who need to support one another. To them openness, honesty and integrity are the ingredients on which trust is build. All information cannot always be shared or displayed, but should this be the case they will be open and honest about this too.

- **Equal and fair treatment**

They regard every individual of special value to the company. Individual differences are acknowledged and the work had to create a climate in which each individual can develop that uniqueness. Differences such as style and culture of people, as well as customers, suppliers and business associates are accepted at SCHÜMANN SASOL SA (PTY) LTD.

- **Pride**

Through their achievements, positive outlook towards the future and willingness to serve and satisfy their customers an all-embracing feeling of pride in the company is developed.

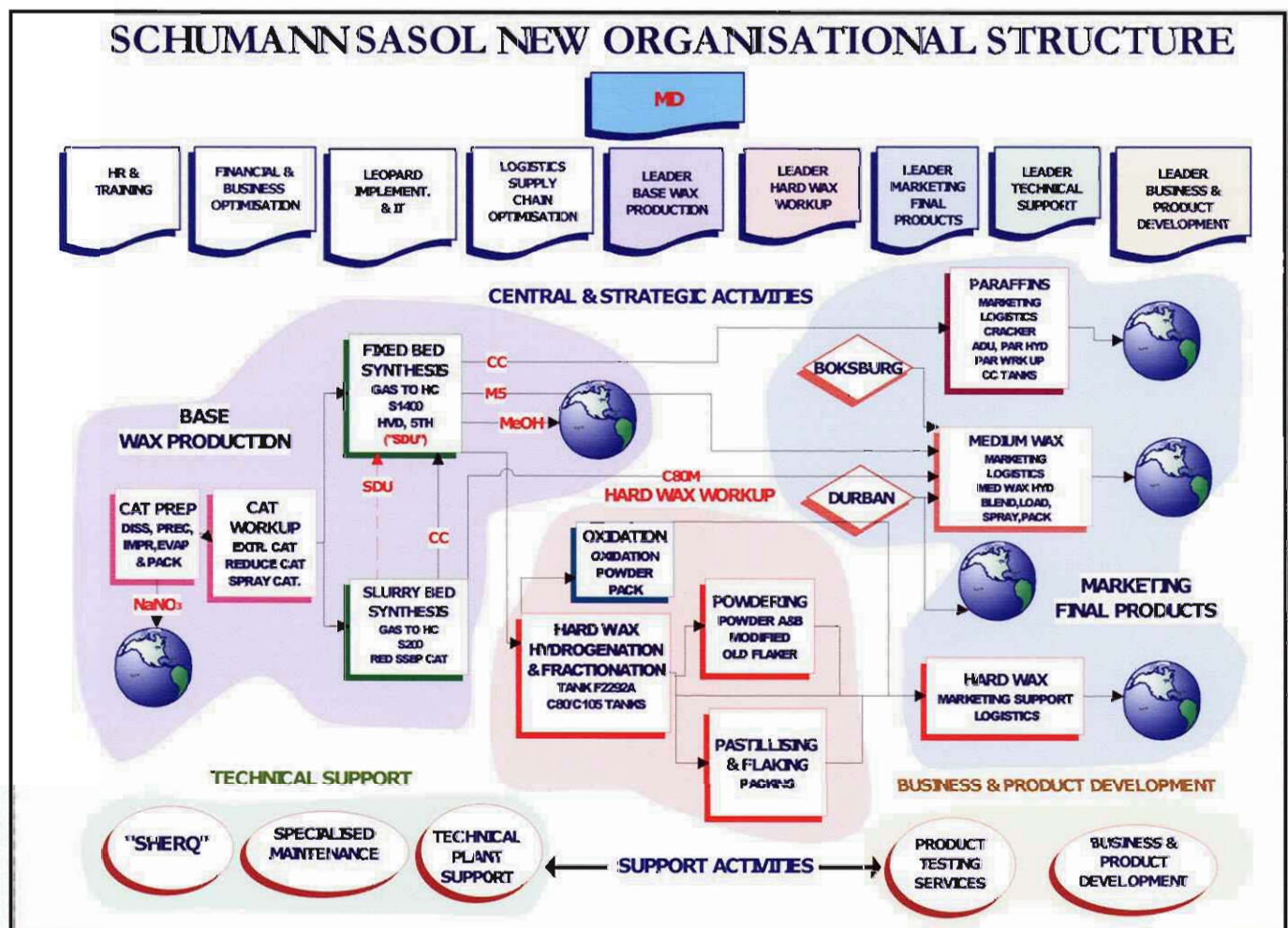
They will set high standards and challenging objectives to foster this price continuously so that customers and suppliers prefer to be associated with them.

- **Perseverance**

Much of what have been achieved at SCHÜMANN SASOL SA (PTY) LTD can be attributed to a pioneering spirit and long term vision, which will continue to nurture. Their commitment to solving problems and exploiting opportunities is a total one and they will not give up until they see results.

2.3.5 The new organisational structure

Figure 2.3 : The new organisational structure



The organisational structure as displayed by figure 2.3 is the result of a first order redesign. A dedicated Leopard project team was selected and with inputs and collaboration from the total organisation, this integrated, cross-functional organisational structure was developed. It basically consists of central and strategic activities, the primary business activities and support activities.

The design of the organisational structure is based on the following principles:

- the new future structure must fit the strategy;
- the value chain has to be optimised across its total length and span;
- establishing whole task groups along the value chain offers the best alternative for the focus on optimisation;
- a flatter structure is essential to enhance future communication;
- employees can enhance their own individual contributions within whole task groups, particularly if they are given more opportunities to set their own standards and are empowered to make their own decisions; and
- being multi-skilled within groups make them more adaptable and responsive, thus contributing to the systems capability of continuous learning and change.

Empowerment in the true sense of the word is implemented with this design and is also seen as a key success factor in enabling the structure to be fully executable.

The people also understand that empowerment provides them with the power and freedom to take decisions and function as autonomous groups but also that they take full responsibility for their decisions and actions.

- **Rationale of the design**

By grouping people around processes, in effect mini businesses are created. Whole task groups as self managed teams are built around these processes. These groups have their own leaders and are empowered to make their own decisions directly related to achieve their objectives. They can

continuously solve their own problems and improve their own processes. Energy and resources will be put in these processes that truly determine the company's outcome and the realisation of its mission.

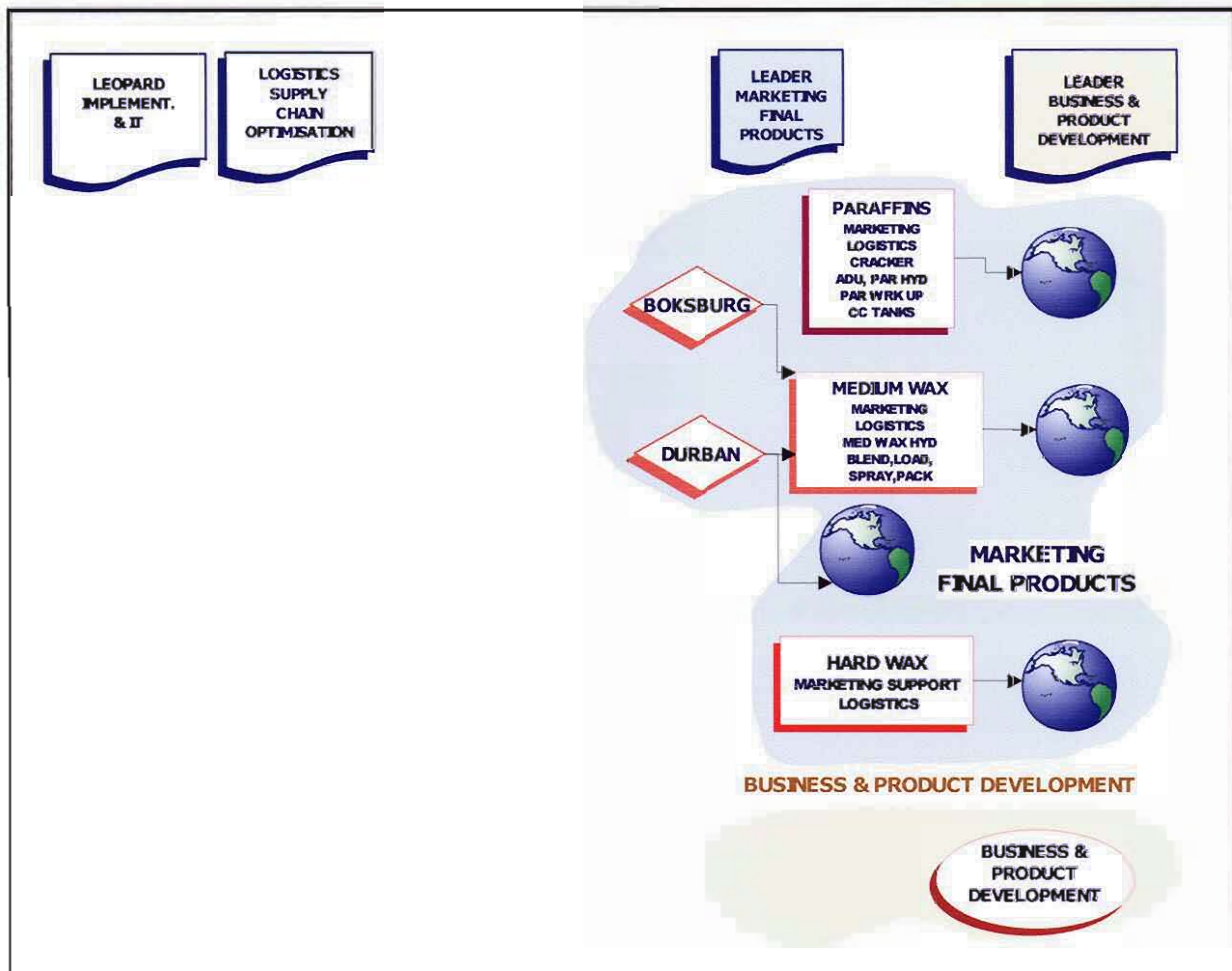
- **The changing role of management in the new redesign**

In the new SCHÜMANN SASOL SA (PTY) LTD very little of the functional structure will be left. In the traditional functional structure it was a major function of management to get the process to work through command and control. The management role in the new redesign will revolve around:

- ❖ exercising leadership in its true sense;
- ❖ creating alignment across the value chain;
- ❖ building a new culture based on the five core values;
- ❖ co-ordination, integrating and facilitating;
- ❖ establishing an environment for learning to build knowledge and expertise;
- ❖ shifting focus from short-term operational issues to the longer term strategic issues determining the company's future;
- ❖ become role models demonstrating commitment to the core values;
- ❖ empower people to exploit their full potential;
- ❖ collaborate across functional boundaries and become multi-functional in all activities to create alignment of strategies; and to
- ❖ become leaders instead of managers by coaching, facilitating, supporting and learning.

These are just some of the important attributes the management team of a changing organisation must adopt to really make change happen.

Figure 2.4 : The focus areas of this study on the new organisational structure



In terms of the new structure this study will focus on the marketing, information and supply chain aspects involving the identified whole task and support groups indicated by figure 2.4. These are the domains and areas at SCHÜMANN SASOL SA (PTY) LTD that interacts with the global market and strongly depend on the total supply chain and availability and flow of information. These are also the specific focus areas in integrating this transforming organisation with the global market.

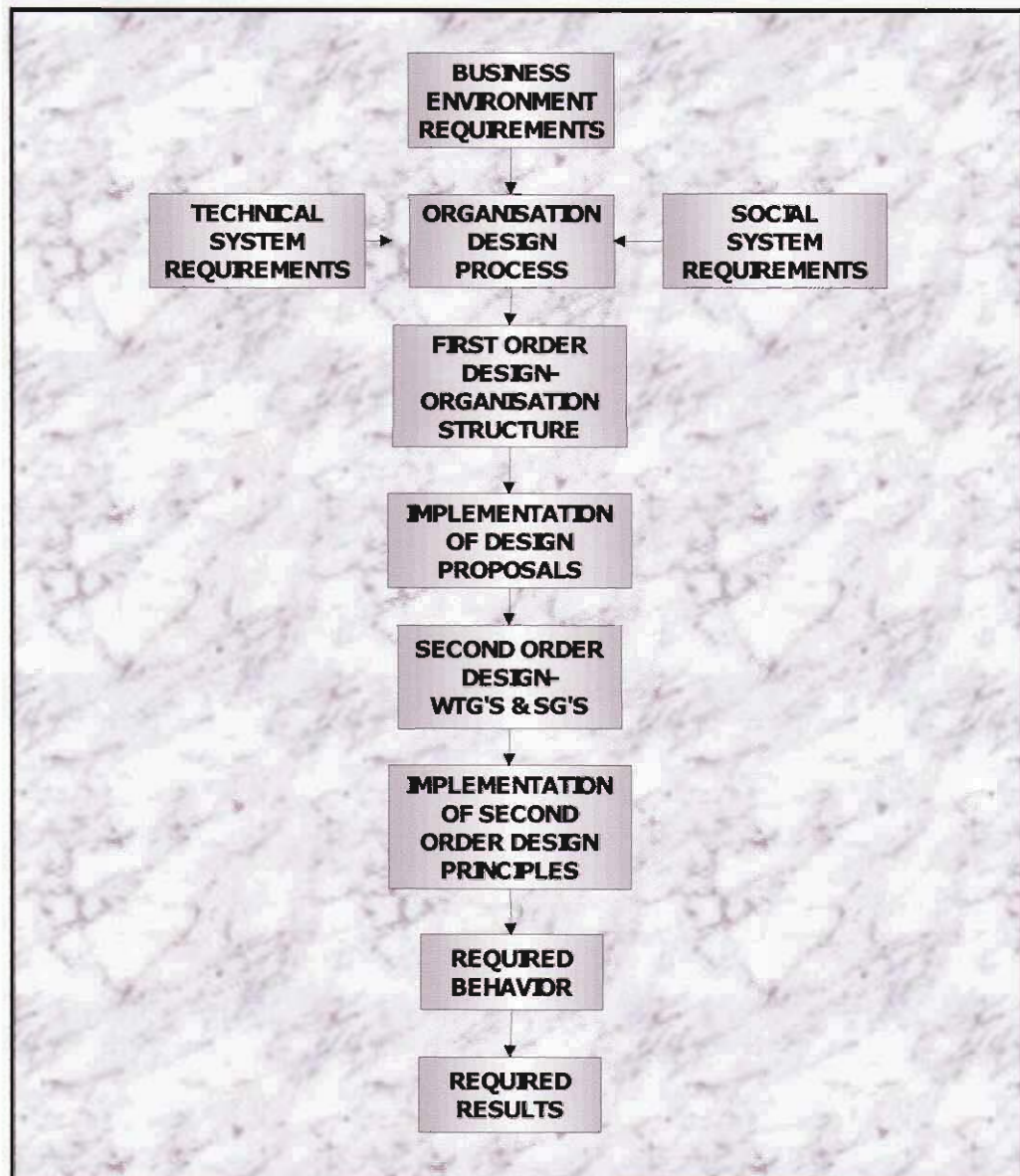
2.3.6 The activities and scope of the total transformation process

Figure 2.5 indicates in summary the steps and phases of the transformation process currently in full swing at SCHÜMANN SASOL SA (PTY) LTD. The marketing and final product cluster as indicated in figure 2.4 will form the pilot groups for implementation of the process.

The reasons for selecting these areas as the pilot implementation groups at SCHÜMANN SASOL SA (PTY) LTD are:

- it is the only area where the quantum leap that this organisation needs to survive can be achieved;
- these are the areas that are exposed to the dynamics of hard business and competition;
- there are great opportunities for development and to add value on the short and long term;
- due to the fast changing markets and fierce competition there is no time to spare and these areas must be transformed with speed and agility;
- this area will set the pace and determine the change of the rest of the organisation;
- it focuses directly on the customer and the supply chain issues to radically improve service levels;
- it is the most under developed area in certain product applications and markets;
- the most value for growth can be added if mechanisms in these areas are properly developed and implemented;
- it is the areas where the biggest losses and damage can occur if left unchanged;
- it is the most vulnerable areas in the business where markets can be lost or customer service can be affected; and
- this is the area that will enable or disable the successful accomplishment of the SCHÜMANN SASOL SA (PTY) LTD strategy.

Figure 2.5: Phases of the transformation process at SCHÜMANN SASOL SA (PTY) LTD



With this approach the total organisation is involved with the redesign and everyone is committed to achieve the required results. This feeling of ownership and commitment towards the transformation process throughout the total organisation is critical for the success of proper change management.

2.3.7 Summary

It becomes clear out of the above layout and explanation of the changing activities currently in full swing at SCHÜMANN SASOL SA (PTY) LTD that this company is serious about change.

It is also clear that there are still a lot of challenges ahead to meet the overall strategic objective by the beginning of 2003.

It is on these challenges that this study will focus and specifically those areas where a quantum leap can be achieved, including some of the following aspects:

The critical success factors of the industry are:

- a cost effective value chain;
- availability of feedstock;
- competitive business intelligence;
- a knowledgeable, competent and innovative work force;
- customer satisfaction including:
 - ❖ high quality products and services;
 - ❖ being a reliable supplier;
 - ❖ establishment of sound relationships;
 - ❖ providing technical support; and
- successful new product and market development.

It is also against this background of a changing organisation, finding itself in a aggressive competitive market environment supported by a culture ready for change, that this study will be focussing on.

2.4 THE CAUSAL FACTORS TO THE STUDY

As discussed in chapter one and specifically the problem statement SCHÜMANN SASOL SA (PTY) LTD finds itself currently in a very challenging environment.

Facing this challenges the company finds itself currently in a situation where the following factors have a significant influence on whether the strategic objectives being will be met:

- the current transformation process and changing organisation environment;
- the financial influence of certain strategic objectives not being met;
- no radical marketing structure and furthermore insufficient resources with regards to creative and experienced marketing personnel;
- no collaboration networks between marketing and new product development teams;
- the supply chain is not totally customer focussed and not optimised to the extent possible;
- no proper information system and network to support marketing and new product development objectives; and
- fierce competition in a slow growing market.

