FORMULATION OF AN INTERNATIONAL STRATEGY FOR GOBA MOAHLOLI KEEVE STEYN (PTY) LTD

By

N. Sankar

Submitted in partial fulfilment of the requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

Graduate School of Business, Faculty of Management Studies

University of Natal (Durban)

Supervisor: Professor E. Thomson

August 2003

CONFIDENTIALITY CLAUSE

31 August 2003

TO WHOM IT MAY CONCERN

RE: CONFIDENTIALITY CLAUSE

Due to the strategic importance of this research it would be appreciated if the contents remain confidential and not be circulated for a period of five years.

Sincerely

N. Sankar

DECLARATION

This research has not been previously accepted for any degree and is not being currently submitted in candidature for any degree.

Signed .....

Date 31 August 2003 .....

ACKNOWLEDGEMENTS

I would especially like to thank my supervisor Professor Elza Thomson for her ideas and insightful comments.

I would also like to thank the management of Goba Moahloli Keeve Steyn (Pty) Ltd for taking their time to give me valuable inputs and information for this dissertation.

Last but not least, I would like to thank my wife, family and friends for their encouragement and support throughout this study.

ABSTRACT

Whether it is internationalisation or globalisation, many South African firms are under constant pressure to enter and compete in foreign markets. For some firms, the decision to internationalise is crucial to the sustainability of the firm and in some instances requires a re-evaluation of the strategic intentions and objectives of the firm. Firms in the civil engineering consultant industry are no different, with many having no logical choice of expansion and growth except to enter foreign markets.

For the civil engineering consultant, the acquisition of international projects is somewhat different from domestic projects in that key role players and operational norms in the international arena are relatively unknown and often misunderstood. Many firms attempting to enter foreign markets simply do not undertake the necessary analysis to understand the international environment and fail to formulate a sustainable international strategy.

The objective of this dissertation is to analyse those factors contributing to the successful identification and formulation of an international strategy. Whilst the dissertation has a bias to civil engineering consultants it is believed that many of the points and issues highlighted can be used by any firm attempting to breach international markets.

In order to provide a suitable conclusion to this dissertation, a case study is analysed. The case in point is the international strategy identification and formulation of Goba Moahloli Keeve Steyn (Pty) Ltd, a multi-disciplinary engineering firm whose aims are to acquire and manage large engineering projects beyond national borders.

It is evident from this study that in order to be effective in foreign markets, it is extremely important for consulting engineering firms to have a thorough understanding of the market and to ensure that the most sustainable markets are chosen for possible operation. The design, delivery and implementation of services may have to be tailored to suit the environment within which the firm chooses to operate. The main recommendation of the study is that the consultant engineering firm needs to develop and formulate an international strategy that is consistent with the firm's goals and is one that can be easily adapted to a changing environment.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION AND PROBLEM DISCUSSION

1.1 Introduction

Civil engineering consultant firms in South Africa continually search for projects or work opportunities in both domestic and international markets. Almost all projects are acquired on a competitive basis, where firms submit proposals to client/sponsor organisations that adjudicate them on the basis of service, price, expertise etc. The successful bidder will then manage and implement the project according to the guidelines, specifications and conditions as agreed with the client. In other instances, projects are acquired by holding a preferred status with a client thus limiting the competitive powers of rival firms.

South African civil engineering consultant firms generally strive to understand the needs and desires of their existing and prospective clients so that the services rendered are in line with their expectations. This is easily achieved when dealing with domestic clients, however, is not so easily achieved with clients that are based outside South Africa.

Many consultants find it difficult to obtain work beyond national borders for several reasons. One of the primary reasons is that many consultants fail to understand the requirements of international clients. In addition, many consultants also do not have the critical mass and thus cannot compete effectively with rival firms.

This dissertation highlights the issues and elements required for an effective formulation of an international competitive strategy. In the first instance, a theoretical backdrop is provided that identifies various factors pertinent to the acquisition and management of international projects, hence, the formulation of an international strategy. This theoretical background provides a framework for the case study of Goba Moahloli Keeve Steyn (Pty) Ltd, a medium sized, multi-disciplinary engineering firm based in South Africa.

1.2 Background

Acquiring and managing international projects is generally an onerous but necessary task for civil engineering consultant firms that want to grow and expand their operations. The "onerous" part arises because of the complexity and risk attached with such projects. The necessity is linked to the ambitions and vision of the firm to become an international competitor.

Reasons for internationalising

As the civil engineering consultant industry becomes increasingly competitive, many firms are now looking for opportunities beyond national borders. Acquiring and managing international projects assists a firm to gain a competitive edge over rival firms and is generally the route taken to expand and globalise the firm. There are many reasons for a firm to internationalise its operations. Some of the major reasons are highlighted below.

- Gaining access to new clients

New markets in foreign countries are favoured because the expansion into such markets offers potential for increased revenues, profits and long-term growth. These markets also become especially attractive when home markets become mature and saturated. In some instances, these markets also provide the firm with exposure to international financiers such as the World Bank Group and the African Development Bank Group, who finance projects all over the world and Africa respectively.

- Enhancement of firm's competitiveness

A firm that has had international exposure has a stronger competitive advantage than those firms operating in a single or domestic market. The experience curve effect can be taken advantage off in international markets, and in some instances could

substantially improve a firm's cost competitiveness. Furthermore, many clients are more inclined to deal with firms that have had some international exposure.

- Capitalise on core competencies and capabilities

Many firms develop a range of core competencies and capabilities over a period of time and can hence leverage these into positions of competitive advantage in foreign markets.

- Spreading business risk

Operating in foreign markets spreads the business risk of a firm. The more markets targeted the higher the degree of spread. Currency fluctuations, external shocks and political instability are some of the key drivers of spreading the business risk of the firm over a wider market base.

Factors influencing the internationalisation decision

There are a wide range of factors that influence the foreign market selection decision. Some of the more important factors are outlined below.

- Strategic focus and orientation

The decision to internationalise or begin cross-border activities is indeed an important one, therefore it is vital that the strategic focus and orientation of the firm is consistent with the firm's goals and objectives as spelt out in its mission or vision statement. The international strategy will be built around this focus and orientation and will prevent the firm from losing sight of its intended objectives.

The firm must assess its position of international competitiveness, which ties into the stage of internationalisation the firm is considered to be in, and where it would like to be.

- Resources and capabilities

This is an important issue for the firm as many fail to accept or realise that they do not have the resources and capabilities for competing in international or foreign markets. A resource analysis including the analysis of the value chain and core competencies will be vital in defining the risks and benefits linked to the decision to internationalise.

- Similarity/ Proximity to foreign market

The proximity and similarity of foreign markets is an important factor in the choice of foreign markets. Although this is considered in the decision to internationalise, it is analysed in greater detail after the firm has made the decision to internationalise. This is usually accomplished through various analytical models where various other factors are considered in the selection of foreign markets.

- Firm's alliance experience

A firm with limited or no experience in forming strategic alliances or other forms of collaborative agreements is considered a drawback against the decision to internationalise. Many international projects are usually given to consultants with specialist expertise or those that have formed a strong collaborative with one or more firms.

- Presence/experience in foreign markets

The decision to internationalise is obviously to gain a presence and experience in foreign markets and the firm should not be inhibited from making the decision to compete in foreign markets based on its lack of experience in these markets. Nevertheless, the firm must take into account the anticipated foreign market risks.

- Competitive significance of foreign markets

It is extremely important for the firm to target those markets that have the highest potential to enhance the firm's competitiveness. This does not necessarily mean those markets that will yield the highest returns. The country's market potential must be viewed as well the significance of competing in that market relative to global trends and activities.

1.3 International strategy development

Civil engineering consultant firms possess competitive advantage whenever they have an edge over industry rivals. There are many routes to competitive advantage but the most basic is to provide a client/sponsor organisation with a level of service that is of superior value. This is especially important in the management and implementation of engineering projects.

Competing in foreign markets where there are significant cross-country variations in cultural, demographic and market conditions poses a much bigger strategy-making challenge than just competing at a domestic level. The challenge is to balance pressures to be responsive to domestic situations in a particular country, against pressure for lower costs and superior levels of service.

Strategic Intent

The strategic intent of a firm is of utmost importance in achieving the firm's objectives, as it drives the firm's desire to succeed. It is imperative that the vision, mission and goals of a firm are clear and concise. The successful acquisition and management of an international project are very important steps for an engineering consultant firm. Projects such as these generally allow the firm to strengthen their positions in domestic and foreign markets and are extremely important marketing tools.

Setting Objectives

The process of converting the firm's objectives into tangible outputs is a key feature of strategic planning. Many engineering consultant firms are gauged by outputs such as financial performance, market share, superior service, geographic coverage etc. Thus, it is important to set up realistic performance targets that are quantifiable.

Types of Strategy

Strategies are essentially action oriented and evolve over time. The shape of a particular strategy is influenced to a great extent by external and internal situational factors and can differ from firm to firm even in the same industry. The business strategy for most engineering consultant firms is how to build and strengthen the long-term competitive position in the market place. When engineering consultant firms decide to extend operations beyond national borders, a solid situational analysis becomes even more critical for the development of an appropriate international strategy.

Consideration of the strategic environment

In the development of appropriate strategies, attention must be directed to the nature and strength of the forces driving strategic change i.e. the dynamics of the environment. The reason for this is that if the forces are particularly unstable or turbulent, they make certain elements of an environment analysis difficult. In addition, the nature of the environment could also influence the way that a firm is structured to cope with the changes (Lynch, 2000).

Environmental scanning involves studying and interpreting those factors that influence trends and conditions that could become driving forces in the environment. Many firms do not perform adequate environmental scanning and thus are not able to position themselves competitively. Scanning entails the study of all segments in the general environment and is extremely important for firms competing in highly volatile environments.

The external environment is composed of segments that are external to the firm, which include the general, the industry and competitor environments. The challenge is to scan and assess those elements in each segment that are of greatest importance to the firm. In addition, the results of an external environmental analysis should recognise environmental changes, trends, opportunities and threats. It is then necessary to maximise the positive elements and minimise the negative elements to achieve strategic competitiveness.

In addition to the results of the external environment analysis, the firm's core competencies should drive the selection of strategies. The challenge for the firm is to ensure that the resources and capabilities selected as core competencies do in fact yield a competitive advantage.

1.4 Case Analysis

Goba Moahloli Keeve Steyn (Pty) Ltd (GMKS) is a medium size multi-disciplinary engineering firm. The firm was formed in 2001 by the merger of two individual firms namely Keeve Steyn (Pty) Ltd and Goba Moahloli and Associates Inc. Since the merger, the firm has grown and expanded its operations, and has offices in major centres around South Africa. Like many South African engineering firms, GMKS is seeking new business opportunities beyond national borders, and has targeted surrounding African countries as a point of first entry into the international arena. With its present size, strong growth and diverse operations, GMKS is also considering expanding its operations even further, by targeting larger engineering projects beyond Africa. It is intended to outline an international strategy that GMKS could adopt to break into these international markets by undertaking an analysis of all the key elements of the strategy formulation process.

1.5 Motivation for Research

As a Senior Associate in the GMKS Durban branch office, one of my functions is to assist the firm to grow and expand the business. Expanding a business into an internationally recognised entity has always been a keen interest of mine, and this

study will be used as a vehicle to provide the much-anticipated insight required for such activities.

As a multi-disciplinary firm, GMKS has had considerable success in the domestic market. The firm has attempted to enter foreign markets but has not had the success as has been anticipated. Furthermore, GMKS does not have a structured international strategy, hence the motivation for the proposed formulation of one.

1.6 Value of Research

This study will hopefully assist GMKS and other civil engineering consultant firms to understand the dynamic and dominant forces at work in an international setting.

It is also envisaged that GMKS will use the strategic assessment presented in this study to acquire and manage offshore projects successfully in the foreseeable future. In addition, the information that is highlighted by this study will not only enlighten the engineering consultant industry but will also provide valuable insight for other industries.

1.7 Problem Statement

The main problem focussed on in this dissertation, with respect to the formulation of an international strategy is:

"How can Goba Moahloli Keeve Steyn (Pty) Ltd acquire international projects successfully?"

The international strategy of a firm is usually situation driven as cultural, demographic and market conditions vary significantly amongst different countries and locations. One of the biggest challenges facing firms is how to create a sustainable competitive advantage in different markets through the provision of services and products that meet client expectations.

1.8 Objectives of Study

The objectives of the study are as follows:

- To determine and understand the dynamic and dominant forces in acquiring international engineering projects.
- To establish the basis and process for the formulation of an international strategy.
- To undertake a strategic analysis of GMKS and to formulate the firm's international strategy for the successful acquisition of international projects.

1.9 Research Design and Methodology

The chosen research design provides the glue that holds the research project together and is used to structure the research, to show how all of the major parts of the research project work together to try to address the central research question.

There are various types of research designs including exploratory, descriptive and causal research. This study is undertaken using exploratory research, which concentrates on becoming more familiar with the problem by the exploration and drawing together of information that is fairly accessible. The information used in this study has been gleaned from available literature and from people who have some experience and knowledge of the subject being investigated as well as from a case study.

There are essentially two types of research methods, namely qualitative and quantitative research. This study is a qualitative study as the data used was collected and analysed from personal interviews and from various literature sources. Part of the study is to provide a theoretical framework, which focuses primarily on the formulation of an international strategy. This information provides the structure for the analysis and evaluation of the case study. As stated above, qualitative techniques

were used as the primary source for the collection of data. Secondary data exploration includes the following sources:

- GMKS
- Internet search engines (Online information)
- Journals
- Publications
- Books
- Articles

1.10 Limitations

The consultant engineering industry is broad, and contains several different sectors and sub-sectors. An international strategy developed for one firm may not necessarily apply to another. Although the information presented in this study tries to explore various areas of international strategy development, it is focused on the civil engineering consultant with multi-disciplinary capabilities.

The primary limitation of the case study relates to the financial status of GMKS. As a result, a comprehensive financial assessment of the firm is not possible.

1.11 Structure of Study

The structure of the study is presented in five key chapters as illustrated in Figure 1.1 and as follows:

Chapter One

This introductory chapter presents an overall outline and background to the study. It provides an explanation of the problem area and the research question.

Chapter Two

This chapter provides the theoretical framework used in the study and describes the analytical tools applied in the research. This chapter is also the basis on which the case study of GMKS is analysed and evaluated.

Chapter Three

This chapter presents the key elements of the case study and provides detailed information on GMKS. The model developed at the end of Chapter Two is used as the framework for the case study.

Chapter Four

This chapter evaluates the information outlined in Chapter Three against the model developed in Chapter Two. The analysis serves as the base for the conclusions and recommendations outlined in Chapter Five.

Chapter Five

This chapter concludes the study with the presentation of conclusions and recommendations relating to the problem statement and the primary objectives of the study.

1.12 Summary

As the global village expands, many firms in South Africa change or modify their business strategies in order to become international or global competitors. Whilst the opportunities presented are lucrative, many firms find it difficult to cope with the new, and dynamic environments in which they find themselves. This is especially evident in the management and implementation of international projects.

The success of an international strategy may be judged on measurable economic outcomes or a wide range of performance criteria. The theoretical framework of the study highlights the key elements that constitute the successful formulation of an international strategy. In addition, key elements of strategic management are conceptualised and reviewed.

The GMKS case study includes a strategic analysis of the firm and is concluded with the identification of an international strategy that could be implemented for the successful acquisition of international projects.

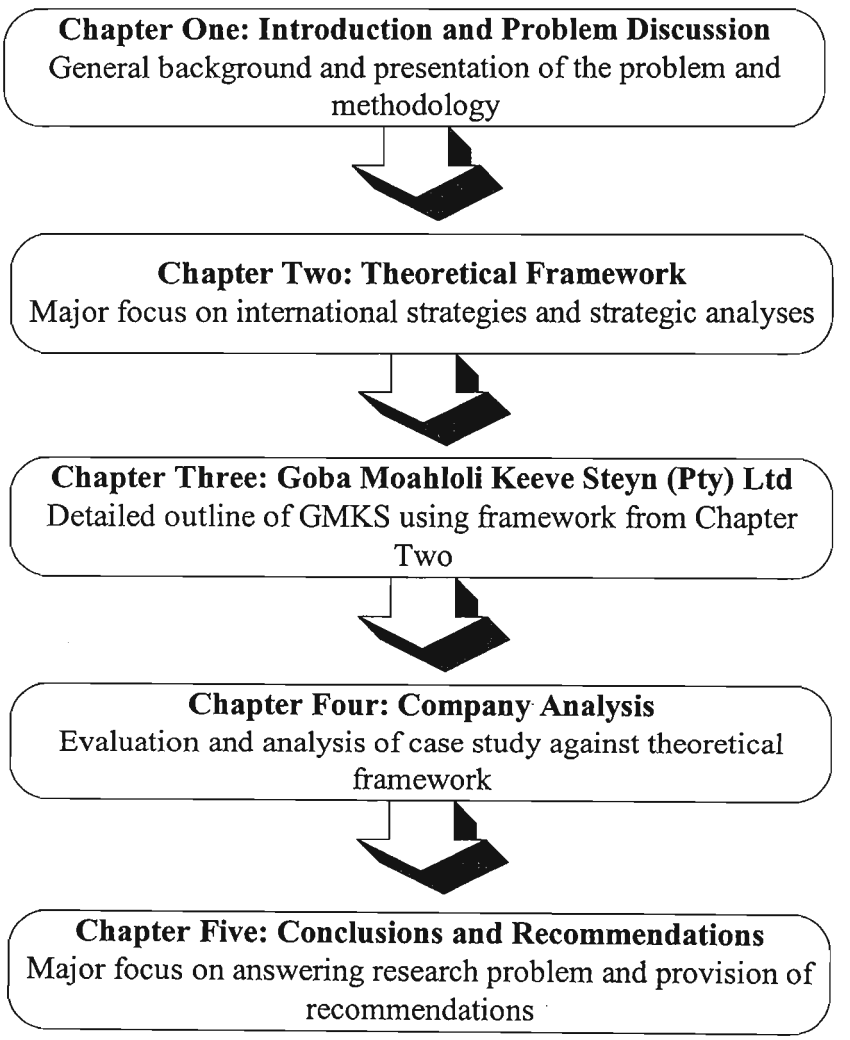

Figure 1.1: Structure of Study
Source: Own

CHAPTER TWO: THEORETICAL FRAMEWORK

2.1 Introduction

This chapter presents a broad theoretical framework for the formulation of an international strategy. It focuses on the various elements of strategic analysis and the tools used to formulate effective and sustainable strategies. In addition, all attempts have been made to outline strategic issues relevant to the civil engineering consultant industry. The model developed at the end of the chapter is used as the framework for the analysis of the case, which is the subject of Chapter Four.

2.2 The Civil Engineering Industry

Civil engineering is one of the oldest professions in the world and employs a wide range of professionals across various industries and disciplines. As the technological revolution unfolds, and as the world population increases coupled with mounting environmental concerns, the role of the civil engineer has never been more important. In the 21st century, the job of the civil engineer is to build the quality of life using creativity and technical ability whilst meeting the challenges of the developing world.

Key players in the civil engineering industry include client/sponsor organisations, planners, researchers, designers/consultants, contractors, and a host of other participants. As part of a national economy, the civil engineering industry is an extremely important component, contributing as much as 10% of GDP in some countries through its influence on various other industries.

"Consultant Engineering" first emerged in the 18th century and has since grown into one of the most respected professions in the civil engineering industry. In the USA alone there are over 17000 consulting engineering firms accounting for a multi-billion dollar industry. Many consultant engineering firms also compete at an international or global level, with some having operations on several continents.

2.2.1 Industry Values

According to Badaracco (1998), a management that cares about business ethics and corporate social responsibility is proactive rather than reactive in linking strategic action and ethics. If similar views were held by the "industry" in which a firm operates, then it would be logical to infer that the industry would discourage morally or ethically questionable business practices and would go to considerable lengths to ensure that a firm's actions reflect integrity and high ethical standards.

Worldwide, the civil engineering industry boasts a proud history of ethical conduct and professionalism. In civil engineering, which is commonly understood to be foundation of all other industry, such professionalism and ethics is indeed a compulsory prerequisite. It is widely recognised that the work of the civil engineering profession is crucial to the sustainable development of society and the environment ("Ethics", 2001). In South Africa, engineers registered with the Engineering Council of South Africa are bound to adhere to a strict code of conduct, which has international recognition. The South African Institution of Civil Engineering (SAICE) as well as the South African Association of Consulting Engineers (SAACE) all advocate a code of ethics, which is believed necessary for society to have the necessary confidence in the civil engineering profession.

Many civil engineering firms thrive on their membership and association with such institutions as listed above. By subscribing to the ideals and values presented by such institutions, many civil engineering consultants have developed a positive work ethic and behaviour code that is congruent with world standards and requirements, and which undoubtedly assists the firms in acquiring international projects and the development of an international strategy.

2.2.2 Market Characteristics

The civil engineering market is in many ways governed by changes in the requirements of other industries. As these industries develop, their requirements change, ultimately imposing greater demands on the civil engineering industry. These

requirements have prompted the formulation of specialist areas of expertise in the civil engineering industry. Coupled with this new expertise, the tools and materials used by civil engineers have also changed and improved.

Scattered across the globe, domestic civil engineering markets are highly fragmented with many civil engineering consultants and contractors competing for market share. Generally, the larger the market the more fragmented the market. Most large civil engineering projects are generally multi-disciplinary and require a cross section of expertise from project start up to project close out. The start-up phase of such projects is generally complex in nature, that can be further complicated by the use of non-technical project managers and/or international cross-cultural differences.

In recent times, many civil engineering consultants in domestic markets have been forced to adjust profit margins and resort to cost reducing measures in order to be competitive. This phenomenon, which is mostly evident in the domestic contracting industry, has filtered its way into the consulting framework where bottom line price is the criterion used for the selection of consultants ("The Geotechnical", 2000). In the engineering context, this situation usually translates into sub-standard service provision and non-realisation of client expectations.

2.3 Decision to Enter Foreign Markets

Technology and the globalisation of business have created a new competitive landscape for the 21st century. The pace of this change is relentless and ever increasing, and in some industries has blurred the boundaries in which an industry competes.

The effects of globalisation are clearly evident in the South African business landscape. Many of South Africa's best-known "exports" are flourishing in foreign markets and hold their own amongst respected competitors in a seriously competitive global environment. There are also those firms that have failed to realise their intended objectives and have not managed to bridge the global divide. This often leads to the question of whether the decision to internationalise was indeed based on

fundamental and sound reasoning and judgement. In the case of the civil engineering consultant, the decision to acquire international projects is the internationalisation decision.

Many of the larger civil engineering consultants in South Africa have either crossed the hurdle of whether to internationalise or are consciously contemplating it on a regular basis. Indeed, globalisation or internationalisation is not "new" to civil engineering consultants. Multi-disciplinary consultant Mott MacDonald is a prime example of a global consultant. The firm has always worked on projects in different parts of the world, but has only recently started to develop regionally based businesses across the globe. Important acquisitions have underpinned the consultant's ambition to become more than a British-based international firm (Bolton, 2001). Other global companies such as UK's Halcrow and USA's Aecom have also succeeded in various parts of the world and continue to expand their tentacles into foreign markets.

Solberg (as cited in Hollensen, 2001) argues that a firm with limited international experience and a weak position in the home market has little reason to engage in international markets. This may be true to some degree; however, the reason to internationalise may be based on other factors, which in some instances are linked to the strategic direction and vision the firm's decision makers wish to pursue. Ultimately, the decision to internationalise should be based on sound fundamentals, which are inextricably linked to the overall business strategy of the firm. Clearly, the international arena features both opportunities and threats for firms seeking strategic competitiveness in global markets.

For some authors, internationalising a firm's operations appears to be the most logical strategy for those who have succeeded in domestic markets. From this point of view, international operations could simply mean the extension of a domestic concept outside of the firm's national boundaries. This ideology may work well in a franchising environment, however, it does not lend itself well to the civil engineering consultant environment. There are in fact many forces at work that prohibit a consultant from simply duplicating the services rendered in a localised set-up to an international environment. However, the concept of spreading the success in local

markets to international markets is something that most consultants seeking to internationalise, strive to achieve.

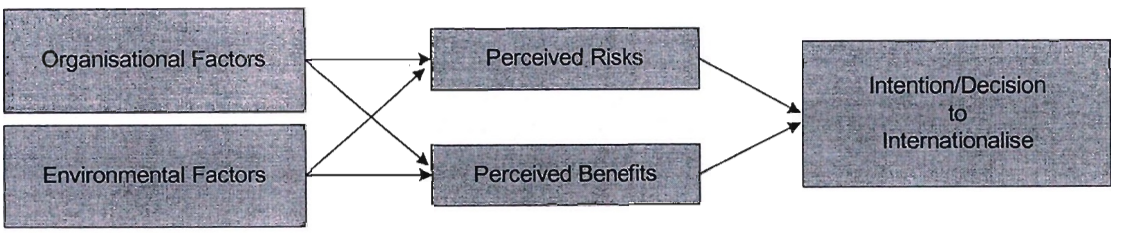

Figure 2.1: The Internationalisation Decision
Source: Adapted from Duniach-Smith (2003)

As illustrated in Figure 2.1 above, the intention or decision to internationalise is a premeditated decision that is usually based on an assessment of organisational and environmental factors. The perceived risks and benefits attached to these factors are contemplated, which affect making a decision to internationalise. The model above is particularly relevant to the civil engineering industry, where a major facet of the industry itself is concerned with the assessment of risk and adding value. In this instance, it is the risks and benefits that would lead to the decision to internationalise the operations; and in the case of a civil engineering consultant, whether to acquire international projects.

As the firm should analyse the opportunities and threats of expanding internationally, it should also evaluate the possible outcome of not expanding internationally. For example, a firm that decides against developing international markets would have to evaluate the possible consequences, especially where major competitors are increasingly becoming international.

2.3.1 Reasons for Entry into Foreign Markets

International business is becoming a necessity rather than an option for many businesses. Every firm has different reasons for entering foreign markets and

engaging in international business. Some of the reasons that companies subject themselves to the complexities of international business include:

- To enter more favourable markets, e.g., faster growing, more profitable, better government climate
- To reach new customers/clients
- To spread its business risk across a wider market base
- To gain other advantages inherent in location

One of the issues common to all of these reasons is organisational growth. It is commonly believed in the engineering industry that growth is a necessity and not an option. Many firms believe that it is only by growth and diversification that the value of the firm can be built whilst simultaneously increasing the ability to better serve client or sponsor organisations. In the civil engineering industry, consultants usually realise that domestic markets are simply insufficient to support the firm, so the firm must expand into a global environment to find more clients and projects.

Entering foreign markets is usually a deliberate action taken by a firm, however, there are exceptions where opportunities presented to the firm, encourage the expansion into foreign markets. There are many ways for a firm to become an international or global player and the various modes are discussed in ensuing sections, however, it is important to note here, that the route taken by the firm gives a strong signal of the firm's strategic intent and objectives.

The selection of an international strategy is much more complex than a domestic strategy because of the additional factors, such as national cultures, currency fluctuations and a host of other matters. The objectives of the international strategy must be clear as this provides the direction for the development and selection of the relevant international activities. The decision to internationalise is usually based on the ideal to achieve organisational growth, and is usually one of several other types of growth strategies including, diversification, concentration and integration as indicated in Figure 2.2 below.

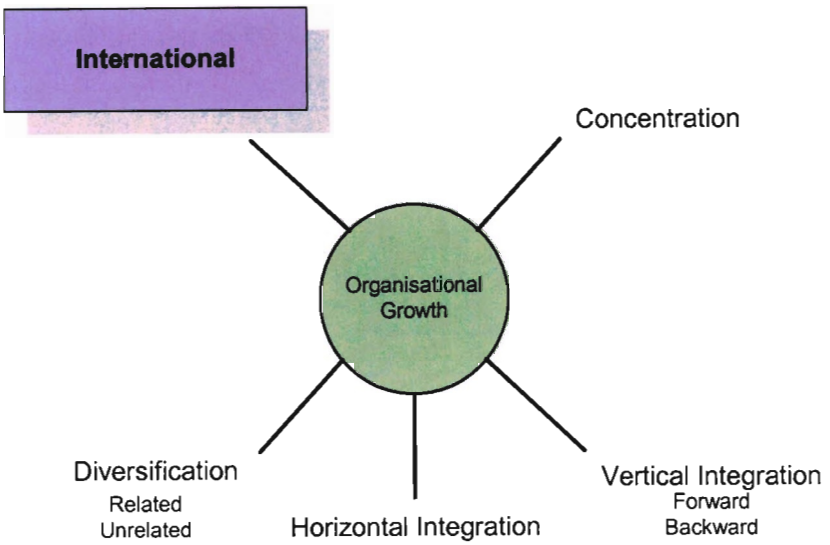

Figure 2.2: Organisational Growth
Source: Adapted from Boyd (2003)

The firm can "go international" by crossing domestic borders as it employs any of the strategies highlighted above. For the purposes of this study, only the major relevant international strategy choices will be highlighted.

2.3.2 Benefits of an International Strategy

Given the emerging motivations for expanding into foreign markets, a firm may achieve three basic benefits from international diversification:

- Earn greater returns from distinct skills and competencies (competence transfer)
- Exploit comparative advantage by dispersing value creation activities to locations where they can be performed most efficiently (location economics)
- Realise learning and scale effects through operating in larger markets (experience curve effects)

2.3.3 Strategic Intent

According to Hitt, Ireland and Hoskisson (2001), strategic intent is the leveraging of a

firm's internal resources, capabilities and core competencies to accomplish the firm's goal in the competitive environment. In other words, the strategic intent of a firm reflects what the firm is capable of doing as a result of its core competencies, and the unique ways they can be used to exploit a competitive advantage. In the international context, strategic intent often implies a significant stretch of a firm's resources, capabilities and core competencies.

Once the firm has established the readiness to engage in international business, the strategic intent of the firm should be developed to achieve the firm's underlying vision and objectives.

The strategic intent of a large firm may be to exercise industry leadership on a national or global scale. The strategic intent of a small firm may be to dominate a market niche and gain recognition as an up-and-coming enterprise. The time horizon underlying the concept of strategic intent is long term. Firms that rise to prominence in their markets almost invariably begin with strategic intents that are out of proportion to their immediate capabilities and market positions. They set ambitious long-term strategic objectives and then pursue them relentlessly, sometimes even obsessively, over a 10-20-year period (Thompson & Strickland, 2003).

Hamel and Prahalad (1989) argue that strategic intent is more than to simply envision a desired leadership position and establish the criterion the firm will use to chart its progress. Strategic intent also includes an active management process to focus the entire firm on the essence of winning, but it is also stable over time while allowing for reinterpretation as new opportunities emerge. Similarly, it helps set a target that deserves personal commitment and effort. Although strategic intent is stable over time, a target should be motivational and goals thus need to be realistic (Hamel & Prahalad, 1989).

2.4 Crafting an International Strategy

Raimond (1996) states that strategy is at the heart of the way it is chosen to develop a firm. There are many derivations of the term strategy. For the purposes of this

dissertation strategy is defined in an international context, as the expression of the strategic intentions of a firm to achieve sustainable competitive advantage in international markets.

2.4.1 Strategic Planning Vs Strategic Thinking

Mintzberg (1994) asserts that strategic planning is different from strategic thinking and that most successful strategies are visions and not plans. It is important for the civil engineering consultant to embrace and understand this philosophy when it is in process of crafting a strategy to enter foreign markets.

Mintzberg also states that there are two types of planner, the analytical thinker and the creative thinker, and firms' must ensure that it has them both in appropriate proportions.

When companies understand the difference between planning and strategic thinking, they can get back to what the strategy-making process should be: capturing what the manager learns from all sources and then synthesising that knowledge into a vision of the direction that the business should pursue. Mintzberg also states that too much planning leads to chaos but so too does too little.

2.4.2 Strategic Vision

Identification of the firm's vision and mission is the first step of any strategic planning process. The vision sets out the reasons for the firm's existence and the "ideal" state that the firm aims to achieve. The vision must tie into the firm's decision to enter foreign markets and clearly reflect the firm's intention at the international level.

Mintzberg (1994) suggests that strategy is a pattern over time. At the beginning, this includes the intended strategy as planned and the actual realised strategy that is the outcome after a certain period of time. As shown in Figure 2.3, the emergent strategy, which is not planned at the beginning, contributes the most to the realised strategies in the end. The smaller contribution is derived from the deliberate strategies, which

represent the intentions that are fully realised. This model is particularly relevant for firms that fail to get across their vision.

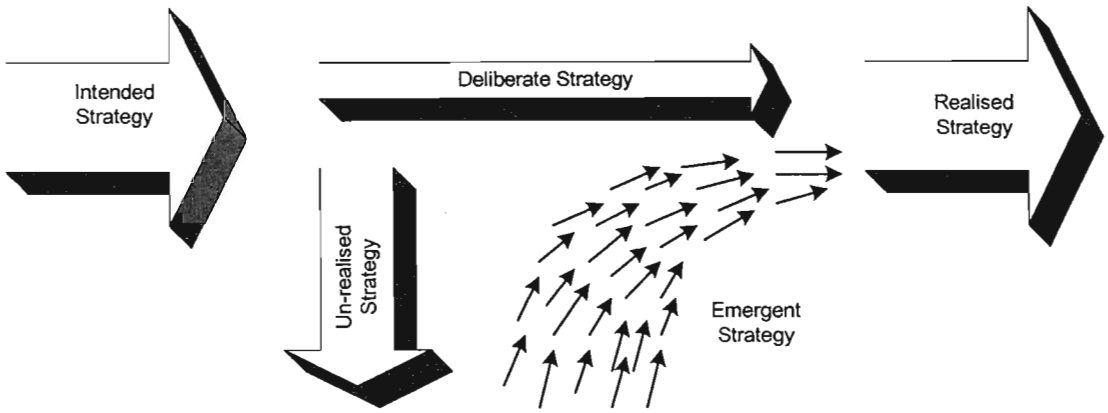

Figure 2.3: Forms of Strategy
Source: Mintzberg (1994)

There are many examples where actual planning or vision does not materialise and the emerging strategies became prevalent. Unpredicted and unintended events occur frequently that will differ from the firm's intended strategies, and the need arises for the firm to respond accordingly. Firms must be alert to recognise advantageous emergent strategies, and flexible enough to accept them. Otherwise, an ineffective intended strategy may not bring the desired results, and a beneficial emergent strategy may be hindered.

