

The development of a strategic plan for a company in the dust suppression industry

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ABSTRACT

The general aim of this study was to develop a strategic plan for a company in the dust suppression industry. Currently there is no formal process documented or analysis done within the company regarding strategic planning due to the company being founded, extensive growth taking place year on year and the urgent need for the operations to be established, in order for the company to start selling their products and services. The study was conducted among a sample of 45 junior, middle and senior management employees within this company.

The data collected from the participants were collected personally via interviews and a strategic planning questionnaire and recorded electronically by the Statistical Consultation Services at the North-West University and the data were analysed by means of the Statistical Package for Social Sciences (SPSS V18). In addition to the structured questionnaires, management was also interviewed to assess their views on the strategic planning at the company.

The results and findings indicated that there was some strategic planning actions lacking and that formal strategic planning that defines objectives and assessment of the various situations within the company, are not properly performed. The author was however able to evaluate and determine where the company is going over the next three years. The study draws a number of conclusions and makes recommendations with regard to strategic planning, one of which is that the company should follow a more structured and formalised approach.

Key terms: Strategic planning, vision, mission, objectives, dust suppression, growth, strategy.

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CHAPTER 1

NATURE AND SCOPE OF THE STUDY

1.1 INTRODUCTION

Under South African law dust is defined as small airborne particulates with a diameter smaller than 100 micrometers. Small particles directly emitted from a carbonaceous combustion are specifically excluded from this definition.

The first areas of activity to come under legislative control were below surface mining. The small confined spaces with high concentrations of machines and people working in them gave rise to serious health problems for the miners. Disease names like thythis and silicosis entered the common lexicon. These were serious diseases, appreciably shortening the lives of miners and ruining their quality of life. Workplace healthcare legislation needed time to evolve, firstly for the diseases to manifest, secondly to pinpoint the cause and lastly to enact the laws. The conditions and legislations forced mining companies to install huge ventilation systems. This was mandated by law, but it was only a matter of time before mining companies would not have been able to find workers willing to mine in such conditions.

The situation above ground was viewed as less serious. It was not confined, the dust blew away and clean air seemed to be in endless supply. Only workers working in factories with noxious gases and substances received protection.

There are various measures of air quality as a result of dust. Dust is defined as particles larger than smoke but smaller than grit, as such the particle size for dust range from 0.1 μm to 100 μm . Dust particles have a small volume to surface ratio, this leads to extended periods of atmospheric suspension, should the particle gain elevation, by whatever means. This property leads to dust being easily distributed to surrounding areas. The most dangerous particle size and thus the size one which the regulations focus most on is respirable dust, dust particles smaller than 10 μm . These can enter the alveoli region of the lungs.

Originally dust was divided between non-fibro genic dust, considered to be biologically inert, and fibro genic dust, which causes fibro genic tissue in the lungs. Today it is recognised that all forms of non-degradable dust will have an immunological effect. Dust legislation however is aimed at fibro genic dust, specifically alpha quartz dust. Alpha quartz or SiO₂ is the cause of silicosis and workplace related pneumonias.

Air quality degradation due to dust is defined in South Africa on the AQI or air quality index. AQI takes total dust and alpha quartz into consideration. An AQI number smaller than one is acceptable. Between one and five requires immediate action, and at AQI numbers larger than five no work is permitted.

An AQI number of one roughly translates to 0.3mg/m³ although it is not a precise conversion.

The current draft legislation tabled by minister Edna Molewa prohibits persons or entities to conduct activities that gives rise to dust in such quantities and concentrations that:

1. Dust or dust fall has a detrimental effect on the environment including health, social conditions, economic conditions, ecological conditions or cultural heritage or has contributed to the degradation of ambient air qualities beyond the area where it originates.
2. The dust remains visible in air beyond the premises where it originates.
3. The dust fall at the boundary or beyond the boundary of the premises where it originates exceeds, 600 mg/m²/day for residential and light commercial areas and 1200 mg/m²/day for other areas. Taken as an average figure over 30 days.

Clearly dust is being seen as more than just a health hazard. It is now defined as something that lowers people's quality of life. This legislation reflects the ever more powerful notion that one's activities should not be detrimental to others' well-being, no matter how insignificant it may seem. The legislation can be seen as a positive force in that it forces people to be more accountable for their actions and to change the mind set of people more towards sustainability.

The legislation taken as a whole creates a void for entrepreneurial activity to help persons or companies fulfil their lawful and conscientious obligations. It is in this area of entrepreneurial activity that companies such as this company help add value to organisations and people's lives.

Dust control has gone in lockstep with environmental legislation in recent years. It remains an aspect of business that has to be managed. As such the demands on companies are increasingly onerous but are to the advantage of companies that provides these services like this company. Environmental legislation also tends to be stricter in developed countries than developing countries.

1.2 COMPETITION IN THE DUST SUPPRESSION INDUSTRY

A lot of the companies in dust control tend to be similar to this company in culture and structure. They are young entrepreneurial companies, as such financial data tend not to be readily available and it is difficult to rate them according to revenue.

1.2.1 International competitors

International competitors include, but are not limited to:

- *Polymer Innovations, Australia*. They manufacture a wide range of polymers for interacting with water. One of their products is Watersave DS, which according to company literature is a polymer that penetrates the earth and tend to bind water particles, thereby reducing the amount of water spray needed to wet the road area and control dust release.
- *Reynolds Soil Technology, Australia* or RST focuses on developing complete dust solutions, from identifying through implementation to monitoring. One of their slogans is pit 2 ports, emphasizing their focus on providing a complete solution. They can be seen as more of a product company than a service.
- *Du Pont dust suppression*, Du Pont is a giant chemical company and ranks as the 84th biggest company in the USA according to Fortune magazine (Cacace 2010:F-

5). Though an extremely small part of the Du Pont organisation, the resources of Du Pont make it a serious competitor. It is also worth noting that Du Pont focuses on the Australian market. Du Pont markets Dusgon which is a water soluble polymer with low environmental impact. Du Pont also emphasises both the service and product side of dust suppression.

- *Soilworks LLC* is an American firm specialising in dust suppression. It also manufactures a water soluble polymer that penetrates the gravel or substrate and forms a hard translucent bond between particles. It is given as environmentally friendly. The economical version of the product is marketed under the colorful name of Gorilla-snot®. This product is used extensively by the US Army in Iraq and other areas of operation where dust is a problem.

1.2.2 National competitors

National competitors include, but are not limited to:

- *Dustaway* is a company who specialises in dust emanating from the handling of material in a non-road application. Their main business is supplying dust suppression for conveyor belts and areas where loose material is loaded or unloaded.
- *Lignotech* is a joint venture between Borreaard Industries and Sappi Saiccor both companies that are heavily involved in wood processing. The product they manufacture is Dustex which is lignosulphonate a polymer derived from lignin – a polymer found in wood. Dustex is mainly used as a binder for road surfaces.
- *Marine 3 Technologies* specialise in producing water surfactants that lower the surface tension of water and result in smaller droplets and better wetting ability. These products are mainly used in material transportation.
- *Afri-group* is also a company supplying a complete dust management system. Their main road treatment product is a polymer that penetrates and binds the road surface.

As can be seen from the abovementioned, the competition is fairly fierce with regards to non-bitumen product; this compromises the entire sector' profitability. Competition on the bitumen product is less fierce.

From the customer research done by the company under review, there is only one product specific complaint and that is that product cost is perceived to be expensive mainly due to the ever increasing cost of crude oil and thus the bitumen raw material.

The value added benefit of the company's technology and management offering far outweighs the cost of the product as all petroleum products increase with the crude oil as is the case for the company's bitumen emulsion product price. Diesel, being one of the greatest cost material to the mining industry, constitutes an increased saving, from the company road management program.

1.2.3 The value proposition

In the mining environment and especially in opencast mining roads are used to transport raw material and machinery from the pit to the processing plants. In most cases these transport roads are dirt roads and must be wide enough for large machinery to pass each other in different directions. The distance from the slopes to the processing plants can sometimes be several kilometres. Except for continuous maintenance that has to be done on the roads to keep it in an operational condition, dust must be controlled.

This was historically done by continuously spraying water on the roads. The company has however created an environmental friendly heavy duty bonding agent that is mixed with water and sprayed on the roads but does not leach out once bonding has occurred. The crushing and handling of the raw material create large quantities of dust which has to be controlled.

Legislation around dust management is becoming more strict and combined with the advantages of the company product offerings it assists mines to focus on their core business, which is extracting minerals from the ground.

This is done by firstly helping mines to meet the health and safety regulations concerning dust management (with regard to bitumen and non-bitumen products) as well as providing advantages like enhancing a safe production and working environment, visibility and clarity

which decreases possibility of safety incidences, all-weather product which allows for hauling in wet and dry weather conditions, more than 5% of fuel saving, water saving more than 90%, more than 8% improvement in tyre life expectancy and a reduction in rolling resistance.

The company has assembled a simple, comprehensive, proven programme that significantly improves the draining capability of the haul road design which is integral to maintaining a haul road in its best structural condition. The company's product certainly is supported by excellent dust suppressant figures. Figures from sealed or paved roads show that there is less than 2% dust release from such roads (Thompson & Visser, 2000:8).

1.3 PROBLEM STATEMENT

As highlighted by the available literature, strategic planning within any company needs to have clearly defined objectives and methods of assessing these objectives both internally and externally to formulate, and develop the strategy and progress made, and to be able to make adjustments as necessary for the company to stay focused and on track.

Currently there is no formal process documented or analysis done within the company regarding strategic planning due to the company being founded, extensive growth taking place year on year and the urgent need for the operations to be established, in order for the company to start selling their products and services. There is no cohesion between management and key role-players are not consulted on their field of expertise when considering the future direction of the company. Management needs to determine what the current level of strategic planning within the company entails, before they can start to improve on it. In order for this to happen an internal audit had to be completed and was done by means of completing a strategic planning questionnaire as well as personal interviews.

1.4 RESEARCH OBJECTIVES

The research objectives are divided into primary and secondary objectives.

1.4.1 Primary objective

The primary objective of this research is to provide formal structure within the company through the formulation of a winning strategic plan.

1.4.2 Secondary objectives

The secondary objectives of this research are:

- Analysing the current company vision statement, mission statement and company values;
- Conducting an environmental scan by doing a PEST analysis; (macro environment)
- Conducting a SWOT analysis and competitive capabilities; (micro environment)
- Analysing the current strategy by assessing the competitive advantage and ways of adding value;
- Analysing the company strategic objectives;
- Analysing the company financial objectives;
- Conducting an internal organisational assessment;

1.5 RESEARCH METHOD

This research, pertaining to the specific objectives, consists of two phases, namely a literature review and an empirical study.

1.5.1 Phase 1: Literature review

In phase 1 a complete review is given regarding the topic of the study, which in this case is strategic planning. Before starting with the literature search the author defined the parameters of the search to limit the search to:

- Language of publication – (English)
- Subject area – (Strategic planning)
- Business sector – (mining industry)
- Publication period – (2000 – 2010)

Various articles, handbooks and other literature documentation were used to provide a definition and overview of the strategic planning process. Steps in the strategic planning process, as defined by various authors are evaluated within this company context.

The first step in the strategic planning process is to address the questions “Where are we?” and “What do we have to work with?” Here the author looks at recent history and changing contexts (both internal and external) of the company to assess its current position.

The second step in the process is answering “Where do we want to be?” As the vision stems from the values of those involved in the process, it is essential that this step involves all of those who have a stake in the achieving of the vision. The vision is translated into a mission statement: a broad, comprehensive statement of the purpose of the agency or program. The third step in the planning process is the setting of goals that indicate the intended future direction of the organisation.

After setting the vision and determining goals, means are addressed for reaching the goals. This step involves articulating strategies for achieving results. Strategies reflect the strengths and weaknesses of the departments engaged in the planning. Addressing goal measurement involves articulation of objectives, indicators, and benchmarks. Benchmarks are target levels of performance expressed in measurable terms and specified time frames, against which actual achievement is measured.

List of topics addressed:

1. Company core values, purpose and visionary goals.
2. The calculation of market share and ways to increase this as well as evaluating the marketing mix (product, place, price and promotion)
3. Conduct a PEST analysis of macro environmental factors – social, technological, economic and political.
4. Conduct a SWOT analysis of the company internally – strengths, weaknesses, opportunity and threats.
5. Evaluate Porter's five forces model for industry analysis – supplier power, threat of substitutes, degree of rivalry, buyer power and barriers to entry.
6. Determine if the company possesses competitive advantage over rival companies.

1.5.2 Phase 2: Empirical study

The empirical study consists of the research design, participants, measuring instrument, and statistical analysis.

1.5.2.1 Research Design

The aim of the research design involves the strategic plan for a research project or research program, setting out the broad outline and key features of the work to be undertaken, including the methods of data collection and analysis to be employed, and showing how the research strategy addresses the specific aims and objectives of the study, and whether the research issues are theoretical or policy-oriented (Encyclopedia.Com, 2010).

Descriptive research - is used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. Descriptive research methods include case studies, observational-, survey- and archival research (MBA knol, 2010).