2.4.1 A changing organisational environment

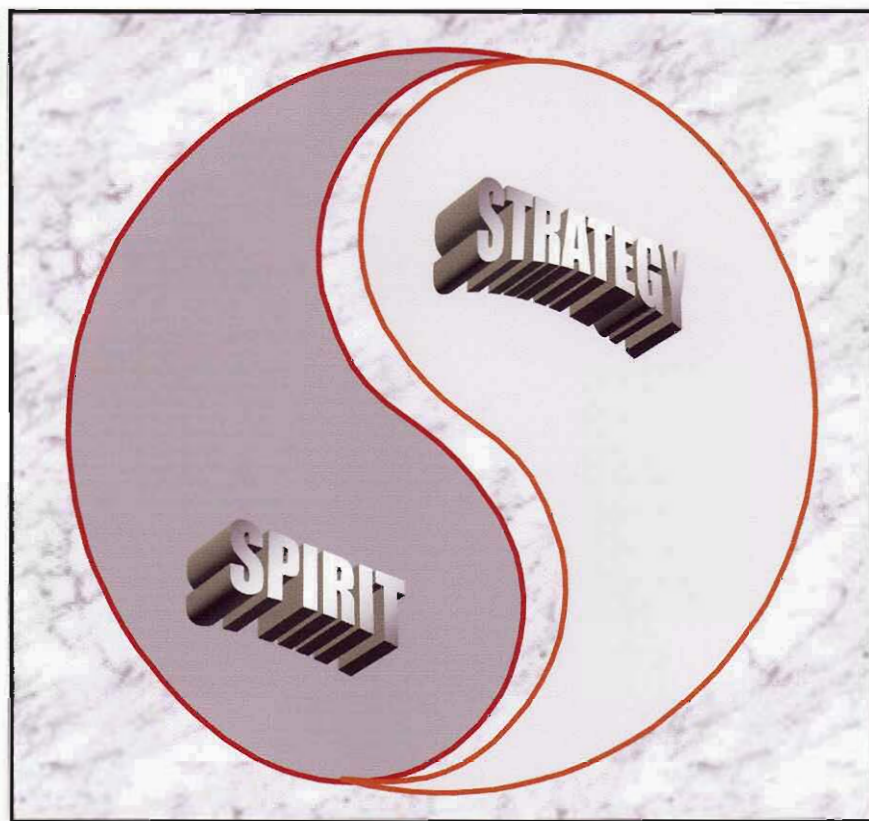
The implementation of SCHÜMANN SASOL SA (PTY) LTD strategy implies major change. Major change is so difficult to accomplish that it requires a powerful force to sustain the process. SCHÜMANN SASOL SA (PTY) LTD is currently being assessed and found to be ready for change. The success of the strategy now strongly relies on how

successful the spirit of the people is combined with their creativity and imagination (Manning 1997:186).

The current changing culture should now be used as a vehicle to enhance progress and achievements in terms of the marketing strategy and new product development initiatives. The new changing environment leans itself to freedom where creativity and innovation can be exploited compared to the traditional environment where it mostly have been inhibited by old paradigms, strict control and supervision.

This is therefore one of the important causal factors tot this study that cannot be ignored. The environment is favorable and the energy is there. They must just make it happen.

Figure 2.6 : The Yin Yang pair



Energy, enthusiasm, commitment and perseverance drive your goals, plans and actions. Strategy and spirit are a Yin Yang pair as shown by Figure 2.6. You cannot separate them and hope to succeed (Manning 1997:186).

The attitude of people is crucial for success. Their readiness to throw up new ideas, to sidestep problems and to leverage resources is a telling factor in competition (Manning, 1997:185).

In theory, strategy is an intellectual activity that produces the objectives and plans to guide the organisation into the unknown future. The quality of the strategy depends on the richness of the debate that produces it. The people with their spirit are the ones who will make the valuable inputs and who will go the extra mile to realise the objectives.

The way people are involved and the meaningfulness of their jobs are key issues when taking them along with change initiatives in the quest for growth and prosperity. By involving fully empowered people in the realisation of strategic objectives, they could make a difference in ways never expected.

The days when people were regarded as a “*valuable asset*” of the organisation is something of the past. People should rather be regarded as the “*heart and soul*” of the company.

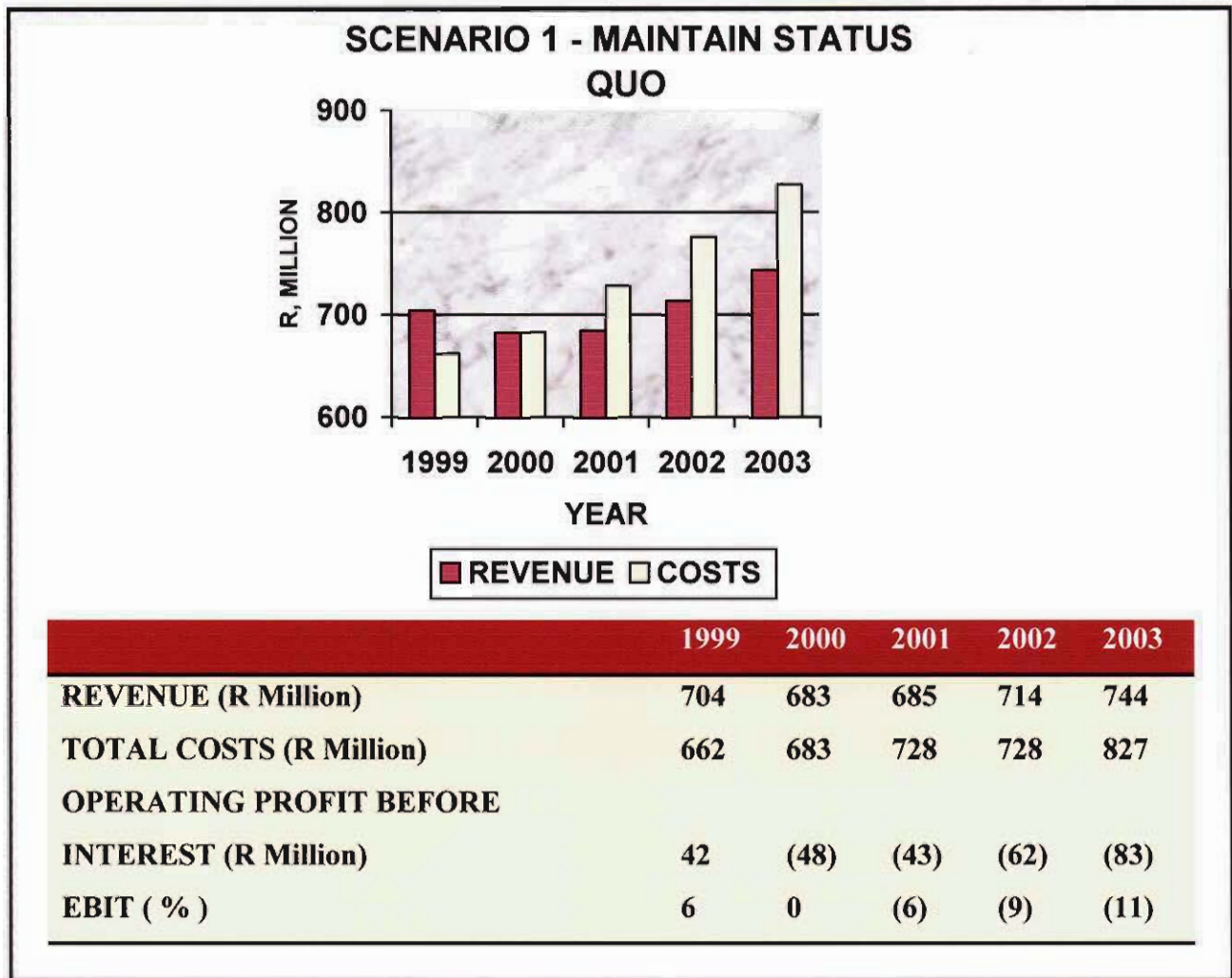
2.4.2 Financial influences of strategic objectives

The following scenario analysis show the impact of strategic objectives being met including specific marketing related objectives, and also if certain objectives are not met. The figures are projected over a 5-year period from 1999 to 2003. All figures are in R.million and based on a few possible scenarios at SCHÜMANN SASOL SA (PTY) LTD.

- **Scenario 1 - Maintain the Status Quo**

The assumption here is that no change will take place and everything remains unchanged and is indicated by figure 2.7 and its data table.

Figure 2.7 : Scenario 1 - Maintain status quo

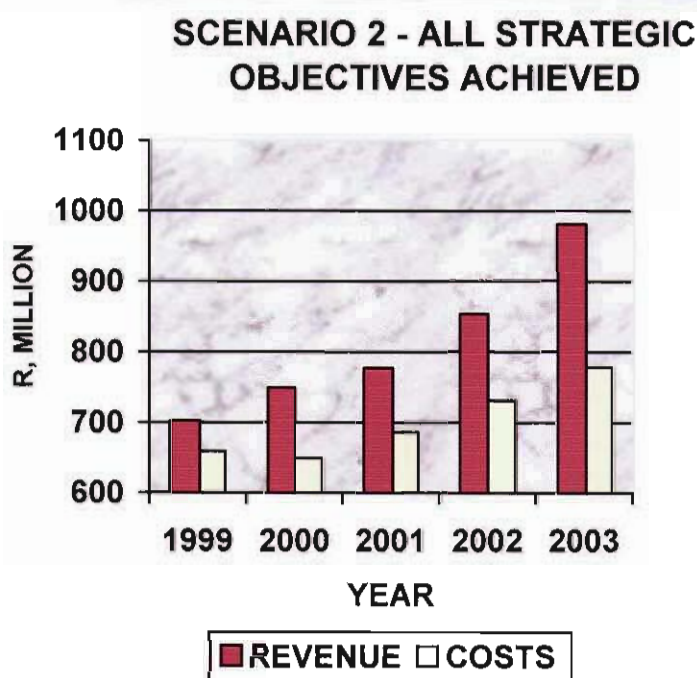


This scenario shows that there is no future for this company with the revenue and costs breaking even as early as next year. The role out and implementation of the strategic objectives is thus crucial for the survival of this company.

- **Scenario 2 - All strategic objectives are achieved**

This scenario implies that all of the nine strategic objectives are achieved through the successful implementation of the Leopard transformation project as shown by figure 2.8 and its data table.

Figure 2.8 : Scenario 2 - All strategic objectives are achieved



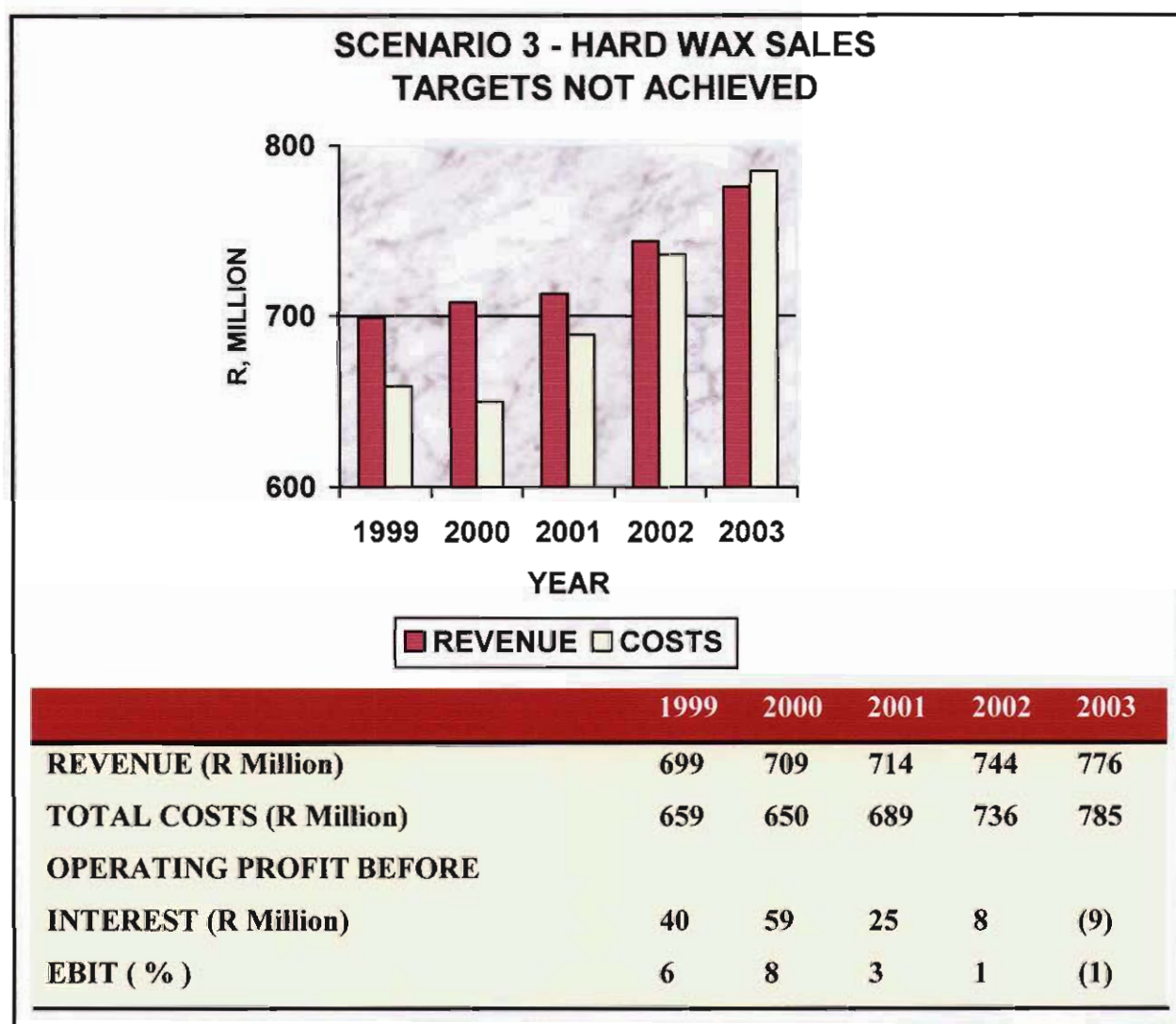
	1999	2000	2001	2002	2003
REVENUE (R Million)	702	748	777	853	981
TOTAL COSTS (R Million)	659	649	686	732	778
OPERATING PROFIT BEFORE					
INTEREST (R Million)	43	99	92	121	204
EBIT (%)	6	13	12	14	21

This in itself will put SCHÜMANN SASOL SA (PTY) LTD in a competitive and market leading position.

This is the most optimistic scenario and relies on the successful achievement of all strategic objectives. These objectives are realistically set and will exceed the overall strategic goal of 15% EBIT by the year 2003 by 6%.

- **Scenario 3 - Hard wax sales targets not achieved**

Figure 2.9 : Scenario 3 - Hard wax sales targets not achieved



As indicated by figure 2.9 and its data table it becomes clear that this scenario have to be avoided at all cost. This also forms one of the most important causal factors to this study

and is the one area in which SCHÜMANN SASOL SA (PTY) LTD can achieve the quantum leap that is so desperately required.

This is the scenario that will be addressed by the three-tier integrated approach that forms the underlying concept of this study. This will be addressed in detail by the following chapters. This is also the area that faces fierce competition in mature and slow growing markets. This makes the marketing of new applications and products absolutely essential for the survival of SCHÜMANN SASOL SA (PTY) LTD.

2.4.3 The lack of radical marketing structure and sufficient experienced marketing people.

In chapter, three the important aspects for a marketing strategy and the different ways of thinking and doing compared to the traditional approach will be addressed.

At SCHÜMANN SASOL SA (PTY) LTD, no formal marketing strategy is evident and to further enhance his weak point there is also a lack of sufficient marketing people to actively market in the global market environment and especially the USA.

The hard wax inventory has also doubled since the same time in 1998 and can only be reduced by placing it into the market through aggressive marketing and selling. It is also evident that there is in some global first world countries virtually no marketing people deployed and in some instances where they are, they totally lack the essential product and application knowledge. It can be summerised that the global presence of SCHÜMANN SASOL SA (PTY) LTD in terms of skilled marketing and application people is seriously lacking.

2.4.4 No collaboration networks between marketing and the developers of new products and applications

The new organisational structure as indicated by figure 2.3 caters for collaboration and cross-functional integration. Successful market and new product development as one of the industry's critical success factors will not be achieved without sound collaboration and well established networks. These two aspects are interdependent to the extent that they cannot survive in isolation.

Chapter 3 will address these aspects forming this important lifeline of the new SCHÜMANN SASOL SA (PTY) LTD.

2.4.5 A customer focussed and integrated supply chain optimisation

The supply chain is the "*golden wire*" that covers the flow of goods from suppliers through manufacturing and distribution chains to the final customers.

Supply chain management provides a different perspective on inventories and distribution activities. Supply chain management requires a new approach to systems integration and not only simple interfaces. (Christopher, 1992:13).

The goal of supply chain management is to link the market the distribution network, the manufacturing process and the inbound procurement activity in such a way that customers are serviced at higher levels and yet at a lower total cost.

It is therefore a crucial requirement to extend the logic of integration outside the boundaries of the company to include suppliers and customers (Christopher, 1992:12).

Supply chain management and optimisation is one important dimension of the three-tier integrated approach on which this study is based. An organisation can have the best marketing strategy supported by the best information network in the world, but if the supply chain is not focussed on customer satisfaction, the total effort will be a waste.

2.4.6 No proper information system and network to support the marketing strategy and new product development

To stay ahead and maintain competitive advantage in the wax industry it is absolutely crucial to have market related and application related information available at the fingertips of the decision-makers. Business information and specifically market intelligence are the building blocks of the marketing strategy. Information regarding competitor movements, customer movements, new potential applications, new products, and market dynamics of the day are typical pieces of information forming the total picture to clear up the direction of the marketing strategy. These typical trends are ever changing and so rapidly changing that decisions based on information received a week ago could be already be outdated today.

For an organisation to stay the leader in the market and to remain flexible with quick responsiveness to sudden dynamic changes, a good and solid information network is unavoidable.

At SCHÜMANN SASOL SA (PTY) LTD, no radical marketing strategy based on market intelligence or proper marketing information network is evident. This is a major aspect of the three-tier integrated approach on which the conceptual framework for a marketing strategy is based and will be discussed in chapter 5.

2.4.7 Fierce competition in a slow growing market

The current scenario in which SCHÜMANN SASOL SA (PTY) LTD finds itself today has a dark cloud hanging on the horizon.