2.4.3 Strategic Mission

Generally, the mission of a firm identifies major goals and performance objectives and flows from the firm's strategic intent. Whilst the strategic intent is internally focused, the strategic mission that is externally focused is a statement of a firm's unique purpose and the scope of its operations in market and product terms (Hitt, Ireland and Hoskisson, 2001). Mission statements are frequently used management tools that have several benefits to the firm including:

- Communicating the direction of the firm

- Keeping the firm focused and motivated
- Making operational decisions

Essentially, the mission statement should reflect those elements of the firm as illustrated in Figure 2.4 below.

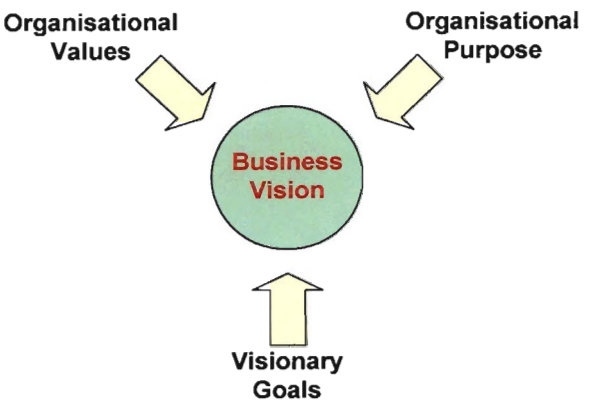

Figure 2.4: Organisational Vision and Mission
Source: Adapted from www.quickmba.com

As illustrated in Figure 2.4, the purpose of the firm must clearly state what the firm seeks to accomplish, why the firm exists, and what are the ultimate results of the firm's work. This "business" element of the mission statement must specifically outline the "business(es)" (i.e. operations or activities) the firm chooses in order to attain its purpose. Values are beliefs that the firm's resources hold in common and endeavour to put into practice.

For firms pursuing an international strategy, the firm's mission statement must clearly reflect all three elements of the mission statement in order for it to be seen in a serious light regarding its intentions and ambitions.

2.4.4 Sustainable Strategic Positioning

According to Porter (1996), strategy is the creation of a unique and valuable position, involving different sets of activities. If there were only one ideal position, there would

be no need for strategy. Thus the essence of strategic positioning is to choose activities that are different from rivals.

Porter (1996) states that costs are generated by performing activities, and cost advantages arise by performing particular activities more efficiently than competitors. Similarly, differentiation arises from both the choice of business activities and how they are performed. Thus, with activities being the basic units of competitive advantage, strategic positioning is about performing different activities from rivals or performing similar activities in different ways (Porter, 1996).

The civil engineering consultant industry is often categorised into a large number of sub-sectors; including structural engineering, geotechnical engineering, environmental engineering, transportation engineering, water resources engineering, industrial engineering, urban and community infrastructure engineering amongst others. There are generic activities in each category, but involvement in a particular sub-sector only consolidates the competence of the firm in handling projects in that sub-sector. Moreover, positioning choices not only determines which activities a firm will perform and how it will configure individual activities, but also how activities relate to one another. In other words, a firm needs to develop a fit among its activities and this will eventually lead to profitability due to the manner in which other activities are performed (Porter, 1996).

For consultants that do not see a need to engage in cross-border activities, there is a temptation to operate in all sub-sectors because the trade-offs that are necessary in positioning may appear to the firms as surrendering opportunities. Positioning trade-offs are essential because they avoid inconsistencies in specialist skills and management systems etc. To choose a position, therefore, a firm should view the global market in the context of operations where a highly developed competence in a particular sub-sector will enable it to pursue opportunities and create others wherever conditions permit.

To create a strategic position, a firm has to allocate adequate resources to the effort and ensure that everyone in the firm, particularly the leadership and senior

management is fully committed to the position created. Once a strategic position is created, the firm needs to continuously innovate valuable new service features before competitors (Teece, Pisano & Shuen, 1997). A valuable position will attract imitation by incumbents, who are likely to copy it by repositioning themselves or by straddling, i.e. seeking to match the benefits of another position while maintaining its existing position.

Based on the preceding information, it is clear that, to create and sustain a strategic position, a firm needs global information about the intended or created position and the inherent competition.

2.4.5 Strategic Fit

Porter (1996) states that strategic fit among many activities is fundamental not only to competitive advantage but also to the sustainability of that advantage. Competitive advantage is no longer being seen as an organisation as a whole but is now focused on competencies, critical resources and key success factors. Porter (1996) argues that fit among a firm's activities creates pressures and incentives to improve operational effectiveness, which makes imitation even harder. Firms that exhibit a strong strategic fit compound their competitive advantage, and is undoubtedly a key success factor for superior strategy.

Much of the discussion in this chapter includes the various models such as the SWOT analysis, key success factors etc., which are used to determine the strategic fit of the firm in an international environment.

2.4.6 Strategic Drift

In many instances a firm is faced with pressures for change, and the firm will attempt to minimise the extent to which they are faced with ambiguity and uncertainty, by looking for that which is familiar. This often results in incremental change (Johnson & Scholes, 2002). However, this incremental change is often insufficient and too slow to keep pace with the environmental change. This often results in the firm getting out

of line with its environment and may well result in strategic drift in which the firm's strategy gradually moves away from relevance to the forces at work in its environment. Even the most successful companies may drift in this way (Johnson & Scholes, 2002). This pattern of drift is made more difficult to detect and reverse because changes may achieve some short-term improvement in performance, thus tending to legitimise the action taken. However, in time, either the drift becomes apparent or environmental change increases, and performance is affected. Strategy development is then likely to go into a state of flux, with no clear direction, further damaging performance. Eventually, more transformational change is likely, if the demise of the firm is to be avoided (Johnson & Scholes, 2002). Symptoms of strategic drift include:

- Highly homogenous organisational culture
- Major blockages to change from powerful organisational managers/leaders
- Deteriorating relative performance
- Insufficient focus on external environmental

2.5 Understanding the International or Global Market

A country's competitiveness is achieved through the accumulation of individual firms' strategic competitiveness in the global economy. In order to accomplish this, a firm must view the world as its market place. However, the international arena features both opportunities and threats for a firm seeking strategic competitiveness in global markets. Bowman and Asch (1996) argue that if mistakes are made in defining the nature of the market, it is likely that inappropriate strategies will be formulated and hence the understanding of the market has to be sound.

Every country, whilst having similar economic objectives and goals, has different ways in conducting business, which in most instances is tailored to local conditions and stimuli. From a civil engineering consultant's perspective, there are differences in documentation, design standards, cultures, laws etc., which can all play a major role in the success or failure of a cross-border strategy or if only just to acquire a single

international project. In an endeavour to enter new and international markets, research is an essential element for success.

One of the most important aspects of foreign market entry is the understanding of an international client's needs. There are a number of effective ways in which civil engineering consultants can research client needs and perceptions. Market research could be undertaken through informal or formal channels.

The informal approach is an unstructured approach that essentially involves gathering prospective client information from multiple sources. This technique is often rewarding and useful as it could be used to reflect the engineering firm's strengths and weaknesses as well as the opportunities and threats prevalent in the engineering industry. As many South African civil engineering consultants do not have direct or immediate contact with prospective foreign clients, the main avenue of information gathering would be the Internet. On-line engineering publications and foreign government policy documents etc. provide useful insight and information on current and future trends.

Formal market research is extremely relevant in the international context and is often more costly than informal research, however, the additional investment could prove to be more rewarding. More often than not, it is based on defining the specific issues that need further analysis, combined with the objectives of a business (Labuschagne, 2001a). Of all the marketing research methods, the formally designed questionnaire has proved to be the most successful and informative. Of particular importance to the consultant firm wishing to acquire international projects would be information relating to the following issues:

- Current international market trends (needs and preferences)
- Planned or completed large international engineering projects
- Perceived quality assessment of products
- Usage of preferred engineering materials and products
- Technology development and usage

The most important aspect of market research is using the information gathered to build strategies that would assist the firm to achieve its desired objectives i.e. to acquire international projects.

2.6 Assessing International Opportunities

Any traditional form of analysis is best undertaken with an underlying methodology. The assessment of international opportunities is no different to other forms of strategic analyses. In the international context, the primary areas of interest remain the same except the position from which the information is viewed i.e. the global or international view. It is important to construct a trends and issues analysis in a manner that is consistent with the firm's strategic intent and objectives. The process traditionally includes the so-called PEST (Political, Economic, Social and Technological) angle; a market perspective in terms of the industry as a whole and specific competitors and a local, national and international perspective. For the purposes of this study, only the international perspective is discussed.

2.6.1 Identification of Global Trends and Environmental Scanning

The identification and analysis of trends and issues go a long way in discovering new ways to grow and maintain a firm. Trends usually develop over a fairly long period of time, however, if ignored could often be disastrous.

Environmental scanning enables a firm to identify early signals of potential changes in the general environment and detect changes that are already underway. Depending on the state of the environment, the firm must design a scanning system that is applicable to that environment i.e. a scanning system designed for a volatile environment is inappropriate for a firm in a stable environment (Hitt, Ireland and Hoskisson, 2001).

There are many trends that affect the international aspirations of a firm and encompass a broad range of factors including clients, competitors, industry characteristics, economics etc. Most firms fail to undertake sufficient environmental

scanning and trend analyses and therefore are not able to adapt to environmental changes.

The ensuing strategies resulting from the analysis of trends and environmental scanning should be devised to capitalise on 'positive' issues and to minimise and mitigate 'negative' issues of the business environment. It is important that the strategies account for the industry as a whole i.e. both local and international.

The extent to which a firm undertakes a trend analysis depends to a large extent on the nature of a specific business or practice and the available resources to undertake the required research. Simply listing trends and issues that are discussed and highlighted by various reliable sources of intelligence may not be sufficient. The firm must ensure that the list does not simply remain a list, but is in fact analysed, quantified and factored into the firm's planning scenarios.

A case in point is the construction industry. The construction industry is linked extensively to almost all aspects of a national economy. The industry is a major purchaser of material and equipment and is also the supplier of final constructed products. The industry is crucial to maintaining economic growth by providing the infrastructure necessary to support social and economic activities. The consultant environment as an industry is extremely dependent on the state of the construction industry and in essence "piggybacks" on the activities that drive the construction industry. National economic growth is closely linked to the growth in the construction sector and it is particularly important for consultants to identify and track these trends in the international or global arena. Countries exhibiting growth in the construction sector as opposed to those showing signs of shrinkage, is a trend that consultants must monitor closely so that the necessary action can be implemented to capitalise in times of a boom. Furthermore, consultants must also be abreast of events and actions that could drive the construction sector into a slump.

2.6.2 Issues Management

Issues are in many ways similar to trends but there are some differences worth noting.

Issues are often more contained from a 'time' perspective and carry significant emotional value. In general, issues are more controversial in nature and generate much greater public opinion than trends (Labuschagne, 2002).

HIV/Aids, international crime and international terrorism are some of the bigger issues that are prevalent in the modern era. There are also many smaller issues that affect an enterprise wishing to operate in foreign markets. Overall, it is important for the civil engineering consultant to have a broad understanding of these issues and to manage the benefits and threats posed by them.

By all accounts, issues management deserves a high degree of sensitivity, and from a marketing point of view should be managed carefully, especially when dealing with the media, local communities, interest groups etc.

2.6.3 External Shocks

Any scenario planning should account for eventualities that cover both the best and the worst-case scenario. Although the international civil engineering consultant cannot plan for external shocks or disasters, they can plan for the response to such events. Hence, in the international context, crisis planning should form a vital part of the consultant's business and marketing strategies.

2.7 Environmental Analysis

An analysis of the environment is an important element in the development of an international strategy. In the context of international strategies, the analysis itself is important because it helps in developing a sustainable competitive advantage, identifies opportunities and threats and may provide opportunities for productive co-operation with other firms. All strategy outcomes of an environmental analysis need to be monitored which may be either reactive or proactive (Lynch, 2000).

2.7.1 PEST Analysis

In most instances, investment decisions on foreign markets are made with a degree of uncertainty, and when a firm contemplates entering a new market, its success or failure will depend on its knowledge of the market and the related environment. Hence it is extremely important to undertake an analysis of the business environment as the first step in the assessment of potential opportunities in foreign markets.

The PEST analysis is a widely recognised method of the identification of four dimensions of possible influences on the business as illustrated in Figure 2.5.

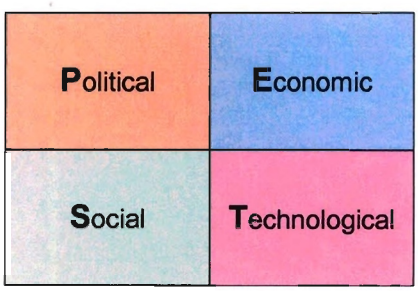

Figure 2.5: PEST Framework
Source: Own

It is evident that this framework does not cover all aspects of the environment, but the categories provide sufficient structure to scenario planning and the assessment of major factors that could influence the business.

2.7.1.1 Political

The global political environment is probably the most difficult environment to forecast accurately or with some degree of certainty. Political stability, whether local or international, affects the decisions relating to large engineering projects. In many instances, many large projects have been shelved due to political upheaval. On the other hand, it is well documented that changing political circumstances is one of the key drivers to opening new markets and reflecting new ways of thinking. It is thus

crucial for the firm to be able to react or anticipate these situations and/or to manage time delays. The political landscape of a country dictates the manner in which business is undertaken and it is thus imperative that the civil engineering consultant is familiar with the dynamics that drive it. It is often that the consultant has to develop strategies tailored to suit a political climate and local constraints.

2.7.1.2 Economic

The economic climate is probably the most important aspect of the PEST analysis. The advent of globalisation has affected the way business is conducted in all sectors of the economy. It is essential for the international engineering consultant to understand the workings of international trade economics and management. Knowledge of global economic trends assists the firm to manage the risk of operating in the international environment in a structured and organised manner. There are many economic trends that should be considered in the international environment and the correct interpretation and anticipation of these trends will also help the firm to identify various opportunities in international markets.

2.7.1.3 Social

The socio-cultural environment is more concerned with demographics, lifestyles and social values. Social factors such as income distribution, living standards, population distribution etc., are all indicators of future demand and the need for infrastructure investment. The cultural environment is more concerned with the values and norms of the country and the industry. In an international context, cross-cultural influences are one of the most critical elements for the civil engineering consultant. Language, religion, attitudes and other ethnic aspects shape the business culture and it is imperative for the engineering consultant to understand these issues when attempting to operate in foreign markets.

2.7.1.4 Technology

The technological environment of foreign markets is of utmost importance in the civil engineering industry. Worldwide, the exponential growth and changes to electronic communication are influencing the way in which business is conducted. The international civil engineering consultant must be conversant with the state of technological infrastructure in foreign countries, as these would dictate the level or direction of investment in a particular foreign market.

2.7.2 Key Success Factors

The key success factors are those elements in the industry or firm that most affect the ability to prosper (Thompson & Strickland, 2003). Thompson and Strickland (2003) state that key success factors vary between industries and could even vary within an industry from time to time as driving forces and competitive conditions change. Most industries generally have three to four key success factors at any one time.

It is clearly evident that future markets for civil engineering are strong and global demand is expected to remain high in the 21st century (Oxer, 1998). In light of the above statement, it is vital for civil engineering consultants to keep abreast of the key success factors of the industry. This is even more important in the international context, where the firm's success will depend heavily on the key success factors both internal and external to the firm. Some of the more important key success factors for the civil engineering consultant are discussed hereunder.

2.7.2.1 Leadership

The leadership of the firm is undoubtedly one of the most important key success factors for a firm deciding to enter foreign markets. There are three leadership qualities, which are seen as key success factors for firms entering foreign markets. Firstly, the ability to communicate a vision is extremely important. In the international context, this ability is vital to motivate others to realise the vision. Secondly, the

leader must show willingness to be a change agent. Change is a constant in any business and a good leader will be able to motivate people to adapt and look to the future, to see the entry into foreign markets as an opportunity and a challenge and not as a threat. Lastly, honesty is extremely important as people generally do not follow leaders they cannot trust.

2.7.2.2 Engineering Skills

The skills required by civil engineering consultants today have evolved considerably in the recent past, thus it is extremely important that the firm identifies the type and quality of engineering skills required for international projects. To some extent, engineering skills determine the extent to which firms can bid successfully for international projects. The skills required today must be assessed in terms of the relevance in today's changing environment. Employing individuals with multiple skills is of extreme importance. Besides the obligatory technical skills, employees who are also good at marketing, client relations, strategic thinking, project development, proposal preparation and communications are extremely valuable. Focusing on internationalisation, multi-lingual capabilities are also extremely valuable and can provide some leverage to a firm's international credibility.

In civil engineering the scarcest resources are those individuals who can perform, especially while wearing different hats. To create wealth in the international environment, managers and recruiters need to identify, attract and cultivate and allocate human resources as well as is done for financial capital, especially in a knowledge-based system (Oxer, 1998). As civil engineers must change their individual perspectives to thrive in the future, so must engineering management adapt to attract the type of engineers who will add most value in the future.

Many firms attribute the success and growth of their operations to having the best and brightest employees in the industry. Indeed, intellectual capital is a fundamental component of a civil engineering consultant, and must be put to the optimum advantage of the firm. There are many arguments that for civil engineering to be a

vital profession it must be able to attract its share of the best and brightest resources, and all else falls below this in priority since talent and ideas are the taproot of innovation and success (Clough, 2000).

2.7.2.3 Client Knowledge

Labuschagne (2001a) offers that it has been the experience of most successful firms globally, that the quality of relationships with stakeholders can make or break the future for that firm.

Knowledge of prospective foreign clients is vital if they are to be engaged meaningfully and effectively. For example, firms wanting to become involved in World Bank assisted projects must understand not only the process of project development and procurement procedures, but also the decision making structure and the organisational lines along which the World Bank functions ("World Bank", 2003).

Clients are often misunderstood, and hence attempts at acquiring international projects often fail at a very early stage. This situation may arise even with the most comprehensive of bids. Anticipating client needs and understanding their objectives is a key factor in building mutually profitable long-term relationships with important clients.

The knowledge gained from understanding current needs coupled with strategic thinking and creativity can be used by engineering firms to predict future needs (Labuschagne, 2001b). More often than not, a client can be delighted by understanding the client's business issues and problems (even of a non-engineering nature) and providing effective and creative solutions that exceed client expectations. This in turn paves the way for repeat business and referrals.

Also of importance, is the way in which the client organisation perceives the firm and the manner in which it conducts business. Many civil engineering consultants fall short in this area by failing to understand how the client views them, and thus not

positioning themselves to adopt or adapt strategies to market the client more effectively.

2.7.2.4 Technology

Civil engineering consultants should ensure that technologies which are considered to be key to future export success, are identified and are well researched. Certain international projects require a wide range of skills and technologies that are considered to utilise a small percentage of classical civil engineering. On certain projects, data collection, synthesis and interpretation are key elements of success and technologies that offer reduced time benefits and data acquisition costs, offer a significant competitive advantage.

Often, many types of civil engineering work have far-reaching and complex implications on the receiving natural and built environment domain. It is critical that these impacts are predicted and linked by undertaking a risk analysis. It is here that opportunities lie for the development and innovation of competitive technology.

Essentially, technologies must be developed and created to meet present and future demands. Reactive approaches will not work in the technology context as it continually changes and does not allow for the luxury of the firm to play catch-up. "Adapt or die" is a slogan that fits well for the civil engineering consultant industry. In order to become a truly international player, it is imperative for the civil engineering consultant to be technologically equipped.

2.7.2.5 Adaptation to an ever-changing environment

Crossan et al. (1996) states that the superior ability to adapt and capitalise on a rapidly changing environment is what distinguishes the best firms from all others. The rapid pace of development, and the growing challenges facing societies across the globe requires the 21st century firm to adapt and embrace the changing environment. Civil engineering as a profession is known to be slow to adapt to change (Clough, 2000).

The question is no longer whether or not to adapt to change, but rather how far and how fast the firm can move.

For the civil engineering consultant to survive and succeed in the future, the firm must in the first instance be able to identify the crucial aspects of the internal and external environment and then synthesise this knowledge into the appropriate action. The consultant must also realise that change is a 'living' process and that the firm will constantly face a changing economy, changing technology, changing client needs, market shifts, and changing resources. The strategic planning process of the firm must embrace this concept albeit difficult to grasp.

2.7.3 Industry Analysis

Porter (1985) states that the first fundamental determinant of a firm's profitability is industry attractiveness. Porter argues that competitive strategy must grow out of the sophistication and understanding of the rules of competition that determine an industry's attractiveness. Essentially, the industry analysis aims to determine and identify the competitive forces in an industry.

Porter's Five Forces model is a classical example of the "outside in" approach used in industry analysis. Porter argues that the state of competition in an industry depends on five basic competitive forces. These are potential entrants, suppliers, substitutes, buyers, and evidently the rivalry that exists between competing firms. Based on this model, Porter developed three generic approaches to outperform other firms in an industry, namely overall cost leadership, differentiation, and focus. Additionally, he also developed a framework for competitor analysis, arguing that a central aspect of strategy formulation is perspective competitor analysis.

The model framework as indicated in Figure 2.6, provides an analysis for considering how to squeeze the maximum competitive gain out of the context in which the business is located. Alternatively, it also provides an analysis on how to minimise the prospect of being squeezed by competitive forces on the five competitive dimensions that the firm confronts.

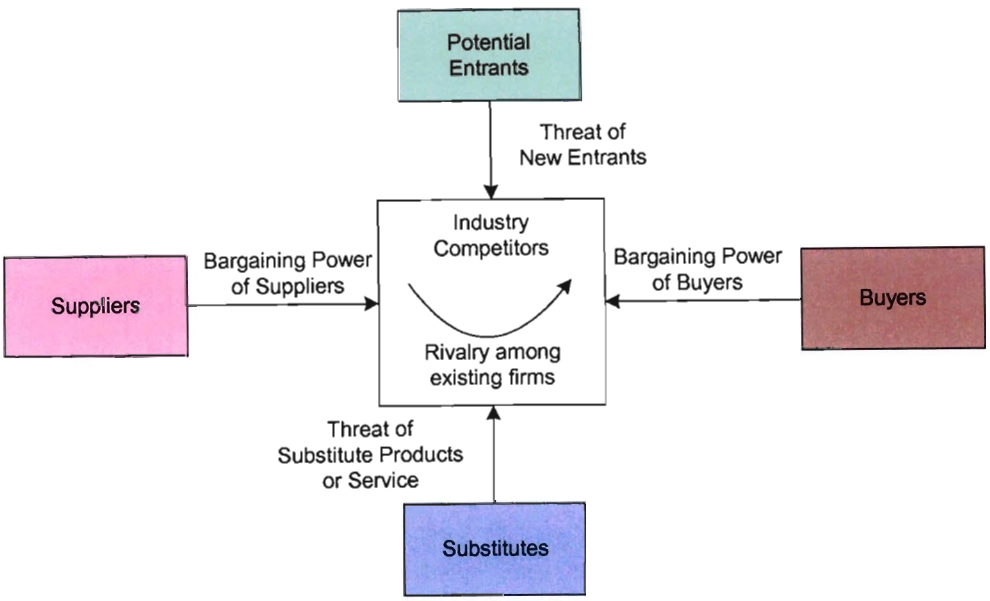

Figure 2.6: Porter's Five Forces Model
Source: Reproduced from Porter (1985)

In the international context, the five forces analysis is particularly difficult, as it requires data and information from multiple sources. However, the analysis is extremely important and should be applied to each market the firm intends pursuing.

2.7.4 Competitor Analysis

Having examined the forces acting throughout a particular industry or market, the next analytical step is to explore in greater detail, the competitive forces acting within parts of an industry. According to Porter, there are four components to competitor analysis, these being future goals, current strategy, assumptions and capabilities. Porter also mentions that it is very difficult to study the driving factors of a firm, although these often determine how a competitor will behave in the long run. As strategic intent is embedded in a firm, it can be argued that the only way to successfully study this intent is through espionage by means of actually having someone work for the firm. Where possible, strategic group maps could be used to understand the similarities, differences, strengths and weaknesses inherent in the market position of rival firms. The use of strategic groups for analysing industry

structure requires that dimensions relevant to the firm's performances within an industry be selected (Lynch, 2000).

2.7.5 Benchmarking and Competitive Intelligence

As highlighted earlier, although strategic intent is stable over time, organisational goals need to be realistic. Bearing on this statement, it is thus considered more appropriate to focus on the ground that a firm would cover in the short run as opposed to long-term objectives which encompasses a large degree of uncertainty. Consequently, a challenge needs to create a sense of urgency, and competitor focus should be developed at every level through widespread use of competitive intelligence.

According to Hamel and Prahalad (1989), a strategy that begins with a careful analysis of the competitor's conventional wisdom by focusing on a competitor's current strategy, an understanding can be drawn with consideration to how the competitor defines its market, the profitability of various parts of its business portfolio and to geographically analyse the market.

In the international environment, it is extremely important for the firm to benchmark itself against rivals and to extract as much competitive intelligence as possible from such activities. Benchmarking should be an ongoing process of measuring and comparing the firm's operations, practices and performance within and outside the industry and should include the evaluation of the "best practices" of other firms. The information derived from such activities can be used by the firm to provide insight into a particular industry and to understand how other firms have grown and expanded within the industry as well as internationally. Hamel (1996) states that firms pursuing incremental improvements while rivals reinvent the industry are like fiddling while Rome burns. This statement is particularly apt for the civil engineering consultant and cannot be overstated.

2.8 Resource Analysis

In the development of an international strategy, it is vitally important for the firm to understand the role of organisational resources and capabilities. A resource analysis together with the environmental analysis should drive the selection of strategies. According to Lynch (2000), the resource analysis usually proceeds along two parallel and interconnected routes: value added and sustainable competitive advantage. The concept of value added is basically an economic one and explores how the firm provides particular services, which are eventually "sold" to clients. The competitive advantage route examines the special resources that enable the firm to compete.

2.8.1 Value Chain Analysis

Porter's value chain provides a systematic means of displaying a firm's activities. The activities performed by a firm in any industry can be grouped into nine generic categories as illustrated in Figure 2.7.

Porter (1985) states that each of the categories may be vital to competitive advantage depending on the industry. For the civil engineering consultant industry, the operations, marketing and service activities are the primary activities with the others having a lesser role as a source of competitive advantage. All support activities are important.

The firm needs to analyse both internal and external factors and understand core processes in its value chain in order to know what clients and associates value. The value chain is closely linked to the firm's core competencies and mission focus, and is an important tool for understanding how a firm positions itself against its competitors.

A firm that has international intentions must consider an eventual internationalisation of the value chain functions. Principally, value chain functions should be carried out where there is the highest competence and optimal cost effectiveness.

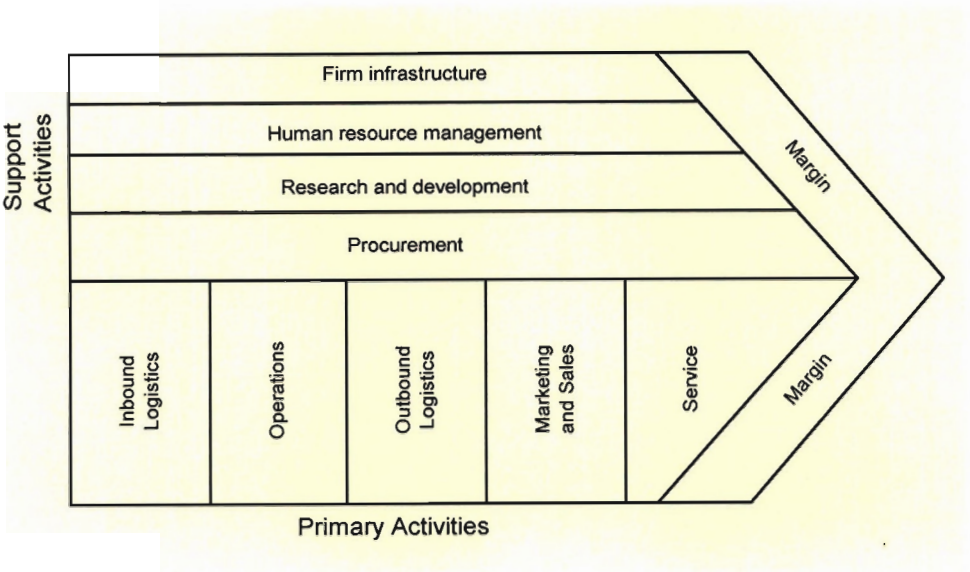

Figure 2.7: Porter's Generic Value Chain
Source: Reproduced from Porter (1985)

2.8.2 Core Competencies

The firm's resources and capabilities culminate into core competencies that must be used to establish a competitive advantage. Defining core competency is not an easy task, but it can be said to be a bundle of organisational and technological capabilities, that collectively captures know-how and are capable of being deployed to provide unique functionality and sustain advantage in the market place.

Core competencies are one of the most important attributes of civil engineering consultants and should be identified at an early stage in the development of an international strategy. Many consulting engineering firms in fact base their expansion into foreign markets by capitalising on their core competencies. These firms usually leverage their core competencies to put themselves into positions of competitive advantage in both domestic and foreign markets.

2.8.3 Strengths Weaknesses Opportunities and Threats (SWOT) Analysis

A SWOT analysis is common to both an environmental analysis and a resource

analysis and generally fits into the overall environmental scanning process. The Strengths and Weaknesses (SW) element of the analysis is concerned with the internal environment whose output could be derived from the resource analysis. The Opportunities and Threats (OT) element is concerned with the environmental analysis and is based on the environmental analysis process. As indicated in Figure 2.8, a SWOT matrix could be derived which could be used in conjunction with other strategic planning tools to develop strategies.

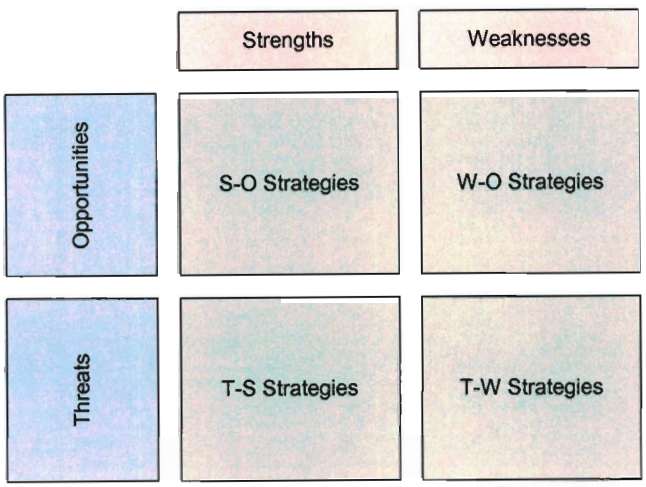

Figure 2.8: SWOT Matrix
Source: Adapted from http://www.quickmba.com/

Specific to the international aspect, the SWOT analysis could be used as a basis for designing future international strategies and indeed should be used for making the internationalisation decision. The analysis itself is a means to an end and will not change or improve any aspects of the firm. In essence, international strategies must be devised to enhance internal strengths and address internal weaknesses, while at the same time looking for ways to capitalise on external opportunities and minimise threats.

2.9 International Competitive Strategies

Figure 2.9 illustrates the strategy-making pyramid of a firm. Corporate strategy decisions include mergers and acquisitions, new ventures, allocation of corporate

resources etc. Business strategy is concerned with how the firm competes within a particular industry. In other words, it is what defines the competitive advantage that a firm must attain in order to win or to survive in an industry. Therefore, business strategy is also referred to as competitive strategy. The definition of corporate and business strategy is not a separation but rather a hierarchy. If a firm is successful in executing its business strategy, it will be successful in the overall corporate strategy. In this hierarchy, the next level is functional strategy, which identifies functional decisions for R&D, personnel, finance, production, and sales and marketing. As the firm gets larger, the distinction between functional and business strategy grows. For small, entrepreneurial businesses, the two are virtually the same.

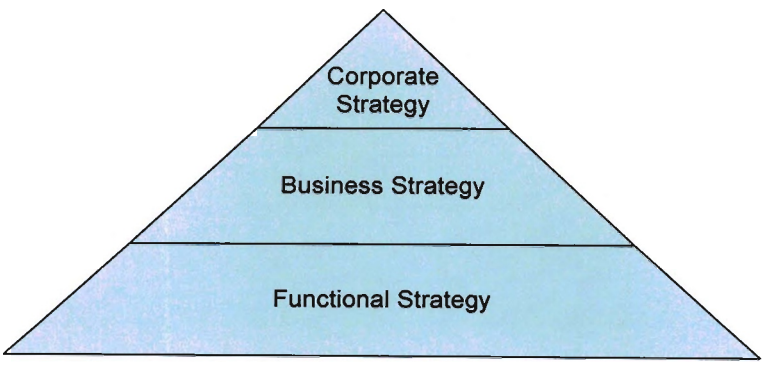

Figure 2.9: Hierarchy of Strategy
Source: Adapted from Thompson and Strickland (2003)

An international strategy may be either a business (competitive) strategy or a corporate strategy as indicated in Figure 2.10. Business or competitive strategy and corporate strategy should be closely interfaced since the business plan flows to the corporate level for approval and resource commitments. Many firms expect to create value through the implementation of both a business-level and corporate-level strategy. There are many tools and forms of analysis to derive and evaluate strategies, however, if one set of analytics are used to derive the business plan and another set to test whether to sustain or expand the business, then the resulting decisions may be incongruent.