According to Leedy and Ormrod (2005:179), quantitative research can include “either identifying the characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena.” Either way, descriptive research examines a situation as it is. It does not involve changing or modifying the situation under investigation, nor is it intended to determine cause-and-effect relationships. Quantitative research will produce information that is quantitative and that can utilise statistical methods and analyses to describe the research findings and draw conclusions.

Surveys provide information for co-relational research. One can correlate responses to some questions (often demographic questions) with responses to other questions (often attitudes or reports of behaviour). Survey questions must be clear and unambiguous. Even if the questions are unambiguous and non-leading, people may display a social desirability bias and give positive or socially acceptable and desirable answers.

The survey method used was twofold seeing as descriptive research was used in the form of structured interviews with the 10 department heads and stakeholders within the company as well as a strategic planning process self-assessment questionnaire that was completed by 45 junior-middle- and senior management.

The structured interview (or face-to-face method), which is generally viewed as the best method, for obtaining a high rate of responses which in this study took the author three weeks to complete by scheduling interviews with the various department heads and spending approximately four hours personally interviewing each department head.

In survey research, information is obtained about a single group or multiple groups and the information gathered can be about their “characteristics, opinions, attitudes or previous experiences”. This is done through the use of questions and the consequent recording of their answers, according to Leedy and Ormrod (2005:181), which is also what the author did.

The main purpose of this survey, according to Creswell (2009:21), is to generalise the information obtained from a sample to the broader population that will provide some

information about the characteristics, attributes or behaviour of the specific population under study.

1.5.2.2 Advantages of survey research

The following can serve as advantages of conducting survey (structured interviews) research (Creswell, 2009:48):

- the method can be applied to a great number of people;
- the data provided is about the current levels of thinking and anticipation of the participants; and
- it can be a useful method for discovering new insight.

1.5.2.3 Participants

According to Saunders (2007:52) the population of a study refers to the “complete set of cases or group members.”

With regards to this specific study in completing the strategic planning process self-assessment questionnaires, the population was South African individuals with specific reference to 45 junior- , middle- and senior level managers in the company. These job categories are described as:

- supervisors/site managers of the people on a specific site and shift; and
- area-, business- and operations/departmental managers whose main responsibilities are the smooth functioning of their regions and/or departments, ensuring that tasks are completed timely and within budgets and people managed effectively. These 45 participants are male and female, from different ethnic groups, and different ages, educational qualifications and experience.

Regarding the use of structured interviews the 10 department heads consist out of 7 white males and 3 females. The ages of all the department heads vary between 32 – 53 years of age, with different educational qualifications and experience.

According to Saunders (2007:61), a sample refers to the “representative group of people or behaviours from which predictions can be made with respect to a total population”. A variety of sampling designs exist. The participants of this study are all part of the company and fall in the category of junior- and middle- and senior level management.

1.5.2.4 Measuring Instrument

The interview questionnaire that was used to collect the data was developed by the author and the self-assessment questionnaire was developed by Strategic Futures Consulting Inc. (Copyright protected 1997 – 2009).

1.5.2.5 Statistical Analysis

The data collected from the participants were collected personally and recorded electronically by the Statistical Consultation Services at the North-West University. Data were analysed by means of the Statistical Package for Social Sciences (SPSS V18). A regular backup of data was made to ensure that data-loss does not occur.

1.6 CHAPTER DIVISION

The chapters in this mini-dissertation are presented as follows:

Chapter 1: Nature and scope of the study.

The fundamental focus of this chapter is to provide the background and motivation for the research. Based on this the problem and purpose statement with specific aims is identified. Once this has been established, the research design and methodology applicable to the study and chapter division is addressed. A summary concludes this chapter.

Chapter 2: The development of a normative model.

This chapter is dedicated to a literature analysis where the focus is specifically on the field of strategic planning. Within this field, the basic building blocks of strategic planning is identified and discussed.

Chapter 3: Research methodology and results.

A comprehensive description of the research methodology and the empirical research is provided in this chapter. It firstly describes the research paradigm chosen. Secondly, it gives attention to the specific inquiry of strategy, the design of the sample, the data collection process and the statistical analysis of such data. The chapter also describes the results obtained from the data collection process and the specific inferences drawn from it. The focus is thus to test the hypotheses identified.

Chapter 4: Conclusions and Recommendations.

The final chapter of the research study serves as a method for integrating the various results and presents the conclusions, possible comparisons as well as deviations from the normative model. Possible limitations as well as future proposals related to the study are also addressed in this chapter.

1.7 CHAPTER SUMMARY

The main aim of the first chapter is to summarise the essential components of the research study. Consequently, the focus was on the background leading to the study, the problem as identified by the researcher, the main and specific aims of the research and the literature available. Furthermore, it addressed the research methodology of the study, including the design, data collection and analysis.

The core motivation for the study is based on the lacking formal strategic planning that defines objectives and assesses various situations within the company to be able to evaluate and determine where the company is going over the next three years.

In conclusion, the main aim of this study will thus be the development of a strategic plan for an entrepreneurial company in the dust suppression industry.

The next chapter performs a literature review of the normative models present to analyse the strategic management process.

CHAPTER 2

THE DEVELOPMENT OF A NORMATIVE MODEL

2.1 INTRODUCTION

This chapter focuses on normative models for strategic management ('how it should be). In general, normative has two related meanings:

1. a prescriptive meaning (for example, the rules specified in a standard or guideline), and
2. a descriptive meaning.

A company's strategy is a set of action plans for conducting operations and running the business, in order to enhance the transition from the present status quo to the envisioned successful company. It encompasses competitive moves and business approaches to ensure growth of the business and to outcompete rivals.

A winning strategy is the key to building a sustainable competitive advantage which leads to superior performance and financial results. This strategy is well suited to the future demands and characteristics of the organisation's macro and operating environment. It is fast, friendly, focused and flexible.

The building blocks of a winning strategy results in a learning organisation where knowledge is transferred and employees empowered. A company's strategy as discussed in chapter 1 is the "game plan" management has for positioning the company in its chosen market arena, competing successfully, pleasing customers, and achieving good business performance.

2.2 THE FIVE TASKS OF STRATEGIC MANAGEMENT

According to Thompson, Strickland & Gamble (2010:24-48), the five tasks of management include:

1. Forming a strategic vision of what the company's future business structure will be and where the company is headed. This in turn provides long-term direction, defines what kind of business the company is trying to become, and implements within the company a sense of purposeful action. Management's views and conclusions about the company's future course, the customer focus it should have, the market position it should try to occupy, and the business activities to be pursued constitute a strategic vision for the company. A strategic vision indicates management's aspirations for the company, providing a panoramic view of "what businesses we want to be in, where we are headed, and the kind of company we are trying to create." It spells out a direction and describes the destination.

The whole idea behind developing a strategic vision/mission statement is to set a company apart from others in its industry and give it its own special identity, business emphasis, and path for development. The best vision statements are worded in a manner that clarifies the direction in which a company needs to move.

The elements of a Strategic Vision are (CreateTheFuture, 2011):

- Defining what business the company is presently in;
- Customer needs, or what is being satisfied;
- Customer groups, or who is being satisfied;
- The technologies used and functions performed – how customers' needs are satisfied (fully integrated, partially integrated, or specialised);
- Deciding on a long-term strategic course for the company to pursue; and
- Communicating the vision in ways that are clear, exciting and inspiring.

2. Setting objectives by changing the strategic vision into specific performance outcomes for the company to achieve. By setting objectives it converts the strategic vision and directional course into specific performance targets. Objectives represent a managerial commitment to achieving specific outcomes and results.

What kind of objectives to set

Objectives are needed for each key result managers deem important to success. Two types of key result areas stand out: those relating to financial performance and those relating to strategic performance (Pearce & Robinson, 2000:241).

Financial objectives

- Growth in revenues
- Growth in earnings
- Higher dividends
- Wider profit margins
- Higher returns on invested capital
- Attractive EVA performance
- Strong bond and credit ratings
- Bigger cash flows
- A rising stock price
- Attractive and sustainable increased in market value added (MVA)
- A more diversified revenue base
- Stable earnings during periods of recession

Strategic objectives

“Strategic objectives relate to the target outcomes that indicate a company is strengthening its market standing, competitive vitality, and future business prospects” (Thompson et al., 2010:34). Such objectives are:

- A bigger market share
- Quicker design-to-market times than rivals
- Higher product quality than rivals
- Lower costs relative to key competitors
- Broader or more attractive product line than rivals
- A stronger reputation with customers than rivals
- Superior customer service
- Recognition as a leader in technology and/or product innovation

- Wider geographic coverage than rivals
 - Higher levels of customer satisfaction than rivals
3. Crafting a strategy to achieve the desired outcomes. Strategy making is all about how? (Pearce & Robinson, 2000:246-252):
- How to achieve performance targets?
 - How to outcompete rivals,
 - How to achieve sustainable competitive advantage?
 - How to strengthen the company's long-term business position?
 - How to make management's strategic vision for the company reality?

A strategy is needed for the company as a whole, for each business the company is in, and for each functional piece of the business. A company's overall strategy emerges from the pattern of actions already initiated and the plans managers have for fresh moves.

4. Implementing and executing the chosen strategy efficiently and effectively.
5. Evaluating performance and initiating corrective adjustments in vision, long-term direction, objectives, strategy, or implementation in light of actual experience, changing conditions, new ideas, and new opportunities. Company situation analysis is trained on five questions (Thompson et al., 2010:58-70):

2.2.2.1 How well is the company's present strategy working?

In evaluating how well a company's present strategy is working, a manager has to start with what the strategy is. The first thing to do is to establish the company's competitive approach – whether it is (Slideshare, 2010):

1. Striving to be a low-cost leader or stressing ways to differentiate its product offering and

2. Concentrating its efforts on serving a broad spectrum of customers or a narrow market niche.

Another strategy defining consideration is the firm's competitive scope within the industry – how many stages of the industry's production-distribution chain it operates in (one, several, or all), what its geographic market coverage is, and the size and makeup of its customer base. The company's functional strategies in production, marketing, finance, human resources, information technology, new product innovation, and so on further characterise company strategy.

The best quantitative evidence of how well a company's strategy is working comes from studying the company's recent strategic and financial performance and seeing what story the numbers tell about the results the strategy is producing. The two best empirical indicators of whether a company's strategy is working well are:

1. Whether the company is achieving its stated financial and strategic objectives; and
2. Whether it is an above-average industry performer.

It is nearly always feasible to evaluate the performance of a company's strategy by looking at:

- Whether the company's market share ranking in the industry is rising, stable, or declining;
- Whether the company's profit margins are increasing or decreasing and how large they are relative to rival firms' margins;
- Trends in the company's net profits, return on investment, and economic value added and how these compare to the same trends in profitability for other companies in the industry;
- Whether the company's overall financial strength and credit rating is improving or on the decline;
- Trends in the company's stock price and whether the company's strategy is resulting in satisfactory gains in shareholder value;
- Whether the company's sales are growing faster or slower than the market as a whole;

- The company's image and reputation with its customers; and
- Whether the company is regarded as a leader in technology, product innovation, product quality, customer service, or other relevant factor on which buyers base their choice of brand.

2.2.2.2 What are the company's resource strengths and weaknesses and its external opportunities and threats? (SWOT Analysis)

The SWOT analysis is grounded in the basic principle that strategy-making efforts must aim at producing a good fit between a company's resource capability and its external situation. Strength is something a company is good at doing or a characteristic that gives it enhanced competitiveness and can take any of several forms (Pearce & Robinson, 2000:202-205):

- *A skill or important expertise* – low-cost manufacturing know-how, technological know-how, a proven track record in defect-free manufacture, expertise in providing consistently good customer service, skills in developing innovative products, excellent mass merchandising skills, or unique advertising and promotional know-how.
- *Valuable physical assets* – state of the art plants and equipment, attractive real estate locations, worldwide distribution facilities, natural resource deposits, or cash on hand.
- *Valuable human assets* – an experienced and capable workforce, talented employees in key areas, motivated employees, managerial know-how, or the collective learning and know-how embedded in the organisation and built up over time.
- *Valuable organisational assets* – proven quality control systems, proprietary technology, key patents, mineral rights, a base of loyal customers, a strong balance sheet and credit rating, a company intranet for accessing and exchanging information both internally and with suppliers and key customers, computer-assisted design and manufacturing systems, systems for conducting business on the World Wide Web, or e-mail addresses for many or most of the company's customers.

- *Valuable intangible assets* – brand name image, company reputation, buyer goodwill, a high degree of employee loyalty, or a positive work climate and organisational culture.
- *Competitive capabilities* – short development times in bringing new products to market, build to order manufacturing capability, a strong dealer network, strong partnerships with key suppliers, an R&D organisation with the ability to keep the company’s pipeline full of innovative new products, organisational agility in responding to shifting market conditions and emerging opportunities, or state of the art systems for doing business via the Internet.
- *An achievement or attribute that puts the company in a position of market advantage* – low overall costs, market share leadership, having a better product, wider product selection, stronger name recognition, or better customer service.
- *Alliances or cooperative ventures* – partnerships with others having expertise or capabilities that enhance the company’s own competitiveness.

Taken together, a company’s strengths – its skills and expertise, its collection of assets, its competitive capabilities, and its market achievements – determine the complement of resources with which it competes.