The single biggest competitor, Shell GTL in Bintulu (Sarawak), East Malaysia were destroyed by an explosion on Christmas day 1997. Since then SCHÜMANN SASOL SA (PTY) LTD capitalised on this and are currently supplying a major part of this market normally supplied by Shell. Despite this fact the inventory levels on specifically hard waxes manufactured by SCHÜMANN SASOL SA (PTY) LTD are building up on a daily basis and currently inventory levels of final hard wax product amounts to 19 000 metric tons. The Shell plant in Malaysia is currently being rebuilt and will be commissioned during April 2000. It is also getting a 25% capacity increase (Belcher, J. 1999: 1).

It is thus very clear that the pressure on the marketing of hard waxes and the finding of new hard wax applications will be a crucial factor in the future of SCHÜMANN SASOL SA (PTY) LTD and limited time is already a major concern.

2.5 SUMMARY

In view of the above causal factors, there is a great challenge ahead of SCHÜMANN SASOL SA (PTY) LTD. This study will focus on these challenges based on the three-tier integrated approach.

A Marketing strategy supported by a customer focussed supply chain and enabled by an integrated market intelligence network will interdependently and with direct interaction attempt to implement a solution for SCHÜMANN SASOL SA (PTY) LTD to take on the challenges of the new millennium.

CHAPTER 3

A LITERATURE STUDY OF THE DOMAINS IN INTEGRATING THE TRANSFORMING ORGANISATION WITH THE GLOBAL MARKET

3.1 INTRODUCTION

A three tier integrated marketing approach as introduced in chapter one will form the basis of the literature study in this chapter. Each of the three tiers namely :

- the right marketing culture for a radical strategy;
- customer focused supply chain optimisation; and
- a global marketing information network will be discussed in detail.

Each of these three tiers is in fact individual sciences in their own right. They are also characterised as extremely dynamic with significant complexity due to the turbulent global market environment. It is expected that this trend will become even more evident and fierce as we enter the new millenium.

Extensive and focussed research went into these domains during the past decade leading to attractive opportunities in especially the consulting industries focussing on these domains to assist businesses world wide.

Organisational transformation without these domains integrated as part of the total redesign, are facing the danger of not being properly equipped or prepared for the digital era and the velocity at which things will change and happen in business.

If the 1980's were about quality and the 1990's were about reengineering and transformation, then the 2000's will be about velocity (Gates, 1999: 1). It becomes clear that the 2000's will be about how quickly the nature of business will change. It will also address how quickly business itself will be transacted and about how information access will alter the lifestyle of customers and their expectations of the business.

For a business like SCHÜMANN SASOL SA (PTY) LTD to survive in this environment, it is essential to focus on the enablement of business processes through the integration of the three tier integrated marketing approach.

3.2 CREATING THE CULTURE TO SUPPORT A RADICAL MARKETING STRATEGY

“ We obviously have little control over global economic trends, currency fluctuations, devaluation, natural disasters, bad weather or schizophrenic stockmarkets. We do, however, have complete control over our own behavior”

Roberto Goizueta, Chairman of the Coca-Cola Company (1997).

From this statement it becomes clear that change and how we determine our strategies and how radical and effective it will be, is in our own hands.

To make successful change happen, we come to realise that our values and beliefs, or organisation, our systems and products are all up for examination and even reinvention. Things we took as seriously and defended at such cost can now suddenly not matter anymore. To venture into a new future we need a mindset of

realising that the only thing that stands between the future and us is the past (Manning, 1997 : 10).

As a strategist he also warns South African countries that:

- the pace of change is going to be dictated by other foreign companies; and
- other players with their own agendas will make the rules.

The challenges for organisations to make successful change happen, rather than to be the followers of change is, to operate at high velocity. The definition of velocity as seen in this context is: *“Speed with marketing intelligence”*.

It becomes evident that tomorrow’s winners in the corporate battlefield will be flexible and fast. “Agility” is a measure of an organisation’s wellness just as temperature tells you about the health of a human body (Manning, 1997: 188).

SCHÜMANN SASOL SA (PTY) LTD can only grow by selling more of its existing products in current markets under fierce competition or to develop completely new products and applications for new markets. The drive to cost effectiveness and efficiency is also included during these processes.

This can only be achieved through the competencies and capabilities of it’s people and specifically it’s marketing and research people working in collaboration as a strong team, capitalising on the synergies of joint effort.

It becomes clear that competence in the absence of a clear strategy is like acting without an audience (Ulrich, 1998 : 15). Ulrich also re-emphasis the fact that skilled and capable people that are committed to the business is the “heart and soul” of the company.

“Intellectual Capital of a Marketing force = Competence x Commitment.”

(Ulrich, 1998 : 18)

With this equation it becomes clear that a company with high competence but low commitment have talented marketing people who can't get things done. It also implies that a company with high commitment but low competencies has less talented people who get things done quickly. Both are dangerous because intellectual capital of marketing people require both commitment and competencies and also in a well balanced ratio. This must all evolve to a capable marketing force.

The following tools as indicated (Ulrich, 1998: 18) are important to address and to supplement the companies needs for competent marketing people.

- **Buy**

Here a company can acquire new talent by hiring individuals from outside the firm or even from another department within the firm. The objective is to have a total outside and new view on the current activities and strategies. This is also a very aggressive method used by companies to target key marketing personnel from the competition and to buy not only the intellectual capital of such a person but also to capture essential strategic information from the competition. This often comes at a high price and is a risky exercise.

- **Build**

With this approach a company can train and develop talent through formal job training, job rotation, job assignment and action learning. Unfortunately this take

time and must happen anyway as part of succession planning. It is, however, not always the right solution to force the short term radical marketing strategies to happen.

- **Borrow**

From partnerships, sister companies, or companies with competent and well skilled people, marketing people can be borrowed for a specific time to breach the gap of current requirements. Especially the short term and most essential competencies should be focussed on here to really make a difference. Potential people from consultants, vendors, customers, suppliers and even external companies globally can be sourced to satisfy the immediate need for specific marketing competence but is risky due to the sensitivity of information and knowledge.

- **Bounce**

Immediately remove individuals with low or sub-par performance. They can be coached and trained to be put back at a later stage. Currently they often can do more harm than good and could damage the market to the extend that important customers could be lost forever.

- **Bind**

It is of utmost importance to retain the most talented marketing people and fully exploit their potential. Every organisation should also be aware of external poaching by the competition. These people often become well known as competent in the market environment and very attractive to the competition.

Ways to foster the commitment of the company's marketing force is the other very important part of the equation and the following needs to be addressed (Ulrich, 1998 : 19).

- **Control**

The professional and modern marketing people of today cannot be successful if they are not fully empowered and control the decisions of how to do and plan their own work.

- **Clear strategy and vision**

This is the direction and dream to pursue and being part of it and understanding it leads to commitment and passion to make it happen as discussed in chapter 2.

- **Collaboration and teamwork**

"No one is as good as all of us" is an old saying that reminds us of the power of teamwork, sharing and collaboration. Successful companies are characterised by the extensive and powerful global networks of their marketing people. Strong global networks enhance agility, flexibility and influence in the marketing environment. This is a strong attribute of a professional marketer and creates a feeling of security and satisfaction further enhancing the commitment and to feel in control to make things happen with velocity.

- **Culture of velocity and agility**

A new culture characterised by professionalism, proudness and agility is unavoidable to face the challenges of the future. The toughest challenge is to see

the next technology, the next concept that is beyond the bounds of their expertise. A culture of high competitiveness and velocity is becoming evident and the letting go of the current solutions. They constantly move themselves and their customers to the next paradigm making it a continuous way of life and thinking (Treacy & Wiersema, 1995 : 189).

Being part of such a team and committed to such a team and performance are essential ingredients for the modern marketer to face the challenges of fierce competition. “*Running at full speed and accepting all challenges*” as clearly stated in the Vision of SCHÜMANN SASOL SA (PTY) LTD emphasizes the strategic seriousness of this attributes needed in it’s people.

- **Technology**

Technology must be seen as an enabler of the organisation’s strategy and this includes the marketing strategy. Information technology and more specifically the “*Digital nervous system*” of the organisation is of utmost importance to increase the effectiveness an efficiency of the marketing people. To be globally connected and to have essential information at their fingertips 24 hours of the day could be the key to success. This will be discussed in detail later in this chapter and forms an integral part of the three domains in integrating the transforming organisation with the global market. Technology increase productivity and also the commitment of people, especially when they enjoy and appreciate the value it can add to their efforts.

- **Incentives and rewards**

Being part of the success and to share in the growth by being well rewarded is a very strong motivator. Not only in monetary terms but also in the growth and

new challenging work. Very strong focus must be given to the intrinsic and extrinsic motivational factors of the modern marketing people in the company. This needs to be approached scientifically where the specific needs and expectations of each individual are clearly understood. The incentives and rewards must be of significant value to the people to drive the required behaviour. The company must be open and able to deliver when the agreed performance objectives are met or exceeded. This can only succeed in an environment where the parties have a modern and mature working relationship as professional people in a professional environment and clear and realistic targets are set.

For strategy to translate into work and to survive the difficulties, distractions and dangers that are inevitable, it must be underpinned by a powerful human spirit (Manning, 1997 : 185).

The marketing force of a successful company preparing for the new millenium will have a total different approach towards strategy, energy, enthusiasm, commitment, competitiveness and perseverance to drive their goals, plans and actions will be clearly visible in their spirit. In reality the marketing strategy does not always evolve in the orderly fashion that could be expected and it is only as effective as the people behind it.

Tony Manning also makes it clear that the quality of a marketing strategy depends on the richness of the debate that produces it. The support of the marketing people is an outcome of conversation and participation in defining the strategy. They will make valuable inputs, and they will go the extra mile to realise the purpose in direct proportion to the way they will be involved and to the meaning they will gain in working as a team.

By including marketing people in high level conversations they will feel that their

contributions have meaning and they could make a difference in ways beyond any expectation.

The new millenium will require a new mind.

“We must look at the lens through which we see the world, as well as the world we see and understand that the lens itself shapes how we interpret the world”.

Stephen R Covey (1997).

One can now reason that this new way of thinking will let companies ride the turbulence. A far deeper appreciation of paradox and the absolutely vital role that assumptions play in treating all problems and challenges is desperately needed (Manning, 1997 : 242).

The following slogan puts perspective on the power of the person in the portfolio of a professional marketer.

“What lies behind us and what lies before us are tiny matters compared to what lies within us”.

Oliver W Holmes (1997).

3.3 CUSTOMER FOCUSED SUPPLY CHAIN OPTIMISATION INITIATIVES

Business leaders are moving towards new business paradigms that allows companies to work more closely with their traditional and new business partners to adapt to the rapidly changing market place. This improved integration is the

very essence of supply chain management. Supply chain leaders are now also considering the linkages between functions within the company as well as with other organisations up and down the supply chain (Gattorna, 1998 : 1).

The relationships of the supply chain and marketing efforts are of utmost importance and must be aligned every step of the way. The market provides the structure, conditions and forces for change in a given industry and shapes the range of customer buying behaviours or segments.

Methods of integrating supply and demand are enabling entire supply chains of companies. They can now capture, analyse and respond effectively to market signals, trends and align themselves accordingly. We can see in the example of Amazon.com that introduced electronic commerce (E-Commerce) as a major order processing and marketing initiative worldwide. They realised too late what the effect of this strategy could have on their supply chain in terms of cost and operational effort. They are only now slowly recovering from this impact and had to put significant effort into reducing the pressures on their supply chains and still remain profitable.

3.3.1 Intuitive supply chain thinking

There are many desirable qualities evident in world-class organisations, which enable them to sustain their competitive advantage:

- they are focussed and dominate their chosen markets;
- although some are large, they remain agile and adapt quickly to business & market changes;
- they are market leaders in both products and service;
- their business processes are healthy, lean, value adding and fast;

- their management and employees are well-informed, knowledgeable about current and developing concepts in their functions and related functions;
- they are early adapters of new technology, process equipment, information systems and supply chain initiatives; and
- they assist their supply chain partners to develop with them.

Doug Hunter also (Hunter, 1999: 19) puts the important goals of supply chain management into perspective and also captures a wide range of viewpoints on this, namely the:

- collaboration (partnering);
- coordination (integrating); and
- optimising (solutions adding the most value).

From the work done by Hunter one can reason that processes and systems within the supply chain must be able to deliver intense integration of the following four business activities.

- **Planning**

The ability to anticipate the future and to easily respond to changing situations.

- **Optimisation**

The ability to plan or carry out supply chain activities with optimum efficiency.

- **Execution**

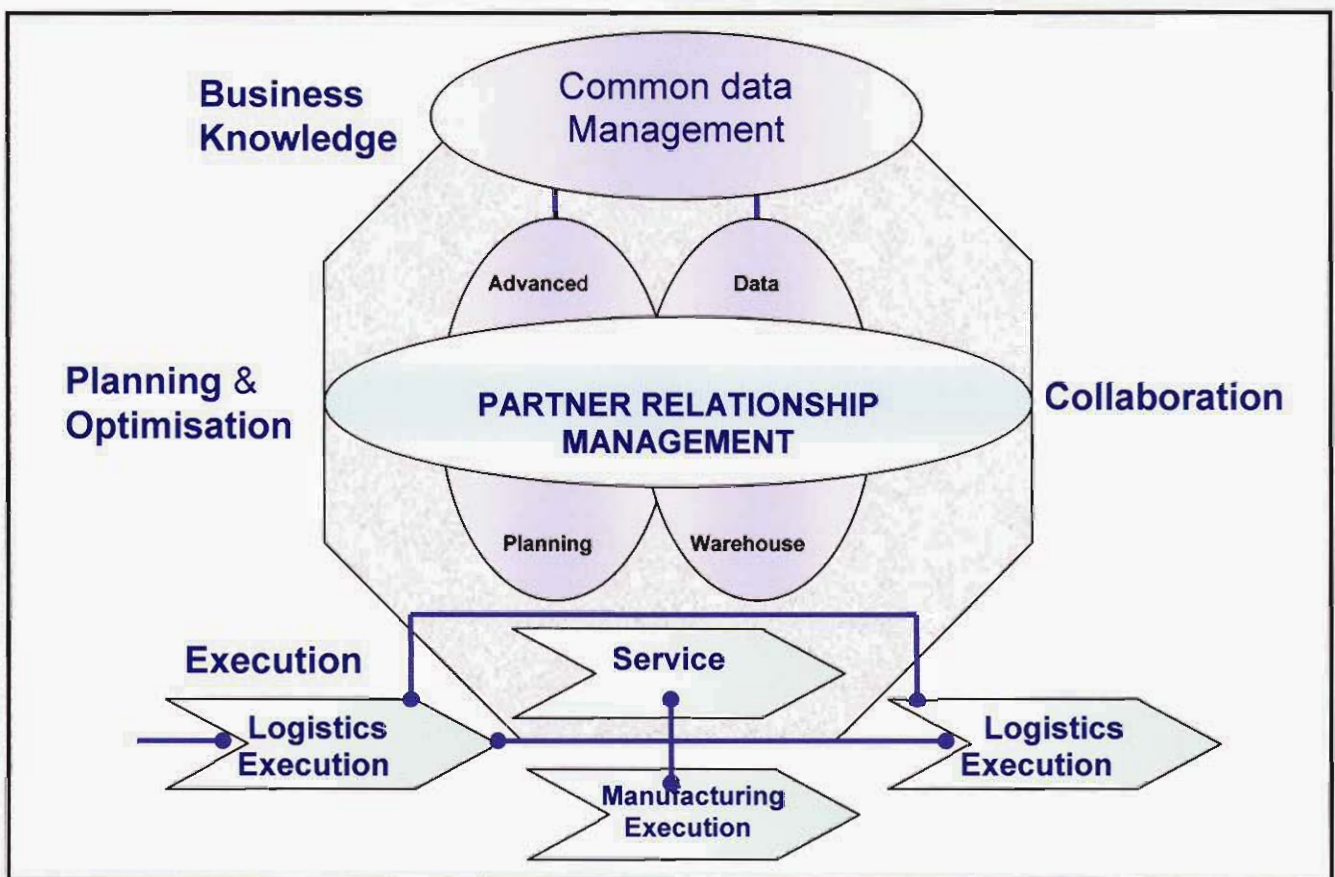
The ability to automate your supply chain and execute optimised plans with predefined constraints.

- **Performance management**

The ability to define key performance or benchmark indicators and continually monitor performance against them.

These actions must automatically cut across every business process: design, planning, sourcing, manufacturing, order management, delivery, service and support. It is just as important that the activities also move up and down from strategic, to tactical, to operational levels and back.

Figure 3.1: The supply chain components & activities and how they traditionally integrate and interacted.