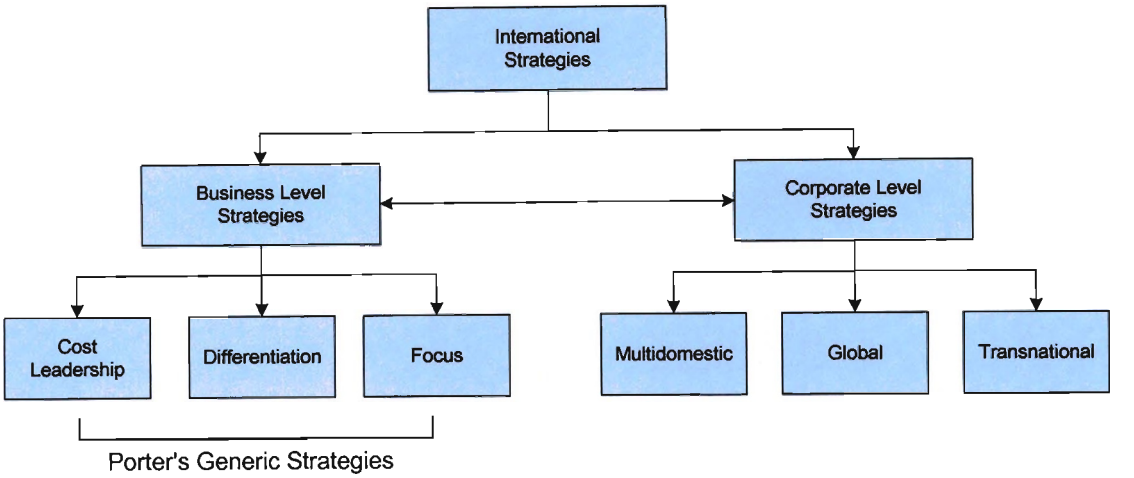

Figure 2.10: International Strategies
Source: Own

2.9.1 International Business Level Strategies

In pursuing an international business-level strategy, the home country of operation is often the most important source of competitive advantage (Rugman, 1998). The resources and capabilities established in the home country frequently allow the firm to pursue the strategy into markets located in other countries. Porter's "diamond" is one of the models that describe those factors contributing to the advantage of firms in a dominant global industry and associated with a specific country or regional environment. The four basic dimensions of the "diamond", as illustrated in Figure 2.11, emphasise the environmental or structural attributes of a national economy that contribute to national advantage. It should be noted that the factors of the "diamond" are likely to produce competitive advantages for a firm only when an appropriate strategy is developed and implemented i.e. one that takes advantage of distinct country factors.

The international business level strategy is based on Porter's five generic strategies as illustrated in Figure 2.12. These strategies are used to establish and exploit a competitive advantage within a particular competitive scope. Each of these strategies is discussed in an international context hereunder.

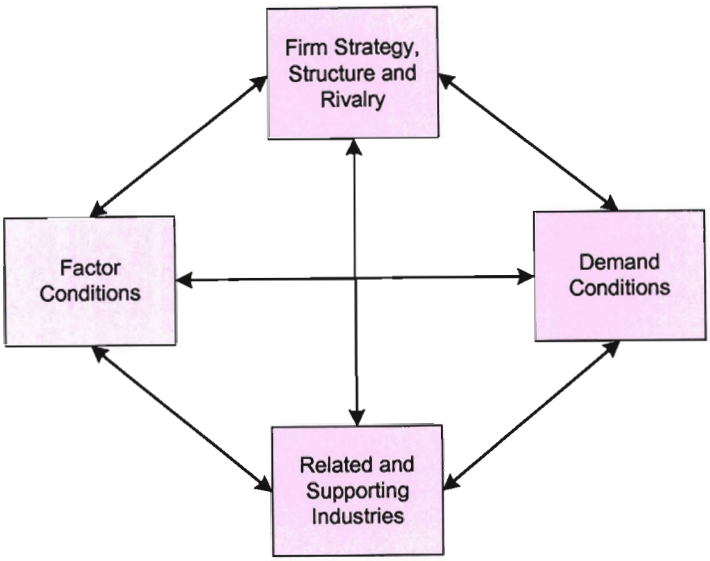

Figure 2.11: Porter's Diamond
Source: http://www.quickmba.com/strategy/global/diamond/

Target Scope	Advantage	
	Low Cost	Product Uniqueness
Broad (Industry Wide)	Cost Leadership Strategy	Differentiation Strategy
Narrow (Market Segment)	Focus Strategy (low cost)	Focus Strategy (differentiation)

Figure 2.12: Porter's Generic Strategies
Source: http://www.quickmba.com/

2.9.1.1 International Cost Leadership Strategy

Firms that pursue a cost leadership strategy deliver equal value to the customer at a lower overall cost. As stated by Porter (1996), cost is generated by performing activities, and cost advantage arises from both the choice of activities and how they

are performed. The international civil engineering consultant must be fully aware that in competition, "cost" is from the perspective of the client and includes other factors than just the fees for the services rendered. For a firm to undertake a cost leadership strategy it must be able to accomplish one or more of its value chain activities better than its competitors. Sources of competitive advantage may be derived from various sources including, size, specialisation technology advances, product mix advantages etc (Hitt, Ireland & Hoskisson, 2001).

A low cost strategy works well under the following conditions:

- Price competition among rivals is dominant competitive force
- Industry's product is a commodity-type item readily available
- Few ways to achieve product differentiation that have value to clients
- Most clients have similar needs/requirements
- Clients are large and have significant bargaining power

Some of the drawbacks of a low cost strategy include:

- Technical breakthroughs open up cost reductions for rivals, negating a low-cost provider's efficiency advantages
- Rivals find it comparatively easy or inexpensive to imitate leader's low cost methods
- Low-cost provider becomes so fixated on cost reduction it fails to respond to:
    - Increased client desires for added quality or service features
    - New developments in related products
    - Declining client sensitivity to price

Due to the nature of civil engineering work conducted by consultants, international cost leadership strategies are not one of the foremost strategies pursued. Consultants services are hardly homogenous and the fees for such services are usually based on industry agreed standards and norms. Although price is an important attribute it is not

the most important attribute as required under an effective cost leadership strategy. However, more and more civil engineering consultants are being made to bid against each other for work and hence a cost leadership strategy could be pursued in large markets. In addition, Kaluza and Blecker (2001) state that market share has to be high enough so that the experience curve effect can be exploited. Furthermore, the firm should not fall short of a minimum acceptable standard of quality.

2.9.1.2 International Differentiation Strategy

Firms based in a country with advanced and specialised factor endowments (refer to Figure 2.11) are likely to develop an international differentiation strategy (Hitt, Ireland & Hoskisson, 2001). Firms adopting this strategy incorporate differentiating features resulting in the client making a preference based on the firm's product/service over rivals. The firm may also find ways to differentiate to create value for clients that are not easily copied by rivals. Usually a differentiation strategy is spending less to differentiate than price premium to be charged. For the international consultant the differentiation strategy could be used successfully, if it selects one or more attributes of many clients perceive as important, and uniquely positions itself to meet those needs. The differentiation could be based on the services offered, the marketing approach and a broad range of other factors. A differentiation strategy works bests under the following conditions:

- There are many ways to differentiate product/service and differences are perceived by clients to have value
- Client needs and uses of item are diverse
- Not many rivals are following a similar type of differentiation approach

Some of the pitfalls of the differentiation strategy include:

- Trying to differentiate on a feature clients do not perceive as lowering their cost or enhancing their well-being
- Over-differentiating such that product features exceed clients' needs

- Charging a price premium that clients perceive is too high
- Ignoring need to signal value, depending only on "real" bases of differentiation
- Not identifying what clients will consider as value

2.9.1.3 International Focus Strategy

As adapted from Porter's generic focus strategy, the international focus strategy is centred on serving a narrow market segment or niche better than rivals. The strategy has two variants. In cost focus, a firm seeks a cost advantage in its target segment, whilst the differentiation focus strategy rests on the firm seeking differentiation in its target segment (Porter, 1985). Both variants involve choosing a market niche where clients have distinctive preferences, special requirements or unique needs. The international consultant could adopt either of the variants of the focus strategy and must develop unique services to satisfy the needs of the target client segment. Sources of competitive advantage are similar to those of a cost leadership strategy. A particular segment is attractive for focusing under the following conditions:

- Big enough to be profitable
- Good growth potential
- Not crucial to success of major competitors
- Firm has enough resources to effectively serve the segment
- Firm can defend itself adequately through superior ability to serve clients in the segment

A focus strategy works well under the following conditions:

- It is costly or difficult for multi-segment rivals to serve specialised needs of target niche
- No other rivals are concentrating on same segment
- Firm's resources do not permit it to go after a wider portion of the market
- The industry has many different segments, creating more focusing opportunities

Risks of a focus strategy are as follows:

- Broad-line competitors may find effective ways to match the focused firm in serving target market
- Niche client preferences may move towards product attributes desired by market as a whole
- Segment may become so appealing it becomes crowded with aggressive rivals, causing segment profits to be split many ways

2.9.1.4 International Integrated Cost Leadership/Differentiation Strategy

An integrated strategy is far more common and popular amongst certain industries, which capitalise on improvements in information networks within and across the firms and Total Quality Management (TQM) (Hitt, Ireland & Hoskisson, 2001). Larger consultants can benefit from an integrated strategy where competing in the international or global environment requires sophisticated and effective management.

2.9.2 International Corporate Level Strategies

To some degree the corporate level strategies guide the development and implementation of business level strategy. There are cases where the corporate level strategy may allow individual country units the authority to develop their own business level strategies whilst other corporate level strategies dictate the business level strategies to accomplish the standardisation of products and services and sharing of resources across countries. The international corporate level strategy is required when the firm operates in multiple countries or regions. Ultimately, the international corporate level strategy evolves from a firm's strategic intent and mission.

2.9.2.1 Multidomestic Strategy

This strategy involves operating in several countries, each with rather independent

strategies and processes (Hitt, Ireland & Hoskisson, 2001). Under this form of strategy, strategic and operating decisions are usually decentralised to the strategic business unit in each country to allow the unit to tailor products and services to the local market. Competition is focused within each country. The use of multidomestic strategies usually expands the firm's local market share because of the attention paid to the needs of local clients. However, the use of these strategies also results in more uncertainty for the firm as a whole, because of the differences across markets and thus the different strategies employed by the local country units. The multidomestic strategy is commonly used by multinational firms operating in geographic regions where there is a variety of cultures and markets conditions etc.

2.9.2.2 Global Strategy

A global strategy is one where a firm operates in multiple countries, in which there is considerable interdependence and linkage among the countries, resulting in global strategies (Hitt, Ireland & Hoskisson, 2001). A global strategy emphasises economies of scale and offer greater opportunities to utilise innovations developed at the corporate level in one country, into other markets. Accordingly, a global strategy produces lower risk, but may forego growth opportunities on local markets, either because those markets are less likely to identify opportunities or because opportunities require that products are adapted to the local market.

2.9.2.3 Transnational Strategy

This strategy seeks to achieve both global efficiency and local responsiveness (difficult to achieve because of the conflicting goals of global co-ordination and local flexibility). This strategy requires building a shared vision and individual commitment through an integrated network for successful implementation.

2.9.3 Other Types of Growth Strategies

Corporate strategies can generally be classified into three groups: growth, stability

and decline/renewal. Stability and decline strategies are not covered in this study. Growth through internationalisation has already been discussed, however, it is important to outline some of the other forms of growth strategies as many of these strategies could be used in combination with international business level strategies to enter foreign markets.

2.9.3.1 Concentration Strategy

These types of strategies entails the firm concentrating on its primary line of business and looking for ways to meet its growth objectives through increasing its levels of operation in this business. The strategic options available under this strategy are illustrated in Figure 2.13.

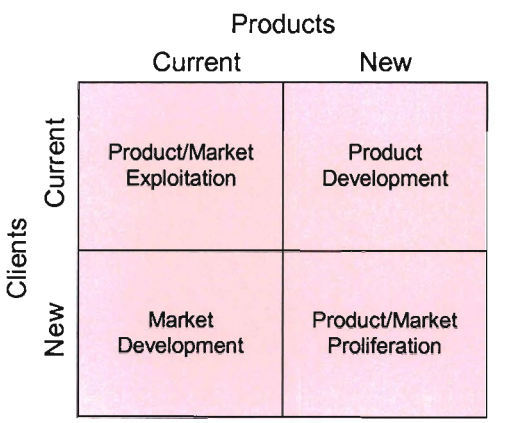

Figure 2.13: Concentration Options
Source: Adapted from http://www.mgt.smsu.edu/mgt487/corpstrt.htm

Firms intending to become the market leader in a domestic market could use a strategy of concentrated growth. This new found position could then be used as a catalyst for entry into foreign markets.

2.9.3.2 Vertical Integration Strategy

Here a firm tries to gain control of its inputs (backward integration) or its outputs

(forward integration). For civil engineering consultants, there is limited scope for the use of these types of strategies.

2.9.3.3 Horizontal Integration Strategy

This strategy entails expanding operations by combining with other firms in the same industry performing similar type of work. In many instances, the engineering consultant attempting to pursue foreign markets does not have the critical mass to compete at an international level. Hence, a horizontal integration strategy could be used in conjunction with an international strategy.

2.9.3.4 Related Diversification Strategy

Related diversification is the strategy adopted by a firm that diversifies into an industry, which is related in some way to the current industry. For the civil engineering consultant, this strategy could be particularly useful if the construction industry was the target of related diversification. As pointed out earlier, consultants "piggyback" on the construction industry and could be exposed to the international environment through some of the larger construction firms who already have exposure to foreign markets or who are in pursuit of foreign clients.

2.9.3.5 Unrelated Diversification Strategy

Diversifying into an unrelated industry is also an option available to the firm in pursuit of growth. Companies that pursue this strategy nearly always enter new businesses by acquiring established companies in the hope of increasing shareholder value and diversifying risk. For the larger and wealthier civil engineering consultant, unrelated diversification could be an option for growth prior to an international strategy.

2.10 Market Segmentation and Targeting

It is extremely difficult for a firm to service all sub-sectors of a given industry. As illustrated in Figure 2.14, a firm would generally divide the total market into segments and will then carefully select one or more specific segments to serve i.e. a target market. In some instances, a firm would also have to devise tailored marketing strategies to ensure that the product or service offered occupies a unique position in the mind of the client or buyer relative to competitors.

In an international environment choosing or targeting the appropriate country markets is vital for the firm to succeed in the chosen areas. It is important for the civil engineering consultant to specialise in those areas that suit the firm's specific capabilities and expertise and to adapt where there are established and growing markets. Hence, the civil engineering consultant could employ both "outside in" and "inside out" strategic approaches. Figure 2.15 represents a model approach that could be used for selecting a target country.

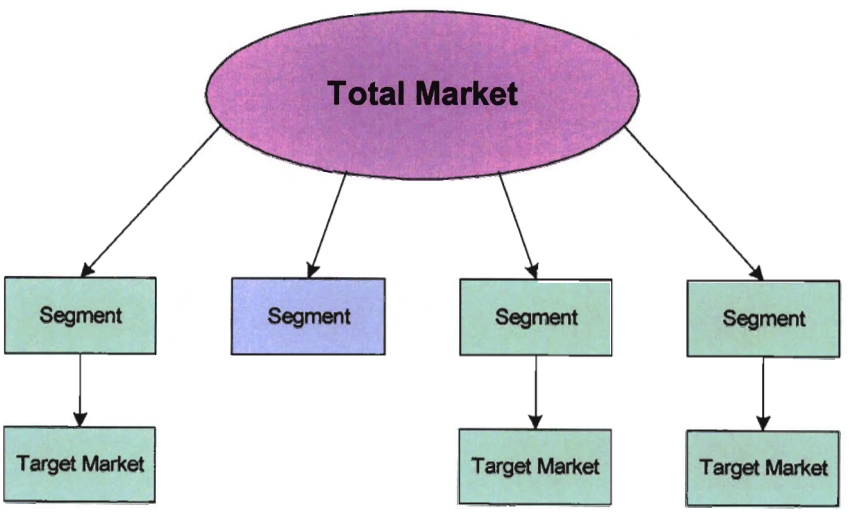

Figure 2.14: Market Segmentation and Targeting
Source: Adapted from Class Assignment (2001)

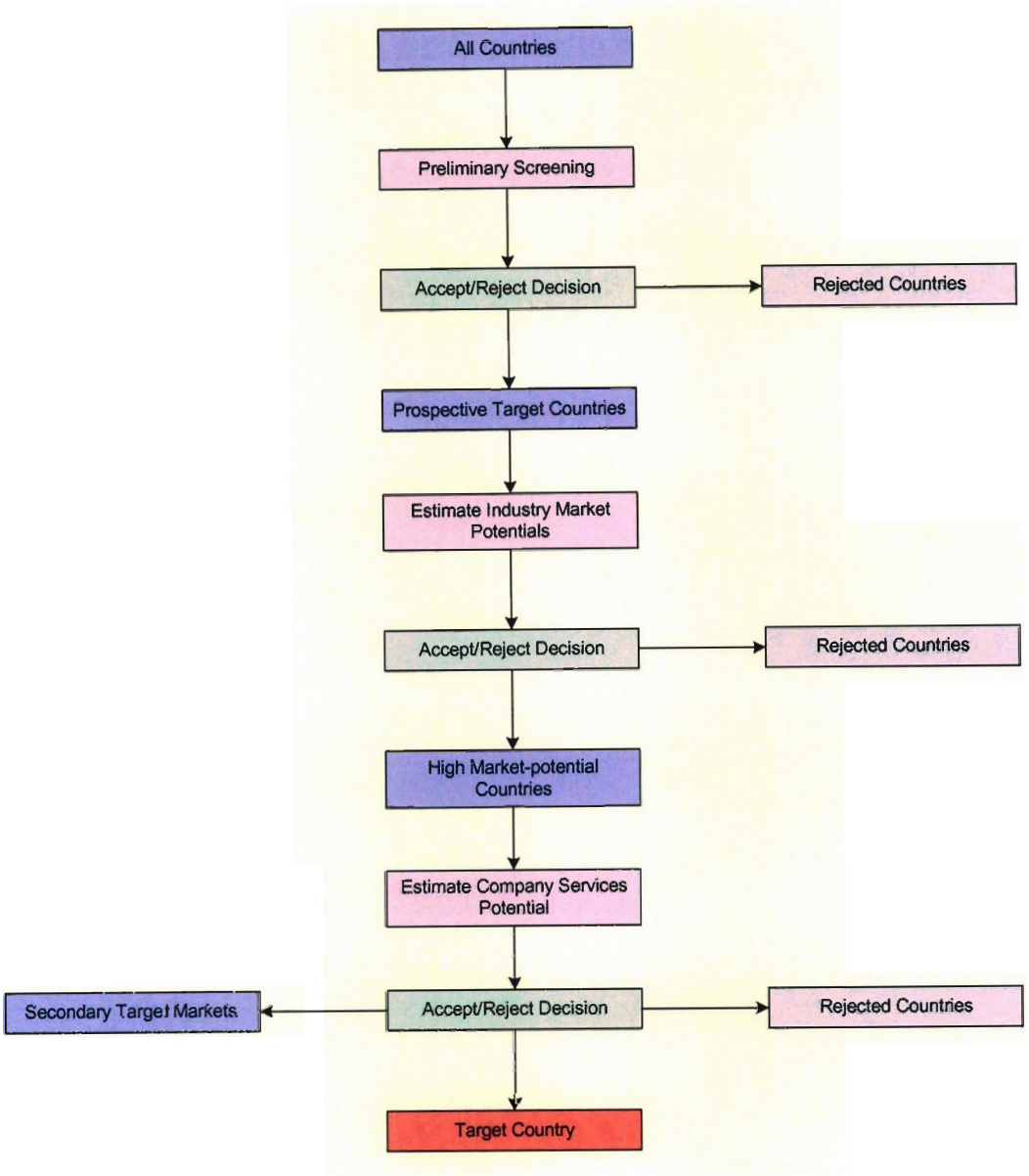

Figure 2.15: Target Country Selection Model
Source: Adapted From F. Root (1998)

2.11 International Modes of Entry

Certainly, there are many different ways to become an international or global player and many of the choices depend on the strategic intentions and ambitions of the firm and also on prevailing and future environmental factors. One of the most common ways of entering foreign markets is the amalgamation of different firms, which then

operate as one firm or holding in a bigger or global scale. This path involves mergers, acquisitions and to a certain extent, strategic alliances.

2.11.1 Factors Influencing Entry Mode Decision

There are many factors affecting the entry mode decision as indicated in Figure 2.16. The need to anticipate the strength and direction of these forces makes the entry mode decision a complex process with numerous trade-offs amongst alternative entry modes. The decision on the right entry mode could follow the process flow as indicated in Figure 2.17.

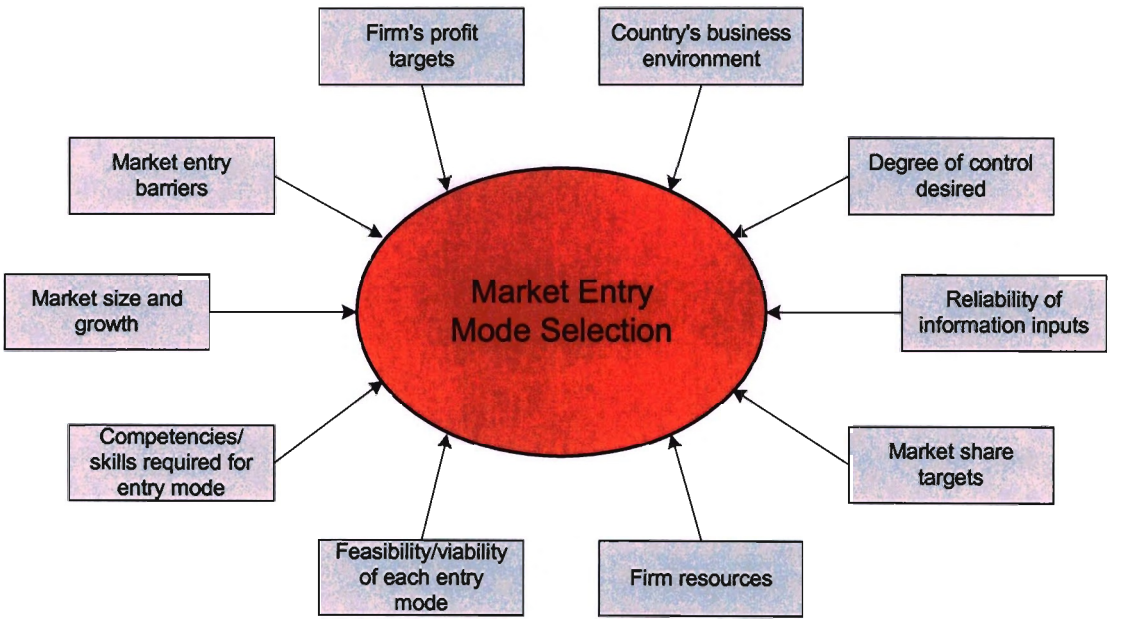

Figure 2.16: Factors Influencing Entry Mode Decision
Source: Own

Figure 2.18 gives some indication of the various entry modes available for international expansion. The most important and appropriate strategic entry modes for the civil engineering consultant are discussed hereunder.

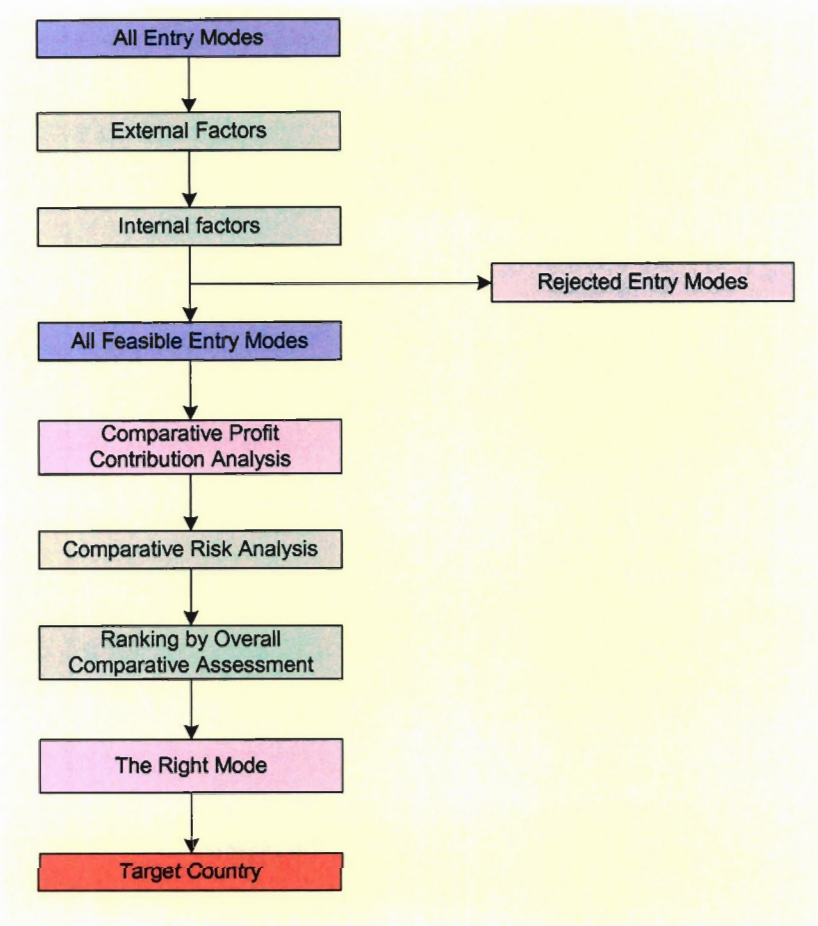

Figure 2.17: Entry Mode Selection
Source: Adapted From F. Root (1998)

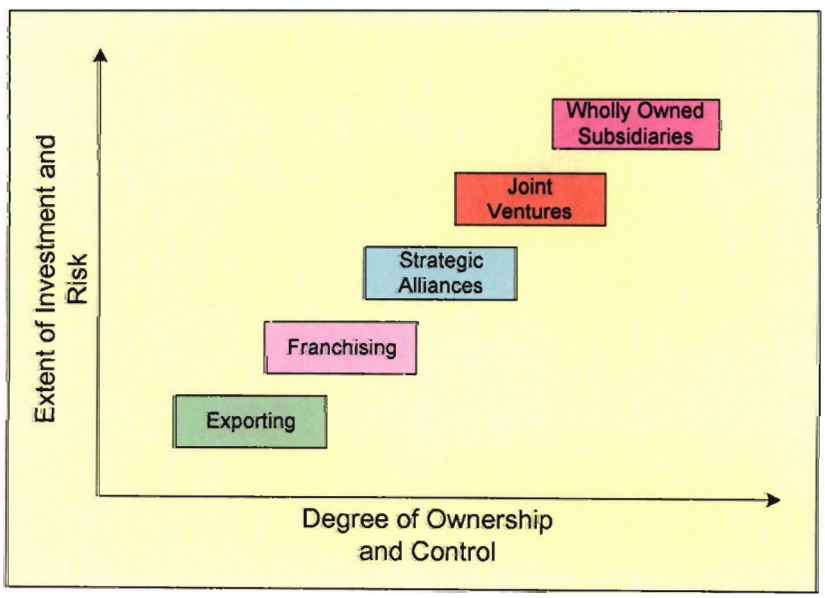

Figure 2.18: Types of Entry Modes
Source: Own

2.11.2 Exporting Services

Exporting of professional services is clearly one of the most desirable modes of entry. It exposes the firm to the least degree of risk and investment, whilst allowing the firm to maintain some degree of control and ownership of its activities in foreign markets.

Exporting of services is particularly useful in situations where host countries have a shortage of skills and where the home country has a problem of curbing the loss of professional capacity due to a shortage of work. This scenario is extremely relevant to the South African engineering consultant sector where firms are trying to match the under capacity of international firms with their need for work in a manner which curbs relocation and immigration. The advent of electronic technology promotes this scenario, and allows engineers to carry out most of the work here in South Africa.

2.11.3 Strategic Alliances

Many firms often find themselves short of resources and competitive capabilities to compete successfully against rival firms. The gaps created by such shortfalls must be addressed if the firm is to compete in an international or global environment. One of the best methods of filling the gap is through the use of a strategic alliance with a firm that already possesses the strengths and capabilities.

Strategic alliances are typically non-equity co-operation and are quite common in the engineering consultant profession. Joint ventures are a common element of a civil engineering consultants' business. Such alliances are sometimes enforced by a client but generally are used as a strategic option to strengthen a firm's bid to win projects.

For the civil engineering consultant contemplating entry into foreign markets, strategic alliances with foreign firms are extremely beneficial. These alliances help the firm to enter a critical country market quickly and aid the firm in the process of building a global market presence. In the case of foreign partners, the alliances also assist in obtaining valuable inside knowledge about unfamiliar markets and cultures. Strategic alliances are also seen as an important element for the consultant's pursuit of

a related diversification strategy. Strategic alliances with engineering contractors are probably some of the most important alliances for engineering consultants pursuing international strategies.

One of the important things that many consultants should consider is how to make themselves attractive for strategic alliances. If a consultant can become a partner of choice, it would indeed succeed in not only its local business, but in its overall strategy to become an international or global player. It is essential for the consultant to undertake the necessary research to determine what competencies that prospective partners find attractive. However, it is also critical for engineering consultants to ensure that they do not become dependent on other firms for essential expertise and capabilities over the long term, as this may hamper the firm's strategy of becoming a market leader in international markets.

2.11.4 Joint Ventures

A joint venture (JV) is a partnership between two or more parties that can either be contractual non-equity or an equity joint venture. The contractual non-equity JV is the same as a strategic alliance, and as stated earlier, is often used by the civil engineering consultant. The equity JV is also utilised by engineering consultants where two or more companies form a partnership to share the costs of investments, the risks, and the long-term profits. Such collaborative efforts can be used effectively in a situation where two or more firms set up an equity JV with the sole intention of developing and harnessing international capabilities.

International joint ventures (IJV's) can also prove to be extremely lucrative for firms' in pursuit of entry into foreign markets. The use of this type of collaborative strategy has proved to be successful in many industries, however, is not without risks and inherent problems. Ultimately, the choice of an IJV should reflect a balance between the firm's objectives and the ever-changing environment.

2.11.5 Mergers and Acquisitions

Mergers are similar to acquisitions in the sense of two companies combining together. However, mergers usually arise because neither firm has the scale to acquire the other on its own. Both entry modes offer significant benefits for entry into foreign markets. In the international civil engineering environment, many firms offer multi-disciplinary services and are relatively large in terms of size. Mergers and acquisitions can assist the engineering consultant to achieve a critical mass to compete effectively in the international arena. Opportunities for mergers and acquisitions should be investigated as often as possible, as many large firms such as Mott MacDonald and Earth Tech etc., are constantly looking out for opportunities in foreign countries. Much of the success of such firms has been achieved from strategic mergers and acquisitions in markets across the globe.

2.11.6 Organic Growth

Organic growth has always been the "ideal" strategy. This approach focuses on the expansion of the firm's own resources and direct foreign penetration. It is less spectacular than mergers or acquisitions and usually takes many years under normal circumstances or is even considered impossible in certain highly competitive industries. Although the civil engineering consultant industry is highly competitive, it does lend itself to a certain degree of organic growth, and many international and global firms such as Mott MacDonald and Earth Tech attribute some of their success to organic growth.

2.12 Development of an International Marketing Programme

Marketing is the core of any business, and successful businesses place a high value on the marketing strategy or marketing programme. Much of the general marketing tools and issues are relevant in the civil engineering industry and even more relevant in an international context i.e. global marketing. Many civil engineering consultants are confronted with an important question at the beginning of a marketing campaign. Does the firm ensure that products or services are available before marketing or does

it first examine the existing markets and anticipate future needs? The answer to this 'chicken and egg' situation is sometimes difficult. Ideally, the approach adopted should be linked to the overall strategic approach of the firm and should take place at the same time.

The marketing strategy of a firm should ideally encompass all the traditional elements of a marketing plan.