A weakness is defined as what a company lacks or does poorly (in comparison to others) or a condition that puts it at a disadvantage. A company’s internal weaknesses can relate to:

1. Deficiencies in competitively important skills or expertise,
2. A lack of competitively important physical, human, organisational, or intangible assets, or
3. Weak competitive capabilities in key areas.

Internal weaknesses are shortcomings in a company’s complements of resources. Managers cannot properly tailor strategy to the company’s situation without first identifying each company opportunity, appraising the growth and profit potential each one holds, and crafting strategic initiatives to capture the most promising of the company’s market opportunities. In appraising a company’s market opportunities and

ranking their attractiveness, managers have to guard against viewing every industry opportunity as a company opportunity.

Not every company in an industry is equipped with the resources to pursue each opportunity that exists. The market opportunities most relevant to a company are those that offer important avenues for profitable growth, those where a company has the most potential for competitive advantage, and those that match up well with the financial and company resource capabilities which the company already possesses or can acquire.

Management's job is to identify the threats to the company's future well-being and evaluate what strategic actions can be taken to neutralise or lessen their impact. Tailoring strategy to a company's situation entails (1) pursuing market opportunities well suited to the company's resource capabilities and (2) building a resource base that helps defend against external threats to the company's business.

The important part of a SWOT analysis involves evaluating a company's strengths, weaknesses, opportunities, and threats and drawing conclusions about (1) how best to deploy the company's resources in light of the company's internal and external situation and (2) how to build the company's future resource base.

2.2.2.3 Are the company's prices and costs competitive?

One of the most telling signs of whether a company's business position is strong is whether its prices and costs are competitive with industry rivals. Cost differences can range from tiny to competitively significant and can stem from any of several factors (Thompson et al., 2010:102-105):

- Differences in prices paid for raw materials, component parts, energy and other items purchased from suppliers.
- Differences in basic technology and the age of plants and equipment.
- Differences in production costs from rival to rival due to different plant efficiencies, different learning and experience curve effects, different wage rates, different productivity levels, and the like.

- Differences in marketing costs, sales and promotion expenditures, advertising expenses, warehouse distribution costs, and administrative costs.
- Differences in inbound transportation costs and outbound shipping costs.
- Differences in forward channel distribution costs (the costs and markups of distributors, wholesalers, and retailers associated with getting the product from the point of manufacture into the hands of end users).
- Differences in rival firms' exposure to the effects of inflation, changes in foreign exchange rates, and tax rates (a frequent occurrence in global industries).

For a company to be successful competitively, its costs must be in line with those of close rivals.

2.2.2.4 How strong is the company's competitive position relative to its rivals?

A broader assessment needs to be made of a company's competitive position and competitive strength. Particular issues that merit examination include (1) whether the company's market position can be expected to improve or deteriorate if the present strategy is continued, (2) how the company ranks relative to key rivals on each industry key success factor and each relevant measure of competitive strength and resource capability, (3) whether the company enjoys a competitive advantage over key rivals or is currently at a disadvantage, and (4) the forces, competitive pressures, and the anticipated moves of rivals.

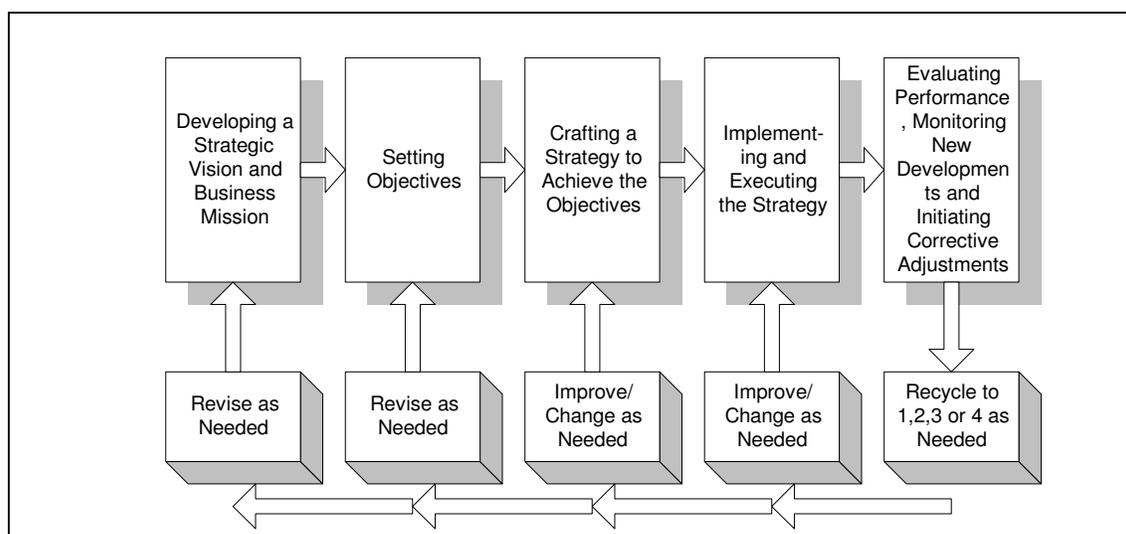
2.2.2.5 What strategic issues does the company face?

The final analytical task is to focus on the issues management needs to address in forming an effective strategic action plan. To pinpoint issues for the company's strategic action agenda, managers ought to consider the following:

- Does the present strategy offer attractive defenses against the five competitive forces – particularly those that are expected to intensify in strength?

- Should the present strategy be adjusted to better respond to the driving forces at work in the industry?
- Is the present strategy closely matched to the industry's future key success factors?
- Does the present strategy adequately capitalise on the company's resource strengths?
- Which of the company's opportunities merit top priority? Which should be given lowest priority? Which are best suited to the company's resource strengths and capabilities?
- What does the company need to do to correct its resource weaknesses and to protect against external threats?
- To what extent is the company vulnerable to the competitive efforts of one or more rivals and what can be done to reduce this vulnerability?
- Does the company possess competitive advantage or must it work to offset competitive disadvantage?
- Where are the strong spots and weak spots in the present strategy?
- Are additional actions needed to improve the company's cost position, capitalise on emerging opportunities, and strengthen the company's competitive position?

Figure 2.1: A normative model of strategic planning



(Source: Author's expanded version of a normative model of strategic planning.)

2.3 THE FIVE GENERIC COMPETITIVE STRENGTHS

When one takes away the details to look at the real substance the biggest and most important differences among competitive strategies come down to (1) whether a company's market target is broad or narrow and (2) whether it is pursuing a competitive advantage linked to low costs or product differentiation. Five distinct approaches stand out as discussed by Thompson et al. (2010:146-148):

- *A low-cost leadership strategy* – Appealing to a broad spectrum of customers based on being the overall low cost provider of a product or service.
- *A broad differentiation strategy* – Seeking to differentiate the company's product offering from rivals' in ways that will appeal to a broad spectrum of buyers.
- *A best-cost provider strategy* – Giving customers more value for the money by combining an emphasis on low cost with an emphasis on upscale differentiation; the target is to have the best (lowest) costs and prices relative to producers of products with comparable quality and features.
- *A focused or market niche strategy based on lower cost* – Concentrating on a narrow buyer segment and outcompeting rivals by serving niche members at a lower cost than rivals.
- *A focused or market niche strategy based on differentiation* – Concentrating on a narrow buyer segment and outcompeting rivals by offering niche members a customised product or service that meets their tastes and requirements better than rivals' offering.

2.3.1 Matching strategy to a company's situation

The most important drivers shaping a company's best strategic options fall into two broad categories:

- The nature of industry and competitive conditions; and
- The firm's own resources and competitive capabilities, market position, and best opportunities.

The dominant strategy shaping industry and competitive conditions revolve around what stage in the life cycle the industry is in (emerging, rapid growth, mature, declining), the industry's structure (fragmented versus concentrated), the relative strength of the five competitive forces, the impact of industry driving forces, and the scope of competitive rivalry (particularly whether the company's market is globally competitive). The important company specific considerations are:

- Whether the company is an industry leader, and up and coming challenger, a content runner up, or struggling to survive; and
- The company's set of resource strengths and weaknesses, competitive capabilities, and market opportunities and threats.

The author identified three classic types of industry environments and their strategy making challenges in which the entrepreneurial dust suppression company falls.

2.3.1.1 Strategies for Competing in Maturing Industries (mining environment in this instance)

When growth rates do slacken, the transition to market maturity usually produces fundamental changes in the industry's competitive environment:

- Slowing growth in buyer demand generates more head to head competition for market share;
- Buyers become more sophisticated, often driving a harder bargain on repeat purchases;
- Competition often produces a greater emphasis on cost and service;
- Firms have a "topping out" problem in adding production capacity;
- Product innovation and new end-use applications are harder to come by;
- International competition increases;
- Industry profitability falls temporarily or permanently; and
- Stiffening competition leads to mergers and acquisitions among former competitors, drives the weakest firms out of the industry, and, in general, produces industry consolidation.

There is however several strategic moves that firms can initiate to strengthen their positions, namely:

- Pruning the product line;
- More emphasis on process innovations;
- A stronger focus on cost reduction;
- Increasing sales to present customers;
- Purchasing rival firms at bargain prices;
- Expanding internationally; and
- Building new or more flexible capabilities.

Perhaps the greatest strategic mistake a company can make as an industry matures is to get caught by the strategic pitfall *of* steering a middle course between low cost, differentiation, and focusing. Such strategic compromises typically result in a firm ending up “stuck in the middle”. Other strategic pitfalls include being slow to adapt to changing customer expectations, concentrating more on short term profitability than on building or maintaining long-term competitive position, waiting too long to respond to price cutting, getting caught with too much capacity as growth slows, overspending on marketing efforts to boost sales growth, and failing to pursue cost reduction soon enough and aggressively enough.

2.3.2.2 Strategies for competing in international markets

There are two fundamental strategies to compete in international markets, namely:

- *Multi-country competition* exists when competition in one national market is independent of competition in another national market – there is not “international market”, just a collection of self-contained country markets; and
- *Global competition* exists when competitive conditions across national markets are linked strongly enough to form a true international market and when leading competitors compete head to head in many different countries.

In multi-country competition, rival firms fight for national market leadership. In globally competitive industries, rival firms fight for worldwide leadership.

A global competitor's market strength is directly proportional to its portfolio of country based competitive advantages.

Types of international strategies

1. License foreign firms to use the company's technology or produce and distribute the company's products
2. Maintain a national (one-country) production base and export goods to foreign markets
3. Follow a multi-country strategy, varying the company's strategic approach from country to country in accordance with the same basic competitive theme
4. Follow a global low cost strategy
5. Follow a global differentiation strategy
6. Follow a global focus strategy, serving the same identifiable niche in each country market
7. Follow a global best cost provider strategy

The need for a multi-country strategy derives from the sometimes vast differences in cultural, economic, political, and competitive conditions in different countries. The more diverse national market conditions are, the stronger the case for a multi-country strategy where the company tailors its strategic approach to fit each host country's market situation.

Usually, but not always, companies employing a multi-country strategy use the same basic competitive theme in each country, making whatever country specific variations are needed to best satisfy customers and to position itself against local rivals.

Global strategies are best suited for globally competitive industries. A global strategy involves:

1. Integrating and coordinating the company's strategic moves worldwide and
2. Selling in many if not all nations where there is significant buyer demand.

Strategic alliances can help companies in globally competitive industries strengthen their competitive positions while still preserving their independence. Strategic alliances are more effective in combating competitive disadvantage than in gaining competitive advantage.

Companies can realise the most from a strategic alliance by observing the five guidelines:

1. Pick a compatible partner; take the time to build strong bridges or communication and trust, and don't expect immediate payoffs
2. Choose an ally whose products and market strongholds complement rather than compete directly
3. Learn thoroughly and rapidly about a partner's technology and management; transfer valuable ideas and practices into one's own operations promptly
4. Don't share competitively sensitive information with a partner
5. View the alliance as temporary (5 to 10 years); continue longer if it's beneficial but don't hesitate to terminate the alliance and go it alone when the payoffs run out.