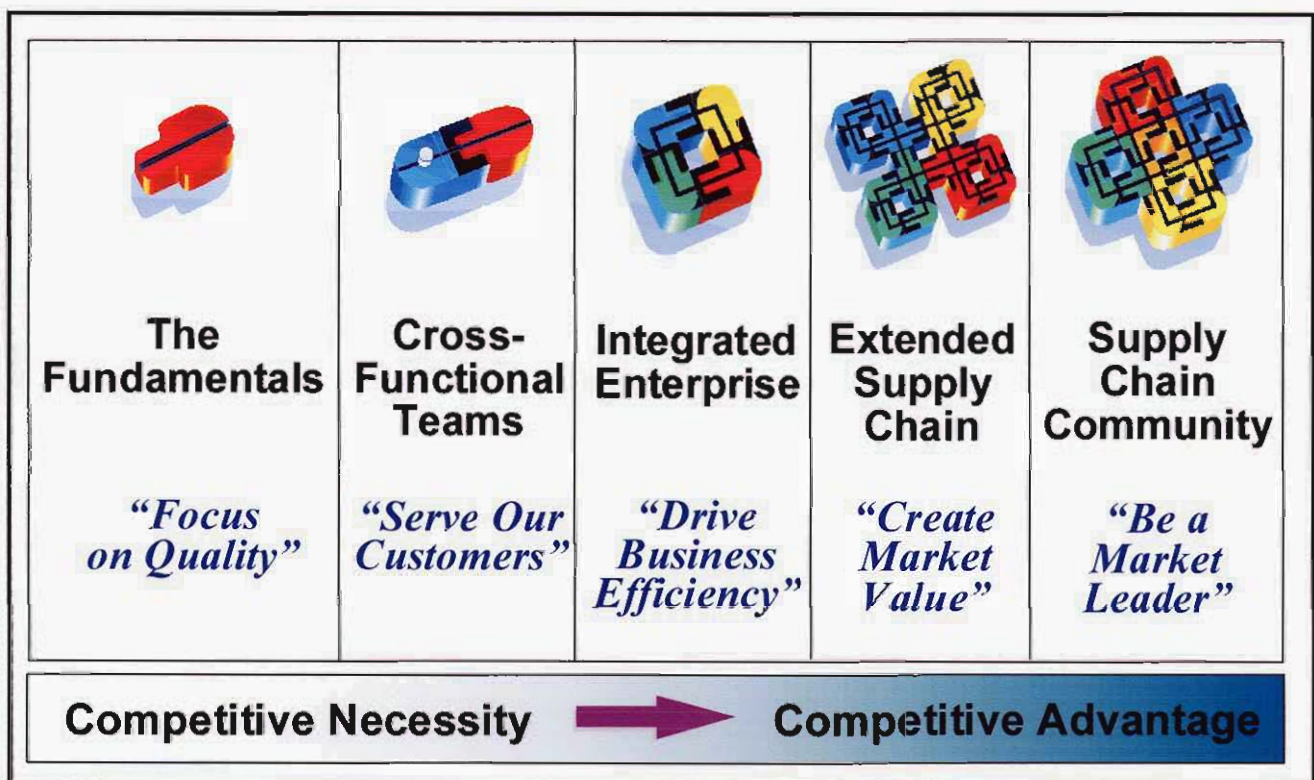


It becomes evident that each of these activities has its own peculiarities in terms of the knowledge required, the techniques available, traditional business or departmental practices and competitive pressures. Although there were integration to some extent, the traditional approach were very much focussed on categorizing different activities into specific labeled silos with thick walls of isolation separating them. Companies have tended to implement “island” or point systems to address each activity which led to disintegration that militates against true supply chain management principles and caused confusion and loss of synergy.

3.3.2 The five stage compass model for supply chain management

It is essential for the customer focussed organisation to strive towards having a seamless, fully optimised and efficient supply chain as strategic priority.

Figure 3.2: Five stage compass model for supply chain management



Fox & Holmes (1998 : 55) focus their supply chain compass model on the following key objectives:

- to create a common framework and foundation to help companies understand supply chain management and it's supporting technologies;
- provide the linkage of supply chain strategy, organisational strategy and the information technology strategy to the established business goals and objectives; and to
- provide the roadmap and direction for companies to achieve and sustain a competitive advantage in their marketplace.

They link and integrate with this model all the essential activities and efforts in the transforming organisation with the global market.

This becomes clear if one look at the five stages of the supply chain compass (Fox & Holmes, 1998 : 56).

- **Stage 1 : The fundamentals**

The focus here is from quality of the products being produced to the way in which they are packaged and delivered. The primary business pain for SCHÜMANN SASOL SA (PTY) LTD here as the supplier of commodity products, is the cost of providing this quality. This supply chain (logistics) costs is an significant expense and the driving goal is to produce dependable, consistent, on-spec products in their final state at the lowest cost. This is essential to become and remain a dominant market leader.

The automisation of processes (ordering, distribution, transportation, trading and scheduling) are ways in which companies of today progresses to stage 2 with

information technology as the leading enabler.

- **Stage 2 : Cross-functional teams**

Customer service is the primary focus of stage 2 companies, which view this capability as the primary discriminator in today's market place.

There are viewpoints on the fact that the best prices and quality of products are no longer the only aspects that will provide companies with a competitive edge. Without attractive prices and top quality products companies will not survive, but it is the flexibility, agility and reliability of the supply chain that will provide the edge. Companies of the future will compete on their supply chain versus the supply chain of the competition and with less focus on prices or product quality as the traditional approach. The emphasis here turns to shipping orders complete and always on time to satisfy customer demand with price and quality as a given. To remain competitive, customer service becomes the driving goal.

Nagel & Cilliers (1990 : 4) defines customer service as a deed, a performance or an effort, which if added to a product, increases it's value or utility to the customer.

Therefore it becomes clear that customer service consists of those intangible components which are added to the product. This also includes the powerful value of sound business relationships of marketing people with their customers and the efforts they put in to maintain the relationship. This statement is also evident at SCHÜMANN SASOL SA (PTY) LTD where some customers prefer to buy from them just because of the sound customer/supplier relationship and even at higher prices in some occasions.

Companies organise themselves into cross-functional teams that typically incorporate compatible cross-functional areas. An example would be where the physical distribution and freight departments are combined to form logistics organisations where their success are measured on how well the company meets their customer service objectives and it's cost and profit targets. The operational excellence grounded in stage 2 is the pre-cursor to drive business efficiency in stage 3.

- **Stage 3 : The integrated enterprise**

The primary focus here according to Fox & Holmes (1998 : 59) is efficiency. The driving goal is to be highly customer responsible by building an successful customer service attained in stage 2, while leveraging the ability to quickly deliver high quality products and services. All of this is accomplished at the lowest total delivered cost.

It also becomes clear that stage 3 companies become highly responsible by investing in operational flexibility and by integrating their internal supply chains from the acquisition of raw materials to the delivery of product to the final customers.

Cross-functional processes such as demand planning, demand fulfillment and source supply commonly replace traditional and functional silos.

As can be seen with the new organisational structure of SCHÜMANN SASOL SA (PTY) LTD, the traditional logistics silos are now decentralised. It is an integral part of the three separate business units of paraffins, medium wax and hard wax.

It often happens at this stage that while operational efficiency has improved, companies fail to capitalise on the opportunity potential of implementing enterprisewide decision support technology. Existing technology partners must be locked in to add additional required functionality as part of an integrated solution. Information technology is the enabler of supply chain activities and also the tool to share information in optimising and increasing effectiveness. This is essential specifically in a decentralised environment with whole task groups, as is the case with SCHÜMANN SASOL SA (PTY) LTD. Operational excellence with the enterprise business efficiency in stage 3, companies are well positioned to gain and sustain the competitive edge found at the next level.

- **Stage 4 : Extended supply chain**

The main focus of stage 4 is on creating market value.

In the market environment in which SCHÜMANN SASOL SA (PTY) LTD operates it is evident that relatively slow growth and margin erosion forces companies to pursue “preferred partner” or “preferred supplier” status with key accounts.

The driving goal of stage 4 is to increase market share and profitable growth. This is accomplished by providing customer tailored products, special packaging, tailored services and value added information that differentiate them from their competitors.

Vendor managed inventory (VMI), efficient health care response, and the emerging practice of collaborative planning, forecasting and replenishment (CPFR) are excellent examples of industry processes orientated toward achieving preferred partner status.

According to Fox & Holmes (1998 : 60) close partnerships with key customers, suppliers and service providers the following benefits are the result:

- companies can collaborate on forecasts, production and shipment plans. Lack of this is usually the cause of customer complaints and non-conformances to the customer requirements: and
- they can work as partners to jointly design products, services and value added information.

Stage 4 companies often reorient their organisations and processes to integrate external parties into their supply chain view.

Customer focussed, cross-functional teams are created to handle all aspects of the service.

To further maintain and improve sound customer relationships, they offer a menu of options for collaboration on forecasting, production planning, delivery scheduling and inventory levels. The success here lies in the areas and aspects where each party jointly executed process results in pricing or other advantage acting almost as an incentive like sharing in the total saving.

Market value as determined by increased share of the consumers in all chosen markets is the final measure of successful stage 4 companies.

- **Stage 5 : Supply chain communities**

Vision is a sense of the future. It is an imagined possibility, stretching beyond today's capability, providing an intellectual bridge from today to tomorrow, and

forming a basis for looking ahead, not for affirming the past or the status quo. The power of a vision is that it gives leaders a basis for positive action, growth and transformation (Sullivan & Harper, 1997 : 11).

It is with the same approach and mindset that companies strive to achieve preferred supplier relationships within an environment of continuous reinvention of business processes and organisational structures.

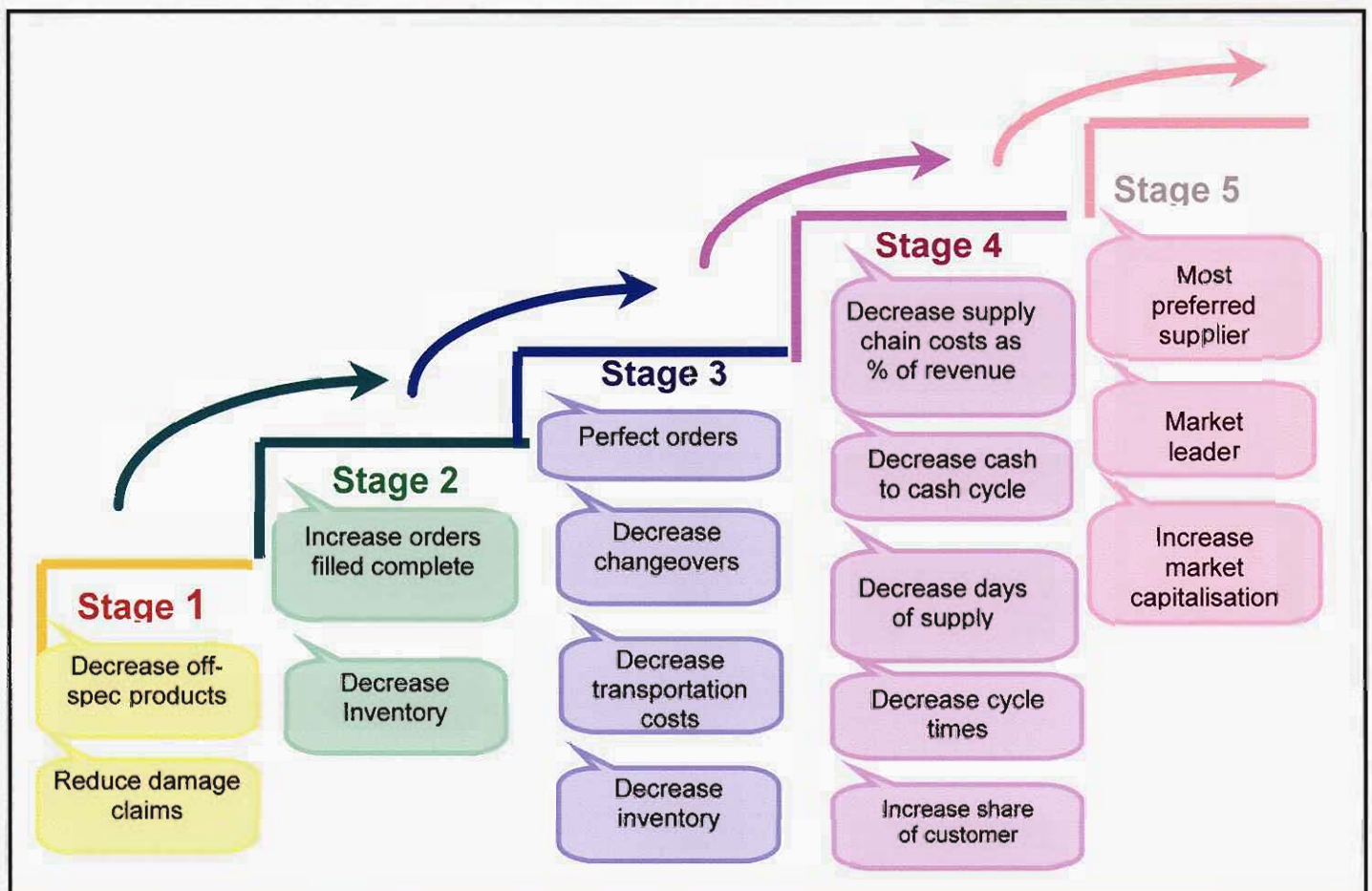
The focus of stage 5 companies is an achieving synchronous integration of common goals, objectives and metrics within the preferred supplier community. The attention here is on gaining and sustaining market leadership. Companies are consolidated into supply chain communities and those that have not achieved supply chain management marketing are excluded from these communities.

Stage 5 supply chains companies become rapidly configurable organisations, linked by Internet commerce software. These supply chains organise to meet the needs of customers and then disappear, only to be reassembled as other demands are identified and different combinations of companies dynamically connect to service them.

Direct links within customers, suppliers and consumers through real time information transfer throughout the community. This enables shared processes, services and goals to be synchronised. Companies of the future who are not prepared to participate may find their market distribution and penetration limited and will not be able to “lock in” their key accounts. Fox & Holmes (1998 : 61) also highlight the fact that by leveraging the inter-networked technology infrastructure, supply chain partners will minimise the amount of time spent coordinating between one another while achieving visibility across multiple organisations.

According to Fox & Holmes (1998 : 61) the journey across the supply chain stages is never ending. The constantly changing business environment will challenge business to reinvent themselves and leverage the power of information technology to support their new business processes. The supply chain compass can assist companies to differentiate them as leaders from the rest of the pack.

Figure 3.3: The five stages of the supply chain compass with a business perspective.



3.3.3 Fourth party logistics (4 PL)

This is a new organisational form that is now starting to emerge and overcome the problems of third party logistics that focussed mainly on transportation and warehousing.

Fourth party logistics is according to Gattorna (1997 : 81) a proven concept, which have the following benefits:

- it manages and continuously improves all aspects of the client's supply chain;
- it requires minimal attention from senior management of the client organisation;
- it offers opportunities for revenue generation by offering supply chain management services to other organisations; and
- where logistics and supply chain activities are decentralised it offers great opportunities for synergy through sharing and collaboration.

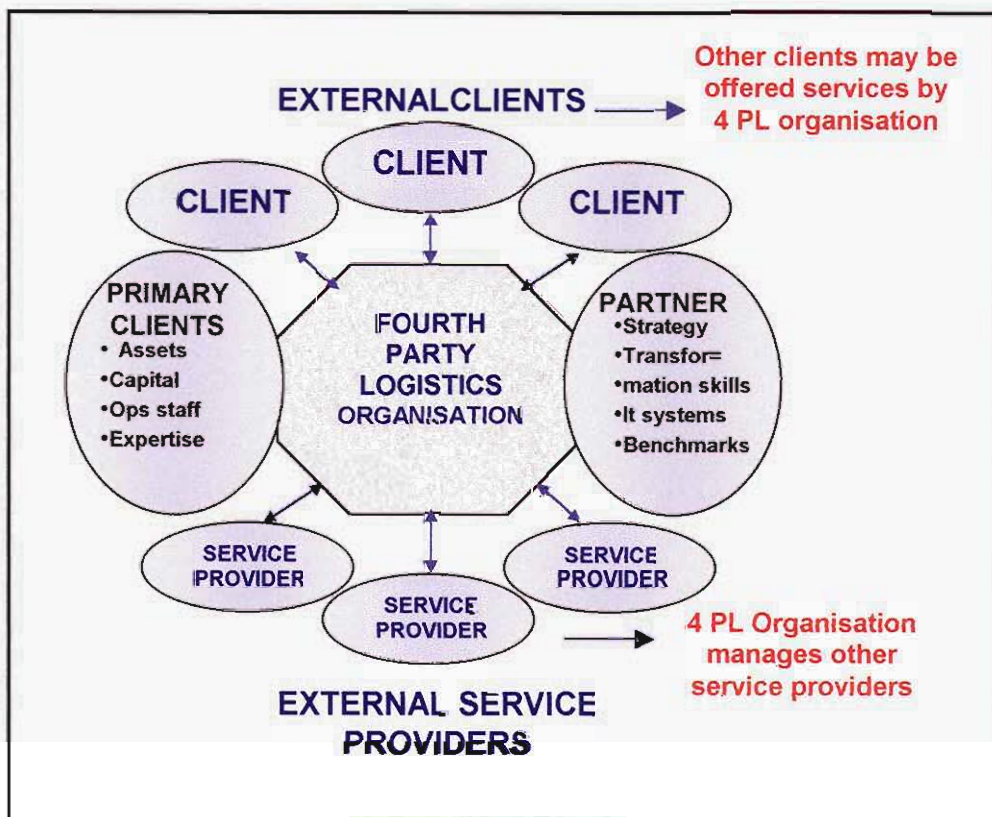
Gattorna (1997 : 81) also confirm that the concept of outsourced logistics and supply chain services has become accepted practice amongst manufacturing companies since the early 1980's.

In the United States, the acceptance of logistics services as a legitimate business practice has increased amongst Fortune 500 manufacturing companies. Between 1991 and 1995 the proportion of Fortune 500 manufacturing companies who indicated via a survey response that they make use of third party logistics increased from 37% to 60% (Gattorna, 1997 : 81).

Services not outsourced by these companies were generally limited to the following areas:

- warehouse management;
- shipment consolidation;
- information systems;
- fleet management;
- rate negotiation; and
- carrier selection.

Figure 3.4 : The fourth party logistics structure



The fourth party logistics (4PL) organisation differs from traditional and third

parties logistics organisations in the following main areas:

- the 4PL organisation is a joint venture between a primary client and one or more equity partners and established as a separate legal entity;
- the full responsibility for managing all aspects of the clients supply chain is given to the 4PL entity; and
- very little involvement of the client organisation's management on logistics operational issues.

According to the above structure as presented by Gattorna (1997 : 83) the benefits as described above can be visualised.

Gattorna (1997: 84) addresses these key characteristics of the 4 PL. company:

- hybrid organisation formed from a number of different entities;
- typically established as a Joint Venture (JV) or long term contract;
- alignment of goals of the partners and clients through profit sharing and other types of incentives;
- responsible for the management and operation of the entire supply chain;
- continual flow of information between partners and the 4pl organisation.
- great potential for revenue generation; and
- synergies are exploited through sharing of specialized knowledge, services and networks of all partners involved.

3.3.4 The different phases of implementing fourth party logistics.

It is important to focus on the following phases in the implementation of fourth party logistics across the total supply chain. This is a very intensive and complex exercise and needs all the support and commitment all essential stakeholders.

- **The establishment phase**

- ❖ A structured framework for selecting partners in the venture must be adapted to ensure the optimum combination of knowledge and capabilities.
- ❖ Clearly defined goal and performance measures for the venture must be established and agreed between the parties.
- ❖ An information system that is consistent across all the equity partners, supplier organisations and other essential stakeholders must be implemented.
- ❖ A change program to help manage the transition from internal supply to 4 PL outsourced supply chain activities.