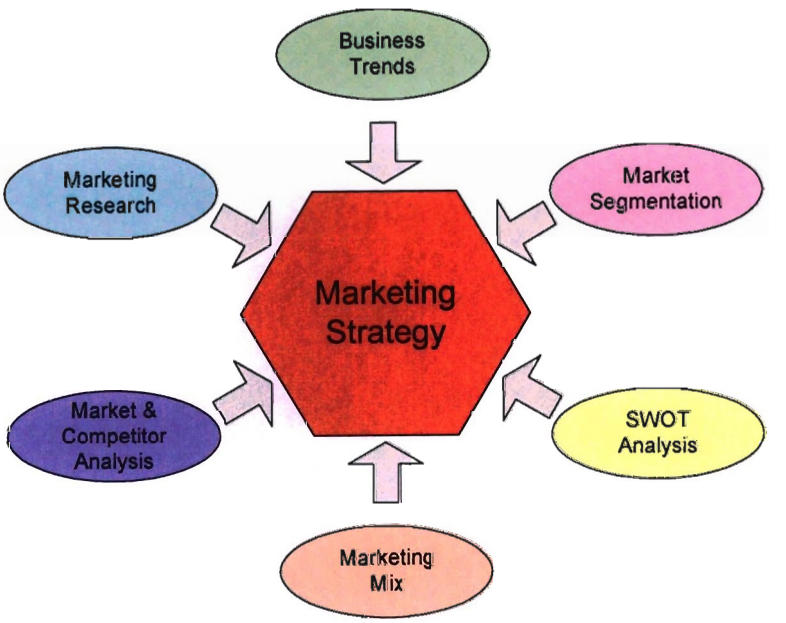

Figure 2.19: Marketing Strategy
Source: Adapted from Labuschagne (2001b)

As seen from Figure 2.19 above, some of the elements have been covered in the preceding sections. The classical aspects of a marketing strategy are theorised in subsequent sections.

Ideally, the firm should develop a marketing plan and incorporate issues that are based on the classical '4 P's' of a marketing mix i.e. product, price, place and promotion as illustrated in Figure 2.20 below. The marketing mix must reflect the overall strategic business objectives of the firm and ranges from adapting mixes to local conditions to adopting a standardised approach across various markets.

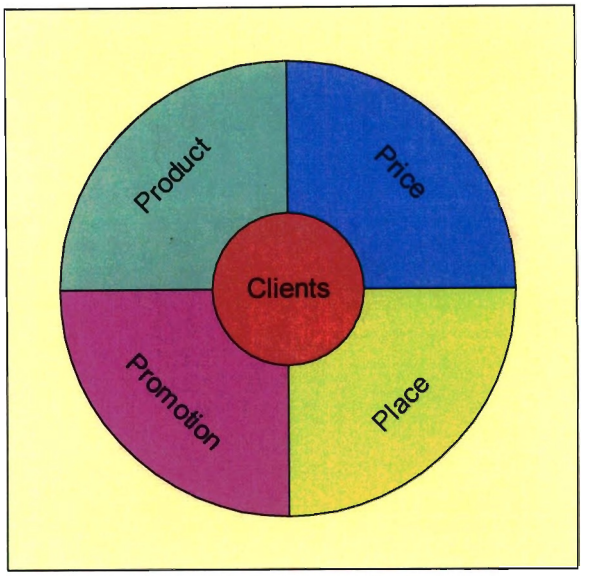

Figure 2.20: Classical Marketing Mix
Source: Own

2.12.1 Product Strategy

The services offered by civil engineering consultants have a two-fold nature. Firstly, there is an intangible aspect of professional design and/or consulting services and supervision. Secondly, there are the managerial aspects and physical activity involved in projects. Issues such as stringent quality control and professional excellence affect all of these products and services. In the international context it also means staying in touch with international best practices (Labuschagne, 2001b).

The product/service strategy has to be reviewed continually and depends on regular scanning of changing marketing circumstances to anticipate market threats and opportunities.

2.12.2 Pricing Strategy

In the civil engineering industry, professional fees are market driven. Fee revisions and product prices are generally dependent on a number of factors, not least of all being the fierce competition in the international engineering sector. Fluctuating or

distorted exchange rates also affect the pricing strategy of the firm. In order for a firm to adopt appropriate pricing strategies, the factors governing or determining the right 'price' needs to be well understood.

2.12.3 Place Strategy

In classical marketing theory, "place" usually refers to the distribution and value chain. In the civil engineering industry it can also refer to being at the right place at the right time. The success of this strategy is influenced by various factors including the manner in which the firm networks and the way in which it keeps in touch with existing and potential clients.

2.12.4 Promotion Strategy

The communication strategies adopted by a firm are of paramount importance in the international civil engineering consultant industry. If the firm does not have a "name" or an image of international repute, it will not be able to compete in the fiercely competitive international environment. Many firms often ignore that every sort of communication with the outside world is of extreme importance and includes simple communications such as letters, faxes etc.

2.12.4.1 Media Strategy

A sustained media strategy is a key component of a firm's promotion strategy. Most civil engineering consultants produce regular newsletters to provide up to date information on the firm's activities and major projects. This information is also usually available on the firm's website.

However, a sustained media strategy is more than distributing company newsletters or news releases. The media strategy should be seen as a long-term strategy that is an integral part of the marketing strategy. The contact with the media is an ongoing

process and there are various ways in which information about the firm could be distributed through the mass media including advertising, press releases etc.

In the international context, securing advertorial space in key international publications and magazines usually provides beneficial business exposure to the firm in international markets. It is important to engage the media as frequently as possible and to foster relationships that would assist in developing a sustained media strategy. Organisational resources can also play a key role in the media strategy. Showcasing major projects and key resource inputs in international journals and publications signals a firm's capabilities and experience. All individuals in a firm have an impact on the firm's image and reputation and therefore should be incorporated in the media strategy.

2.12.5 Internet Strategy

Porter (2001) argues that a distinctive strategy could be reinforced by using the Internet. Porter also states that although the Internet provides a better technological platform than previous generations of IT, the competitive advantage derived from it will be neutralised as more companies embrace Internet technology. Porter states further that competitive advantages will arise instead from traditional strengths such as unique products, proprietary content, and distinctive physical activities. Internet technologies should be utilised to build on these strengths rather than replace them.

2.12.5.1 Business Exposure

Business exposure is one of the fundamental benefits of using the Internet to expand into new markets and attract clients. The Internet provides a cheap solution to gain continual access to clients, thus providing the firm with marketing exposure impossible with any other advertising medium at similar costs.

For civil engineering consultants in pursuit of international markets, an Internet strategy is a vital component of the overarching internationalisation strategy. In many

instances, it is true that without an Internet strategy, a firm is doomed to failure. However, many firms even with some form of Internet capability have a narrow focus of the benefits derived from the Internet. Many firms are looking to the Internet only to gain exposure, and so develop a functional company web page. However, in present times it is clear that the Internet can provide a firm with significant benefits and having an Internet strategy should form a key component of a firm's overall business and communication strategy.

2.12.5.2 Website Content

An Internet strategy is usually centred on the development of a company website that delivers valuable and sometimes critical information about the firm and its operations. It is imperative for the firm to provide information on its site that is consistent with the firm's strengths and core competencies whilst also providing information that is up to date and relevant.

For consultants wishing to breach international markets, website content is probably the most critical aspect of an Internet strategy. Showcasing company-developed products along with information on specific projects, capabilities and key organisational members provides prospective international clients with key decision-making information. The provision of pictures demonstrating the firm's services has also proved to be useful, however, it is argued that descriptions should be deliberately brief and slow loading graphics should be avoided so as not to overwhelm visitors (Mealey, 1999).

Again, with the focus being the international strategy, it is extremely important to display the vision, mission and objectives of the firm on the firm's home page, especially if the firm is geared to acquire international projects. This information gives prospective clients and visitors instant information on the firm's strategic intentions and ambitions.

There are conflicting views on whether to put information on key resources on the Internet. Some firms fear that competitors, who also view website content, will be given opportunities to poach key staff on a plate. On the other hand, proponents of showcasing resources argue that giving prospective clients a more personal approach makes it easier for them to identify with the firm. Also, certain resources who are well known in the industry for specialist work should be showcased to maximise marketing potential. A compromise would be to showcase the key principals of the firm, especially those staff that have international experience. The credentials of such staff should be clear and concise highlighting important international project information.

Once the website is up and running, it is important to keep the information on the site updated regularly. Dated information reflects poorly on a business. Changes should be made when new and significant international projects are completed or when the business focus changes.

It is also important to keep the website fresh and exciting. There is the case of using professionals to undertake this task and to ensure that the site gets hits as often as possible. Research has indicated that most Internet users usually don't go past the first page when looking for information. Investing in technology that ensures that the website will feature on opening pages of various web-browsers is a key success factor for any firm.

One of the key features of a good website is the ability to provide the user with links to other relevant sites. Giving the user valuable information sources can also encourage them to use the firm's website as a point of first entrance or as a reference source.

Overall, it is important to ensure that the website is incorporated effectively into the marketing and communication strategies of the firm. For this to materialise, input derived from a multi-disciplinary team would be invaluable. Input from graphic designers or corporate identity specialists, as well as the firm's own marketing and public relations specialists will contribute to the establishment and maintenance of a

website that reflects the firm's culture and communicates appropriate information effectively ("Communicating", 2002).

2.12.5.3 Project Management and the Internet

Technology and the Internet have revolutionised project management in the civil engineering industry. Decentralised project management is a now a common feature of the global civil engineering industry. This has arisen through the advent of Internet-enabled project management methodologies. With civil engineering projects scattered throughout the world, it is imperative that a suitable methodology is used such that data could be processed through a common base and that access could be provided regardless of where an individual is situated. These features are crucial for the successful management of a project whilst still placing the responsibility of the project on individuals (Blignault, 2001).

As with most international multi-disciplinary projects, data from project start-up to project close-out has to be distributed to several people from several companies and possibly in different countries and in their respective languages. It is evident that an Internet based solution gives the most optimal solution. Essentially an Internet based methodology ties up all the main controls of a project i.e. scope, organisation, quality, cost, time, budget, risk and communication (Blignault, 2001).

2.13 Management of International Projects

The use of project management techniques has become an increasingly well-accepted method for performing a wide range of organisational tasks and is currently utilised across a wide range of disciplines and corporations (Pinto & Kharbanda, 1996). Voegtli (1998) states that an organisation's project management capability is in the hands of its resources: their personal leadership, their ability to work on a team, the skills they possess, the techniques they choose to perform their work and the processes they use together to integrate their efforts. Grundy and Brown (2002) argue further that the strategic perspectives of the firm must be integrated with the project management techniques.

Project management is now an indispensable part of many successful firms and is indeed a critical element of the civil engineering profession. Many engineering consultants are aware that without adequate training and unrealistic expectations, many projects will ultimately fail. Experience is a key factor in project management and many consultants learn more from project failures than project successes. In general, consultants spend far too little time critically evaluating projects and learning from their experiences.

The management of international projects is often much more complex than domestic projects and is thus more susceptible to being derailed at some stage of the project life cycle. Any number of events beyond the control of the project team and the firm can play an important part in its success or failure. Project management itself is a well-documented subject and it is not the intention of this dissertation to investigate or to outline various project management techniques and theories. However, in the international environment there are several important aspects of project management, which the consultant should acknowledge in order to avoid or minimise project failure:

- ***Suitability of project manager***

In the absence of a strong project manager to keep the project team operating within the project confines, most projects begin to experience the vacuum of indecision (Pinto & Kharbanda, 1996). A weak project manager can be counterproductive to the success of a project and in most cases would result in project failure. On international projects, the qualities of the project leader are key to the ultimate prize: the successful completion of a project. In many senses the project manager has to have strong leadership abilities that would facilitate the marshalling of resources, motivation of team personnel, negotiation with stakeholders and leading the project development process. Thomas Teal (1996) argues that one reason for the scarcity of managerial greatness is that in educating and training managers, the focus is often on technical proficiency and little on character.

The use of expatriates on international projects is not always the right choice for the firm. One of the main reasons why expatriates fail is due to the social and physical environments of the foreign country. Different values systems and living habits are a main cause of adaptation problems and the inability to communicate only worsens the problem. The length of an assignment is also another factor in the failure of expatriates. When an expatriate is not happy with their situation, it usually reflects on their job performance. Good use of human resource planning is one of the key factors in the success of an expatriate. The use of special selection criteria for expatriates and extensive training processes enhances the success rate of an expatriate. A successful expatriate should be able to move from country to country and perform effectively wherever they are. Such resources are invaluable assets for a firm wishing to enter new markets.

- ***Recognition and understanding of all stakeholders***

One of the most prominent ways to resign a project to almost certain failure is to manage it without regard for the firm's external environment, including those stakeholders who can play an important role in the project's success or failure (Pinto & Kharbanda, 1996). Many problems arise when firms forget their client base or assume they know more than their stakeholder groups. Many projects have also been sidelined due to opposition from other functional or operating divisions within a firm. It is thus vitally important that the receptivity of the firm's internal environment is considered.

- ***Quality of final product should be the overriding factor***

Many firms lose site of their final product by introducing technologies and products that are unproven and risky. In many instances the rush to push these new designs or technical achievements can often result in disaster. Engineering consultants thrive on quality, which should not be sacrificed in any form or manner to achieve 'first mover advantage' or competitive advantage etc.

Although it has been stated that new technologies should not be pushed at the expense of the success of the project, new ideas should not be shelved indefinitely. This is extremely important if a firm is to keep abreast of constantly changing environments.

- ***Developing fallback options***

It is commonly known that all projects run into trouble during some stage of the project life cycle. One of the best tests of good project management is to identify how quickly the project is brought back on track. The true test of successful project managers lies in their flexibility and capacity to respond to problems once they occur. Development of 'what if' scenarios at an early stage of a project, allows project managers to develop quick solutions to problems in a non-reactive manner. This is very important on international projects where problems can sometimes have severe repercussions.

- ***Fixing the problem not the blame***

Once a problem has arisen, as it surely will on any international project, many firms tend to panic and the "knee jerk" reaction is to see heads roll starting with the project manager. In the absence of irrefutable evidence, however, such actions should be clearly considered before they are acted upon. Removing key personnel in the midst of a project could be more counterproductive particularly so when a project is on a critical path. Pinto and Kharbanda (1996) emphasise that project managers who are constantly in fear of retribution are not capable of taking risks and acting in ways to further the success of a project.

- ***Conducting suitable feasibility studies***

Feasibility planning involves a firm undertaking the necessary pre-project initiation work to put itself in a position to conclude a project successfully. Understanding the project's risk analysis, cost analysis, stakeholder analysis etc., are essential elements

for project success. Much of this type of work is part of the bigger strategy evaluation process, except that it is applied at the project level.

- ***Admitting project failure***

Upper management must be able to make the decision to terminate a project when it recognises the circumstances that it is no longer sensible to continue with a project. This decision may have to be made in face of stiff opposition from the project team etc., but will ultimately serve the long-term interests of the firm. Damage control is and always will be a better option than falsely throwing away good money after bad in the hope of somehow "buying" success. The key factors to success is to recognise that the project is in danger at an early stage and a willingness to acknowledge that errors have been made which now have to be rectified. This in itself may be considered a success, and the experienced gained from such situations will assist the firm to identify and minimise problems in forthcoming projects.

- ***Conducting post-failure reviews***

Mistakes are a natural side effect of many new ventures (Pinto & Kharbanda, 1996). Project failures are often swept under the carpet and are generally attributed to an occurrence of events beyond the control of the firm. As coined by famous philosopher, George Santayana: "Those who cannot remember the past are condemned to repeat it". It is thus useful for a firm to confront its failures rather than forget them. A firm's level of ongoing performance is a function of how well it learns from the successes and failures of its past efforts and works to develop its people over time (Voegtli, 1998).

2.13.1 Project Based Management

In the civil engineering environment, project management has evolved and changed into a new philosophy called project-based management (Blignault, 2001). This concept is about the application of project management principles to individual

projects and specific areas of the firm including the management of people. The new philosophy has emerged through the acceptance that industry forces change perpetually and especially so in the civil engineering industry, hence the need to provide solutions that can cope with changing requirements.

In the case of the management of international projects, it is imperative that the project management methodologies and techniques used can facilitate and guide the project to a successful completion. The use of project-based management on international projects is considered vital for the success of the project and ties in all relevant aspects of the project during the life cycle of a project as illustrated in Figure 2.21 below.

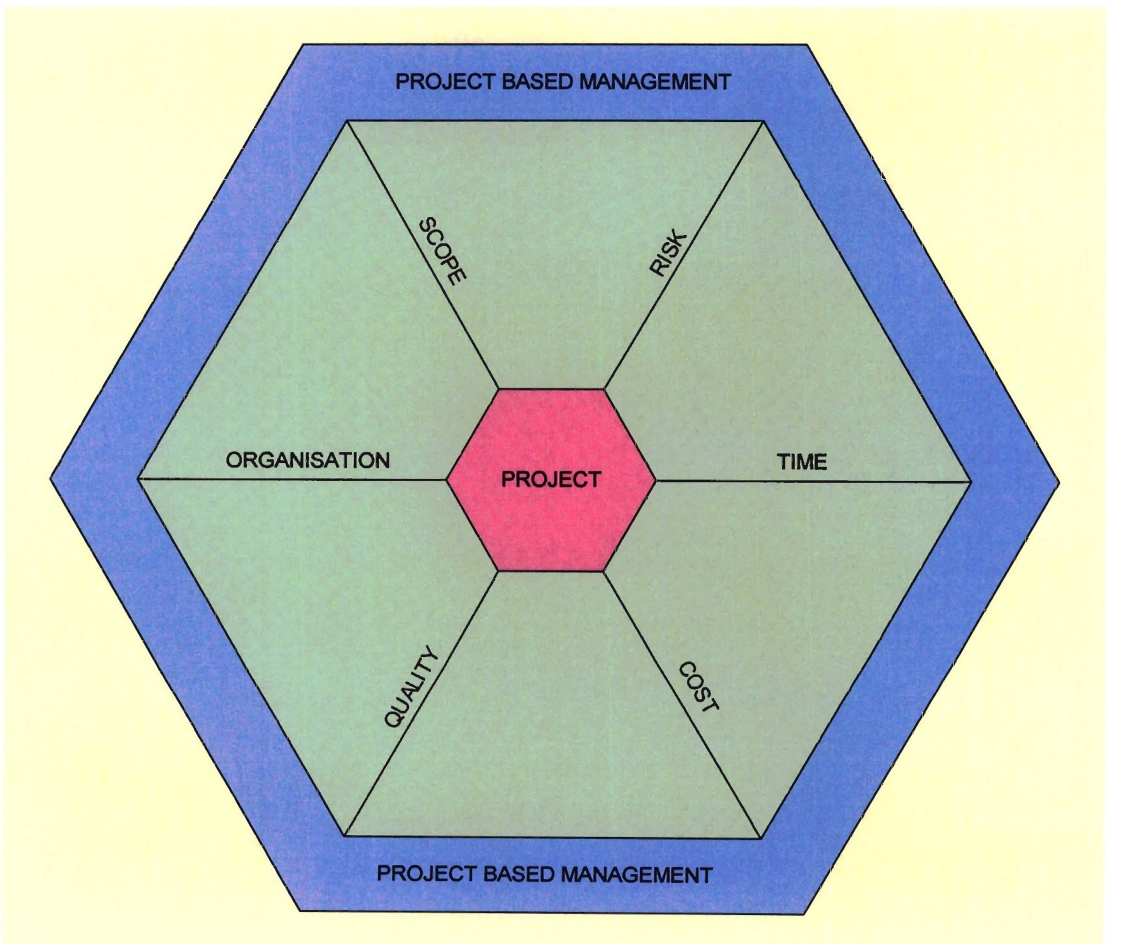

Figure 2.21: Project Based Management
Source: Adapted from Blignault (2001)

2.13.2 Bridging the Culture Gap

Chee and Harris (1998) state that the influence of culture on a firm's operations is difficult to quantify. Mistakes, misunderstandings and misinterpretation of actions have a high probability of occurrence.

A manager has to be extremely careful when applying management theories in foreign cultures. Many of the theoretical developments in management are said to be "ethnocentric" meaning that home country management practices are felt to be superior to corresponding foreign country practices and often does not allow for differing cultural perspectives.

Hofstede developed four dimensions of national culture. First, he describes a culture's predisposition toward individualism versus collectivism. Some people regard individualism very highly, whilst others see it as subordinate to collective efforts. Stemming from this, it is fair to say that a manager from one of these perspectives operating in the culture of the other, risks making some very basic blunders in dealing with people.

Another dimension suggested is the degree of what Hofstede calls "power distance," or how society in a particular culture, deals with the fact that people are unequal. Some let the differences grow, while others address the unfairness of such differences and play them down. A third dimension of national differences is the tolerance of ambiguity, also called uncertainty avoidance. Some cultures are very rigid in their anticipation of the future, and attend to forecasting and planning activities intensely. Others are less concerned about that which they cannot control in the future and live more in the present. Finally, Hofstede suggests that some nationalities pay more attention to the division of roles between the sexes in society. This was named masculinity versus femininity, with societies that were more differentiating between roles of men and women being masculine, others being feminine.

A less obvious, but still interesting phenomenon of international operations is the distance between and among managers. This takes form in two dimensions -

geographic and time. Because of the physical distance between the players in a firm, and the cross-national borders that interfere with the ongoing management of the operations, people from different cultures will necessarily be required to interact and co-ordinate their efforts. Likewise, there is a great distance between managers in the time dimension. One who lives and works in South Africa cannot communicate directly with a counterpart manager in New Zealand unless one of them is willing to conduct a phone conversation in the middle of the night.

Differences in approaches, values and expectations between various stakeholders and team members on international projects with different cultural backgrounds can lead to project failure. An understanding of the impact of cross-cultural differences increases the probability of an international project's success and goes well beyond design and construction.

Laroche (1998) cites poor communication across cultural lines as the most important cause of cross-cultural problems in multinational projects. Laroche (1998) states that miscommunication can have several causes including:

- Differences in body language or gestures
- Different meanings for the same words
- Different assumptions made in the same situation

The early identification of such miscommunication is extremely important, as it limits corrective action that may require considerable effort and money and which may result in a missed deadline or in extreme cases result in casualties.

Standards and measurement systems vary between countries and can often lead to significant difficulties on international projects. It is extremely important that consultants are aware of possible differences and manage them in a diplomatic manner.

Approaches to problem solving differ widely across different cultural backgrounds and issues are more than likely to arise when engineers with different cultural backgrounds and educations work together on an international project. The approaches used by engineers in different countries may also depend on the types of resources available. Approaches in developed countries, where labour costs are generally high, will generally favour the use of automated processes and heavy equipment whilst the use of large numbers of unskilled labour may be preferred in developing countries (Laroche, 1998). In many instances, these situations will also be a function of government policy and funding requirements etc.

When engineering consultants from different countries work together on international projects, cross-cultural issues arise at the organisational level purely because these firms organise their businesses differently (Laroche, 1998). Laroche (1998) cites some of the most noticeable differences as:

- relative hierarchy of departments
- way in which information is shared and distributed
- employment process and criteria

2.14 Bridging the Gap

Many civil engineering consultants find themselves in situations where there is not much scope for growth or expansion in local markets. They are also under pressure to embrace international markets as globalisation marches forward. The logical choice for these consultants is to pursue some sort of international or global strategy. In many instances such strategies are not well planned and whose execution results in failure. In some cases, such failure can result in a complete disaster for the firm to the extent of the seizure of all operations. This dissertation highlights the issues and requirements of an international strategy for a civil engineering consultant.

A gap analysis model as illustrated in Figure 2.22 reflects the situation of the civil engineering consultant operating in domestic markets. "Where are we now?" indicates

the current status of the firm. "Where do we want to get to?" represents the position the firm would like to be at. In this instance it is a sustainable competitive position in foreign markets. "How do we get there?" is the firm's plan to get to the desired position. The model clarifies the scenario faced by the civil engineering consultant pursuing an international strategy.

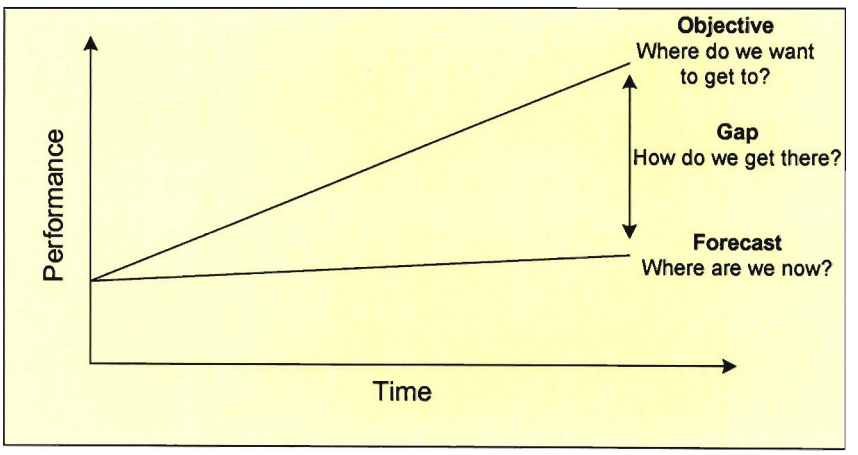

Figure 2.22: Gap Analysis Scenario
Source: Ambrosini (2000)

As illustrated in Figure 2.23 below, there is a range of factors that influence foreign market selection.

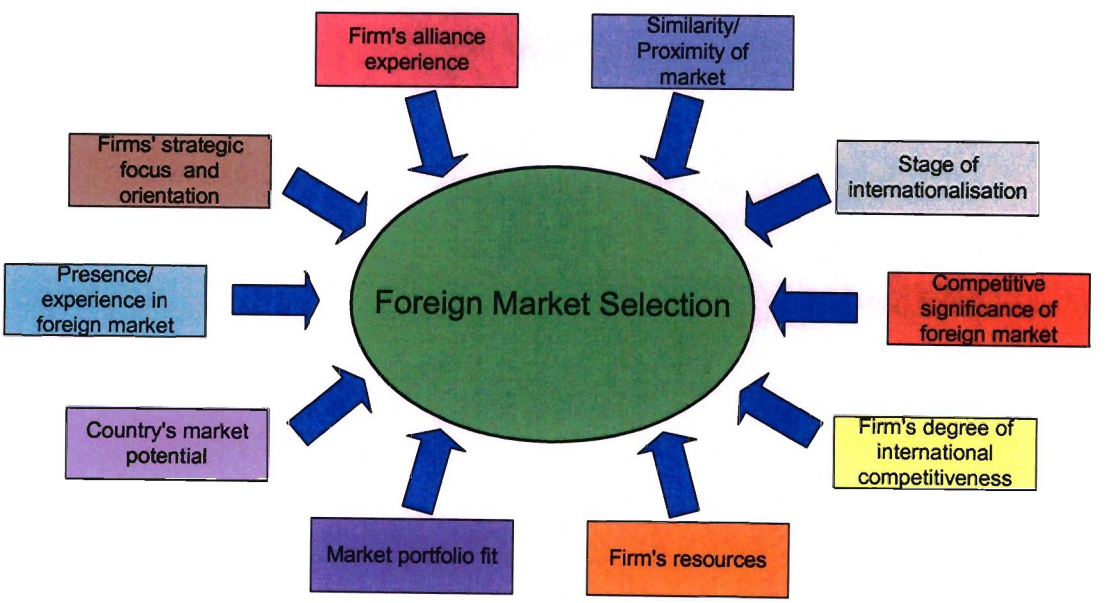

Figure 2.23: Foreign Market Selection
Source: Own

A firm should account for each of the factors, where applicable, in the decision to pursue foreign markets. The following flow diagram should be used as the basis for entry and operation in foreign markets. The model clearly indicates a flow from the point that the firm decides to enter international markets to the point of selection and operation in target markets. This model provides the basic structural framework for the analysis of GMKS in Chapter Four.

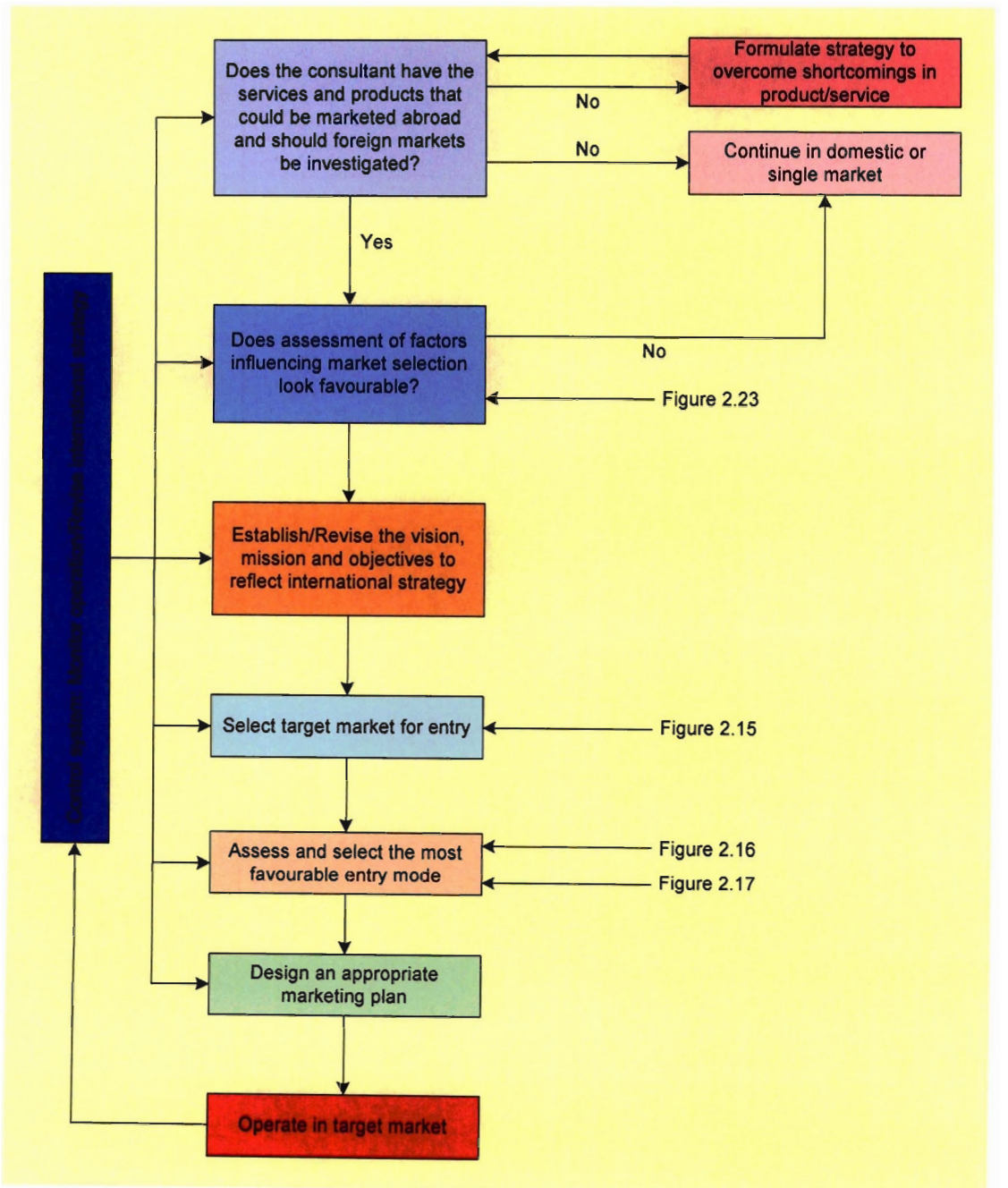

Figure 2.24: International Strategy Model
Source: Own

2.15 Summary

International strategy formulation is a complex process involving the analysis and interpretation of various factors and conditions influencing foreign market entry. The success of the strategy depends to a large extent on how the firm defines itself and its strategic intent.

Besides undertaking a comprehensive environmental and resource analysis, it is necessary to develop a marketing strategy that is consistent with the firm's goals, and the conditions influencing foreign market selection. The strategic position adopted by the firm determines the success or failure in foreign markets; hence it is vital for the firm to understand the complexities of foreign markets and to target those markets that will enhance stakeholder value. An ability to adapt to an ever-changing environment is a prerequisite for success in foreign markets and those firms that achieve the best strategic fit with its resources and the environment, will ultimately be the most successful.

CHAPTER THREE: GOBA MOAHLOLI KEEVE STEYN (PTY) LTD

3.1 Introduction

This chapter presents the details of Goba Moahloli Keeve Steyn (Pty) Ltd, Consulting Engineers and Project Managers. The information provided includes amongst others, the history, strategic focus, core business activities, and the most recent achievements of the firm. A detailed analysis of the information presented, is undertaken in Chapter Four.

3.2 Company background

In an exciting and strategic move in September 2001, after working together in joint ventures and in consortia for over 10 years, two of South Africa's prominent consulting engineering firms, Keeve Steyn (Pty) Ltd (KS) and Goba Moahloli and Associates Inc. (GMA), merged to form Goba Moahloli Keeve Steyn (Pty) Ltd (GMKS). The idea behind the merger was to bring together two strong firms which could reflect the cultural diversity of the new South Africa, whilst continuing to provide clientele with multi-disciplinary services on a national and international scale.

As a newly transformed company, GMKS looks forward to being an integral part of the continued growth and development of South Africa and the African region. With only about 5% of South Africa's more than 15 000 registered consulting engineers being from previously disadvantaged groups, GMKS is on of South Africa's first "truly" empowered engineering consultant firms. The formation of GMKS was endorsed by the South African Association of Consulting Engineers (SAACE) and is today considered as a leading example of a South African consultant engineering firm.

3.3 History

The history of GMKS is outlined below under the two individual companies of KS and GMA.

Keeve Steyn

Dr Keeve Steyn founded Keeve Steyn in Johannesburg in 1952. The initial work undertaken by the firm was on multi-storey building designs, which eventually led to special design assignments. The first major project of the firm was the water supply and effluent treatment plants for Sasol at Sasolburg.

In 1955, the firm undertook its first silo assignment becoming one of the leading firms in the grain handling industry.

In the early 60's the SA economy had started a long-term upswing which provided the firm with a variety of new assignments including amongst others, the Orange/Fish water tunnel (in association with Halcrow of London) and radio transmission towers for the SABC's F.M. and shortwave transmission projects. By this time, the firm had grown substantially with the appointment of new partners within the firm, and was one of the first in SA to offer multi-discipline design services and gradually developed in-house mechanical and electrical departments to handle any materials handling and industrial projects.