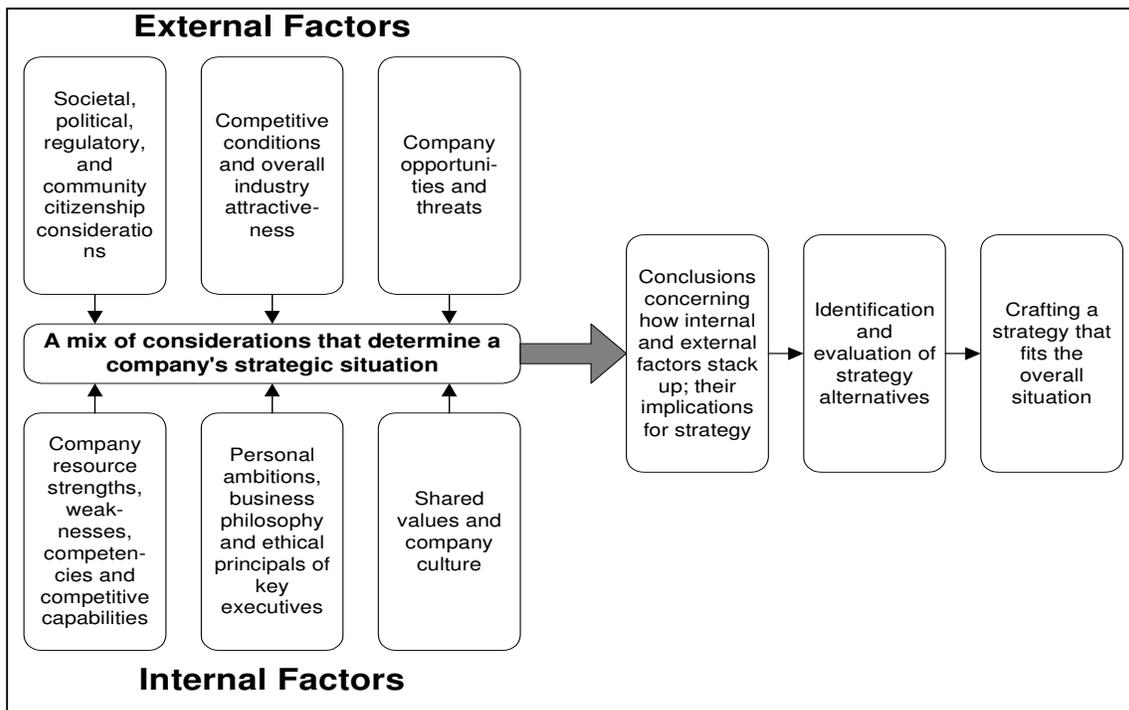
2.3.2.3 Strategies for industry leaders

The company is perceived as an industry leader and, therefore, three contrasting strategic positions are open to industry leaders and dominant companies:

1. *Stay on the offensive strategy* – The theme of a stay on the offensive strategy is relentless pursuit of continuous improvement and innovation.
2. *Fortify and defend strategy* – Make it harder for new firms to enter and for challengers to gain ground. This strategy suits firms that have already achieved industry dominance and don't wish to risk antitrust action. Specific defensive actions can include:
 - Attempting to raise the competitive ante by increasing spending for advertising, higher levels of customer service, and bigger R&D outlays;

- Introducing more product versions or brands;
 - Adding personalised services and other “extras” that boost customer loyalty;
 - Keeping prices reasonable and quality attractive;
 - Building new capacity ahead of market demand;
 - Investing enough to remain cost competitive and technologically progressive;
 - Patenting the feasible alternative technologies; and
 - Signing exclusive contracts with the best suppliers, distributors, and dealers.
3. *Follow the leader strategy* – The leader uses its competitive muscle to encourage runner up firms to be content followers rather than aggressive challengers. The leader plays competitive hardball when smaller rivals rock the boat with price cuts, using large promotional campaigns to counter challengers’ moves to gain market share, and offering better deals to the major customers.

Figure 2.2: Factors shaping a company’s strategy



(Source: Author’s expanded version of macro- and micro environment.)

2.4 BENEFITS OF STRATEGIC PLANNING

Since the founding of the company in 1989, it has experienced phenomenal growth in various aspects of its business. Changes in the fields of dust suppression science have been dramatic and fundamental to the very way of doing business. The company recognises that it can no longer merely react to issues as they emerge. If it is to continue as a leader in improving the profession, it must begin to anticipate future change rather than merely react to change. The company needs to consider this long-term future.

Drawing on the resources it has both human and financial, it needs to continue to grow. These resources are limited, and careful thought is given to the allocation of such resources. To meet obligations, it is essential that the company and its departments use these resources in the most efficient manner by determining priority areas on which to concentrate.

Strategic planning will help build continuity in the company's products, the people, quality measurement systems and the instrumentation for dust monitoring.

2.5. BASIC OVERVIEW OF VARIOUS STRATEGIC MANAGEMENT MODELS

As discussed by McNamara (2010a) there is not one perfect strategic planning or management model for every company. Each company ends up developing its own model of strategic planning, often by selecting a model and modifying it as they go along in developing their own planning process. The below mentioned models provide a range of alternatives from which companies might select an approach and begin to develop their own strategic planning process. It is also important to note that companies might choose to integrate the models.

The first five models listed below are discussed briefly as per McNamara's (2010a) research and findings.

2.5.1 Model One - “Basic” Strategic Planning

This basic process is typically followed by companies that are extremely small, busy, and have not done much strategic planning before. The process might be implemented in year one to establish a sense of how planning is conducted, and then executed in later years with more planning phases and activities to ensure well-rounded direction. Planning is usually carried out by top-level management.

According to McNamara (2010b) the basic strategic planning process includes:

1. Identifying the company purpose (mission statement) - This statement(s) describes why the company exists, i.e., its basic purpose. The statement could describe what client needs are intended to be met and with what services, the type of communities are sometimes mentioned. Top-level management should develop and agree on the mission statement.
2. Select the goals the company must reach if it is to accomplish the mission - Goals are general statements about what the company needs to accomplish to be able to meet the purpose, or mission, and address major issues which the company might face.
3. Identify specific approaches or strategies that must be implemented to reach each goal - Strategies are often what change the most as the company starts to conduct more intense strategic planning, particularly by more closely examining the external and internal environments of the company.
4. Identify specific action plans to implement each strategy - These are specific activities that each department must undertake to ensure its effectively implementing each strategy. Objectives should be clearly defined to the extent that people can assess if the objectives have been met or not.
5. Monitor and update the plan – Management should regularly reflect on the extent to which the goals are being met and whether action plans are being implemented. The most important indicator of the company’s success is positive feedback from the customers.

2.5.2 Model Two - Goal-Based Planning

Companies that begin with the “basic” planning approach described above, often evolve to using this more comprehensive and more effective type of planning.

1. External/internal assessment to identify “SWOT” (Strengths, Weaknesses, Opportunities and Threats).
2. Strategic analysis to identify and prioritise major goals.
3. Design major strategies (or programs) to address goals.
4. Design/update vision, mission and values.
5. Establish action plans (objectives, resources, roles and responsibilities for implementation).
6. Record issues, goals, strategies/programs, updated mission and vision, and action plans in a Strategic Plan document, and attach SWOT, etc.
7. Develop the annual Operating Plan document (from year one of the multi-year strategic plan)
8. Develop and authorise budgets for year one.
9. Conduct the company’s first year operations.
10. Monitor/review/evaluate/update the Strategic Plan document.

2.5.3 Model Three - Alignment Model

The overall purpose of the model is to ensure strong alignment among the company’s mission and its resources to effectively operate within the company. This model is useful for companies that need to fine-tune strategies.

Overall steps include:

1. The planning group outlines the company’s mission, programs, resources, and needed support.
2. Identify what’s working well and what needs adjustment.
3. Identify how these adjustments should be made.
4. Include the adjustments as strategies in the strategic plan.

2.5.4 Model Four - Scenario Planning

This approach might be used in conjunction with other models to ensure that managers truly undertake strategic thinking. The model may be useful, particularly in identifying strategic issues and goals.

1. Select several external forces and imagine related changes which might influence the company. Scanning the newspaper for key headlines often suggests potential changes that might affect the company.
2. For each change in a force, discuss three different future company scenarios (including best case, worst case, and reasonable case) which might arise within the company as a result of each change.
3. Suggest what the company might do, or potential strategies, in each of the three scenarios to respond to each change.
4. Management will soon detect common strategies that must be addressed to respond to possible external changes.
5. Select the most likely external changes to affect the company, over the next three to five years, and identify the most reasonable strategies the company can undertake to respond to the change.

2.5.5 Model Five - Self-Organizing Planning

Traditional strategic planning processes are sometimes considered “linear,” meaning that they are rather general-to-specific or cause-and-effect in nature. For example, the processes often begin by conducting a broad assessment of the external and internal environments of the company, conducting a strategic analysis (“SWOT” analysis), narrowing down to identifying and prioritizing issues, and then developing specific strategies to address the specific issues.

Self-organizing requires continual reference to common values, dialoguing around these values, and continued shared reflection around the systems current processes. General steps include:

1. Clarify and articulate the company’s cultural values.
2. Articulate the group’s vision for the company. In both points 1 and 2 use dialogue and story-boarding techniques.

3. On a continuing basis, for example once every quarter, discuss what processes are needed to arrive at the vision and what the group is going to do to achieve those processes.
4. Continually remind the group that this type of naturalistic planning is never really complete and that the group needs to learn to conduct its own values clarification, reflection, and process updates.
5. Have patience.
6. Focus on learning and less on method.
7. Ask the group to reflect on how the company will portray its strategic plans to stakeholders and directors who often expect the "linear" plan format.

2.5.6 Glueck's Model

William F. Glueck (2010) developed several models of strategic management based on the general decision-making process. The phases of this model are as follows:

1. Strategic management elements: "to determine mission, goals, and values of the firm and the key decision makers."
2. Analysis and diagnosis: "to search the environment and diagnose the impact of the threats and opportunities."
3. Choice: "to consider various alternatives and assure that the appropriate strategy is chosen."
4. Implementation: "... to match plans, policies, resources, structure, and administrative style with the strategy."
5. Evaluation: "... to ensure strategy and implementation will meet objectives."

As major contribution to the strategic management process, Glueck considered two elements: "enterprise objectives" (the mission and objectives of the enterprise," and "enterprise strategists" (who are involved in the process). This model also treats leadership, policy, and organisational factors. However, the importance of medium- and short-range planning activities of strategy implementation is omitted.

2.5.7 Schendel and Hofer's Model

Schendel and Hofer (1979) (as cited in Barnat, 2010) developed a strategic management model, incorporating both planning and control functions. Their model consists of several basic steps:

1. Goal formulation;
2. Environmental analysis;
3. Strategy formulation;
4. Strategy evaluation;
5. Strategy implementation; and
6. Strategic control.

2.5.8 Korey model

Jerzy Korey-Krzeczowski's (2010) model consists of three discrete major phases:

1. Preliminary analysis phase;
2. Strategic planning phase; and
3. Strategic management phase.

It is further stated that the strategic planning phase consists of at least three continuous sub-processes:

1. Planning studies;
2. Review and control; and
3. Feasibility studies.

The planning is an on-going process, thus all these sub-processes are integrated and they are interactive creating a fully dynamic model. This model also incorporates planning and control functions.

Moreover, it describes not only long-range strategic planning process, but also includes elements of medium and short range planning. This model is based on existing models; but it differs in content, emphasis, and process.

This model adds several facets to the planning process that the reader has not seen in other models. Some of these are: development of educational philosophy, analysis of the value systems, review of community orientation and social responsibilities, definition of planning parameters, planning studies, and feasibility studies.

Using this model for strategic planning provides both new direction and new energy to the company.

2.5.9 Schematic Model

This model was developed by Peter Wright, Charles Pringle and Mark Kroll (1994). It consists of six stages:

1. Analyse the environmental opportunities and threats.
2. Analyse the company's internal strengths and weaknesses.
3. Establish the company direction: mission and goals.
4. Strategy formulation.
5. Strategy Implementation.
6. Strategic Control.

The model begins with an analysis of environmental opportunities and threats. The company is affected by environmental forces; but the company can also have an impact upon its environment.

The next area depicts the idea that strategy formulation sets strategy implementation in motion. Specifically, strategy is implemented through the company's structure, its leadership, and its culture.

Then, the final stage indicates that the actual strategic performance of the company is evaluated.

The control stage is demonstrated by feedback that connects strategic control to the other parts of the model.

2.6. CONCLUSION

Companies exist in an uncertain and constantly changing environment, where yesterday's strategy is often obsolete today. Also, faced with limited resources and time, managers and teams often neglect strategy and its importance, focusing instead on other business areas that appear more relevant.

An effective strategy is critical because it represents goals and vision that the company believes will create value in the organisation and give it a sustainable competitive advantage in its market environment.

It also assists management in developing the correct strategy, verifying that the strategy is being implemented as planned, and – more importantly – ensuring that the results are those intended.

Historically, strategic practices have been linked solely to strategy formulation. However, in today's dynamic and competitive industries it is clear that an effective strategy must also be linked to implementation.

The strategy formulation process is arguably the most important task of managers because it determines how the company will operate in the competitive and changing market environment. The formulation process summarised by the abovementioned literature thus comprises three steps: strategy development, strategy articulation, and strategy evaluation.

- *Strategy development and articulation:* From the above models it is clear that strategy development as part of a normative model includes the following:
 - Evaluating the vision, mission and values of the company;
 - Evaluating the internal and external environment with regards to the SWOT and Pest analysis.
 - Evaluating and determining factors including market demand, market size and structure, and industry margins. In some instances, these factors are readily observable but more often the manager must develop assumptions about these factors from various other indicators such as industry reports,

market research, and analysis of the competition. The external factors must then be weighed against the organisation's internal ability to bring together the appropriate team and capability to manage the necessary operational resources.

- Evaluating and determining the key success factors for the industry.
 - Determining the company's competitive advantage and core competency.
 - Evaluating Porter's five forces model;
- *Evaluating the company's strategic and financial objectives:* Performance against formulated strategic goals is measured in the process of evaluation. This leads to a number of challenges, namely:
 - The chosen company has been growing at a phenomenal rate. Various strategic decisions with regards to products, services and company structure have placed it in a desirable position in the dust suppression industry.
 - Rapid growth can also be dangerous. Rapid company growth can become a challenge on its own if the internal company structure and resources do not keep up with the increased demand for product and services.
 - The challenge is to find a balance in terms of building the company into a strong international company and the increased local demand for the product and services. While the current local strategy of being a complete dust control company is delivering great returns, it risks losing focus on the product and its competitive advantages if it actively pursues growing international market share too soon.