- **The initial development phase**

The following requirements for the successful operation of the 4 PL organisation must be developed:

- ❖ Introduction of a global best practice process level and service level agreements through a continuous improvement mechanism.
- ❖ The ability to draw on personnel with the appropriate industry, functional and operational skills as required for each different country.

- **The ongoing operations phase**

Here the skills necessary to sell and manage services offered to multiple clients will be required as part of the revenue generation activities forming part of the 4PL organisation.

Fourth Party Logistics companies is a modern approach that have great offerings especially for a company like SCHÜMANN SASOL SA (PTY) LTD which is operating in a global high logistics intensive commodity market.

3.3.5 The supply chain and customer service

According to Connelly *et al.* (1997: 89) brings the attention to the fact that customers don't draw the line between a manufacturer and the supply chain partners that deliver the manufacturer's product to their receiving docks. If the shipment is late, the customer blames the manufacturer.

Connelly *et al.* (1997: 89) also states that the longer a customer stays with a company, the more that customer is worth to the company.

On average, the CEO's of most United States corporations lose half their customers every five years.

A significant part of SCHÜMANN SASOL SA (PTY) LTD customer complaints is logistics and supply chain related. It is of utmost importance that organisations realise that the supply chain is a direct interaction with the customer. The satisfaction level the customer experience through the supply chain services he receives from the company is a very strong builder of his specific perceptions and

relationship with the supplier.

We earlier discussed the integration of the entire supply chain and locking in of key accounts. A professional, flexible and reliable supply chain is a prerequisite for success. We also discussed the fact that competition will be fierce on the supply chains versus supply chain levels and how valuable this is in view of customer service and to become and stay the market leader.

The following examples demonstrates the direct contact of the supply chain activities visible and forming customer perceptions:

- order processing;
- packaging and handling of products;
- on time shipments;
- correct quantities and quality of service;
- handling of customer complaints;
- personal interaction with customer;
- technical support; and
- sharing in essential information.

From this it also becomes clear that these issues can be seen as the frontline contact with the customers. The mission statement of SCHÜMANN SASOL SA (PTY) LTD states clearly that they strive to be a customer focussed organisation. This implies that those crucial supply chain activities closest to the customer contact and which in effect are forming customer perceptions of the organisation should be flawless. Any incompetence in these areas of operations will be devastating to customer satisfaction and also great opportunities for the competition to exploit. SCHÜMANN SASOL SA (PTY) LTD will have to consider a more service than product orientated strategy to improve customer satisfaction. This could result in a total change of direction from the selling of products to rather selling of services and going beyond customer expectations.

3.3.5 The supply chain from a market perspective

Figure 3.5 : The market perspective on the supply chain

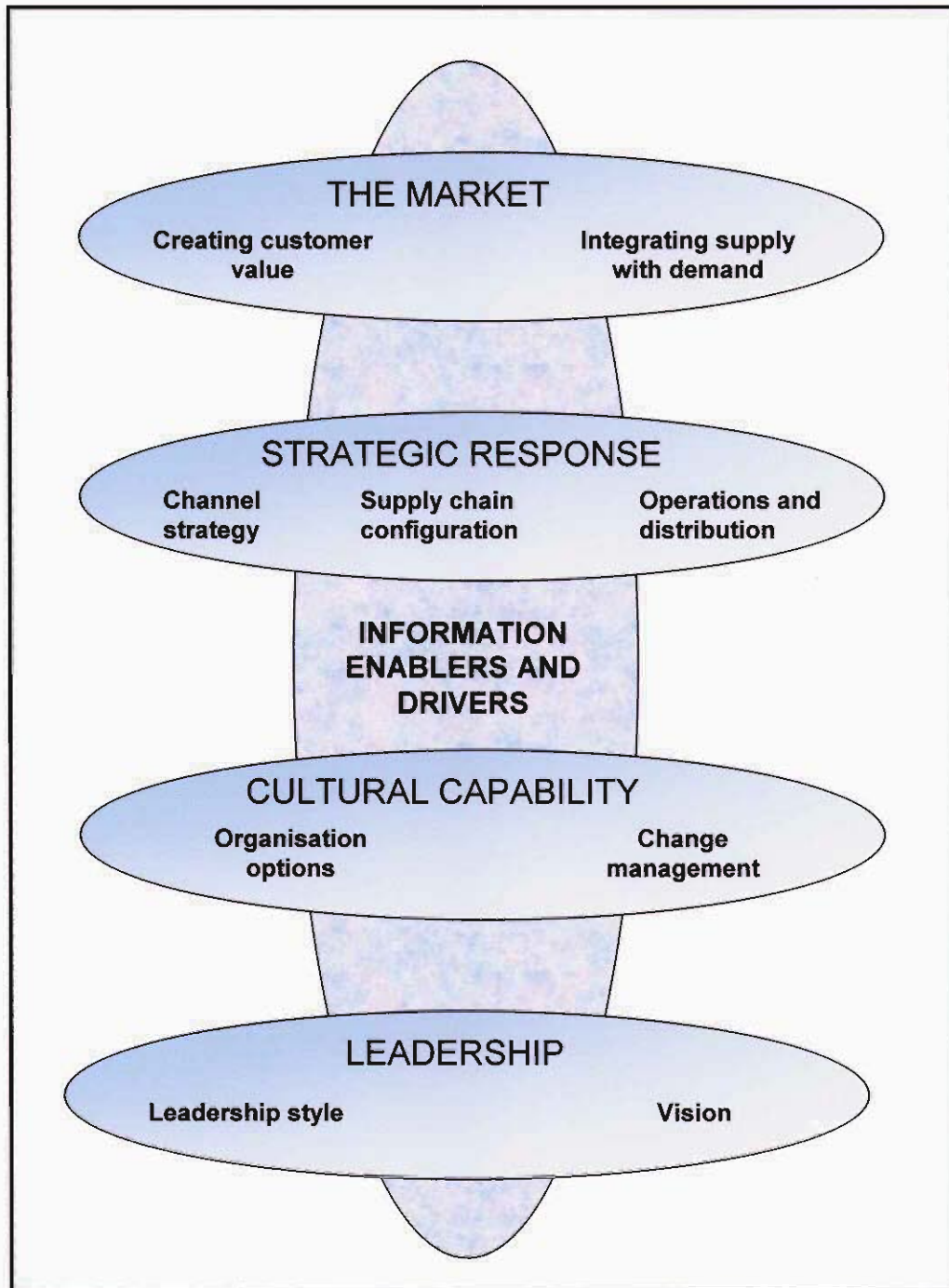


Figure 3.5 by Gattorna (1997 : 40) brings the reality that superb supply and demand chain management is the contemporary challenge confronting supply chain practitioners and will be the basis for competitive success or failure for many businesses. Companies looking to succeed need to understand their customers and consumers, their present needs, their stage of life and their consumption values.

A key part of understanding and retaining customers is to draw them into the companies orbit. This can be done through integrating the supply and demand chain. Clever management of customer needs through carefully planned logistics structures and services will help deliver the ever-elusive business goal of customer satisfaction (Gattorna, 1997 : 76).

In the future, higher levels of customer expectations along with new technologies, multiple channels for delivery and product proliferation will pose ever-greater challenges for customer support organisations.

3.3.7 Marketing and supply chain basics

According to Ptak (1999 : 23-1) the correct alignment of the supply chain can significantly improve the overall performance of the company.

She also highlights the fact that some marketing myths exist in the management paradigm about how to effectively focus new product development and offerings of the company to successfully meet the specific needs of each customer.

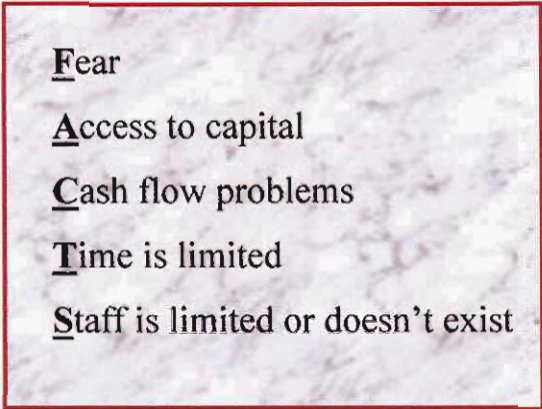
It also becomes clear that the long-term success of the company depends very much on the alignment of the marketing, supply chain and manufacturing strategies on the real needs of the customer.

The following definition captures and integrates total supply chain management as a very extensive and wide concept:

“Integrating the needs of the customer’s customer to the supplier’s supplier”.

Ptak (1999 : 23-1).

Very important to understand is the “FACTS” of marketing as described by her.



Fear
Access to capital
Cash flow problems
Time is limited
Staff is limited or doesn't exist

- **Fear**

Businesses have an inherent fear of taking risks that can adversely affect their future. Effective marketing can take the fear out of new product development and sub initiatives, which are very high cost generators at SCHÜMANN SASOL SA (PTY) LTD currently.

A “*rifle*” approach instead of a “*shotgun*” approach, focussed on the true needs of the customer has a high success rate. This results in confidence gained successfully introducing products that customers readily purchase. This will reduce the fear factor. The introduction of supply chain management is exactly the same approach according to Ptak (1999 : 23-1).

- **Limited access to capital**

All companies have limited access to capital and this resource must be allocated to produce the best results. Additional to the capital limitations, the perception of top level managers one often that they knew what the customer wants and it is therefore a waste of resources to do the research. For companies deciding on enterprise resource planning (ERP) software and the integration of this information to the entire supply chain, capital can become a critical issue.

- **Limited time**

The critical demand on time to handle the day to day operational issues with available resources often leaves no adequate time to properly survey the marketplace. Lack of time spent to evaluate market survey results and how it affects the organisation have a direct impact on the customer.

Learning how to use a new system, apply it to current business practices and deciding on the best practices is an overwhelming task in today's business environment. Especially with the high velocity and agility of competitiveness in the marketplace.

- **Cash flow problems**

Successful marketing efforts targeting the development of products with higher success rates in the market can dramatically improve the cash flow of the company supply chain tools help to determine what the appropriate product mix must be to maximise profits.

- **Limited or no staff**

Business can no longer afford to dedicate staff only to long-term strategic issues. Usually the crisis of the moment draws all available resources. Marketing efforts are added onto the list of duties of current personnel resulting to the priority and focus is only on the urgency of satisfying immediate customer demands. This also is exactly the case at SCHÜMANN SASOL SA (PTY) LTD as earlier discussed. ERP and supply chain implementations are also left to consultants due to a lack of resources often resulting to chaos and failure.

A successful ERP implementation is one where the enterprise has an acceptable return on investment (ROI) and produce a bottomline result.

Accurate data and trustworthy information can be automated to pass from customer to supplier by utilising a supply chain system. If the data inside the enterprise is inaccurate, the information from the ERP system will be unusable.

Attempting to implement proper supply chain management without effectively using an effective ERP tool is not worth the effort (Ptak, 1999 : 23-4).

3.4 A GLOBAL MARKETING INFORMATION NETWORK

Napoleon Bonaparte said, *"the right information at the right time is nine-tenths of any battle"*.

According to Blackwell & Pengo (1998 : 3-1) enterprises of today are engaged to the processes of:

- understanding customer needs;
- responding to customer needs with innovative products and services; and
- manufacturing and delivering these products and services.

It is also true that customers expect immediate availability of the products and services on a global basis and specifically relevant to the situation of SCHÜMANN SASOL SA (PTY) LTD.

Flattened hierarchies with empowered product teams can do this effectively provided that the people concerned have immediate access to accurate information.

An integrated information management strategy to deliver the required information and supporting activities from shop floor automation to enterprise wide solutions is a critical success factor.

Blackwell & Pengo (1998 : 3-3) identified a few valuable questions to test the need for an integrated information solution.

- Does your staff always have the right information at their fingertips?
- Do they waste time and effort looking for information?
- Is the information obtained consistent?
- Is the information up-to-date or in a visible format?
- Does it have to be collated manually from different sources?
- Can the information be passed on speedily in a useful form?
- Is information available 24 hours of the day and 365 days per year?
- Do you have access to certified professional implementation and support services?
- Do you have common development environments for all your application systems?

At SCHÜMANN SASOL SA (PTY) LTD not one of the above questions can be positively answered with confidence.

Back office and SQL server were developed with their questions in mind. As with Microsoft products, they also benefit from the global infrastructure that exists for distribution, implementation and support.

3.4.1 Changing technology and expectations

Here on the edge of the twenty-first century, the tools and connectivity of the digital era now gives us a way to easily obtain, share and act on information in new and remarkable ways (Gates, 1999 : 15).

Digital information pervasiveness is enabled by the Internet technologies that are giving us worldwide connectivity. It certainly becomes clear that the Digital age, “Connectivity” takes on a broader meaning than just putting two or more people in touch. The Internet creates a new universal space for information sharing, collaboration and commerce.

How many of us realise the impact and appreciate the value in the following scenario: “A person sits in her office in South Africa busy to finalise a contract for a person in Hamburg, Germany. With a “click” of a button she submits the document for comments to a person in Germany. Ten minutes later she received an edited document back from Germany with completed comments”. No paper, no time loss of two to three weeks without the technology. No postage and many more benefits are evident here.

The phrases “*Web Workstyle*” and “*Web Lifestyle*” are commonly used today to emphasize the impact of employees and customers taking advantage of these digital connections.

Today we are globally connected 24 hours of the day with portable electronic equipment.

Benefits of the Web Workstyle:

- changing business processes to be flexible and agile;
- replacing paper processes with collaborative digital processes;
- save precious time of all the people in the company;
- groups of people act together almost just as fast as a single person could act, but with the insights of the entire team;
- highly motivated teams are getting the benefit of everyone's thinking;
- faster access to information about our sales, partner activities, customers and competition; as well as
- faster reaction on problems and opportunities.

Gates (1999 : 17) describes the information system of the company in comparison with the biological nervous system of a human body.

It triggers your reflexes to react quickly to danger or need. It gives you information you need as you ponder issues and make choices. You are alert to the most things, and your nervous system blocks out information you don't need. Many activities takes place simultaneously and are integrated to influence each other.

Companies need to have some kind of nervous systems. The ability to run smoothly and efficiently. To respond quickly to emergencies and opportunities. To quickly get valuable information to the people in the organisation who need it. The ability to quickly make decisions and interacts with customers.

The twelve steps to make information flow and intrinsic part of a company: (Gates, 1999 : 20) are categorised below:

- **Knowledge work:**

1. Insist on communication flow over e-mail to react with reflexible speed.
2. Study sales data online to find patterns and share insight easily. Understand overall trends and personalise service for individual customers.
3. Use PC's for business analysis and shift knowledge workers to high level thinking work about products, services and profitability.
4. Use digital tools to create cross-departmental virtual teams that can share knowledge and build on each other's ideas in real time, worldwide.
5. Convert every paper process to a digital process, eliminating administrative constraints and freeing knowledge workers for more important value adding tasks.

- **Business operations:**

6. Use digital tools to eliminate single task jobs or change them into value-added jobs that use the skills of a knowledge worker.
7. Create a digital feedback loop to improve efficiency of physical processes and improve the quality of the products and services created. Every employee should be able to track and understand all the key metrics.
8. Use digital systems to route customer complaints immediately to people who can improve a product or service.
9. Use digital communications to redefine the nature and boundaries of your business.

- **Electronic business and commerce:**

10. Trade information for time by decreasing cycle times using digital transactions.
11. Use digital delivery of sales and service to eliminate the middleman from customer transactions.
12. Use digital tools to help customers to solve problems for themselves. Reserve personal contact to respond to complex, high value customer needs.

Manning (1999 : 1) supports this approach by saying that the personal touch is still irreplaceable and that customer's minds are won through human contact. He also argues that managers should pay more attention to the advantages of information technology. However they make a deadly mistake if they think that the only way to compete is through information technology, or that the internet offers the only route to success.

3.4.2 Essential aspects of the global information network to realise global integration

A key element of a "*digital nervous system*" in fact is the ability to link the following essential business systems:

- knowledge management;
- business intelligence;
- business operational systems; and
- commerce.

For the purpose of this study the focus will be only on these four aspects as essential aspects in integrating the transforming organisation with the global market. This will be properly addressed in chapter four, conclusions and recommendations to follow a practical approach to make it work for SCHÜMANN SASOL SA (PTY) LTD.

Gates (1999 : 3) expresses his strong belief that the most meaningful way to differentiate your company from your competition is to do an outstanding job with information management. How a company gather, manage and use information will determine its survival.

There are more competitors and more information available about them and about the market, which is now global.

A digital nervous system of world class should be developed for information to flow easily through the total value chain of the company.

3.4.3 Creating a digital nervous system

According to Gates (1999 : 37) the starting point should be to develop an ideal picture of the information the company needs to:

- run the business;
- understand the markets;
- understand all the competitors; and
- then demand that your information systems provide those answers.

