DIRECTION OF BUSINESS STRATEGY AND FUTURE TRENDS

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To whom it may concern:

Owing to the sensitive nature of some of the information and material contained within this study, duplication or circulation of the study is prohibited for a period of at least ten (10) years.

Sincerely

Mr. M. Govender
Smiths Manufacturing (Pty) Ltd.

DECLARATION

I hereby declare that this work presented is the original work of Mr. M. Govender [Devon]. This dissertation is the representation of my thoughts. Any quotes or references that have been made do not belong to me, they have been granted the credit and recognition accordingly. This work has not previously been accepted in substance for any degree and is not concurrently submitted in candidature for any degree.

Signed: .....

Dated: 12-9-03

STATEMENT 1

This dissertation is being submitted in partial fulfillment of the requirements for the Masters in Business Administration.

Signed: .....

Dated: 12-9-03

STATEMENT 2

This dissertation is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged within the text and explicit references are included in the bibliography appended at the end of this study.

Signed: .....

Dated: 12-9-03

Acknowledgements

Dedication to –

God almighty, my source of inner strength
My family, who is the foundation of my life
My girlfriend, who stands by my side, good times and bad
My friends and colleagues, who supported and inspired me throughout this study
And last, but not least, Professor Elza Thomson

My sincere gratitude goes out to my parents Morgan and Cookie Govender for their invaluable support, unconditional love, and understanding throughout my academic career, particularly the MBA and this thesis.

A special mention must be made to Professor Elza Thompson, for her unswerving guidance and inspiration.

Abstract

To make profits in such a world, unit costs must be reduced to the minimum possible and consistent with acceptable quality. To do this firms are endeavouring to combine lean production with the maximisation of economies of scale, that is, to achieve the lowest possible long run average cost curve and the lowest point on that curve. The process of consolidation and globalisation can be seen as driven by the latter whilst initiatives such as internet procurement, tendering, and production systems, the former.

The automotive industry of the early 21st century, barely one hundred years old, reaches into the lives of almost everybody on the planet. The business of making these vehicles is the largest manufacturing sector in the world, a core part of the leading industrial nations and of growing significance elsewhere. The automotive industry is huge by almost any measure, complex, and always rapidly changing. In recent years the environmental consequences of automobility have thrust the industry into the heart of the debate over wealth generation and sustainability.

"An industry's key success factors are those things that most affect the industry members ability to prosper in the marketplace – the particular strategy elements, product attributes, resources, competencies, competitive capabilities, and business outcomes that spell the difference between profit and loss, and ultimately between competitiveness and failure" *(Thompson and Strickland:2003).*

This paper examines the future strategic focus that a local South African automotive firm ought to adopt to ensure competitive success in the harsh global auto industry. Smiths Manufacturing is on its way to becoming a world class company, limited in terms of local market size and firm infrastructure, yet astute in terms of systems, products and technology. Although Smiths is currently experiencing success and plans for short term growth, indications are that the whole strategic focus is being diminished in retaining its competitiveness in lieu of expansion and operations. Throughout this research thesis it will be observed that Smiths is competitive, but its *competitive advantage* is not increasing relatively. Smiths has to do something unique, and this unique competitive differential advantage can be induced on the soft side, i.e. Smith's social capital – ***people***.

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Chapter 1

1.1) Introduction

"Cheshire Pussy" she [Alice] began..."would you tell me, please, which way I ought to go from here?". "That depends a good deal on where you want to get to," said the Cat. – Lewis Carroll.

The task of crafting, implementing, and executing company strategies are the heart and soul of managing a business enterprise. A company's strategy is the game plan management is using to stake out a market position, conduct its operations, attract and please customers, compete successfully, and achieve organizational objectives. In crafting a strategy, management is saying, in effect, "Among all the paths and actions we could have chosen, we have decided to move in this direction, focus on these markets and customer needs, compete in this fashion, allocate our resources and energies in these ways, and rely on these particular approaches to doing business". A strategy thus entails managerial choices among alternatives and signals organizational commitment to specific markets, competitive approaches, and ways of operating *(Strickland, Thompson,2003:3).*

Key factors for success are rather easier to define in principle than examine in practice. However, if they prompt a thorough examination of what drives profitability or other measures of success in an industry and in the company itself, then they are worthwhile considering. In the context of strategy, key success factors may be particularly concerned with adding value to the organization. When key success factors have been correctly identified, they can provide a checklist for the rest of the strategic analysis process. Having identified these KSF's and other pertinent tools of strategy, this paper analyses strategic approaches in order to ensure survival in the harsh competitive climate of the global automotive industry. This methodology will be using as a guiding beacon light in determining whether the Heat Exchanger Plant [SBU] of *Smiths Manufacturing is sailing in the right direction to face the future, particularly so in terms of its strategic focus and intent.*

1.2) Problem Statement

What is the most appropriate strategic course for an organisation in a developing country to ensure survival, success and growth in the dynamic, globalized, automotive marketplace, in the face of continually increasing competition and ever-changing technology?

1.3) Research Objectives

Essentially this study will focus specifically on the Heat Exchanger Plant of Smiths Manufacturing SA, an air-conditioner/vehicle climate control manufacturer. The objectives of the study can be defined as follows:

- To determine what changes are occurring in the market arenas in which we operate, and what implications do these changes have to the direction in which we need to move in.
- To identify the manufacturer's circumstances and position within the industry.
- To identify the manufacturer's strategic options for the future.
- To determine the STRATEGIC PATH FORWARD using strategic tools of analysis.

1.4) <u>Research Design and Methodology</u>

1.4.1) Presentation of Case Study

As the study is of a qualitative, rather than quantitative nature, the approach to the dissertation is one of a case study of an air conditioner manufacturer who operates in the Original Equipment Manufacturer (OEM), P&A (Parts and Accessories Aftermarket), and Export markets.

The first section (chapter 2) of the dissertation will look at appropriate theoretical models, concepts and studies that have a direct, and indirect bearing on the firm, and more importantly, developing a strategic analysis model applicable to suit the firm in this industry.

The second section (chapter 3) introduces the actual case study, i.e. the current state of play of the Heat Exchanger SBU of Smiths Manufacturing (Pty) Ltd. This chapter introduces the firm, and analyses the current situation of the company in light of all the appropriate theories presented in the previous chapter. The case study itself comprises of a strategic analysis of the firm. In conducting the strategic analysis a review will be done of existing research and studies that have been completed on the air-conditioning sector in both South Africa and globally.

Chapter 4 evaluates the company's position, predominantly in terms of the SWOT, Porter's theories, and GAP Analysis models, but also integrating other pertinent theories and models too. It highlights the existing gap, in addition breaking down all the strengths, weaknesses, core competencies, enabling culture, opportunities and threats: factorising all these into positives and negatives. In addition, secondary data of the company will be used to evaluate the position of the company and also to identify patterns that may assist in determining the most appropriate way forward, and to underpin future strategies.

Chapter 5 explains how the firm is to turn these negatives into positives to close the GAP by virtue of the instrumental use of strategy theory. Chapter 5 underscores the extent to which these derived analyses fortify the firm's gameplan in implementing their 'sustainable competitive differential advantage' to make gains in terms of market share and shareholder wealth creation. It concludes by performing acceptability, suitability and feasibility evaluation criteria, and closes with optional recommendations.

1.4.2) Data Collection Methods and Analysis

Secondary data is to be collated and thoroughly researched, the sources of which are academic peer reviewed journals, the EBSCO academic and business science website, interviews with personnel at the firm, the Society of Automotive Engineers' papers and journal articles, Business Report, the Institute of Marketing, EcoBulletin, internet searches, books, personal communication, periodicals and newspaper articles. Relevant data has been collected on the rivals in this specialized sector, therefore restricting generalisation of the results of this study to a minimum.

1.4.3) Data Analysis to Identify Strategy Models and Theory

Studies, research papers, journals, meta-analyses, etc have been reviewed in the context of strategy research in the backdrop of the automotive industry to identify the common premise in developing models to characterize the appropriate key elements of strategy. Strategic research will be conducted in the following subject areas:

- The competitive forces within the market
- External forces affecting the market
- Strategies that other manufacturers have employed in preparing for the future
- Global Automotive Trends
- The Industry's Dominant Economic Characteristics
- The future course of the Automotive Industry
- Strategic Options best suited to Smiths

1.4.4) Determination of the Industry's KSF, and Evaluation of Strategic Options

The proposed strategic options will be assessed on three criteria: suitability, acceptability and feasibility. In assessing the suitability of the options numerous theories, models and concepts will be employed: Life Cycle Analysis, Positioning, SWOT, Value Chain Analysis, Business Profile and Portfolio Analysis.

Criticism of the strategy model will be concentrated on four issues –

i) Identification

It is difficult to extract the important factors of rivals, and rivals strategies. Information is not freely available and this in itself poses a slight limitation to this study.

ii) Causality of Relationships

Even though these will be identified, it may not be entirely clear how they operate or act.

iii) Dangers of Generalising

The competitive advantage of a single organisation (by definition) cannot be obtained by seeking what is commonly accepted as bringing success to all organisations in an industry.

iv) Disregard of Emergent Perspectives

Success may come from change in an industry, rather than the identification of the current key factors for success.

1.5) Importance of the Proposed Study (Value to Firm)

The study focuses on the latest technological developments in the air-conditioning sector of the automotive industry, to analyse the degree of gap between a firm in a developing country, and that of developed countries, as well as relative lead/lag in terms of strategic focus, technological innovation and product interest. It also identifies the existing strategy and the extent of distinctive competitive advantage (if any) of this strategy as a 1st tier supplier to local and global OEM's. Further it also serves to give an indication of the future developments of global markets and analyses the direction technology is moving, hence aiming to reduce uncertainty of the future, and exhibiting measures of proactivity in terms of gearing for the future. It also addresses strategic questions such as whether SMSA should maintain being a follower, or aim to be closer to the first movers. In essence, this study serves to provide SMSA with valuable, constructive, data based on attested theories, models and concepts to help remodel strategic decisions with greater insight.

"The future isn't ahead of us. It has already happened" (Kotler:2000)

1.6) Limitations

This research study can only be applied to the South African scenario relative to the global automotive industry, and is specifically limited to automotive air-conditioning enterprises exposed to both local and global markets. Financial data and crucial strategic knowledge (tacit knowledge) may be limiting due to the highly competitive nature of the automotive industry. It is also anticipated that information pertaining to the value chain, i.e. customers and suppliers may possibly be somewhat constraining too in terms of factors of competitiveness.

Chapter 2 – Overview of Theory

"This is not an age of castles, moats, and armour, where people can sustain a competitive advantage for very long. This is an age that calls for cunning, speed and enterprise" *(Aveni,R.D., 1995).*

2.1) Introduction

When executives create strategy, they project themselves and their organisations into the future, creating a path from where they are now to where they want to be some years down the road. In competitive markets, though, no one expects to formulate a detailed long-term plan and follow it mindlessly. As soon as we start down the path, we begin learning – about business conditions, competitors' actions, the quality of our preparations and so forth – and we need to respond flexibly to what we learn.

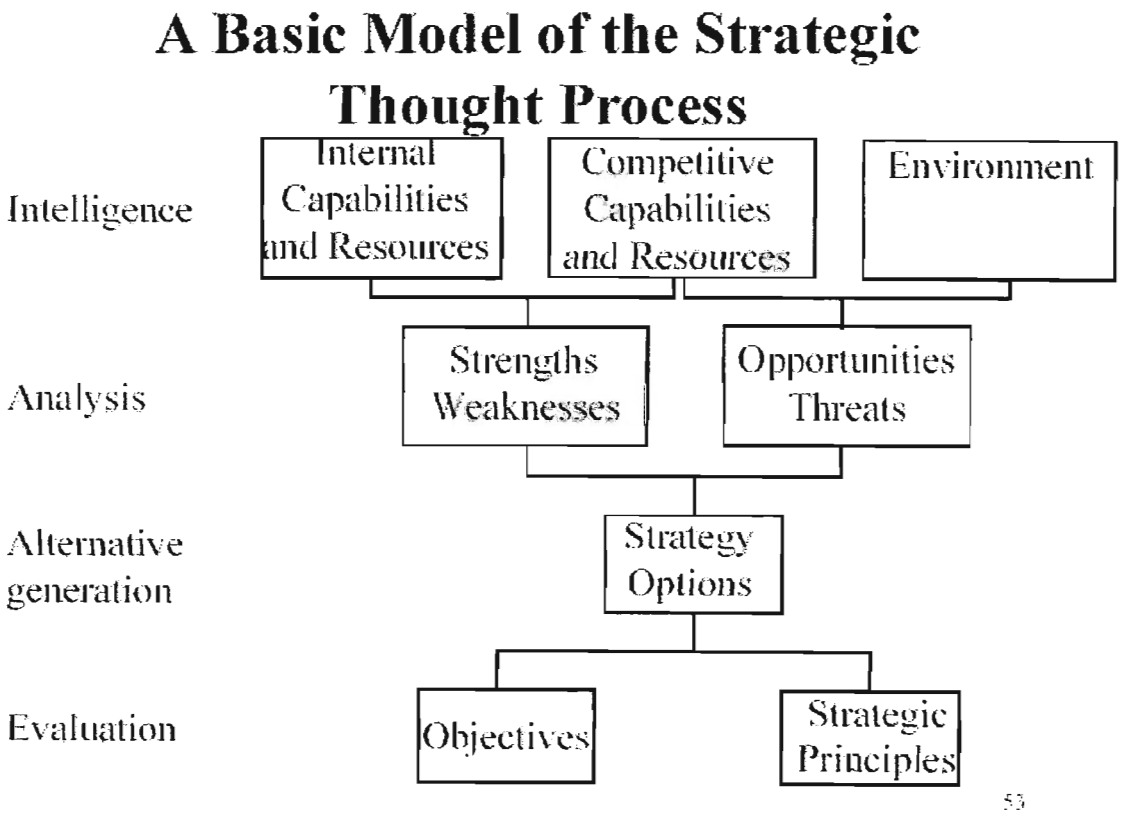


Figure 2.1 - A Basic Model of the Strategic Thought Process

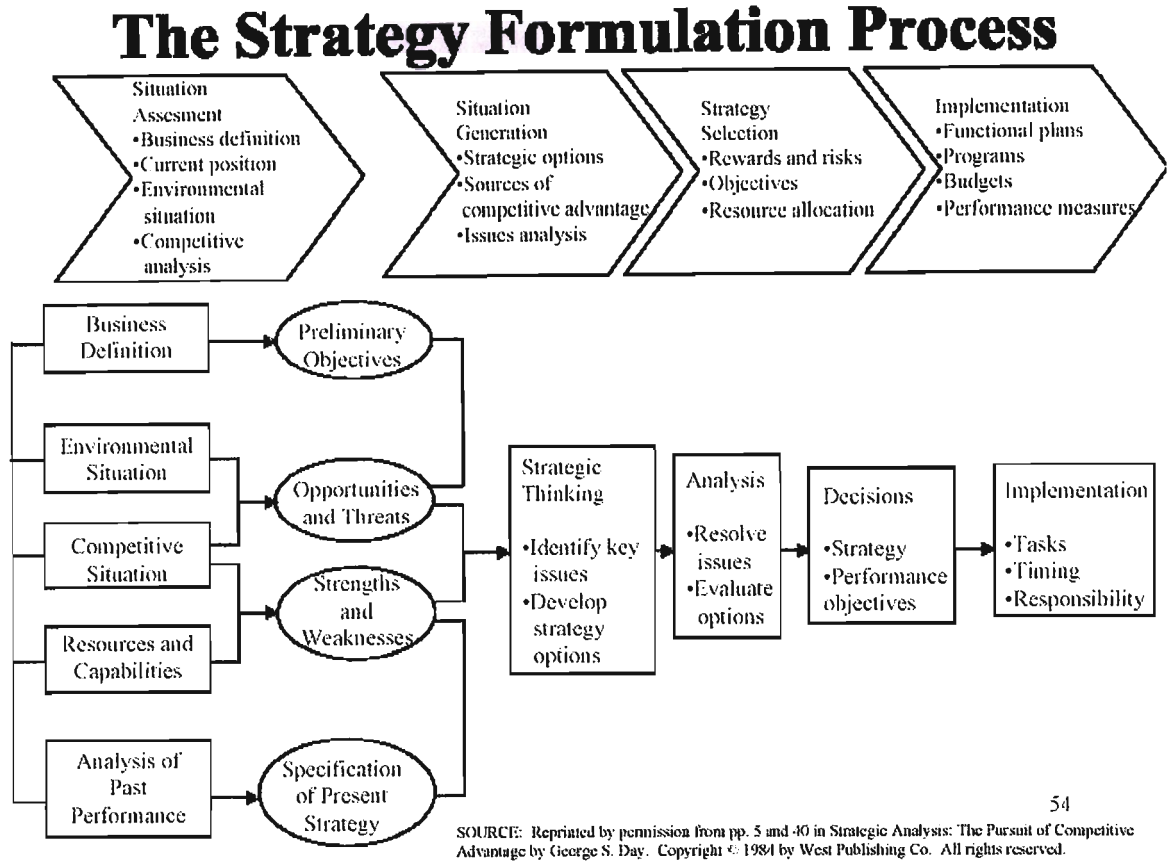
Michael Porter wants you to pursue cost leadership, differentiation, or focus. Treacy and Wiersema want you to select operational excellence, product leadership, or customer intimacy. Hamel and Prahalad want you to focus on a few core competencies. It is alleged that they all are saying "Don't try to be everything to everyone."

Be Unique

Of course, your best strategy is not just to emphasize something but to emphasize something that is unique. Porter *(Thompson, Strickland, 2000)* says the clearest advantage goes to the company that can put together a chain of activities (logistics, operations, marketing, sales, service, procurement, technology, and so on) in a way that delivers value no other company can deliver.

It's Not Just a Numbers Game

Mintzberg *(1996)* has a good point when he says that the world isn't going to stand still while you conduct a detailed analysis and write a strategic plan. You are just not going to have the time to spell everything out in detail. The most you can hope for is a reasonably good definition of the direction you want to take. You and your people have to work out the details day-by-day. Instead of viewing your company as a machine that can be designed, engineered, calibrated, and fine-tuned, think of it as a co-evolving, unpredictable organism.



2.2) Competitive and Managerial Resource Fits

Checking a diversified company's business portfolio for competitive and managerial resource fits involves the following -

i) Determining whether the company's resource strengths are well matched to the key success factors of the businesses it has diversified into - A close match between industry key success factors and company resources and capabilities is a solid sign of good resource fit.

ii) Determining whether the company has ample resource depth to support all its businesses - A diversified company has to guard against stretching its resource base too thin and trying to do too many things. The broader the diversification, the greater the concern about whether the company has sufficient managerial depth and expertise to cope with the diverse range of managerial and operating problems its wide business lineup presents (plus those it may be contemplating getting into).

to cope with the diverse range of managerial and operating problems its wide business lineup presents (plus those it may be contemplating getting into).

iii) Determining whether one or more businesses can benefit from the transfer of resources and/or competitive capabilities from sister businesses - Capabilities that are often good candidates for transfer include short development times in bringing new products to market, strong partnership with key suppliers, an R&D organization capable of generating technological and product opportunities in several different industry arenas simultaneously, a high degree of organizational agility in responding to shifting market conditions and emerging opportunities, or state-of-the-art system for doing business via the Internet. The ability to transfer competitively valuable resources or capabilities from one business to another is a strong signal of resource fit.

iv) Determining whether the company needs to invest in upgrading its resources or capabilities in order to stay ahead of (or at least abreast of) the efforts of rivals - In a world of fast-paced change and competition, managers have to be alert to the need to continually invest in and upgrade the company's resources, however potent its current resources are. All resources depreciate in value as competitors mimic them or retaliate with a different (and perhaps more attractive) resource combination. Upgrading resources and competencies often means going beyond just strengthening what the company already is capable of doing. It may involve adding new capabilities (like the ability to manage a group of diverse international manufacturing plants, technological expertise in related or complementary disciplines, a state-of-the-art-company intranet, or an innovative website that draws many visits and gives all business units greater market exposure); building competencies that allow the company to enter another attractive industry; or widening the company's range of capabilities to match certain competitively valuable capabilities of rivals *(Thompson, Strickland,III:pg 344-345).*

2.3) Key Success Factor Theory

"Winning COMPETITIVE ADVANTAGE often hinges on being distinctively better than rivals at one or more of the KSFs"

A key success factor is a performance area of critical importance in achieving consistently high productivity. There are at least 2 broad categories of key success factors that are common to virtually all organizations: business processes and human processes. Both are crucial to building great companies.

To some extent, every human process issue is a key success factor. Every one has been important since people first formed organizations to accomplish tasks too big to be performed by individuals working alone—and every one will continue to be a challenge as long as people work together. The form each takes is constantly evolving to fit changing circumstances, but every once in a while, major shifts occur which dramatically change what's required in each of these key areas. We're experiencing such a shift right now—moving from the industrial age to a knowledge-based economy.

- KEY SUCCESS FACTORS (KSFs) spell difference between
    - Profit and loss
    - Competitive success or failure
- A KEY SUCCESS FACTOR can be
    - Specific skill or talent
    - Competitive capability
    - Something a firm must do to satisfy customers

Globalization and information technology are placing different, challenging demands on leaders and organizations in virtually every performance area. Here are some highlights of these changes:

Common Types of KEY SUCCESS FACTORS

Technology Related KSF's

- Scientific Research Expertise
- Technical Capability to make Innovative Improvements in Production Processes
- Product Innovation Capability
- Expertise in a given Technology
- Capability to use the Internet for all kinds of E-Commerce activities

Manufacturing Related KSF's

- Low Cost Production Efficiency
- Quality of Manufacture
- High Utilization of Fixed Assets
- Low-Cost Plant locations
- Access to adequate supplies of skilled labour
- High labour productivity
- Low cost product design and engineering
- Ability to manufacture or assemble products that are customized to buyer specifications

Distribution Related KSF's

- A strong network of wholesale distributors/dealers
- Gaining ample space on retailers shelves
- Having company owned retail outlets
- Low distribution costs
- Accurate filling of customer orders
- Short delivery times

Marketing Related KSF's

- Fast, accurate technical assistance
- Couteous customer service
- Accurate filling of buyer orders
- Breadth of product line and product selection
- Merchandising skills
- Attractive styling or packaging
- Customer guarantees and warranties
- Clever advertising

Skills Related KSF's

- Superior workforce talent
- Quality control know-how
- Design expertise
- Expertise in a particular technology
- An ability to develop innovative products and product improvements
- An ability to get newly conceived products past the R&D phase and out into the market very quickly

Organisational Capability

- Superior information systems
- Ability to respond quickly to shifting market conditions
- Superior ability to employ the internet and other aspects of electronic commerce to conduct business
- Managerial experience

Other types of KSF's

- Favourable image or reputation with buyers
- Overall low cost
- Convenient locations
- Pleasant, courteous employees in all customer contact positions
- Access to financial capital
- Patent protection

Thomson, Strickland (2003:107

Table 2.1 – Common Types of Key Success Factors

2.4) Leadership

"Strategic leadership is really very simple – determine where you want to invest, develop a competitive strategic advantage, and get the right leader, who will then select the right team. From thereon, it is just good management" (Rothschild. 1996:p16-19). Unfortunately, many companies don't link the leader with the team and the strategy. Unless all of the pieces fit together, the business will fail.

According to Rothschild (1996), three factors are key to successful strategic leadership –

- *Leader and life-cycle phase must be matched*

  All successful companies have a portfolio of products and probably businesses. Some are growing, others are maturing, and still others declining. A different type of leader is required to lead a business in each of the life-cycle phases. Each phase requires specific attitudes and skills in dealing with changeand risk.

- *Each strategic differentiator requires a different leader and implementation team*

  All successful business units or product lines have a strong, lasting competitive advantage or differentiator. Some are differentiated by their ability to market and sell, some by their ability to innovate and create new products or services, and others by their ability to produce more for less. Leader and team must match the strategic driver.

- *Just as strategies must change, so must leadership*

  Timing is the key – nothing last forever. A strategy may have been successful for a decade or more; a leader may have an unblemished track record and a string of winning years; but neither of these facts can guarantee success in the future.

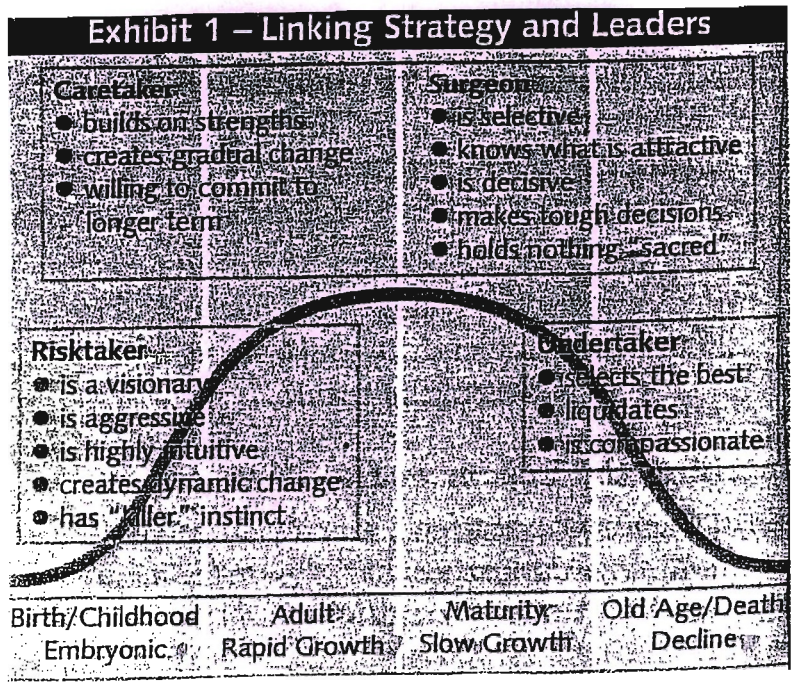


Figure 2.3 – Linking Strategy with Leadership

2.5) Vision

A compelling vision is one of a company's greatest assets. It can be a magnet for attracting talented people. It can serve as a beacon when people temporarily lose their way. It can be a source of energy and inspiration when people are encountering difficult obstacles. The CEO has a primary responsibility to shape, communicate and sustain the vision, but this need not be a solitary task. In fact the more people who can be involved in shaping the vision, the better.

2.6) Communication

In most organizations, there have been 3 pervasive patterns that will no longer work in knowledge-based organizations: (1) the primary flow of information was vertical—within departmental walls that were often impermeable, (2) information was hoarded and used as a source of power over others, and (3) people at the top often withheld crucial strategic information from those lower in the organization in the belief they couldn't handle it.

2.7) Teamwork

Teamwork is more crucial to producing results today than ever before, and at the same time, the very nature of teams and their functions are changing rapidly. In the past it was typical to

go for long periods—even an entire career—as the member of one functional team. Today, membership on more than one team is the norm, and it is unlikely that anyone entering the work force will remain on the first team they join for more than a year at most.

2.8) Alignment

Process reengineering and systems thinking are moving strategic alignment back to the top of many corporate agendas. It has become crystal clear that many of the greatest opportunities for productivity improvement lie at the interfaces of the processes used to produce products and serve customers—and it is fruitless to excel in one process while lagging in others. In fact, it's counterproductive.

2.9) Conflict Management

The new economy increases the potential for conflict in virtually every area of organizational life. Stakeholders are more informed and frequently more demanding. Employees are being asked to do more with less—without the promise of job security that existed in the past; aligning self-interests with corporate interests is not as simple as it used to be. Alliances, mergers, and acquisitions bring together different cultures and set the stage for major internal conflicts and power struggles. Developing good conflict skills needs to be high on everyone's personal and corporate agendas.

2.10) Embracing Change

Individuals and organizations that change before they have to will be the winners in global competition. People vary a lot in their tolerance of change and in the degree to which they actively seek change in their lives. It is difficult to grasp the potential for the continuing acceleration of change on a global scale. With more people having more access to more information, it is reasonable to expect more innovation and more competition on a daily basis. Merely accepting change and learning to tolerate it will not be enough to successfully compete in the next century. We must welcome change as our friend.

2.11) Organisational Learning

Leaders and managers have always given lip service to the notion of people being their most important asset and to the need for continuous training and development. In most companies,

however, it has been no more than a notion. Most have not been consistent in this crucial area. The same company that will spend $5,000 a year to maintain a machine will not spend $500 to develop an employee. Of all the key success areas, this one is changing the most. The future belongs to learners—to individuals that take responsibility for updating their skills and knowledge, to teams that consciously develop the deep dialogue that enables team members to learn from one another, and to organizations that continuously improve their ability to transform data into value-added, actionable information to serve customers.

Out of all the changes buffeting the corporate world today, a single imperative stands out above all others for individuals and organizations alike—learn to learn rapidly or be prepared to be an observer instead of a player. The global economy will have no mercy on organizations that don't learn rapidly, and organizations that want to survive will have no place for people who aren't committed to learning every day.

Why is learning suddenly so important?

Information is now the most valuable organizational resource in virtually every industry.

Keeping abreast of the rate of change in information is the greatest organizational challenge.

People that can learn rapidly will be in greater demand than ever before.

Corporations that can retain their most talented learners and develop the capacity for organizational learning will enjoy a competitive edge over the rest of the field.

What is a Learning Organization?

A Learning Organization continuously shortens the time it takes to transform data into value-added, actionable information and apply it to achieve outstanding results. In the very near future, learning organizations are the only ones that will be able to survive the rigors of global competition.

2.12) The Strategic Planning Process

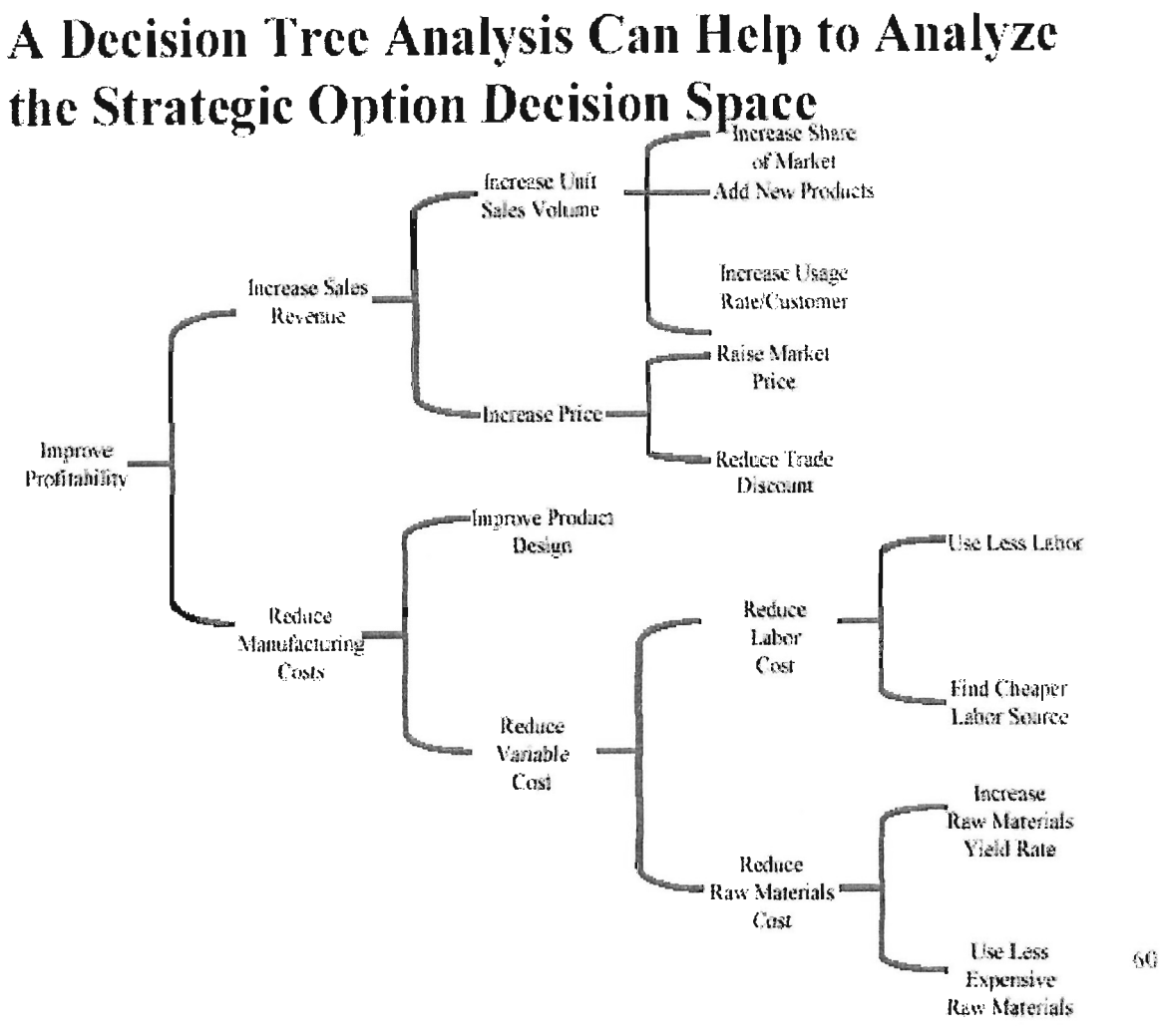
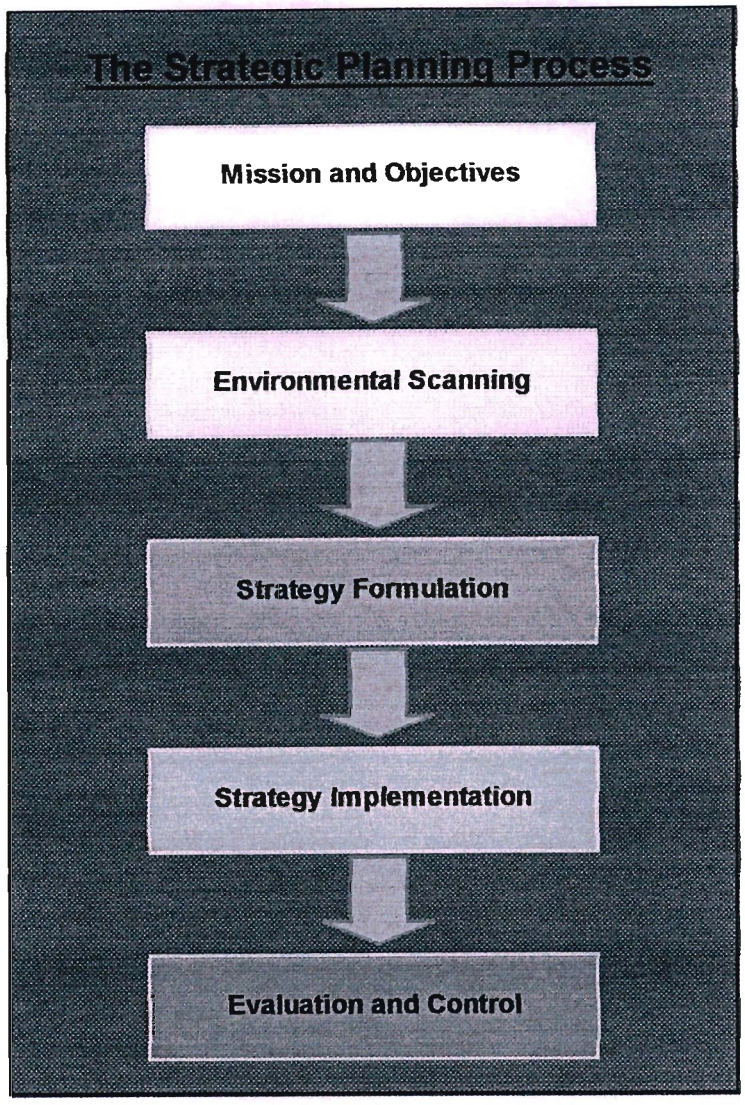


Figure 2.3 – A Decision Tree Analysis

In todays highly competitive business environment, budget oriented planning or forecast based planning methods are insufficient for a large corporation to survive and prosper. The firm must engage in strategic planning that clearly defines objectives and assesses both the internal and external situation to formulate strategy, implement the strategy, evaluate the progress, and make adjustments as necessary to stay on track. A simplified view of the strategic planning process is shown by the following diagram –



(Source – www.quickmba.com/strategy/strategic-planning/)

Figure 2.4 – the Strategic Planning Process

2.13) Strategy Defined

Strategy is the direction and scope of an organization over the long term: which achieves advantage for the organization through its configuration of resources within a changing environment, to meet the needs of markets and to fulfill stakeholder expectations (Johnson and Scholes, 1998:10).