The next chapter thus addresses the research methodology and results obtained to analyse the strategic planning and management process.

CHAPTER 3

RESEARCH METHODOLOGY AND RESULTS

3.1 INTRODUCTION

The aim of the research design as mentioned in Chapter 1 involves the strategic plan for a research project, setting out the broad outline and key features of the work undertaken, including the methods of data collection, and showing how the research strategy addresses the specific aims and objectives of the study.

3.2 RESEARCH METHODOLOGY

3.2.1 Introduction

The specific design that the author used was in the form of the strategic planning process self-assessment questionnaires and structured interview questionnaires with various management members, department heads and stakeholders within the company.

The interviews were done through the use of questions and the consequent recording of their answers. The self-assessment questionnaires were handed to the relevant management members and they completed it accordingly, handing it back to the author.

The analyses were then used to summarise the respondents' answers and also to draw conclusions on the answers given.

The main purpose of this survey was to generalise the information obtained from a sample to the broader population that will provide some information about the characteristics, attributes or behaviour of the specific population under study.

3.2.2 Data collection

The survey method used was twofold in terms of structured interviews with the ten department heads and stakeholders within the company as well as a strategic planning process self-assessment questionnaire that was completed by 45 junior- middle- and senior management members.

The interviews were conducted with department heads that have a direct interest and execution of the company strategy and are also responsible for the setting of goals, budgets, business growth and communication of the afore-mentioned to all subordinates.

The structured interviews took the author three weeks to complete by scheduling interviews with the various department heads and spending approximately 4 hours personally interviewing each department head.

The 45 junior- , middle- and senior level managers in the company were all included:

- Supervisors and/or site managers are located on specific sites and shifts; and
- Area, business and operations/departmental managers whose main responsibilities are the smooth functioning of their regions and/or departments, ensuring that tasks are completed timely and within budgets and people managed effectively.

These 45 participants are male and female, from different ethnic groups, and different ages, different educational qualifications and experience, and situated in different provinces.

The author has also addressed the objectives as set out in Chapter 1, through the interview questionnaires, regarding the company's internal and external resources to determine how feasible the strategy is.

3.2.3 Statistical analysis

The data collected from the participants was collected personally and recorded electronically by the Statistical Consultation Services at the North-West University. Data was analysed by means of the Statistical Package for Social Sciences (SPSS V18). A regular backup of data was made to ensure that data-loss does not occur.

3.3 RESULTS

3.3.1 Demographic profile

The gender profile appears in table 3.1 below.

Table 3.1: Gender profile of sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	44	97.8	97.8	97.8
Female	1	2.2	2.2	100.0
Total	45	100.0	100.0	

As per table 3.1 the sample consisted of 97.8% males and 2.2% females. The findings of the study may, therefore, only be applicable to the members of the particular gender group, namely males.

Table 3.2: Age profile of sample

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-30	12	26.7	26.7	26.7
31-40	22	48.9	48.9	75.6
41-50	6	13.3	13.3	88.9
50+	5	11.1	11.1	100.0
Total	45	100.0	100.0	

As per table 3.2 the sample consisted of 48.9% respondents between the ages of 31-40. It is expected that the majority of the workforce will be between these ages.

Table 3.3: Qualifications profile of sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Matric	25	55.6	64.1	64.1
	Diploma	8	17.8	20.5	84.6
	Degree	4	8.9	10.3	94.9
	Honours/Masters	2	4.4	5.1	100.0
	Total	39	86.7	100.0	
Missing	System	6	13.3		
	Total	45	100.0		

As per table 3.3 the sample consisted of 55.6% respondents with a matric qualification, 17.8% with diplomas, 8.9% with degrees and only 4.4% with a post graduate qualification.

Table 3.4: Ethnic group profile of sample

Ethnic Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Indian	3	6.7	6.7	6.7
	White	42	93.3	93.3	100.0
	Total	45	100.0	100.0	

As per table 3.4 the sample consisted of 93.3% respondents being white, with the remainder 6.7% of the sample being Indian. The findings of the study may, therefore, only be applicable to the members of the particular ethnic group, namely white males.

Table 3.5: Region profile of sample**Regions employed**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Gauteng	10	22.2	22.7	22.7
	Mpumalanga	21	46.7	47.7	70.5
	Limpopo	9	20.0	20.5	90.9
	Northern Cape	4	8.9	9.1	100.0
	Total	44	97.8	100.0	
Missing	System	1	2.2		
	Total	45	100.0		

As per table 3.5 the sample consisted of 4 regions with 46.7% employed in Mpumalanga, 22.2% employed in Gauteng, 20% employed in Limpopo and 8.9% employed in the Northern Cape.

Table 3.6: Position profile of sample**Position employed**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	10	22.2	27.0	27.0
	Site Manager	19	42.2	51.4	78.4
	Area/Business Manager	8	17.8	21.6	100.0
	Total	37	82.2	100.0	
Missing	System	8	17.8		
	Total	45	100.0		

As per table 3.6 the sample consisted of lower-, middle- and senior management of which 42.2% consisted of Site Managers appointed in middle management positions,

22.2% consisted of Supervisors in lower management positions and 17.8% consisted of Area- and Business Managers who are regarded as senior managers.

3.3.2 Summary of demographic profile

As indicated in tables 3.1 to 3.6 the sample consisted mainly of white, male participants between the ages of 31 and 40 and who are site managers. In addition the sample mainly represented the Mpumalanga region and participants who have a Matric qualification. The findings of this study may, therefore, only be applicable to members from these demographic groups.

3.4 FEEDBACK FROM INTERVIEWS

As per the personal interviews as well as questionnaire conducted with the departmental heads and management regarding the internal company analysis the following was established:

3.4.1 Components of a strategic planning process

The first step in the strategic planning process was to address the questions “Where are we?” and “What do we have to work with?” Examination of recent history and changing contexts (both internal and external) of the company allowed participants to assess current positions.

The next step in the process was answering “Where do we want to be?” As the vision stems from the values of those involved in the process, it was essential that this step involved all of those who will have a stake in the achieving of the vision. The vision is then translated into a mission statement: a broad, comprehensive statement of the purpose of the company.

3.4.2 Vision statement

The current vision statement of the company is:

“To be a global leader in dust control management by adding value to our customers, through innovative solutions and utilizing the operational skills of our safety conscious and highly motivated people.”

Although already incorporating most of the main strategic aims, the following vision is proposed for consideration of the company’s management.

The proposed new vision statement for the company is:

“To be the global total dust control solution to the mining industry by providing a safer and healthier working environment through providing an all-encompassing dust control product and service via cutting edge innovation and highly motivated and skilled people”

From the vision statements, the following changes are proposed :

- *“the”* instead of *“a”* global leader;
- *“total dust control”* instead of *“dust control”*;
- Added *“mining environment”* as our discussion indicated that the mining industry would be the single target customer going forward;
- Added *“through providing an all-encompassing dust control product and service”* to indicate how value will be added to the client; and
- Added *“safety and healthier working environment”* as these are part of the core values of the company.

3.4.3 Mission statement

A company’s mission is defined as: “the fundamental/unique purpose that differentiates the company from other similar enterprises and that describes the scope of its operations in product and market terms. The mission embodies the business philosophy of the strategic decision makers, indicates the image the company seeks to project and describes the company’s self-concept.” (Kotze, 2011:25).

The current mission statement is:

“We will continuously improve stakeholder value by providing world class dust suppression solutions and services, maximizing the potential of our people and technologies in a safe and healthy environment.”

The mission is supposed to differentiate the company from rivals in the industry. Proposal includes considering including “multi-national total dust suppression” into the mission statement to differentiate the company from rivals.

The new proposed mission statement is:

“We will continuously improve stakeholder value by providing world class multinational total dust suppression solutions and services, maximizing the potential of our people and technologies in a safe and healthy environment.”

3.4.4 Organisational values

Table 3.7: Company values

SAFETY	<ul style="list-style-type: none"> • Every action we take must conform with the highest standards of safety • Safety is our priority responsibility
WE MUST EXCEED OUR CUSTOMERS' EXPECTATIONS	<ul style="list-style-type: none"> • The quality of our work must be world class • We must treat our internal and external customers like royalty
CARING	<ul style="list-style-type: none"> • We are people of integrity • We show respect and fairness to everyone we deal with • We care for the communities we work in • We care for our environment
PROSPERITY	<ul style="list-style-type: none"> • Everyone’s future at the company depends on economic growth and profitability • We all play an important part in creating a secure future
A PASSION FOR EXCELLENCE	<ul style="list-style-type: none"> • Excellent thinking and attitude leads to excellent behaviour and work standards • It all starts with each one of us – we can make a difference.

Regarding organisation values, the recommendation is that a limited number of three values are proposed to focus the company's integrity and culture. The proposed values are safety, caring and a passion for excellence. The reasons are noted below:

- The company's core competency is controlling dust in order to improve safety conditions and enhance performance in the mining environment, thus safety is a critical value.
- By having caring as a value, the company confirms respect for employees, the environment, community and the customer.
- A passion for excellence expresses the commitment of the company to deliver superior value to the customer. The pride that is taken in the company's work and products is reflected in this value.

3.4.5 Current strategic stance

The company is employing a focused-differentiation strategy, concentrating on the narrow buyer segment of the mining industry and outcompeting rivals by offering niche members customised attributes (in terms of the total service packet for each customer) that meet their needs and requirements better than rival products.

The company creates value to all stakeholders through:

- Technologically advanced products and surveillance systems.
- Continuous research and development.
- Environmentally safe products.
- Increasing safety and productivity through better visibility and quicker hauling times.
- Health benefits for personnel and surrounding communities.
- Natural resource conservation – up to 90% savings in water use.
- Reduction in maintenance cost of heavy loading equipment– through extended tyre life.
- Quick and easy road repair without closing roads for construction.

Supporting the strategy and vision of the stakeholders and company are the following comments from the General Manager as noted from the interview:

- The current value chain involves delivering financial benefits to our customers based on the product, service and management we provide. This in turn ensures the growth, profitability of our company and its employees.
- Regular customer feedback meetings and additional quality measurement ensure that the customer's value added benefits are being quantified. This in turn focuses the company on the ever increasing demand to perform better.
- The lack of skills, basic artisan as well as management skills has and will continue to challenge the value chain of the business. The continuous employment and training of personnel ensures that the company can deliver the required quality standard on the customer site.
- Increasing the throughput capacity of the manufacturing facility has reduced the potential bottleneck of product supply.
- Allowing and encouraging our employees to further their education assists with increasing the skills required to manage the more complex requirements for the business.
- Specialised safety, auditing, certification courses are also important.
- A total product range was developed and proven, through documented case histories, during 2010. The company also invested in measurement tools such as a telemetric road scoring and planning software package together with continuous dust monitoring equipment that will allow the business to diversify and increase our offering to our customers. The mining trend is to use fewer suppliers to provide the required service. The company has developed the capability to provide more value added services through the expansion of our products and service offering.
- The above strategy will get more momentum and emphasis as all the technologies are implemented. More technical personnel are being transferred into the operations to increase the acumen of the product marketers and the ability for the operation unit to promote total dust control management.

3.4.6 The company's strategic objectives for the period 2012-2014

The company's strategic objectives for the period 2012-2014 include:

1. Grow the business by targeting new customers.
2. Achieve lower overall cost.
3. Developing long-term supplier contracts and relationships.
4. Actively increase marketing activities.
5. Increase communication to all employees.
6. Clarity and support for mission and vision.
7. Strategically located second manufacturing facility.
8. Maintain the highest quality in product and service delivery.
9. Value employees and provide continuous personnel development and training.
10. Safety is a high priority.
11. Prioritise ethical conduct.
12. Continue environmental protection practices.
13. Societal impact.
14. Focus on individual mine management buy-in.

3.4.7 The company's operational objectives for the period 2012-2014

The company's operational objectives for the period 2012-2014 include:

Efficiency: Efficiency is defined as increased output for a static given input. To assist in obtaining the maximum output for the input used the quality control process of the final product entails testing of the product every fifteen minutes (four times) during the one hour manufacturing process. The binding content of the final product should be maintained between 59% - 60.5% by adjusting the mixing ratio of the bitumen and emulsifier.

Productivity: Increased production using given resources - only one hour (the first hour of the shift) is allowed to plan the production and check the equipment in the

factory. The factory has subsequently been staffed with two shifts to ensure continuation of production.

Economy: The production of emulsion should be done more economically; at reduced cost. As mentioned under point number 1 the binding content of the emulsion is checked continuously throughout the manufacturing process. Not only does this act ensure uniform quality of the final product but also translates into ensuring that not too much of the main ingredient bitumen is used. This aids economical production through the prevention of wasteful usage of ingredients.

Increased Bitumen storage capacity: Current bitumen storage capacity is the limiting factor in the output of the manufacturing facility. The capacity is limited by the potential environmental risk of spillage pollution and thus governed by legislation.