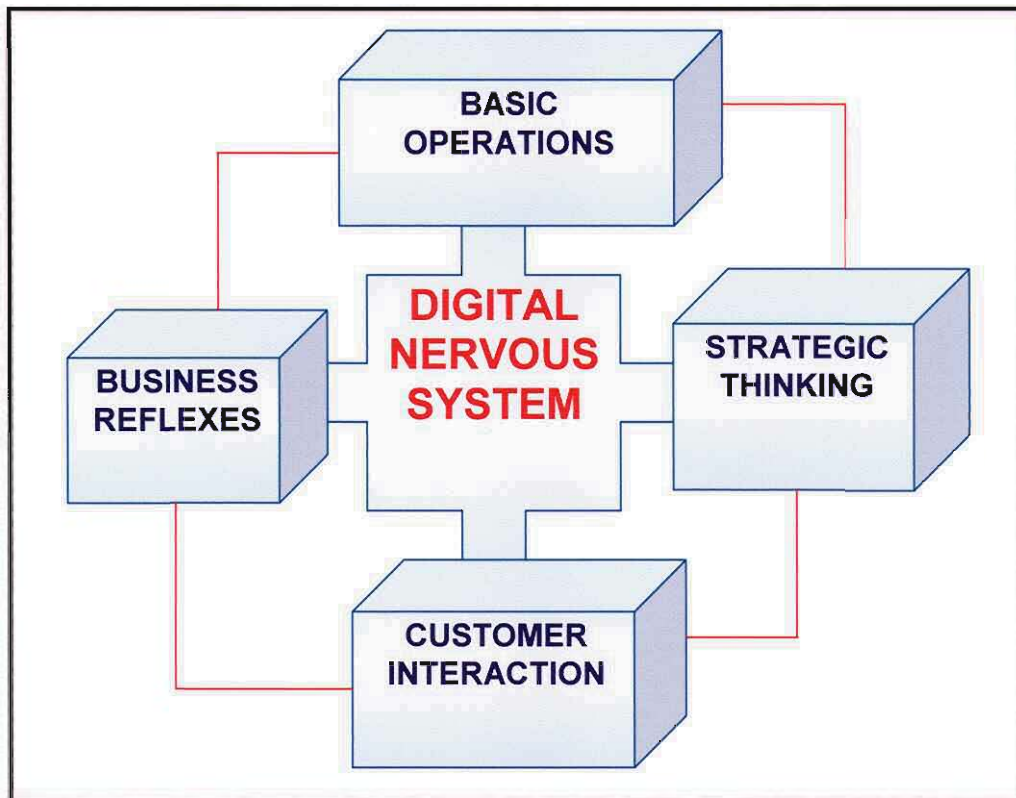
The following are some questions that should be asked to test whether you have adequate information as the lifeblood of the company in knowing your customers and markets:

- What do our customers think about our products?
- What problems do they want us to fix?
- What new features do they want us to add?
- What problems are our distributors and channel partners experiencing after doing business with us?
- Where are our competitors taking business away from us and why?
- Will changing customer demands force us to develop new capabilities?
- What new markets are emerging that we should enter?
- What areas should new product development focus on to ensure effectiveness and successful market placement?

The digital nervous system will not guarantee the right answers to all these questions, but it will free the decision maker of tons of old paper processes and create time to think about these questions.

The digital nervous system will put information there so that you can evaluate trends, have facts and ideas to quickly surface from down in the company and from the people who do have information about these questions. Importantly, a proper digital nervous system will enable all these things to happen fast.

Figure 3.6 : The Digital Nervous System



Source: Gates (1999 : 15)

From figure 3.6 the importance of an integrated information network for the survival of companies in the new millennium becomes clear and this is put into perspective by the following issues and examples:

- The digital nervous system comprises the digital processes that closely link every aspect of the thoughts and actions of a company.
- Basic operations such as finance, distribution, production plus feedback from customers are electronically accessible to the company's knowledge workers.
- Knowledge workers who use these digital tools can now quickly adapt and respond to the information.

- The immediate availability of accurate information changes strategic thinking from a separate, stand-alone activity to an ongoing process integrated and an ever changing and dynamic activity.
- Through human intelligence and collaboration, static sales, customer and demographic data can now be transformed into the design of a new product or program.
- Information is thinking work. When you have thinking and collaboration significantly assisted by information technology, you have a digital nervous system.
- Less time is spend on protecting information such as financial information and, marketing information with more time spent on teaching the people to use, analise and act on the information.
- Sales numbers, expense breakdowns, vendor and contractor costs, status of major projects can be seen in a form that incites analysis as well as coordination with other stakeholders in and outside the organisation.
- The digital nervous system can also be a big motivator. People really do appreciate information. They enjoy using technology that encourages them to evaluate them to run “what-ifs” and to evaluate what is going on in their markets.
- A digital nervous system enables a company to do information work with significant depth, creativity and efficiency.

3.5 SUMMARY

To summarise, it becomes clear out of the work of Gates (1999 : 24) that the main purpose of a digital nervous system is divided into two focus areas:

- it extends the individual's analytical abilities the same way in which machines extend physical capabilities; and
- combines the abilities of individuals to create an institutional intelligence and unified ability to act.

A digital nervous system seeks to create corporate excellence out of individual excellence on behalf of the customer.

Gates (1999 : 37) also makes the following observation that can be interpreted as unavoidable for any business today to survive the digital era.

“You know you have built an excellent digital nervous system when information flows through your organisation as quickly and naturally as thought in a human body. When you can use technology to marshal and coordinate teams of people as quickly as you can focus on individual on our issue. That is business at the speed of thought”

(Gates 1999 : 37).

This approach will fit the new organisational structure of SCHÜMANN SASOL SA (PTY) LTD like a glove.

It can become the “*super enabler*” required to integrate this transforming organisation with the global market.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

Organisational transformation has a significant impact on each individual in the organisation at SCHÜMANN SASOL SA (PTY) LTD where the transformation process is well underway and already in an advanced stage of the implementation phase. This is a great opportunity and also the best time to integrate this company with it's global market. In the previous chapter we had a look at the three important domains on which this study focussed to make this integration happen.

Having a culture recognised by agility, creativity, modern thinking, an efficient, customer focussed supply chain and a global digital information network were focussed on. These three aspects are the essential focus areas to successfully integrate SCHÜMANN SASOL SA (PTY) LTD with the global market as part of the transformation process.

In this chapter the focus will be on the conclusions and recommendations regarding:

- the transformation process at SCHÜMANN SASOL SA (PTY) LTD;
- the marketing initiatives and culture;
- the optimisation of the supply chain; and
- a global digital nervous system as information management approach.

4.2 THE TRANSFORMATION PROCESS AT SCHÜMANN SASOL SA (PTY) LTD.

4.2.1 Conclusions on the transformation process

In order to create the integration between man, technology and the global market environment, SCHÜMANN SASOL SA (PTY) LTD have agreed on a number of principles for the design of the future organisation:

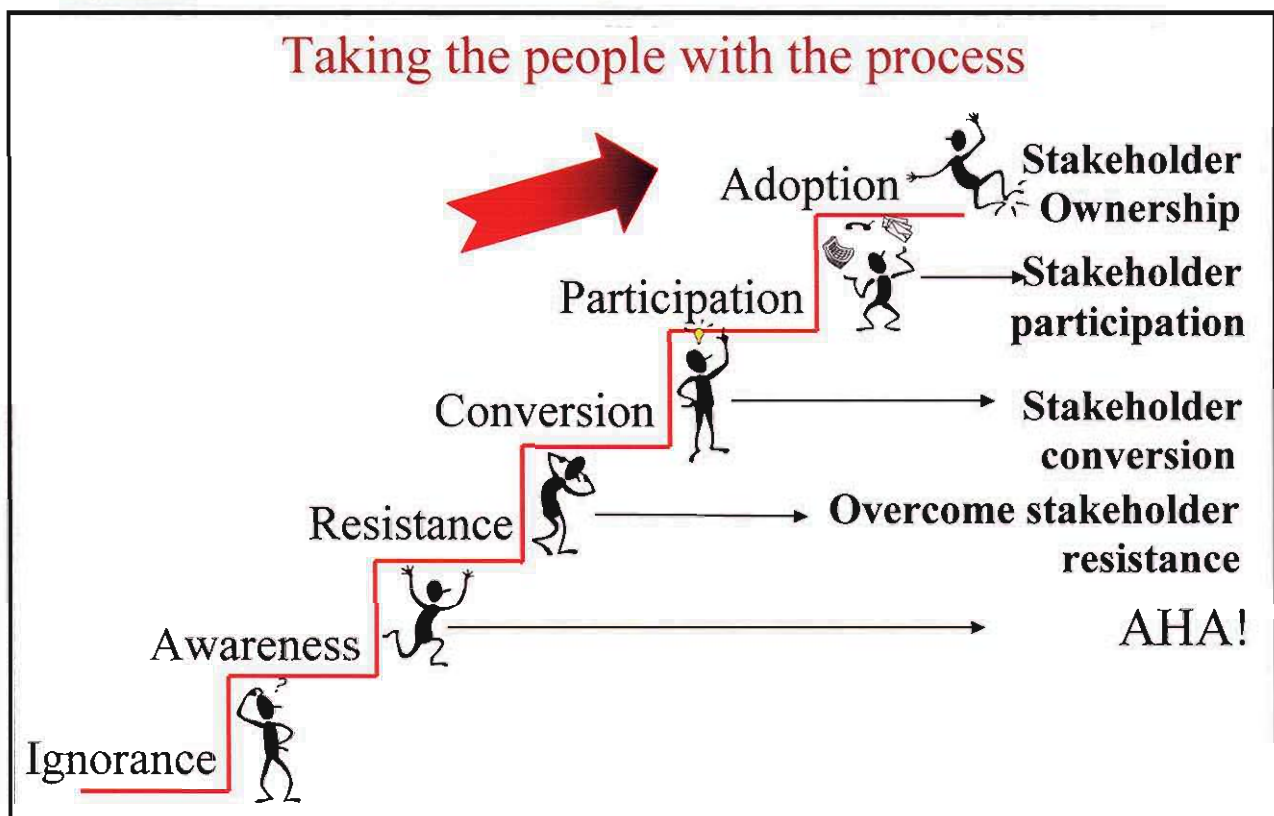
- ensure that the new organisational redesign fits the strategic plan;
- construct meaningful flow of tasks that lead to whole jobs across the total value chain;
- ensure individual involvement in the design;
- include supporting activities such as marketing, quality control and new product development in primary jobs;
- create the right amount of variety in tasks;
- leave scope for workers to set their own standards and determine their own means of production as fully empowered teams;
- ensure that individual jobs are worthy of respect in the community;
- contribute directly to the end product and service levels;
- control deviations at their source;
- create jobs that require multiple skills;
- ensure that information is available at the fingertips of all decision-makers;
- provide opportunities for individuals to meet needs for growth, learning, decision making, social support & recognition;
- provide feedback to units enabling them to control their own deviations; and
- monitor inputs just as carefully as outputs.

A dedicated project team applied these principles over a six-month period. The organisational structure that developed out of has the following characteristics as observed during this study:

- cross functionality;
- integrated;
- focuses on whole jobs based on basic transformations along the value chain;
- customer and market focus;
- flexible and dynamic; and
- well equipped to meet the challenge of the new millennium.

These characteristics are the key elements that should be further entrenched to supplement the organisation to grow new markets.

Figure 4.1: The current position with regards to the forces of transformation



Furthermore it can be concluded that the people at SCHÜMANN SASOL SA (PTY) LTD is ready, willing and able to change and the change management activities conducted by the Leopard project seems to be extremely successful. Looking at the stages the people went through during the process (figure 4.1) one can conclude that the majority of the people are already in the participation and adoption stages.

Great opportunities exist for synergy, specifically capitalising on the enthusiastic and energetic attitudes towards change and adding value to each individual's specific activities. This success is the result of excellent project management, change management and taking all the people along from the beginning.

4.2.2 Recommendations on the transformation process

Considering and taking into account information discovered during this study and also the market environment of which SCHÜMANN SASOL SA (PTY) LTD is currently part of, the following recommendations regarding the transformation process (Leopard project) can be made:

- **Recommendation 1 :**

A sense of urgency should be adopted amongst all people and this will have to manifest in the acceleration of the transformation process.

With the threat of Shell Malaysia, the biggest competitor of SCHÜMANN SASOL SA (PTY) LTD coming into operation during April 2000, there is a great need to accelerate the transformation process, to quickly and efficiently optimise and adapt traditional and inefficient processes. This have to be achieved by being sensitive to current people resources at SCHÜMANN

SASOL SA (PTY) LTD and the impact these dramatic changes will have on their capabilities and lives.

- **Recommendation 2 :**

Immediate and short-term targets should be developed in support of the longer-term objectives.

Although the overall strategic objective is to achieve an EBIT of 15% by the year 2003, it is important to also have more specific shorter-term immediate targets. The management team of SCHÜMANN SASOL SA (PTY) LTD also recognises this fact and agreed to the indicators to be achieved at the end of the 1999/2000 financial year as displayed by table 4.1

Table 4.1 : Short term immediate objectives

Sales	R806,2 million
Gross Contribution	32%
Fixed Costs	R125,3 million
Operating Profit	R89,2 million
Net earnings	R62,4 million
Return on sales (after tax)	7,8%
Return on net assets	10,1%

This implies a 5% reduction in the current budgeted fixed costs, a 10% increase in budgeted sales and a slight increase in contribution margin to 32%.

These are realistic and immediate objectives that will focus the people of SCHÜMANN SASOL SA (PTY) LTD to actively revisit all the strategic

objectives and to seek ways of accelerating the process without sacrificing efficiency. These are also the objectives that will directly benefit from the three tier integrated approach to integrate this organisation with its global market.

- **Recommendation 3 :**

The core values should be entrenched as a way of life within all the people of SCHÜMANN SASOL SA (PTY) LTD

All the people in the company must be involved to make the five core values as described in chapter 2, a way of life. The success of the transformation and the future of the company depends on it. Active programs and continuous evaluation activities must take place to entrench the core values in every individual. This will be the building blocks in establishing the new organisational culture that will take SCHÜMANN SASOL SA (PTY) LTD into the new millennium and to ensure it's survival.

- **Recommendation 4 :**

Current areas of excellence should be exploited in the quest of becoming a well equipped service organisation

Current areas of excellence must be further exploited, especially with regards to supply chain activities in the quest for perfection. These are the areas of importance that forms customer perceptions and these are the areas where the opportunities to distinguish SCHÜMANN SASOL SA (PTY) LTD from it's competition can add significant value.

- **Recommendation 5 :**

Increase flexibility by always developing alternatives on operational, tactical and strategic levels of business activities.

The total redesign must be built around alternatives for every aspect of the business. Always having alternatives gives a business the flexibility and agility to always optimise on the direction and effectiveness of its strategy. It minimises risks and creates the correct environment to accept all challenges and capitalise on all opportunities. It is also essential for the company to survive in this dynamic business environment.

- **Recommendation 6 :**

The company should strategically focus only on those issues and activities that adds the most value and are part of its core business.

Specific focus on market ownership and the optimal product mixes is of utmost importance for SCHÜMANN SASOL SA (PTY) LTD. Here new product development and marketing activities must be well equipped and coordinated to realise the global flexibility that is required. This must be seen and understood as a dynamic never ending process. Business processes not directly related to the core business should be outsourced to specialist organisations and parties in these specific areas. This should be an effort by the company in its own right to focus and specialise on own core businesses.

- **Recommendation 7 :**

Empowered, mature and responsible people should be given full control over their business processes and activities.

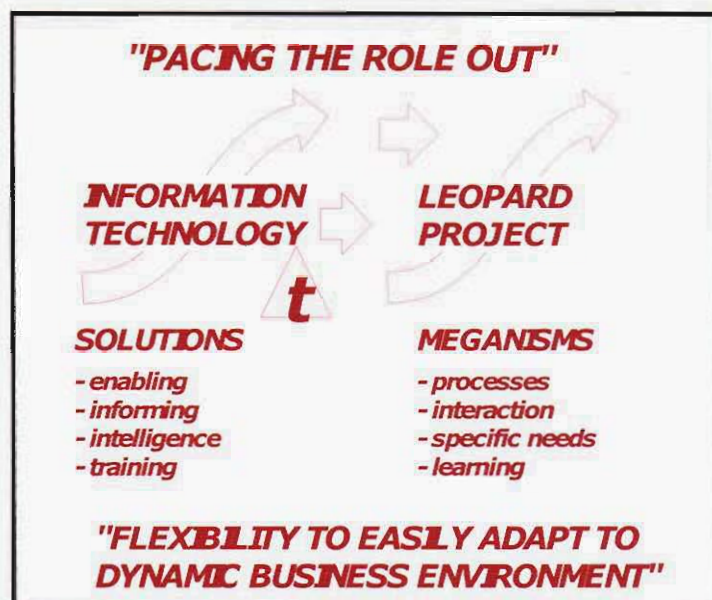
The new way of thinking as earlier described must be understood and aligned with all the people in the organisation and also all external stakeholders doing business with SCHÜMANN SASOL SA (PTY) LTD. The new organisational structure lends itself to have fully empowered teams acting as a virtual company. The power and implications of empowerment must be fully understood by all people and stakeholders. At SCHÜMANN SASOL SA (PTY) LTD still a great deal of effort in the form of coaching is required to achieve and realise this dream.

- **Recommendation 8 :**

The implementation of the information technology redesign and also the transformation process should be carefully paced considering the impact on people and other resources.

Figure 4.2 puts the relationship of the transformation process and the information technology redesign into perspective.

Figure 4.2 : The transformation process and information technology



It is important to keep in mind that there is in actual fact two transformation projects running at SCHÜMANN SASOL SA (PTY) LTD, the Leopard project and the information technology redesign. Both have a significant impact on people and other resources. The roll out and implementation of the information technology redesign must be carefully paced by following the Leopard project. The information technology redesign must be the enabler for the Leopard project to be flexible and to adapt to the dynamic business environment. The information technology must address the requirements of enabling, informing and providing business intelligence to the company.

- **Recommendation 9 :**

The roles and responsibilities of all business units should be clearly defined and well understood by all the people of SCHÜMANN SASOL SA (PTY) LTD.

The following examples put the typical areas of focus and responsibilities towards the corporate strategy into perspective:

- ❖ develop, align and execute own specific individual strategies subordinate to the bigger strategy;
- ❖ develop own individual structure to guarantee the strategy;
- ❖ have an own focussed discipline to achieve the strategy;
- ❖ develop own targets subordinate to the company targets with specific emphasis on new markets and costs; and
- ❖ select any specific enabler and implement the strategy concentrating on aspects such as information technology, empowerment, a virtual network or intellectual capital.

Each and everyone in the organisation should know their **areas** of responsibility, how it fits in with the corporate strategy and also how they can

influence their environment towards the successful achievement of all strategic objectives.

4.3 THE MARKETING INITIATIVES AND CULTURE

4.3.1 Conclusions on marketing aspects

At SCHÜMANN SASOL SA (PTY) LTD the following aspects are currently slowing down the process of building the right marketing culture needed for marketing force par excellence:

- Limited resources are creating major problems and currently the business units at SCHÜMANN SASOL SA (PTY) LTD have only four dedicated marketers. They are responsible for all the marketing activities of the Paraffins, Medium wax and Hardwax businesses.
- All the Hardwax marketing activities are mostly controlled by the Hamburg offices and this situation is very demotivating and frustrating for the marketing people in South Africa.
- A traditional market focus still exists where most of the marketing efforts go into the maintenance of existing markets, customers and applications. Very little effort goes into the development of new market and applications to create the required flexibility, value and growth.
- Lack of collaboration between the marketing and new product development teams is also evident at SCHÜMANN SASOL SA (PTY) LTD. The strategies and activities of these two core functions to ensure the future growth of the company also needs to be aligned predominantly towards new product development and market placement. These two interdependent activities are playing a key role to increase the sales of specifically Hard wax as described in chapter 2. This is one of the few areas through which SCHÜMANN

SASOL SA (PTY) LTD can achieve the “*quantum leap*” it so desperately requires.