By the year 2000, KS had established offices in Johannesburg (Head Office) with branch offices in Durban, Cape Town and Upington. KS was wholly owned by its directors with turnover around R40 million per year as recorded in year 2000.

At this time, the firm had a personnel strength of 12 Directors, 5 Divisional Directors, 24 Associates and some 40 qualified engineers and technologists in various disciplines backed by supporting technical and administrative staff. The majority of these resources was permanent staff and had been with the firm for many years. There was thus a great benefit in this continuity of staff and experience in the ongoing relationship with clients.

KS provided a variety of services including project management, geotechnical, buildings, structural, silo bins, civil infrastructure, roads, rail, tunnels, water mechanical, mining infrastructure, materials handling, water, electrical, process

control, traffic and transportation and security and access control. KS also had considerable experience with collaborative agreements, having a shareholding in several related civil engineering companies and non-equity joint venture partnerships with several other firms.

The management of KS attributed much of the firm's success to the high degree of commitment from all staff members as well as striving to provide service excellence to all clients. The dedication to the quest for excellence had resulted over the last 7 years up to year 2000, in KS being the winner four times of the SAACE Award for Excellence in the multi-disciplinary category as well as winning three of the civil, mechanical and electrical individual category awards. KS had also twice (once in consortium) received the award for the Most Outstanding Civil Engineering Achievement of the Year from SAICE.

Goba Moahloli and Associates

Goba Moahloli and Associates (GMA) was an independent South African consulting engineering firm established in 1993 by Trueman Goba and Ebenezer Moahloli. The two founders, who were among the first black civil engineers to have graduated from local universities in the 1970's, sought to establish an expanded professional consulting service structured to meet the needs of a changed South Africa.

By the late 1990's, GMA had expanded into a national and regional consulting engineering firm, offering a broad palette of professional services to high standards of excellence. The GMA head office was in Braamfontein, Johannesburg, with a branch office in Durban and project offices in Umtata and Cape Town. GMA was wholly owned by its Directors with turnover around R15 million per year as recorded in year 2000.

With a solid reputation built over years of committed delivery, the firm had developed a highly reputable profile among a wide cross-section of clients who had appointed GMA on its merits. Clients included public sector departments at all levels of

government, private sector businesses, parastatals and non-governmental organisations.

Of the 47 staff members employed by the Firm in 2001, 38 were fully qualified engineers and technicians and the remainder provided administrative back-up to the technical personnel. GMA believed in the proactive approach to information technology and continually invested in the training of staff to keep abreast of technological advances. All operations were computerised and the practice utilised a variety of software packages, including proprietary CAD and in-house developed solutions. These packages facilitated the efficient implementation of projects by way of detail designs, production of drawings, compilation of tender documents and provided the project management services needed to complete a project on time and within budget.

To further facilitate a superior service, GMA were in the process of streamlining business operations including the following:

- Introduction of a Quality Assurance system with a view to ISO 9000 accreditation in the year 2001/2002.
- A Novell computer network comprising more than 30 workstations with peripheral devices had been installed at the head office in Braamfontein and was planned to extend to Durban. Intranet and e-mail linkage enabled sharing of resources and facilities with almost instantaneous communication.

Services offered by GMA included feasibility studies, planning and design, project management, contracts/tender administration, project monitoring, construction supervision, evaluations and training.

Up to year 2001, GMA had been retained in hundreds of projects, either as the consulting engineering firm of record or in consortia. These projects included infrastructure development related to urban and rural roads, freeways, rail transport, water resources, community water supply and sanitation, wastewater treatment and conveyance, drainage systems, buildings, bridges and associated services.

3.4 Vision, Mission and Objectives

The firm's mission statement and vision is presented hereunder.

3.4.1 Mission Statement

The GMKS mission statement is as follows:

The full effort of management and staff at Goba Moahloli Keeve Steyn will be directed towards taking the company to the forefront of multi-disciplinary consulting engineering and project management practice in South Africa. Each and every activity of the firm will have, as of its dedicated target, the achievement of excellence.

3.4.2 Vision

The vision of GMKS is to be a leading firm in the consulting engineering environment where people are happy to work, are capable of meeting targets annually, and achieve excellence in multi-disciplinary engineering and management services. Furthermore, GMKS is to be widely known and respected for:

- Excellent client service in terms of quality, cost and programme commitment;
- The impeccable professional ethics and integrity evinced by all members of staff;
- The firm's sincere concern for humanity and the environment;
- An innovative approach to problem solving;
- Pro-active-oriented, participative management style; and
- Promotion of the well-being, aims and aspirations of all members of the GMKS 'family'.

3.5 Company Culture and Core Values

The culture at GMKS hinges around a set of 8 core values as illustrated in Figure 3.1.

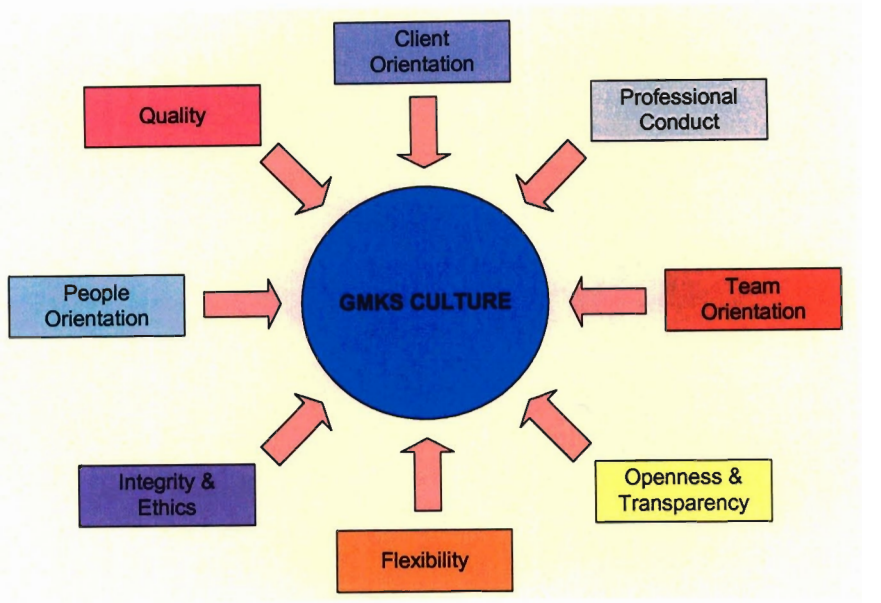

Figure 3.1: GMKS Culture
Source: Adapted from GMKS

- **Client Orientation**

GMKS staff strives to understand client needs and do whatever it takes to satisfy them, with the ultimate goal of exceeding their expectations.

- **Quality Conscious**

GMKS develops and offers quality product and services to clients such that they perceive to receive excellent value for money. The service is characterised by a high response rate to client requests.

- **People Orientation**

GMKS recognises that the key asset of the business is its people. To this end, the firm focuses on skills development and undertakes to manage the diversity of its people and clients. GMKS endeavours to treat stakeholders with empathy and to do whatever is necessary to attract develop and retain the best talent.

- **Integrity & Ethics**

Integrity is about ethical honesty and always keeping the promises the firm makes.

- **Flexibility**

GMKS strives to adopt a flexible approach in how resources are scheduled to enable the firm to respond timeously and adapt to change faster than competitors.

- **Openness and Transparency**

The spirit of openness is encouraged throughout the firm through being transparent in company activities and communicating openly and timeously.

- **Team Orientation**

A team centred approach is encouraged through recognition and reward of team performance. Mentoring is a cornerstone of this approach.

- **Professional Conduct**

GMKS maintains high levels of professional conduct in all dealings with all stakeholders.

Continuous improvement of the quality of engineering services provided by GMKS is also one of the cornerstones of the company culture. The directors and staff of GMKS are committed to making a success of the newly formed firm and have embraced the core values that make up the company culture. GMKS management endeavour to apply a participative approach in managing the firm i.e. the knowledge and experience of employees is tapped to make the most appropriate decisions, enabling support and opportunities.

3.6 GMKS Stakeholders

The firm is 54% empowered at management levels, of which 37.3% of the shares belong to previously disadvantaged individuals (PDI) and 13.4% is held by a GMKS Empowerment Trust, chaired by the Executive Chairman of the firm, Mr Trueman Goba.

The main objective of the Trust is to improve the Black Economic Empowerment (BEE) ratio of the firm, by promoting the interest of employees from previously disadvantaged communities. The Trust renders assistance by way of bursaries and/or loans to students and employees from previously disadvantaged communities.

The firm distributes registered shares among a board of 14 directors, three divisional directors, as well as among a few associates including 5 from previously disadvantaged groups. Total black shareholding has risen from 2% in year 1999 to the current figure of 37.3% in year 2003. There are a number of additional associates who are profit sharers, although they do not have registered shares. GMKS are in the process of increasing its PDI ownership in line with its current positioning strategy.

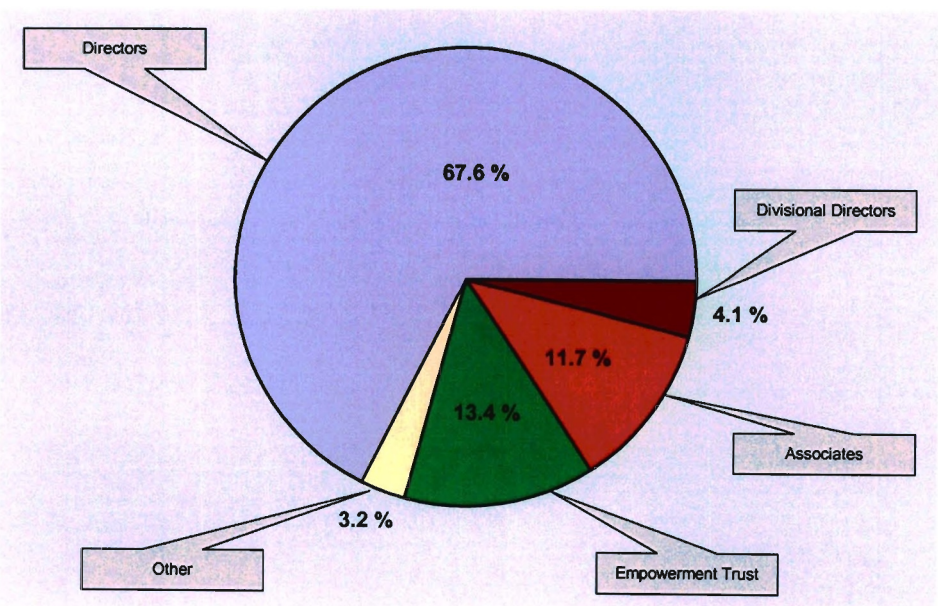

Figure 3.2: GMKS Shareholding
Source: Adapted from GMKS

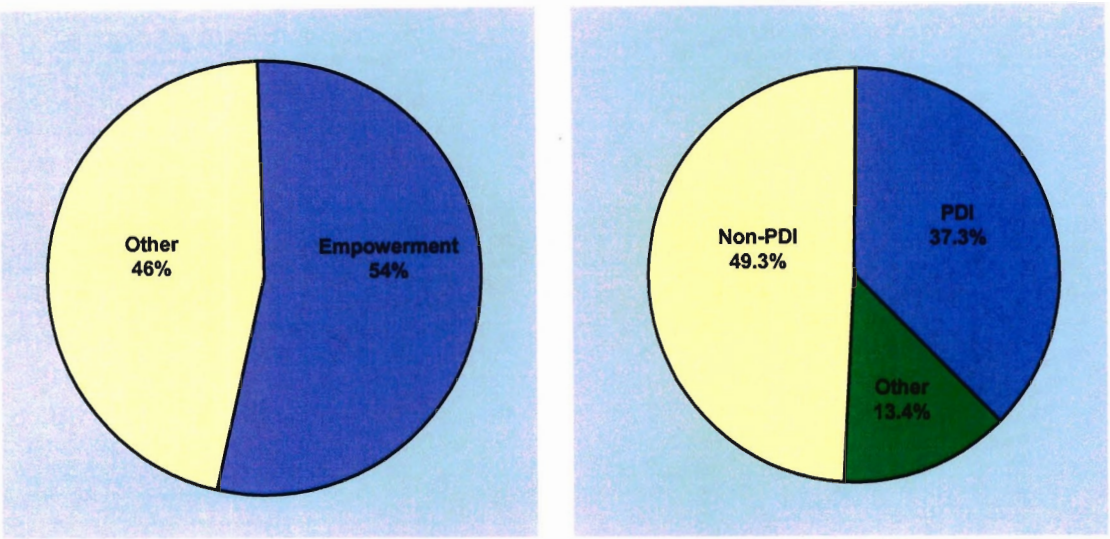

Figure 3.3: GMKS PDI Status and Empowerment
Source: Adapted from GMKS

3.7 Strategic Focus

The strategic focus of GMKS is to enhance shareholder value. This is to be achieved through various strategic goals as set out below.

3.7.1 Human Capital

Human capital is the foremost asset of GMKS. The primary focus in this area is to fast track human capital implementation by putting the company resources into the best positions to realise benefits for GMKS. Ways in which GMKS aims to reach this goal include, competence improvement strategies, optimising performance management and to undertake focused attraction and retention initiatives.

3.7.2 Sustain Profitable Growth

GMKS is well positioned in domestic markets. The firm must take all necessary steps to ensure sustainable growth and increase in market share to enhance shareholder

value. This goal is achievable through internationalisation, proper market segmentation and positioning.

3.7.3 Optimising Business Process Efficiency and Delighting Clients

Clients are the lifeblood of GMKS's activities. The goal is to ensure a single-minded focus on client delight at every possible opportunity presented to the firm. GMKS is in the process of implementing business processes that will ensure world-class efficiency (doing things right) and effectiveness (doing the right things). This goal also involves following through on the merger, cost reduction and technology leverage.

The GMKS quality policy statement and quality objectives followed the strategic decision by the board of directors, to implement an integrated process-based quality management system complying with ISO 9001:2000. The philosophy is to improve the effectiveness of the current quality system to enhance client satisfaction by not only meeting their requirements but to exceed expectations. The Operational Performance System (OPS) complying with ISO 9001:2000, links internal and external processes, delivers planned results, improves continuously and supports the following key performance management elements:

Client focus
Organisational flexibility
Nurturing environment
Service excellence
Unquestionable risk management
Leadership
Target setting and measurement

A quality manual and the process procedures have been documented and GMKS have commenced with the first internal training sessions. The implementation programme made provision for the internal auditing, which commenced at the end of February 2003 and an external audit for certification.

3.7.4 Business Partner Development

The focus here is to establish and manage new business partner relationships that will leverage the joint core competencies in win-win partnerships and will ensure customer delight. The development of a business partner model is the main focus of this strategic goal. Currently, GMKS is associated with the following companies:

Ramboll - Copenhagen

GMKS has worked on several projects with this large Danish firm and is able to draw on specialist resources for international work from Ramboll's 2000 strong workforce.

Sargent & Lundy - Chicago

For projects in the Power and Energy field, GMKS would usually work with Sargent & Lundy who are a very large firm of consulting engineers based in Chicago USA but carrying out projects all over the world.

Consult 4

GMKS is a shareholder partner in this consortium of four large consulting engineering firms. Consult 4 was originally formed out of the Lesotho Highlands Water Scheme and is intended to provide a sufficiently large South African resource base to carry out large off-shore projects. A large pool of expertise is thus drawn from the four partner firms. Consult 4 has carried out hydro electric projects in Burkina Faso and Uganda as well as Maguga Dam in Swaziland, security work for Catoca Mine in Angola, water projects in Nigeria, roads in Mozambique and tunnels & dams for the multi-billion dollar Lesotho Highlands Water Scheme.

Earthplan

GMKS is a shareholder partner in this firm of environmental and ecological experts and use Earthplan for specific projects where Environmental Impact Assessments

(EIA's) are required, as well as nature reserve development and eco-management projects.

Civilab

GMKS has a shareholding in Civilab, a materials laboratory that carries out civil and soil testing.

Keeve Steyn Europe BV & Associates

GMKS is a majority shareholder (80%) in this company registered in The Hague, Netherlands that carries out various projects in Greece, including toll road studies, toll plazas, bridges and infrastructure engineering.

3.8 Strategic Positioning

In terms of the domestic market, GMKS is well positioned against its rivals and is structured to handle various projects across several disciplines. The current trend in the market is the employment of BEE classified companies. GMKS has made the necessary adjustments in its structure to ensure that it is a BEE company, and together with its current array of disciplinary services hopes to capitalise on this trend. GMKS are also enjoying the benefits of membership and association with such organisations' as SAACE, who have adopted a policy to promote engineering consultancies owned by previously disadvantaged people.

GMKS has allocated adequate resources to this effort and ensures that everyone in the firm, particularly the leadership and senior management is fully committed to the strategic position created. GMKS is now in a position where it needs to continuously innovate valuable new service features before competitors.

3.9 Leadership and Management

GMKS is led by a board of directors with Trueman Goba as the elected Executive

Chairman and designated leader of the firm. All directors have specialist expertise in engineering and management and most of them are responsible for the overall running of the various divisions of GMKS.

There are only three layers of management between technical staff and the CEO at GMKS. A participative management style is encouraged throughout the GMKS group where directors and senior management have an open door policy, actively listening to employee concerns, opinions and suggestions. Ultimately, management at GMKS wants employees to be proud of the firm and its work practices. Trueman Goba is responsible for leading this process and his profile is outlined below.

Trueman Goba Profile

Trueman is the eldest of five brothers. His father was a textile worker in Jacobs, Durban, and his mother was a housewife, as befitted a woman of her time. Trueman's parents came from a poor background and constantly met with challenges whilst trying to sustain a family. This environment shaped Trueman's personality and character from a very young age. Trueman's leadership qualities also came through at a very early stage in his career. He was the head prefect in school and was elected Chair of various student bodies. As a young man, Trueman had gained a lot of confidence from his parents and his faith in his academic abilities.

After completing his schooling career, Trueman pursued a career in civil engineering in the mid 70's at the University of Natal. By his own admission, his university career was a struggle against the odds, but he rose above all and graduated in 1980 as one South Africa's first black civil engineers.

After completing his degree, Trueman started work in 1980 at Keeve Steyn's Durban office as an engineer-in-training and achieved professional registration with the Engineering Council of South Africa (ECSA) in a record three years, the shortest possible period allowed by the Professional Registration Act. Trueman attributes this achievement to some of the management of KS, who were keen to see him achieve success. Trueman furthered his academic achievements by obtaining a Masters degree

in engineering (civil) in 1986 from Cornell University in the USA. Trueman subsequently worked in the USA for consulting engineers Whitman Requardt and Associates before returning to South Africa to work for KS in 1988.

By the time Trueman left KS in 1991, he had achieved much success with them to the extent of being made a shareholder in the company. Trueman started his own practice in the early 1990's and undertook mainly project management work. His office was small and the type of work undertaken did not stimulate his abilities and desires. Trueman has a natural ability of working with people and thrives on working within teams. He soon realised that working on his own was not consistent with the ever-changing civil engineering market, hence, decided to look for ways in which he could broaden his firm. In 1993, T.T. Goba and Associates (Gauteng based) merged with Moahloli and Associates (Eastern Cape based) to form Goba Moahloli and Associates Inc. with Trueman as Chief Executive. The immediate vision of the merger was that of an expanded professional consulting service for the needs of a changed South Africa. Trueman together with Ebernezer Moahloli built the company from strength to strength into a full-fledged, nationally represented, wholly black owned civil engineering consultant firm by year 2000. Once again, the success of GMA could be mostly attributed to the visionary leadership of Trueman.

In 2001, GMA approached KS with a proposal to merge assets and form a new firm namely GMKS. At the time, Trueman felt that GMA had grown significantly but there was not much room for growth in the existing company structure and whilst it was nice to hold a niche position, the company was too small in certain respects. Trueman wanted to build on the core competencies that had already been established and to position GMA so that it could handle the requirements of the rapid development in South Africa and take advantage of opportunities outside of South Africa. Consequently, GMKS was registered as a company in 2001 of which Trueman is currently the Executive Chairman.

In 2002, Trueman was elected as SAICE's president elect, the first black man to hold this position. This position was hardly forced, as his peers saw him as an automatic choice. Trueman viewed his achievement of becoming president as reflecting the

positive change that has been made in South Africa and which was to hopefully assist to inspire more entries of black engineers into the civil engineering profession.

As the executive chair of GMKS, Trueman is the type of leader who embraces challenges and is seen by many as a visionary in his field. At GMKS, Trueman is also well known for being a very accommodating leader and has always embarked on ensuring that people are heard. Trueman has a high degree of self-esteem that is reflected by his inner calmness in stressful times. The challenges that he has faced up to now have made him the man that he is today and one of the foremost and respected engineers in the engineering industry.

In 2003, Trueman leads GMKS into the future full steam ahead. He has extreme faith in the ability of the resources at GMKS and believes that the firm has an exciting and challenging path ahead of it.

3.10 Organisational Structure

The organisational structure of GMKS is presented hereunder. Information is provided on the firm's human resources, empowerment policy, and organisational framework.

3.10.1 Human Resources

Currently the group (excluding associated companies and contract staff) has a personnel strength of 14 Directors, 3 Divisional Directors, 37 Associates and some 165 engineers, technicians, draughting and administrative support staff. By far, the majority of personnel are permanent staff and have been with the firm for many years. There is thus a great benefit in this continuity of staff and experience in the ongoing relationship with clients.

Of the current staff complement of 192, 80% of employees are engaged in the provision of professional technical services through the functions of design, project management or construction supervision. Of the remaining 20%, 4% are professionals

in the areas of administration and finance, 9% are clerical and 7% are unskilled. Of the 80% of GMKS staff engaged in the professional services, 70% are based in the head office or a branch office, whilst the remainder are considered "site" personnel, i.e. employees who are committed to supervising construction projects wherever they occur. As a result, site engineers and technicians are frequently shifted around the country and sometimes to neighbouring countries in order to perform their duties in the field.

3.10.2 Empowerment Policy

GMKS is a Black Empowered Company as defined in the SA Government's Empowerment Strategy Document, i.e. GMKS has in excess of 25% Black ownership. GMKS consistently implements procedures to empower the previously disadvantaged in South Africa. Bursaries for university, technikon and technical college studies are awarded annually to previously disadvantaged individuals. Practical in-house and post-qualification training is also given to empower black staff through all levels of the firm, where there is an invaluable exposure to exciting and stimulating multi-million rand projects. GMKS has successfully executed a number of projects in joint ventures with other emerging consultants from the historically disadvantaged sector resulting in the transfer of engineering expertise between colleagues in the industry. Following the merger, GMKS is pro-actively proceeding to increase BEE at all levels in the company.

An extremely important aspect of GMKS employment requirements are that some 80% of staff must have a tertiary education in engineering, either from university, technical college or technikon. This tertiary education involves mathematics and science subjects which are in crisis stage at many South African schools, and particularly in black schools. The major problem (and challenge) faced by the firm is that the pool of potential employment equity candidates for 80% of staff requirements is only 5% of the total available technically qualified pool in the country.

Bearing the above in mind, the GMKS approach to employment equity is to maintain commitment to a primary goal of performing profitably, which is the cornerstone to

the firm's survival as a provider of jobs. This commitment, harmonised with an adherence to the principles, objectives and recommendations of employment equity will be the basis of providing quality, sustainable empowerment of people from designated groups, whilst upholding the competency of the South African economy at large.

3.10.3 Organisational Framework

GMKS carries out its operations through designated divisions, with each division being headed up by a Director as follows:

Executive Chairman	- Trueman Goba
Deputy Executive Chairman	- Llewellyn Pike
Special Projects	- Ian Pinnock
Civil, Building & Structural	- John Cowden
Water & Sanitation	- Paul Le Roux
Kwazulu-Natal	- Peter Viljoen
Industrial	- Leon Laubscher
Roads	- Llewellyn Pike
Traffic & Transportation Planning	- Bill Kennedy
International	- Andy Griffiths

Within the broadly grouped divisions are the engineers and technicians who provide specialist expertise in the particular discipline involved. For multi-disciplinary projects this expertise is drawn from the other divisions as required. Where it is beneficial to the project, outside specialist consultants are included in the project team, and the project manager would then apply project management in a matrix fashion across all the disciplines involved. See Figure 3.4 for company organogram.

3.11 Nature of Business and Core Competencies

The sole driver of the core business, consulting engineering, is the securing of projects either by appointment or through a competitive tender process. The workload

of the firm is a function of the number of projects secured, and it is not always predictable when next, clients will be awarding projects. Due to this indeterminacy, profit margins depend on striking a fine balance between maximising project input, whilst keeping overhead costs to a minimum, which means carrying no more than the "critical mass" of staff. In order to prevent over-staffing, job functions that are needed only occasionally or ad hoc are performed via a temporary contract employee, rather than through permanent appointments.

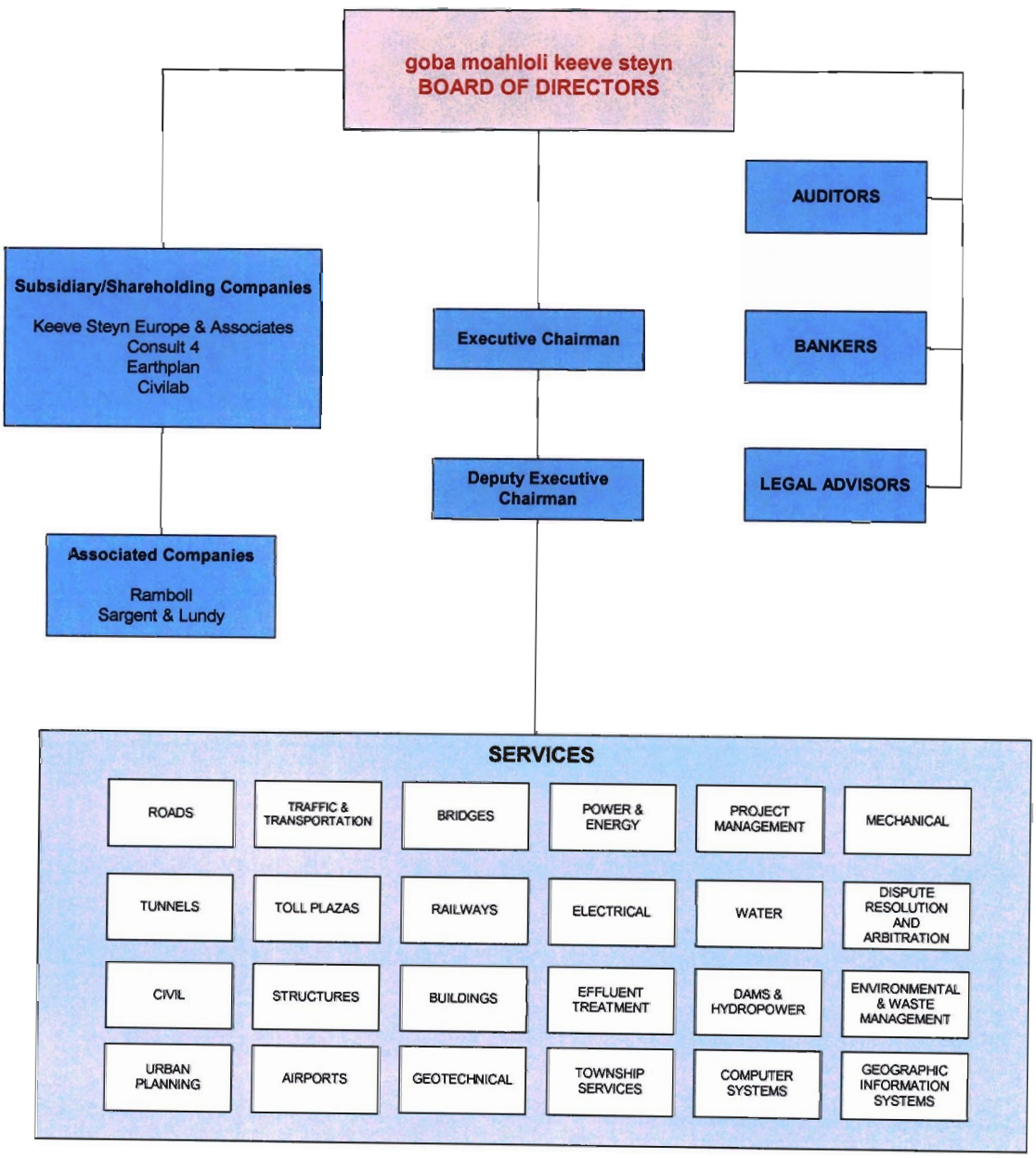

Figure 3.4: GMKS Organogram
Source: GMKS

A consulting engineering environment, such as that of GMKS, must be contrasted against large-scale industrial or manufacturing establishments, where large numbers of staff are needed to accommodate multiple shifts or to provide replacements on assembly lines that cannot be interrupted. Instead, the nature of GMKS technical services is not labour-intensive: the success of each project depends on continuity gained from one person carrying a project to its completion, and, in periods of temporary absence, the project manages to thrive without any replacement staff member being required.

GMKS offers the following variety of professional services:

Project Management	Including all aspects of time scheduling, cost control, project administration and quality control. In-house systems have been developed and refined, and these are tailored to suit each particular client's requirements.
Feasibility Studies	Studies and investigations into the feasibility and financial and economic viability of large and small-scale projects.
Quantity Surveying	Including budget estimation, procurement of tenders, inquiries and contracts, measurement of quantities, payment certification and the handling of all contractual issues.
Geotechnical	Including soil testing and foundation assessments.
Roads	The GMKS Roads Division undertakes all types of road and bridge design whether it is for freeways, toll roads, rural roads or urban streets. This division has specialist expertise on all the engineering aspects of toll roads.

Traffic & Transportation	This division is a specialist unit with many years of experience in all aspects of traffic and transportation engineering. In addition to being involved in traditional traffic and transportation work it has vast experience in toll road development and in assessing the traffic and financial requirements of BOT projects.
Buildings	Floor layouts, plans, sections, elevations, lighting, electrics, plumbing, heating, air-conditioning and ventilation for hostels, married quarters, villages, administration offices, mine complexes, etc. for commercial buildings & toll plazas. Where specialist aesthetics are involved, an outside architect is normally brought in to the team, as well as a landscape architect.
Civil & Structural	All aspects of design in reinforced concrete or structural steel, including foundations, low and high rise buildings, mining and industrial structures, offices and warehouses including associated access roads, parking areas drainage and services.
Silos/Material Storage and Handling	For many years GMKS has specialised in the design of silo bins, hoppers, bunkers, conveyors and elevators, catering for the storage and handling of various products such as ore, coal, clinker and grain.
Civil Infrastructure	This includes the expertise required for new roads, rehabilitation of existing roads, bridges, dams, rail lines (private siding and main line), stormwater, paving, slurry and water supply pipelines.

Tunnels	This includes all aspects of drill and blast tunnelling as well as using TBM's (tunnel boring machines) for lined and unlined tunnels. Exploratory investigation work recently carried out by GMKS has proved the viability of using TBM's in a mining application for connecting shafts.
Rail	GMKS has completed several mainline projects including the 780 km Sishen- Saldanha line, the 350 km Beitbridge to Bulawayo rail line, as well as having carried out hundreds of private siding projects.
Airports	GMKS has carried out a site investigation for the feasibility of property development for the non-scheduled East area of the Johannesburg International Airport. They have also been involved in the pavement and geometric design for the rehabilitation of the pavements for runways and taxiways.
Water	All aspects of water supply, treatment and reticulation for potable, process and fire water, as well as stormwater, sewerage, contaminated water and mine effluent treatment via various processes.
Mechanical	Including the design of mechanical equipment for mining and industrial projects, such as pumps, boilers, conveyors, piping, pneumatics, hoists and compressors, etc., as well as the interface management with the main process machinery supplier (floor loadings, openings, electrical and control and instrumentation).

Mining Infrastructure	GMKS has carried out the design and implementation of mining infrastructure such as shafts, vent shafts, structures, offices, villages, hostels and married quarters.
Primary/Secondary Crushers	Including the civil, mechanical and electrical design of foundations, structures & equipment.
Materials Handling	Including all aspects of belt, pneumatic, screw and chain conveyors, stockpiles, stockyards, stacker reclaimers, surge bins, mass meters, warehousing, packing, palletising and stretch wrapping. Overland conveyor projects of up to 23 km conveyor distance have been carried out, and GMKS has recently completed the 2200 tph run of mine crushing and screening plant.
Electrical	HV/LV supply, transformers, switchgear and reticulation, MCC's, JB's, cabling and distribution boards. Lighting (internal and area) and all elements of small power supply and reticulation to mines, villages, buildings and process plants.
Process Control	All aspects of control and instrumentation, developing the specialist process supplier's mechanical flow diagrams into P&ID's, instrumentation schedules, I/O listing, PLC design, rack layouts, supervisory and MIS systems. For most of the GMKS process control projects outside software developers are brought into the team.
Industrial Engineering	Apart from the Mechanical expertise above, GMKS employs an Industrial Engineer, who can provide input and expertise to production logistics and risk management.

Security & Access Control	GMKS has carried out numerous projects for mining houses, involving security systems, perimeter and interior intruder detection, card reader access control, as well as time and attendance systems.

3.12 Domestic Market Analysis

In 2001, SAACE reported that national, provincial and local government departments and parastatals accounted for about 50% of work undertaken by member firms, which was down from approximately 70% in the previous five years. As privatisation gathers momentum, this trend continues in 2003, with a decline of the quantity of work gained from the public sector.