Distribution channels utilised: The distribution channels delivering the products to the customers' site are important. A strong product does little good if customers are not able to easily and conveniently obtain it. Therefore, decisions regarding the following must be made to facilitate an effective and efficient distribution system:

- Arranging a reliable ordering system that allows customers to place orders.
- Creating a delivery system for transporting the product to the customer.
- Establishing facilities for product storage.

A distribution transport company is contracted to transport the products to the customers' site as well as transporting the bitumen from the supplier to the company's factory in specialised trucks. The benefits of outsourcing the transport of bitumen and the products are:

- *Cost saving:* The contractor's core business is transportation. They are specialists in transportation and that qualifies the company to be able to handle the transport of the required bitumen and products at a lower cost and probably performs the overall transport better. By outsourcing the transport the company can concentrate on their core business according to their strategy.

- *Reduced Exchange Time:* Not only is the contractor able to reduce the company's distribution costs by being experienced at what they do, they are also able to perform their job more rapidly resulting in faster product delivery. With a direct transport system the emulsion reaches the intended customer's site by distributing the product directly to the customer.

Quality assurance: By ensuring a consistent high quality of product the company builds the brand name and brand loyalty. As bitumen is the main ingredient of the emulsion the quality of the bitumen is the first step in ensuring the high quality of the final product. Temperature control is a major factor in the quality control of bitumen mixes. Daily emulsion samples are taken from the storage tanks and the binder content; the Sieve test and the viscosity are done/tested and recorded. Strategic alliances have been established with commercial emulsion producers and can manufacture the company's emulsion under confidential toll manufacturing.

3.4.8 Financial objectives

"Financial objectives relate to the financial performance targets management has established for the company to achieve" (Thompson et al.; 2010:34).

The company's financial objectives for the period 2012-2014 are:

- *Budget for new projects:* Since growing the business is top priority, capital should be devoted to new projects.
- *Marketing budget:* The 2011 projected budget for advertising and promotions represents 0.45% of annual turnover. It is strongly recommended to increase the marketing budget to gain new contracts.
- *Turnover growth:* An actual compounded growth rate over the years 2005 to 2010 was 29.89%. Taking into consideration that the global recession of 2008 still put constraints on margins, a 20% turnover growth can realistically be achieved over the next three year period. This is particularly realizable due to the rapid organic mining growth both inside and outside of South African borders.

These strategic- and financial objectives will be analysed and further recommendations made in chapter 4.

3.4.9 Competing effectively

The Porter *five-force model* of competition is an effective tool to identify principal competitive pressures in the market and assessing the strengths and importance of each, creating a competitive landscape (Pearce & Robinson, 2000:86-89).

3.4.9.1 Rivalry among competing sellers

The company uses bitumen as the base for their haul road application. Haul road applications provide for 95% of the revenues. Rival companies offer mainly water based dust control products (non-bitumen products), which compete with the remainder 5% of the company's adjuvant products controlling dust from stockpiles, or transfer points, or wetting the surface on non-sealed haul roads. ***Rivalry competition in haul road applications is low. (-)***

Figure 3.1: Illustration: Porter's Five Forces Model



(Source: Marketing gemzies, 2011)

3.4.9.2 Buyer power

The power of buyers is the impact that mining companies have on the dust controlling industry. The company is the only company in Africa that offers a haul road solution to the mines with a full maintenance program. Therefore, ***buyer power is weak. (-)***

3.4.9.3 Firms in other industries offering substitute products

No other bitumen emulsion palliatives exist for haul road application. No substitute product which is environmentally friendly and that can be seen as semi-permanent is available. Competitors use anionic bitumen emulsion which does not seal as well as the company's emulsion. 95% of the company's revenue comes from haul road bitumen sealants. The remaining 5% of products are competing in a highly competitive fugitive dust control, where rivals have substitute products. ***Threat of substitution is low. (-)***

3.4.9.4 Supplier power of raw materials, parts, components, or other resource inputs

SAPREF, the main suppliers to British Petroleum (BP) which has a global agreement with the company, may vary the quality and quantity of bitumen available. Sasol/Total or NATREF refinery as well as ENGEN may be used as alternative suppliers in case of refinery shut downs. The bitumen price correlates with the Brent crude oil price, which has been escalating the past year and is expected to rise to close to \$200 per barrel within the next three years.

The company's transport contractor plays a key role in product delivery, timing schedules and cost structure. Fixed contracting is essential to the company's operational structure.

Chemical suppliers such as AECI, Protea, Chemserve, Sasol and IOP provide raw materials utilised in the production of the bitumen emulsion and have supplier power due to essential ingredients and price structure. Three alternative formulations are in

place in case of supply upsets. ***Supplier power is very strong and has a significant impact on the company's margins (+)***

3.4.9.5 Potential new entrants

Specialist knowledge is required to compete effectively. The company has trademark protection on its products, with brand recognition. Capital required for start-up as well as operating cost is high. ***Threat of new entry is low. (-)***

3.4.9.6 Five-forces conclusion

The company has a sustainable competitive advantage in haul road sealing in the niche mining sector. Only supplier power poses a main threat.

3.4.10 Strategic performance gaps

The strategic performance gaps were identified as:

- The company has the vision of being the number one global dust-control preferred supplier. Marketing efforts and financial investment need to be implemented in order to support the realization of favourable brand positioning and brand recognition.
- Communication lines should be improved to ensure aligned commitment and clear understanding of the company's strategy.
- Establish S.M.A.R.T. (specific, measurable, attainable, realistic, time-based) objectives and performance goals with transparent reward and recognition for achievers.
- Underutilization of capacity should be eradicated.

3.5 EMPIRICAL EVALUATION OF STRATEGIC PLANNING

3.5.1 Evaluation of strategic planning (mean values)

A six-point Likert scale was used in the questionnaire, with 1 and 6 being the two extremes. The higher the ratings the greater improvement was needed for this specific category. The ratings are defined as follow:

- 1-2 = Little improvement needed.
- 3-4 = Some improvement needed
- 5-6 = Much improvement needed.

Maree (2007:187) defines a mean as “the arithmetic average of all the data values.” To determine the perceptions of the participants regarding the categories of the questionnaire the mean scores will be used. For interpretation of the mean scores the following guidelines can be used (Bisschoff & Lotriet, 2008:5)

- < 3.6 Much improvement needed
 Satisfactory, but some improvement
- >3.6; < 4.5 needed
- >=4.5 No improvement needed

The grand means (thus the mean calculated from the means of the individual items in each category) of the categories appear in the table below.

Table 3.8: Grand means of categories

Category	Mean
Institutionalising the planning function (1)	3.07
Establishing the strategic foundation (2)	3.02
Conducting the strategic situational diagnosis (3)	3.00
Developing strategic plans (4)	2.82
Managing strategic plan implementation (5)	2.82
Optimising board development and utilisation (6)	3.03

As per Table 3.8 all of the categories needed much improvement. In particular the *developing strategic plans* and *managing strategic plan implementation* categories

were identified as those in need of much improvement. The participants may therefore feel that the company does not use strategic diagnostic activities to formulate strategic plans including: consideration of business performance-, market penetration-, management-, and product enhancement options. This finding is consistent with the interviews conducted where the participants also noted that the company is not aware or knowledgeable on the afore-mentioned factors.

In addition the participants felt that the company does not, based on the strategic plan, communicate strategic decisions, assign responsibility, set performance standards and manage these standards.

However as it was stipulated in the problem statement the company currently does not have a formal strategic plan. Consequently this finding serves as an indication for the need to develop a formal plan and to communicate this plan to all management levels.

The low scores on all categories of the questionnaire are indicative of the following:

- The company needs to conduct a strategic situational diagnosis including: the external and internal environment in which the company operates, the company's market segment, competitors, pricing- and marketing strategy as well as operational and financial influences;
- Top management needs to identify, describe and communicate – orally and in writing – the company's short and long-term objectives, as well as the mission, vision and core values to all employees;
- Developing strategic action plans to accomplish the company objectives;
- Managing the implementation of the strategic plan including: assigning responsibilities to applicable management, developing performance standards and monitoring these standards; and
- Ensure optimisation of board members and the engagement of relevant management members in strategic thinking processes.

3.5.2 Reliability of the data

The reliability of the data was determined by using the Cronbach Alpha coefficient as suggested by Field (2007:668).

Table 3.9 Cronbach's Alpha Coefficients (N=45)

Category	Cronbach's Alpha	N of Items
Institutionalising the planning function	0.940	5
Establishing the strategic foundation	0.941	9
Conducting the strategic situational diagnosis	0.971	18
Developing strategic plans	0.945	7
Managing strategic plan implementation	0.941	7
Optimising board development and utilisation	0.901	4

Maree (2007:215) describes reliability "as the extent to which a measuring instrument is repeatable and consistent." The Cronbach's Alpha coefficients for the *Strategic Planning Process: Self-Assessment Questionnaire* ranged between 0.901 and 0.971. According to Field (2007:668), in support of Maree (2007:216), reliability coefficients of 0.90 are viewed as highly reliable. Consequently the items correlate strongly with each other, which results in high internal consistency, and therefore high reliability. If this instrument is used at a different time or administered to different subjects from the same population the finding will be the same.

3.6 CONCLUSION

The company has options to increase current services and products to already existing clients, expanding to new clients in Africa and around the globe and even considering mergers and acquisitions. Important decisions need to be taken by management in terms of the route the company will follow in future. The current strategy that is being put into action is providing the full product range as well as service to existing clients and new clients – total dust suppression system.

Sound financial ratios indicate an ability to do far more than just provide total dust suppression systems in South Africa. With the declining “life of mines” in South Africa the management team of the company will have to set up a long-term plan to expand successfully outside the borders of South Africa.

The company management team seems to have made the right decisions up to now and it shows in the results and the position they placed themselves in.

With regards to the results of the abovementioned interviews held, questionnaires’ feedback as well as the high reliability of the statistics it is of the utmost importance that the company formally develops and executes their strategic plan, and communicate this to all stakeholders, management and employees.

The next chapter is the final chapter of the study. The chapter draws conclusions, makes recommendations and also highlights areas for future research.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

This chapter concludes the study and serves as integration of the various results and presents the conclusions, possible comparisons as well as deviations from the normative model. Possible limitations as well as future proposals related to the study are also addressed in this chapter.

4.2 CONCLUSIONS

The following conclusions were drawn regarding the literature review and the empirical investigation:

4.2.1 Conclusions regarding the literature review

The general aim of this study was to provide formal structure within the company through the formulation of a winning strategic plan by investigating, analysing and evaluating whether a strategic plan does in fact exist as determined through a normative model and if this plan is formally documented and communicated within the company. Addressing and achieving the specific objectives of the research achieved the general aim.

Regarding the development of a strategy from the literature it is clear that strategy development as part of a normative model includes the following:

- Evaluating the vision, mission and values of the company;
- Evaluating the internal and external environment with regards to the SWOT and Pest analyses.

- Evaluating and determining factors including market demand, market size and structure, industry margins and analysis of the competition. The external factors must then be weighed against the organisation's internal ability to bring together the appropriate team and capability to manage the necessary operational resources.
- Evaluating and determining the key success factors for the industry.
- Determining the company's competitive advantage and core competency.
- Evaluating Porter's five forces model.

The following key strategic factors were identified within the company resulting in the company being highly competitive and thus positioning itself in a strategic desirable situation:

4.2.1.1 Research and development

Outstanding chemical understanding/knowledge and continuing research and development regarding dust suppression.

4.2.1.2 Management

- Good knowledge of environmental laws that impact on the mining industry.
- Good knowledge/experience of the basic activities comprising different mining processes.
- Good industrial relations are important. Bad relations could lead to inability to provide the consistent service required as part of the contracts.

4.2.1.3 Total dust control service

- Maintenance programs are important and are a differentiating factor for the company in that it increases the competitive advantage of the company.
- Non bitumen products are important as they support the strategic aim of "total dust control".

- Mines prefer to do business with less service providers and, therefore, this adds value to the client if the company is able to provide total dust control.

4.2.1.4 Consistent product quality

- An efficient product of consistent quality is a requirement and key success factor.
- Quality measurements or control is an important feature of the business.
- Substandard product will lead to deficiencies in performance and health risks to the client.

4.2.1.5 Adding value to customers by improving efficiencies

- Haulage roads can be used while being maintained or repaired (Time and cost saving).
- Savings on tyre expenditure (Cost and time saving; less time lost to changing of tyres).
- Better visibility on the roads and at other activities during the mining process leads to less injuries on duty and potential fatalities that would cost the mine to shut down production for investigations (fatalities). (Environmental and cost saving, improved relationship with the government).
- Environmentally friendly products are important to mines. (Leads to improved relationship with government).

4.2.1.6 Trade marketing

Important factors with regard to trade marketing are:

- Ethical behaviour.
- A BEE compliant company image.
- Good value for money – The price structure has been set up in such a way that the client experiences it as good value for their money. Clients pay per square metre haulage road and not for the products used per litre.