These four conclusions as described above are major dilemmas faced by the marketing people in South Africa today and could be detrimental to the company if not urgently addressed.

4.3.2 Recommendations on marketing aspects

It becomes clear that the development of new ways of thinking and doing things is a prerequisite to create marketing excellence at SCHÜMANN SASOL SA (PTY) LTD. This will enable the company to achieve its marketing related strategic priorities being to:

- half the time cycle for all new products from concept to customer;
- rationalise and align activities, structures, technologies and resources across the value chain in order to effectively meet customer needs; and to
- establish SCHÜMANN SASOL SA (PTY) LTD as the worlds market leader on Fisher Tropsch waxes as well as the leader in new product applications.

These specific marketing related strategic objectives as indicated by the corporate strategy are extremely challenging and will certainly not be achieved with the traditional approach and old ways of thinking and doing.

- **Recommendation 10 :**

The lack of marketing resources in terms people, skills and experience should be seriously considered and immediately supplemented.

- ❖ Very well experienced marketing people should be allocated and deployed to the various global geographical market areas.

These people could be expensive to employ but they should have attributes and competencies similar to the following guidelines :

- more than 5 years experience in the global Fischer Tropsh and polyethylene wax related markets;
- strong and wide networks within the global wax related markets;
- located and deployed within their specific area, be it Europe, America, Middle East or Far East;
- strong builders of relationships as well as global networks; and
- they must have the characteristics of high energy, agility, creativity and also well experienced and equipped to operate with the modern information technology tools of the day.

- ❖ Universities, research centers across the world can be approached to assist in market research activities focussing on new product applications only.
- ❖ A lot of information is already available on the Internet and must just be exploited by using the facilities and content providers like Reuters and Feedonia.
- ❖ Market expertise from other Sasol Limited companies could also be borrowed or temporarily exchanged. Sasol Limited is a major global player and there could be significant synergy potential waiting to be exploited by working in collaboration on key aspects. Especially within the petroleum industries with so many interdependent, related and supplementary products.
- ❖ The best decisions regarding Ulrich (1998 : 18) to buy, build, borrow, bounce or bind as discussed in chapter 3 must be considered.

- **Recommendation 11 :**

The issue of global Hardwax markets not being totally controlled by the South African Hard wax team should be addressed to enable them to have full control over their markets and to work in sound collaboration with all global stakeholders.

In this regard it is of utmost importance that the roles and responsibilities of marketing people operating from SCHÜMANN SASOL SA (PTY) LTD and Hamburg are clearly defined.

Through proper collaboration and information systems all the stakeholders should be enable to grow the markets without disturbing current market dynamics. The current emotions and protection of own turf should be turned around to working together as fully empowered global teams. To develop more applications and to sell more products should be the primary drivers of all these marketing people. Nothing in the world should prevent them from doing the necessary concerning the future of the organisation.

- **Recommendation 12 :**

The traditional marketing approach of maintaining current markets should be redirected with a new focus towards new product and applications development and also to become a truly service and customer driven organisation.

Maintaining only current markets creates a dangerous comfort zone for SCHÜMANN SASOL SA (PTY) LTD. It reduces flexibility and alternatives that is desperately needed to survive in the dynamic wax related business

environment. An aggressive strategy with the primary focus on development and selling into totally new applications should be the approach.

Incentive schemes and worthwhile compensation programs is also unavoidable to retain and create a motivational environment for marketing people (Darmon, 1997: 1218).

- **Recommendation 13 :**

Sound and effective collaboration as well as strategic alignment between marketing and new product development teams should be established.

One of the best ways to address this problem is to make the people of these teams all part of the same team. They must also develop the same strategic plans as a team with specific focus areas. Currently at SCHÜMANN SASOL SA (PTY) LTD, new product development is not directly part of the specific Paraffins, Medium wax or Hard wax business units. New product development is a separate support group in the organisational structure. The people at new product development should be allocated to the specific business units and become an integral part of these individual teams.

- **Recommendation 14 :**

The marketing people should be globally connected by means of cellular and remote access technology as well as computerised connectivity.

Marketing personnel with their portable computers connected to the global digital network is of utmost importance and crucial to exploit the opportunities required for growth. Continuous information sharing and always being online and informed about competitors, customers, production

facilities and inventory levels is essential for today's professional marketers (Sandhusen, 1994: 57). Here also the ways to foster commitment of the company's marketing force must also be incorporated (Ulrich, 1998: 19) as discussed in chapter 3.

4.4 SUPPLY CHAIN OPTIMISATION

4.4.1 Conclusions on supply chain optimisation

An extensive study was undertaken at SCHÜMANN SASOL SA (PTY) LTD to access the supply chain opportunity.

As a result of the transformation, the logistics activities were decentralised and people resources allocated to the different business units. These activities include:

- Storage, handling and packaging of products.
- Distribution and transportation.
- Inventory and stock control.
- Support activities including, external storage, surveyor and courier services.
- Inbound logistics and procurement of inbound materials.
- Order processing including clearing and forwarding of export documentation and import services.

These activities take place on an international scale and as seen in chapter 2 almost on every continent of the world. Being in the commodity market, SCHÜMANN SASOL SA (PTY) LTD handle, store and distribute significant volumes of solid and liquid products in bulk, smaller quantities and intermodal format. These products also sometimes need special transport and storage requirements.

For example the liquid needs to be stored and transported in bulk at temperatures between 85°C and 105°C.

Due to the extremely low flashpoint of some paraffins, it needs to be stored and transported under nitrogen blankets to prevent fire hazards. All these aspects are extremely costly and also add to the important issue of very high volumes being handled and distributed.

- **Cost savings as driver for supply chain optimisation**

This scenario as described above creates significant opportunities for optimisation. Logistics costs as can be expected, are very high at SCHÜMANN SASOL SA (PTY) LTD. The 1999/2000 budget shows logistics costs of up to R100 million and as approximately 20% of the company's total expenditure. It is therefore evident that supply chain optimisation with cost saving as a driving force can make a substantial difference on the bottom line of SCHÜMANN SASOL SA (PTY) LTD.

Furthermore as also discussed in chapter 3, supply chain optimisation is unavoidable to become and maintain the status of a market leader through service excellence. Currently the statistics regarding the customer complaints of SCHÜMANN SASOL SA (PTY) LTD also indicates that more than 40% are supply chain related.

- **Customer service is an important driver for supply chain optimisation**

Once again it is clear that supply chain optimisation with not only cost saving, but also customer service as driving force is of utmost importance for SCHÜMANN SASOL SA (PTY) LTD. This can result to a total change in

strategic direction from being production orientated to becoming service orientated.

- **Synergy as driver for supply chain optimisation**

With the logistics activities decentralised the following situations are now automatically resulting:

- loss of synergy potential due to poor collaboration; and
- the exploitation of synergy potential with proper supply chain management at company level are not achieved.

Supply chain management at SCHÜMANN SASOL SA (PTY) LTD involves the following:

- effective anticipation of market demand;
- optimal positioning of all internal and external enterprise resources to meet demand;
- efficient fulfillment of demand;
- comprehensive combination of all sub-business processes that enables velocity; and
- fast and intelligent exchange of information with the movement of goods and capital between end consumer and inbound suppliers including suppliers of raw-material.

4.4.2 Recommendations on supply chain optimisation

The following recommendations are all specifically related to supply chain activities that could be of benefit to SCHÜMANN SASOL SA (PTY) LTD.

These are the areas where the company can achieve a competitive advantage to the competitors. Here the issues of “*supply chain versus supply chain*” become strategically important to high volume commodity organisations, especially with a customer and service focus.

- **Recommendation 15 :**

The implementation of the fourth party logistics (4 PL) concept should be seriously considered in an attempt to focus the activities of SCHÜMANN SASOL SA (PTY) LTD and to improve current supply chain costs, services and flexibility.

The proper role out and implementation of fourth party logistics principles as discussed in chapter 3 and by Dr John Gattorna in his book “*Strategic Supply Chain Alignment*” is a modern approach that offers great opportunities for SCHÜMANN SASOL SA (PTY) LTD.

The most important reasons why this organisation should implement 4 PL logistics is:

- ❖ specialised focus on the logistics activities of this nature is required and can be done by 4 PL companies making logistics is their core business;
- ❖ the logistics activities at SCHÜMANN SASOL SA (PTY) LTD is not the core business of the company and can easily misdirect the focus of management and key personnel, away from the core business and activities that are really adding value; and
- ❖ 4 PL logistics when properly implemented and with the correct partners involved can supplement and optimise current processes.

Table 4.2: The stages of the supply compass in relation to key organisational elements

	 The Fundamentals	 Cross-Functional Teams	 Integrated Enterprise	 Extended Supply Chain	 Supply Chain Communities
Business Pain	Cost of Quality	Unreliable Order Fulfillment	Cost of Customer Service	Slow Growth, Margin Erosion	Non-Preferred Supplier
Driving Goal	Quality & Cost	Customer Service	Profitable Customer Responsiveness	Profitable Growth	Market Leadership
Organizational Focus	Independent Departments	Consolidated Operations	Integrated Supply Chains (Internal)	Integrated Supply Chains (External)	Rapidly Reconfigurable
Process Change	Standard Operating Procedures	Cross-Functional Communications	Cross-Functional Processes	Customer-Specific Processes	Reinvented Processes
Metric	Predictable Costs & Rates	On-Time, Complete Delivery	Total Delivered Cost	Share of Customer	Net Worth
I T Focus	Automated	Packaged	Integrated	Inter-Operable	Networked
Key Tools Planning	Spreadsheets	Point Tools	Enterprise Supply Chain Planning	Point-of-Sale Supply Chain Planning	Synchronized Supply Chain Planning
Execution	MRP & Other Homegrown Applications	ERP	ERP	Customer Management Systems	Network-centric Commerce

Table 4.2 puts the supply chain compass into perspective during the development stages of supply chain management as viewed from a SCHÜMANN SASOL (PTY) LTD perspective. It also highlight the following key aspects during every identified developmental stage (Fox & Holmes, 1998 : 16 – 10):

- main business supply chain related problems;
- driving goals;
- organisational focus;

- process changes;
- metrics and key performance indicators;
- information technology focus;
- planning tools; and
- execution & application tools.

The 4 PL structure as described by Gattorna (1997: 87) integrated with model of the supply chain compass the can form the basis of successful implementation of 4 PL logistics with specific focus on:

- planning of all logistics activities contracted;
- Service Level Agreements (SLA's) and deliverables;
- strategic focus; and
- enabling technologies required.

The overall objective for 4 PL logistics channel partners and SCHÜMANN SASOL SA (PTY) LTD could be:

“To become a sustainable stage five company within 18 months of implementation across the Paraffins, Medium wax and Hard wax business units”.

This is a long-term solution for supply chain management at SCHÜMANN SASOL SA (PTY) LTD continuously optimising and improving the supply chain activities on strategic, tactical and operational levels of operation.

Some of the benefits for SCHÜMANN SASOL SA (PTY) LTD by implementing 4 PL logistics integrated with the supply chain compass are:

- proper demand fulfillment;

- proper demand planning enabling proper production planning;
- proper logistics planning involving all supply chain activities;
- only the best and most efficient suppliers and service providers across the total supply chain;
- linked online to a global digital nervous system through information technologies;
- great flexibility in supply chain activities and learning to become a preferred and reliable supplier;
- continuous optimising on cost versus efficiency of services;
- continuous capitalising on synergy potential internal and external including global partners;
- forward visibility and responsiveness along the total supply chain involving all stakeholders, from suppliers of suppliers to customers of customers;
- performance under extreme and demanding situations to still produce and to excite, dazzle and delight customers at all times; and
- global integration.

4.5 INFORMATION MANAGEMENT ENABLED BY A GLOBAL DIGITAL NERVOUS SYSTEM

4.5.1 Conclusions on the global information network

The following conclusions are related to information management at SCHÜMANN SASOL SA (PTY) LTD and the interaction thereof specifically towards the transformation process, marketing and supply chain activities.

- **Conclusions on information management and the transformation process**

By putting the transformation process at SCHÜMANN SASOL SA (PTY) LTD into perspective, the following conclusions can be made:

- ❖ to get the most from information technology initiatives, it requires radical changes in traditional practices;
- ❖ wide spread access to powerful information systems and to be globally connected will allow job responsibilities to be significantly expanded;
- ❖ by fully integrating technology and people, it will be possible for SCHÜMANN SASOL SA (PTY) LTD to:
 - do things different and
 - to do new things;
- ❖ information technology could be instrumental in achieving, not only better performance, but a quantum leap;
- ❖ old paradigms can be replaced with new paradigms or metaphors for new ways to conceptualise work on every level; and
- ❖ information technology can play a major role in integrating functions across the value chain.

- **Conclusions on SCHÜMANN SASOL SA (PTY) LTD current information systems status**

- ❖ **Operational and transactional systems**

Applications and transactional systems at SCHÜMANN SASOL SA (PTY) LTD consist of a “fruit salad” of quite a few non-integrated systems.

There is great opportunities in this area to integrate the data from all these different source systems, be it, logistics, order processing, financial

transactions, process data from the plant, laboratory results, purchase orders or maintenance activities.

There is no need to replace these systems with a “Big Bang” fully integrated enterprise resource planning (ERP) system. This will incur significant and unnecessary costs of around R12 million. The individual systems are operating effectively but the aggregation and reporting of information out of their individual databases remain a challenge. How to effectively integrate the data into valuable shared information will be discussed during the recommendations later in this chapter under business intelligence.

Automated waste can result when a company spends money on expensive systems to support inefficient processes instead of using digital systems to create new and more efficient processes.

❖ **Business intelligence and knowledge management**

On these aspects it can be concluded that almost no evidence of such initiatives are available at SCHÜMANN SASOL SA (PTY) LTD.

This is a major challenge and critical for the company to establish proper management information systems (MIS) and decision support systems (DSS).

The global digital nervous system as discussed in chapter 3 will address this issue and how to do that will be also discussed later in this chapter. The management of SCHÜMANN SASOL SA (PTY) LTD currently relies on old legacy systems and time consuming activities to compile and analyse data for decision making. Sometimes important decisions are made with basically no or very limited information. It is also true that, what a company don't know, is what is hurting it the most.

❖ Computer literacy of people

The situation at SCHÜMANN SASOL SA (PTY) LTD in terms of the computer literacy of all the people is one of great opportunities. Out of 400 people employed there are 170 computer users of which 50% takes complicated and important decisions that relies on accurate and timeous information.

Most of the users have a limited knowledge of desktop software, MicroSoft products and even Windows 95 but all of them are well acquainted with their specific operational applications software like financial or logistics applications.

There is however a great need to significantly increase the computer literacy of all users on the following aspects that will form the essential software platform in implementing the global digital nervous system:

- MicroSoft Office including. Powerpoint, Excel, Word and Access;
- MicroSoft Outlook (e-mail);
- MicroSoft Internet explorer (Browser);
- Data Warehousing, including extracting and reporting tools; and
- Windows 95/98.

Figure 4.3 highlights the essential characteristics of these software packages that are not closely utilised to the extent that it could be in modern organisations today.

Figure 4.3: The key characteristics of the essential MicroSoft tools forming the platform of the digital nervous system at SCHÜMANN SASOL SA (PTY) LTD.



These tools are the essential tools to establish a proper digital nervous system and to ensure the integration, sharing and global connectivity of the company. One can make the assumption and reason that not even half of the power and utility of these programs are currently utilized at SCHÜMANN SASOL SA (PTY) LTD, including the higher skilled users.

❖ **Hardware and networks infrastructure**

The hardware, specifically desktop PC's, network infrastructure and file servers currently conforms to the requirements to properly role out the information technology architecture and strategy for a digital nervous system. It is of utmost importance to have a stable hardware infrastructure with continuity and properly planned redundancy before any implementation can take place. This can be considered as the platform and foundation on which the building of the architecture can commence.

❖ **Electronic business**

The same scenario exists with electronic business as with business intelligence and knowledge management. No proper system, infrastructure and procedures are evident at SCHÜMANN SASOL SA (PTY) LTD exist to exploit the potential of the opportunities of this area.