GMKS generally contributes services through four avenues including tenders/bids, panel selection, invitation to submit proposals and joint ventures. The consultant engineering market is inundated with smaller tenders, which is an extremely competitive segment highly focussed on empowerment, but also leads to increased competition amongst the medium sized and larger consultants as the more lucrative larger projects become scarce. Invitations to submit proposals are generally the most profitable of all four service-type contributions.

Presently, GMKS has the majority of its larger projects in joint ventures and derives most income from public sector clients. Geographically speaking, Gauteng is the primary market with the bulk of GMKS services provided in Gauteng, followed by Kwazulu-Natal, Western Cape and other areas respectively.

The competitive rivalry amongst consultants in the domestic market is considered to be high. Many of GMKS rivals are now aligning or have already aligned themselves as BEE companies in the hope of achieving sustainable profitable growth in South Africa. Amongst GMKS main competitors who have already positioned themselves along these lines are Stewart Scott, Bigen Africa, BKS and a host of others.

Growth in the civil engineering industry is expected to grow by 5.3% in real terms during 2003, but could experience a marginal decline towards the end of the first quarter of 2004 (Richardson, 2003). According to South African Federation of Civil Engineering Contractors (SAFCEC), this projection is quite conservative, should the delivery of a few large projects such as Gautrain and King Shaka International Airport as well as increased spending by provincial governments on infrastructure take place.

Richardson (2003) also reports that cross border activity measured in the region of 20% of domestically generated turnover. Activity was focused in Mozambique, Botswana and Swaziland with the main focus being on roads, railways, harbours, airports and industrial related work. Confidence regarding the SADC region is around 80, which is very positive for those firms focusing on these areas.

3.13 Major Projects and Clients

Since the formation of GMKS, various projects have been awarded to the firm. Some of the major projects are outlined below to give an indication of where the bulk of GMKS services are being provided and who the major clients are. Some of these projects have also helped GMKS management to base the firm on a strong technical and financial footing.

Berg Water Project

In December 2002, GMKS in joint venture secured the appointment for the tender, design, detailed design and construction supervision of the Berg Water Project in the Western Cape. The client is the Trans Caledon Tunnel Authority (TCTA).

The joint venture, Berg River Consultants, comprises GMKS, Knight Piesold and Ninham Shand, and as major South African partners of Lesotho Highlands Consultants carried out the design and supervision of the 185 m high Katse Dam in Lesotho.

The Berg Water Project will augment the yield of the Western Cape water system by 81 million m^3 to 523 million m^3 per year by 2007 and will be integrated with the Riviersonderend - Berg River Government Water Scheme. The Berg Water Project consists of:

- A dam on the farm Skuifraam in the upper reaches of the Berg River near Franschhoek, approximately 70 m high, creating a reservoir with a gross storage capacity of 126.4 million m^3.
- A pump station with a 2 m^3/s capacity, downstream of the dam and a 3.5 km pipeline to deliver water to the existing Dasbos Adit of the Riviersonderend-Berg River Tunnel.
- Abstraction works on the Berg River, located downstream below the confluence with the Dwars River, with a pump station of 4 m^3/s capacity and a 9 km pipeline to deliver water to the dam.

The dam will be a concrete face rockfill dam (CFRD) - the first of its type in South Africa. The construction cost of the Berg Water Project is estimated to be R1.4 billion at 2002 prices.

Bakwena Platinum Highway

The R3.3 billion Bakwena Platinum Highway, is a four-year project and the largest road contract ever awarded in Southern Africa. The Bakwena Platinum Highway will link the Limpopo (formerly Northern Province) and North West provinces in South Africa with the Maputo Corridor and will join South Africa to Botswana in the West and Mozambique in the East.

Internationally, the Bakwena Platinum Corridor will form part of the East/West national road linking Maputo in the East via the N4 through the project to the Trans-Kalahari Road through Windhoek to Walvis Bay in the West. Locally, the Corridor will open up opportunities for tourism, agriculture, industry, mining (the Rustenburg

platinum deposits are the richest in the world and lent their name to the 'Platinum' Toll Highway) and export.

The project drew much of its strength from private/public partnerships (PPP's). For instance, the South African National Roads Agency Limited entered into a 30-year contract with the Bakwena Platinum Corridor concessionaire [members: Dragados, Cofides (from Spain), The Infrastructure Fund, Murray and Roberts, WBHO, Concor, GMKS, Stewart Scott, Real Africa Holdings, and the Royal Bafokeng Nation].

The 380 km Platinum Toll Highway Project comprises 95 km of the N1 from Pretoria to Bela Bela (formerly Warmbaths) to the North and 290 km of the N4 from Pretoria via Rustenburg and Zeerust in a Westerly direction to Skilpadnek on the Botswana border. The contract comprises 90 km of new construction and 290 km of rehabilitation and upgrading of existing road. The 30-year concession contract value is R2.7 billion, of which the value of the initial construction works contract is R1.7 billion (March 2000 prices). The four-year construction contract commenced on August 28, 2001, and the contractual completion date is accordingly August 28, 2005.

Six main plazas and nine ramp plazas will be constructed with a total of 96 toll lanes. All the toll plazas are operated and monitored from the control centre in Pretoria. Also, the highway will be the first in South Africa to benefit from the implementation of electronic tolling via use of e-tag, a technology new to South Africa but used elsewhere.

A socio-economic development programme forms part of the concessionaire's contract. Local communities have been involved in the project and it has led to the establishment of a number of medium, small and micro enterprises.

An environmental impact assessment (EIA) was done and approved by the departments of Agriculture, Environmental Affairs and Tourism, Water Affairs and Forestry and Minerals and Energy.

Eastern Cape Mountain Pass

GMKS, in joint venture with Manong & Associates were appointed in August 2002 by the Eastern Cape Department of Roads and Public Works for the upgrading of an existing gravel road from Mount Frere, in the Eastern Cape, to the R56. This road, the T15, starts at an intersection on the N2 in Mount Frere and continues along undulating terrain and then enters the high mountainous terrain of the Eastern Cape midlands area.

GMKS had a twofold appointment, namely to undertake a route alignment study of the full 90 km section from Mount Frere to the R56 intersection followed by the detailed design of the first 30 km of the road as a fast track project to ensure that the contract went out to tender in early January 2003 and that a contractor commenced work at the end of April 2003.

The GMKS project team immediately got stuck into this challenging task, particularly problematic over the five-kilometre Buffalo Nek Pass, which winds its way over a high terrain area with many unstable slopes and poor geometric alignment. Despite these challenges in difficult terrain, the team achieved a 100 km/h design speed over this 30 km section. An interesting feature of this project is the paucity of good quality road construction materials as much of the area comprises mud stones and dolerites, and this led to the team proposing the establishment of a hard rock quarry and crusher to produce base course and concrete/road surfacing aggregates. Also, given the unstable nature of the higher altitude areas, this has led to the need for extensive and innovative slope stability measures to be introduced.

The expected construction period is three years, commenced in May 2003. The estimated cost of the project is R200 million.

3.14 International Operations

GMKS has offices registered in The Hague, Netherlands under the name of Keeve Steyn Europe and Associates BV. The office was registered in 1999 in order to

qualify for EU financed projects undertaken in Europe and more especially in Greece. To date, the company has managed to successfully secure two projects in Greece.

GMKS are also actively involved in various projects in Africa, which primarily involves the exporting of services to various destinations. GMKS has not formulated an international strategy, and much of the work undertaken in foreign markets is primarily a result of taking advantages of opportunities that have arisen from time to time.

3.14.1 International Projects

The bulk of GMKS offshore projects are through the export of services, which involves managing them from South Africa. Some of the major projects are outlined below to give an indication of where the bulk of GMKS services are being provided to international clients. Some of these projects have also helped GMKS management to base the firm on a strong technical and financial footing.

Maguga Dam

Started in 1998, the Maguga Dam project was completed in 2002, at a final cost of R520 million. The dam is located on the Komati River about 12 km south of Piggs Peak in Swaziland, and supplies water for irrigation to farmers downstream of the dam in Swaziland and across the border into South Africa. The Komati Basin Water Authority (KOBWA) is the client for this major project.

The Maguga Dam main embankment, comprising a clay cure rockfill, is about 115 m in height from the lowest foundation level to its crest, and contains 800 000 m^3 of clay, 2 800 000 m^3 of rock and 43 000 m^3 of crushed rock filter material. Two large 8 m x 9 m and 8 m x 7 m tunnels were constructed for the temporary diversion of the Komati River, which also provides permanent outlet facilities.

Maguga Dam now boasts an impressive 200 m wide x 300 m long concrete chute spillway, with a labyrinth crest providing a discharge capacity of 15000 m^3/s. This

relatively high discharge is required to accommodate the high floods possible in an area influenced by cyclones.

GMKS as part of the Consult 4 team, has played a big part in this prestigious dam project, including being responsible for the design of the dam embankment and spillway, the outlet works, mechanical/electrical works and tunnels, as well as being part of the site supervision team throughout the construction phase.

GMKS in consortium with Maguga Dam Joint Venture recently received the SAICE 2001 national award for the most outstanding civil engineering project outside the borders of South Africa for the Maguga Dam. The Joint Venture was also the recipients of SAACE's 2001 award for excellence, and *Construction World* named this project the "Project of the Year".

Following this success, the Maguga Dam Joint Venture, which include GMKS, have been appointed for the design and construction supervision of the Maguga downstream regulating weir and hydropower civil works. The client is once again KOBWA.

Tonota to Francistown

GMKS Botswana and Pula Consultants in joint venture were appointed for the rehabilitation and upgrading of road A1: Tonota to Francistown after keen tendering during the first half of 2001. The road commences 30 km south of Francistown in Botswana and ends at the BMC Circle in Francistown. The project started in November 2001 with substantial input from the GMKS traffic and transportation division, which included a series of 12-hour traffic counts, economic analyses using HDM 4 and a life cycle capacity analysis using HCM. The findings of the traffic study were presented to the client in Gaborone.

The main challenges of the project were to justify the requirement of a dual carriageway road, prove structural soundness of existing bridges with no as-built details available, provide suitable and economically viable structural arrangements for

bridge structures, and to finalise the pavement designs. The alignment of the highway had to minimise the impact on the critical services adjacent to the road such as the main water line to Francistown, and an optical communications cable between Gaborone and Francistown. The design stage of the project should be completed before the end of 2003, and construction to the value of approximately R230 million is expected to commence during the first half of 2004.

3.15 GMKS Today

At the end of 2002, GMKS were nominated as one of South Africa's top black empowerment performers in its economic sector. As a result, GMKS has been included in the 2003 issue of "South Africa's Top 300 Black Empowerment Companies National Edition".

This prestigious nomination followed extensive research of over 5000 of South Africa's leading companies - both listed and unlisted, municipalities, government departments, institutions and agencies and other organisations in 150 sectors of the South African economy. Ratings to qualify for entry into the listing were researched by a team of experts, who, following consultation with industry leaders and educational institutions, proposed the nominations list. The criteria for inclusion in the list included key performance indicators such as annual turnover, growth, quality of products or services as well as achievements within the relevant field. GMKS are proud to be associated with South Africa's leading black empowerment firms, and continues to strive to be the best it can be, with the intention of retaining membership in this exclusive club. This achievement is attributable to all staff, technical and support, who have contributed to the success and growth of GMKS since its formation.

CHAPTER FOUR: COMPANY ANALYSIS

4.1 Introduction

In order to assess the future international strategy of GMKS, a holistic analysis must be undertaken of both the external and internal environment. The analysis begins with the evaluation of the products and services offered by GMKS followed by the decision to enter foreign markets. A comprehensive environmental and resource analysis then follows, outlining all factors that influence GMKS's international strategy formulation. Target markets are identified and assessed. The chapter is concluded with an analysis of the GMKS marketing strategy. The findings of this chapter are used as the basis for the conclusions and recommendations outlined in Chapter Five.

4.2 Analysis of GMKS Products and Services

GMKS provides cost effective engineering solutions, to meet client's needs and expectations, within agreed time, cost, and quality requirements. The firm differentiates itself from other consultants by offering multi-disciplinary services. Not many South African firms enjoy this ability hence GMKS is well positioned as a firm providing "complete" solutions to clients. Like many international firms, this ability gives GMKS a competitive edge over many of the smaller, and some of the larger, engineering consultant firms operating in domestic markets.

The international arena is far more competitive in that many international consultants deliver a wide range of services which are not that easily differentiated from firm to firm. i.e. most consultants can undertake a huge 'roads' project quite easily. Hence, the ability to provide international clients with additional benefits that would set GMKS apart from rival firms is of paramount importance. At this time, GMKS does not offer many highly differentiated services the exception being in certain areas where specialist expertise is available such as dams, tunnelling and hydropower projects. However, GMKS does use the latest technologies available especially, in areas such

as road and infrastructure design, traffic and transportation analysis and Geographical Information Systems (GIS).

GMKS has also developed various in-house solutions in the water and sanitation division. These software applications can be exported to any foreign market and is suitable for both developed and developing countries. In addition, the firm has also developed a range of GIS based applications that are used primarily for strategic planning purposes. These applications are particularly relevant to emerging foreign markets that are predominantly in a growth and development phase.

In terms of the international marketability of its current array of services, GMKS products and services easily meet with international standards and norms across the globe. In some instances, the professional services offered are considered to be well beyond the expectations of international clients. The areas where this is particularly evident, is in the use of technology led expertise as well as the use of tried and trusted and universally accepted technical practices.

GMKS leads high level planning with several clients providing solutions or proposals to suit their requirements. The firm is also widely acknowledged by the industry as being experts in several fields of engineering including road design and rehabilitation, dams, tunnelling and hydropower schemes. In addition, the firm actively contributes to technological standards and advances in specific fields of expertise within South Africa.

All of the attributes highlighted above have already differentiated GMKS from other consultants in South Africa and many of the services are readily exportable to international or foreign markets.

4.3 Decision to Investigate Foreign Markets

It is evident that GMKS offers a range of professional services that are utilised or required throughout the world, and also some services that have specialist applications, which are used more widely in specific locations. Based on the

professional services alone, it is obvious that GMKS should pursue international or foreign markets. Indeed, GMKS has already made the decision to investigate foreign markets, but have not formulated a definitive international strategy.

Prior to 1994, GMKS had little foreign opportunities as South Africa was isolated from the rest of the world and it was virtually impossible to enter foreign markets. The Lesotho Highlands project in the 1980's was the activation point for the pursuit of foreign markets, and through Consult 4, GMKS has since pursued several foreign markets.

Although Consult 4 has had some success, it does not have the best interests of all member firms at all times. This becomes apparent when Consult 4 attempts to pursue too many different types of projects that do not benefit some of the individual member firms. This situation had already arisen in the late 90' when Consult 4 attempted to obtain projects all over the world. The lack of focus eventually resulted in the movement away from the core competencies of the member firms.

Although GMKS continues to be a member of Consult 4, it actively pursues foreign market opportunities in Africa as an independent firm, as do all the other member firms. The scenario of operating Consult 4 and GMKS as separate entities is not considered ideal and cost effective, although it does have the benefit of allowing GMKS to pursue certain avenues that are considered to have higher potential for utilisation of GMKS core competencies. Coupled with the Consult 4 "strategy", GMKS actively seeks to pursue markets in Africa through synergies with host country contacts. Many of the contacts are developed through previous working relationships or personal contacts.

The competitive significance of foreign markets is considered to be extremely important to GMKS. Although GMKS sees the pursuit of foreign markets as secondary to that of a strong domestic strategy, the leadership and management maintain that entry into foreign markets is a huge part of the future of the firm.

GMKS is in the growth phase of internationalisation and the degree of international competitiveness is considered to be moderate overall. The international experience/presence of the firm is considered to be reasonable. The firm has by no means established a prominent international presence but continues to work on various international projects in Africa.

The extent of GMKS's alliance experience is considered to be good. GMKS has worked with several international firms on projects such as the Lesotho Highlands and the Bakwena Platinum Highway. The experience gained from these alliances has been extremely useful to GMKS, and undoubtedly gives the firm a solid footing for future collaboration efforts.

4.4 Environmental Analysis

An environmental analysis is presented below, where firstly the general environment is analysed through a PEST framework. This is followed by an industry analysis using Porter's Five Forces model. The analysis is concluded with a competitor analysis.

4.4.1 PEST Analysis

GMKS currently conducts business operations in several neighbouring African countries and is one the most high profile multi-disciplinary engineering consultants in SA. The diverse cultural, social, political, and economic circumstances of the various countries where GMKS has existing or future business raises issues that could subject the corporate reputation of the company and therefore, the business success, to potential harm. The GMKS international strategy has to be dynamic and fluid in order to cater for the changes in the global environment in which it operates. This environmental analysis undertakes to highlight those issues that relate to assessing potential risks and business opportunities and to provide valuable information for formulating an effective international strategy for GMKS. The analysis is structured to provide information on the four interlinked drivers of the PEST framework. These are discussed in the context of both developing markets and those that are already well established.

4.4.1.1 *Political*

The key regions of the world as depicted in Figure 4.1 are evolving in different ways, and the interrelations between them are becoming more pronounced.

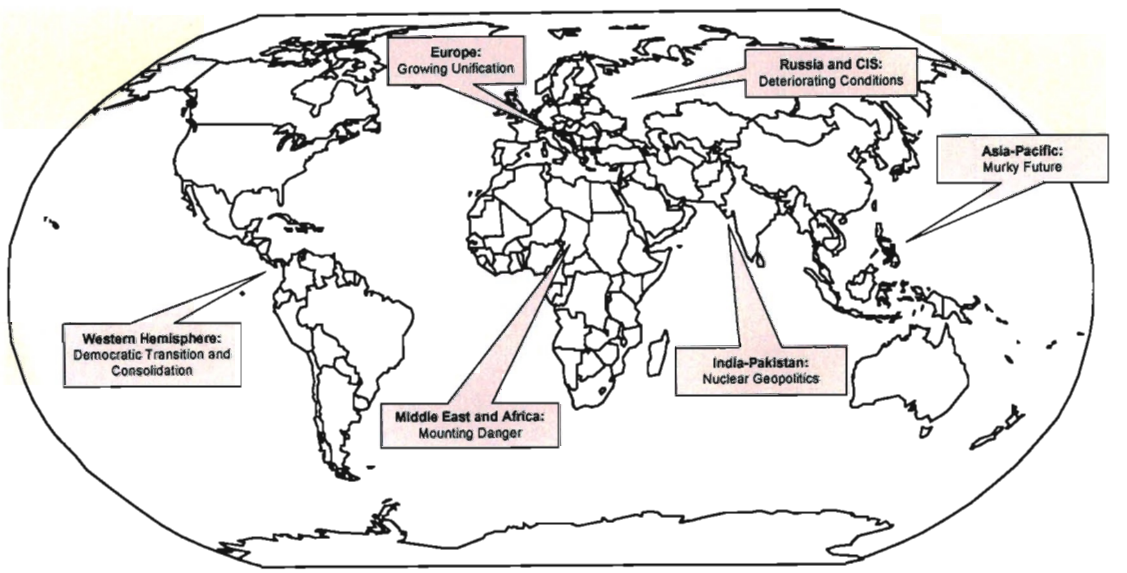

Figure 4.1: Global Political Trends
Source: Own

Europe is headed toward stability and unity. NATO and the EU are enlarging eastward, while Russia struggles to influence the process in ways reflecting its interests. In Eurasia, the struggle to build democracy and market economies continues toward an unclear destination.

In Asia, there exists the near-term threat of war on the Korean peninsula. Elsewhere, Asia's strength is growing, even though its economic prospects are cloudy. Democracy has a firmer foothold in Asia owing to changes in such key countries as South Korea and Taiwan. In the future, China's evolution is considered to be key as its power grows even as it clings to authoritarian rule. If China becomes a co-operative partner of the West, Asia's future will likely be stable. If it emerges as an intimidating country with assertive geopolitical aims, growing instability could be the result. China and Japan could become rivals, making Northeast Asia more tense.

One of the most explosive and complex zones is that encompassing the Middle East, Persian Gulf, and South Asia. The principal democracies are Israel and Turkey in the Middle East, and India and Pakistan in South Asia. Elsewhere, democracy is not developing, nor are market economies taking hold. Danger lies in polarised politics, rampant poverty, fundamentalism, terrorism, and the proliferation of weapons of mass destruction. What occurs in this region depends heavily on three issues: the Arab-Israeli peace process, gulf security affairs, and the India-Pakistan stand-off.

Sub-Saharan Africa is progressing toward democracy and economic improvement. Yet, some governments behave as rogues, poverty dominates and the potential for savage ethnic violence exists. It is anticipated that Africa will make slow progress, amidst numerous setbacks.

Central and South America are advancing toward democracy and multinational co-operation, but some countries are vulnerable to political instability and social strife. This is clearly evident from the recent Argentinean crisis amongst a host of others.

In Africa, like most other developing regions, political influences and trends are considered to be of extreme importance to engineering consultants. In many instances knowledge of the political system and the people who essentially run it, is critical for the success of the consultant. Many developing countries are often controlled by regimes or governments that are considered to be unstable and who lack the necessary regulatory framework in which consultants work. In certain African countries for example, it is common knowledge that bribery and corruption is rife amongst politicians. GMKS has experienced this situation on several occasions, to the extent that payments are delayed unless "something" is passed on to authorities. This trend continues to plague many African countries and in other developing regions such as the Far East, and Latin America, these systems are often entrenched within the national culture.

Many people feel that the "Achilles heel" of Africa is its boundaries. Africa's rigid international boundaries have created as much instability as stability. Africa has been witness to collapsed states (e.g. Liberia, Somalia), rampant genocide and some 100

coups since 1950. No continent on earth has suffered more bloodshed arising from territorial disputes than Africa. This mismatch between cultures and boundaries is the single biggest factor contributing to instability, civil war and acts of genocide in Africa. Clearly no real development or rebuilding of war-torn countries could be initiated until there is stability in these regions.

Whilst there are many negative political trends that emerge from Africa, there are also several positive features of the African political landscape. The "African Renaissance" as coined by SA President Mr. Thabo Mbeki, is set to reduce dependence on the "First World". This is characterised by cross-boundary political co-operation through the creation of regional trading communities, pools, and economic resources. It is envisaged that the bigger market would attract large capital flows and build a co-operative basis for industrial development.

Whilst most African countries are besieged by shoddy governments there are a few stars amongst them including Botswana and Swaziland. Whilst Botswana is a landlocked country, it is also considered to be one of the richest non-European nations. Botswana, with a population of approximately 1 million people owes much of its wealth to well managed diamond mines.

Surrounded by South Africa, except for a short border with Mozambique, Swaziland is heavily dependent on South Africa from which it receives nine-tenths of its imports and to which it sends more than two-thirds of its exports. The Swazi government is trying to improve the atmosphere for foreign investment and is currently the beneficiary of the US-African Growth and Opportunity Act initiative. The active trade relationship with Swaziland provides opportunities for the South African Government to promote the use of domestic (SA) consultants.

In the case of China and some other Asian countries, where it seems that several opportunities exist for foreign engineering consultants, regional political stability is still questionable. This political 'hot potato' will have to be monitored closely in order to determine the viability of operations in this region.

4.4.1.2 ***Economic***

Trends reflected in terms of growth, inflation and interest rates are some of the important economic indicators that need to be considered. The global economy is strongly influenced by the behaviour of the U.S. economy as well as the unpredictable nature of external shocks. Many of the world's major industrial economies are either shrinking or stagnating. Even before the events of September 11, the US economy was in a state of slowdown and today, global economic slowdown is still highly visible throughout the world. The economic slowdown in industrialised countries has been accompanied by widespread downturns in economic activity in developing countries and by a less favourable environment for international trade and financial flows.

Capital inflows to emerging markets have declined consistently through the last three years. This situation has been accompanied by sharply reduced access to financial markets and sharply higher interest rates for most countries. Latin American countries are the most severely affected by these conditions subsequently leading to some having to seek assistance from the IMF.

Presently, only two countries namely China and India continue to weather the reversal of the global economy. China is currently in a steep infrastructure and development drive as institutional investors continue to provide the much-needed foreign direct investment (FDI). In addition, China is currently one of the major recipients of loans from the World Bank and the Asian Development Bank.

Whilst India is also experiencing vigorous expansion and growth, the country is also plagued by major infrastructure constraints. The main areas of concern are roads and power. This situation presents a twofold opportunity to foreign civil engineering consultants.

Besides India and China, economic and population growth and increasing per capita

income, as well as the urbanisation on the Asian and African Continents have created huge demands for construction, including building and non-building construction.

On the African continent, many of the countries are growing at a much faster pace than their frail economies can handle. There is also a dramatic shortage of skills in many of these countries. The promotion of the consultant industry through South Africa's trade agreements with its major African and Asian trading partners is one of the key areas where SA based firms can get access to foreign markets and is viewed as a major opportunity.

In the case of external shocks, there is no doubt that since the events of September 11, the world economy has become more fragile and economic prospects are surrounded by a good deal more of uncertainty. It is almost impossible to anticipate with a reasonable degree of accuracy how large the economic effects of these events will be or how long they will last.

4.4.1.3 *Social*

One of the major features of the 20th century has been a population growth larger than at any other time in history. Although the population growth is expected to continue into the next several decades, the pace of growth has decelerated since 1970. Studies also indicate that majority of the high growth has been occurring in developing countries (Shackman, Wang and Liu, 2002).

Ageing populations is another major trend. The population age of 65 and older is increasing at an unprecedented rate, both in developed and developing countries, and expected to continue to increase well into the 21st century as stated by (Shackman, Wang and Liu, 2002). The increase appears to be occurring more in developing countries. Related trends are that public pension take a large part of GDP's, that disability rates are more likely to be a problem in developing states than in developed states (Shackman, Wang and Liu, 2002).

Another major change taking place, specifically in developing countries, involves increasing urbanisation, especially in concentrations of populations in the largest cities. While some cities may manage the growth process well, some of the concerns are about depletion of non-renewable natural resources, and increasing urban poverty and inequality, with consequent weakening of the state, civil unrest, urban-based revolutions and radical religious fundamentalism.

All of the trends highlighted affect the decision to enter certain markets. Naturally, these trends will vary from country to country and should be assessed at a country level before conclusions can be drawn. In addition to all of the trends outlined above, increasing community concerns about the sustainable prospects of the environment has been affecting the many aspects of building, construction and operation. This trend has implications for the consultant engineering industry and has to be monitored and tracked at all times.

4.4.1.4 *Technological*

The problems of the 21st century are going to require new solutions that are technology driven. It is envisaged that problems of traffic congestion, waste removal, and infrastructure development using the same old materials, will not be solved using conventional wisdom and technologies. Whilst civil engineering may give form to the new solutions, the technology that drives them is unlikely to be part of civil engineering.

Research and development monies are in short supply in the civil engineering field, because they are pouring into areas like biotechnology, nanotechnology, information technology, and advanced communications. The response from the civil engineering industry must be to draw from fields that are advancing faster than it wherever possible, and use that technology as a springboard for its own progress.

Advances in the field of biotechnology will have pronounced effects on life expectancies which coupled with declining birth rates will cause the rapid ageing of

populations in developed countries. The resultant demographic changes will call on consultant engineers to change their perspectives on how to design housing, transportation and public structures in the coming years. It is also envisaged that advances in biotechnology will also help to shape the materials used to build them.

The advancement in biotechnology has already touched on fields such as environmental engineering. Bio-remediation to clean up waste was unheard of 40 years ago. Today, microbes clean up 80% of the world's oil spills and is considered to the cheapest and most effective approach. Biotechnology also has the potential to change the treatment of wastewater dramatically, and even raises the possibility of treating wastewater at the point of generation, significantly reducing the need for large-scale sewage infrastructure.

It is envisaged that new materials will also change civil engineering dramatically. Today, a wide variety of other new materials already adorn irregular rooflines in major cities. New materials are making today's bridges longer, stronger and lighter than ever before. Within the past five years researchers have learned how to lace materials with optical fibres that contain strings of sensors. Data from the sensors passes along the fibres to an opto-electronic data processing unit. These optical fibres are now being tested in carbon fibre composites that can be used as building materials. The goal is for the sensors to detect stress or strain and relay it along the fibres to create a picture not only of the present stress being placed on the structure, but also of the cumulative lifetime stress the structure has experienced. These technological advances have significant future ramifications for the development of skyscrapers, bridges, pipelines and tunnels.

Developments in information processing and communication technologies already allow many firms to operate internationally and globally. Such technologies are more often becoming a reality in many developing parts of the world, which further aids the globalisation of the civil engineering industry. It is envisaged that yet much more is still to come as computing power and optical and wireless networks continue relentlessly to double in power every two years. For all of the incredible possibilities

ahead in new technologies, progress will be slow if the civil engineering consultant does not take advantage of new management strategies to implement them.

4.4.2 Industry Analysis (Porter's Five Forces)

The industry analysis is conducted using Porter's Five Forces model. The nature of competition is embodied in the five competitive forces as outlined below.

4.4.2.1 *Threat of substitute products or services*

The threat of substitute services in the consultant industry is considered to be non-existent because of the non-substitutional nature of the products or services. Services provided are usually tailored or differentiated to suit specific project parameters that are more often than not dictated by the client. The client is not inclined to switch to alternative service providers unless a specific problem has arisen between the client and consultant which forces or entitles the client to use the services of an independent party providing similar services.

Where consultants are providing clients with products such as software applications or patented designs etc, the threat of substitutes are existent. Due to the specialist expertise generally required for such solutions, the threat of substitutes is considered to be low in most aspects of civil engineering products. This threat could be reduced or eliminated completely by differentiating the products further.

4.4.2.2 *Rivalry amongst existing firms*

The South African consultant industry is characterised by numerous firms of varying size. Many of the smaller firms employ between 2 and 10 people with turnovers in the range of R0.5 million to R5 million. These firms generally operate in one or two segments of the domestic market without any significant expertise. The segments dominated by these companies include structural and civil engineering works. There are also many firms that employ in excess of 10 people with turnovers of R10 million

or more. These firms are still classified as small, however, they generally operate over various segments in domestic markets having developed expertise over a period of time. The rivalry amongst smaller firms is considered to be intense with many vying for the fewer and fewer work opportunities presented in the domestic markets.

The medium size firms such as GMKS generally employ between 80-200 people and operate over many segments. These firms have generally developed a wide range of expertise with turnovers ranging from R40 million to R200 million. These firms usually operate over most segments in the civil engineering industry in which competitive rivalry is considered to be high. A small number of these firms, including GMKS, offer multi-disciplinary services and have acquired some projects in one or more foreign markets.

The larger firms generally employ in excess 300 hundred people and operate over all segments in the domestic markets. Most of these firms are multi-disciplinary with wide geographical coverage in domestic markets. Many of these firms have strong links or alliances with offshore partners and operate in several foreign markets. The turnovers of these firms are well in excess of R200 million with a substantial portion of income being derived in foreign markets. The competitive rivalry amongst these larger firms is also considered to be high, with many now having to compete with international competition homing in on African markets.

4.4.2.3 ***Bargaining power of suppliers***

The term 'suppliers' comprises all sources for inputs that are needed in order to provide products or services. The external inputs for consultants are considered to be very small and are essentially project driven. Suppliers bargaining power is low in the consultant industry as there are a large number of suppliers with many substitute products available to satisfy the operational requirements of firms. The switching cost from one supplier to another is low and there is no possibility of suppliers integrating forward into the consultant engineering industry.

4.4.2.4 *Bargaining power of buyers*

In the civil engineering consultant industry, the term 'buyers' comprises different client organisations. The bargaining power of clients is considered to be high in the consultant industry. The clients are usually the owners and initiators of projects and are responsible for engaging the services of consultants through some sort of competitive process. Generally, clients can impose significant pressure on profit margins, as there are usually a large number of consultants operating within various segments of the market, all of who are generally heavily reliant on them. This is particularly evident in the segment where there are a large number of smaller consultants vying for limited work opportunities in multiple segments. In terms of service substitution, client bargaining power is considered to be low as the services offered cannot be substituted by alternative services, however, the client can switch to similar services from rival firms.

4.4.2.5 *Threat of new entrants*

The barriers to enter the consultant industry are not high. Any engineer registered professionally with the Engineering Council of South Africa (ECSA), can register a company and operate in the consultant industry. Hence, the competition in this industry is much higher than some other industries. In such situations, new entrants also drive the market environment in terms of market shares, prices, client loyalty etc, at any time. There is always a latent pressure for reaction and adjustment for existing firms in this industry. Economies of scale, experience curve effects, as well the scarcity of important resources are but some of the most important barriers to growth in the consultant industry.

Economic globalisation has resulted in many more consultants entering domestic markets. These consultants are usually well-established internationally recognised groups either from developed countries or from newly industrialised countries that generally have some competitive advantage in terms of technology, management

skills, capital as well as experience curve effects. These firms constitute a major threat to the existing players in domestic markets.

4.4.3 Competitor Analysis

A competitor analysis, as presented below, is undertaken to provide feedback on GMKS's competitive position in both domestic and international markets.

4.4.3.1 *Domestic Competitors*

GMKS operates amongst many competitors in the South African civil engineering market. Many of the rival firms have offices in several cities and towns around the country. Some of the larger firms have offshore offices as well, and in some instances are backed by international consultants based outside South Africa.

As illustrated in Figure 4.2, GMKS provides a relatively wide range of professional services with average geographical coverage in South Africa. The strategic group map gives an indication of the relative size and market share of some of the firms in the domestic market. A relatively large number of firms are concentrated in the third quadrant of the map, which represents smaller firms with limited services.

Using key success factors, a weighted competitive assessment as illustrated in Table 4.1, indicates the competitive position of GMKS relative to some of its rivals. The following rating scale is used: 1 = very weak, 10 = very strong. The weight given is based on the relative importance of each key success factor for firms to gain competitive advantage.