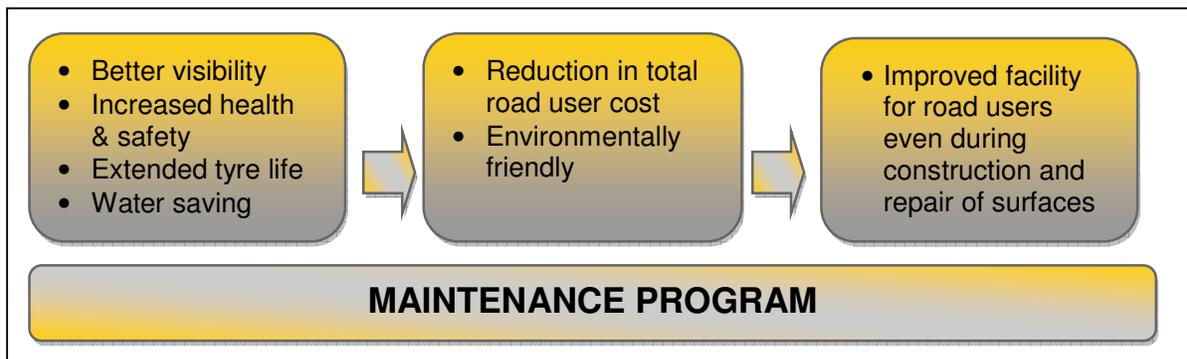
- Targeted marketing is applied and representatives are sent out to mining houses.

The company's core area of competence is thus identified as:

- Outstanding chemical understanding/knowledge.
- Total dust control system including the non – bitumen products, the “train to apply option” and the maintenance program.

The combination of the two core competencies leads to a competitive advantage in the dust control industry. The company is the only known company in South Africa offering a haul road sealing solution for the mine industry with the added benefit of a maintenance program. This is a distinctive competence of the company adding unique value to mining companies.

Figure 4.1: Company maintenance program



The heavy duty bonding agent that the company is using, ensures practically dust and mud free surfaces after application. Bitumen is the main ingredient of the company's emulsion used to treat haul roads and is referred to as a bitumen product, in contrast to the non-bitumen products applied to control dust on non-road surfaces, as well as water-based road applications. Bitumen emulsions are still under technological progress to ensure that it meets current and emerging engineering demands.

4.2.2 Conclusions regarding the empirical study

Findings for each of the secondary research objectives that merit discussion will be presented as conclusions. These were:

Objective 1: Analysing the current company vision statement, mission statement and company values as described and evaluated in Chapter 3. The recommendation is recorded and every employee seems to relate to and know what it is.

Objective 2: Conducting an environmental scan by doing a PEST analysis; (macro environment). The macro environment consists of all factors in the global economy affecting individual entities. These factors are discussed below:

- **General economic and political conditions**

Bitumen is an end-product of oil-refineries. It is however the main ingredient in the company's Haul Road Applications and, therefore, sensitive to the volatility of the global economy and oil price. Political unrest, such as observed in Libya, North Africa, early 2011, drove the escalation of crude oil prices, and hence also a foreseen decrease in profitability margins. The crude oil price on 14 June 2011 of US \$121 per barrel is expected to rise even further. Main suppliers, such as NATREF and SAPREF, may vary the quality and quantity of bitumen available to smaller companies.

As the company is mainly a South African based company, the Rand-Dollar exchange rate is another critical factor affecting the price of Bitumen.

Natural disasters, such as the floods in Queensland, Australia January 2011, may have a significant effect on economic growth in Australia which can reflect negatively on the company's expanding business.

- **Economic conditions driving the mining sector**

In the 2009 financial year, South African Mines employed almost one million people, (500 000 indirect), and contributed 8.8% directly to the GDP and 50% to merchandise exports (Chamber of Mines, 2009). The complexity of mining activities requires attention to many variables which can affect effectiveness and efficiency of operations. Meteorological conditions, such as wind and rain, should be taken into account, as well as geographical locations and the geology of the surrounding area, to minimise the environmental impact. Most mining activities involve heavy load machinery which damages haul roads. The mining industry has been under considerable pressure to meet Occupational Health and Safety standards, and environmental sustainability through reduced carbon emissions and water preservation.

- **Infrastructure**

Since the company is internationally active, the infrastructure of the various countries plays a major role in operational efficiencies. Major factors to consider in expanding the company internationally are:

- Cost effective sourcing of Bitumen and the production/supply of quality controlled anionic emulsion.
- Logistics in the transportation of product to remote mines within Africa, Australia and South America.
- Employment of necessary skilled personnel.
- Successful skills transfer from the South African company to international potential business opportunities.
- Language and cultural barriers.

- **Geographical area and climate**

Geographical differences and high annual rainfall in various operating countries, affect the way the company might have to apply and maintain roadways in the wet season.

- **Legislation and regulation**

The Mine Health and Safety Act of 1996 (MHSA), originated from the Occupational Health and Safety Act (Act 85 of 1993), and addresses the responsibility of employers to provide a safe and healthy work environment. Dust is classified according to the size of the particulate matter (PM). Respirable dust has a PM of 2.5 micrometer; Inhalable dust's PM is 10 micrometer. Airborne dust has a PM of 2.5 – 10 micrometer. Fugitive dust has a PM smaller or equal to 30 micrometer and Fall-Out dust has a PM larger than 30 micrometer. The act stipulates that the concentration of inhaled dust should not exceed 10mg/m³/day (total weighted working day of 8 hours), and respiratory dust inhalation should not exceed 5mg/m³/day. This regulation is applicable not only to South African mines, but also to New South Wales' mines in Australia (NSW Department of Health, 2010). Different countries have different legislative requirements that have to be adhered to.

- **Population demographics pertaining to the mining industry**

Previously only men worked underground, but legislation changed and women currently are also employed as part of the underground labour force. This poses particular health and safety risks to the expecting female labourer. South Africa faces additional constraints with a high prevalence of HIV/Aids, as well as pulmonary tuberculosis. Such individuals are extremely vulnerable to opportunistic respiratory diseases and occupational lung diseases caused by silica particles in dust.

- **Societal values and lifestyle:**

Labour regulations regarding employment equity and black economic empowerment policies are adhered to by the company. The company is currently certified at level 7 BBBEE. Trade union activities and strikes may drastically influence operating efficiencies.

Infrastructure: the current deteriorating conditions of South African roads, as well as poor infrastructure in other African countries limits the safe transport of raw products and mobile units. Toll road fees are another factor escalating

product transport cost, especially when looking forward over the next three year period.

- **Technology:**

Eskom is the main supplier of electricity to operations of the company's manufacturing site. This poses vulnerability, especially due to the inability of Eskom to provide sufficient supplies for the country.

- **Critical issues of the future operating environment of the company:**

The company currently has only one static factory in South Africa where the emulsion is manufactured. Two mobile manufacturing units are kept on the factory premises and run once a month to ensure that all parts is kept in a working condition. Although much more electronically advanced, the mobile units each has an output of 15 000L per hour, equal to the static plant. The mobile units are currently kept for client sites that may be logistically very far from the factory. Profitability may then be maximised when the emulsion is manufactured on the particular site. Strategic satellite storage tanks on major delivery routes will assist with increased holding capacity. These mobile units should be utilised more actively, especially to increase capacity and to serve as a back-up during shut-downs and maintenance programs.

Objective 3: Conducting a SWOT analysis and competitive capabilities (micro environment).

“For a company's strategy to be well-conceived, it must be matched to its resource strengths and weaknesses aimed at capturing its best market opportunities and erecting defences against external threats to its well-being” (Thompson et al., 2010:111).

Core and distinctive competencies of the company: “A competence is the product of organisational learning and experience and represents real proficiency in performing an internal activity” (Thompson et al., 2010:107). The company has developed core competencies in total dust control through experienced curve effects and knowledge,

coupled with on-going research and development. The company thus has the distinctive competencies in providing an environmentally friendly, semi-permanent haul road solution together with a unique maintenance service.

Table 4.1: Company SWOT analysis

<u>STRENGTHS</u>	<u>WEAKNESSES</u>
<ul style="list-style-type: none"> • Years of experience in the dust management industry; experience curve effects • Good customer base and relations. • Road building expertise via our final cut grader operators • ISO9001 & 14001 Accredited. • High Quality products • Financial Resources • Total dust control program including maintenance • Trademark protection • Continuous research and development • Qualified, motivated personnel • Partnerships, alliances and joint ventures globally 	<ul style="list-style-type: none"> • Reward and recognition programs to be updated and transparent • Marketing • Underutilised plant capacity (mobile units)

<u>OPPORTUNITIES</u>	<u>THREATS</u>
<ul style="list-style-type: none"> • New technology in mist systems and environmental products – to expand company market share • Expansion of customer base • Technology innovation • Global market infiltration • A second production plant in a geographically favourable location, to increase efficiency and competitiveness. 	<ul style="list-style-type: none"> • Rival attraction and acquisition of professional and skilled personnel. • Competitive Activities by rivals – especially in international markets with knowledge of local know-how • Substitute Products • The Power of Suppliers to dictate prices • Customer Desertion. • Strikes, labour disputes and Union activities • Eskom power supply and escalating costs • Restrictive trade policies on the part of foreign governments • Nationalisation of mines in SA

Summary of afore-mentioned internal company environment:

- **Personnel**

The company has experienced and skilled personnel, capable of performing exceptionally well. Communication gaps do exist though and reward and recognition programs need attention. Motivation by visually exhibiting the company's performance strategies and performance statistics will aid in aligning commitment.

This can be done in addition to the already visually exhibited company vision and mission. Investment in personnel through continued training and skill development is essential in empowering people. Skilled and motivated people are highlighted in the company vision and mission and, therefore, the importance of placing the right people in the right jobs at the right times with the correct skills is crucial. The current skill level needs to be determined and developed to adhere to company requirements. Furthermore succession planning should be done in areas of scarce and crucial skills to allow the company to maintain a competitive advantage.

- **Finances**

The company is in a good financial position and able to grow at a constant rate due to general operational efficiencies and relative good cost control. Growth opportunities should be prioritised in budgets.

- **Machinery**

Consider auditing suppliers of equipment with regards to machine availability per site and per machine type.

- **Market**

The mining industry is growing rapidly worldwide although the potential nationalisation of mines in South Africa poses a threat. Simultaneously environmental protection and awareness are enforced in legislation. The

company has positioned itself excellently in both these areas essential to future sustainability.

- **Dust monitoring system:**

The dust monitoring system is a scientifically designed and validated system that can be used to measure the performance of the company's products/applications in as near to real time as possible. There are two components to this system, and these may be offered as standalone systems or as a complete package.

- 1. Haul Road Condition Monitoring & Reporting**

A Haul Road Condition Monitoring & Reporting System was developed in conjunction with technology partners that have extensive experience in performance measurement, validation and reporting techniques. It provides critical information regarding the condition of the haul road network in near to real time.

By means of validated algorithms, this data is translated directly into the impact that these haul road conditions have on the overall cost of the mining operation. By using this scientifically measured and validated information, the company will be able to offer further value and savings to its clients as a direct result of continuous incremental improvements in the overall condition of the haul road network.

It is customised for each mine site and provides a near to real time web based dashboard that allows users access to haul road conditions and historical reporting data at the push of a button, thus improving the overall management and control of the haul road maintenance programs.

2. Dust Monitoring & Reporting System

DMR is a Dust Concentration Measurement system that makes use of the most modern technology available to measure dust concentrations along with wind speed and direction in real time.

A range of equipment with sophisticated data collection and analysis software can be supplied as part of a dust concentration monitoring network service that the company will install and maintain on the client's premises. These dust monitoring networks can range from basic systems monitoring dust concentrations in either PM2.5, PM10 or TSP to sophisticated systems measuring PM2.5, PM10 and TSP to US EPA certification (EQPM-0798-122) standards for automatic monitoring, recording and reporting. All equipment used in these Dust Monitoring Networks is well proven, robust and features low cost operation, ease of use and minimal maintenance. The networks can consist of mobile units, fixed stations or a combination of both. Mobile units are self-contained and do not require any utility supply from the client, whilst the fixed stations generally would require a power supply. All monitoring station can have various communications options installed, including radio networks, 3G (GSM), satellite or fixed line.

By making use of these dust monitoring networks, the client will be in a position to know in real time what the dust concentration levels are in and around their operation, what the potential is for exceeding legal limitations and further be able to provide accurate real time reporting both internally and to external authorities when required.

Objective 4: Analysing the current strategy by assessing the competitive advantage and ways of adding value;

The company has a sustainable competitive advantage in haul road sealing in the niche mining sector. Only supplier power poses a main threat.