A consequence of these characteristics of strategic decisions is that they are likely to be complex in nature. This is especially so in organizations with wide geographical scope. Such as multination firms, or wide ranges or products or services. However, there are other

significant problems in developing effective strategies. Strategic decisions may also have to be made in situations of uncertainty: they may involve taking decisions on views of the future which is impossible for managers to be sure about. Strategic decisions are also likely to demand an integrated approach to managing the organization. Unlike functional problems, there is no one area of expertise, or one perspective, that can define or resolve the problems. Managers therefore have to cross functional and operational boundaries to deal with strategic problems and come to agreements with other managers who, inevitably, have different interests and perhaps different priorities. They also have to manage and perhaps change relationships and networks outside the organization, for example, with suppliers, distributors and customers. Strategic decisions may also involve change in organizations. Not only is it problematic to decide upon and plan those changes, it is even more problematic to implement them if the organization has been used to operating in ways, perhaps developed over years, which are not in line with the desired future strategy.

2.14) Mission and Objectives

The mission statement describes the company's business vision, including the unchanging values and purpose of the firm and forward looking visionary goals that guide the pursuit of future opportunities. Guided by the business vision, the firms leaders can define measurable financial and strategic objectives. Financial objectives involve measures such as sales targets and earnings growth. Strategic objectives are related to the firm's business position, and may include measures such as market share and reputation.

2.15) Environmental Scan

The environmental scan includes the following components:

i) Internal Analysis of the Firm

ii) Analysis of the Firms Industry

iii) External Macro-Environment (PEST Analysis)

The internal analysis can identify the firm's strengths, and weaknesses, and the external analysis reveals opportunities and threats. A profile of the strengths, weakness, opportunities and threats is generated by means of the SWOT Analysis.

An Industry Analysis can be performed using a framework developed by Michael Porter known as Porters 5 Forces. This framework evaluates entry barriers, suppliers, customers, substitute products and industry rivalry.

2.16) Strategy Formulation

Given the information from the environmental scan, the firm should match its strengths to the opportunities that it has identified, while addressing its weaknesses and external threats. To attain superior profitability, the firm seeks to develop a competitive advantage over is rivals. A competitive advantage can be based on cost or differentiation. Michael Porter identified three industry-independent generic strategies from which the firm can choose.

2.17) Strategy Implementation

The selected strategy is implemented by means of programs, budgets and procedures. Implementation involves organisation of the firm's resources and motivation of the staff to achieve objectives. The way in which the strategy is implemented can have a significant impact on whether it will be successful. In a large company, those who implement the strategy likely will be different people from those who formulated it. For this reason, care must be taken to communicate the strategy and the reasoning behind it. Otherwise implementation might not succeed if the strategy is misunderstood or if lower level managers resist its temptation because they do not understand why the particular strategy was selected. The implementation of the strategy must be monitored and adjustments made as needed. Evaluation and Control consists of the following steps:

1) Define parameters to be measured
2) Define target values for those parameters
3) Perform measurements
4) Compare measured results to the pre-defined standard
5) Make necessary changes

2.18) Organisational Behaviour

"Its stupid to deny yourself the intellectual capability and constructive attitude of tens of thousands of workers" (Senge, P:1990).

There is clear and abundant evidence that the distinguishing factor for winning organizations of the future is the one thing that offers long term, sustainable shareholder value and cant be replicated by the competition, that is, the PEOPLE. Seventy five percent of executives surveyed globally ranked human performance ahead of productivity and technology as a source of competitive strength[1]. Eighty percent believe that "the ability to attract and retain the best people" would be the primary force influencing business strategy by the year 2010. The correlation is high, maximize the performance of your people, and you maximize the performance of your business[2].

2.19) Core Competencies

According to Hamel and Prahalad (1990), the term 'Core Competencies' is explained as the collective learning and coordination of skills behind the firms product lines. Without core competencies, a large corporation is just a collection of discrete businesses. Core competencies serve as the glue that bonds the business units together into a coherent portfolio. According to Hamel and Prahalad, core competencies arise from the integration of multiple technologies and the coordination of diverse production skills.

There are three useful tests for identifying a core competence. A core competence should:

i) provide access to a wide variety of markets, and

ii) contribute significantly to the end-product benefits, and

iii) be difficult for competitors to imitate.

Cost-cutting moves sometimes destroy the ability to build core competencies. For example, decentralization makes it more difficult to build core competencies because autonomous groups rely on outsourcing of critical tasks, and this outsourcing prevents the firm from developing core competencies in those tasks since it no longer consolidates the know-how that is spread throughout the company.

2.20) Assessing the External Environment

It is important to understand the nature of the external environment facing the organization. As environmental uncertainty increases the environment becomes more dynamic and/or more complex. In static, simple environments the organization can look to more traditional methods of analysis – historical analysis, forecasting – but, off course, simple and static environments are not commonplace. More probable are complex environments, i.e. too difficult to comprehend in totality, and/or dynamic ones, i.e. those that are constantly changing.

Ginter and Duncan (1990) suggest that macro-environmental analysis involves:

i) scanning
ii) monitoring
iii) forecasting
iv) assessing current and future trends

Further, Johnson and Scholes (1999) suggest that it:

i) helps identify long term drivers of change

Bryson (1995) notes that external analysis helps:

i) to provide information on emerging issues and trends
ii) to develop networks and partnerships among scanners and their organizations
iii) to provide useful information for the strategy process
iv) to educate the participants about the scanning function and about specific issues and trends

2.20.1) Competitor Analysis

In order to establish a view on the organizations competitive position, it is necessary to obtain and consider information about competitors. There is evidence that organizations which are good at sensing the environment perform better than those that are not (Norburn, 1974:37). However, a major problem is the difficulties that managers have in understanding the complexity of the environment of a modern organization and relating signals in the environment to likely influences on the organization.

Research which has looked at how managers make sense of their environment emphasizes a number of key points –

i) Managers have to simplify the complexity of the environment they face. It is not possible for them to operate in terms of *perfect knowledge*. Understanding the effect of *simplification processes* is important.

ii) Given the complexity of the environment and its influences on organizations, even if a manager has a very rich understanding of that environment, it is unlikely that this manager will bring that complex understanding to bear for all situation and all decisions. Rather managers access part of that knowledge, i.e. *selective attention.*

The models examined below show how such techniques might be used together to provide an understanding of the competitive position of an organization, and provides guidelines as to its future strategy. By drawing together results of a PESTEL and Five Forces analysis by means of impact analysis, examining competitive standing in the context of market segments, analyzing customer and managers perceptions of value and the consideration of all these in relation to different positions of competitors in relation to the Bowmans Strategy Clock.

A company competing in the market must be very clear of its strategic position in relation to competitors and of its own competitive strategy. This can be done by asking the following crucial questions –

1) To what extent have changes in the industry affected us differently from competitors? How has this yielded opportunities and posed threats differentially between competitors?

2) How do competitors positions differ by market segment?

3) To what extent do different competitors meet the needs of customers in different segments to a greater or lesser extent than rivals?

4) What does this tell us about the different positions in terms of competitive strategies adopted by competition?

5) What does this all suggest about the strategy we should follow?

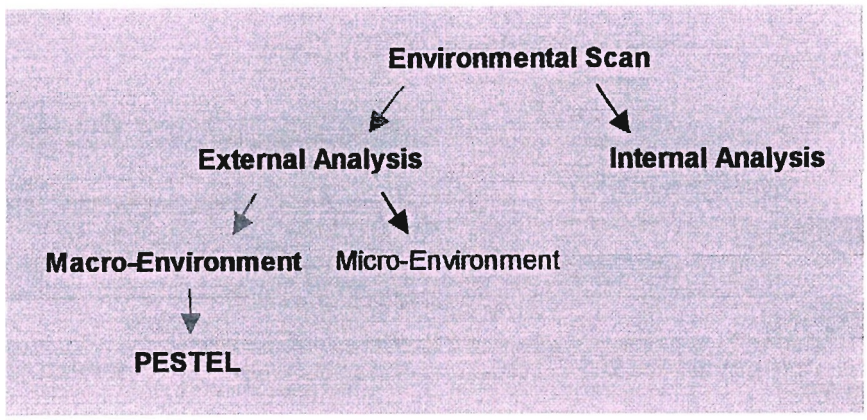
2.20.2) Techniques for Short-to-Medium Term

2.20.2.1) PESTEL

Broadly speaking, a PESTEL analysis involves a "first look" at events. A scan of the external macro-environment in which the firm operates can be expressed in terms of the following factors-

1) Political
2) Economic
3) Social
4) Technological
5) Environment
6) Legal

A PESTEL analysis fits into the overall environmental scan as illustrated below –



Source – http://www.quickmba.com/strategy/pest

Figure 2.5 – The PESTEL Analysis Model

Environmental scanning involves studying and interpreting the sweep of social, political, economic, ecological and technological events in an effort to spot budding trends and conditions that could become driving forces. According to Thompson and Strickland (2003:100), the "purpose of environmental scanning is to raise the consciousness of managers about potential developments that could have an important impact on industry conditions and pose new opportunities or threats".

2.20.2.1.1) Political Factors

Political factors include government regulations and legal issues and define both formal and informal rules under which the firm must operate.

i) Government regulations
ii) Tax policy
iii) Trade restrictions and tariffs
iv) Political stability

2.20.2.1.2) Economic Factors

Economic factors affect the purchasing power of potential customers and the firms cost of capital.

i) Economic growth [GDP]
ii) -Interest rates
iii) Exchange rates
iv) Inflation rates

2.20.2.1.3) Social Factors

Social factors include the demographic and cultural aspects of the external environment. These factors affect customer needs and the size of the potential market.

i) Health consciousness
ii) -Population growth rate
iii) Age distribution
iv) Career attitudes
v) Emphasis on safety

2.20.2.1.4) Technological Factors

Technological factors can lower barriers to entry, reduce minimum efficient production levels, and influence outsourcing decisions.

i) R&D activity
ii) Automation
iii) Technology incentives

2.20.2.2) Analysing the Competitive Industry Environment

An industry analysis usually begins with a general examination of the forces influencing the organization. The objective of such a study is to use this to develop the *competitive advantage* of the organization- to enable it to defeat its rival companies (Lynch, R. 2000:124).

2.20.2.3) Porters 5 Forces – A Model for Industry Analysis

The model of pure competition implies that risk adjusted rates of return should be constant across firms and industries. However, numerous economic studies have affirmed that different industries can sustain different levels of profitability; part of this difference is explained by industry structure.

Michael Porter provided a framework that models an industry as being influenced by five forces. The strategic business manager seeking to develop an edge over rival firms can use this model to better understand the industry context in which the firm operates, in order to develop opportunities in its environment and to protect it against competition and other threats.

2.20.2.3.1) Threat of Substitutes

In Porters model, substitute products refer to products in other industries. To the economist, a threat of substitutes exist when a products demand is a-ffected by the price change of a substitute product. A products price elasticity is affected by s-ubstitute products – as more substitutes become available, the demand becomes more elastic since customers have more alternatives.

2.20.2.3.2) Competitive Rivalry

In the traditional economic model, competition among rival firms drive profits to zero. But competition is not perfect, and firms are not unsophisticated price takers. Rather firms strive for a competitive advantage over their rivals. When a rival acts in a way that elicits a counter response by other firms, rivalry intensifies. The inten-sity of rivalry commonly is referred to

as being cutthroat, intense, moderate, or weak, based on the firms aggressiveness in attempting to gain an advantage.

2.20.2.3.3) Buyer Power

The power of buyers is the impact that customers have on a producing industry. In general, when buyer power is strong, the relationship to the producing industry is near to what an economist terms a monopsony – a market in which there are m-any suppliers and one buyer. Under such market conditions, the buyer sets the price. In reality, few pure monopsonies exist, but frequently there is some asymmetry between the producing industry and buyers.

2.20.2.3.4) Supplier Power

A producing industry requires raw materials – labour, components and other supplies. This requirement leads to buyer-supplier relationships between the industry and the firms that provide it the raw materials used to create products. Suppliers, if powerful, can exert an influence on the producing industry, such as selling raw materials -at a high price to capture some of the industry's profits.

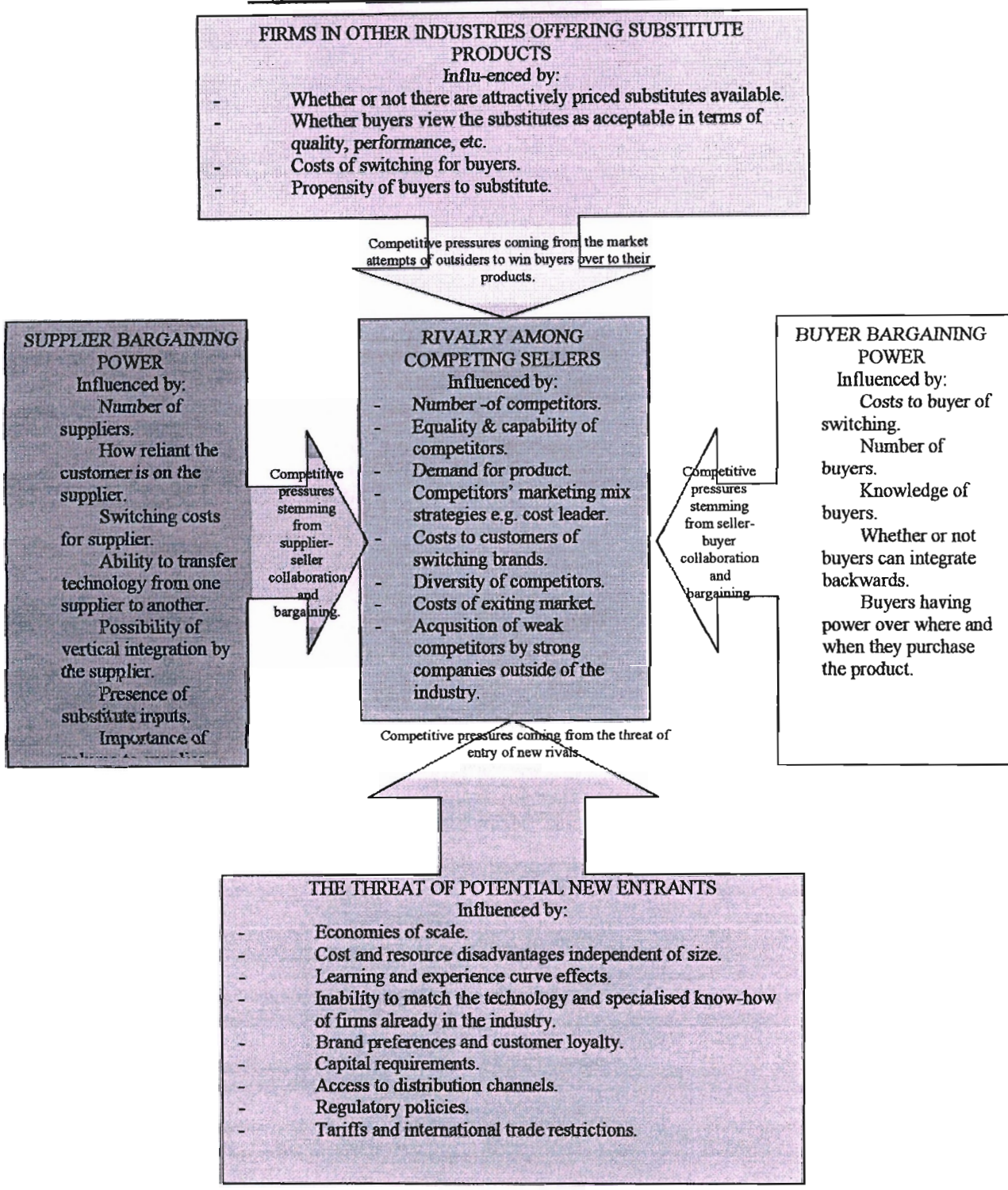
2.20.2.3.5) Barriers to Entry / Threat of Entry

It is not only incumbent rivals that pose a threat to firms in an industry; the possibility that new firms may enter the industry also affects competition. In theory, any firm should be able to enter and exit a market, and if free entry and exit exists, then profits should always be nominal. In reality, however, industries possess characteristics that protect the high profit levels of firms in the market and inhibit additional rivals from en-tering the market. These are barriers to entry. Barriers to entry are unique characteristics that -define the industry. Barriers reduce the rate of entry of new firms, thus maintaining a level of profits for those already in the industry. From a strategic perspective, barriers can be created or exploited to enhance a firm's competitive advantage.

Limitation

These descriptive and analytical models of industry tend to examine the industry at a given state. The nature and fascination of business is that it is- not static.

Figure 2.6 – Porter's Five Forces Model

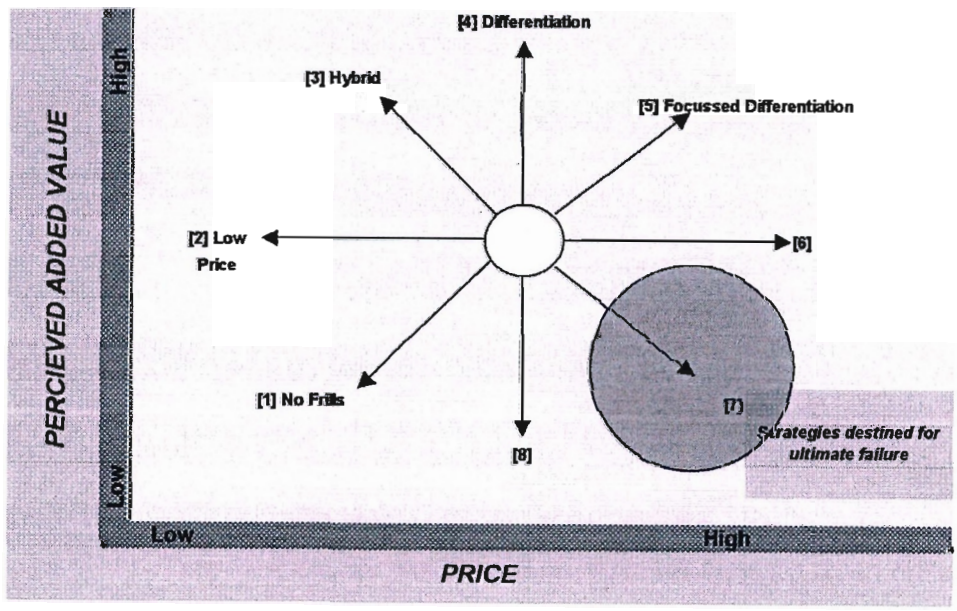


Source: Adapted from Micheal E Porter "How Competitive Forces Shape Strategy", Harvard Business Review 57, no 2 (March-April 1979) pp.137-45. With input from :Thompson & Strickland, Crafting & Executing Strategy 12th Edition, McGraw-Hill (2001) pp. 80-92; Fahey & Randall, The Portable MBA in Strategy, Wiley (1994) p.177; and Pearce & Robinson, Strategic Management 8th Edition, McGraw-Hill Irwin, 2003, p. 70.

2.21) Bowmans Strategy Clock

Porters approach is based on the principle that organizations achieve competitive advantage by providing their customers with what they want, or need, better or more effectively than competitors, and in ways which their competitors find difficult to imitate. Assuming that products or services of different businesses are more or less equally available, customers may choose to purchase from one source rather than another because either (a) the price of the product or service is lower than competitors, or (b) the product or service is perceived by the customer to provide better *added value* than available elsewhere. Although these are very broad generalizations, important implications which represent generic strategic options for achieving competitive advantage flow from them. This is illustrated below-

Figure 2.7 – Bowman's Strategy Clock



	Needs / Risks
1) No frills	Likely to be segment specific
2) Low Price	Risk of price war and low margins; need to be cost leader
3) Hybrid	Low cost base and reinvestment in low price and differentiation
4) Differentiation a) without price premium b) with price premium	 Percieved added value by user, yielding market share benefits Percieved added value sufficient to bear price premium
5) Focussed differentiation	Percieved added value to a particular segment, warranting price premium
6) Increased price/standard value	Higher margins if competitors do not follow; risk of losing market share
7) Increased price/low value	Only feasible in monopoly situation
8) Low value/standard price	Loss of market share

Differentiation

Likely Failure

Source - Johnson and Scholes, 1999:272)

2.22) Porters Generic Competitive Strategies

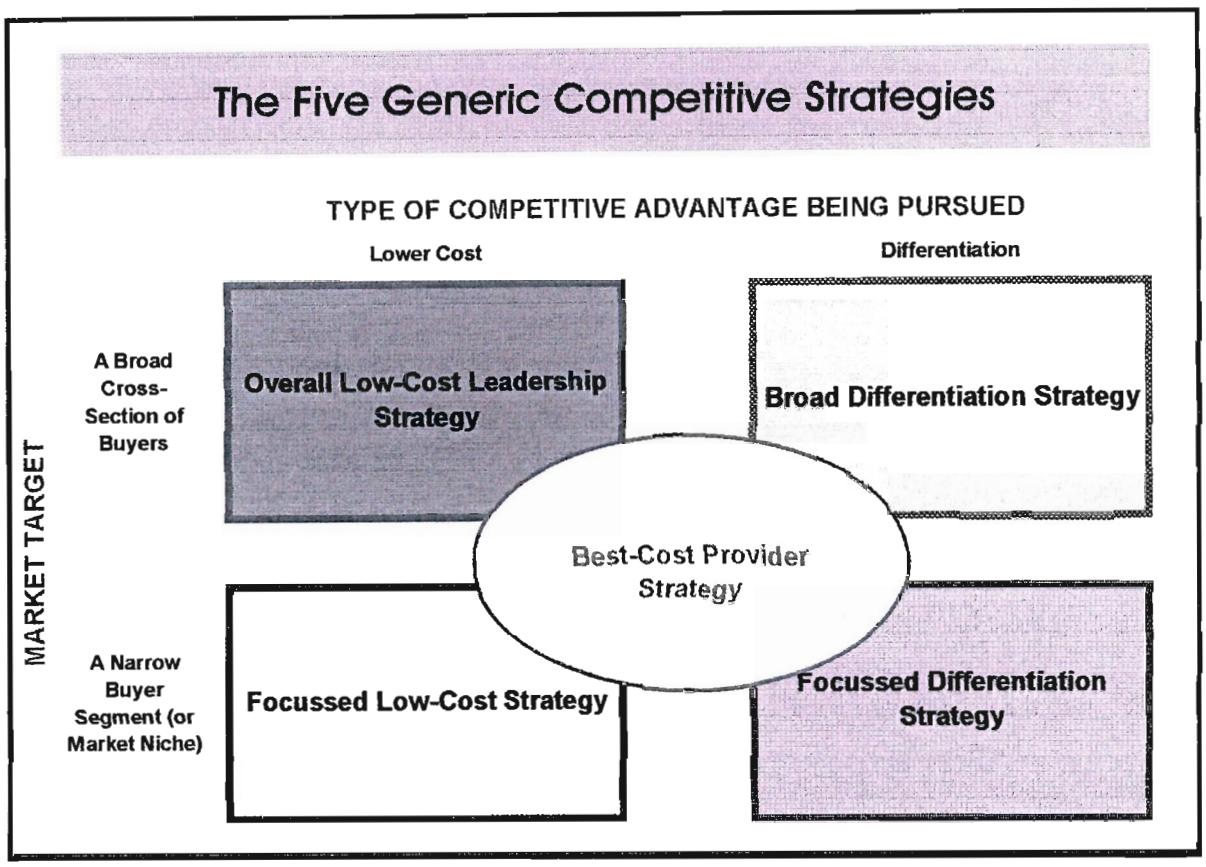


Figure 2.8 – Porter's Generic Competitive Strategies

If the primary determinant of a firms profitability is the attractiveness of the industry in which it operates, an important secondary determinant is its position within that industry. Even though an industry may have below average profitability, a firm that is optimally positioned can generate superior returns.

A firm positions itself by leveraging its strengths. Michael Porter has argued that a firms strength ultimately falls into one of two headings: cost advantage and differentiation. By applying these strengths in either a broad or narrow scope, three generic strategies result – *cost leadership, differentiation and focus.* They are generic strategies because they are not firm or industry dependent.

Porters Generic Strategies

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]

Table 2.3 – Porter's Generic Strategies

Each generic strategy has its risks, including the low cost strategy. For example, other firms may be able to lower their costs as well. As technology improves, the competition may be able to leapfrog the production capabilities, thus eliminating the competitive advantage. The risks associated with a differentiation strategy include imitation by competitors and changes in customer tastes. Additionally, various firms pursuing focus strategies may be able to achieve even greater differentiation in their market segments.

These three generic strategies each have attributes that can serve to defend against competitive forces. The following table compares some characteristics of the generic strategies in the context of Porters Fives Forces.

Industry Force	Generic Strategies		
	Cost Leadership	Differentiation	Focus
Entry Barriers	Ability to cut price in retaliation deters potential entrants	Customer loyalty can discourage potential entrants	Focussing develops core competencies that can act as an entry barrier
Buyer Power	Ability to offer lower price to powerful buyers	Large buyers have less power to negotiate because of few close alternatives	Large buyers have less power to negotiate because of few alternatives
Supplier Power	Better insulated from powerful suppliers	Better able to pass on supplier price increases to customers	Suppliers have power because of low volumes, but a differentiation-focussed firm is better able to pass on supplier price increases
Threat of Substitutes	Can use low price to defend against substitutes	Customers become attached to differentiating attributes, reducing threat of substitutes	Specialized products and core competency protect against substitutes
Rivalry	Better able to compete on price	Brand loyalty to keep customers from rivals	Rivals cannot meet differentiation-focussed customer needs

Table 2.4 – Porter's Generic Strategies

2.23) Balanced Scorecard

According to Kaplan and Norton (1996), the Balanced Scorecard translates an organizations mission and strategy into a comprehensive set of performance measures and provides the framework for strategic measurement and management. Traditionally most organizations look at their corporate performance by reviewing the financial aspects. However, financial measures alone is not a balanced view of the critical success factors of any organization, mainly because financial measurements tend to measure the past. The balanced scorecard is based on four key perspectives;

i) Financial goals – how will we look to our stakeholders?

ii) Customer perspective – how must we look to our customers?

iii) Internal processes – what internal processes must we excel at?

iv) Learning and growth – how can the organization learn and improve? (Sanger, 1998)

Critique of the Balanced Scorecard

The Balanced Scorecard does a great job in strengthening the link between customer improvement initiatives and the organizations strategy. However, the Balanced Scorecard does not indicate how new customers and markets can be identified (McAdam and O'Neill, 1999). According to McAdam and O'Neill, the Balanced Scorecard's major weakness is the lack of *"hows"*.

2.24) SWOT Analysis

Business strategy is equated widely with crafting and maintaining a profitable fit between a commercial venture and its environment. ***SWOT analysis***, which inquires into strengths, weaknesses, opportunities, and threats (***SWOT***), is the traditional means of searching for insights into ways of realizing the desired alignment (e.g., Ansoff 1965; Andrews 1987; Porter 1991; Mintzberg, Ahlstrand, and Lampel 1998). The SWOT analysis provides information that is helpful in matching the firms resources and capabilities to the competitive environment in which it operates. As such, it is instrumental in strategy formulation and selection. The following diagram shows how a SWOT analysis fits into an environmental scan:

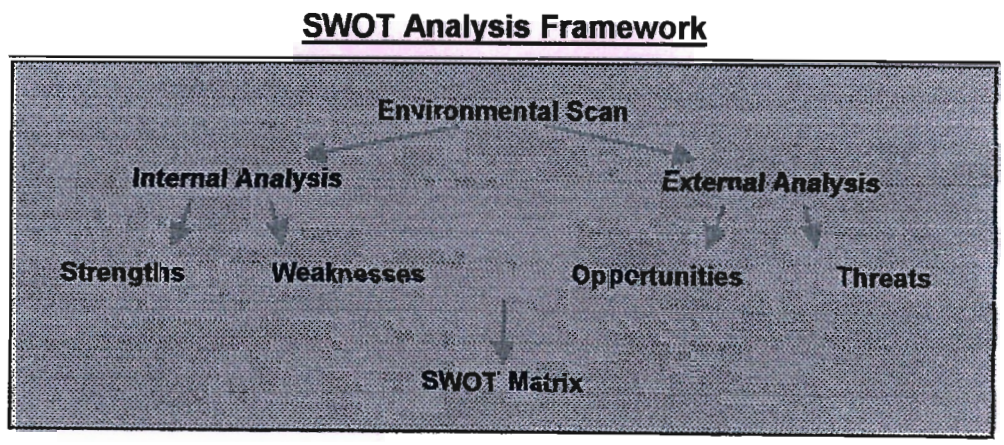


Figure 2.9 – SWOT Analysis Framework

Limitations of the SWOT Approach

The ubiquitous nature of SWOT in planning exercises has given rise to a number of valid criticisms. While these concerns do not undermine SWOT analysis, they do provide sensible guidelines for applying the tool. Like any other tool, its utility is directly related to the appropriateness of application and the skill of those using it. A few common pitfalls can be recognized and avoided:

i) ***Scanning not Strategy*** *— A SWOT analysis does not generate an organization's strategy; it identifies issues that are important in the creation of an organization's strategy. Factors that affect the organization should not be confused with organizational objectives.*

ii) ***Subjective nature*** *— The factors that fill in the four perspectives, may in some cases be determined by people who are too close or too far away from the actual activities of the organization to make an objective assessment. This can lead to a misfit strategy or to a focus that is too narrow or too broad to be useful in strategy development.*

iii) ***Static view*** *— A SWOT analysis often represents a view particular to a specific point in time. Uncertainty should not be excused from an analysis because of the difficulty it may present to planners. Other tools, such as scenarios, may need to be built into the SWOT to make it fit with the realities of today.*

iv) A SWOT analysis can result in long lists of observations which provide little overall insight or clarity about required action.

v) There are no formal mechanisms to ensure that managers challenge their own frames of reference or their organisations paradigm.

vi) A further danger is that managers might conceive of strengths and weaknesses in terms of the strategy they aim to implement rather than that which currently exists.

vii) There is also evidence that there is a tendency for managers to see environmental changes as threats rather than opportunities.

A firm should not necessarily pursue the more lucrative opportunities. Rather, it may have a better chance at developing a competitive advantage by identifying a fit between the firms strengths and upcoming opportunities. In some cases, a firm can overcome a weakness in order to prepare itself to pursue a compelling opportunity.

SWOT / TOWS Matrix

	Strengths	Weaknesses
Opportunities	S-O Strategies	W-O Strategies
Threats	S-T Strategies	W-T Strategies

Table 2.5 – SWOT/TOWS Matrix

- S-O strategies pursue opportunities that are a good fit to the company's strengths
- W-O strategies overcome weaknesses to pursue opportunities
- S-T strategies identify ways that the firm can use it strengths to reduce its vulnerability to external threats
- W-T strategies establish a defensive plan to prevent the firm's weaknesses from making it highly susceptible to external threats.

2.25) Weighted SWOT Analysis

With regards to the weighted SWOT, a scoring mechanism is used to aid and provide clarity to the analysis and as a means of getting managers to assess:

i) the environmental changes that are most critical

ii) the internal strengths that will remain as strengths or become weaknesses in the changing environment

iii) the internal element that is most influenced by each external change

Scoring can be a lengthy process, because any matrix of average size will not only generate a large number of impacts to be considered, but will also highlight differences in opinions between managers.