From Table 4.1, it is evident that Stewart Scott has the strongest competitive position. Its strength lies in its core competencies, financial backing and convenient locations whereas its weaknesses could be interpreted as its technological capabilities.

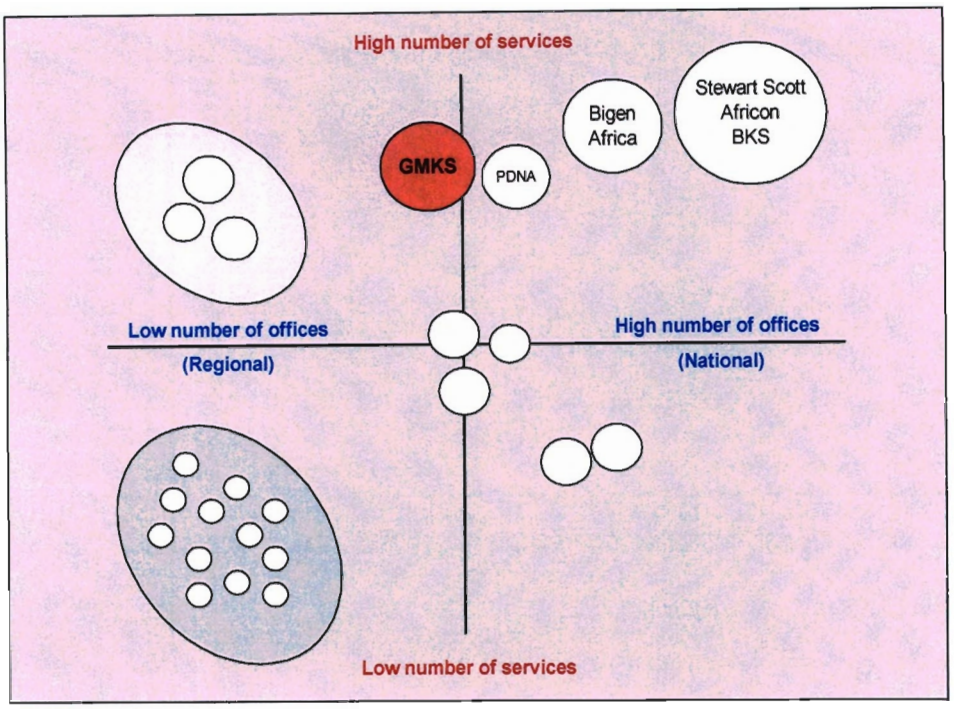

Figure 4.2: Strategic Group Map
Source: Own

Key Success Factor /Strength Measure	Weight	GMKS	Stewart Scott	Africon	Bigen Africa	PDNA
Core Competencies	0.15	8/1.20	9/1.35	9/1.35	9/1.35	6/0.90
Strong leadership and management	0.15	7/1.05	8/1.20	6/0.90	6/0.90	7/1.05
Geographical coverage/locations	0.10	4/0.40	9/0.90	9/0.90	8/0.80	6/0.60
Financial backing	0.10	3/0.30	9/0.90	7/0.70	7/0.70	3/0.30
Client service capability	0.15	6/0.90	8/1.20	8/1.20	8/1.20	6/0.90
Technological capabilities	0.15	7/1.05	7/1.05	7/1.05	7/1.05	6/0.90
Adaptation to ever-changing environment	0.15	7/1.05	8/1.20	8/1.20	7/1.05	5/0.75
Image and reputation	0.05	8/0.40	8/0.40	8/0.40	7/0.35	7/0.35
Sum of weights	1.00					
Weighted overall strength rating		6.35	8.20	7.70	7.40	5.75

Table 4.1: Weighted competitive strength assessment
Source: Own

GMKS's major strengths are in its core competencies, and its image and reputation. Its major weaknesses are its financial backing and geographical coverage in terms of the number of office locations.

Although GMKS competes with the larger firms, it does not have the size and geographical presence as Stewart Scott or Africon etc. GMKS has worked with Stewart Scott on several projects including the Bakwena Platinum Highway and the current Gautrain bid. As one of GMKS's primary domestic competitors, the following analysis of Stewart Scott is undertaken highlighting the future goals, current strategy, assumptions and capabilities.

Stewart Scott was established in South Africa in January 1992 by the merger of two large consulting engineering companies. Today, it is an independent, multi-disciplinary group of companies, whose managers, engineers and technologists are involved in a broad range of civil, structural, environmental, mechanical, electrical and electronic engineering and management services projects, covering complete life-cycle needs within the fields of water, transportation and industrial infrastructure development.

Stewart Scott was among the first engineering consultancies in the new South Africa to take black equity partners on board. Chairperson Rufus Maruma joined the company's board more than five years ago, when he acquired a 5% stake. He now controls 20% of the 33,33% that is in the hands of BEE interests. The remaining two-thirds is split equally between the pre-restructuring owners of the company and DHV, of the Netherlands, one of the world's top engineering consultancies. Since the start of their association with DHV in 1994, Stewart Scott has extended its activities internationally, with a focus on Africa. It currently has operations in Angola, Nigeria, Kenya, Swaziland, Lesotho and Mozambique, and several offices all over South Africa. Much of Stewart Scott's growth has been through strategic mergers with various consultancies. Many of these mergers were with firms that were owned by previously disadvantaged individuals.

Of Stewart Scott's South African equity, 53% is in the hands of previously-disadvantaged people. Maruma has transformed Stewart Scott from an ordinary engineering consultancy into an entity that takes equity stakes in the projects it implements. By investing in physical infrastructure, Stewart Scott hopes to build up a strong asset base, which will boost its appeal to the stock market.

The management of Stewart Scott hope to eventually list the company on the JSE Securities Exchange, thus giving more South Africans a chance to become shareholders in one of the country's more successful consulting firms.

4.4.3.2 *International Competitors*

There are many consultants operating worldwide and in some instances, firms have offices on every continent. To name but a few of the most global, are Parsons Brinckerhoff, Arup and Mott MacDonald. All of these firms offer multi-disciplinary services, employ more than 2000 employees worldwide and currently have offices in Africa.

Out of all of these companies, Mott MacDonald is probably the most global and has previous working experience with GMKS on the Lesotho Highlands Scheme. Africa has always featured on Mott MacDonald's international portfolio with offices currently in Egypt, Lesotho, Ghana, Kenya, Uganda and Mozambique. As one of GMKS's primary international competitors, the following analysis of Mott MacDonald is undertaken highlighting the future goals, current strategy, assumptions and capabilities.

Many of the bigger British consultants have already established or are establishing strong regional presences in key markets worldwide. Mott MacDonald is one of them. Whilst, the firm has always worked on projects in different parts of the world, it has only recently started to develop regionally based businesses across the globe. Important acquisitions in the US and India since the year 2000 has underpinned the consultant's ambition to become more than a British-based international firm.

The buying started in year 2000 with east coast based water and wastewater consultant Killam, adding 450 staff and complementing Mott MacDonald's growing presence in the burgeoning US transportation market, developed through its Mott Hatch joint venture.

Mott MacDonald then purchased Dalal, the third largest firm in India with a staff of 750. In India, Dalal's most significant project is the $400 million Delhi metro where it is working as civil, architectural and mechanical and electrical consultant for a 6.5 km section. In the commercial sector, Dalal works for a strong blue chip client base that includes Unilever, Cadbury, Siemens, Pfizer, Rhone Poulenc and ICI - all useful additions to Mott MacDonald's portfolio of global clients.

Mott's two acquisitions and some organic growth boosted the consultant's annual turnover from around $320 million to $500 million. For Mott MacDonald, the globalisation programme is considered to be still evolving. The two most recent acquisitions were a big step for the company, but the firm's management considers there to be still a long way to go.

South East Asia is one area where Mott MacDonald is keen to build another hub. Although Mott MacDonald has a large Hong Kong office, the high cost base makes it difficult for the firm to use it as an entry point to the Chinese construction market, where salaries are much lower. Instead, the firm is looking to build up its South East Asian presence from its Thailand office, which currently employs around 200 staff.

4.5 Resource Analysis

A resource analysis of GMKS is presented below. In the first instance, the GMKS value chain is analysed in terms of strengths and weaknesses. This is followed by an analysis of GMKS's core competencies and is concluded with a SWOT analysis.

4.5.1 Value Chain Analysis

The internal environment of GMKS includes the entire value chain activities i.e. organisational infrastructure, human resources, technology development, procurement, operations, marketing, finance, service etc. To offer higher value added products/services to the market than competitors, firms should identify the strengths and weakness in each value chain activity. This helps firms to identify which activities are adding value or have negative impacts to the overall performance. GMKS's strengths and weaknesses in each value chain activity are illustrated in Figure 4.3.

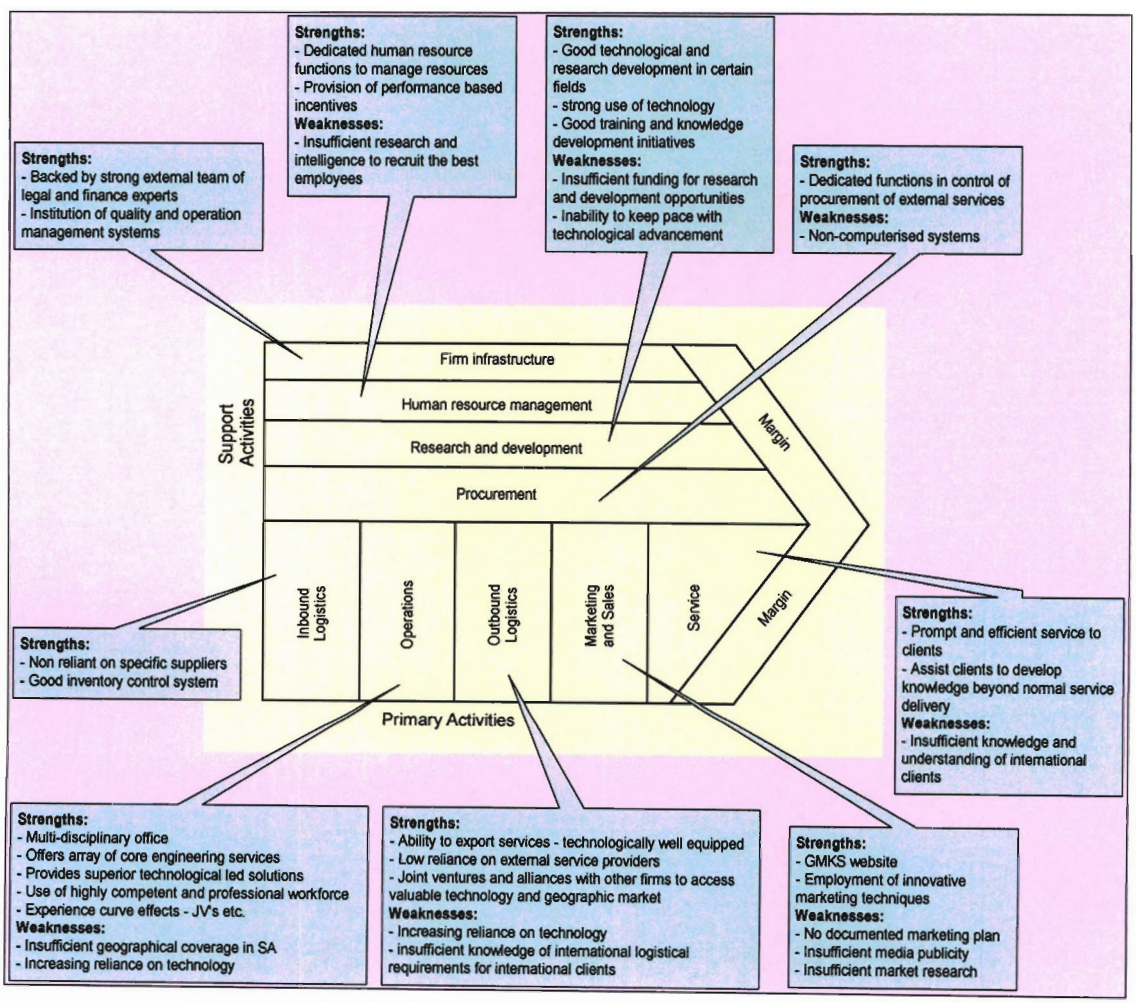

Figure 4.3: Value Chain Analysis
Source: Own

4.5.2 Core Competencies Analysis

GMKS has a wide range of core competencies and services, which can be divided in five separate divisions as indicated in Table 4.2. The current relative rating of each division is also indicated. Whilst the rating and relative strengths are provided for different core competencies, income, and profitability, it is acknowledged that these will vary with time and the various strategies the firm pursues.

Core Service	Rated Position		
	Core Competencies	Income	Profitability
Roads and Transportation	1	1	1
Hydraulics	2	3	3
Industrial Engineering	3	2	2
Project Management	4	4	4
Structural Engineering	5	5	5

Table 4.2: GMKS divisions and relative ratings
Source: Own

The relative positions of the divisions are based on the summary of the core competencies, staff utilisation within each division, income generation and profitability. It is evident, that the Roads and Transportation sub-divisions are the "Stars" in the GMKS group. However, as a multi-disciplinary firm, GMKS often has to use the services of various divisions on one project. Hence, the combined strength of some of the divisions may yield a slightly different picture. Each of the divisions can be further subdivided to indicate the field of expertise within each. The relative strength of each competence is tabulated in Table 4.3.

Based on the core competencies as illustrated in Table 4.3, it is evident that GMKS should concentrate strategies around its divisions of Roads and Transportation, Hydraulics, and Industrial Engineering. The firm is also considered to be strong on Project Management, however, the size and staff utilisation of this division is considered to be small. The Structural Engineering division is obviously the weakest division on its own, however, this division is usually used in conjunction with other divisions on most projects. Hence, this division should always have a place at GMKS.

Core Competence	Relative Strength
ROADS AND TRANSPORTATION	
Traffic and transportation	9
Materials	9
Urban and rural roads	10
Freeways	8
Rehabilitation	10
Rail: Mainline & Sidings	3
Bridges	8
HYDRAULICS	
Water treatment	6
Effluent treatment	8
Pipelines	10
Dams	6
Tunnels	9
Sewer rehabilitation	9
Hydropower stations	8
Water loss management	9
Sewer and water masterplans	9
Fire protection systems	5
GIS applications	10
STRUCTURAL ENGINEERING	
Geotechnical	6
Structural steel	8
Reinforced concrete	7
Warehouses	6
Housing, clinics & hospitals	7
Mine hostels	6
Towers and Masts	5
Prisons	8
INDUSTRIAL ENGINEERING	
Materials handling	9
Grain handling, milling & storage	7
Factory complexes, Mine surface works	7
Mechanical plant area	7
Heating ventilation, Air-conditioning piping	7
Pumps, pipeline and slurry conveyance	8
Utilities: Air, water, gas & power warehousing systems	8
Electrical and process control systems	8
Interior and area lighting	7
PROJECT MANAGEMENT	
Project scheduling	8
Construction Management	8
Cost and quality control	8
Procurement	7
Quantity surveying	6

Rating Scale: 1 = Very Weak; 10 = Very Strong

Table 4.3: Relative strengths of GMKS core competencies
Source: Own

4.5.3 SWOT Analysis

The analysis of the current general environment and the consultant industry has exhibited various opportunities and threats facing South African engineering consultants. In order to pursue the opportunities and to defend against external threats, GMKS must evaluate its own strengths and weaknesses in order to formulate an appropriate international strategy.

According to Ambrosini (2000), a SWOT analysis basically involves two steps. Step one entails identifying the strengths, weakness that relate to the firm and the opportunities, and threats pertinent to the external environment. The second step involves collating the elements of the analysis into a matrix and using a scoring mechanism to provide clarity to the analysis. This analysis is called an impact analysis. The following scoring system is employed with a maximum positive score of +3 and a maximum negative score of –3 for the strengths, weaknesses, opportunities and threats identified.

- A positive (+) score indicates that the strength a firm possesses would help it take advantage of, or counteract, a problem arising from an environmental change or a weakness that would be offset by the environmental change.
- A negative (-) score indicates that a strength would be reduced by the environmental change or a weakness would prevent the firm from overcoming the problems associated with an environmental change or be accentuated by the change.
- A zero (0) score indicates that current strengths and weaknesses would not be affected by an environmental change.

The results of the impact analysis are set out in Table 4.4. It is clearly evident from the analysis, that the strengths of GMKS will clearly remain as strengths and will help the firm to react and adapt to the most important environment changes identified. The weaknesses will remain as weaknesses, except for the small domestic market share which will grow as more domestic opportunities arise.

OPPORTUNITIES & THREATS	Local and international market opportunities	High demand for services in developing countries	Rapid technological changes	Sluggish growth in domestic market	Increasing environmental consciousness	Growing and intensifying competition	Privately financed projects	+	-
STRENGTH									
Multi-disciplinary services	+2	+2	+2	+3	0	+2	+2	**13**	**0**
Experience with alliances and joint ventures	+2	+2	+1	+1	0	+2	+2	**10**	**0**
Committed leadership and management	+2	+1	+2	+2	0	+2	+2	**11**	**0**
Highly competent and professional workforce	+2	+1	+2	+2	+1	+2	+1	**11**	**0**
Technologically well advanced	+1	+1	+2	+1	+2	+2	+2	**11**	**0**
WEAKNESS									
Little knowledge of international markets and clients	-2	-2	-2	-2	-1	-2	-2	**0**	**-13**
Little foreign market experience/presence	-2	-2	0	-2	-1	-2	-2	**0**	**-11**
Increasing reliance on technology	0	0	-1	0	0	0	-1	**0**	**-2**
Small market share in domestic market	+1	0	0	-2	0	-3	0	**1**	**-5**
Slowness too react to international trends and opportunities	-3	-2	-2	-2	-1	-2	-1	**0**	**-13**
Environmental Impact Scores									
	+10	**+7**	**+9**	**+9**	**+3**	**+10**	**+9**	**57**	
	-7	**-6**	**-5**	**-8**	**-3**	**-9**	**-6**		**44**

Table 4.4: Impact analysis of GMKS
Source: Own

In terms of the environmental impact scores indicated at the base of Table 4.4, it is clear that the future for GMKS looks bright, with an aggregated positive score against each of the likely environmental changes. In some instances however, there is a threat that some of the existing strengths could possibly be offset by existing weaknesses unless action is taken in the near future.

4.6 Evaluation of Culture, Mission and Vision

GMKS could be considered an exemplary model of an empowered company. The leadership of the firm is considered to be talented and knowledgeable. They have established a culture of innovation and excellence within a 'family' environment. GMKS has an implied set of strongly shared values, known to most employees and to which they respond.

The GMKS mission statement reflects the firm's intention to become a leading multi-disciplinary consultant in South Africa. It supports the firm's commitment to the provision of professional services within a framework of excellence.

The mission statement is posted on the GMKS website and is used to communicate the direction of the firm. The purpose of the statement is to keep the firm focused and motivated. Although the statement conveys the essential elements of communicating certain valuable organisational information, it does not give any strong indication of the firm's ability or intention to undertake work in the international environment. Hence, in its present form, it does not support an international strategy.

A similar conclusion is drawn from the firm's vision. Although the GMKS vision sets out the ideal state that the firm aims to achieve, it does not infer any elements of growth or an international strategy. However, the current vision as espoused by the management is well understood and well communicated throughout the company. The possibility of becoming a recognised international firm has crossed the minds of many of the senior management, but this paradigm has yet to be internalised.

A set of values that the firm embodies has been drawn up as an attempt to establish the management change since the merger. These are the values that GMKS staff strives to achieve in relation to clients and with each other, and have been workshopped with all levels of staff.

4.7 Target Markets

GMKS undertakes projects in both domestic and foreign markets. Each of these markets is analysed hereunder.

4.7.1 Domestic Markets

GMKS has concentrated most of its efforts on serving various segments in the domestic market. This strategy has been successful and continues to be the primary focus of the firm. The majority of GMKS's clients are from the public sector, with relatively few clients in the private sector. Since the birth of the company in 1952, the firm has opened and closed offices in various locations across South Africa. It has always been the policy of the firm to have an office in a particular location if the work conducted through that office was sustainable and demand driven.

Presently, the main target market is Gauteng, which accounts for over 70% of the firm's revenue. The firm currently has regional offices in Durban and Cape Town. Current demands justify these operations, however, these offices alone are considered insufficient to service the entire regions in which they fall. Many regions are now subdivided and controlled through various metropolitan, district and local municipalities. Generally, these municipalities require consultants to have offices in their area of jurisdiction to have any sort of competitive advantage or to qualify for any work opportunities presented by them.

The Durban office has managed to sustain itself for over 20 years and is currently managed with minimal assistance from the Gauteng based head office. This office targets both private sector and public sector clients.

The Cape Town office was officially opened in 2003 due to sustainable workloads and future opportunities identified in the Western Cape region.

The Eastern Cape region is currently one of South Africa's high development zones and GMKS is in the process of setting up an office in the region in order to position itself for future work opportunities. GMKS currently has several projects in the Eastern Cape that are managed from the Durban Office. This situation is obviously not cost effective, and also does not allow GMKS to service clients in this region as efficiently as possible.

Whilst GMKS competes domestically on the basis of offering multi-disciplinary solutions, many of the projects undertaken do not require multi-disciplinary services except for various large-scale building and industrial projects. The concept of multi-disciplinary services applies to the ability to provide services on a wide range of disciplines albeit on different projects at different times and for different clients. In many instances it is difficult for GMKS to be the sole consultant on a project even though it may be able to provide all or most of the desired professional engineering services. Clients usually dictate and control the appointment of professional service providers and thus have quite high bargaining power.

Many domestic public sector clients have specialist requirements, but are currently experiencing a general shortage of specialist skills. This is particularly true for many of South Africa's municipalities, where various engineering duties and functions have been recently assigned. Many of these types of clients require expertise and skills to assess the work assigned to various consultants, but are unable to do so effectively. These clients are also insistent on using consultants who have operations within their municipal jurisdiction. In many instances, these clients would rather use inexperienced or less knowledgeable consultants who operate in their municipality, than consultants such as GMKS who may provide much better solutions, but have been excluded from competitive tender due to insufficient representation in that particular municipality. This dangerous situation is of particular significance on large-scale high-risk projects such as dam planning and design etc., where GMKS is well experienced. However, GMKS is currently in the unfortunate position of not being

able to target many of the municipalities due to a lack of presence in their particular areas of operation.

4.7.2 Foreign Markets

GMKS currently operates in foreign markets through two fronts i.e. through Consult 4 and through its own initiatives.

Consult 4 has proved to be an extremely costly venture for GMKS, and one which has had limited success in foreign markets. All Consult 4 services are undertaken through exporting services from the four parent firms. Considerable sums of money have been poured into Consult 4 to develop and pursue foreign markets mainly in Sub-Saharan Africa. Although projects have been undertaken in various parts of Africa, Consult 4 failed to establish any reasonable presence in Africa or any other foreign market. For these reasons, the activities of Consult 4 are presently kept at a considerably low key. One of the main reasons for the low success with Consult 4 was the lack of focus and the inability to satisfy the individual needs of all four parent firms. In addition, Consult 4 attempted to pursue too many different markets at a time when all four parent firms were grappling with a downturn in the domestic market. This situation placed considerable strain on GMKS.

The firm currently targets various SADC member markets including Botswana, Lesotho, Mozambique and Swaziland. There is no formal targeting strategy surrounding any of these countries. The selected mode of entry is through the establishment and development of local contacts in the host country, in the hope of building up relationships and alliances that would be mutually beneficial to all parties. So far, GMKS has had limited success with these initiatives. Presently, all services rendered by GMKS are through exporting services and no significant African markets have been tapped to warrant the establishment of offices outside South Africa.

Keeve Steyn Europe BV is still registered in The Hague, Netherlands, however, very little activity is recorded through this office. Inadequate understanding of the

European market, specifically Greece, has prompted GMKS to cease activities in this area.

4.8 Marketing Strategies

The GMKS marketing strategy incorporates the traditional 4 P's of the marketing mix namely; service strategy, price strategy, distribution strategy and promotion strategy.

4.8.1 Service Strategy

The GMKS service strategy is to provide a single source of flexible multi-disciplinary engineering and management services to dynamic South African and global markets. GMKS services involve a high degree of customisation and have a strong component of face-to-face interaction with clients. The services offered usually take the form of multi-million rand projects and is characterised by the development of long-term relationships between GMKS, clients and other firms, but also the management of day-to-day relations for the duration of the projects. In some instances, it is less the services that GMKS sells to clients, but rather the services of specific individuals that it is selling. This is particularly true in specialist expertise areas such as water loss management etc.

One of the major components of GMKS's service strategy is its current implementation of quality management systems i.e. the GMKS Operational Performance System. The firm is in the process of obtaining ISO 9001:2000 accreditation, and is currently on target for the fourth quarter of 2003. GMKS management and staff are fully aware of the considerable benefits that are to be derived from working to an effective ISO 9001:2000 certified GMKS Operational Performance System, both internally and with its clients.

Continual improvement is also one of the key elements of the GMKS service strategy. This philosophy is incorporated in the GMKS Operational Performance System and spans all aspects of the firm i.e. from performance management to service delivery.

4.8.2 Price Strategy

The price strategy of GMKS is to keep in line with the industry specified SAACE and Government gazetted charge rates for domestic clients. There is not much scope for GMKS to move outside these rates except where the service required warrants a different rate from standard rates. This arises in projects where the specialist expertise is so unique that clients have no option but to accept the rates charged by the consultant. In other instances, certain clients such as government parastatals and municipalities have their own rates other than those specified above. Under these circumstances, GMKS usually has no option but to accept these rates.

The process of competitive bidding has also forced GMKS to reduce prices in order to receive commissions from various clients. In certain instances discounts are provided, depending on the type of project, current staff utilisation, volume of works and marketing opportunity presented. In other instances, certain clients are enforcing discounts.

Payment from foreign country markets is a problem on certain international projects. In one instance, GMKS has not been paid in over a year for services rendered. Bribery, corruption and bureaucratic red tape persist in many of the African markets. These factors, coupled with the nature of engineering services makes it considerably difficult to enforce payment in the early stages of the project life cycle.

4.8.3 Distribution Strategy

The GMKS domestic distribution strategy is centred on pooling all necessary resources to ensure that service delivery is met at all times. These commitments are enforced and guided by the GMKS Operational Performance System.

Current services provided in foreign markets are undertaken through exporting. This strategy is a low risk option and continues to work well for GMKS. Continued advancement in information technology in many of GMKS's African target markets

has made the communication and service delivery in these countries much more efficient.

4.8.4 Promotion Strategy

The GMKS promotion strategy involves personal selling, advertising and the exploitation of public relations opportunities. All GMKS business units are required to promote their services to potential and existing customers, and to contribute to the overall company image. The requirements of such activities are also part of the GMKS Operational Performance System.

Personal selling is undertaken before, during and after projects. It is the one of the most effective forms of the promotion of GMKS and is usually undertaken by directors and key senior staff. Client relationships are built and strengthened through existing projects, which are usually followed through after project completion, by personal visits and other modes of communication. Personal selling is most prominent in domestic markets with more effort required for international target markets. One of the drawbacks of this form of promotion in foreign markets is the language barrier.

GMKS undertakes advertising through various channels including publications, contract boards, GMKS website, service provider website directories and a host of other smaller advertising initiatives. In addition, the firm promotes itself by registering on various domestic and international consultant databases and rosters. The GMKS website is probably one the most important advertising tools as its gives the firm global exposure. The website is currently being upgraded to provide as much updated and informative information as possible on the company. GMKS does not have a defined Internet strategy, which is something that many firms are currently employing to adapt to technological and business platform advancement. This concept is particularly important when considering expansion and operations in more advanced markets.

Public relations opportunities are generally well exploited by GMKS. The firm undertakes various public relation activities to promote the company including organisation and participation in workshops and seminars, and contributions to technical journals etc. Whilst some of these activities assist in the international advancement of GMKS, more emphasis needs to be directed towards getting exposure in foreign markets.

4.9 Summary

This Chapter presents a strategic analysis of GMKS. The theoretical framework outlined in Chapter Two is used as the basis for the evaluation of the firm. At the outset, an analysis of the firm's products and services reveal that GMKS's professional services and products are extremely competitive and are highly exportable. The firm's decision to pursue foreign markets was undertaken in 1994, mainly to pursue Sub-Saharan countries through the establishment of Consult 4. This strategy has not worked well, with GMKS now mainly pursuing opportunities on its own strength.

A comprehensive environmental analysis of GMKS reveals several important characteristics of the general environment, industry and competitors. The analysis of the general environment is undertaken using a PEST framework and has revealed several trends, opportunities, and threats that affect GMKS's international strategy formulation. The industry analysis is undertaken using Porter's Five Forces framework and presents some of the driving forces in the civil engineering consulting industry. GMKS's rivals and competitors are presented using a strategic group map as well as a weighted competitive strength assessment. In addition, two of GMKS's main competitors, competing in both domestic and international markets, have been profiled and provides valuable insight into their strategies and business development.

A full resource analysis is presented using the value chain, core competencies and SWOT analysis concepts. The GMKS value chain is analysed by identifying the strengths and weaknesses associated with each value chain activity. GMKS's core competencies are presented using a rating system to give an indication of competitive strengths and weaknesses. The SWOT analysis is presented in the form of an impact

analysis, which gives a good indication of the firm's strengths and weaknesses relative to the most important environmental opportunities and threats.

An assessment of the mission, vision, and culture of GMKS also provides valuable input relating to the strategic intent and values of the firm. GMKS's current target markets are also identified and assessed. An analysis of the firm's marketing strategy using the four elements of the classical marketing mix concludes this chapter. All of the information presented is used as the basis for the conclusions and recommendations outlined in Chapter Five.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter aims to integrate the findings from the study in order to answer the main problem and fulfil the purpose of this study. Based on the analysis undertaken in Chapter Four, which includes an investigation of the external environment, internal environment and marketing strategy of GMKS, the opportunities and threats facing the firm are evaluated. An international strategy for GMKS is recommended based on all relevant information extracted from the study.

5.2 Opportunities and Threats in the Environment

It is evident that the political make-up across the globe highly influences the decision for a firm to participate in foreign markets. Whilst many of the developing markets are highly lucrative, many of them are besieged with problems including political instability, poor regulatory structures, corruption and bribery. Africa and Asia are the primary areas where these problems exist. However, a cross-border strategy involves taking risks, and for the engineering consultant these risks can be calculated to a certain extent. In the case where potential markets are not close to the primary operations, many of these factors become even more prominent, especially when the firm has opted to invest substantially in the development of an offshore operation. Whilst many of the points highlighted above apply to the formulation of an international strategy for GMKS, there are several other factors that need to be evaluated in combination with political climates etc., before any decision could be made. Indeed, one of the key elements of GMKS's international strategy should be to balance out the downturns in different markets. Whether these downturns are likely to be caused by political factors or other influences, is something that can be evaluated in advance, albeit not with much accuracy.

The economic growth of a particular country is certainly an important factor in the determination of potential target markets. In addition, economic fundamentals and policies of these countries greatly influence the extent and manner in which business

is undertaken. Whilst it is important for an engineering firm to consider all aspects of the economic environment to make an assessment of the market potential for a particular country, these must be viewed in conjunction with other trends and issues including social, cultural, political and technology development. Those countries currently experiencing economic growth, or where strong growth is forecast, present the most lucrative opportunities for engineering consultants. However, the economic climate must also be conducive to the entry of foreign firms wishing to operate there. Presently, China and India are the highest GDP growth markets. Both countries are developing at a rapid pace and are also poised to become future economic giants. Both countries have also welcomed the entry of foreign firms to assist and be part of their development initiatives. However, it is noted that both countries are precariously situated in terms of their political agendas. Elsewhere, much growth is forecast in Africa as well as several other Asian countries. The Southern African Development Community (SADC) region in Africa holds great promise with some countries displaying aggressive GDP growth. Albeit from a low base, it is expected that this will go hand in hand with infrastructure development over time. Botswana, Mozambique, Lesotho and Swaziland are currently the countries where the greatest opportunities lie, and all share common borders with South Africa. A recent survey in Africa indicates that roads and bridges are where there is most activity. Railways, harbours and airports are second and industrial type work is third on the list. GMKS is well suited to handle most of these types of engineering works.

There are a number of social and cultural issues that influence the operations of civil engineering consultants. Demographic shifts, cultural differences, government spending on social development etc, are but some of the factors that either pose opportunities or threats to the consultant. Most of these trends are also more common or have higher levels of occurrence in developing countries. One of the major concerns for consultants is the increasing concern about the sustainability of the environment. This scenario poses both opportunities and threats and is more prevalent in developed countries. The likelihood and extent of these trends will vary between target markets and should be accordingly assessed and tracked by the consultant. For GMKS, monitoring trends such as urbanisation, and social development initiatives is of extreme importance, particularly for developing country markets.

Continued and accelerated changes in technology and improvements in software design and integration have direct influence on various engineering disciplines. In addition to the marketing opportunities presented, it also means shifts in budget planning and a demand for sustained training and development in order to achieve and maintain sustainable competitive advantage. It is already clear that the pace at which the civil engineering industry adopts new technologies will be greater than it has been in its recent history. Key advances will include information technology, sustainable development, advanced building services and technical systems, high performance materials and products, automation in design, manufacture, construction and operation. If GMKS wants to become a true international player, it has to be technologically equipped to do so. This would assist GMKS to maintain competitive advantage by adding value through the application of well-adapted technologies. GMKS must re-engineer the business approach to focus on core competencies and delivering the needs of the client. Certain technologies will be the key to future export success. The areas considered to offer real opportunities for development and growth include:

- Urban infrastructure development
- Transportation planning and infrastructure
- Water and wastewater engineering

In developing countries, the institutional barriers to urban infrastructure development favour those consultants with the ability to deliver complete infrastructure solutions, including funding and management. Project management skills and technologies are vital to success, with IT systems enabling 24-hour project design teams. There is also a need for well-focused research on topics such as recovery of contaminated land, integrated urban systems and new materials.