4.5.2 Recommendations on the global information network

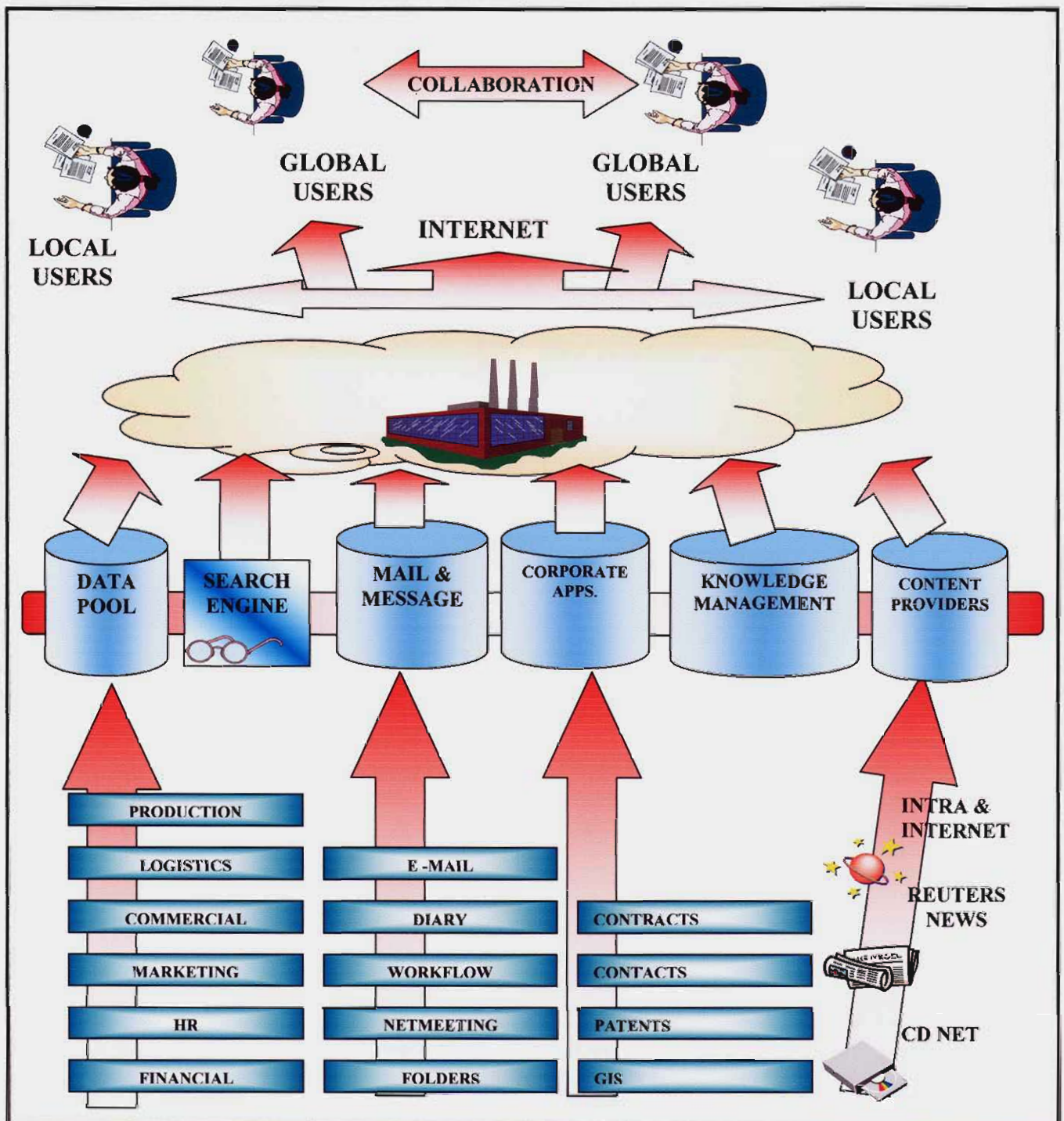
As discussed in chapter 3 it becomes clear that companies entering the new millenium must properly prepare for the future. A digital nervous system can help businesses to redefine itself and it's role in the future. However, energy or paralysis, success or failure, depends on the business leaders.

Only the leaders can prepare the organisation and make the investments necessary to capitalise on the rapidly dawning digital age. Digital tools magnify the abilities that make us unique in the world. This includes the ability to think, the ability to articulate our thoughts, and the ability to collaborate and act on those thoughts (Gates, 1999 : 415).

Principles on which the information management architecture can be based to enable the strategic objectives of SCHÜMANN SASOL SA (PTY) LTD are:

- the Information Management architecture must “enable” the new organisational structure without sacrificing the flexibility. This is also clearly indicated by figure 4.2 earlier in this chapter;
- the role out and implementation will be paced and based upon the tempo of the meganisms being formed and established by the Leopard transformation process;
- to create visibility and business intelligence on operational, tactical and strategic levels across the total supply chain;
- be flexible and ready to adapt to any future dynamics in the business and information technology environments as a dynamic and changing process;
- fully utilise and reap the benefits from the World Wide Web (Intranet, Internet, Extranet);
- reduce cost and complexity by using commercial off-the-shelf software packages whenever possible;
- introduce a single e-mail system company wide; and to
- utilise standard internet technologies specifically to publish, browse and view information.

Figure 4.4: Elements of business intelligence architecture for SCHÜMANN SASOL SA (PTY) LTD



- **Recommendation 16 :**

Business intelligence across all business dimensions should be implemented and utilised to its fullest potential by all the people of SCHÜMANN SASOL SA (PTY) LTD.

Sound business intelligence allows people in a multi-dimensional, cross-functional organisation to accelerate the rate of which they can physically process information for decision making (Connelly *et al*, 1997: 3). Figure 4.4 displays the business intelligence environment that could be established at SCHÜMANN SASOL SA (PTY) LTD.

In figure 4.4 it also becomes clear that if a digital nervous system can be fully exploited, the following well-maintained elements are fully integrated and linked:

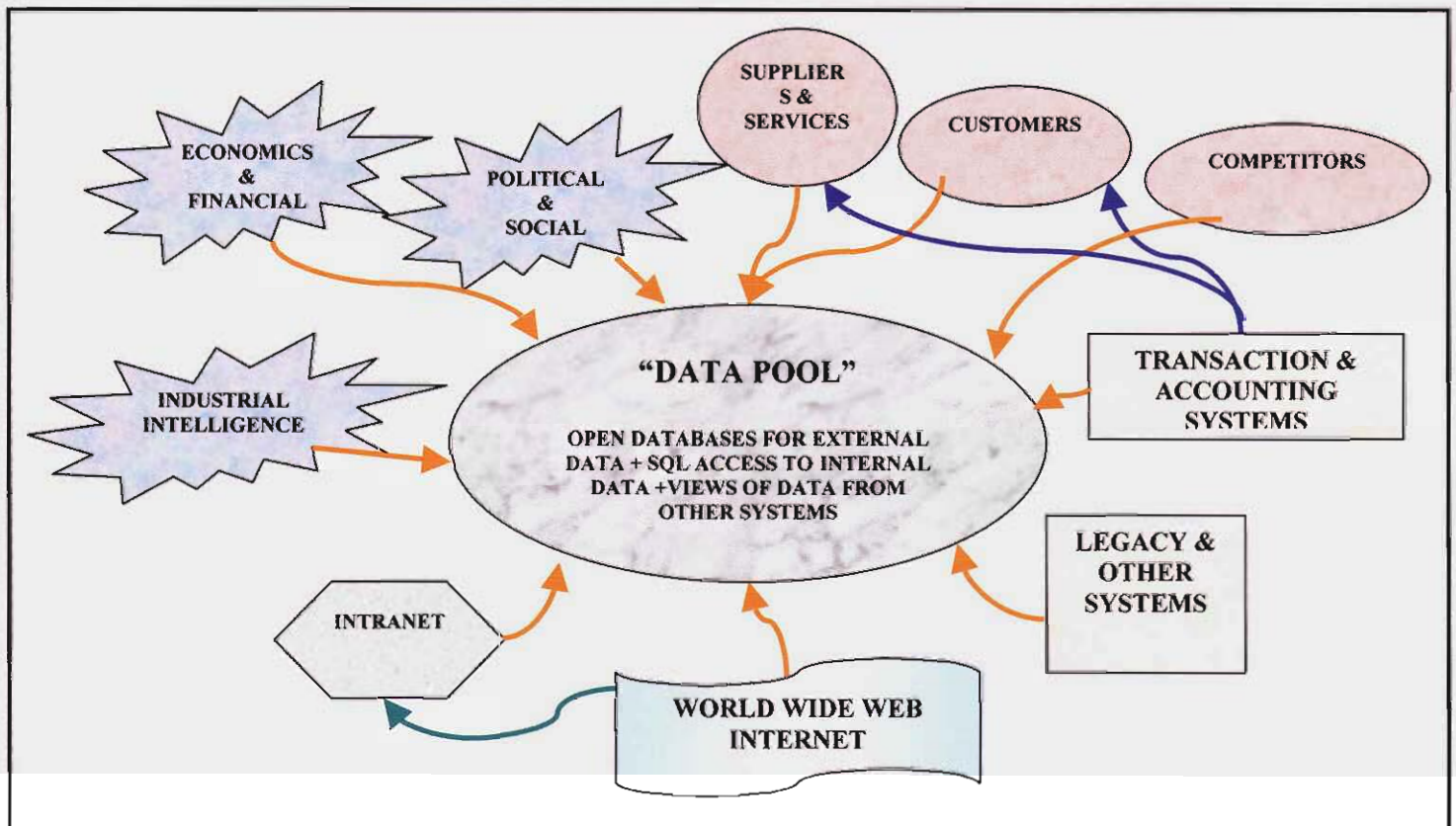
- ❖ the World Wide Web (WWW) with a variety of proper search machines;
- ❖ data warehouse and data pool capturing all the companies operational and transactional data;
- ❖ document management to electronically share digital information;
- ❖ message systems like Microsoft Outlook;
- ❖ corporate applications and new product development issues;
- ❖ knowledge management and automated to the fullest extent;
- ❖ external information contents providers, which is also automated and linked to essential subscribers; and
- ❖ local users and international, global users can be customers, suppliers, distributors, service providers or any other stakeholders.

- **Recommendation 17 :**

The data warehouse architecture should be implemented as an essential information sharing and decision making facility at SCHÜMANN SASOL SA (PTY) LTD which is well understood and utilised by all the people.

The data warehouse forms an integral part of the Business intelligence architecture and figure 4.5 focus specifically on this aspect.

Figure 4.5: The datapool and data warehouse concept as a modern systems philosophy



The following aspects are important to exploit the value of a proper data pool as a modern systems philosophy:

- ❖ the data pool should be an open database to translate any tables from any external source in text, numerical, tables, graphical format and also open to any validated and reconcilable data;
- ❖ it must be a “flat table” common database;
- ❖ it must be open to any multi-format access like SQL (Structured query language) or ODBC (Open database connect);
- ❖ single common access tool like a “viewer” should be used; and
- ❖ the valuable utilisation of the digital network becomes evident and also gives a broad perspective on implementation possibilities.

Very strong emphasis on people computer competencies and especially the following aspects are critical successful utilisation of the data pool concept:

- the contents of the data base, the meaning and sources of the data;
- the relationships within the data base from a holistic perspective;
- the standard Microsoft office applications and programs; and
- the total functionality and applications of these software.

The following aspects put the possible advantages of a proper digital nervous system approach and architecture for SCHÜMANN SASOL SA (PTY) LTD into perspective:

- ❖ information technologies are powerful tools to empower people and allows them to work more efficiently leading to higher productivity and cost savings;

- ❖ with business intelligence (BI) initiatives, the essential information will be available at the fingertips of those who need it and accelerate the decision making process on operational, tactical and strategic levels across the value chain;
- ❖ information systems can now be utilised in such a way that it will provide a competitive advantage in optimising the supply chain and by exploiting electronic data interchange (EDI) and E-commerce to its fullest potential;
- ❖ better allocation of people to use their capacity for more intelligent work like new product development, market analysis and value added activities (Baby sitting inventory & production processes versus optimising storage and inventory as well as production processes);
- ❖ higher productivity in meetings and the smarter use of people time due to better information flow and the tracking of key metrics (Sales info, order tracking, inventory levels, product availability, cost control, yields, performance metrics, BSC indicators);
- ❖ higher productivity and efficiencies at R& D due to data warehousing (easy access to data and prevention of rework);
- ❖ people enjoy running “*what ifs*” and information can then become a motivator leading to ownership and business wide monitoring and preventing current losses like the Chinese wax in Durban warehouses;
- ❖ strategic leaders are shifted into more “*thinking work*” where they now can spend time more efficiently by analysing, interpreting and strategically use information rather than controlling and organising the operational activities (changing from operational managers to business managers);
- ❖ sharing information and collaboration across all activities leads to super team efficiency including logistics, marketing and production;
- ❖ getting more digital and paperless save costs and time and also enable the people to do more interesting work;
- ❖ bringing together the right information to the right people will dramatically improve the company’s ability to develop and act on strategic business opportunities;

- ❖ a professional intranet website with browser driven operational transactions can turn ordinary sales people into consultants;
- ❖ the corporate IQ can be raised through proper information management creating a knowledge sharing culture where teams can act with the same unity of purpose and focus as a well-motivated individual;
- ❖ redesigned processes for optimal information flow enable the transformation process to focus on important business issues; and
- ❖ an efficient supply chain through proper information will provide a competitive advantage in terms of customer satisfaction (committed channel partners and a drive towards vendor managed inventory, VMI).

• **Recommendation 18 :**

Knowledge management principles should be properly developed and implemented at SCHÜMANN SASOL SA (PTY) LTD as well as automated to the most possible extent.

The important aspects to consider in the implementation and utilisation of knowledge management at SCHÜMANN SASOL SA (PTY) LTD are:

- ❖ manage knowledge as a valuable organisational asset;
- ❖ utilise the digital nervous system to participate in acquiring and sharing information globally and between all essential stakeholders;
- ❖ automate knowledge management as far as possible by subscribing, auto search and capturing of essential information like foe example Reuters;
- ❖ automate reporting and sharing of information by utilising the intranet;
- ❖ make SCHÜMANN SASOL SA (PTY) LTD the central “hub” for the aggregation, maintenance and control of its global knowledge management system;

- ❖ involve all the people in the organisation to actively participate and add value through proper knowledge management;
- ❖ utilise knowledge management to capture the valuable intellectual capital that can be so easily lost if the company lose its people; and
- ❖ to enjoy contributing and adding value with knowledge management should be the attitude of all SCHÜMANN SASOL SA (PTY) LTD employees.

• **Recommendation 19 :**

Electronic business principles should be properly developed at SCHÜMANN SASOL SA (PTY) LTD and implemented in the areas where it could be properly supported by the supply chain.

The company should do extensive research and planning prior to the implementation of electronic business including electronic commerce (E-commerce) and the impact it could have on the total supply chain should never be underestimated. The readiness of the supply chain for the introduction of electronic business can be tested with a few of the following typical questions:

- ❖ If 30 % or 50% more orders per day from all over the world hit the supply chain, will it be able to deliver?
- ❖ Can the production facility keep up without backorders?
- ❖ Can the order processing, credit management and invoicing systems cope?
- ❖ Can smaller quantities in different packaging formats and by different distribution methods still be delivered in time?
- ❖ Is sufficient technical support available across the world to assist unknown customers?

It is also true that E-commerce customer also expects excellent service and can also be lost if they are not satisfied.

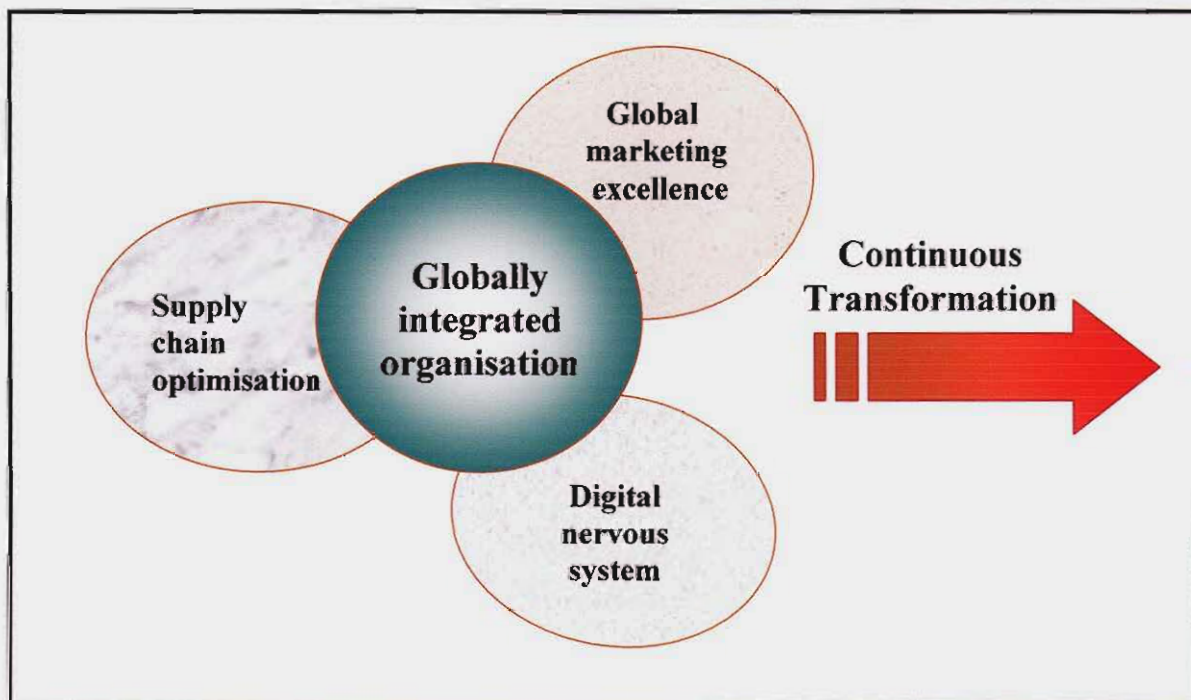
In the high volume commodity markets which SCHÜMANN SASOL SA (PTY) LTD operates, E-commerce can be extremely complicated and supply chain intensive.

However, great opportunities can be exploited in utilising this technology to add value to the company and also to integrate fourth party logistics (4 PL) to this concept. The concept of virtual private networks (VPN) can also be integrated here in providing customers with a single point of contact or one stop convenience shop via the Internet as a carrier or any other dedicated connection technologies.

4.6 SUMMARY

Transformation based on a solid and sound business strategy provides the direction to SCHÜMANN SASOL SA (PTY) LTD in venturing into future of the ever-changing business environment and to concur the global wax related markets.

Figure 4.6 :Three tier dynamics in integrating the transforming organisation with the global market.



By putting it all together as shown by figure 4.6, the three-tier approach creates a dynamic business environment where a marketing culture of agility and exploration is supported by a seamless supply chain and connected by a global digital nervous system.

During this study and conclusions described during chapter 4, it becomes clear that SCHÜMANN SASOL SA (PTY) LTD is a typical South African organisation in a third world country that has to face the challenges and globally compete against organisations of the first world. This is an extremely challenging situation that also offers opportunities with significant potential that needs to be exploited. The strategy of SCHÜMANN SASOL SA (PTY) LTD strives to achieve global market leadership and could be supplemented to a great extent by the recommendations addressed in this chapter.

To enable the successful integration of this transforming organisation, SCHÜMANN SASOL SA (PTY) LTD, with its global market the specific focus should be on the following aspects of a dynamic three tier approach:

- the transformation process at SCHÜMANN SASOL SA (PTY) LTD;
- the marketing initiatives and culture;
- the optimisation of the supply chain; and
- a global digital nervous system as information management approach.

It also became clear during this study that transformation should be seen as a never ending process of drastic organisational redesign as a result of fierce competition and a dynamic market environment. The causal factors to this study also indicated that this three tier approach becomes essential to SCHÜMANN SASOL SA (PTY) LTD in an effort to achieve the "*quantum leap*" it requires to realise its strategy.

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