Impact Analysis of Company

Opportunities and Threats	Increase in Sales from Retailers	*Increase in* Sales from Commercial Accounts	New packaging (Marketing *innovation*)	Bigger, better Production Facility	Food brokers interest	Extend product line (Product *innovation*)	USDA Approval	Potential New Entrants	Costly New Regulatory Requirements	
Strengths										
Competitive Prices	+1	+2	+3	-1	+2	-1/+1	0	+1	-1	6-8
Good product brand, recognizable	+2	+1	+2	+3	+2	-1/+1	-1	+1	-1	8-10
Leadership	+1	+1	+2	+3	+1	+2	0	0	0	10
Weaknesses										
Over-reliance on leading product	-1	-2	+2	0	-1	0	0	-2	0	-4
No USDA certification	-1	-2	+1	+3	-2	-3	0	-2	0	-6
No state-of-the-art Production Facility	0	-3	+1	0	-1	0	0	-2	0	-5
No imminent Product Innovation	-1	-2	+1	0	-3	0	0	-2	0	-7
Damaged Reputation	-1	-2	0	0	-2	0	-3	-3	0	-11
Inadequate Distribution	-1	-2	0	0	0	-3	0	-1	0	-7
ENVIRONMENT IMPACT SCORES	-1	-9	+12	+8	-4	-2 to -6	-4	-10	-2	

Table 2.6 – Weighted SWOT Analysis *(Ambrosini, V. 1998:122)*

2.26) Value Chain Analysis

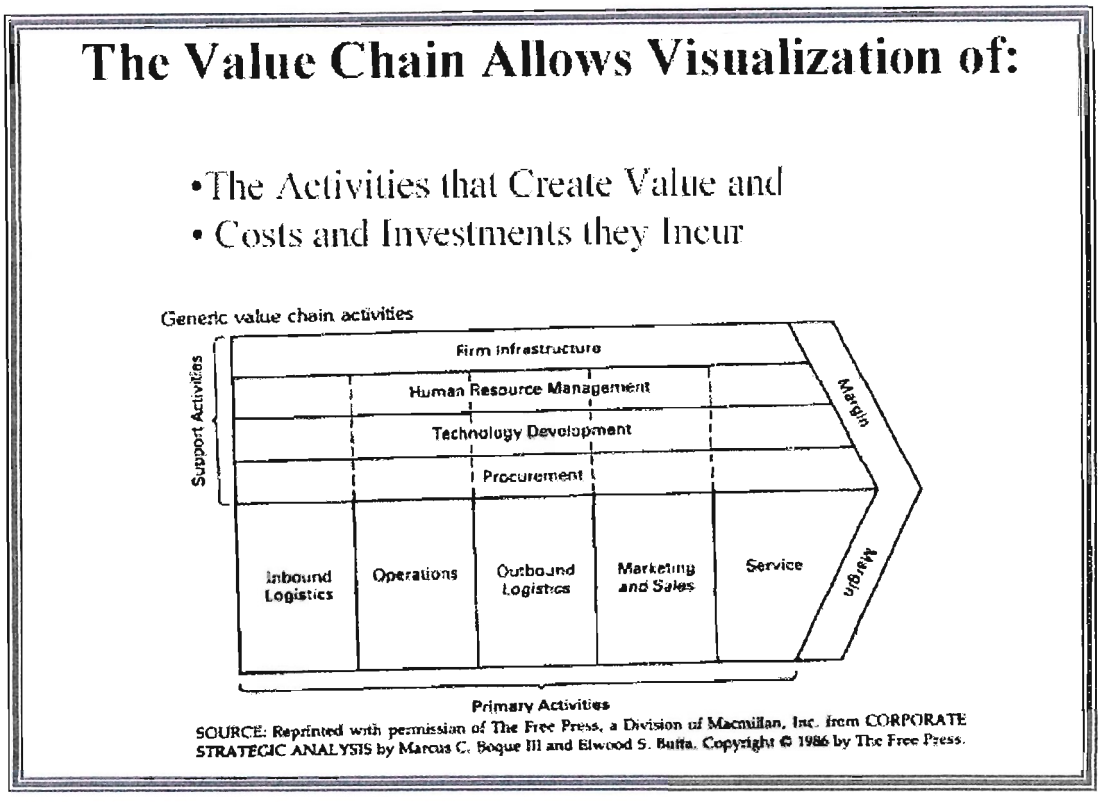


Figure 2.10 – Value Chain Analysis

One of the key aspects of Value Chain Analysis is the recognition that organizations are much more than a random collection of machines, money and people. These resources are of no value unless deployed into activities and organized into routines and systems which ensure that products or services are produced which are valued by the final consumer or user. It is these competences to perform particular activities and the ability to manage linkages between activities which are the source of competitive advantage for organizations. Primary activities are directly concerned with the creation or delivery of a product or service and can be grouped into five main areas: inbound logistics, operations, outbound logistics, marketing and sales, and service.

2.27) Impact Analysis

This analysis assesses how firms might be able to deal with changing factors within the market segment. It combines analyses of strength by market segment and impact analysis based on the PESTEL and Five Forces analyses. Key environmental factors are identified and the variable impacts of these on the different firms assessed. Factors generally considered may be :

i) The effect of *globalisation* and the emergence of third world countries competing in this market

ii) The continuous emphasis on cost and a case of *survival of the fittest* amongst firms in order to endure

iii) The continuous *technological improvements* leading to increased efficiencies

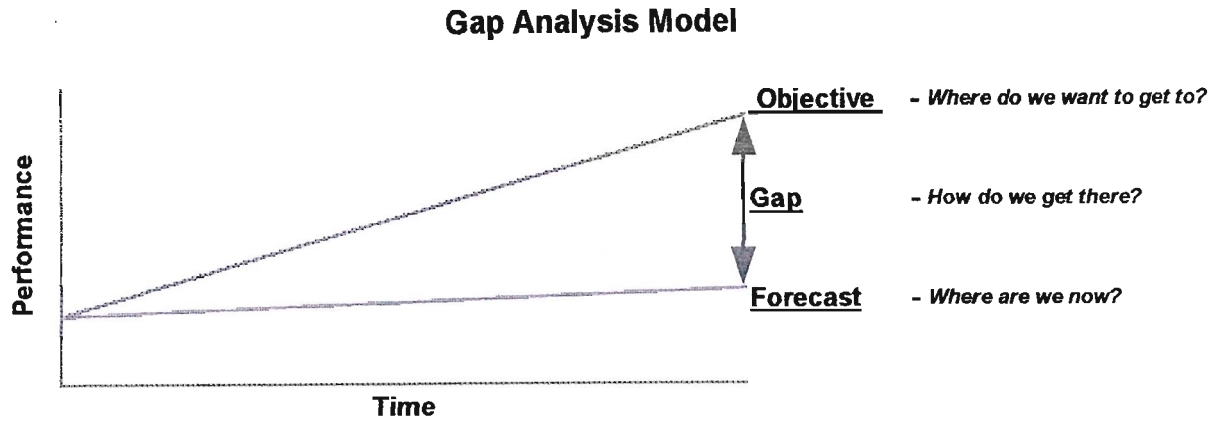
iv) More demanding customer requirements, shorter lead time to market new products, more stringent quality systems and procedures

v) The need for more innovative leaders, people development to be more of a learning organization and knowledge management inclined

2.28) GAP Analysis

In assessing strategies for the future, managers are usually concerned with understanding the incentive to change, in other words, the extent to which current strategies (if unchanged) would fall short of meeting the organization's aspirations and/or obligations. Gap analysis is one such approach to assessing the need for change. Gap analysis can help the manager better understand the dynamics of the competitive environment. Importantly, it can be used to reveal where an organization has weaknesses, and where it has strengths, in relation to its competitors. Such an analysis helps the manager develop strategies to catch market leaders, or strategies to stay ahead of the chasing pack. It is important to note that "gaps" are dynamic and ever-changing.

A simple but very powerful approach to gap analysis centers around three questions –



Source **– Ambrosini, (1998:p221)**

Figure 2.11 – GAP Analysis Model

Used in such a manner, these three questions have relevance in almost every planning and forecasting scenario. Their usage tends to frame the nature of the planning and forecasting problem being faced and allows the application of other strategic planning techniques, such as PESTEL, SWOT, the Culture Web, and Portfolio Matrices (BCG, McKinsey, Life-Cycle) with a purpose and direction.

Models are proposed to analyze the gaps between offerings that fit best with the company, offerings that the consumer prefers, offerings that fit best with competitors, and offerings currently sold in the market, then, the prescribed actions the company should take to address these gaps (e.g., 4 P's policy or longer-term resource/competency development). Simply put, the goal is to develop and validate a methodology that makes rigorous the strategy formulation process. After deriving the models for customer fit, company fit, and competitor fit, a multi-attribute gap analysis can be conducted. The gaps analyzed are between 1) company current-offering product, 2) company best-fit product, 3) customer best-fit product, 4) competitor best-fit product, and 5) competitor current-offering product. Theory suggests that to maximize performance the company should simultaneously minimize the gap between their current-offering product (maximize

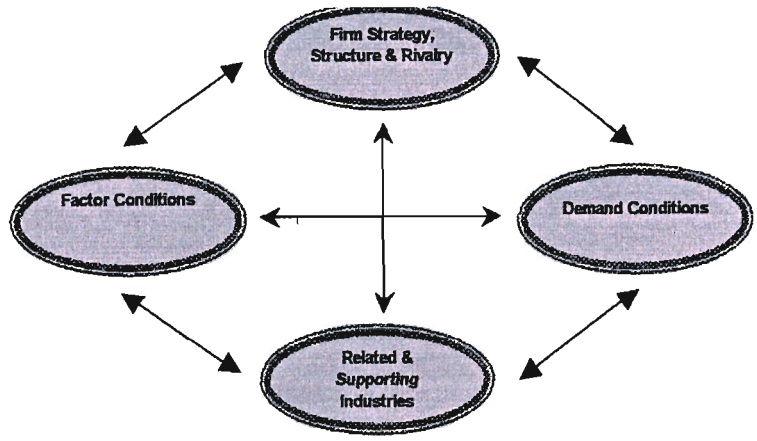
customer utility), maximize the gap between their current-offering product and the current-offering products of competitors (differentiate), and minimize the gap between their current-offering and company best-fit product (maximize strategic fit). Joint modeling of customers and managers, and its implications for informing both shorter-term (tactical) decisions and longer-term (strategic) decisions can also be analysed.

Critique of Gap Analysis

At first glance, gap analysis might appear a little too superficial. But such an impression mistakes the purpose of this tool. Unlike many other techniques of analysis and models, it is not the honed analytical tool from finance, management science or marketing. Instead, gap analysis is a first stage technique that gives the manager a feel for the size and nature of the strategic problem. Gap analysis frames the problem and informs the manager about the directions which to look for solutions. Once this direction has been established, other techniques can then come into play. As such, gap analysis is a vital weapon in the strategic managers armoury (Jon Billsberry, 228:1998).

2.29) Porters Diamond

Porters diamond suggest that there are inherent reasons why some nations are more competitive than others, and why some industries within nations are more competitive than others. Porter suggests that the national home base of an organization plays an important role in shaping the extent to which it is likely to achieve advantage on a global scale. This home base provides basic factors which organizations are able to build on and extend to provide such advantage.



Source - Johnson and Scholes (1998:110)

Figure 2.12 – Porter's Diamond

There may be specific factor conditions which help explain the basis of advantage on a national level. These provide initial advantages which are subsequently built upon to yield more advanced factors of competition. Home demand conditions provide the basis upon which the characteristics of the advantage of the organization are shaped. For example, Japanese customers high expectations of electrical and electronic equipment have provided an impetus for those industries in Japan. One successful industry may lead to advantage in related and supporting industries. For example, in Singapore, port services and ship repair industries are mutually advantageous. The context of characteristics of firm strategy, structure and rivalry in different countries also help explain bases of advantage. In Germany, for example, the propensity for systematic, often hierarchical processes of management has been particular successful in providing reliability and technical excellence in engineering industries.

2.30) Scenario Planning

Most analyses involve current or historic data. Yet good corporate strategy options need to contain some vision: some view about how trends are evolving, about opportunities that will exist in ten years time, about how the world is going to be. The danger with all analytically based approaches to strategy is that they are all over influenced by historic

data. The use of scenarios presents scenario planning as a tool that can help managers to audit the environment and, in particular, to envision the long term future (Mercer, 1998:99)

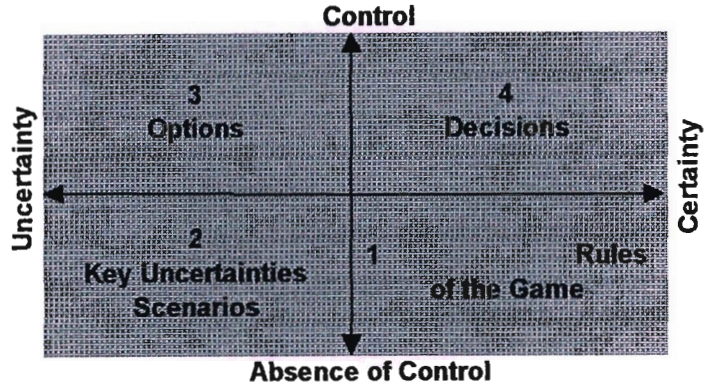


Figure 2.13 - The Foxy Matrix – ***Source:*** **Mind of a Fox** *(Sunter, C and Illbury, C)*

The first quadrant represents the rules of the game – things that are certain and over which we have no control. The second quadrant has two components: key uncertainties over which we have no control, and plausible and relevant scenarios derived from these uncertainties, though the scenarios must be vivid and different enough to take us out of the comfort zone. The third quadrant is now identified with the options presented by the scenarios. The formulation of options is crucial and allows us to operate with more control in an uncertain environment. The fourth quadrant is the area where decisions are made based on the preferred scenario and linked to the preferred option. It is also the quadrant where strategic plans and programmes of action should be located, as these are really decision paths formulated in advance. The term scenario planning normally denotes the processes one goes through in the first two quadrants. "Rules of the game" are sometimes called "predetermined elements" and "key uncertainties" are "driving forces".

2.31) Competition verse Cooperation

Often when making a strategic choice, an organization needs to decide if the focus will be on competition or cooperation. These two viewpoints exist on opposite ends of a

continuum. Absolute competition is a theoretical concept as all companies develop relationships with suppliers, competitors, customers and other stakeholders over time. Absolute cooperation is also a theoretical concept as the primary aim of firms is to make profit. This invariably involves holding or gaining market share at the expense of others, saving costs at the expense of other parties, charging higher prices or developing new business areas ahead of other competitors. In spite of the two viewpoints, the cooperation viewpoint argues that the modern business environment should adopt a cooperative stance towards strategy.

Cooperation can be vertical or horizontal. Horizontal cooperation, referred to as strategic alliances by Preece (1995), is commonly emphasized in the cooperation argument. Vertical cooperation looks at collaboration in strategic networks. Hamel et al. (1989) have earlier argued that cooperation will achieve the following:

i) serve as a low cost route to allow new competitors access to technology and markets

ii) alliances between Eastern and Western companies can allow Western companies to improve productivity and quality control

iii) by increasing its vulnerability to a strategic partner, the firm strengthens itself against outsiders

The main argument of the competitive viewpoint is that business is war, and by exposing itself to its enemy a firm weakens itself in relation to its enemy, often in the form of giving away technology and market access to a competitor.

Competitive behaviour with the exclusion of cooperation constrains the organization at various levels. Firms who embrace competitive behaviour tend to structure relationships with their stakeholders on the premise of zero sum gain. This prevents firms from exploiting the potential positive sum benefits of cooperation. Solely competitive firms fail to nurture and develop the long term relationships that can sustain competitiveness.

However, cooperation cannot be achieved without competition first being present. Firms have no desire to cooperate with partners that have nothing to offer. Without exposure to competition, inefficient firms can survive, stagnation is tolerated and innovation is scarce. Therefore firms have no incentive to cooperate because there is no competitive pressure. Competition is also the driver that ensures that firms develop the qualities that makes them attractive partners for strategic alliances.

The benefits of cooperation are clear to the partners, but they should not be allowed overshadow forces that made the cooperation desirable in the first place, i.e. competitive forces.

2.32) Outside-In verse Inside-Out

The debate over Outside-In or Inside-Out is exactly akin to the question of whether business strategy should have a perspective of strategic fit (Inside-Out) or strategic stretch (Outside-In). The Outside-In viewpoint suggests that business strategy should focus on identifying opportunities arising from an examination of environmental forces facing the organization and then adapting organizational resources to take advantage of these opportunities (Porter:1980). The key issue in Outside-In is to position the company so that it meets clearly identified market needs. The strategy of a small firm should therefore be to target a particular niche in a market, or, in the case of a large corporation, make investments in businesses that have successful market positions in attractive industries.

The use of Porters Five Forces model by Outside-In firms has a number of implications. Powerful firms can act strategically to increase the industry attractiveness while at the same time building barriers to entry against prospective new entrants. Inside-Out firms are less concerned altering industry attractiveness and building barriers to entry since their competitiveness is based on internal strengths and not manipulation of external industry factors. The notion of an Inside-Out approach to strategy (or strategic stretch) involves the identification and leverage of resources and competencies of the organization that can be used to yield new opportunities or provide competitive

advantage (Hamel & Prahalad:1994). Well developed core competencies provide the barriers against the present and future competition. The Inside-Out focus is not on altering the environment to build barriers to entry, but to build the core competencies.

In the Outside-In organization, the approach to strategy involves scanning the environment for opportunities and then altering the organization to take advantage of those opportunities. Inside-Out goes further, the purpose of scanning is to understand how the complex interaction of the environment and the organizations core competencies will generate opportunities that will sustain competitive advantage.

Aspect of Strategy	Fit [Outside-In]	Stretch [Inside-Out]
Basis of Strategy	**Strategic fit between market opportunities and organisations resources**	**Leverage of resources to improve value for money**
Competitive Advantage through...	**"Correct" Positioning - Differentiation directed by market need**	**Differentiation based on competencies suited to or creating market need**
How small players survive...	**Find and defend a niche**	**Changing the "Rules of the Game"**
Risk reduction through...	**Portfolio of products/businesses**	**Portfolio of Competencies**
Corporate centre invests in...	**Strategies of divisions or subsidiaries**	**Core Competencies**

Table 1 - Strategy - Fit or Stretch? (Hamel & Prahalad: 1994)

Table 2.7 – Strategic Fit/Stretch

2.33) Responsiveness (Diversification) and Synergy (Focus)

Evidence of the whole being greater than the sum of the parts occurs when the interaction of departments in a firm makes the firm more productive than it would have been had

each department acted in isolation. In the context of business organizations, synergy in often realized in expansions or mergers. The benefit of synergy is achieved through the combining of strengths, opportunities, skills and expertise (Mullins:1996).

Synergy is a commonly identified reason for related and unrelated diversification on the part of organizations (Campbell and Luchs: 1992). In order for synergy based strategies to be successful, they must be accompanied by compatible systems and culture of the combining organisations. The danger is that the synergy benefits envisioned resulting from a merger could be negated by the fact that the merging organizations have widely different cultures. The synergy benefits of a diversification strategy can be accessed as the result of :

i) Shared knowledge of best practices
ii) Coordinated strategies to counter threats
iii) Shared tangible resources to access economies of scale
iv) Pooled negotiating power to gain leverage over suppliers (or customers)
v) Vertical integration to reduce costs or improve market access
vi) New business creation through alliances of joint ventures

(Gould and Campbell: 1998)

Diversification is a frequently researched area of business (Johnson and Scholes: 1999). Diversification can either occur through related or unrelated diversification. The basic contention of the synergy argument is that related diversification (i.e. synergy) is advantageous over unrelated diversification (i.e. responsiveness). Synergy could arise in diversification through different types of links –

i) In the market by exploiting a brand name, sharing outlets and by pooling promotional or selling activities
ii) In company operations by shared purchasing, facilities, maintenance, quality control, etc.
iii) In product/process developments by sharing information and know-how

(Johnson and Scholes: 1999)

In a typical synergistic corporation, the role of corporate head office is to manage and search for synergy within the various sub-units. Management needs to develop and ability to integrate company wide systems, use of technologies, resource use and core competences to add value to the entire corporation. Individual business units will then be enabled to be more cost competitive, add more value and react swiftly to new opportunities (Prahalad and Hamel: 1990).

A barrier to synergy is that the individual business unit managers compete against each other and fail to exploit opportunities to co-ordinate value adding activities. In a synergistic corporation, top management is not a layer of accountant caretakers, but a value adding layer that identifies competence building to alleviate the threat of competition and build a complex harmony of technology and production process (Prahalad and Hamel: 1990). Porter (1985) has argued that synergies can be realized by strategic fit between diverse organizations. This enables the transferring of skills and expertise between organizations to be realized. The result is reduced costs and increased competitive advantage of the entire business.

Vertical integration, either backward or forward can become a strategic consideration. Once the growth opportunities become limited, the organization experiences pressures to diversify to produce a related or unrelated diversified conglomerate. The risk of a single business strategy is to put all the eggs in one basket. The organization runs the risk of stagnation of the industry. In changing times, changing consumer needs, new technology or substitutes can wipe out an industry overnight (eg. the fax and the telex).

The typical candidate organization for a diversification strategy is a company with a strong competitive position in a slow growth industry.

Mintzberg and Quinn (1996) have identified six different types of diversification strategies –

i) Entering new industries, eg. acquisition, start-up or joint ventures

ii) Related diversification (synergy may be a factor)

iii) Unrelated diversification

iv) Divestiture and liquidation

v) Turnaround, retrenchment and restructuring

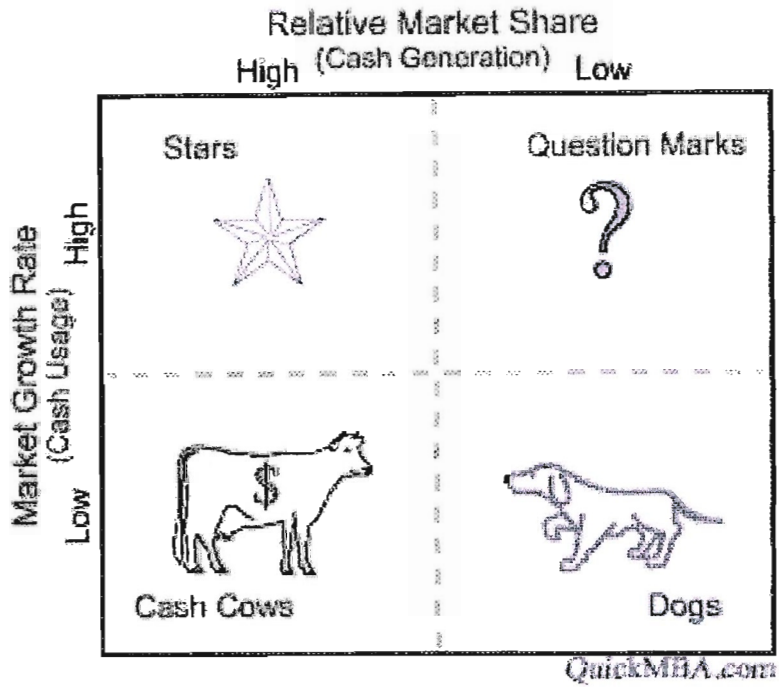
vi) Multinational diversification

Economists have argued that because capital markets are inefficient, the diversified organization may be better able to allocate capital. Diversification spreads risks across different markets whereas the focused organization has all its eggs in one basket. Also, loosely coupled divisions can be more responsive than tightly coupled divisions (Thompson and Strickland: 1996).

Synergy has the advantage that it can allow corporations to generate competitive advantage by exploiting synergies in markets, products or technology. However, synergy has a number of drawbacks, it is often difficult to achieve in practice and it is often easily identified in acquisition and diversification strategies where its actual value is limited. This often leads in organizations overpaying for acquisitions and destroying shareholder value instead of creating it.

Responsive diversification offers a number of advantages; it diversifies risk encourages efficient use of capital and produces diverse configurations that are strategically responsive. Responsive diversification has the added advantage that, while recognizing the value of synergy, does not sow the seeds of its own failure by enthusiastically extolling the virtues of synergy where practically they are difficult to achieve and can be considerably devalued by cultural and system differences.

2.34) The BCG Growth-Share Matrix



Source ***www.quickmba.com/strategy/matrix/bcg***

Figure 2.14 – The BCG Growth-Share Matrix

Companies that are large enough to be organized into strategic business units face the challenge of allocating resources among those units. In the early 1970's the Boston Consulting Group developed a model for managing a portfolio of different business units (or major product lines). The BCG growth-share matrix displays the various business units on a graph of the market growth rate verses market share relative to competitors.

The BCG matrix has the attraction of its simplicity, but is suffers from a number of problems and weaknesses and should be used with caution. The two axes attempt to relate the attractiveness of a market to the inherent strength of the business unit. However, market growth rate is only a very approximate surrogate for market attractiveness. The Porters Five Forces model competitive intensity model illustrates the complexity of the attractiveness concept in which market growth has only one part to

play in one of the five identified key forces determining attractiveness. Whether growth is important also depends on whether the business unit concerned has strategic advantage in the key competences that enable the growth to lead to improved results for the company.

Relative market share is also an uncertain surrogate for company strength. Market share can be bought easily by pricing below cost without the possession of any real internal strength. It also refers to the past, not the future and could be said to be more the result than the cause of business unit strength. The BCG model does not allow for declining markets, allows mostly to FMCG companies and certainly does not easily apply to industrial goods companies, to fragmented industries, or to industries in which the experience curve and scale economies give small unit cost advantages. It is also not evident why companies in slow-growth industries who are not market leaders should be divested. Indeed, in many industries, it would not be difficult to find examples for the concept of the "cash dog". Furthermore, even slow-growth industries exhibit investment opportunities in particular segments or niches, and many well focused companies in this box may well be acceptably profitable (Faulkner, D., 1998:207).

2.35) The McKinsey Directional Policy Matrix

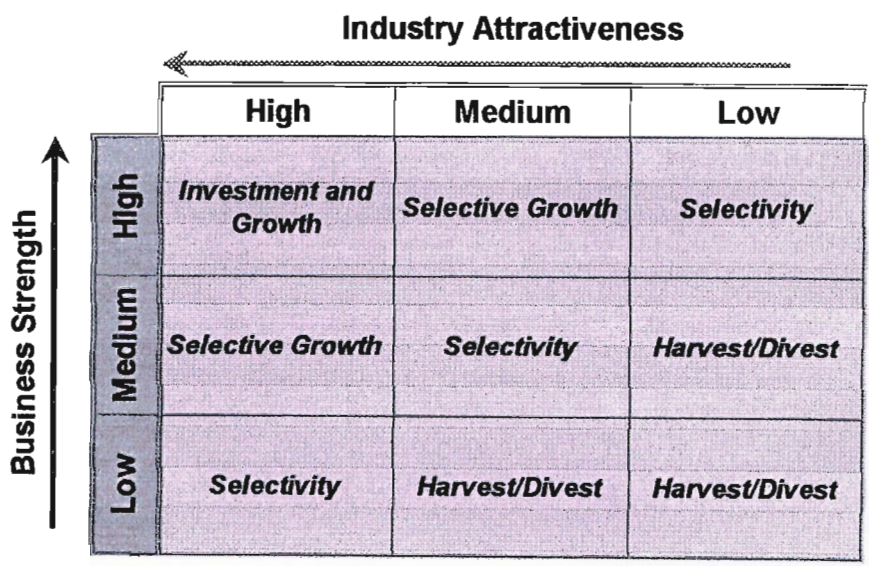


Figure 2.15 – The McKinsey Directional Policy Matrix

The McKinsey matrix attempts to overcome some of the weaknesses of the BCG matrix by selecting more realistic multidimensional axes to represent industry attractiveness and business strength, as illustrated above. This model is careful not to be over-prescriptive regarding the dimensions of industry attractiveness or of internal business strength. Indeed, this model emphasizes that the relevant factors will vary from industry to industry. This matrix has its axes in reverse to that of the BCG model. They are, however, conceptually similar in that the box where high industry attractiveness meets high business strength leads to a recommendation of investment with the objective of growth, similar to that of the *star*. Correspondingly, low attractiveness/low strength as with the BCG *dog* leads to the recommendation *"harvest/divest"*.

The major weakness of the McKinsey matrix is that there is no easily applied means of establishing the appropriate weightings for the many dimensions of attractiveness and business strength, and this enables practitioners to bias weightings to meet their already established ideas if they are so inclined. Therefore, in the wrong hands, it can be more of a demonstration tool than an analytical model capable of giving surprising insights.

2.36) Life Cycle Theory

A life cycle analysis assesses whether a strategy is likely to be appropriate given the stage of the product life cycle [PLC]. The life-cycle/portfolio matrix consist of two dimensions. The market situation is described in four stages ranging from embryonic to ageing; the competitive position in five positions ranging from weak to dominant. The purpose of the matrix is to establish the appropriateness of particular strategies in relation to these two dimensions. The crucial issue is establishing where an organization is currently positioned on the matrix, and therefore what types of strategy are most likely to be suitable.

According to Kotler (2000), the Product Life Cycle [PLC] matrix is best used to interpret product and market dynamics. As a planning tool, the PLC concept helps managers

characterize the main marketing challenges in each stage of a products life and develop major alternative marketing strategies.

The PLC theory has its share of critics. It is claimed that life-cycle patterns are too variable in their shape and duration. PLC's lack what living organisms have – namely, a fixed sequence of stages and a fixed length of each stage. Critics also charge that marketers can seldom tell what stage the product is in. A product may appear to be mature when actually it has only reached a plateau prior to another upsurge. They charge that the PLC pattern is a result of marketing strategies rather than an inevitable course that sales must follow (Kotler, 2001:315).

Very deterministic rules apply to this matrix for the calculation of competitive position and market maturity, leading to a positioning on the matrix to which, in turn, leads to the recommendation of a very limited range of "natural" strategic thrusts. A problem here exists in that if every business unit in a particular matrix position adopts the same strategic thrust in a given market, it is difficult to see how competitive advantage will be gained. In business, as in life generally, the winner is often the competitor who does something different/unusual, rather than the one who applies rigorously a formula known and available to all (Faulkner, D., 209).

		Stages of Industry Maturity			
Competitive Position		Embryonic	Growth	Mature	Ageing
	Dominant	Fast-growth Start-up	Fast growth. Attain cost leadership. Renew Defend position	Defend position. Attain c leadership. Renew. Fast grow.	Defend position. Focus. Renew. Grow with industry.
	Strong	Start-up. Differentiate. Fast grow.	Fast grow. Catch up. Attain cost leadership. Differentiate.	Attain c leadership. Renew, focus. Differentiate. Grow in industry.	Find niche. Hold niche. Hang-in. Grow with industry. Harvest.
	Favourable	Start-up. Differentiate. Focus. Fast grow.	Differentiate. Focus. Catch-up. Grow with industry.	Harvest., catch- Find niche. Hold niche. Ren Turnaround. Differentiate, focus Grow with industry.	Retrench. Turnaround.
	Tenable	Start-up. Grow with industry. Focus.	Harvest., catch-up. Hold niche, hang-in. Find niche. Turnaround. Focus. Grow with industry.	Harvest. Turnaround. Find niche. Retrench.	Divert. Retrench.
	Weak	Find niche. Catch-up. Grow with industry.	Turnaround. Retrench.	Withdraw. Divest.	Withdraw.

Source: *Faulkner D., 1998, Portfolio Matrices, Ambrosini V.*

Table 2.8 – Life Cycle Model

2.37) Comparative Analysis - Benchmarking

Organisations must be able to assess their competences against *best-in-class* as an important part of sustaining competitive edge. When properly resourced and implemented, benchmarking is a very powerful tool to focus and drive change. It assists the change process by providing objective targets and demonstrated best practice. It can enable the organization to take a quantum leap in process and bottom-line performance improvements and outstrip competitors.

Benchmarking can benefit the organization in three ways –

1) Gap identification and objective target setting:

i) Providing credible and unarguable targets

ii) Proactively targeting improvement

iii) Providing an opportunity to become industry leader

2) New insights and improved practices –

i) Objective evaluation of customer requirements

ii) Providing many options for improvement

iii) Generation of superior performance

3) Overcoming barriers and providing a motivation for change –

i) Concrete understanding of competitor position

ii) High commitment for change

Benchmarking is a valuable tool for comparisons, and a very logical step for setting objective targets and enhancing performance measurement. It can often be the first step in creating the recognition that change and improvement are required.

However, benchmarking does not provide all the answers to all questions. It is best used if it is focused and controlled correctly. It is also not black and white. Many issues are subject to interpretation and are likely to provoke conflict, therefore the results should be used judiciously. However if used correctly, it can be a powerful improvement weapon.

2.38) Instill Lean Thinking

The transformation to becoming a lean company requires a careful strategy. With lean thinking comes significant change in corporate culture, change that necessitates strong project leadership, visible support from top management, and patience. Keep in mind that it took Toyota 20 years to develop its remarkable production system.

Manufacturing is hard, and to make matters worse, in the past 20 years or so manufacturing managers and shop-floor people have been subjected to many management ideas and fads, including Business Process Re-Engineering, Total Quality Management, Just in Time, ISO 9000, Flow Management, Matrix Management, and the Theory of Constraints to name a few. It is not surprising that many managers view lean manufacturing as just another fad to be endured until it passes.

Lean principle work, and those that don't develop a lean workplace will lose the competitive race, ultimately going out of business. Creating a lean workplace requires changing the corporate culture to embrace a different way of doing business. Changing

the corporate culture requires using a robust change management strategy. Done right, a lean implementation can result in a disciplined, orderly workplace that continually improves and remains competitive. Done wrong, lean becomes yet another management process that failed.

2.39) Organisational Change

How do organizations know when they should change? What cues should an organization look for? Although there are no clear cut answers to these questions, the *cues* that signal the need for change are found by monitoring the forces for change.

Organisations encounter many different forces for change. These forces come from external sources outside the organization and from internal sources. Awareness of these forces can help managers determine when they should consider implementing an organizational change.

External forces for change originate outside the organization. Because these forces have global effects, they may cause an organization to question the essence of what business it is in and the process by which products and services are produced. There are four external forces for change –

i) Demographic characteristics
ii) Technological advancements
iii) Market changes
iv) Social and Political pressures

Internal forces for change come from inside the organization. These forces may be subtle, such as low job satisfaction, or can manifest in outward signs,such as low productivity and conflict. Internal forces for change come from both human resource problems and managerial behaviour/decisions.

John Kotter, an expert in leadership and change management, believes that organizational change typically fails because senior management commits one or more of the following errors –

1) Failure to establish a sense of urgency about the need for change

2) Failure to provide a powerful enough guiding coalition that is responsible for leading and managing the change process
3) Failure to establish a vision that guides the change process
4) Failure to effectively communicate the new vision
5) Failure to remove obstacles that impede the accomplishment of the new vision
6) Failure to systematically plan for and create short term wins. Short term wins represent the achievement of important results of goals.
7) Declaration of victory too soon. This derails the long term changes in infrastructure that are frequently needed to achieve a vision.
8) Failure to anchor the changes into the organizations culture. It takes years for long term changes to be embedded within an organizations culture.

(Kotter, 1995:59-67)

Resistance to change is an emotional/behavioural response to real or imagined threats to an established work routine. Ten reasons employees resist change are –

1) An individuals predisposition towards change
2) Surprise and fear of the unknown
3) Climate of mistrust
4) Fear of failure
5) Loss of status, and/or job security
6) Peer pressure
7) Disruption of cultural traditions and/or group relationships
8) Personality conflicts
9) Lack of tact and/or poor timing
10) Non-reinforcing reward systems *(Krietner, Kinicki, Beulens, 2000, 605)*

2.40) Strategy Evaluation

With so much resting on their decision, how can managers be confident that they have made the wisest possible choice among the strategic options available to them – especially when those options involve a significant departure from business as usual? Traditional profitability analysis are of limited value here because they treat market size, market share and price as independent variables. How can managers responsibly predict the likely share of an entirely new kind of product for example? Evaluation techniques that focus on economic surplus, not price, largely avoid these difficulties by concentrating on how total surplus gets divided among all the different elemtns in an industry chain. Equally important, these techniques encourage managers to look beyond the task of beating direct competitors to the broader challenge – and opportunity – of generating and capturing value throughout all elements of their industry's surplus chain.