Increasing city populations have a wide-ranging impact on transport planning and infrastructure, and planning to cater for increases in traffic and its effects are among the greatest potential export earners. It is envisaged that the decreasing cost of IT and

advances in "soft technologies" such as management and software will provide opportunities in transport-related exports. Key issues and technologies relate to access, reduction of accidents and environment and health. The development of expert systems for "knowledge" engineering to capitalise on intellectual skills will underpin this market sector.

Water and wastewater engineering is well regarded as technology led and will need to be constantly reviewed in order to maintain a competitive edge. Water is an increasingly valuable resource and accurate methods of measurement for resource management and recovery of investment are urgently needed. The expertise for the resolution of conflict between the demand for development and the demand for the protection of water environments offers a growing market opportunity, together with the technology for disposal of wastes, reduction of plant volumes and footprints, and alternative corrosion-resistant materials.

In the age of electronic communication, technology crosses national boundaries almost instantly and the South African civil engineering industry must learn fast, apply fast and feed back experience fast to stay ahead. The South African government and the engineering industry need to work in active partnership to optimise the use of finite resources to sustain the problem-solving experience and technical know-how that underpin the industry's international reputation and export earnings.

5.3 Opportunities and Threats from an Industry Perspective

The opportunities and threats from an industrial perspective are presented hereunder. The industry is considered from three angles, namely the domestic sector, foreign sectors and the competitive environment.

5.3.1 Potential in domestic sector

South Africa is a country with significant socio-economic development. From the lack of basic infrastructure to inner city decay, the country is besieged with numerous socio-economic problems. One of the major influences on the growing need for

sufficient infrastructure is South Africa's increasing integration into global markets. Some of the primary areas of focus include, housing backlogs, access to basic services (water and sanitation) and road rehabilitation and maintenance. Based on socio-economic developments it is anticipated that the transport demand will continue its rapid growth. Whilst the socio-economic development is good for domestic consultants, it also presents opportunities for many international firms to enter the domestic markets.

South Africa also has huge development potential, with the SA government realising that sustained infrastructure development is an essential foundation for growth and development. GMKS has already committed itself to supporting this development agenda and whilst doing so, must continue to exploit local opportunities to further its own goals. Together with the support of SAACE, SAICE and ECSA it is envisaged that the domestic consulting engineering industry will continue to grow and expand and be more recognised as important contributors by many sectors of government, the business sector and the public at large.

The construction industry is undergoing fundamental procurement, production, and technological changes that are set to accelerate in the future. The historical role of civil engineering has broadened from that of service provision and product delivery to that of influencing the production process as well as to the management of facilities and infrastructure. This has created an increased emphasis on design-build, BOOT (Build Own Operate and Transfer) and BOT (Build Operate and Transfer) projects, public-private partnerships (PPP) and joint venturing. All of these trends affect the way consultants do business and should be viewed as an avenue of opportunity rather than a threat.

Integrated solutions are the key drivers of the future, and require holistic approaches and not just those that might be technically superior but is flawed by a narrow outlook. It is envisaged that civil engineering consultants could become the core of this integration, but is under threat from other professional disciplines threatening the market position.

It would appear that the civil engineering industry is set to embark on a longer growth cycle. Stability in the political and economic arenas, as well as the boom in mining will continue to boost sustained economic growth, thus creating an environment conducive to growth in the consultant engineering industry. The domestic market will always be a key element of GMKS's corporate focus and is also seen as the platform for a sustainable international strategy.

5.3.2 Potential in foreign sectors

Civil engineering is a global industry, with many consultants operating all over the world, some on several continents. These consultants have taken advantages of opportunities created through increasingly integrated economies and trading enviroments. It is clearly evident that there are numerous opportunities in foreign markets for GMKS. However, these opportunities don't come without risks and therefore need to be assessed accordingly. The major opportunities identified include developing countries exhibiting high economic growth, with favourable trading conditions. In addition, those countries where sustained economic growth is forecast are also considered to be extremely lucrative long-term prospects.

Notwithstanding the above, each country is characterised by its own individual industry characteristics and requires extensive research before attempting to operate within them. A Porter's Five Forces analysis of each potential target country should be undertaken in the first instance, to provide key information about the industry and its driving forces. Based on the findings of this study, the countries where GMKS should undertake detailed industry analyses include all the SADC countries as well as China and India. This analysis should be undertaken in conjunction with other analyses such as the PEST framework and the analysis of Porter's Diamond etc.

5.3.3 The Competitive Environment

The analysis undertaken in Chapter Four indicates that the competitive environment in which GMKS finds itself is quite intense. The barriers to entry in the domestic market are considered to be low with good support from the domestic legal

framework and operational requirements. This scenario, coupled with good GDP growth and political stability has also made it easier for foreign competition to enter the market. Foreign firms have advantages in their large scale, experience of international markets and good access to bank financing. In competitive bids and tenders, it is very difficult for competitors to differentiate themselves except on price. Sometimes, domestic clients favour firms that can provide services at a low cost, but it has become more apparent recently that quality is of extreme importance. Most of the smaller domestic competitors compete on the basis of price whereas many of the larger firms, including international competitors, are regarded as suppliers of high quality services.

GMKS is well positioned against domestic competitors but is by no means close in the size, and geographical coverage of its major domestic competitors such as Stewart Scott and Africon etc. In addition, there are many smaller consultants each operating within various segments that fragment the market considerably. GMKS possesses competitive advantage in several areas, such as BEE and multi-disciplinary services, however, there are now many firms who are catching up and will pose major threats to the firm unless it moves a few steps further ahead of them. Mergers, acquisitions and joint ventures are on the increase as more firms try to achieve BEE status in order to qualify for major civil engineering works from both the private and public sectors. Furthermore, based on the current development scenarios in SA, it is concluded that GMKS must take all necessary steps to expand its market share in the domestic market. This should be a short-term objective of GMKS and is considered to be an essential component of the international strategy of the firm.

From an international perspective, GMKS is considered to be moderately competitive. Presently, there is only one international mode of entry that the firm has explored successfully i.e. exporting of services. Based on current technological advancements, this mode will continue to be an extremely viable option. However, if GMKS wants to increase its international presence, other options have to be explored. Many foreign clients still do not accept bids from firms who do not have offices in their regions or areas. Therefore, the firm must genuinely look for opportunities to develop sustainable competitive advantage in the international arena. In comparison to many

international firms, GMKS is still in the very early stages of internationalisation, with little international experience or presence. The firm does realise the need to be in foreign markets, but currently lacks the critical mass to compete with the likes of Mott Macdonald etc. By no means will GMKS become an international force overnight, however, the strategy it adopts to get there must be initiated now. The international strategy of the company will ultimately decide the future of the firm in the global civil engineering industry.

5.4 Opportunities and Threats in GMKS Resources

GMKS is considered to be a medium sized engineering firm with the bulk of the firm's resources concentrated in Gauteng and Kwazulu-Natal. Whilst the firm has the resources to handle almost any type of civil engineering project, there are instances where the firms lacks the required level of technical expertise. In line with the various opportunities highlighted in the domestic environment, it is imperative that GMKS develops and enhances its core competencies to reflect current and potential requirements of the civil engineering market. The firm needs to bolster its resources in all divisions, but most especially the structural engineering division. Once again, there are various avenues that GMKS could pursue, but most importantly these must tie into the firm's international strategy.

In order for GMKS to compete effectively in international markets, it is imperative that the firm's resources and structure are in line with its international strategy. The financial ability of the firm is one of the most important factors in determining its competitive position. It is possible that the firm may opt to internationalise the value chain at some stage of its development, and therefore must have the physical and financial resources to be able to undertake these actions. In addition, the employment of experienced staff with international project experience or links is considered to be vital for the success of an international strategy. Presently, GMKS does not have many staff with international experience, which is seen as a weakness in the firm, which has to be overcome. When staff work on international projects, they naturally become very marketable and are thus easily lost to competitors. GMKS has had several losses in this manner, and should make every effort to keep such key staff. By

acquiring and managing more international projects, GMKS should succeed in retaining such key staff.

From a management and leadership perspective, GMKS is considered to be reasonably well equipped for a firm of its size. However, this would become questionable should the firm expand and grow. Although the firm's organisational structure is fairly flat, it needs to be more flat to cater for a dynamic environment. GMKS has one leader in Trueman Goba, however, the firm's growth will depend on several leaders leading operations from different strategic locations. Depending on the extent of control the firm wishes to have over its operations, there are various options available to the firm to boost its resources both physically and financially. The most appropriate options are discussed under the recommendations.

Overall, the firm needs to enhance its existing strengths and to reduce its current weaknesses. GMKS's existing strengths undoubtedly supports an international strategy, though the firm also has some existing weaknesses that inhibit it. Of particular importance is the knowledge of foreign clients. One of the keys to the international strategy is the gathering of all relevant intelligence on clients, markets and competitors. The firm does not currently devote enough time, or has insufficient budget for such activities and is considered to be a shortfall in the firm's operations.

5.5 Recommendations

Financial advantage created through distorted exchange rates, coupled with local engineering firms reputations for work excellence and technological support, give South African engineering firms an edge in the international marketplace. For GMKS to compete sustainably and effectively in foreign markets, the firm will have to exploit the full potential of the opportunities presented by this scenario. Figure 5.1 represents a model of an international strategy for GMKS. Each element of the recommended strategy is outlined below.

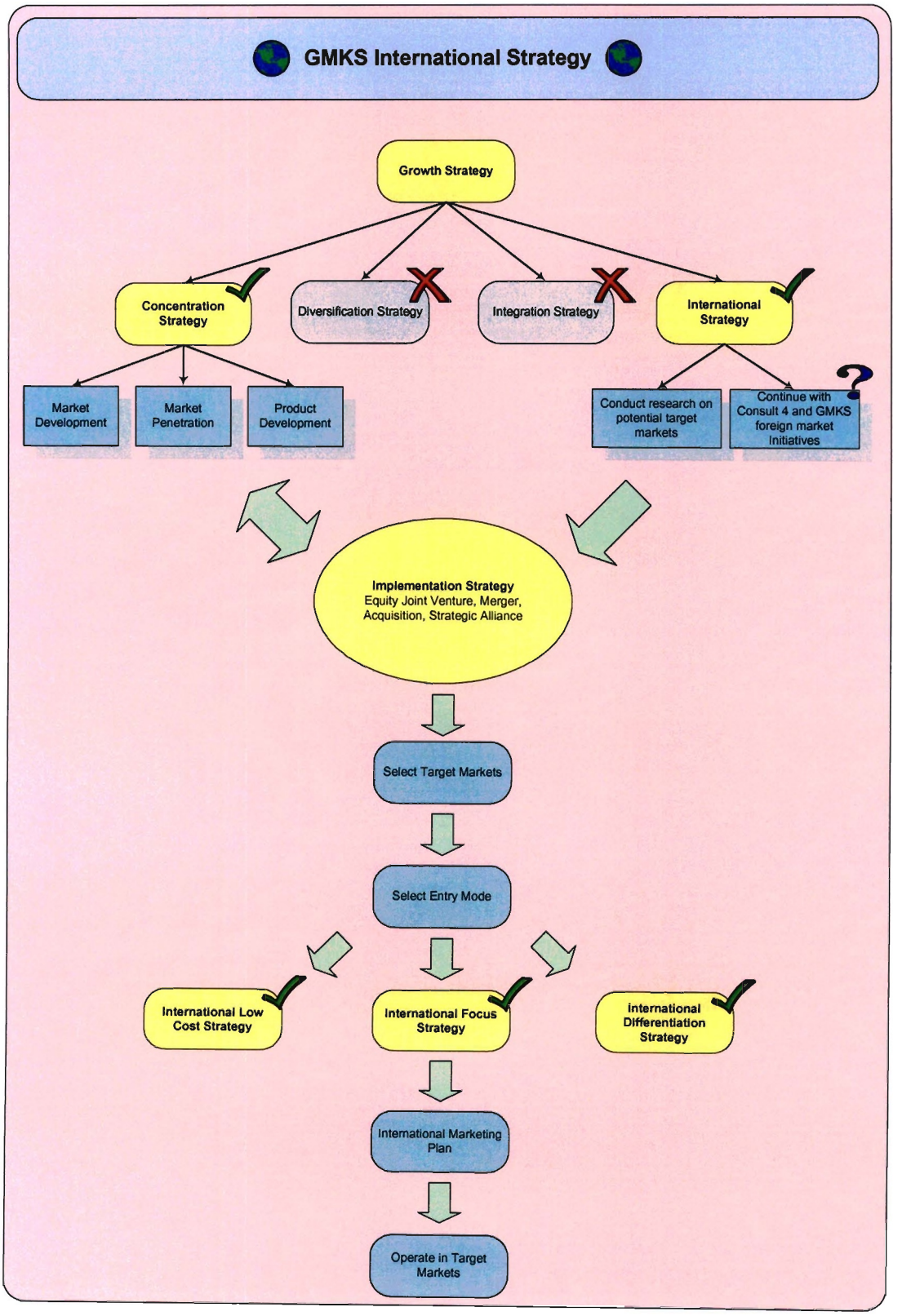

Figure 5.1: GMKS International Strategy Model
Source: Own

5.5.1 Growth Strategy

It has become apparent through this study, that GMKS cannot have an international strategy without a strong home base. It is recommended that the firm concentrates on its primary line of business and looks for ways to meet its growth objectives through increasing its level of operations in the primary business i.e. civil engineering. The home base should be strengthened through a concentration strategy with three areas of focus namely; market development, market penetration and product development. The intention of this strategy is to become a major competitor in the domestic market, which would then act as the catalyst for international expansion.

The guiding principle must be that the strategy produces a strong fit between GMKS's internal capabilities (strengths and weaknesses) and its external environment (opportunities and threats). Diversification and integration strategies are not considered to be areas where GMKS could gain competitive advantage. The resources required for such strategies are considered to be high and are not justifiable in the firm's current situation. Although, a strategy of related diversification should not be ruled out completely, as opportunities may arise which could justify this approach.

Simultaneously, and as part of the growth strategy, the firm should continue to pursue foreign market opportunities outside SA borders. This should be limited to the closest SADC countries, and should be undertaken at the firm's current rate of investment in these markets. The involvement in Consult 4 is questionable as it is considered that GMKS should concentrate on setting up its own international identity and brand. GMKS should remain part of Consult 4 in the short-term, but should sever ties once the company has achieved a critical mass to compete effectively on its own. Instead of allocating resources to Consult 4, more time and money should be devoted to analysing and assessing potential target markets. Ideally, this should include setting up a team of individuals (2 or more) who can dedicate themselves to this task. In order to be cost effective, this task should include all activities of gathering relevant market intelligence, identifying and analysing domestic and international trends and issues, seeking out potential opportunities, and identifying threats.

5.5.2 Implementation Strategy

Having identified and selected the growth strategy, GMKS must choose a way to implement it. There are several options available to the firm including, mergers, acquisitions, equity joint ventures and strategic alliances. Based on the analysis of the environment and the firm's resources, it is evident that the firm needs to overcome a few weaknesses and potential threats in the domestic environment. In addition, there are several opportunities that must be realised. Whilst the firm needs to penetrate the domestic market, the firm must also consider the requirements of becoming a recognised competitor as well as its future strategic direction.

A merger with a firm of similar size or an acquisition with the right mix of core competencies is considered to be the most appropriate implementation strategy for the firm. This should be the primary implementation strategy of the firm, which is to be used as the platform for further implementation strategies. The option that is chosen should be implemented as soon as all necessary research and analysis is undertaken. Depending on the choice, such a strategy will allow the firm to maintain a reasonably high degree of control, albeit the extent of investment and risk may be high. The strategy must lead to the firm achieving better geographical coverage and increased domestic market share. Although GMKS could take the route of achieving these objectives on its own strength, by establishing its own offices at considerable expense, it is highly unlikely that this strategy would work. An equity joint venture may be less risky but is not considered to be the right strategy as GMKS has built up a significant reputation for a firm of its size, and should use this reputation to gain maximum exposure for itself.

A strategic alliance with a major SA construction company is also seen as a very lucrative opportunity for GMKS. This is something that should be considered after GMKS has implemented its primary implementation strategy as highlighted above. Many of the larger SA construction companies have already established themselves as international companies. This fact coupled with the current trends of Private Finance Initiatives (PFI's) and Design-Build projects, a strategic alliance with such a company

is considered to be of paramount importance. In order to uncover opportunities for design-build work, GMKS need to cultivate relationships with clients and track potential projects during their formative stages. The larger or more complex a project is, the longer and more elaborate this process is likely to be, thereby allowing more opportunity for the firm to identify and assess prospects. If GMKS decides to pursue a design-build project based upon its own strengths, the decision to continue must be contingent on finding a suitable construction partner. Irrespective of the strength of GMKS's credentials, working on a design-build project, the firm will almost certainly be a member of a larger team and the prospects for producing a winning proposal will be intertwined with the qualifications and abilities of the other firms on the team.

In addition to the various strategic alternatives highlighted above, GMKS is currently considered to be an 'eligible bachelor' i.e. the company is well suited for a possible acquisition by an international firm wishing to breach the African markets. Many international firms see South Africa as a gateway to Africa, and are constantly looking for good opportunities in terms of strategic acquisitions. This situation must not be seen as a threat by GMKS but rather as a possible opportunity, and should not be swept under the carpet. As GMKS shareholders and management would like to retain control of the company, this scenario is not particularly lucrative, except in the case where the international firm sees enough opportunity to invest heavily in the firm. This situation would suit GMKS ideally as it could provide the much-needed resources to expand into African markets and provide benefits from experience curve effects through the international firm. The financial backing from such a firm would also allow GMKS to pursue other strategies such as taking equity stakes in projects through PFI's and PPP's. This would help the firm to build up an asset base that could be leveraged to diversify the firm's operations etc. It is envisaged that through the growth and primary implementation strategies recommended, GMKS would become even more attractive for such opportunities and hence should not pursue the option highlighted above until these strategies have materialised.

5.5.3 Selection of Target Markets

As illustrated in Figure 2.23, there are many factors that affect the selection of foreign markets. All of these factors should be thoroughly assessed before targeting a particular market. The analysis and evaluation should take place in conjunction with GMKS's current foreign market initiatives included under the *growth strategy*.

Notwithstanding the above, and based on the information researched and presented in this study, it is recommended that the GMKS international strategy be aimed at developing or newly industrialised countries. Developing countries have a much higher demand for infrastructure as a proportion of GDP than advanced industrialised countries. Many of the developing countries also do not have developed consulting engineering industries and therefore ease of entry into these markets is high. Although advanced industrialised economies such as the USA and Europe have fairly open markets, competition in these markets is intense and is dominated by numerous large international consultants. Furthermore, South African consultants are generally not considered to be technically superior than their European and American counterparts.

There are two main target markets that are considered to be extremely lucrative namely, China and the SADC region. GMKS is fairly conversant with the SADC region through its own activities in the region as well as through Consult 4, however, not much is known about the China and the Chinese consulting engineering framework.

SADC Region

The amount of construction activity in the SADC region is considered to be vast. Many of the key projects are government financed and some have international support. There are also many less competitive and more profitable local and private clients or non-governmental organisations (NGO's) with projects in factories, mines, schools etc. Financing development is one of the key opportunities in the SADC region. Coupled with the incentives provided in the various SADC countries to attract investment, the opportunities for Private-Partner Initiatives (PPI's) in various sectors

of civil and industrial engineering work such as transportation, water and sanitation and energy, are enormous. In addition to the above, GMKS has delivered services in several of the SADC countries, which coupled with the proximity of these markets make the SADC region extremely attractive. It is quite clear that the strategy for the SADC region should be to try and provide and deliver complete infrastructure solutions. This is borne by the fact that many of the countries are plagued by institutional barriers to infrastructure development and thus favour firms that have capabilities to provide technical solutions coupled with funding and management solutions.

China

As the UK was a superpower in the 19th century and the USA in the 20th century, there are indications that China may be the world power in the 21st century. It is not since the last 20 years that China has moved away from a centralised planning economy to a more outward focused economy. China's doors have opened to the rest of the world and in doing so presents enormous opportunities for South African engineering consultants. China's WTO accession, the Beijing 2008 Olympics, and the various development and reform strategies in the mainland, augur well for international firms to participate in the infrastructure development of the Chinese mainland. China's economy is poised to overtake that of the USA in the next few years and hence all indications are that the Chinese construction market will be the world's major market which is currently estimated at well over US $300 million. As institutional investors continue to provide the much-needed foreign direct investment, there will be many opportunities for experienced engineering consultants and contractors alike.

Opportunities are also especially evident in the project management sector that was previously plagued by the lack of budgeting, accountability and timeframes which were prevalent under the inward focused economy. Although a number of initiatives have been established since the change in focus, for example the establishment of project management institutes etc., there are still indications that modern project management skills are required.

In addition, the privatisation of China's large contingent of state owned enterprises would lead to various modernisation and refurbishment programmes that would present further opportunities to the international engineering industry. Opportunities would also be present in the management and operation of former state owned enterprises such as transport facilities, water and wastewater distribution facilities etc.

Based on the preliminary investigation undertaken in this study, it is recommended that GMKS undertakes all necessary steps now, to gain the experience and knowledge on international projects that would assist in capitalising on opportunities that may present themselves now and in the future in countries such as China.

5.5.4 Mode of Entry

The mode of entry into the selected target market requires considerable investigation prior to selection. As illustrated in Figure 2.16, these include an assessment of factors ranging from the country's business environment to the firm's resources. Each country is an individual state and has different ways of doing business. Differences in documentation, licences, taxes, culture etc, all can play a major role in success or failure of a cross-border strategy. In addition, the need to be in friendly association with officials, where the majority of projects are state run, is of paramount importance, and is especially applicable in Africa.

From the preliminary investigations undertaken on the two potential target markets, it is evident that partnering with local firms and possibly another international group is the key to success in both markets.

An additional point to entry in the African markets is the feature of privatisation programmes, to which a number of SADC countries have subscribed. This consists of an array of ventures up for offer, including engineering and construction companies. In Africa, it is also a well known fact that in order to secure work, firms need to be established in the locality with a long-term view preferred by many clients.

The Chinese market is not for the faint-hearted or for those with a narrow or short-term view. The most important things to do in China is to gain assistance in making contacts and understanding the social and business culture, and to make and establish friendships over a period of time. No business will be secured until an environment of trust has been established. Naturally, this cannot be done overnight, but GMKS must initiate the process now.

Notwithstanding the entry modes described above, GMKS must also capitalise on other initiatives that are supported by the SA government and engineering bodies such as SAACE, which promote the exporting of services. This entry mode should always be part of GMKS's international strategy and would give the firm access to other markets such as Ireland etc. This strategy will depend on GMKS's ability to keep abreast of technological advancement and the technological abilities of the firm. It is therefore recommended that GMKS undertake the necessary research to understand these requirements, and then take the necessary steps to position itself as one of the front-runners for potential opportunities.

5.5.5 Business Level Strategy

The business level strategy adopted by the firm depends to a large extent on the firm's objectives and the requirements and conditions of various target markets. From the analysis and evaluation undertaken in this study, it is evident that GMKS could pursue a combination of business level strategies i.e. low cost, focus and differentiation. However, as more and more clients are looking for technical superiority and differentiated services, it appears that an international focus differentiation strategy will work well in the short-term. Both target markets selected are attractive for focusing because there are a relatively high number of segments within each market that are big enough to be profitable and have good growth potential. A low cost strategy could be adopted after the firm has achieved economies of scale and in particular segments where clients are especially sensitive to price.

5.5.6 International Marketing Plan

The analysis of GMKS's marketing strategy outlined in Chapter Four reveals that the firm's service and distribution strategies wholly support an international strategy, and undeniably serves the best interests of the firm. The firm's aim is to provide an excellent service and continually improve overall performance for clients, while simultaneously fostering innovation and encouraging personal and professional development of employees.

Whilst the firm presently undertakes various promotional activities, it is recommended that the firm design a comprehensive promotion strategy. This should contain a detailed outline on what, how and when promotional initiatives will be undertaken to promote the firm. For the envisaged growth and expansion of the firm, it is essential that the promotional efforts are adaptable and incorporate the future changes of the firm. It is further recommended that the firm develop an Internet strategy, which will form part of its strategy to become technologically equipped. The Internet should not only be used as a tool to get business exposure, but also to provide a platform for technology based solutions and service delivery. This is considered to be one of the key success factors in GMKS's future international competitiveness.

One of the major shortcomings of GMKS's current marketing strategy is the issue of marketing research. GMKS does not devote sufficient resources to this activity, which is considered to be one of the most important aspects influencing the firm's operations. It is imperative that the firm develops dedicated functions for this task as suggested under the *growth strategy* of the firm.

5.6 Summary

The information highlighted in the preceding chapters brings to the fore a wealth of information relating to the acquisition of international projects for South African civil engineering consultancies. The strategy for such acquisitions is indeed complex and is dependent on numerous factors both within and outside the organisation. It is the synergy of these forces that allows for the successful acquisition of international

projects. Bidding for an international project sounds simple, but the fundamental question surrounding international acquisitions is more to do with why the company desires it and what it intends doing with it. If a proper strategy is not developed in the first instance, the chances of succeeding in the international context will undoubtedly lead to failure. There are no "born globals" in civil engineering. Consultancies are developed, resourced and positioned to firstly penetrate local markets, which is then used as the underlying base for further expansion. This is the classical internationalisation or globalisation approach and one that should be used by GMKS.

South African Civil Engineering consultants must develop and apply leading edge technologies if they are to be successful in the international environment. This will not only help them to develop and maintain an international reputation but will also assist to keep their order books' in a healthy condition. It is imperative that the civil engineering industry and the South African government work in an active partnership to optimise the use of resources to provide solutions that will underpin the growth of the industry's international reputation and export earnings.

International Competitiveness

The global business environment in which the civil engineering consultant operates has changed dramatically in recent times, the changes of which are far more evident in the last 10 years than in the previous 5 decades. The demand for infrastructure in developing countries continues to drive the international civil engineering industry, however, at the same time many of these countries now also rely on their own resources and capabilities to design and build the desired infrastructure.

In addition, in Africa for example, South African civil engineering companies have to compete with many well-established overseas counterparts who have already established worldwide reputations for service delivery and value added. The question then arises; can South African consultants add value meaningfully? The answer to this question is quite clear. Many of the South African consultants have already demonstrated that they have the skills and technology to match many of the "heavy weight" consultants in the international arena. Where SA companies fall short, is the

lack of experience on international projects. International trends indicate that many of the large engineering consultancies are re-engineering their business approach to focus on core competencies and delivering client needs. South African companies should draw on this trend and adopt strategies consistent with the changing environment.

The future of GMKS

In light of the general conclusions and recommendations highlighted above, where then does GMKS fit into the international environment? Reflecting on my research, the formulation of an international strategy has a numbers of diverse facets, which extend across the boundaries of prescriptive and emergent approaches. Yet, each provides insight and guidance in the development of an international strategy. This dissertation gives preferences to an eclectic approach. Therefore, should the firm actively choose to implement the international strategy formulated in this study, it is envisaged that the firm would acquire and manage international projects successfully, and; by becoming a major international competitor in a relatively short period, will push the firm to a higher plateau. In the end, it is evident from this study that the future of the firm lies in the hands of the company's major stakeholders.

REFERENCES

Ambrosini, V. with Johnson, G. and Scholes, K. (2000). *Exploring Techniques of Analysing and Evaluation in Strategic Management*, Prentice Hall.

Badaracco, J.L. (1998). The Discipline of Building Character, *Harvard Business Review* vol. 76, no. 2, March-April, pp. 115-124.

Blignault, I. (2001). Project Management and the Internet, *Civil Engineering* vol. 9, no. 9, October, pp. 14-16.

Bolton, A. (2001). Global Gains. *New Civil Engineer International*, December, pp. 19-20.

Bowman, C., Asch, D. (1996). *Managing Strategy*, Macmillan Business.

Boyd, C. (2003). *Chapter 7: Corporate Strategies* (Online), Available at: http://www.mgt.smsu.edu/mgt487/corpstrt.htm.

Bruce, B. (1999). Risk Management through the Anatomy of a Project, *Civil Engineering* vol. 7, no. 5, May, pp. 22-23.

Chee, H., Harris, R. (1998). *Global Marketing Strategy*, Pitman Publishing.

Clough, G.W. (2000). *Civil Engineering in the Next Millennium* (Online). Available at: http://web.mit.edu/civenv/www/colloquium.clough.html.

Communicating via the Internet (2002). *Civil Engineering* vol. 10, no. 11, November/December, pp. 21-22.

Crossan, M.M., Lane, W.L.,White, R.E., Klus, L. (1996). The Improving Organization: Where Planning Meets Opportunity, *Organizational Dynamics* vol. 24, no. 4, pp. 20-34.

Duniach-Smith, K. (2003*). International Entry Mode Choice in a Franchise Setting*, paper presented at EMNet Conference, Vienna, June 23.

Ethics for Civil Engineers (2001). *Civil Engineering* vol. 9, no. 9, October, p. 31.

Garvin, D.A. (1993). Building a Learning Organization, *Harvard Business Review*, July-August, pp. 78-91.

The Geotechnical Industry in South Africa: Quo Vadis in the New Millennium. (2000). *Civil Engineering* vol. 8, no. 5, June, p. 9.

Grundy, T., Brown, L. (2002). *Strategic Project Management*, Thomson Learning, London.

Hamel, G., Prahalad, C.K. (1989). Strategic Intent, *Harvard Business Review* vol. 67, no. 3, May-June, pp. 63-76.

Hitt, M.A., Ireland, R.D., Hoskisson, R.E. (2001). *Strategic Management: Competitiveness and Globalisation*, 4th edition, South Western College Publishing.

Hollensen, S. (2001). *Global Marketing: A Market-Responsive Approach*, 2nd edition, Pearson Education Limited, England.

Johnson, G., Scholes, K. (2002). Exploring Corporate Strategy, Pearson Education Limited, Harlow.

Kaluza, B., Blecker, T. (2001). *Cost Leadership Strategy, Frankfurter Allgemeine Zeitung (English)*, November.

Katsioloudes, M.I. (2002). *Global Strategic Planning: Cultural Perspectives for Profit and Nonprofit Organizations*, Butterworth-Heineman.

Labuschagne, L. (2001a). Why Does Communication Matter?, *Civil Engineering* vol. 9, no. 8, September, pp. 26-27.

Labuschagne, L. (2001b). A Two Way Street, *Civil Engineering* vol. 9, no. 9, October, pp. 28-29.

Labuschagne, L. (2001c). Planning to Grab your Share, *Civil Engineering* vol. 9, no. 10, November/December, pp. 25-26.

Labuschagne, L. (2002). Scenarios for the Future [Part 2], *Civil Engineering* vol. 10, no. 4, April, pp. 32-33.

Laroche, L. (1998). Managing Cross-Cultural Differences in International Projects, *Engineering Dimensions*, November/December, pp.34-37.

Lynch, R. (2000). Corporate Strategy, 2nd edition, Prentice-Hall.

Mealey, M. (1999). Casting Their Net, *Civil Engineering (USA)* vol. 69, no. 2, February.

Mintzberg, H. (1994). The Fall and Rise of Strategic Planning, *Harvard Business Review*, January-February, pp. 107-114.

Oxer, J.P. (1998). Into the 21st Century: A Great Time to be a Civil Engineer, *Journal of Management in Engineering* vol. 14, no. 3, May-June. pp. 27-29.

Pinto, J.K., Kharbanda, Om P. (1996). How to Fail in Project Management (Without Really Trying), *Blue Horizons* vol. 39, pp. 45-53.

Porter, M.E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance,* The Free Press, New York.

Porter, M.E. (1996). What is Strategy, *Harvard Business Review* vol. 76, no. 6, November-December, pp. 61-78.

Porter, M.E. (2001). Strategy and the Internet, *Harvard Business Review* vol. 76, no. 6, March, pp. 62-78.

Raimond, P. (1996). Two Styles of Foresight: Are We Predicting the Future or Inventing It?, *Long Range Planning* vol. 29, no. 2, April, pp. 208-214.

Richardson, H. (2003). Salient Points from SAFCEC's State of the Civil Industry Report, *Civil Engineering* vol. 11, no. 3, March, p.10.

Root, F.R. (1987). *Entry Strategies for International Markets*, Lexington Books, Lexington, MA.

Rugman, A. (1998). Multinationals as Regional Flagships, as Business goes Global, Part 1, *Financial Times*, February 10/11.

Shackman, G., Liu, Y-L., Wang, G. (2002). *Why does a society develop the way it does?* (Online), Available at: http://gsociology.icaap.org/report/summary2.htm

Teal, T. (1996). The Human Side of Management, *Harvard Business Review*, November-December, pp. 35-38.

Teece, T.J., Pisano, G., Shuen, A. (1997). Dynamic Capabilities and Strategic Management, *Strategic Management Journal* vol. 18, no. 7, pp. 509-533.

Thompson, A.A., Strickland, A.J. (2003). *Strategic Management: Concepts and Cases*, 13th edition, McGraw-Hill International.

Voegtli, C. (1998). Project Management - Beyond Schedules and Budgets, *IEEE Engineering Management Review* vol. 26, no. 4.

The World Bank Group: Procurement (2003). (Online), Available at: http://www.worldbank.org/html/opr/procure/.