Even creative strategists can go wrong. Having an insight is one thing; developing the numbers that show whether it is worth pursuing is quite another. All good strategists work hard to develop reasonable projections based on valid assumptions.

In assessing strategies, whether formal or informal processes, there are three types of evaluation criterion which can be used:

i) Suitability
ii) Acceptability
iii) Feasibility *(Johnson and Scholes, 1998)*

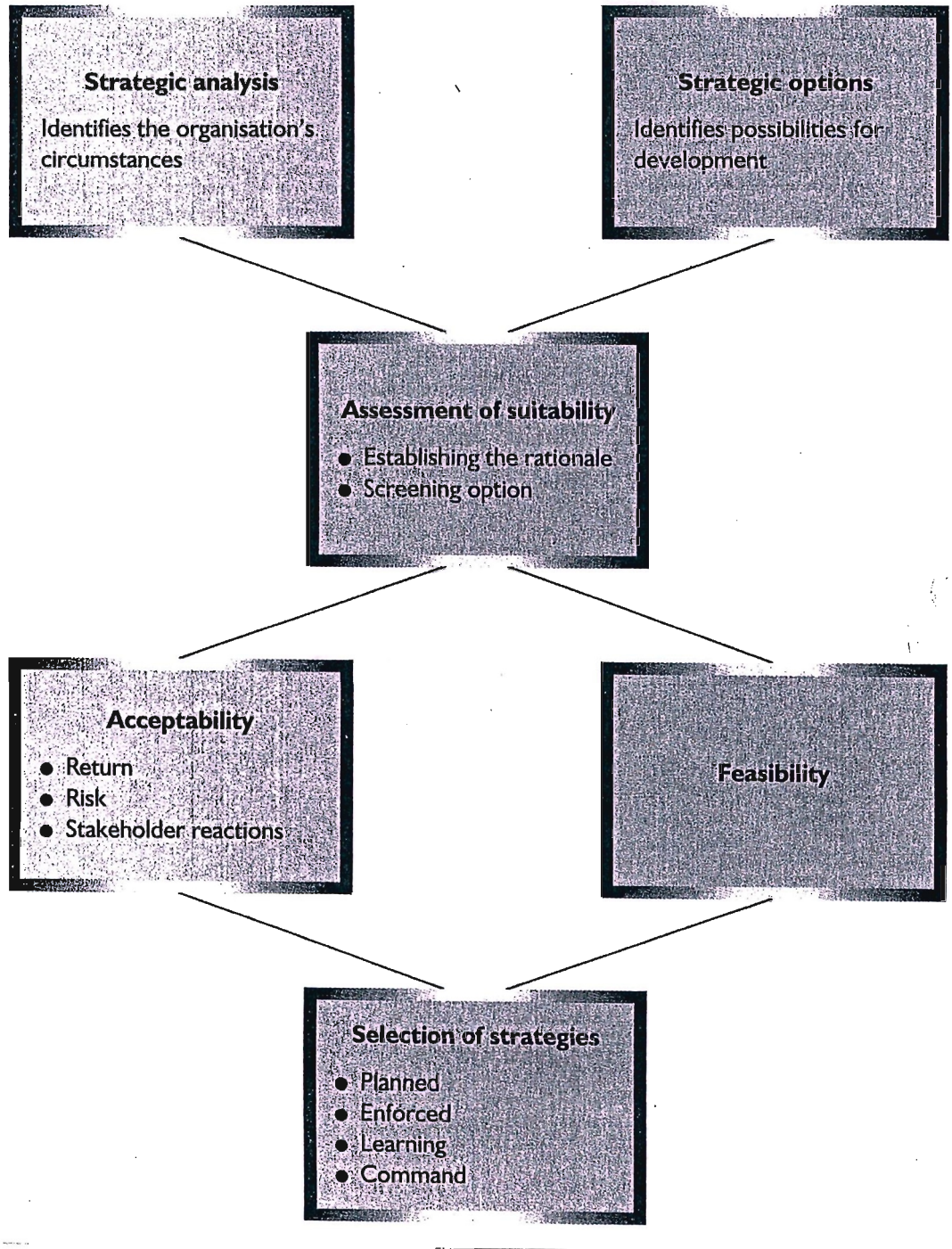


Figure 2.17 – A Framework for Evaluation and Selection of Strategies

2.40.1) Assessing Suitability

Suitability is a broad assessment of whether the strategy addresses the circumstances in which the organization is operating, i.e. the extent to which new strategies would fit with the future trends and changes in the environment; or how the strategy might exploit the core competences of the organization.

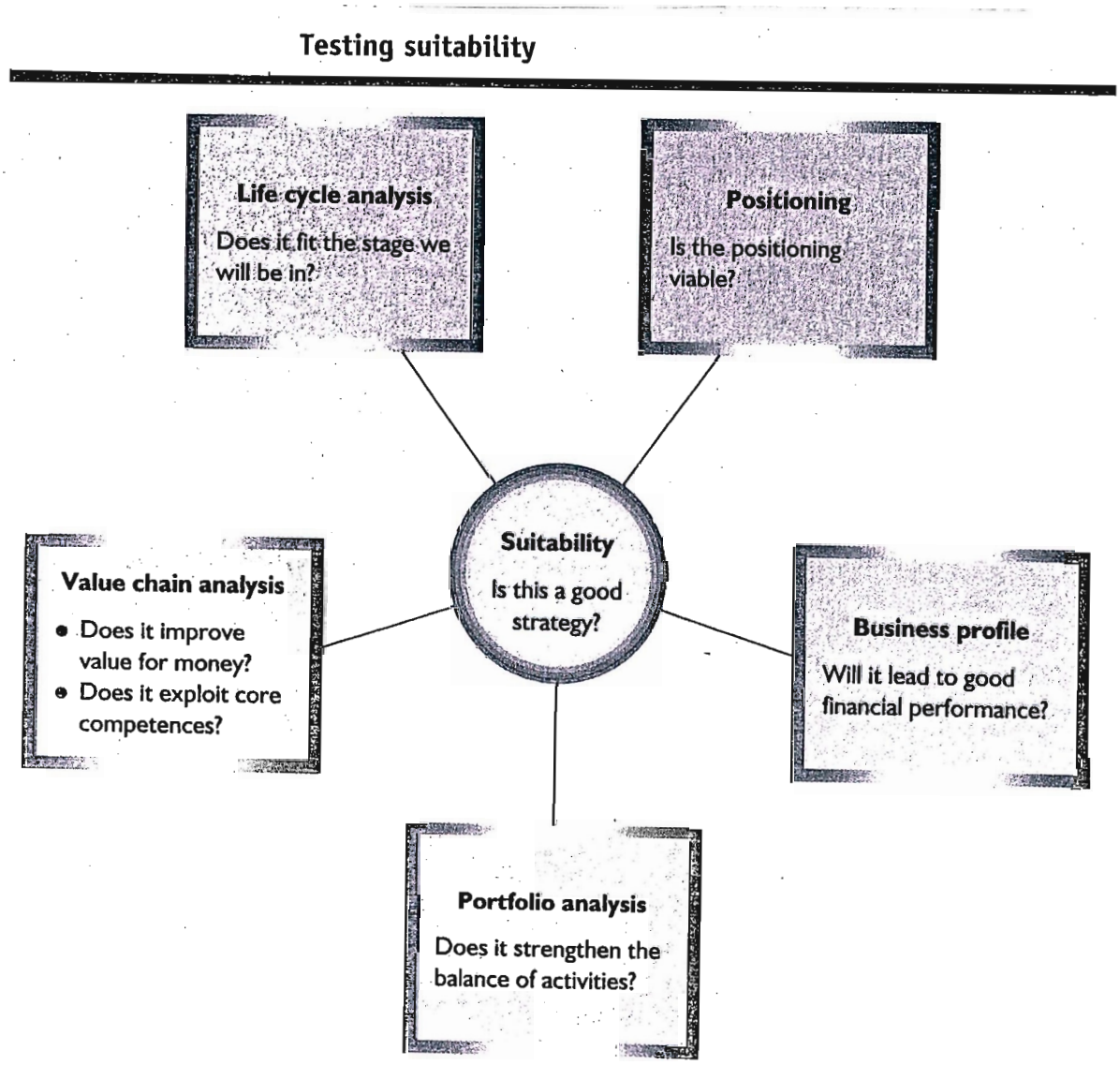


Figure 2.18 – Testing Suitability

2.40.2) Analysing Acceptability

Acceptability is concerned with the expected performance outcomes such as risk or return if the strategy were implemented, and the extent to which these would be in line with the expectations of the stakeholders.

Assessing the acceptability of strategies

APPROACH	USED TO ASSESS	EXAMPLES	LIMITATIONS
Analysing return			
Profitability analyses	Financial return of investments	Return on capital Payback period Discounted cash flow (DCF)	Apply to discrete projects Only tangible costs/benefits
Cost–benefit analysis	Wider costs/benefits (including intangibles)	Major infrastructure projects	Difficulties of quantification
Shareholder value analysis (SVA)	Impact of new strategies on shareholder value	Mergers/takeovers	Technical detail often difficult
Analysing risk			
Financial ratio projections	Robustness of strategy	Break-even analysis Impact on gearing and liquidity	
Sensitivity analysis	Test assumptions/robustness	'What if?' analysis	Tests factors separately
Simulation modelling	Aggregate impact on many factors	Comprehensive models Risk analysis	Quality of data on causal relationships
Stakeholder reactions	Political dimension of strategy	Stakeholder mapping Game theory	Largely qualitative

Figure 2.19 – Assessing the Acceptability of Strategies

2.40.3) Examining Feasibility

Feasibility is concerned with whether the strategy could be made to work in practice. Assessing the feasibility of a strategy requires an emphasis on more detailed – often quantitative – assessment of the practicalities of resourcing and strategic capability.

(Johnson and Scholes, 1998)

2.40.4) Selection of Strategies

Strategies are selected in different ways, not just through a formal, analytical (planned) approach. It is crucial to understand the role which formal evaluation will play in different processes of strategy selection .

Processes for selecting strategies

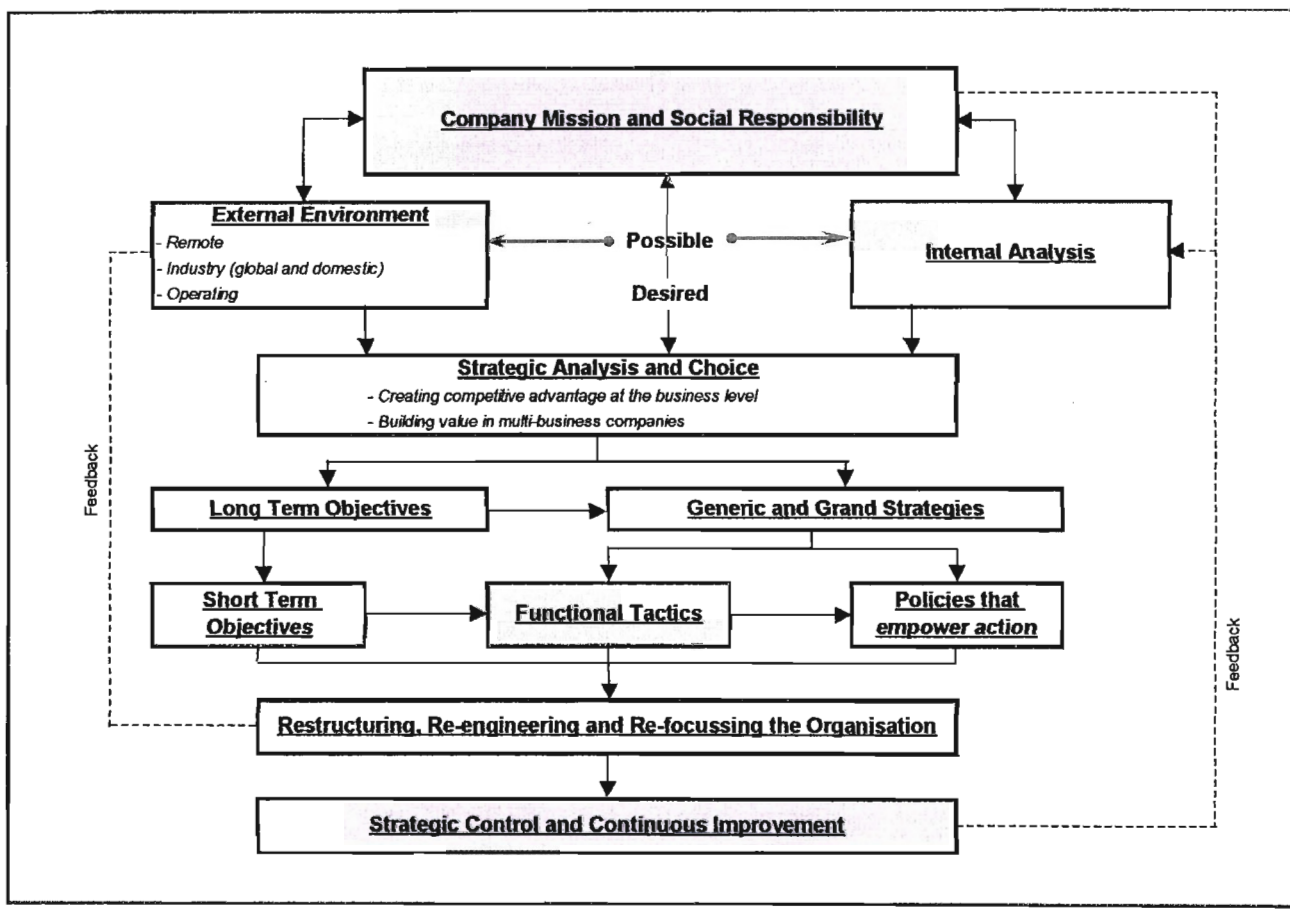
APPROACH	DOMINANT PROCESSES	ELEMENTS OF GOOD PRACTICE	DANGERS
Planning	Analytical techniques Tested against objectives Quantified where possible	Involve line managers Analyse 'holistic' picture Build in flexibility Communication between analysts and decision-makers	No ownership Fragmented analysis Rigidity – lost opportunities Decision-makers disown analysis
Enforced choice	Bend to environmental 'pressure'	Assess risk Prepare contingencies	'Victims of circumstances' Evaluation not done
Learning from experience	Reactive moves in separate parts of organisation Cultural/political context important	Processes need credibility Avenues of challenge Promote inter-unit learning	Fragmented/inefficient Pragmatism Risk of strategic drift
Command	Dominant stakeholder selects strategies	Inform/educate decision-maker Need 'completeness' Challenge the paradigm	Incomplete vision Vision institutionalised

Figure 2.20 – Process for Selecting Strategies

2.41) Organisation Structure and Design

Structure is a means to an end (improved performance). All too often it is seen as an end in itself. An inappropriate choice of structure can impede an organisation's strategies. However, the reverse is not true – structural change will not guarantee success.

2.42) The Generic Strategy Model



2.43) Conclusion

Strategic Management theory, models and concepts is a journey to explore and define what is called "Strategy Development" by examining the challenges of the external environment, the company's internal resources, and using various tools of analysis to achieve and sustain extraordinary performance for firms, in this case Smiths.

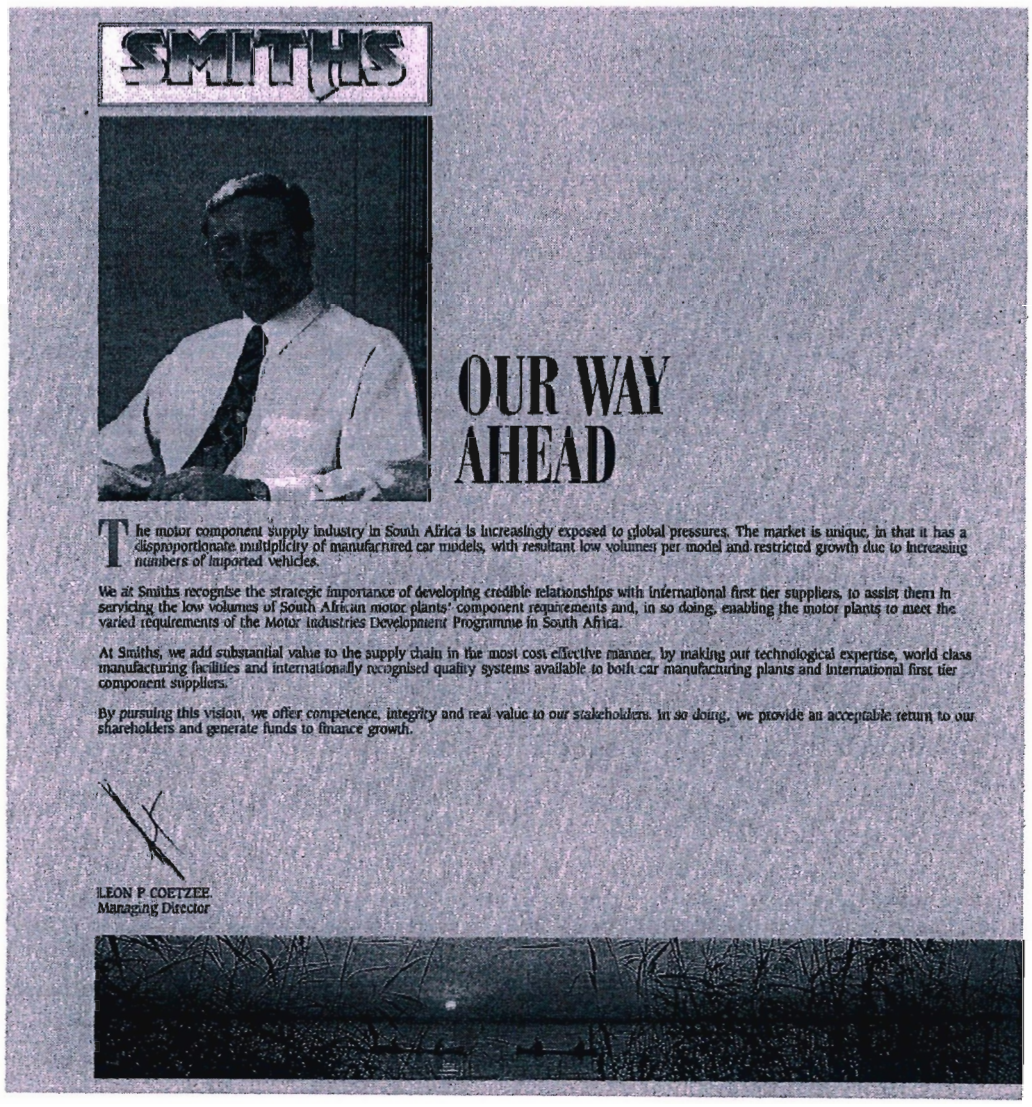
Definitions of strategy abound, but they all share an element of allocation of critical resources over relatively long periods of time in the pursuit of specific goals and objectives. Strategy is enabled and constrained not only by the underlying structural, market and competitive conditions that prevail in an industry or even in a nation, but also by the resources available to management. Analytical tools and frameworks are useful to identify and understand these enabling and constraining factors—both external and internal—in developing strategies and achieving superior performance.

This chapter introduced the basic tools and frameworks of strategic analysis that lay the foundations of *strategic thinking* in developing the impending strategy for Smiths. These models later transform strategic thinking into sound decisions and actions in the face of uncertainty, risks, and organisational complexity, and particularly in the context of very fast changing competitive and environmental conditions.

Chapter 3 – Case Study

3.1) Introduction

The last decade has brought with it a time of totally unprecedented change, an environment where competition is rife, only the fittest organizations survive, as well as the opening of markets to the global economy. Only fluid, fast paced and highly adaptive organizations will continue to thrive in this fast paced global economy in which Smiths operates within.


SMITHS

OUR WAY AHEAD

The motor component supply industry in South Africa is increasingly exposed to global pressures. The market is unique, in that it has a disproportionate multiplicity of manufactured car models, with resultant low volumes per model and restricted growth due to increasing numbers of imported vehicles.

We at Smiths recognise the strategic importance of developing credible relationships with international first tier suppliers, to assist them in servicing the low volumes of South African motor plants' component requirements and, in so doing, enabling the motor plants to meet the varied requirements of the Motor Industries Development Programme in South Africa.

At Smiths, we add substantial value to the supply chain in the most cost effective manner, by making our technological expertise, world class manufacturing facilities and internationally recognised quality systems available to both car manufacturing plants and international first tier component suppliers.

By pursuing this vision, we offer competence, integrity and real value to our stakeholders. In so doing, we provide an acceptable return to our shareholders and generate funds to finance growth.

LEON P COETZEE.
Managing Director

Figure 3.1 - Smith's Vision

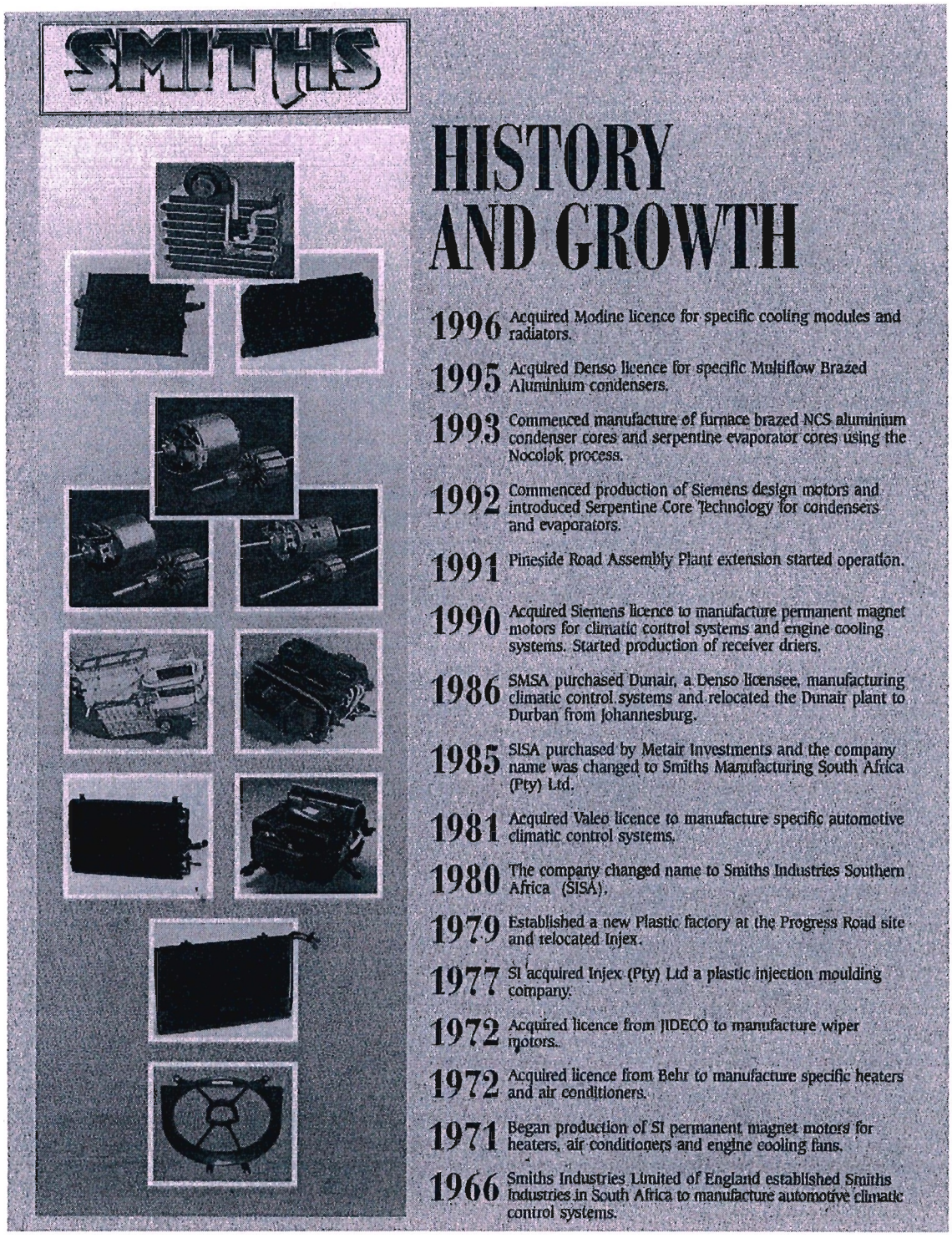


Figure 3.2 - Smiths History and Growth

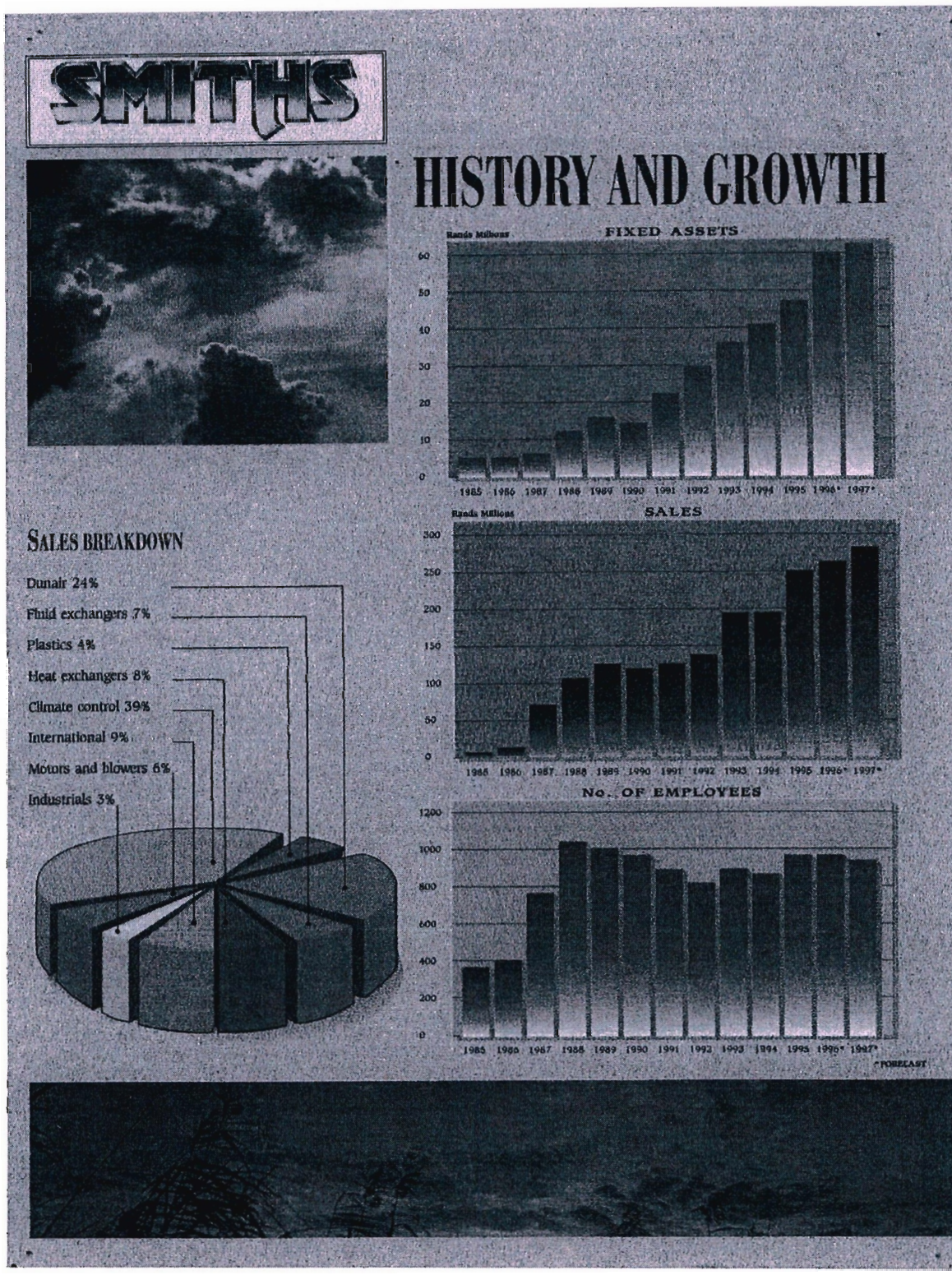


Figure 3.3 - Smith's History and Growth

Figure 3.4 - Smith's Purpose

3.2) SMSA - Background and Context

Smiths Manufacturing is a local organization in a maturing market. It finds itself in a market where there is a saturation of users that are reliant on repeat customers. The competitive conditions force the organization to fight to maintain its share and there is emphasis on efficiency and low cost. Smiths is one of the two prominent automotive air-conditioning manufacturers in South Africa. It is a supplier to the local original equipment manufacturers such as Toyota, BMW, Ford, Nissan, etc... Smiths has formed strategic alliances with global players for product licence agreements to supply the local industry. The organization is one of many companies owned by the blue-chip shareholder group "Metair". The group acquired the organization 15 years ago. Prior to purchase, Smiths manufactured various commodities from clocks to spark plugs. Since the acquisition, it has re-orientated its focus to primarily automotive HVAC systems (heating, ventilation and cooling systems). The average tenure of senior executives is ten years. The middle management and professionals are eight to four years respectively. Although the organization has had a few lean years, it has had consistent growth. In 1995 Smiths experienced a complete restructure. The organization was rearranged into SBU's (separate business units) in order to better address and respond to customer needs.

Smiths, being South African is traditional and bureaucratically controlled. Members are expected to conform, follow the rules and make a good impression. This is inline with a conventional culture. The organization tends to be hierarchically controlled and non-participative. The centralized decision making in such an organization leads to do only what they are told and to clear all decisions with superiors. These are characteristics of a dependent culture.

3.3) The 1995 Separate Business Unit (SBU) Restructuring

In 1995 Smiths underwent a radical change in terms of the way it carried out its operations, management structure, etc. by splitting up into SBU's (separate business units) -

i) Heat and Fluid Exchangers Plants, specialising in heat exchangers (condensers, evaporators, heaters and radiators), and fluid exchangers (pipes and hoses) for the heat exchanger systems.

ii) Plastics Plant specialising in component manufacture (injection moulding)

iii) Climate Control, being the assembly plant (heating, ventilation and cooling (HVAC) module assembly) for Original Equipment Manufacturer (OEM)

iv) Parts and Accessories (P & A) aftermarket kits for dealerships

Each SBU has its own General Manager, his immediate subordinates being made up of a Design/Purchasing Engineering Manager, an Industrial Engineering/Quality Assurance Manager, a Process Engineering Manager, an Operations Manager, a Logistics Manager and a Maintenance Manager, and common HR, Finance, Marketing, Overseas Purchasing and IT departments (refer to appendix 1). The fundamental reason for this major restructure was to better address the market requirements and customer needs, in terms of speed to market products, cost effectiveness/value added, quality and flexibility. Consequentially the SBU's created a flatter structure, with more individualised units (SBU's), the GM of each unit reporting to the MD.

Being part of the automotive fraternity, it inherently operates in a very unionised culture. SMSA has a labour force of approximately 900 people, and three plants situated in close proximity to each other operating as SBU's (strategic business units independent of each other with common HR, Marketing and Finance departments). Because of the multiplicity of the vehicle models and relatively low volumes demanded from our South African customers, SMSA has fairly labour intensive processes, and the high variety, low volume product mix does not justify the capital outlay to automate production facilities. SMSA is thus highly dependant on its people, and with the motor plants adopting 'just in time' logistics systems, SMSA cannot afford to interrupt supply of product to our customers for any period of time, as this upsets the motor plants schedules too.

3.4) A Birds Eye-View of Smiths Business Model and Strategy

Smiths serves local OEM's, the USA and Europe export markets. Smiths aims for developed countries because of their large market sizes, hence larger volumes. Smiths also aims for these niche markets, i.e. lower volume high variety export markets where the overseas counterparts are unable to manufacture low volume, high variety heat exchangers for their P&A (Parts and Accessories/Spares) aftermarket feasibly. Smiths is geared for low volume, high variety product mixes at globally competitive prices due to a number of factors, namely the SA exchange rate, the high abundance of unskilled and semi-skilled labour, a more labour oriented plant as opposed to the fully automated plants overseas. Smiths is and probably will remain more labour intensive due to the local market size (only 300 000 new vehicles per annum as opposed to over 3 million new vehicles per annum at America's General Motors plant alone), as well as the growing multiplicity of models and imports into SA.

Smiths has multiple licence arrangements with BMW (Modine), Toyota (Nippondenso, herein referred to as Denso), VW (Valeo). These strategic alliances exposes Smiths to joint agreements and licences to technology, processes and design information invaluable to our interaction in the global economy. As it currently stands, Smiths cannot compare head to head with first world rivals. The vehicle air-conditioning and climate control market is a very dynamic specialized market with a numbered amount of customer possibilities and long standing well established relationships in place. To ensure new business, a firm must be head and shoulders in terms of competitive advantage above market rivals. And with growing competitive forces, shorter vehicles lifespans, costdown pressures from customers, customers rule. They set target prices within which Smiths has to comply, or face losing the business to source design (eg. Toyota would go to Japan if we cannot meet their target prices, shorter project introduction to market, etc...). Smiths operate in an industry that offers products that are identical substitutes for each other. Unlike other competitors, Smiths does not have selling and distribution outlets/channels, rather Smiths focuses purely in *manufacturing and process technology*. The strategic alliances with Denso, Modine, Valeo puts Smiths in a very favourable position both from a competitive perspective as well as future business reassurance. Smiths is thus locally privileged and doesn't

face much local competition. Internationally, supplier alliances like Visteon and Allexim depend on price sensitivity, exchange rates, rivalry, etc...

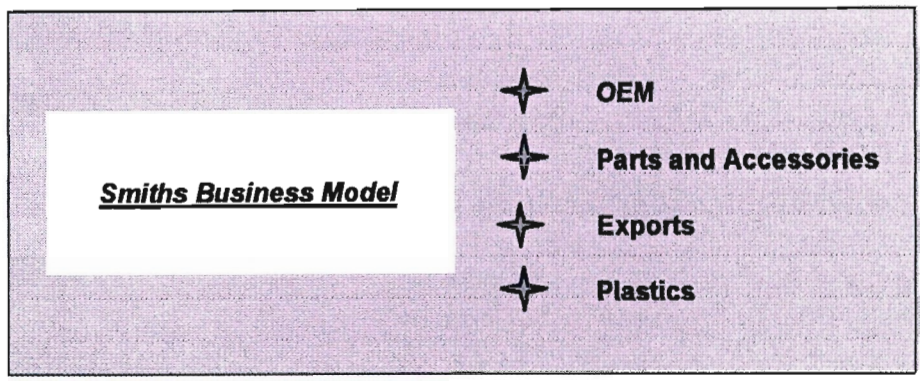


Figure 3.5 – Smiths Business Model Framework

Economic growth, particularly in developing countries, is dependent on small and medium enterprises to a large extent. These enterprises have become the main targets of growth and development policies in the last two decades in developing countries (Bazargan: 1997). Limited marketing experience limited access to technology and raw materials, poor financing and limited political bargaining power have historically made life difficult for these small and medium enterprises. The problem for these firms is not their size but their isolation because they operate alone in a competitive environment. Cooperation is the form of clustering (firms concentrated in one location) or networking (groups of firms not necessarily in the same location) would develop competitive advantages. In Smiths case, particularly the Heat Exchanger SBU, there are certain technology and product licence agreements in place with OEM source design/parent companies, but this relationship is only a consequence on being awarded the business for the relevant vehicle model lifespan. Unfortunately these relationships are not permanent nor beneficial in to Smiths in terms of future projects and business, but it does not certain strategic spin offs, for eg. this type of technology and licenced processes can be used for the export markets to other countires depending on the type of patent and the nature of legislation.

3.5) Increasing role of Niche Markets

There is a growing trend among customers in mature economies for specialised or customized products. With the globalisation of markets and increasing world-wide competition from large multi-nationals, many smaller firms may have no choice but to specialise in the supplying of products that occupy a relatively narrow global niche. The advantages of smaller firms – quicker response times, flexibility, adaptability, etc facilitate the international endeavours of born globals.

3.6) 5 Global Trends that will define our business in the next ten years

*i) **Shorter New Product Development Cycles and Shorter Product Life Cycles***

Development milestones and new product introduction time to market cycles are getting shorter. In the automotive sector, the model life of vehicles are diminishing. This impacts on the ability to react quicker to customer needs.

*ii) **Globalisation of Markets – Smiths trying to reach customers all over the globe as part of their strategy to cut costs due to production and logistics economies of scale***

The rand-dollar exchange rate is an incentive to expand Smiths export market share. Also, with increased volumes comes economies of scale, thus complimenting one of the most competitive factors in this game – cost advantage.

*iii) **Downsizing of Organizations, Business Re-Engineering, Flattening of Organisational Structures and Multi-skilling of employees***

Flatter organisational structures lead to quick decision making and faster response to changing market forces, customers and suppliers. Project teams co-exist (Development Engineer, Technical Buyer, Process Engineer, Quality Engineer) as opposed to previously "over the wall departmentalised engineering practices". Project teams are arranged in open-plan cell type layouts, thus being more empowered in making fast decisions, reacting quickly

to customer changes, breaking down "over the wall" bureaucratic practices, gaining more empowerment and emotional ownership in projects.

iv) Customer and Supplier Partnering, Supply Chain dynamics, and Lean Production for greater efficiencies

In this harsh competitive climate, suppliers and customers have to work hand-in-hand in order to remain competitive and survive. The end consumer, after all, is the real customer. Various amounts of co-operation verse competition exist in order to add value along the supply chain. For example, customers, like Smiths, audit their component manufacturers in terms of quality systems, as well as help the supplier perform Value Engineering exercises in order to implement more proficient work processes, in order to cut cost/eliminate waste out of the processes (Kaizen, TQM, JIT).

v) Benchmarking Initiatives

At present, Smiths is affiliated to the Durban Automotive Cluster Benchmarking Initiative, involved in studying *best practices* companies with the aim of improving our firms performance.

3.7) Industry Trends

Ecology friendly technologies will become an absolute must, along with the development of new materials and processes. As high-tech electronics are increasingly integrated in vehicles, the global harmonisation of technical standards and regulations are a main objective to reach. New engines will progressively replace fuel and diesel engines, although these will be further optimised and continue to be the principal technologies for a foreseeable future.

3.8) Market Size

The actual size of the global market for automotive components (based on 1998 year-end figures) amounts to $932 billion, of which $695 billion goes to original equipment and $237 billion to aftermarket. Ten years ago there were 30,000 direct OE and aftermarket suppliers, with estimated combined sales of $496 billion. In 1998 the total number of direct suppliers was 8,000. Of these, sales from the top 75 global suppliers totalled $275 billion, and the balance of the 8,000 suppliers had combined sales of $683 billion, for an average of $85 million each. We can expect the total number of suppliers to continue to be reduced substantially.

3.9) The Motor Industry – The Current State of Play

Some economists believe that there is a thirty year economic cycle determining our material well being. Interestingly they can find confirmation for this hypothesis in the affairs of the world auto industry. Every thirty years or so a massive increase in consolidation and restructuring occurs, which lasts for a decade. In the first decade of the Twentieth Century thousands of firms appeared but most disappeared quickly and there was also early consolidation of which General Motors was the most notable result. The 1930s and 1960s saw further intensified shake-out and merger to be followed by the 1990s. This time consolidation amongst the auto firms: car, truck, and bus, was accompanied by almost manic merger and acquisition activity by suppliers as they attempted to meet the new demands and global aspirations of their customers. Each period of frenetic activity was followed by one of more measured change - where consolidation did not disappear but took place on a reduced scale. It is likely that the world auto sector is about to enter such quieter waters although some tidying up, such as the future of some Korean producers, will occur. Consequently, it is entirely appropriate to take stock of the situation in the world's auto industry.

Despite all the merger activity it is too early to say that the global auto sector is in some state of long term equilibrium. The current financial results illustrates this, where the merest hint of a slow down in markets is quickly translated into losses for many of the auto companies. A reduction in throughput increases unit costs whilst the dog fight to retain market share reduces unit revenues. Such is the integration of the regions of the world that it is much more difficult for

a producer to insulate itself from the effects of reduced growth in one part of the world by pushing into another - market strength and weakness tends to be duplicated world wide. Hence the markets in North America, South America, Western Europe and Asia Pacific are all demonstrating weakness, whilst more micro economic challenges add to the interest.

3.10) Competition

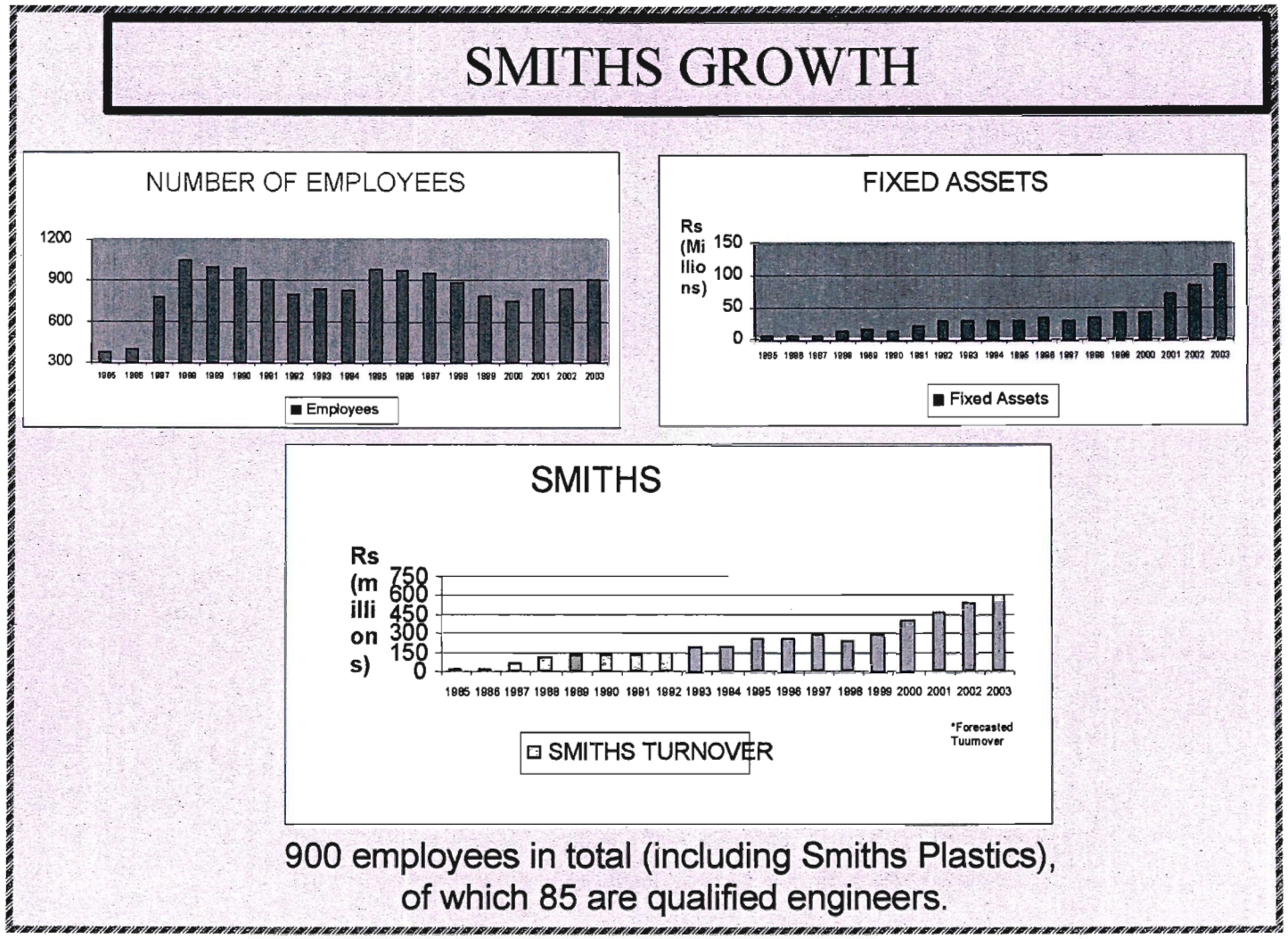
Competition within the automotive industry has become exceedingly tough during the last few years. Demands from vehicle manufacturers towards suppliers are ever-increasing. In particular, the continued requests for price cuts are a threat for the supply chain. Any company cannot afford to lose control over its principal business processes. These remaining manufacturers will continue to use joint engines, joint platforms and even joint plants. Their purchasing power will increase substantially, but so will economies of scale for the supply industry. As these phenomena converge, productivity will be further increased and cost structures will be further improved. Cars will become more affordable and contribute to the mobility needs of the world (just imagine, of the 6 billion people on the planet, only 5% could afford a car). The needs will be met in coming years and achieving this will present vast challenges, not only in cost reduction, but in ecological impact in particular.

3.11) SMSA Segmentation

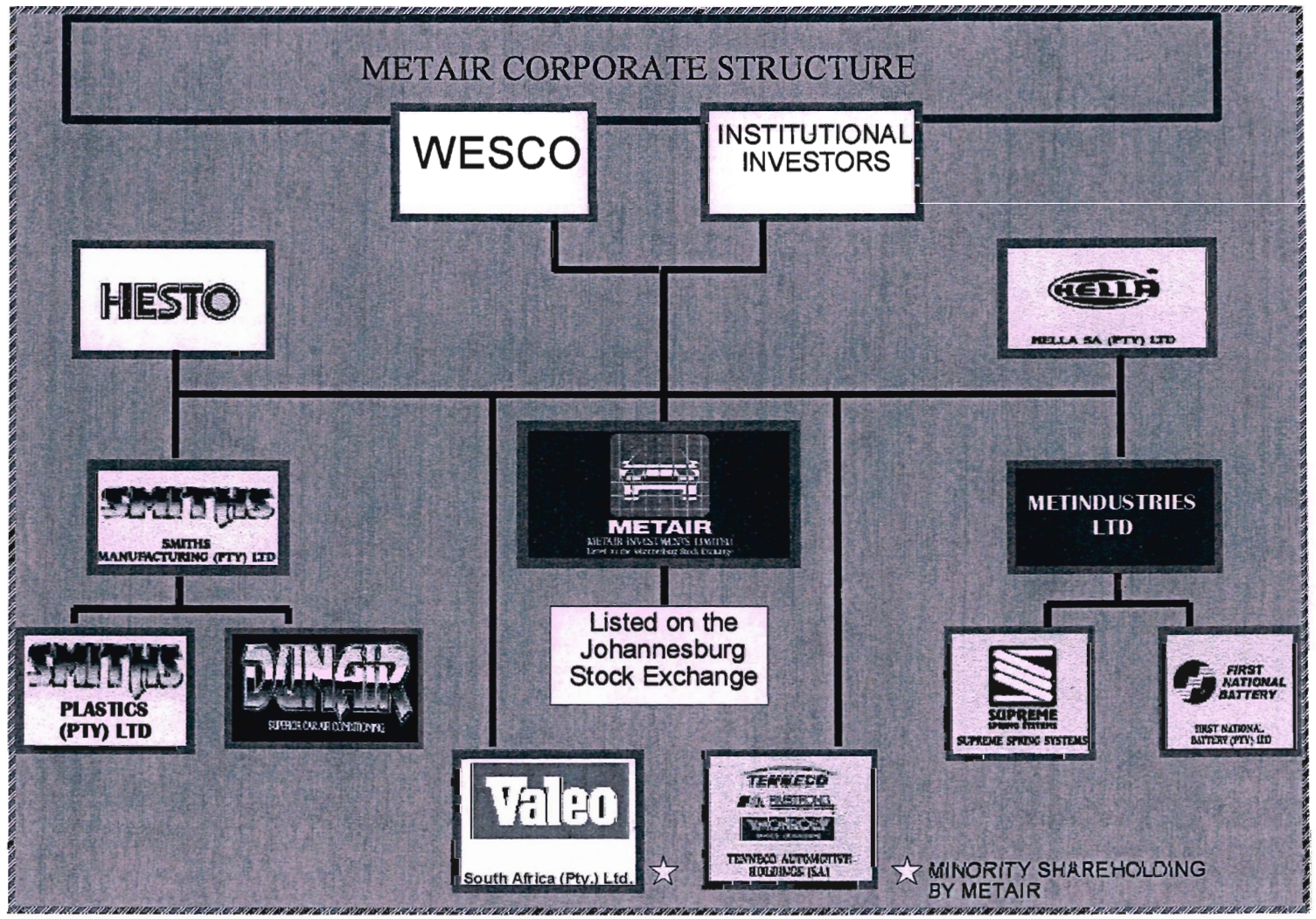
SMSA operates in a niche market where there is a demand for this specialized, limited type of technology requirement. Smiths export markets are predominantly non-emerging countries, i.e. developed countries where volumes are substantial due to market size (eg, USA, Europe) as well as the local SA market (Original Equipment Manufacturers {OEM's}). The United States and Europe OEM's are incapable of supplying small volumes, i.e. high variety, low volume product mixes to their markets. Smiths does well in these market niches where the overseas counterpart firms cannot do low volumes, i.e their suppliers are geared for high volume runs (fairly high-tech automated plants). High variety would be exorbitant, just simply not viable for these overseas plants. Smiths does well here, because Smiths is geared to run semi high volume runs, but more so high variety, low volume product mixes. Smiths being typically South African, is blessed with

a high abundance of unskilled and semi-skilled labour, and this makes sense for firms like Smiths to remain in these niche markets and provide the world over with low volume, high variety, quick introduction to export market products piggybacking off OEM quality systems and standards. It thus remains in Smiths interests to not develop a high volume automated plant here in Durban; not only would capital funding pose to be a huge outlay, but Smiths position in this niche market suits its available economic resources.

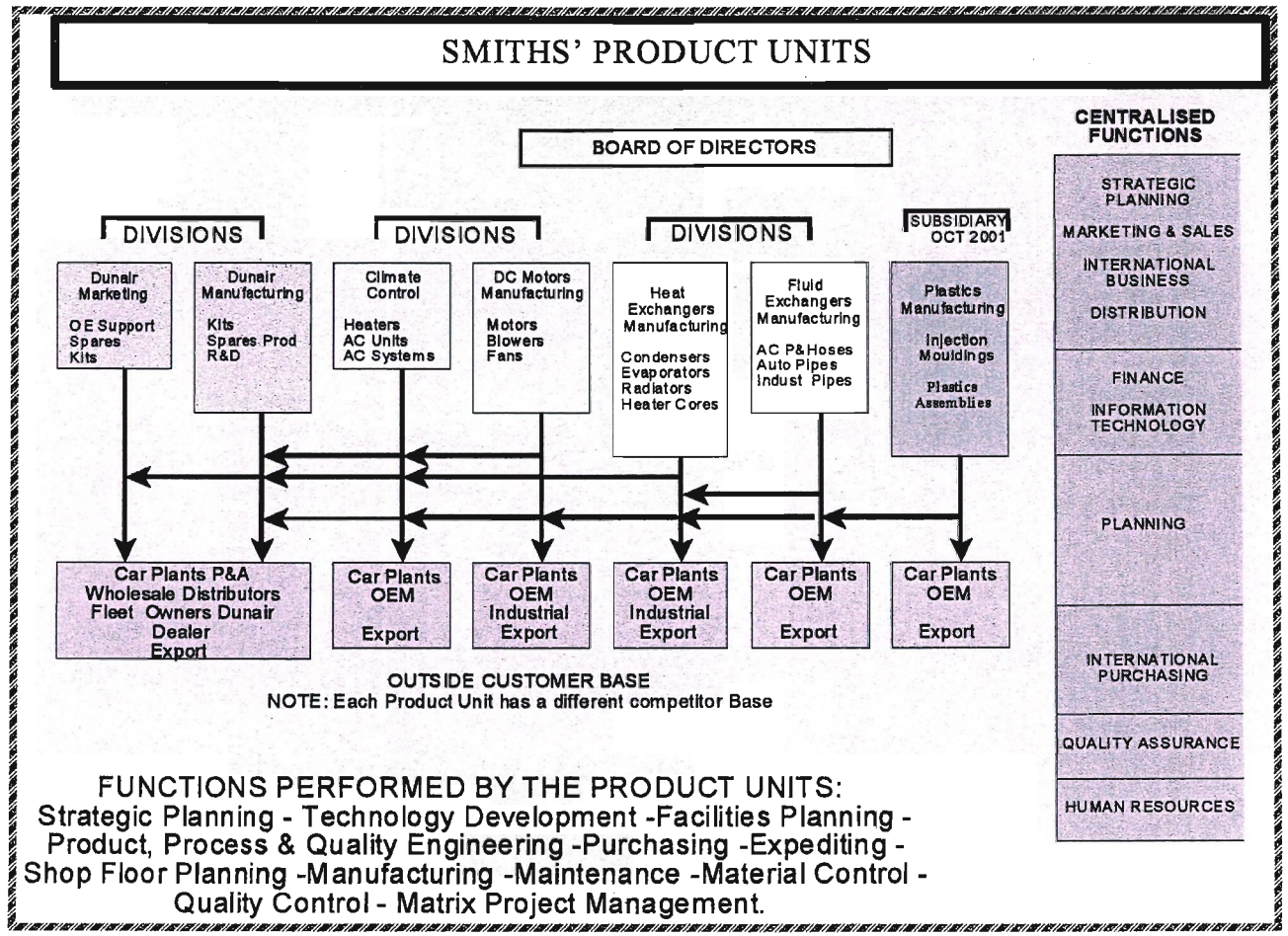
Smiths operates in the business-business sector, not FMCG's, i.e. a defined product made to order, not made to stock. SMSA is a fairly labour intensive plant, flexible enough to run higher local OEM volumes as well as low volume high variety export and P$A product mixes at relatively competitive prices on the world market. The plant is relatively low in terms of automation, compared to the developed countries, but fairly high tech plant and systems to manage low volume, high variety, which from an operations point of view, can be a logistical nightmare.



Slide 3.1 – Smiths Growth

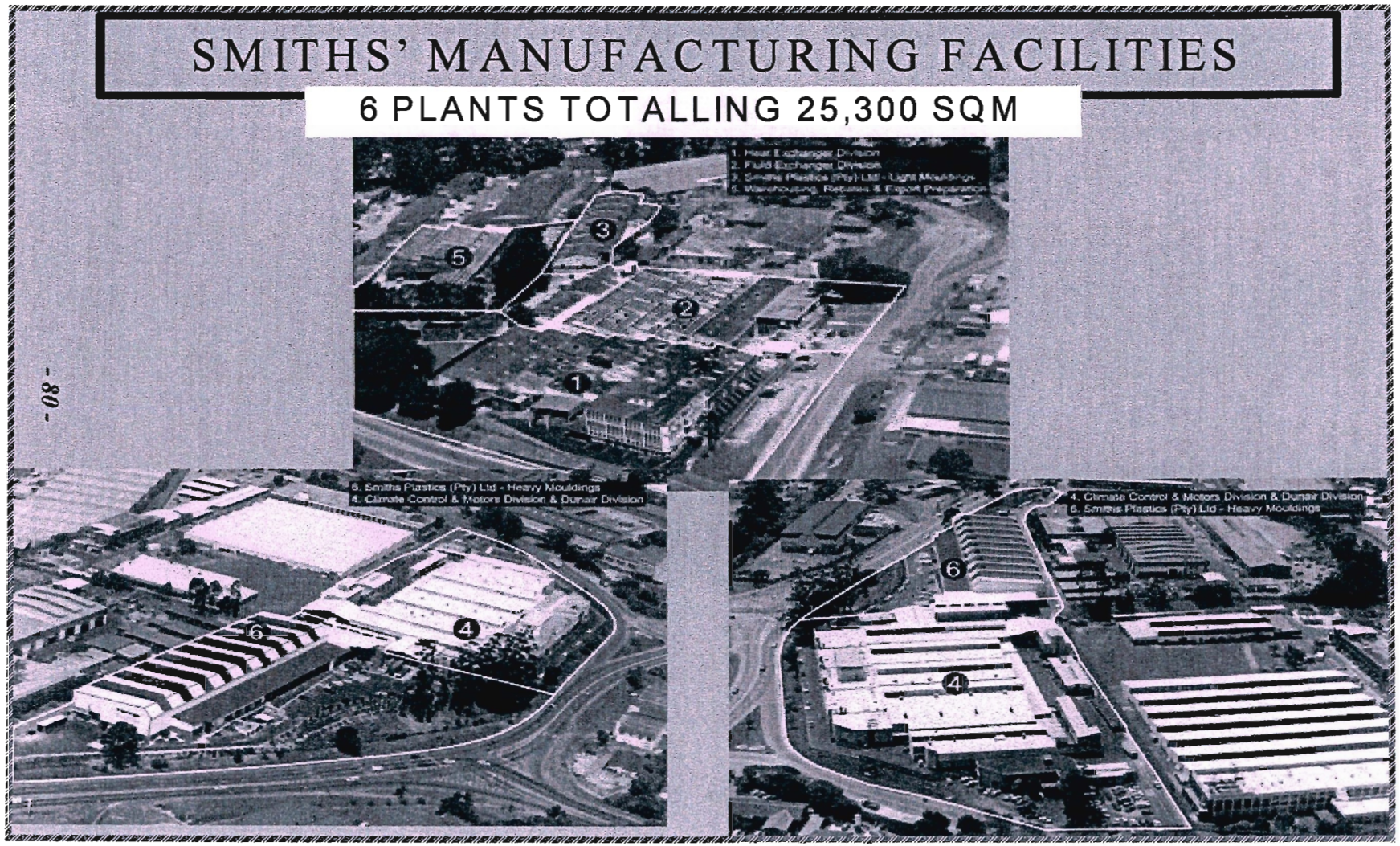


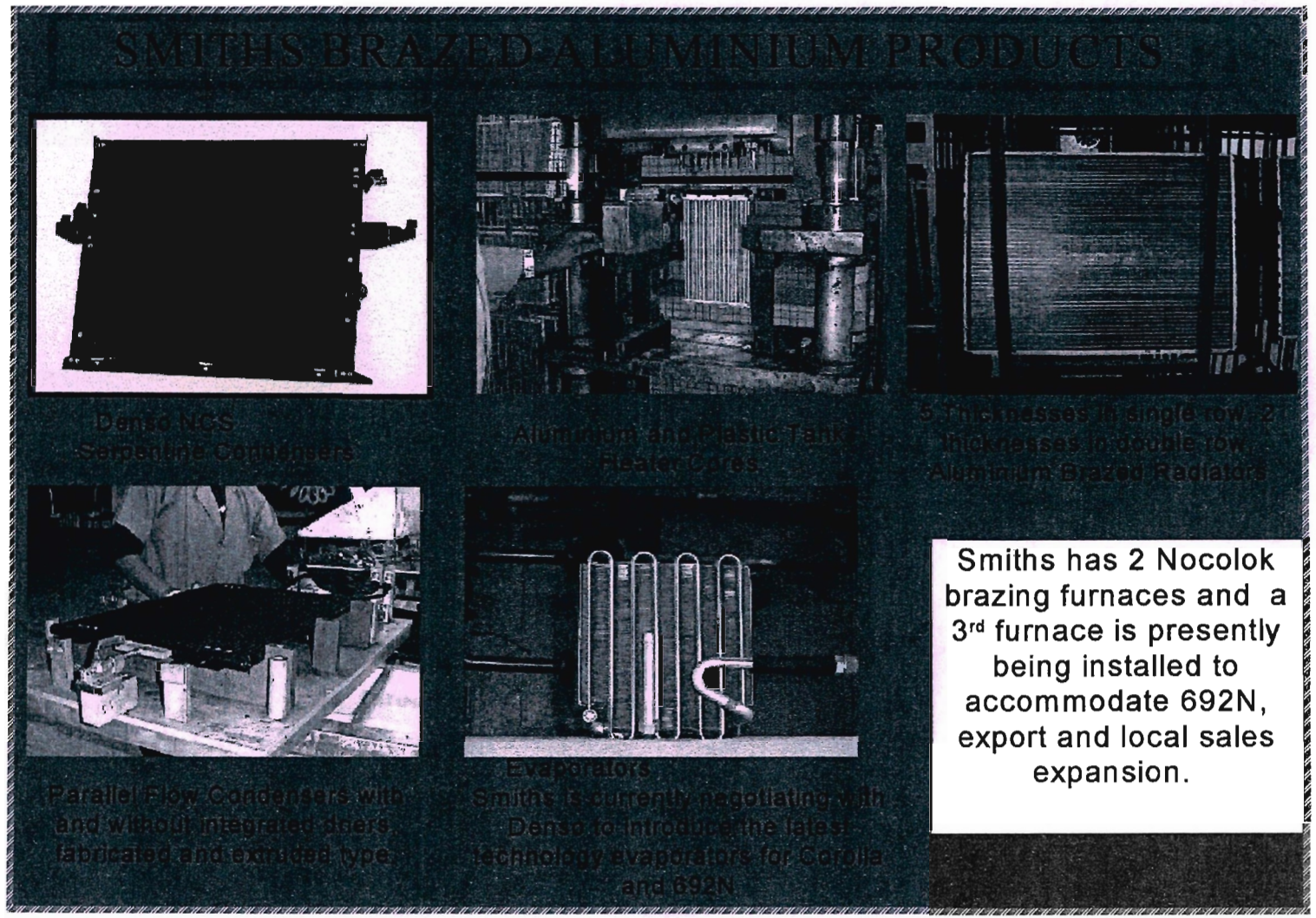
Slide 3.2 – Metair Corporate Structure



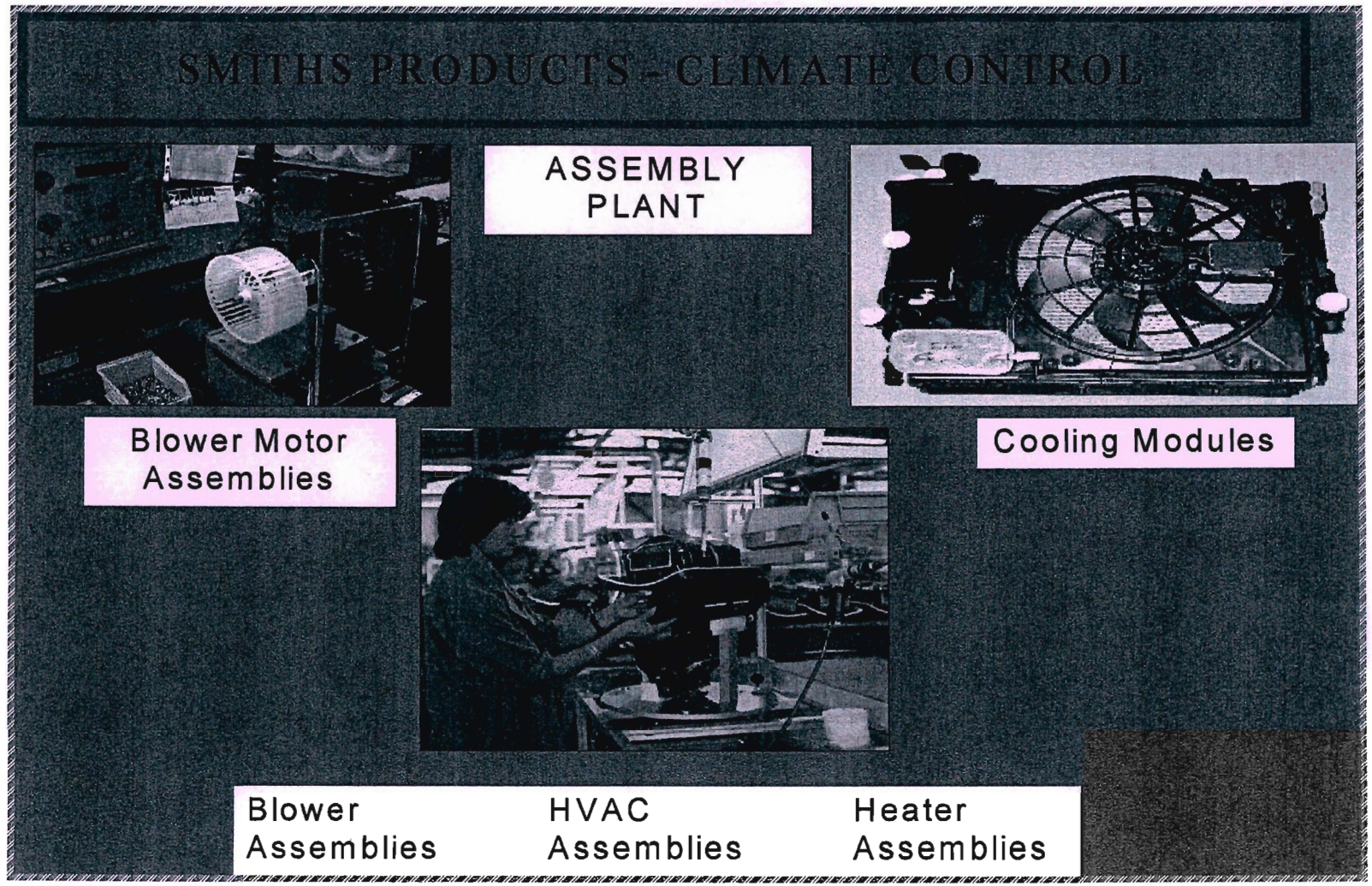
Slide 3.3 – Smith's Product Units

Slide 3.4 – Aerial View of Smith's Manufacturing Plants





Slide 3.5 – Brazed Aluminium Products



Slide 3.6 – Climate Control Product Overview

SMITHS – QUALITY CERTIFICATION

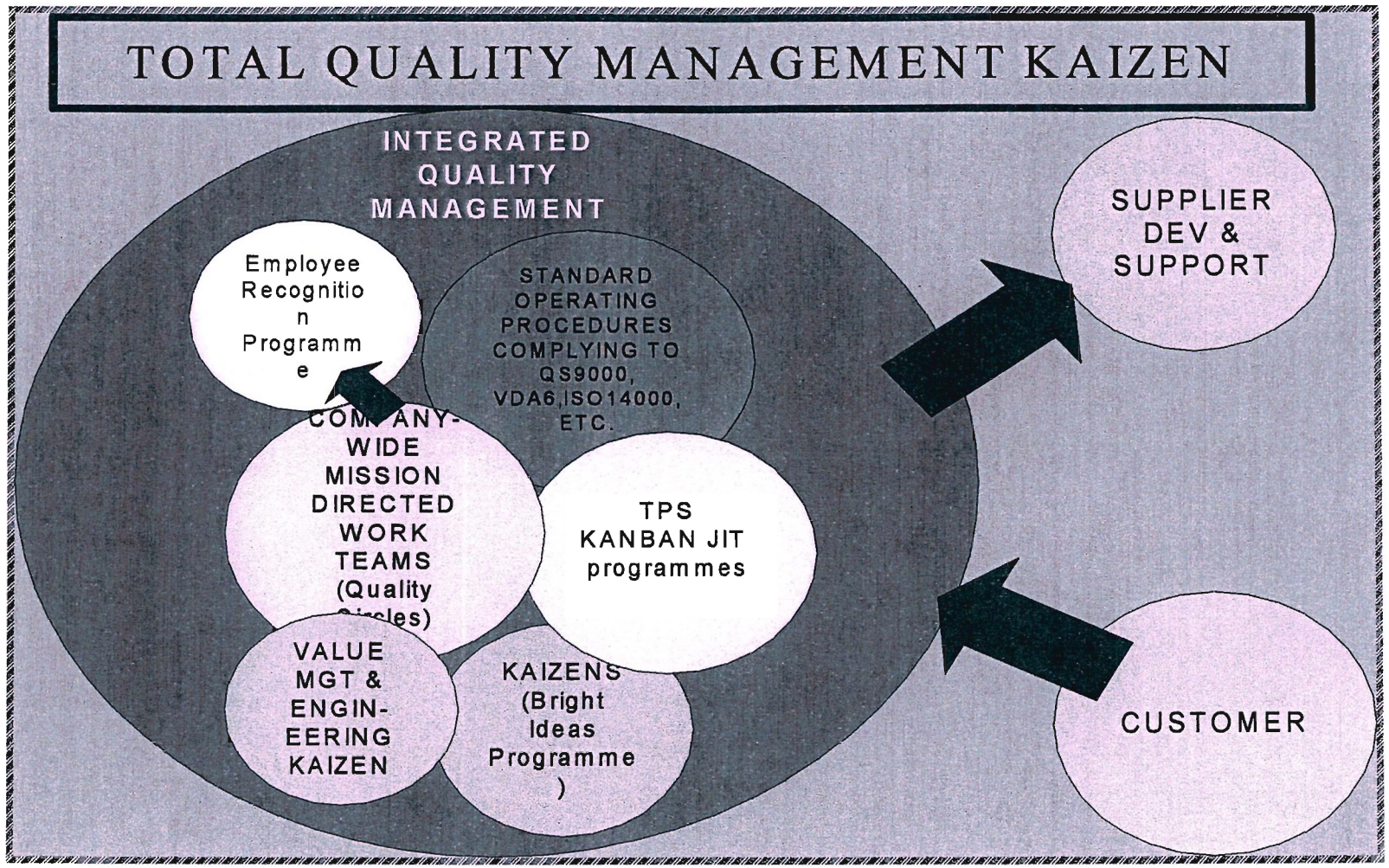
Certified by the Independent Global Authority:
Underwriters Laboratories Inc.

-	TS 16949	2003
-	ISO 14001	2000
-	QS 9000	1999
-	VDA 6,1A	1997

Motor Plant Certification and Local Certification

-	VDA 6,3A	2001	BMW
-	VDA 6,3A	1996	VW
-	VDA 6,1A	1994	BMW/Nissan
-	ISO 9002	1991	SA Bureau of Standards

Slide 3.7 – Quality Certification



Slide 3.8 – TQM Kaizen

3.12) **Smiths – Definition and Purpose**

Smiths is a wholly owned subsidiary of Metair Investments Limited, an automotive component manufacturing group listed on the Johannesburg Stock Exchange.

Smiths' core products are designed, tested and produced to world class manufacturing standards, utilising the expertise and latest technology obtained under licence to international first tier motor industry component manufacturers and suppliers.

Cost competitive products, primarily for the use in car and light truck air conditioning, engine cooling systems and vehicle trim, are supplied to the South African motor manufacturing plants, to the After-market as parts and accessories, as well as to international customers, in line with licence agreements.

Smiths aims to exceed customers' quality and value needs whilst providing shareholders with a satisfactory return on investment, financing growth out of profit. Smiths' operating procedures and controls meet international standards, whilst simultaneously encouraging initiative and creativity, through a formal process of leadership, teamwork, participation and empowerment. This is supported by education, training and a well defined employment equity policy.

Smiths continues to implement and maintain international automotive quality standards and procedures for process, product and environmental standards. Smiths develops credible relations and licences with international automotive first tier suppliers, which assist them in servicing the lower volumes and localisation requirements of their customers' activities in South Africa.

3.13) Company Objectives

3.13.1) Return on Assets

Target >25%

Areas of Concentration:

- ✓ Fixed Assets (ensure better capacity utilisation and increase up-time)
- ✓ Stock Management (more frequent deliveries of smaller volumes, re-forecasting of releases and obsolescence control)
- ✓ Debtors Management (reconciliations, passing of credit notes, get closer to creditors depts of OEMs, pricing in JDE)
- ✓ Maximisation of PBIT (cost-down in all areas), target >15%
- ✓ Improve creditors' payment terms
- ✓ Cash flow management
- ✓ Customer tooling debt

3.13.2) Growth with Profit

Targets:

- Increase export volume (25% of turnover by 2005)
- Focus on automotive Plastics and technologies
- OE to achieve market share of 60 % available market
- Increase market share to 50% in non-franchise sector
- Look for additional system contracts for exports on low volume manufacture
- To upgrade areas that are deficient in aesthetics and efficacy
- Develop personal relationships with our customers
- Investigate alternate options in terms of technologies, building own machines, etc.
- Investigate non-automotive opportunities using "like" technologies

3.13.3) Areas of Concentration:

✓ **OEM**

- Core Product Growth
- Product Development Linked to Vehicle Exports
- 100% Fitment Items (Heaters / Radiators/Plastics)
- Market Understanding / Surveys
- Technology Requirements

✓ **EXPORTS**

- Growth of radiators / condensers
- Market Understanding
- Develop additional business with current customers
- Effective forecasting and stock management

✓ **DUNAIR**

- Spares Program
- Cost-down Program (for acceptable PBIT)
- Distribution Channels, achieving balance between forecast and stockholding

- Maintain the standards of after-market fitment centres through the RMI
- Develop non-automotive business
- Focus on competitor activity

✓ **ASSESS LOCATION STRATEGY**

3.13.4) Implementation of Smith's Employment Equity Policy/Programme

To progress the Employment Equity Policy/Programme.

3.13.5) Maintenance of an effective SHEQ Policy/Programme

Maintenance of an effective SHEQ programme and compliance with international and local regulations. Obtain TS16949 and Ford Q1.

3.13.6) Staff Stability/Building and Retention of Skills

✓ To target retention of skills and staff stability through effective, succession planning, structure planning, routing out of non-conformance.

✓ To investigate the practicalities of the introduction of a cost to company benefit salary structure.

✓ To develop an effective recruitment and retention programme, to satisfy not only Smiths' Employment Equity Policy, but to also meet the needs of Smiths.

✓ To investigate opportunities to reduce absenteeism within the Company.

✓ Flexible labour plan.

✓ Multiskilling.

3.13.7) Heat Exchanger SBU – Objectives

i) ROA 25%

ii) To achieve 60% of the OE market in South Africa

iii) To ensure profit growth

iv) Develop personal relationships with customers and licensors

v) Supply chain development

vi) Alternate technology and machine building

3.14) Strategic Alliances

Over the years, Smiths have developed relationships which evolved into strategic alliances with a few significant automotive source design licensors, namely, NipponDenso of Japan [Toyota], Modine of Germany [BMW], Valeo [VW], etc... SMSA is locally in a privileged position, having only one really large local competitor, BEHR. Although both Smiths and BEHR have maintained relationships with their previous customers in such a manner to secure future projects consistently, customers are being more liberal in who they decide to do business with based on cost, quality and lead time to introduce to market. It is now not uncommon for customers to switch, eg, Delta is a customer of BEHR's, recently Smiths has been asked to quote for the new Isuzu project, scheduled to be launched in 2004.

Smiths is in an opportune position in the following ways, by virtue of being party to multiple licence agreements –

i) By possessing several licence agreements, gives Smiths the ability to walk *freely* into most of these *licensor source design plants wordwide* and thus adapt new ideas

ii) Is exposed to the most up-to-date technological innovations

iii) Is automatically selected to quote for new Toyota, BMW, VW, Ford projects, etc...

Internationally, this is advantageous to Smiths due to the fact that Smiths operates in a fairly technologically inclined niche market, and these licencors are global giants, well networked and established worldwide, with influential power and foremost technical expertise, Research and Development.

With the relatively weak exchange rate, low electricity costs for this type of process, i.e. Continuous Aluminium Brazing (which results in a low facility overhead), inexpensive SA labour costs, low SA land costs, and these strategic alliances, Smiths is classified as a low cost producer, aiming to be a low cost leader. In addition, these licence agreements ensure secured suppliers of scarce, unique raw materials and the Japanese workplace culture of continuous improvement *(KAIZEN)*, which results towards striving to excel at cost reductions *(Value Analysis and Value Engineering)* as well as increased efficiencies *(Industrial Engineering)*.

With the advent of one plant producing a single model for the world in order to maximise economies of scale, reductions in overhead, administrative and tooling, tooling change-overs, cost cutting

technologies, this leads to increased volumes and less uncertainty, less volatility and more routine structure, more firm orders, less export fluctuations, thus enhancing business from all aspects, more so the operational side for Smiths.

Smiths fails however, to look at other countries for rivals price sensitivity, strengths, weaknesses and comparative advantages and disadvantages. Smiths is in a comfortable position, yet in a fiercely competitive market.

3.15) MDWT – Mission Directed Work Teams

Smiths MD Mr. Leon Coetzee, avidly believes in corporate culture, and the adage that people are a company's greatest asset. He promotes the use of MDWT, a visual management, communication worktool that empowers people at all levels throughout the organization. MDWT in essence, breaks the work-force into teams, giving each team emotional ownership for their areas, activities and performance. MDWT communicates the company's vision, departmental mission statement, key objectives and goals in measurable terms broken down from the company's strategy into little units of "job". MDWT encourages the employees voice and input in solving everyday problems, promoting the operators interests and moving to a mindset of kaizen (continuous improvement). MDWT endorses operator initiative and teamwork, a spirit of interplant competitiveness and pride, the sense of belonging to a dedicated team and the voice of the people been heard and taken into account for. MDWT also improves the operators work knowledge and educates the workforce in terms of various modules –

i) Goal Alignment (Mission, Vision, Objectives, Performance Measuring)
ii) Team Coaching (MultiSkilling the Workforce)
iii) 5S Visual Workplace (Lean Manufacturing and JIT)
iv) Equipment Optimisation
v) World Class Leadership
vi) Workflow Management
vii) Quality Assurance
viii) Customer Service
ix) Process Improvement
x) Self Development

3.16) Industry Environment

3.16.1) Trends in Automobile Production

The fact that the triad markets of Europe, Japan and the US have been experiencing low growth or even stagnation has been a major determining factor in the automotive industry's current economic situation. Furthermore, new markets such as China or India can be opened up only by applying vehicle concepts that are adapted to these respective markets and ones that include a high share of domestic production.

Overall, these developments will lead to a greater competitive pressure on the existing production capacities in the triad markets. Parallel to this, trends indicate that customers are requesting increasingly customized vehicles in terms of comfort, equipment and communication. OEM production plants are faced with the challenge of manufacturing customized products as flexibly as possible in smaller quantities whilst still making a profit.

3.16.1.1) Individuality due to Module Production

In order to manage the multitude of models, future vehicles will increasingly be built using individual modules. An example would be the cockpit module already integrated into production, pre-assembled and installed fully automatically into the vehicle body at Daimler Chrysler. Daimler Chrysler is applying the modularization approach not only to production, but to planning, as greater standardization of the assembly units and production facilities will reduce both planning and maintenance expenses, and, at the same time, achieve economies of scale in purchasing.

3.16.1.2) Flexibility succeeds

In addition to the activities relating to modular technology, it is becoming increasingly necessary to organize production in the body shop and the assembly lines more flexible. The reasons for this are, amongst others, shorter vehicles development times and production cycles as well as the need to produce economically and this includes smaller production programs (AutoTechnology, 2003:64-667).

3.17) The Industry's Dominant Economic Features

The local market comprises of the seven OEM motor manufacturers, viz., BMW, Toyota, Ford, Delta, Nissan, VW and Daimler Chrysler (Mercedes). The scope of competitive rivalry extends far beyond the local borders, this being a global market with customers abroad as well as local,

in addition to local customers exporting vehicles (Toyota Corolla, Mercedes and 3 series BMW). The market growth rate seems fairly constant, being in a mature market (as indicated on the life cycle matrix). The industry is dominated by a few large firms, both local and abroad, the likes of Behr International (also situated in New Germany), Visteon Climate Control Systems (USA), Delphi (USA). The number of buyers/customers is relatively few, all being large OEM's. Most industry rivals focus on their core business, i.e. the level of forward of backward vertical integration is relatively remote. However, in this age of unprecedented competition, suppliers and customer partnering is taking off, supply chain dynamics are improving, all in the way of ensuring survival.

3.18) Smiths Chief Competitors

3.18.1) Behr International

Behr Indistrietechnik GmbH & Co, an independent enterprise of the Behr Group since 1990, specializes in the design, manufacture and supply of customized Heat Exchange Systems, Cooling and Air Conditioning equipment for engines, transmissions, crew compartments and electronics in military and civil applications.

Cooling systems for engines and transmissions include :

i) Radiators
ii) Charge Air Coolers (water and air cooled)
iii) Oil Coolers

Air Conditioning Systems for crew compartments and electronics include:

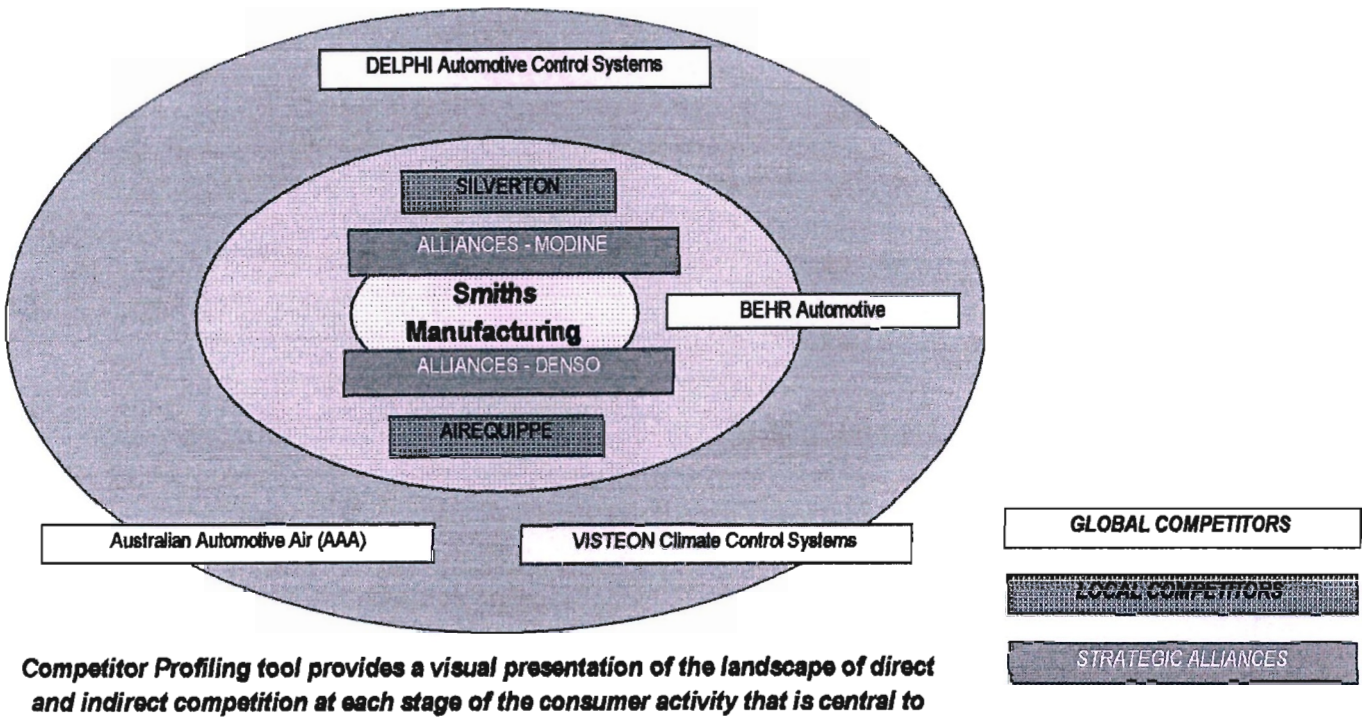
i) Evaporators and Evaporator Blowers
ii) Condenser and Condenser Blowers
iii) Compressors
iv) Receivers
v) Driers
vi) Refrigerant Pipes and Hoses
vii) Thermostatic Control Devices
viii) Pressure Switches
ix) Temperature Sensors

Behr, a leading manufacturer of air conditioning components in South Africa, has grown from strength to strength since its inception in Port Elizabeth in 1986. The company, which is based in

Markman Township, started out as an aftermarket fitment center, and with its own design and manufacture capabilities. The Port Elizabeth based Delta Motor Corporation acquired the company in 1988, and began supplying Opel and Isuzu air-conditioning systems as original equipment (OE). After several other changes, the then Connoisseur Auto Air Conditioning became part of the large Behr global operation with it headquarters in Stuttgart, Germany. Today, Behr Climate Control supplies heating, ventilation and air-conditioning (HVAC) components to all the major original equipment manufacturers (OEM) such as Daimler Chrysler, Delta, VW and Nissan, as well as air-conditioning pipes and hose. Behr Climate Control, PE, is currently exporting air-conditioning pipes and hose to its sister plants in Europe, and is poised to get a contract for the M Class air-conditioning lines for the US. This will mean a capital investment of R5million and the capacity increases to three shifts, employing an additional twenty people per shift. Behr PE is not only concerned with their production and manufacturing quality, but are stringent with their accreditations and occupational safety. It has been awarded the QS9000, TS16949, VDA6.1 and VDA6.3 Automotive Systems. The company has also been awarded a NOSA 5 star rating, and achieved a million hours accident free. Behr also intends promoting a Black Empowerment Supplier Base and has a fully developed internal skills development programme in place *(www.ecdc.co.za/ArticleUpd).*

3.19) Demands from Vehicle Manufacturers towards Suppliers are ever-increasing

Competition within the automotive industry has become exceedingly tough during the last few years. Demands from vehicle manufacturers towards suppliers are ever increasing. In particular the continued requests for price cuts are a threat for the supply chain. Any company cannot afford to lose control over its principal business processes. Suppliers are forced to reduce prices to remain competitive relative to imported source design componentry. The current strengthening of the exchange rate further puts imports at an advantage relative to local suppliers. Margins are being tightly squeezed. Competition is at an unprecedented level. And OEM's are still more demanding in terms of prices and quality improvements (Auto Industry, 1 July 2000).



Competitor Profiling tool provides a visual presentation of the landscape of direct and indirect competition at each stage of the consumer activity that is central to the company's industry

Figure 3.6 – Competitor Profiling

Chapter 4 - Evaluation of the Heat Exchanger SBU Smiths

"The essence of strategy lies in creating tomorrow's competitive advantage faster than competitors mimic the ones you possess today" Gary Hamel and C.K. Prahalad.

4.1) Introduction

Company situation analysis prepares the groundwork for matching the company's strategy both to its external market circumstances and to its internal resources and competitive capabilities. The focus of company situation analysis and evaluation is centred around the following questions :

1) *How well is the present strategy working?*
2) *What are the company's resource strengths and weaknesses and its external opportunities and threats?*
3) *Are the company's prices and costs competitive?*
4) *How strong is the company's competitive position relative to its rivals?*
5) *What strategic issues does the company face?*

This paper uses a number of analytical techniques and models to illuminate SMSA's resource strengths and deficiencies, its best market opportunities, the outside threats to its future profitability, and its competitive standing relative to rivals. Insightful company situation analysis is a precondition for identifying the strategic issues that management need to address and for tailoring strategy to company resources and competitive capabilities as well as to industry and competitive conditions *(Thompson and Strickland, 2003).*

4.2) What is Causing the Industry's Competitive Structure and Business Environment to Change?

The following *driving forces* are responsible for the major underlying causes of change and changing industry conditions –

a) Increasing globalisation of the industry to accrue significant cost economies due to world scale volumes as opposed to national volumes.

b) Technological change, i.e. advances in technology helps induces lean processes, minimizes efficient plant sizes and makes product market cycles shorter, of greater consistent quality standards and less expensive. SMSA has to constantly upgrade processes to remain competitive in this game.

c) SMSA has to actively engage in Value Analysis and Value Engineering to keep the costs low and pass savings to customers. SMSA

4.3) Drivers for Change

The following factors indicate considerable attention to the causes of change in the automotive industry, the forces that make change happen. These have been grouped into a 'top ten' areas creating change:

- Market dynamics
- Industry structure
- Profitability and share price
- Globalisation
- Retailing and the centre of gravity
- Economic regulation
- Environmental regulation
- Supply chain management
- Product and process technologies
- Support infrastructures

(http://www.autoindustry.co.uk/docs/global.doc)

4.4) What are the Key Factors for Competitive Success?

In this industry, the leading KSF is a low cost production efficiency plant. Overall to this is high labour productivity and a multi-skilled workforce talent. SMSA engages in Value Engineering to cut cost and waste out of the product and processes, invests in Industrial Engineers to streamline and optimize plant activity and stays abreast of technology to remain capable. However, a chief problem exists with labour unions and the workforce, in that the labour productivity is at a very low standard, and the organizational culture is not in tune with training and developing the workforce.

4.5) How Well is the Present Strategy Working?

SMSA is facing increasing exposure to new customers, particularly overseas clients due to its budding reputation in this specialized niche field, and the opening of South Africa to global markets. SMSA strives to be a low cost leader, i.e. an apt competitive approach in the automotive sector. From a financial standpoint, SMSA is showing record breaking revenues in the last two years consecutively. Budget forecasted volumes have certainly increased substantially, however, so too have the internal scrap rate and this can be detrimental to the reputation of SMSA in the customers eyes should defect products exceed the quality systems specified PPM maximum allowable limits. The plant is expanding its facilities, warehouses, staff, but it is felt that the focus have shifted off the crucial strategic criteria and is now solely on managing to meet customer deliveries and shipments on time, i.e. purely operational focused. It is felt that procedures are being violated in order to meet shipping deadlines. This in itself is a precursor to disaster, in the sense that as sales are rising, the strategic committee is dormant to the SMSA competitors, both local and global.

4.6) What are the Company's Resource strengths and weaknesses, and its external opportunities and threats

This is examined by means of conducting a SWOT analysis as per below. The SWOT analysis reveals a perceptive understanding of SMSA's resource capabilities and deficiencies. Its market opportunities, and external threats to the firms future well-being, and just how much the current strategy is linked to these findings, or if at all. The task of conceiving a strategy that capitalizes on the company's resources aims squarely at capturing SMSA's best opportunities, and neutralizes the threats to its well-being to become a chancy proposition.

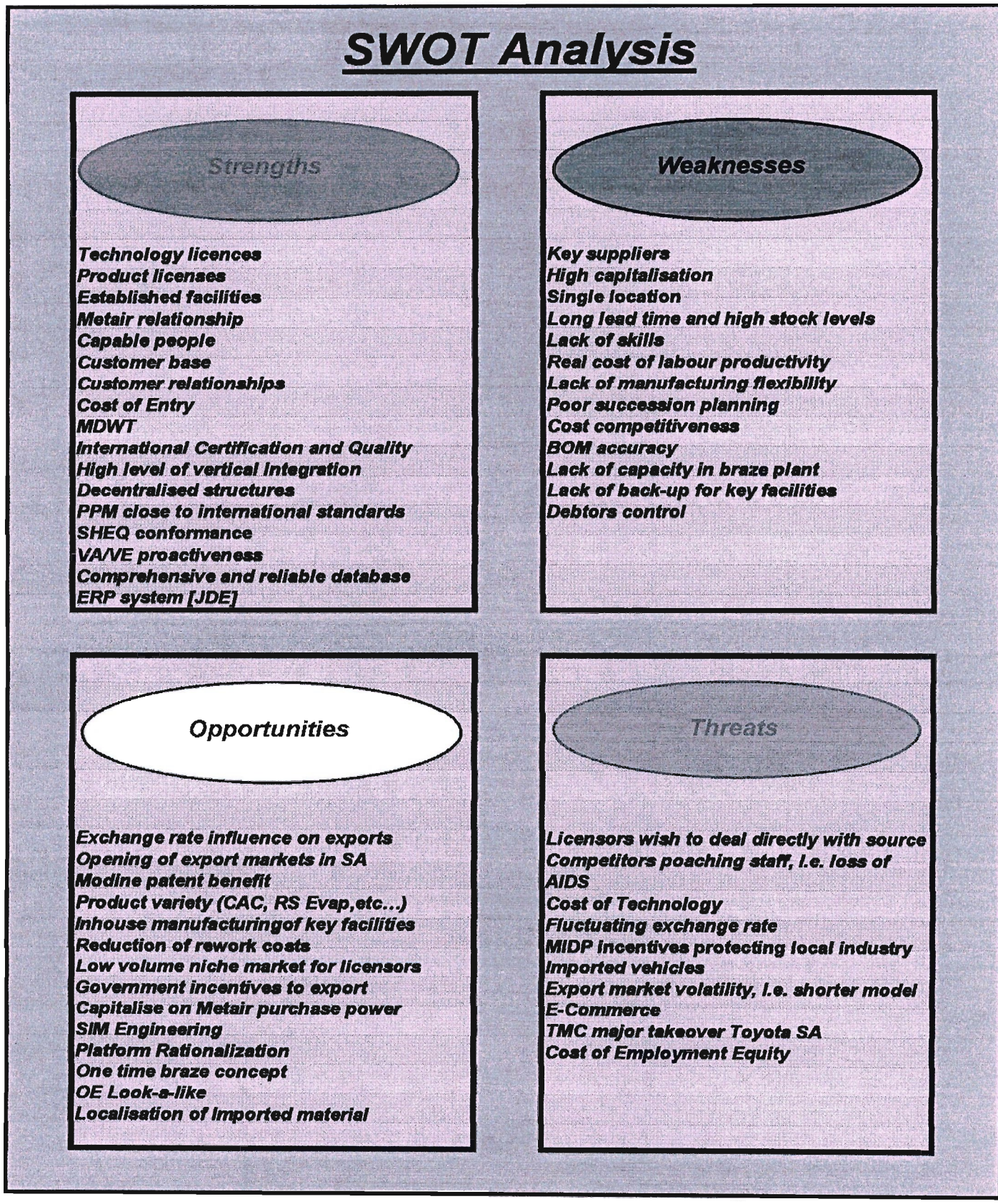


Figure 4.1 – SWOT Analysis

Impact Analysis - SMITHS

		Opportunities			Threats				
		Low Volume - High Product Variety Requirement Niche Market	Opening of Export Markets in SA	New CO2 Technology yet to come	Exchange Rate Fluctuations	Cost of AIDS - Impact to workforce	Increase in Imported Vehicles	Abolition of the MIDP Incentive Scheme [currently protecting Local Industry]	
Strengths	Local Market Dominance	+3	+3	+1	0	-1	-2	0	+7 -3
	Product and Technology Licences	+3	+3	+1	0	0	-1	-2	+7 -3
	Metair Relationship	+1	+2	+1	-1	0	0	0	+4 -1
	International Certification QS9000 ISO9000 ISO14000 VDA6 TS16949	+3	+3	+2	0	0	0	0	+8 -0
Weaknesses	Low Labour Productivity	-2	-1	-1	0	-1	-1	-3	+0 -9
	High Scrap Rate	-1	-1	-2	0	0	0	0	+0 -4
	Lack of Innovation	0	-1	-1	0	0	-1	-2	+0 -5
	Lack of Back-up for Key Facilities	0	0	-1	0	0	0	0	+0 -1
	Decreasing Cost Competiveness	-3	-3	-2	-3	-2	-1	-3	+0 -17
	Long lead time to introduce to market	-2	-1	0	0	0	0	0	+0 -3
	High Inventory levels	0	+1	0	0	0	-1	0	+1 -1
ENVIRONMENT IMPACT SCORES		+10 -8	+12 -7	+5 -7	+0 -4	+0 -4	+0 -7	+0 -10	

Table 4.2 – Weighted SWOT Analysis

4.6.1) Review of the SWOT Analysis

No two companies are alike in their resources. They don't have the same skill sets; assets (physical, human, organizational, intangible); competitive capabilities; or market achievements. – a condition that results in different companies having different strengths and weaknesses. In Smiths case, heavy reliance on success is attributed to the focus and use of its strengths, as illustrated in the SWOT matrix above. Opportunities and Threats are looked at, but no real action plan is put forward to counter these issues. Of significant importance is the fact that the weaknesses are not being proactively countered in defense of a real impact to the future of Smiths. With Smiths experiencing the current growth, all focus is on the new projects, deadlines, project implementation, quality procedure and systems integration, operational requirements and there is a noticeable lack of a futuristic game-plan.

As illustrated in the SWOT table above, there are a significant number of strengths, weaknesses, opportunities and threats. In this dynamic, rapid changing, globally competitive sector, a host of variables affect the organization as per revelation below -

4.6.1.1) Strengths

Multiple technology licences gives Smiths the advantage of walking into different plants in the world and being exposed to all these different processes, products and systems. Whilst some of the licences are patented to the OEM's, Smiths have a competitive advantage of being able to manufacture under these licences, the real benefit being spin-offs on the export products. Smiths can use these technological processes and product licences to introduce export projects (less critical specifications) to market sooner. By virtue of these licence agreements, Smiths can be viewed as a favoured supplier for future projects.

The high level of vertical integration and recently flatter organizational structure gives Smiths advantages in this niche market that contribute to effective and fast market response, quicker project introduction to market lead times, faster-more empowered decision making, value chain advantages owing to the limited degree of vertical integration.

The adherence and endeavor towards lower defect PPM's (parts per million), the ERP (Enterprise Resource Planning) JDE system, SHEQ (Safety, Health, Environmental, Quality), and International Certification and Quality requirements conformance all furnish Smiths with the

necessary world class prerequisites in order to qualify to deal with the global 1st world customers.

4.6.1.2) Weaknesses

Smiths face a number of threats, but the one significant threat that impacts Smiths growing concern is that of the stringent quality standards – real cost of labour productivity. Smiths is deficient in operator training and believes in "On the Job Training". This environment is quite unique in terms of processes and new personnel are often costly to the process by adding to the PPM and reject statistics, the amount of scrap and rework.

4.6.1.3) Opportunities

Loads of opportunities are amenable to Smiths due to Smiths exposure to the newest technologies and ability for the company to restructure and adapt to suit these licensor technologies. Also, Smiths capitalizes on the Metair purchase power and network of overseas supplier associations.

The TMC takeover of Toyota South African by Toyota Japan presents itself both as an opportunity and a threat to Smiths. With TMC now set on the produce the new Corolla for both the local SA market and the export market (starting with Australia), the new volumes will now be substantial to Smiths, thus leading to gains in terms of economies of scale, hence leading to reduced fixed costs per unit volume of product. Also, just in terms of the new volumes for the Toyota projects means increased profits and plant efficiencies (higher volume runners, less changeovers, dedicated tooling, less variety and less operational co-ordination and logistics).

4.6.1.4) Threats

One of the threats Smiths currently faces is the takeover of Toyota SA by Toyota Japan's TMC (Toyota Motor Corporation). Prior to this takeover Smiths and Toyota SA belonged to Metair. Toyota SA now belongs to TMC (TMC being the majority shareholder). This could potentially mean that future business may not necessarily be automatically awarded to Smiths.

The poaching of staff in this specialized field by competitors BEHR and other automotive manufacturers Toyota, etc... impacts drastically in terms of human resource losses to Smiths, loss of expertise and retraining, efficiency losses, etc. Together with this, the cost of

employment equity and AIDS also adds to this dilemma that distresses Smiths human resources pool.

The fluctuating exchange rate, increase in imported vehicles and export market volatility all add undue uncertainty that threatens Smiths well-being.

The SWOT analysis, by far, proves to be the most indispensable, value-adding tool in analyzing and evaluating the strategic route forward for Smiths. Two issues are exposed to Smiths well being in the long term -

i) ***Threat*** ***- Smiths decreasing cost competitiveness***

ii) ***Opportunity*** ***- Low Volume, High Variety Niche Market***

4.7) Are the Company's Prices and Costs Competitive?

Being totally exposed to the harsh global environment has both advantages and disadvantages. One clear advantage is that SMSA can source raw materials directly from overseas suppliers, firms and mills thus achieving economies of scale and cost advantages permitted to competitors. This minimizes price differences paid for raw materials, and with the low cost of electricity and overabundant labour supply, SMSA is opportune to remaining a cost competitive plant. Offcourse the exchange rate also favours exporting to a certain degree.

Smiths focuses immensely on the primary value chain activities to reduce cost and add value to the product range. Smiths extends this to their 1st tier suppliers, getting involved in supplier audits, open book costing exercises, engineering suggestion committees, thus assisting suppliers in achieving savings, decreasing defects, minimizing processes, minimizing stock levels, hence adding value throughout the value chain as far as possible.

4.8) What Strategic Issues does the Company Face?

In light of the five forces analysis below, it is clear that the most important factor in being awarded a project is one of COST. The other facets, i.e. quality, speed to market, process reliability, product consistency, etc... are given pre-requisites in order to do business in this sector. This makes SMSA vulnerable to competitive efforts of rivals striving for market dominance and share. Especially so, with more foreign direct investment pouring into China,

this could only mean new technology in a low labour cost country putting SMSA and other rivals on the back foot.

4.9) Strong and Weak Spots of the Current Strategy

After extensively reviewing of the firms vision, mission, strategic objectives and aspirations, the sudden increase in new business and talk of plant expansion is deluding and amputating management's focus from the competitive environment to one of operational issues, eg. plant expansion, meeting customer deadlines, etc... There is growing concern from the researchers side that opportunities for future business may be jeopardized by the short term operations inclined mindset, which is not being supplemented by long term strategic focus.

4.10) Does SMSA have Competitive Advantage, or must it work to offset Competitive Disadvantage

From the research conducted on Smiths and the market sector it operates within, one can clearly argue that Smiths falls into the category "Low Cost Supplier", with the strategic intent of being a global low cost niche supplier. Various elements lead to this overall classification of low cost supplier, as highlighted in this study (low cost of semi-skilled labour, strategic alliances, relatively inexpensive electricity, etc.).

4.11) Industry and Competitive Analysis

4.11.1) Porters Five Forces Model *to determine "What is the competition like, and how strong are each of these competitive forces"*

4.11.1.1) Rivalry amongst competing sellers

In this market (business to business), buyers want a specific product made to order. Buyers (customers) do however have a choice of suppliers. The product required is always specified by the customers/buyers source design plant (eg. Nippondenso Japan (Denso) is the source design plant for Toyota globally, Modine Germany for BMW, etc...). They design the heat exchangers, cooling systems, ventilation control, etc... Toyota SA, BMW SA use these source designs specifications as product requirements and firms such as Smiths are asked to quote to manufacture these HVAC systems using the appropriate technologies available, licence agreements in place,

etc... to supply these products. Thus, buyers/customers have a choice of manufacturers to use, often awarded largely based on PRICE, reliability, quality systems in place, licence agreements in place, as well as lead-time to introduce to market.

Rivalry is intense in this industry as competitors wish to retain these long term customers. Often if a project is awarded, it means the firm awarded is sole supplier for the entire duration of the model life (eg Toyota Corolla = 5-7 years, BMW 3 series = 4 years). This being the case, rivalry is usually intense to secure these long term high volume projects by being cost competitive. Rivalry is extremely intense as industry conditions tempt competitors to use price cuts and other competitive weapons to boost unit volume, i.e. by engaging in proactive Value Engineering Cost Reduction programs.

Rivalry is stronger also due to the fact that customers costs to switch suppliers is low, but only possible at the end of the project life, i.e. new model introduction.

4.11.1.2) Potential Entry of New Competitors

This industry is a very specialized niche market, continuous aluminium brazing technology and high capitalization costs make the threat of potential new entrants very unlikely.

Economies of Scale also make it unattractive for new entrants.

Cost and resource disadvantages independent of size (partnerships with licensors, customers and suppliers, proprietary technology, patents, etc...) also works against potential new entrants in this industry, so to does leaning and experience curve effects, and the inability to match the technology and specialized know-how of firms already in the industry.

4.11.1.3) Substitute Products

In this industry, products are specified by the customer and made to order as per source design. There is no substitution of products, but customers can revert to source design and source supply, should local firms fail to deliver timeously, and defect free.

4.11.1.4) Supplier Bargaining Power

Due to the unique componentry and special requirements of this business-business sector, and unique customer requirements, there are virtually zero substitutes. However, suppliers are

relatively few in this type of industry, and partnerships and relationship have to be developed along the supply chain in order to survive. The automotive industry is largely based on price, quality is taken for as a guaranteed prerequisite. To further emphasise this, the automotive sector lives by the adage "survival of the fittest". Supplier development programs are in the best interest of firms like Smiths, to encourage cost down programs and improved efficiencies at suppliers firms, Supplier Quality Assurance (SQA), JIT (Just in Time practices), Quality Systems, and reduced inventories. In essence, suppliers have great bargaining power, but Smiths is a huge customer to most suppliers, hence both sides compromise in order to ensure supply chain survival. Vertical Integration unfortunately does not work for firms like Smiths in this case, as their core focus is heat exchangers and not componentry. Suppliers can gain cost advantages and economies of scale by producing componentry for other firms in the same industry specific sector, thus increasing volumes and minimizing machine setups, ordering bulk raw materials at discounted prices, etc..

4.11.1.5) Buyer Power

In this industry, the customer (OEM) is literally king. 1st tier suppliers to the OEM's (eg Smiths) have to abide to quality systems endorsed by each OEM, have to comply to target prices set by the OEM source design plant and meet OEM milestones in terms of project deadlines, market introduction and so forth. Buyers have the power to incrementally change requirements, audit Smiths processes carte blanche, etc... Should the buyer/customer be unhappy with Smiths as a supplier to the OEM plant, source design can be reverted to immediately.

4.12) PESTEL

4.12.1) Political

For years South Africa was an international pariah. The white minority government practiced apartheid, disenfranchising the country's black majority, many of whom lived in poverty. The ANC was outlawed. The US government placed trade sanctions on SA to change its racist ways. The economic pressure contributed to the abandonment of apartheid in 1994. However, the Gross National Product was minimal. The high level pf unemployment and low incoming foreign direct investment was creating a "human time bomb". Industrial disputes (strikes), the neighbouring Zimbabwe conditions, the anemic HIV problems, the high crime rate, our weak policing, corruption amongst some officials, "free" gun policy, high murder rate and President

Mbeki's "rather outlandish" statements about HIV – AIDS, all adds to the general impression that South Africa is becoming politically unstable and less attractive as a draw for foreign investors, particularly when there are so many other more attractive destinations for FDI around the world.

4.12.2) Economic

4.12.2.1) The South African Economy

South Africa is the most advanced economy in Africa yet it is classified as a middle-income country. South African per capita GDP remains at approximately U.S. $3,000. As a result of its past political history, inequities in ownership, employment, education, and skills have resulted in a highly skewed distribution of individual income, productivity and employment among the population. A low GDP growth coupled with population growth of over 2 percent annually has caused stagnant employment and per capita income rates. However, both consumer and producer inflation has declined steadily as a result of gains in tourism and foreign investment. Consumer price inflation averaged 6.9% in 1998, the lowest level in 25 years. Falling interest rates, subdued demand conditions, a highly competitive supply environment, weak commodity prices, and low global inflation are factors that lead analysts to believe that the downward pressure on interest rates will continue (SA, 2000).

Refer to APPENDIX 1 www.econometrix.co.za

4.12.3) Environmental

In the recent years, climate control has become as important as ozone layer protection was in the late 1980's and 1990's. Concerns about global warming and climate change have culminated in the Kyoto Protocol, a treaty requiring its signatories to limit heir total emission of greenhouse gases to pre-1990 levels by 2008. The inclusion of hydrocarbons (HFCs) as one of the controlled substances in the Kyoto Protocol has increased global scrutiny of the global warming impact of HFC-135a (called R134a when used as a refrigerant), the current mobile air conditioning refrigerant. Industry's first response was to begin improving current R134a systems to reduce leakage, reduce charge, and increase system energy efficiency, which in turn reduces tailpipe CO2 emissions (Ghodbane, M., et.al.).

As automotive power-train systems become more efficient, less waste heat is available for vehicle passenger cabin warming. As a result, alternative heating technologies are being investigated to alleviate this shortcoming. One alternative is to operate the existing A/C system in reverse (heat pump mode), thus providing supplemental heat.

Recently, the environmental impact of refrigerant emissions has come under global scrutiny. The concern is their potential for global warming. Thus the environmental characteristic of merit that takes for a more benign refrigerant in terms of emissions is lower Global Warming Potential [GWP]. R152a is more environmentally benign refrigerant compared to R134a with a GWP of 120 vs 1300, [1] vs [2]. Both refrigerants are hydro-fluorocarbons - HFCs – (contain no chlorine) and hence, have zero ozone depletion potential.

In the interest of lowering the Global Warming impact of mobile air-conditioning systems, alternative refrigerants to R134a with a less GWP are being investigated. As automotive power-trains become more efficient, there is less waste heat available for vehicle cabin warming. One way of overcoming this deficiency is to operate the existing A/C system as a heat pump to supplement the vehicle cabin heating system (Kadle, P.S. and Scherer, L.P. 2003).

4.12.4) Social

South African industry is faced with a unique situation of cultural diversity. The South African culture is perhaps one of the most difficult to generalize. It's history of multiple and conflicting cultures results in a wide dispersion of people and attitudes. In addition, the political isolation of different cultures has resulted in separate ethnic development. The cultures co-exist rather than blend together. With a population exceeding 41.2 million, more than 75 percent are Black, about 12 percent are White, 9 percent are Coloureds, and 3 percent are Indians. Upon closer examination, these racial groups also have diverse influences. The white population is divided among Dutch, English, and German heritage, while the black population is divided into nine major groups with distinct communities, cultural practices and languages. The country has eleven official languages including English, Afrikaans, and nine Black languages. The English culture is the dominant influence among the white population, while the culture of the urban black population reflects multi-ethnic influences. Hence,

deducting from the above, it is clear that SA faces challenging complexities from an Organisational Behaviour perspective in the workplace.

4.12.5) Technological

♦ SA is endowed with a high labour abundance, i.e. etc low capital fdi inflows and capital investement, superfluous supply of low skilled workers.

♦Dual economy, 1st world and 3rd world aspects in this same country.

♦*CHINA (Wednesday, 6th August, 2003)*

"We're told that Toyota hopes lending its hybrid technology to the Chinese will give it an edge in the market. We're also told that the programme involves demonstration tests and policy research on fuel efficient technology as well as looking at the role of government in encouraging the use of low-pollution cars. All good stuff to be sure, and I am also aware of a successful joint venture between Toyota and a local partner making a nice little sedan based on the Japanese firm's Echo/Yaris line platform.

Not only has Japan stolen a march on the Americans with production Toyota Prius and Honda Insights and Civics, now it's handing the technology to low-cost China - labour there costs less than a tenth of what it costs a US company according to Delphi today - to perhaps eventually compete against the Big Three as well. After all, how long is it before boatloads of Chinese vehicles start reaching Western markets in the same sort of numbers as the Japanese 30 years ago and Korea around 15 years back?

Hardly a day goes by without news from China's fascinating market. A new factory here, expanded capacity there, new joint venture in this region, new industrial park in that. All well and good and, as long as increasing prosperity in China soaks up all those new cars, minivans and SUVs, fine. But there will come a time when the US, Japan and Korea are all threatened with loads of cheaply built vehicles built in low-cost China with help from technology handed over in joint ventures involving western countries and then I think the fur will start to fly.

The export of jobs is becoming a huge issue in the US and it's only a matter of time before it gets political. People are waking up to the fact that a secure employee with a fat pay packet is a

spending consumer. Take security away and his wallet starts to close. Sooner or later, someone, somewhere in the US with an eye on the next election is going to put some sort of ban on virtually unlimited automotive product imports - and related job exports and retaliation can be expected, which won't be pretty. What happens to the west's half of a Chinese joint venture then?

The Chinese also seem to be keeping as much control as possible. Vehicles and parts come pretty freely in this direction but cars and parts don't go the other way unless built in a Chinese joint venture at least half of which is in Chinese control. Add in some foot-dragging when it comes to World Trade Organisation rules and the playing field seems rather tilted in China's favour. Does the west really want to hand the next big thing - hybrid technology to China on a plate without getting something, other than low-cost competition, in return?

(USA: Toyota to provide hybrid technology to China – reports)

http://just-auto.com/nd.asp?art=41733

4.12.6) Legislation

♦OEM customer quality specifications, higher demanding defect free processes and systems being forced onto 1st tier suppliers to OEM motor plants as a fundamental prerequisite in order to secure future projects.

♦ Open door policy and Auditing processes by OEM plants into our plant to ratify systems compliance and procedures, etc…

♦Global warming and the contribution of air-conditioning systems gases [R12-R134a] impact on global warming effects

4.13) Porters Diamond

4.13.1) Related and Supporting Industries

The low cost of electricity gives the brazing plant (high user of electricity) a cost advantage

4.13.2) Government

The MIDP incentives help promote the export market tremendously, as well as rebates granted towards imported materials give Smiths a cost advantage. Unfortunately SA has no free trade

zone agreements in place and SA is geographically out of the export routes (Europe, North America).

4.13.3) Factor Conditions

SA has a fairly well established transport infrastructure and education systems in place. There is an abundant supply of unskilled and semi-skilled labour available, an in-exhaustive supply of cheap labour, which suits labour intensive firms like Smiths just fine.

4.13.4) Chance

The fall of the rand favours the export market considerably, particularly the US market.

4.14) SA Facts and Figures

- *29th largest economy in the world*
- *27th largest population*
- *24th largest land area*
- *2nd largest beer manufacturer (SAB)*
- *Sole producer of MB Class C RHD vehicles*
- *First ranked world floral kingdom*
- *Cheapest electricity*
- *3rd cleanest tap water*
- *Top ten ranking for the banking sector*
- *World's most progressive democratic constitution*

Post 1980 reforms – high growth economies

- *Deregulation*
- *Privatisation*
- *Lower tax rates*
- *Export promotion*
- *Lower import duties*

Major reasons for the weak rand

- *Unruly neighbours (Zimbabwe)*
- *Speculation*
- *Emerging market risk aversion*
- *Labour unrest*
- *Lower world growth*

4.15) Life Cycle Portfolio Matrix

Smiths Manufacturing is a local organization in a maturing market. It finds itself in a market where there is a saturation of users that are reliant on repeat customers. The competitive conditions force the organization to fight to maintain its share and there is emphasis on efficiency and low cost. Smiths is one of the two prominent automotive air-conditioning manufacturers in South Africa. It is a supplier to the local original equipment manufacturers such as Toyota, BMW, Ford, Nissan, etc... Smiths has formed strategic alliances with global players for product licence agreements to supply the local industry. The organization is one of

many companies owned by the blue-chip shareholder group "Metair". The group acquired the organization 15 years ago.

According to the Athur D. Little life cycle matrix, Smiths can be plotted a "Mature Stage of Industry" against "Strong Competitive Position". ***Using this matrix, the recommended strategy is one of cost leadership, focus, highly appropriate for Smiths at this phase in its life cycle.***

4.16) BCG Matrix

In terms of the Boston Consulting Group (BCG) Matrix, there are a number of assumptions and variables to be aware of in using this strategy analysis tool. Taking into cognizance that there are only two "major" suppliers of this type of technology in South Africa, i.e. Smiths and Behr, and locally these two firms are not really competitive rivals in the sense that they are not vying for position. The real competitors are more the source design plants and export markets, P & A (Parts and Accessories, i.e. Aftermarket). Market growth is dependent on a number of variables and complexities, i.e. older models run out of production simultaneously when new models are introduced, so plant capacities are maintained at optimum levels. Market growth is somewhat constant, unless new OEM business is awarded from one supplier of HVAC systems to another.

It should be noted that the Boston Box does not allow for declining markets, applies mostly to fast moving consumer goods companies and certainly does not apply easily to industrial goods companies, to fragmented industries or to industries in which the experience curve and scale economies give small unit cost advantages *(Faulkner, D. p206-207)*

Hence, the BCG model will be used with great caution as an analysis tool in determining the strategic recommendations forward for Smiths Manufacturing.

4.17) The Competitive Environment & Competitor Analysis

4.17.1) Toyota Motor Corporation of Japan takes controlling interest in Toyota South Africa

As indicated in the organizational structure of Metair, Smiths Holding Company, Toyota SA is no longer the prized possession of Wesco. It has been taken over by Toyota Japan, an increase in shareholding power from 36% to 75%. The fact that TMC will be the controlling shareholder in Toyota SA will have many positive benefits for the company in terms of it becoming an integral member of TMC's (Toyota Japan) global supply network, with major export contracts. It could also mean a vibrant future for the company's employees and dealers, as they are now part of the third largest motor manufacturer in the world. The late Mr. Bert Wessels was quoted " the decision by TMC to make substantial investment in its South African distributor is seen as very positive in terms of further support for the SA motor industry, which has become a significant vehicle and component exporter and earner of foreign exchange in recent years". Wessels said previously that SA had become a low cost manufacturing country because of the cost of land, building services, energy and management costs. He said that this cost competitiveness led to higher local content (Business Report, Roy Cokayne, May 14, 2002).

For Smiths Manufacturing, this could be viewed as a threat, as well as a growth opportunity –

i) Threat

Previously, Smiths and Toyota fell under Metair, hence they were sister companies under the same umbrella. This was not advertised due to the implications of this on Smiths other customers, viz, Nissan, VW, BMW, Land Rover, Ford, etc... Smiths was successful in being awarded Toyota OEM projects due to this being in the best interest of the Metair Group. With TMC breaking away from Metair, this doesn't necessarily imply that Smiths will be favoured in the future.

ii) Opportunity for Growth

With TMC's global supplier network and export contracts, particularly the exporting of the new Corolla (built in South Africa for both the South African market, as well as the Australian market), this means a huge increase in terms of volume supplied to Toyota (TMC Prospecton), thus economies of scale and increased global competitiveness.

Toyota Motor Corporation is having the best year in its 65-year history, both in terms of sales and profits. Toyota has moved to 2nd position in the world automotive industry at the end of the 1st quarter of 2003 when it overtook Ford in terms of global unit sales. Toyota's world market share has increased from 10% at the end 2002, to 11.7% at the end of the 1st three months of 2003. Toyota's sales this quarter have risen by 17% compared to last year, moving up to 1.66 million units.

Ford who have ranked No 2 to General Motors in global vehicle sales since 1931, have also increased their sales but only to 1.58 million units. General Motors was only 276 000 units ahead of Toyota at the end of the 1st quarter of 2003, as its global sales declined by 7%.

Toyota is expanding aggressively in the USA, Europe and China as it chases its vision of holding 15% of the world vehicle market early into the next decade, so it could inevitably be a strong challenger for overall market leadership in the future.

Toyota vehicle sales in the US:

* Month of May 2003 - 186 764 units (an increase of 6.1% over May 2002)
* Year to date sales at the end of May 2003 - 747 641 units (an increase of 26.9% from May 02)

***Source** - Smiths Internal Memo, Marketing Dept, 08 August 2003.*

4.17.2) R1billion Automotive Supplier Park Initiative - Pretoria

An initiative to create a multi-million rand automotive supplier park, which groups different technologies, suppliers and service providers for various customers, was launched in Rosslyn recently. The park aims to ensure global competitiveness and sustainability of South Africa's automotive industry through shared services and improved logistics and automotive manufacturing chain processes. The Gauteng Provincial government contributed R200million towards the development costs of the park. Two important customers of Smiths are located adjacent to this park, i.e. BMW and Nissan. It is in Smiths interests to maximize utilization of this facility is considered appropriate, from a logistics-value chain analysis perspective in serving BMW and Nissan.

4.17.3) China

China is an up and coming developing nation that is attracting OEM fast and furious. Honda plans to export small cars built in China and to Europe beginning 2004. China is considered economically suitable because of its low cost base for vehicle assembly and manufacturing (Automotive News Europe, July 24, 2002).

4.17.4) Ford Motor Company of SA

The central thrust of FMCSA (Ford Motor Company of SA) component export programme so far has been the export of engines to Ford plants worldwide following Port Elizabeth's designation in 2000 as sole supplier of the 1.3 litre RoCam engine. This apparently is a small volume and is experimental, testing the SA plant for consideration for high volume export projects. Business Report, July 05, 2002.

4.17.5) MIDP Program

SA's automotive component manufacturing industry is renowned internationally for its technological sophistication, expertise and flexibility. It is building on a long tradition of being able to manufacture a wide range of products quickly and economically in small volumes by adding new capabilities in meeting high global quality and supply reliability standards for large volumes.

In 2002, the component industry headed for new record export levels and stimulated by the Motor Industry Development Programme (MIDP) – continued with rationalization of production and continuing capital investment to align it with international requirements. Under the MIDP export complementation scheme, component exports qualify for Import Rebate Credit Certificates (IRCC's) which can be used to offset customs duty on automotive imports. Many component makers have arrangements for these credits with the local assembly plants that they supply.

4.17.6) BEHR SA (Pty) Ltd.

Core Business

Manufacturer of Engine cooling radiators and modules, heater radiators, oil coolers, air-conditioner condensers and evaporators, air-conditioner system assemblers, pipes and hose manufacturers, HVAC (heating, ventilation and cooling/climate control) systems for LCV's (light commercial vehicles).

Employees

1150

Quality Rated

ISO 9001:2000, ISO/TS16949:-1999, ISO 14001.

4.17.7) VISTEON AUTOMOTIVE SYSTEMS

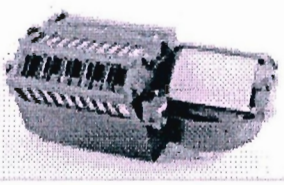
- Launched in 1997 at the Frankfurt Motor Show.
- One of the largest automotive suppliers in the world.
- Spun-off from Ford in 2000.
- Ranked 114 in the 2002 Fortune 500.
- Nearly 75,000 employees in 25 countries.
- Our products come into contact with 50 million consumers every day.
- Visteon's 2002 global sales revenue was $18.4 billion.
- 84 production facilities in every major world region.
- 25 Global Sales and Service Offices.
- Our global delivery system includes more than 180 technical, manufacturing, sales and service facilities.
- We have over 100 years of automotive heritage and over 80 years experience in accomplished integrated systems.
- Our customers include the 19 largest vehicle manufacturers in the world.
- In 2002, Visteon won two awards from Toyota Motor Europe — the Superior Performance Award for quality and the Achievement Award for supply.

- In 2001, Automotive Industries awarded Visteon the Quest for Excellence Awards for audio systems, instrument panels-consoles, instrumentation, interior trim and traction control.
- Visteon has been named to the Dow Jones Sustainability World Index for two consecutive years.
- Visteon were the first automotive supplier to become fully certified on a global basis under ISO 14001

4.17.8) DELPHI AUTOMOTIVE SYSTEMS

Delphi is a premier supplier of thermal management systems for today's demanding commercial vehicle owners. With advanced climate control and powertrain cooling systems, Delphi develops system solutions to meet rigorous criteria of commercial vehicle operators.

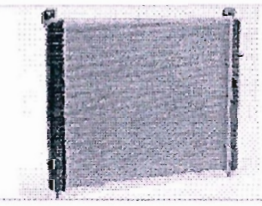
Compact HVAC Module



Air supply, control, and conditioning for enhanced driver/passenger comfort.

>Compact HVAC Module brochure

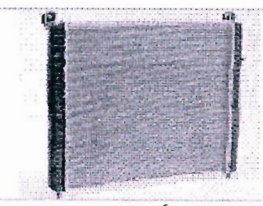
Condenser/Radiator/CAC Module



Air supply, control, and conditioning for enhanced driver/passenger comfort.

>Condenser/Radiator/CAC Module brochure

High Performance Aluminum Radiator



CAB brazed aluminum radiator with plastic tanks.

>High Performance Aluminum Radiator brochure

4.18) Value Chain Analysis

The primary activities of the value chain (particularly inbound logistics, operations, outbound logistics) play a vital role in being competitively priced to the OEM plants. Smiths is totally reliant on suppliers (component manufacturers, raw material suppliers, tooling suppliers, packaging suppliers, consumable suppliers and various service providers to maintain competitive prices. The automotive sector is virtually a *survival of the fittest industry*. It is a harshly competitive, fiercely dynamic market with fast changing economics and services. It is often common that Smiths changes suppliers frequently in order to sustain market share, at the expense of an underdeveloped supply chain. If suppliers become complacent, they're most likely to be eliminated immediately by more inexpensive, more efficient suppliers of substitute services and products. Although it is vital and probably beneficial in the long term to develop suppliers and the supply chain, most firms in reality don't compromise when it comes to reduces prices and cutting cost. The mindset is that if the customer is not happy, the customer has a choice to move onto a new provider of that product/service.

From the support activities viewpoint, Smiths is weak in terms of Human Resource Management, and its role in terms of strategy. Smiths, in terms of technology and firm infrastructure, is well balanced, keeping abreast of the latest technologies in this market sphere, and business policies and decisions (eg, SBU restructure, etc...).

4.19) Anticipating the Future [Scenarios]

In this respect research *(http://www.autoindustry.co.uk/docs/global.doc)* indicates that many future outcomes are possible. **Scenarios** are not prescriptive about these outcomes, because in many instances future trajectories are uncertain. This is the case in, for example, economic regulation where the overall trend has been to reduce controls over industry, and hence allow markets to operate. This gives vehicle manufacturers and suppliers more freedom of action over investments and plant closures. However, in many emerging markets the relaxation of such controls is only partial and in some instances has been reversed in the light of the global economic problems of recent years. In addition there is a growing antagonism to the WTO in the populations of the industrialised countries, who see it as a mechanism to export jobs. So, for each of the main pivot points or drivers for change, the characteristics of the issue and the potential impact it will have on the future shape of the automotive industry.

Future Trajectories - What next for the Global Automotive Industry?

Several different possibilities exist for the future of the automotive industry. This is for two reasons. First, at any one time it is not the case that a single strategy or trajectory is totally dominant over all others. Second, all the outcomes are contested, they are subject to the competitive pressures within the industry and to external influences that may not necessarily be forecast. The Table below provides a summary of alternative trajectories for the automotive industry *(http://www.autoindustry.co.uk/docs/global.doc)*.

Structure / role of vehicle manufacturers	Main points	Scope
System integrators	Design and marketing only, manufacturing is sub-contracted	Industry already moving this way. Essentially product based.
Electronics/ software	Tuning of hard systems to brand characteristics	Some movement in this direction. Again product based
Mobility providers	Manage use of vehicles in the parc. Cars become a retained asset.	Unlikely in short to medium term. Some weak moves e.g. via ownership of rental companies
Environmentally and socially benign corporate citizens	Environmental leadership and product stewardship	Not in the mainstream industry mindset at present. An extension of safety values
Retail and service providers	Ownership of retail and related activities, possible third party branding	Already moves in this direction to shift centre of gravity. Does not fit easily with manufacturing push.
Car makers	Focus on manufacturing. Retain existing relationships down the value chain	Most appropriate for niche producers, but asset intensive for volume producers
Micro Factory Retailing	Combine manufacturing and sales in multiple small sites	Unlikely for existing industry. Possible shape for new entrants redefining the terms of competition
Cross sector consolidation	Links e.g. with aerospace and electronics companies	Not been successful in the past. Not clear that automotive industry would dominate such a structure

(Source: CAIR)

Table 4.1 - Summary of Alternative Trajectories

The futures of all the key areas of design, supply, manufacturing, distribution, marketing and value added services are uncertain, but the ability of the automotive industry to restructure is severely constrained by existing investments: quite simply the barriers to exit are almost as high as the barriers to entry.

As noted above, there is a great many product technology choices emerging for the industry. Ultimately, consumers will be faced with a re-emergence of genuine technical choices between vehicles. In addition, changes to fundamental technologies will alter the design and packaging parameters for vehicles, making possible new configurations and concepts that cross over existing product boundaries.

4.20) Organisational Culture and Labour Relations

One of the key problems at SMSA is that management is more concerned to reduce costs and workers, and weaken the unions, than to co-operate with unions or to upgrade the skills of the workers. It has also been found that the union lacks clear vision and policy guidelines on restructuring.

Workers and NUMSA must be central to any meaningful change in the workplace. There must be more support and less resistance from labour. With local firms competing in the global village, there is more change today than ever, technologically and the way work is conducted, to continuously improve in order to remain competitive. This calls for training, co-operation and information sharing between all parties concerned, i.e. a relationship that pays for itself.

Good working relationships between management and labour as well as union representatives must be fostered to secure worker and union commitment to what is often a survival strategy. The labour relations implications of world class manufacturing are that there is less top-down supervision and greater worker control, especially in a labour intensive firm such as SMSA. Because of this, and the tightly integrated processes backed by minimal inventory (JIT systems adopted in the automotive sector), management becomes more vulnerable to labour action. Consequently, worker participation and information disclosure become necessary in order to minimise the causes of work stoppages. Good dispute resolution procedures and appease commitment to limit strikes to substantive negotiations are frequently in place (Noe, A.R.). There is also far greater participation of line and technical management in areas previously

handled by labour relations specialists. However, both parties fall short when it comes to full information disclosure and joint decision making with union representatives, which are often the prerequisites to getting full support from the shopfloor to implement a world class manufacturing strategy. The maintenance of a reliable customer service depends on meeting delivery schedules, and thus strikes and stoppages at SMSA are a detestation to the achievement of world class competitiveness. An open, transparent working relationship between both parties is hence crucial in these modern times of steep competition and changing society, however a relationship based on common objectives, with the union taking a seat as a business partner rather than the hostile agent of labour.

4.21) Conclusion

Good company situation analysis, like good industry and competitor analysis, is a crucial prerequisite to good strategy making. A competently done evaluation of a company's resources and competencies exposes strong and weak points in the present strategy, company capabilities and vulnerabilities, and the company's ability to protect or improve its competitive position in light of driving forces, competitive pressures and the competitive strength of rivals.

It can be summarized that the following issues as extracted from the industry analysis, remote environment examination, competitor analysis, drivers of change, and market forces are pertinent -

1) the huge export market potential of the US market
2) the modularization of components
3) increased customer value, i.e. low cost and stringent quality
4) the niche market of large variety, low volume heat exchangers due to the opening of trade barriers and multiplicity of vehicle models on the market
5) the technological developments of the new CO2 systems to come
6) productivity and efficiencies
7) Cost, Cost, Cost, Cost, Cost .....

Chapter 5 – Strategy Propositions, Conclusions and Recommendations

"If we can know where we are and something about how we got there, we might see where we are trending – and if the outcomes which lie naturally in our course are unacceptable, time to make likely change" (Abraham Lincoln).

5.1) Introduction

In determining issues that merit strategic attention, one needs to draw on all the prior analysis documented in this paper, putting Smiths overall situation into perspective, and lock in on what challenges have to be overcome and what issues have to be resolved in order for the firm to be financially and competitively successful *in the years to come.* Although Smiths is performing pleasingly at present, the outside forces are dynamic and changing continuously, with all contenders jockeying for market share and position. Smiths therefore have to change proactively – what reaps success today may not necessarily, in all likelihood bring success in the near future. The technology cycle is getting shorter and shorter, the rivals are becoming more aggressive, the marketplace more demanding, people are becoming more of an asset to organizations, and change seems to be the only constant these days. Questions that can help pinpoint the right strategic issues to address are analysed below *(Thompson and Strickland, 2003:144).*

Smith's v*ision* is essentially to be a low cost provider of world class quality air-conditioning climate control systems for light commercial vehicles. Smiths is relatively small at present to compete with the likes of Visteon, Nippondenso and Delphi. In order to compete, Smiths has to increase its cost competitiveness by means of acquiring higher volumes, hence plant expansions and ultimately reaping the benefits of economies of scale.

5.2) Is the Present Strategy closely matched to the Industry's future Key Success Factors

As illustrated in chapter 3 earlier, in this industry, the leading KSF is a low cost production efficiency plant. Overall to this is high labour productivity and a multi-skilled workforce talent. SMSA engages in Value Engineering to cut cost and eliminate waste out of the product and processes, invests in Industrial Engineers to streamline and optimize plant activity and keeps abreast of technology (through licence agreements) to remain capable. However, a chief problem exists with labour unions and the workforce, in that the labour productivity is at a very low standard, and the organizational culture is not in tune with training and developing the workforce. Smiths is also deficient in not having a R&D facility, nor a Future Projects division, but does keep abreast of technology by maintaining networks with overseas counterparts and licensors where possible.

*The single most crucial **key success factor** in this industry is **cost competitiveness**, as quality and the other systems prerequisites are given to be mandatory.*

5.3) Which of the Company's Opportunities Merit Top Priority

Large competitors take pleasure in running their processes consistently, high volume, more rigid, less varying products using high-tech, efficient, automated, low-defect processes as opposed to the high variety, high product mix, labour intensive, low volume aftermarket/parts & accessories fluctuating demand niche that Smiths operates within. Smith's has systems in place to accommodate this niche market of low volume, high product mix items, with complementary finance, logistics, engineering and operations systems in place. This is a market which manufacturers often abhor, finding this to lead to low efficiencies and logistical nightmares in the real world. This impacts on training, labour productivity as well as operating systems, upgrading and maintaining multiple quality standards, operational flexibility and exhorbitant tooling costs. Smiths has a relative comparative advantage in the sense that it is geared up and competent to handle this market niche, establishing a reputation in the industry, though among many new emerging, competitive new firms.

5.4) A Taxonomy of Strategic Options Open to Smiths

From the analyses conducted in chapters 3 and 4, it is evident that a horde of strategic options present themselves to Smiths –

i) Overall Low Cost Leadership

ii) Concentrated Growth

iii) Strategic Alliances

iv) Product Development

v) Innovation

vi) Horizontal Integration

vii) Vertical Integration

viii) Conglomerate Diversification

ix) Joint Ventures

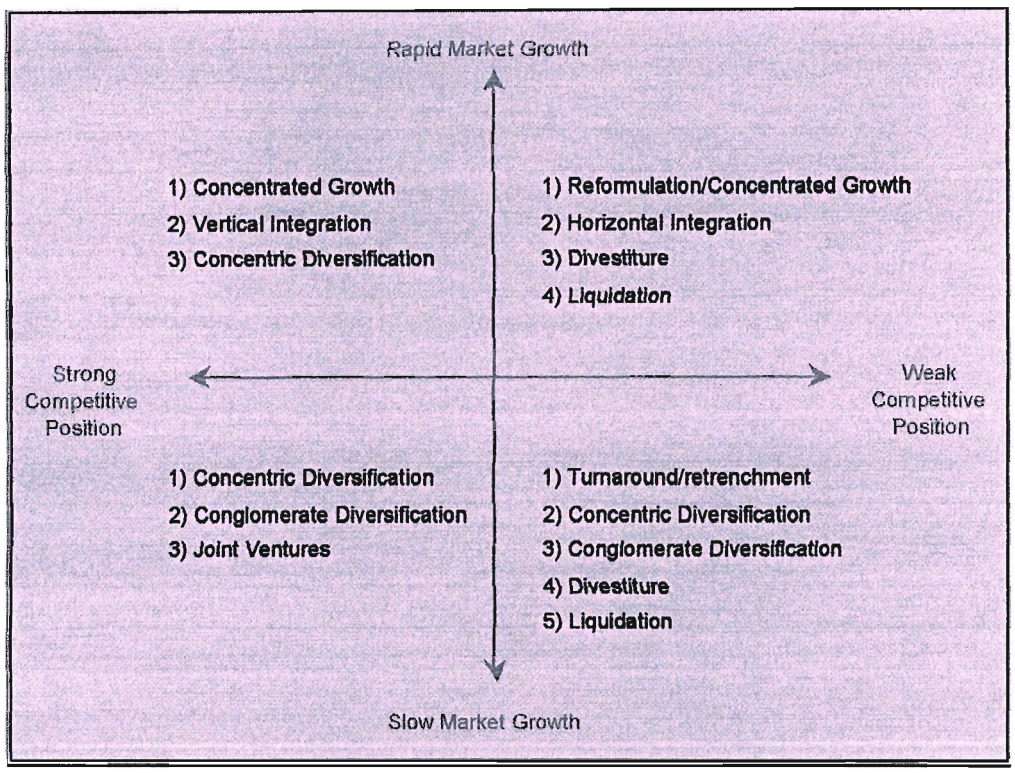


Figure 5.1 – Model of Grand Strategy Clusters

Smiths operates in a relatively slow growing market, retaining a marginally strong competitive position. The model of Grand Strategy Clusters above suggests that Smiths fall into the lower left quadrant. Based on this model, three options are thus recommended –

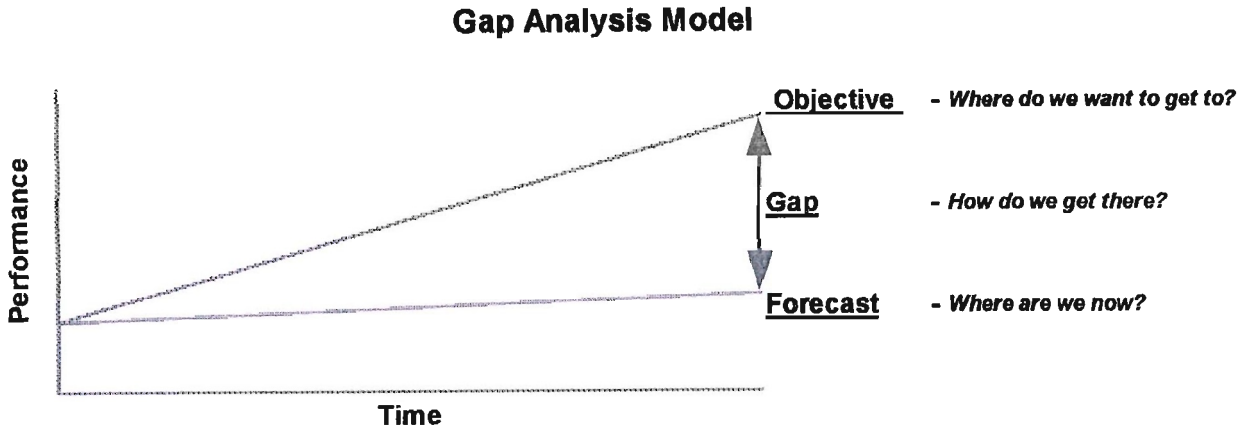
i) Concentric Diversification

ii) Conglomerate Diversification

iii) Joint Venture

Diversification is not befitting to the SBU as it functions in a specialized market. A joint venture, or more so, a strategic alliance is an option with potential of large magnitude. Hypothetical speaking, if Smiths had to tighten the relationship between NipponDenso Japan [Toyota] and its other licensors, this would enhance future business propositions and a long term partnership, working more closely with these 1st world technologies, with intent to inherit some of their global networking relationships.

5.5) Closing the GAP



Source **– Ambrosini, (1998:p221)**

Figure 5.2 – GAP Analysis

5.5.1) Where is Smiths now?

Smiths is a low cost provider, having discovered itself in a niche market, establishing itself as a global enterprise on a small scale relative to the giants of the automotive industry (Delphi, Visteon, Modine, NipponDenso). Smiths has gained a reputation for having world class systems, being capable of delivering similar quality as 1st world counterparts and rivals. To be highly successful companies should strive to exploit promising market segments and continue investing in mature businesses as they many times provide the most value for the company in a long term.

The significance of maturity is growing daily. In western countries the growth rates of gross domestic products are diminishing and mature businesses becoming more common. Managing such businesses requires a lot of attention and rigorous processes.

5.5.2) Where does Smiths want to be?

Smith's *vision* is to be an *established global low cost provider 1st tier automotive supplier* to OEM's competing at world class level, the product being LCV automotive climate control systems. Smiths wishes to penetrate these larger markets, thus gaining cost advantages through economies of scale.

5.5.3) How to get there - Turning the Negatives into Positives

The weighted SWOT analysis proves to be an instrumental tool in analyzing the circumstances that face the firm. From the weighted SWOT analysis, it is clearly highlighted that Smiths faces one severe problem, a ghastly negative that opposes the firm from aspiring successfully towards its prescribed vision, a serious long term **THREAT** - *that being Smith's Decreasing Cost Competitiveness.* Being currently in a favourable situation, facing prospects of plant expansion and increased future market share can lead a company to become complacent, focusing all their strategic action and time on internal plant growth and capacity, project inhouse implementation, etc, and a serious lack of consideration to the external marketplace and competitor's changing strategies. A strength thus can become a firm's weakness in this context, if complacency sets in.

The following recommendations serve to steer Smiths to course safely, by turning the negatives into positives -

5.5.3.1) Cost Leadership

The first strategy is to achieve overall cost leadership in an industry. To do this Smiths needs to construct efficient-scale facilities; vigorously pursuit cost reductions and cut down on administrational costs. Low cost need to be propelled as a cultural theme running through the entire strategy of Smiths. Porter also mentions that the low cost position yields a company above-average returns as they will be able to have higher margins per product. Thus it provides a defensive against competitive forces in the industry. In Porter's own view cost leadership is the first strategy mature businesses such as Smiths should consider, as the markets are highly saturated, and competition tough.

5.5.3.2) Market Strategy

One of the challenges a company has to face once the segment is found is to choose the proper market approach: Should we follow the needs of the customers and be market driven or try to drive the demand ourselves?

It is important for Smiths to be market driven (reactive) as this brings strategic closeness to the customers and will enable the company to select the best strategy for either offensive or defensive action.

5.5.3.3) Product Quality

Just as innovation revives a stagnant market, product quality seems to have power to do the same. Hamermesh & Silk (1979) analyzed over 1,000 companies and conducted that higher product quality is associated with a larger return on investment especially in mature markets.

5.5.3.4) Pricing

One of the stereotypical pictures of a mature industry, particularly the automotive industry is fierce price competition. Unfortunately this is also often the reality. Automotive firms are willing to drop their prices substantially in order to drive up their market share. Not only can companies harm their own harm the industry as a whole as customers get profitability by taking part in price wars, but they will also accustomed to low prices and force companies to sell their products with unprofitable margins, even in the long term. This is experienced in this sector as project lifespans are typically vehicle model lifespans, averaging 5 years, amounting to significant volumes and relatively long term.

5.5.3.5) Fighting the Price War

Though price wars might not be desired they are becoming more common because managers tend to view a price change as an easy, quick, and reversible action. Often price wars simply cannot be avoided. The best situation then is to act upon the situation: fight the war or just sit it out. The key to success is to understand the battleground one is standing on, i.e., knowing your customers, competitors and suppliers.

Ways to Fight a Price War
Non-price responses
Reveal strategic intentions
and capabilities
Offer to match competitor's prices, everyday low pricing, or
reveal your cost advantage
Compete on quality
Increase product differentiation by adding features, build
awareness of existing features, emphasize the performance
Co-opt contributors
Form strategic partnerships by offering cooperative or
exclusive deals with suppliers or resellers
Price responses
Use complex price actions
Bundled prices, two-part pricing, quantity discounts, price
promotions, or loyalty programs
Introduce new products
Flanking brands that compete in customer segments being
challenged by competitors
Deploy simple price actions Adjust the product's regular price in response to a
competitor's price change

Figure 5.3 - Ways to Fight a Price War

5.5.3.6) Improving Operations

Porter starts the discussion by stating that relative importance of process innovations increases as the industry moves into maturity. This development is partly triggered by the diminishing growth opportunities and partly by the possible move into cost competition. The innovations themselves can take various forms from total quality management to just in time [JIT] systems. Another perspective is the consolidation of operations, stressing the importance of divesting excess capacity, achieving best practices and focusing on "lean" methods of production, which can be seen related to Porter's process innovation in a sense that continuous improvements are strived for. These improvements should be incremental as most savings are accounted through incremental improvements.

5.5.3.7) Improving Labour Productivity

Of all the avenues analysed, improving the labour productivity will have the greatest influence on the internal plant efficiency, scrap rate, quality PPM's and in-process cost saving advantages for Smiths. The MDWT (Mission Directed Work Team) modules must be driven from the upper echelon of management, to customize workplace training to the shop-floor environment. MDWT has the potential to empower the workforce in the following ways –

i) emotional ownership
ii) visual management of budgets, targets, performance, productivity
iii) manage stock levels and maintain a lean environment
iv) communicate the vision, mission, objectives and goals
v) motivate the people
vi) measure divisional daily production performance and thereby inset the culture of managing by measuring, and continuous improvement

The HR department has to get in here too, promoting training and upgrading of individuals. Smiths has a relatively old, experienced workforce. Most workers, on average, have been with the company within a 15-27 year range, are well experienced and efficient. There are a majority of women in the Heat Exchanger plant (women supervisors are a commonplace). On average, it has been found that these women are sometimes the breadwinners, complacent (less studious) and expedient in their jobs, less ambitious and slightly resistant to change.

The HR department unfortunately plays a large administrative role in Smiths, and less active in eminent strategic activity. HR needs to focus on the human resources, increasing human resource efficiencies in line with Smiths objectives. Training must commence to be a fundamental way of life at Smiths, on the line. HR must promote the culture of training, similar to the successful Japanese philosophies of TQM, JIT, KAIZEN, WHY-WHY analyses, ISHAKAWA, and ROOT CAUSE analysis.

This is where Smiths can build organizational talent and a strategic competitive differential advantage. Human Resources is seen as a department in isolation, situated away from the company's core business handling people issues. People are seen as a variable cost, a view that must be replaced to see people as a resource and social capital contributing to the company's competitive advantage too.

There is clear and abundant evidence that the distinguishing factor for winning organizations of the future is the one thing that offers long term, sustainable shareholder value and can't be replicated by competition – that is – PEOPLE. In todays competitive and globalized marketplace, maintaining a competitive advantage by becoming a low cost leader or a differentiator puts a heavy premium on having a highly committed and competent workforce. Competitive advantage lies not in just differentiating a product or service, or becoming a low cost leader, but in also being able to tap the company's special skills or core competencies and rapidly respond to customers needs and competitors moves. In other words competitive advantage lies in management's ability to consolidate corporate wide technologies and production skills into competencies that empower individual business to adapt quickly to changing opportunities. A strategic perspective of human resource management requires considerations of both business and strategy and consistency to achieve superior performance through people.

#	Existing HR Services	Proposed HR Roles
1	*Recruitment and selection*	*Workforce productivity programmes*
2	*Industrial Relations and disciplinary hearings*	*Quality and systems education*
3	*Administrative (Pension/leave, etc...)*	*Continuous improvement culture*
4	*Record keeping*	*Innovation*
5	*Performance Appraisals*	*Efficiency and work habits*
6	*Aids awareness*	*Understand mission and goals*
7		*Teams*
8		*Increased communication*
9		*Upliftment*
10		*Social interaction building relationships*
11		*Redesign job descriptions to include strategy based criteria which are measurable towards objectives in terms of cost, performance, efficiencies, morale, suggestions, speed, quality, etc...*
12		*Training and Development*
		Building knowledge, skills and empowerment
13		*Leadership skills for supervisors*

Table 5.2 – Linking HR Roles to Strategic Objectives

A modern concept of the human resource function is to move away from the specialized, stand-alone administration and transaction role and into a broad corporate competency in which "*human resource line managers*" build partnerships to gain competitive advantage and achieve overall business goals. Human Resource management must be developed to a stage where it ceases to be a functional phenomenon, whereas in fact it should be driving strategy.

Recommendations for HR to attain growth and prosperity of the Business goals	
i)	Recognizing and treating labour as an asset from the outset
ii)	Having all strategic planners appreciate and understand the implications and potential constraints of human resources if avoided
iii)	Successfully matching the corporate objectives and human resource functions
iv)	effectively managing and designing organisational processes assisting and helping everyone, thereby retaining high calibre employees.
v)	establishing the types of people and the organisation's distinctive competences and building and maintaining them as well
vi)	Planning, reviewing and improving the levels of commitment throughout the organisation
vii)	Assessing and satisfying the performance requirements to attaining the organisation's goals

Table 5.3 – Recommendations for developing Strategic IQ of Social Capital

5.5.3.8) Building Resource Strengths and Capabilities

Work in strategic management suggests that *resources* are the foundation for strategy, and that unique bundles of *resources* generate the competitive advantages leading to wealth creation. If the firm's *resources* are unique, rare, valuable, and inimitable, they can be a source of core *capabilities* and ultimately a competitive advantage, provided there is an appropriate strategy for deployment. Thus decisions about the mix and allocation of *resources* can determine a firm's success. Prescriptions are offered for identifying properties of *resources*, developing *capabilities*, or relating particular strategies to *resources* to facilitate learning (Brush, Candida G.. 2001, p64, 17p).

In Smiths case, the unique bundle of resources is the ability to handle such a large varying multiplicity of models, the ability to produce low volume batches, whilst maintaining cost competitiveness. It takes more than just rearranging operational resources, this impacts on logistics, systems, engineering project management, the ability to manage a *chaos environment,* which is a consequence of the multiplicity of products. Smiths must strive to streamline and protect this competitive advantage, as the larger rivals handle massive volume, automated plants, with less product variety. Also, by virtue of these multiple licence agreements, shared to Smiths by competing rivals such as Visteon, NipponDenso and Modine, etc... Smiths is in a position to utilize these intrinsic patented-licenced benefits for the Export and Aftermarket projects.

5.5.3.9) Building a Service Oriented Culture

Service-orientated behaviour requires a focus on customers needs and taking action, often beyond the call of duty, to meet these needs. Employees committed to service excellence have a clear understanding of customer queries and complaints and take personal responsibility for correcting customer service problems without becoming defensive. Not only do they exert extra effort to satisfy the customer's needs, but they ask others to assist them when necessary.

A distinction has been made between `hard' and `soft' versions of human resource management with the former emphasising employees as an asset to be used dispassionately and in a rational manner, the latter emphasises building and maintaining relationships. It is the employees who make the difference to the success of the organisation and human resource management forms a strategic part of the organisation both underpinning and moving the organisation towards excellence and success (Browning, Victoria. 1998, p135, 7p).

In the case of Smiths, it is depressing to objectively note that line managers were engineers, having worked their way through the ranks, and lack the essential managerial know-how of priceless matters such as Organisational Behaviour and People Management. Smiths thus need the HR department to step in here and bridge this gap. In essence, the shop-floor workforce has to be treated as organizational assets.

5.6) Cooperation

The benefits of joining a first world organization such as NipponDenso would relate to the exploitation of joint competitive advantages for Smiths in the following manner-

i) it opens new markets for Smiths and new agreements for Toyotas OEM plants
ii) Smiths could outsource cost effectively
iii) Smiths would acquire the leading Japanese manufacturer technology
iv) NipponDenso would streamline the Smiths plant, enhancing productivity and cost competitiveness

5.7) Strategic Choice

Smiths is a "small fish in a big pond", globally speaking, if compared to other 1st world rivals (Delphi, Visteon) in annual volume output terms. Smiths is a low cost, high variety source, a comparative advantage of being able to produce low volumes, high variety product mixes without massive capital outlay and tooling costs. Smiths is strategically set up to utilize flexible facilities and operating systems, design systems, multiple quality accreditations, etc.. Hence, Smiths fares fairly well, although South Africa is geographically way out for the US and Europe, Smiths still remains competitively priced. With the current surplus of new projects, this denotes higher volumes, which translates into lower fixed overheads, thus lower prices quoted for future business. This all equates towards the low cost leader intent.

5.8) Strategic Options

The strategic options open to Smiths are –

i) Maintain Low Cost Leadership

ii) Improve Relationships with Licensors

iii) Concentrated Growth

Being in a dynamic, ever-changing, survival of the fittest industry such as the automotive industry, now exposed to the even harsher global climate, it is recommended that Smiths attempt to be proactive in the following manner, thus gaining a 1st mover advantage in the following way –

i) Establish a Research and Development team/Future Projects team to preempt future movements, eg R152 /CO2 systems technologies

ii) Liaise with leading automotive source design plants in gearing up for this new technology

iii) Institute a test laboratory and testing facilities for this *impending technology*

It is imperative that Smiths adopt this standing, to differentiate itself as a firm between the likes of the new plants starting in Mexico and China. The biggest threats are the economic boom occurring in China, as well as the newer FDI entering Mexico. This could easily lead to OEM's resourcing away from Smiths, hence in order to secure and maintain a competitive differential advantage, it is strongly recommended for Smiths to view this option prudently.

5.9) Strategies for Runner-Up Firms

Runner-up firms like Smiths Manufacturing have much smaller market shares than "first tier" industry leaders. Some runner-up firms are up-and-coming *market challengers*, employing *offensive strategies* to gain market share and build a stronger market position. In this instance, Smiths is too small relative to the global giants of the US, UK and Japan. The disparity is just too large to catch up in the same decade. Smiths is a *focuser*, seeking to improve by concentrating attention on serving this niche market it finds itself in. Smiths is more a perennial runner up, lacking resources and competitive strengths in terms of size, to do more than currently trail the market leaders.

5.10) Strategy Evaluation and Selection

In assessing the above strategies for Smiths, there are three criteria of which to determine the appropriate strategy, in light of the organizations circumstances, life cycle, market conditions, competitors positions, and industry situation; suitability, acceptability and feasibility.

5.10.1) Criterion 1 - Assessing Suitability

a. In terms of the life cycle analysis methodology, this theory further augments a low cost provider strategy. Smiths administers a fairly strong competitive position, in a mature market.

b. In light of the Bowman Strategy Clock, Smiths offers a low cost, quality guaranteed product, adding value, minimizing waste.

c. Smiths uses the Value Chain concept to full benefit, firmly taking the initiative to develop its suppliers, and enhance the supply chain efficiencies and costs, adding real value to the end customer, viz the OEM motor plants. Smiths should not backward integrate, in order not to lose its strategic focus. Outsourcing, yet being a supplier oriented customer works well, and gives Smiths the flexibility to shop around for the best commercial contracts.

5.10.2) Criterion 2 - Assessing Acceptability, Feasibility, Validity and Risk

In terms of stakeholder interests, business risk and financial return, Smiths has to focus on the these soft aspects, i.e. developing its human resources, changing the organizational culture and a drive towards cost savings, continuous improvement and adding real value. Smiths has to drive this persistently, cascade this mindset culture change aiming for world class position as a low cost producer of quality climate control systems.

Smiths has the infrastructure and funds to strategise carefully to implement this low cost provider strategy.

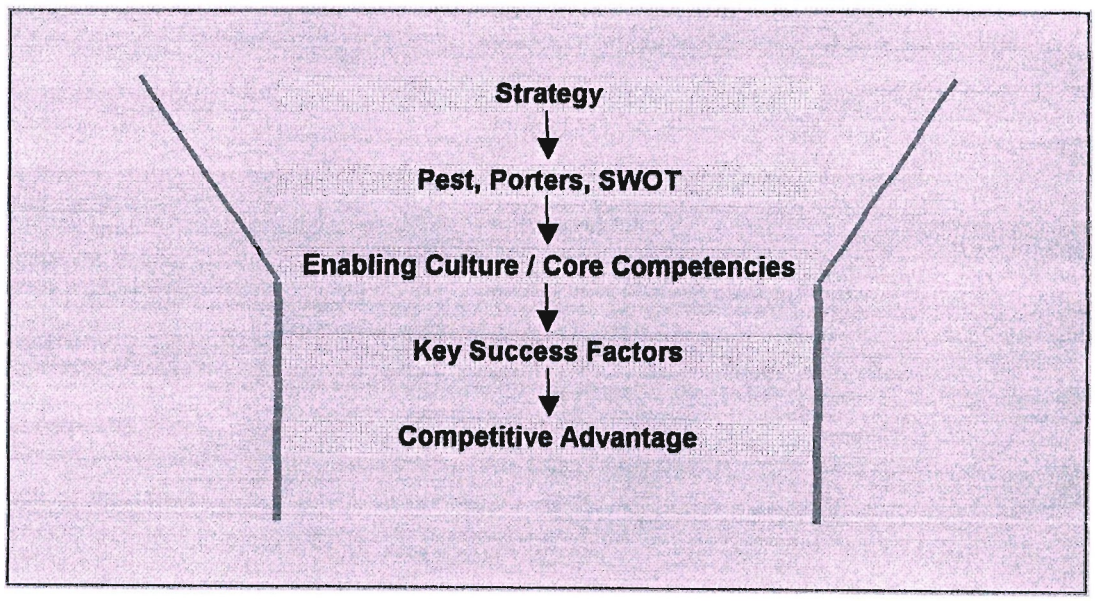
5.10.3) Criterion 3 – Consistency of Strategy to Mission and Objectives

Smiths vision and objectives are to remain a world class, high quality, low cost mass producer of heat exchangers and automotive climate control systems. The core vision epitomises "maintaining a

low cost focus, yet being flexible in terms of product array and assortment'. The proposed recommended low cost strategy aligns well with its mission and objectives.

5.10.4) Criterion 4 – Attractiveness to Stakeholders

One limitation of this study was the inability to quantify the magnitude of the future benefits, and costs of the low cost strategy to Smiths. This thesis directs the avenue Smiths should approach the future – rather than prescribe an exact route Smiths should adopt. In the current state of the automotive sector, strategies cannot be prescribed for too long a period, often companies have to change course frequently – maintaining an *emergent* strategic path rather than a *prescribed* one. The future opportunity and promise of new business is unquantifiable, yet definitely not uncertain by any means.



5.11) Abridgement of Recommendations

5.11.1) Short Term Recommendations

i) Change HR systems, tasks and work processes to align to measurable strategic objectives per division

ii) Design in Cost Reductions

iii) Establish ties and develop relationships with suppliers, to understand Smiths needs. Suppliers can often suggest design improvements to components that will cut expensive operations out of their processes, still maintaining quality as long as they fully understand Smiths needs

5.11.2) Long Term Recommendations

i) Develop stronger ties with source design companies, aiming to

ii) Research and Development

iii) Closer Relationship with Licensors

To join forces with licensors and become part of their global sourcing and trading network.

Continuously re-evaluating the multi-licence strategy against potential or strategic joint ventures and scenarios identified.

iv) Competitive without Protection

Target - International Competitiveness

Areas of Concentration:

Cost Containment/Material Cost Reductions.

Government incentives.

Manufacturing Cost Reduction (Processes/Scrap/Machine Utilisation/ Facilitisation/Cost Effective Vertical Integration/Labour Efficiency).

Ensure Smiths meets quality standards.

Constant Development of Mission Directed Work Teams & Bright Ideas.

5.12) Conclusion

A strategy of trying to be a ***low cost provider*** works well in situations where the industry's product is essentially the same from seller to seller (brand differences are minor), customers are price-sensitive and shop for the lowest price, most quality business to business products, buyers are large and have significant power to negotiate pricing terms over long term projects, buyers costs in switching from one seller to another are low, or even zero in most cases. In addition to this, the market is at a mature stage and suppliers (Smiths) comply with all the customers needs in order to acquire new business.

This paper has examined the future strategic focus that a local South African automotive firm ought to adopt to ensure competitive success in the harsh global auto industry. Smiths Manufacturing is on its way to becoming a world class company, limited in terms of local market size and firm infrastructure, yet astute in terms of systems, products and technology. Although Smiths is currently experiencing success and plans for short term growth, indications are that the whole strategic focus is being diminished in retaining its competitiveness in lieu of expansion and operations. Throughout this research thesis it is publicized that Smiths is competitive, but its *competitive advantage* is decreasing slowly but surely. Smiths has to do something unique, and this unique competitive differential advantage can be induced on the soft side, i.e. Smith's social capital – ***people*** – as illustrated in the preceding recommendations.

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APPENDIX 1

ECONOMETRIX ECOBULLETIN

A DECISION SUPPORT SERVICE FROM ECONOMETRIX (PTY) LTD ©

11 August 2003 No 15603/0809

INTERNATIONAL ECONOMY

The global economy is spluttering along at a growth rate that is slightly superior to that recorded in 2001 and 2002, but which is nevertheless quite modest by standards of the past two decades. Nevertheless, in recent weeks there has been a sudden revival of optimism. Record low interest rates in leading industrialised countries, coupled with expansionary fiscal policy, have encouraged the belief that the US and via it, the global economy, are set to revive in the second half of this year. Although concrete evidence for such a revival has not yet emerged convincingly, there are solid grounds for believing that an improvement in growth will materialise. Amongst these is the relief following the resolution of the war in Iraq, as well as the fact that individuals and corporations have exploited a period of low long-term interest rates to refinance their debt at more favourable interest rates. However, the sustainability of such an upswing remains in question. The global economy is still reeling from the bursting of the stock market bubble of the 1990s and the slump in fixed investment that has ensued. Ominously, consumer and corporate debt remain at a very high level. Any rise in interest rates from current 40-year lows could therefore see a significant slump in spending. With debt levels as high as they are, the best that can be hoped for from a longer term perspective is a continuation of rather modest growth. On the downside is the possibility that there could be a significant slump next year or the year thereafter, especially if the current property bubble bursts, in such a way as to erode the collateral against which much of the debt currently being taken on is based. Furthermore, one fears the implications of giant twin deficits in the US, viz. trade and budget deficits amounting to almost $500bn per annum. Ultimately, these could devastate the US economy by driving up interest rates amidst an environment of excessive debt. Despite its huge debt overhang, the US economy stands to grow faster than the economies of both Europe and Japan, in part because its fiscal and monetary policy has been more aggressive.

Until recently, the fear had been that the US and world economy were threatened by a descent into a deflationary spiral. However, new-found optimism recently has shifted the pendulum of expectation away from deflation towards the possibility of increased inflation. The gold price has benefited as a consequence and commodity prices have been edging up. Most conspicuous, however, has been the dramatic reversal of the downward trend in global long-term interest rates. This has alerted people to the danger of increased inflation and the possibility of rising interest rates posing a danger to the sustainability of global economic growth. As a consequence, leading equity markets, which had recovered strongly in the aftermath of the war in Iraq, have become nervous again fearing the sustainability of the global recovery. Opinions are currently divided over whether the next move in global interest rates will be downward or upward, reflecting the uncertainty of markets about the future.

Although the Dollar has regained some lost ground against other currencies in the past two months, the fear still exists that the massive US trade deficit will take its toll on the greenback. There is insufficient confidence that capital flows into the United States can be sustained at a level necessary to compensate for the trade deficit. There is also a growing belief that a lower Dollar is necessary to alleviate deflationary pressures in the US. On the other hand, an unduly strong Dollar could wreak havoc with the economies of the Euro zone and

Japan. Accordingly, even though one anticipates a weaker Dollar, it might be presumptuous to predict a massive slump in the currency as yet.

DOMESTIC ECONOMY

Economic Growth

Domestic economic activity has cooled off in the first half of 2003 in the wake of the rise in interest rates of last year and the high inflation rate which prevailed and eroded disposable income. The slowdown has been especially noticeable in respect of the manufacturing sector which has been suffering from declining exports as a result of lacklustre global economic growth and a loss in competitiveness as a result of the sharp appreciation of the Rand. Mining, tourism and export oriented services industries have also suffered. Nevertheless, growth in consumer and investment spending has remained fairly resilient and the outlook for the economy is still quite favourable. The financial position of individuals and corporations remains extremely sound and is likely to improve further as domestic interest rates fall over the coming year. In this regard, the expected decline in interest rates on the back of lower inflation is likely to boost disposable income especially given that important wage agreements are being reached granting workers increases well above the expected inflation rate. Furthermore, years of fiscal discipline have paved the way for government to use savings incurred through lower debt servicing costs to increase expenditure on other more vital areas of need. Hugely increased government spending on capital projects to alleviate severe bottlenecks in the transport, energy and other sectors should help counteract the effects of the slowdown in economic growth evident in other areas of the economy. The combination of these factors should ensure that, after dipping moderately this year to between 2 and 2.5%, economic growth will pick up next year and the years thereafter to between 3.4% and 4.0%. The significant provisos in this regard are that international economic activity should not decline materially and secondly, that the Rand should not retain its current strength or strengthen further in the second half of the year. From a longer term perspective, factors such as the huge skills shortage, high crime and growing inequality, as well as the scourge of AIDS, are likely to prevent large-scale foreign investment. Therefore, even though one is optimistic about an improvement in the sustainable growth rate of the economy, one does not foresee this improvement being sufficient to eliminate unemployment and poverty in years to come.

Inflation

Both CPI and PPI inflation have declined sharply over the past six months in response to the marked appreciation of the Rand. Given the dramatic 60% decline in agricultural futures prices of food and the resultant probable further steep decline in food inflation, the downward trend in inflation can be expected to continue in coming months. Furthermore, the Rand has strengthened more than anticipated and this too is likely to subdue inflationary pressures. As a consequence CPIX inflation is almost certain to decline to below 6%, ie a level within the government's 3 to 6% inflation target, in coming months and remain within that target band over the coming year. The challenge will be to keep inflation within the inflation target in future years. Attempts at closing the wage gap between rich and poor, the introduction of minimum wages for agricultural and domestic workers, affirmative action and the skills shortage, are likely to combine to exert significant wage pressure on inflation. The strong pricing power in the hands of a powerful trade union movement and a still fairly highly concentrated big business sector, coupled with administered price increases by large parastatal organisations in excess of the inflation target, aimed at funding massive infrastructural projects, are likely to add to the difficulty in driving inflation down below around 5/6% on a sustainable basis.

Short-term Interest Rates

The 1.5% cut in the repo rate announced by the MPC in June was taken as a signal for a significant reversal in the trend of interest rates. With CPIX inflation likely to fall within the inflation target by the end of this year, the path is set for short-term interest rates to be reduced by between 2 and 3% before year-end. Interest rate cuts of 1% are widely anticipated to take place at both the August and October MPC meetings of the Reserve Bank. Thereafter, it is uncertain as to whether there will be another interest rate cut before the end of this year or whether that will have to wait until early next year. Be that as it may, with CPIX inflation likely to decline below 5% later this year, and into next year, it should be possible for rates to come down by about 3.5% from now until mid 2004, taking the prime rate down to 12% by then. Thereafter, the challenge will be to reduce inflation further. In the light of the likelihood of stickiness in getting inflation below 5/6% on a sustainable basis, the Reserve Bank will have to maintain real

interest rates at relatively high positive levels for many years to come if it is to continue containing inflation within the 3 to 6% CPIX band targeted.

Long-term Interest Rates

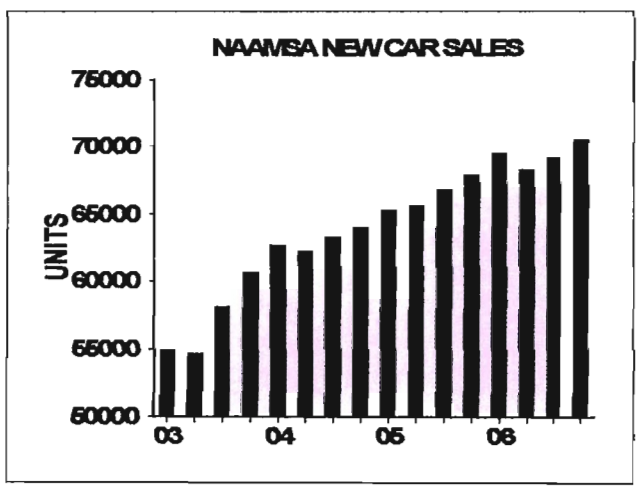
After declining strongly to 20 year lows, long-term interest rates have edged upwards in the past two months. Bond yields had declined in response to the steep fall in inflation and growing optimism about the potential for short-term interest rates to decline sharply. However, hesitancy has crept into the bond market for a number of reasons. Firstly, yields on international bond markets, with which domestic bonds have been highly correlated, have shot up in recent weeks on expectations of a strong recovery in the global economy. Secondly, doubts have crept in about the economy's ability to reduce inflation beyond 5/6% in the longer term in the face of significant wage and administered price pressures. Thirdly, there is also a growing fear of a shortfall in tax revenues in the coming fiscal year and hence an overshoot of government's budgeted borrowing requirement as a result of lower than budgeted economic growth, as well as an erosion of corporate earnings due to a strong Rand. Accordingly, there could be a significant short to medium term interruption in the longer term downward trend of bond yields.

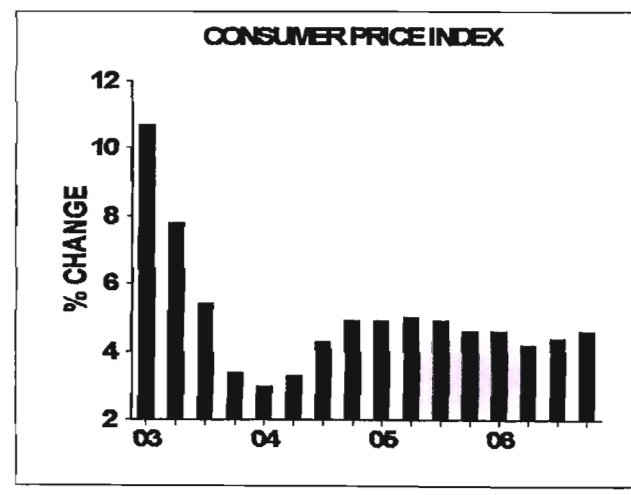
The Rand

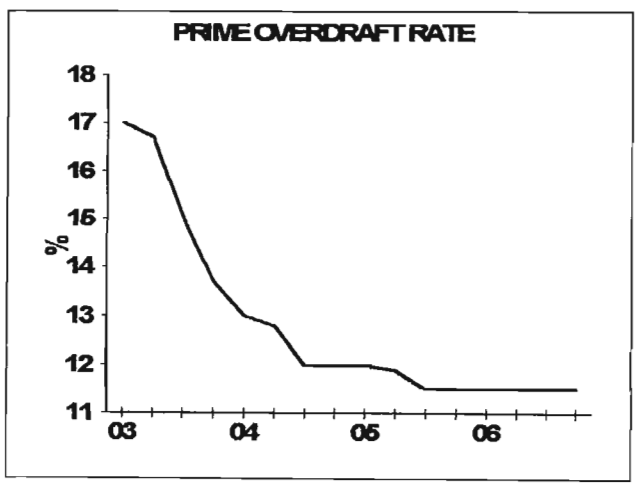
Following its dramatic decline in 2000 and 2001, the Rand has recovered almost as dramatically since August 2002. In the light of the Dollar's decline, however, the magnitude of the Rand's appreciation against the greenback has exaggerated its appreciation. The primary cause of the recent strength of the currency is related to the so-called "carry trade", whereby investors are attracted into the high yields offered by Rand investments in relation to those available on other currencies. However, this does set the currency up for a significant reversal in the event that the carry trade loses its attractions. A number of reasons could bring this about. Firstly, if the expected 3 to 4% further decline in interest rates materialises, the attractions of the interest rate differential between Rands and other currencies will diminish. Secondly, there is little guarantee that the upswing in global economic activity will be sufficient to drive up commodity prices in such a way as to warrant the appreciation of the Rand as a commodity based currency driven by the expectation of higher commodity prices. Thirdly, the loss in competitiveness of South Africa's non-mineral exports could hamper economic growth in such a way as to encourage funds to be withdrawn from Rands. Fourthly, there could be potential for large outflows of Blocked Rands. Finally, the extremely low level of South Africa's gold and foreign exchange reserves, makes the Rand extremely vulnerable to speculation. In conclusion, even though the fundamental strength of the South African economy should prevent the Rand from weakening to levels seen in late 2001, a significant decline to between R8 and R9 to the Dollar within the next six months is quite likely. The currency's performance is likely to be better against the Dollar than against the Euro because of the probability of further Dollar weakness.

SUMMARY OF KEY VARIABLES

	2001	2002	2003	2004	2005	2006
GOLD PRICE ($/oz)	271.4	313.2	354.7	355.8	350.8	346.3
G7 REAL GDP GROWTH	1.5	1.5	1.8	1.8	2.3	2.6
S.A. REAL GDP GROWTH (%)	2.8	3.0	2.5	3.4	3.6	3.7
GROSS DOMESTIC EXPENDITURE (%)	2.3	4.2	3.2	3.5	3.6	3.7
PRIVATE CONSUMPTION GROWTH (%)	3.1	3.2	2.4	3.0	3.2	3.5
FIXED INVESTMENT GROWTH (%)	3.2	6.5	5.4	4.4	4.5	4.2
RAND / DOLLAR EXCHANGE RATE	8.75	10.36	7.99	8.30	8.41	8.54
RAND / EURO EXCHANGE RATE	7.80	9.78	9.08	10.34	10.49	10.59
CPI INFLATION RATE (%)	5.7	9.1	6.8	3.9	4.8	4.4
CPIX INFLATION RATE (%)	6.6	9.3	6.6	5.3	5.3	4.5
PRIME OVERDRAFT RATE (%)	13.8	15.8	15.6	12.5	11.7	11.5
LONG RSA (R153) YIELD (%)	11.2	11.7	9.6	8.7	8.3	8.1







Source - *www.econometrix.co.za*

Graph 5.2 - Consumer Price

Graph 5.3 – Prime Overdraft