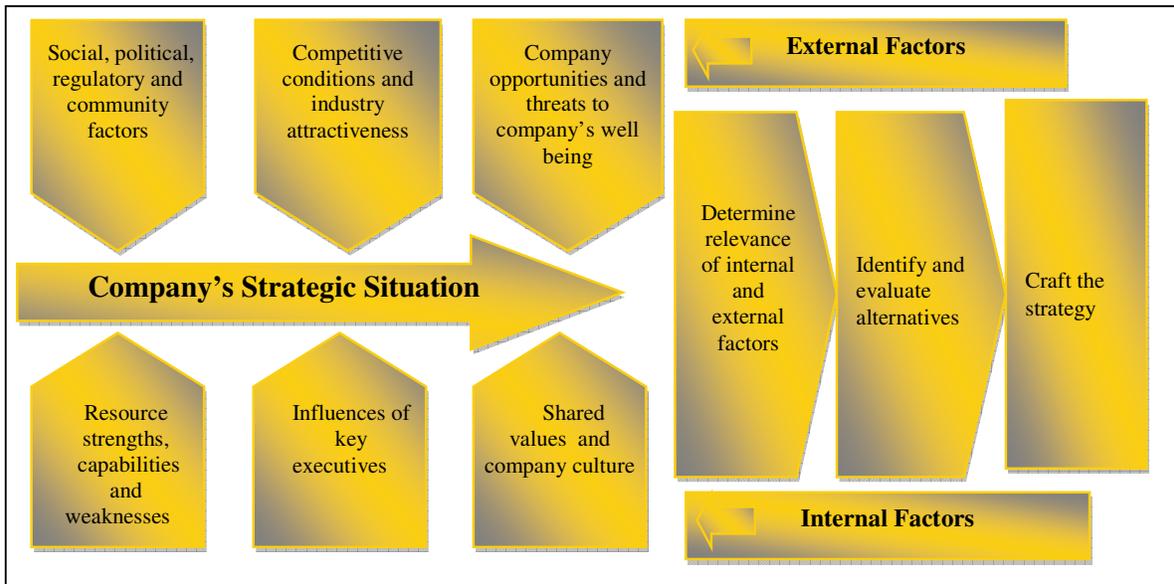
The company creates value to all stakeholders through:

- Technologically advanced products and surveillance systems.
- Continuous research and development.
- Environmentally safe products.
- Increasing safety and productivity through better visibility and quicker hauling times.
- Health benefits for personnel and surrounding communities.
- Natural resource conservation – up to 90% savings in water use.
- Reduction in maintenance cost of heavy loading equipment through extended tyre life.
- Quick and easy road repair without closing roads for construction

Objective 5: Analysing the company strategic objectives;

“Strategic objectives relate to the target outcomes that indicate a company is strengthening its market standing, competitive vitality, and future business prospects” (Thompson et al., 2010:34).

Figure 4.2: Factors shaping the choice of a company’s strategy



The company's strategic objectives for the period 2012-2014 include:

1. Grow the business by targeting new customers

New customers are targeted on the continent or abroad.

- *South Africa and the African continent:*

Huge organic growth potential still exists in South Africa and the African continent. Expansions into Botswana, Mozambique, Zimbabwe, Tanzania and Angola promise tremendous opportunities due to the increasing mining activities in these areas. Identifying similar opportunities should receive the highest priority.

- *Intercontinental expansion:*

Australia and South America is similar in size to the total African operations with huge potential mainly due to labour shortage and environmental pressure.

2. Achieve lower overall cost by

Continuous research and development of the efficacy of bitumen emulsion, on the stabilization and binding of various aggregates, as well as the inclusion of other product technologies in the total dust control management offering.

Expanding the company's total dust management strategy with quality control instrumentation and measurement by means of a web based road defect scoring matrix together with online dust measurement.

Lease equipment on mining sites instead of buying equipment to allow quick mobilization and flexibility in case of break-downs and expansion of the sites being worked on. Replacement equipment should be available quickly.

3. Developing long-term supplier contracts and relationships

This will assist in ensuring continuous supply and cost efficiency. Main supplier contracts have been formed with key contractors. Having fixed contracts can achieve lower distribution cost. Ensure a back-up distributor when contractors should

experience problems such as strikes or a shortage of available trucks is recommended.

4. Actively increase marketing activities

Marketing represents the key to building the company's brand and positioning the company as the global leader in total dust-free solutions in the mining industry. Utilise alternative advertising such as mining journals, mining-, dust control- and environmental related internet websites and social network sites like *FACEBOOK*.

5. Increase communication to all employees

Questionnaires revealed a communication gap from top-to-middle management in critical business activities. Visual strategy enforcement though the whole company is recommended to align commitment.

6. Clarity and support for mission and vision

Assist employees in understanding the strategy and how each person's contribution aids in realizing the strategy. Ensure regular evaluation of performances and reward accordingly. Be transparent in performance objectives and chart weekly, monthly, quarterly and yearly progress.

7. Strategically located second manufacturing facility

This will lower distribution costs and speed up product delivery to the client. Location of such a secondary plant should be optimised by charting the geographic scope of current and probable mining customers. Consider strategic satellite storage facilities along the main product delivery routes.

8. Maintain the highest quality in product and service delivery

This will ensure customer satisfaction and long-term contracts with current and future clients.

8. Value employees and provide continuous personnel development and training

People are a business's biggest asset. Expand employees' knowledge base.

10. Safety is a high priority

All employees should continuously be actively trained to obey safety regulations and practices of not only the company but also of the general mining industry.

11. Prioritise ethical conduct

Ethical conduct can be prioritised by endorsing a Code of Ethics. Management should be major role-players. Such a code should be openly supported by top management. All the levels of management should live the Code of Ethics.

12. Continue environmental protection practices

13. Societal impact

Add value to communities by continuing to use local employees on the local mining customers' sites and undertake community uplifting projects such as funding or managing a vegetable planting project or providing a local, less privileged school with some lacking necessities, or feeding scheme. (The mining companies also prefer to be associated with companies involved in community improvement).

14. Focus on individual mine management buy-in

Strong resistance to change amongst new mine management has been encountered. It is strategically important to convince key leaders on mining sites of the fast payback and high return on their investment with the company.

Objective 6: Analysing the company financial objectives

“Financial objectives relate to the financial performance targets management has established for the company to achieve” (Thompson et al., 2010:34).

Table 4.2: Company's financial ratio's (March – February)

	2011	2010	2009
<u>PROFITABILITY RATIO'S</u>			
Gross profit margin	25.00%	24.00%	23.00%
There is a progressive increase from 23% to 25%. The increase in sales was proportionally more than the cost of sales. Therefore, the increase in Gross profit margin.			
Net profit margin	9.00%	7.00%	9.00%
This is constant. The decline in 2010 seems to have been due to an increase in expenses.			
<u>LIQUIDITY RATIO'S</u>			
Current ratio =	3.60	2.40	1.31
Must be greater than 1 and preferably greater than 2. There is a good ability to pay current liabilities using assets that can be converted to cash in the near future. Favourable uptrend detected due to progressively decreasing current liabilities.			
Quick ratio (Acid test) =	3.41	2.20	1.25
There is a good ability to pay the company's current liabilities without having to rely on the sale of their inventory due to a progressive increase in the current assets. This is a positive improvement.			
Working capital =	R38,016,679	R22,959,611	R8,354,213
As a standard rule larger amounts are better as more internal funds are available to pay its current liabilities timeously. Such a state is desirable. A state of having progressively more internal funds available is always desirable as it will lend itself to the possibility of utilizing an opportunity much easier.			

Table 4.2: Company's financial ratios (March – February) (Continued)

LEVERAGE RATIO'S

Debt-to-assets ratio =	0.38	0.47	0.69
This shows the extent to which debt has been used to fund operations. The progressive decline in the ratio supports the fact that more “own capital” was used to fund operations. This figure is not too high which lowers the risk of bankruptcy.			
Long-term debt-to-capital ratio =	0.24	0.26	0.37
A ratio of less than 0.25 is satisfactory. The progressive declining is again indicative of the company's increasing ability to use “own” instead of borrowed funds to expand operations.			
Debt-to-equity ratio =	0.62	0.90	2.24
This ratio is less than one in 2010 and 2011 which can be interpreted as the company not having excessive debt and this should translate into the company having good credit worthiness and a relatively strong balance sheet. The total stockholders' equity is progressively increasing which shows to increasing owner's sentiment over the years.			
Long-term debt-to-equity ratio =	0.31	0.35	0.58
The company still has a strong capacity to borrow funds (should it be necessary) due to the steady progressive increase in the stockholders equity / owners capital.			

ACTIVITY RATIO'S

Average collection period =	64	63	65
This indicates the amount of time (in days) that the company has to wait before receiving the cash after making a sale. The company's terms with their customers are 60 days. 65 days average collection period is not bad as such but should not slip to more than the 65 days. The company has proven that 63 days could be achieved which is closer to the 60 days so the 64 days average of 2011 is still acceptable but should be managed stricter for the period 2012 – 2014 .			

The general trend of all ratios calculated here seems to be improving towards a more favourable situation. According to these analyses the company is on a progressively improving trend.

4.3 CONCLUSION

All of the abovementioned objectives were established through conducting an internal organisational assessment via personal interviews and a strategic planning questionnaire. Although all the objectives as determined in the literature review defining a normative model is present in the current strategy of the company. There are definitely much improvement and planning as well as thorough communication that need still need to take place between relevant stakeholders, management and the employees.

The study contributed by providing relevant information regarding the development of a strategic plan for this company by trying to increase the parties' involved feeling of commitment and highlighting the importance of planning, documenting and evaluating the planning process regarding the company's strategy.

4.4 LIMITATIONS OF THE STUDY

The study was performed at a particular company. This poses the limitation that the empirical results of the study pertain only to this specific company. However, the research methodology to analyse the strategic planning process as depicted in this study, is not limited to the company and could benefit other companies and researchers aiming to analyse strategic planning.

4.5 RECOMMENDATIONS

Based on the findings, conclusions and limitations of this study, the following recommendations for further research are made:

Implementation of the strategic plan as well as various action plans could be determined and executed for the company including:

1. Actions plans for expanding on future local and international scope;
2. Aggressive action plans are needed to establish the company's global footprint.
3. Specific action plans need to be compiled with regards to company strategic aims.
4. An action plan should be set up for the internal growth of the company. It is important that the company sets out its internal infrastructure and resources in such a way that it is able to support expansion efforts either within the South African boundaries or in Africa or even elsewhere in the world.
5. Internal departmental action plans need to be established for all departments within the company.
6. Feasibility studies could be done regarding economic-, operational-, schedule-market-, resource-, cultural- and financial feasibility within the South African borders and abroad.

4.6 CHAPTER SUMMARY

This chapter discussed the conclusion, the limitation of the study, and made recommendations for management as well as for further research. Herewith the study is concluded.

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**APPENDIX A:
STRATEGIC PLANNING PROCESS: SELF-ASSESSMENT
QUESTIONNAIRE**

This questionnaire is designed to help you critique your strategic planning and management process. It is structured to allow review of the process to determine which strategic planning steps the organization now performs well, not so well, or not at all. Even if your organization does no strategic planning at present, a review of this questionnaire should be instructive as the individual questions identify those considerations that are primary in designing and implementing an effective process.

For each question below, circle the appropriate number to indicate the degree of improvement your organization needs in order to function effectively in that planning step or area.

Institutionalizing the Planning Function	Improvement Needed					
	Little	Some			Much	
1. Do top executives take formal responsibility for the organization's strategic business planning?	1	2	3	4	5	6
2. Is strategic planning a top priority activity, performed on a regular basis, e.g., each year?	1	2	3	4	5	6
3. Does the organization provide resources (managers' time, money, staff support, etc.) earmarked specifically for strategic planning?	1	2	3	4	5	6
4. Does the organization follow a defined set of procedures in its strategic planning process?	1	2	3	4	5	6
5. Do all managers whose work might be affected significantly by strategic planning participate in the planning process?	1	2	3	4	5	6
Establishing the Strategic Foundation	Little	Some			Much	
6. Does the organization have a written mission statement?	1	2	3	4	5	6
7. Are all management and higher-level staff aware of the mission? Do they understand it?	1	2	3	4	5	6
8. Does the organization have written longer-term (3-5 years) and short-term (1-year) goals?	1	2	3	4	5	6
9. Do the goals list quantified, measurable targets (e.g., volume, market share, growth rate, profitability)?	1	2	3	4	5	6
10. If appropriate, do the goals specify targets by location or geographic area?	1	2	3	4	5	6
11. When appropriate, do the goals list quality, time frame, and cost targets? Are they observable or measurable?	1	2	3	4	5	6
12. Do the goals appear realistic yet challenging, based upon experience and/or research?	1	2	3	4	5	6
13. Does the organization systematically measure actual performance vs. goals?	1	2	3	4	5	6
14. Do management and higher-level staff whose responsibilities are affected participate in setting goals?	1	2	3	4	5	6

APPENDIX B:

STRATEGIC PLANNING PERSONAL INTERVIEW QUESTIONS

1. What, in your opinion, are the external macro factors that influence on our business pertaining to the economy, socio-political environment and technology?
2. What, in your opinion, are the company's internal strengths, weaknesses, opportunities and threats?
3. Who, in your opinion, are the biggest competitors and what are their strengths, market share and marketing profile?
4. What is the company's competitive advantage and how do you develop/ maintain this advantage?
5. How do you measure customer satisfaction?
6. How are the results interpreted and what happens to the results?
7. How are recommendations and further action plans pertaining to increasing or sustaining customer satisfaction currently implemented?
8. What is the current overall business strategy and objectives and how is it measured and integrated / communicated to other management and departments?
9. How cost effectively do you manage your resources – people, equipment, site progress, growth etc.?
10. Please provide the history of the company since you started your employment until this day – employees, structure, organogram, daily activities etc.?
11. What were the trends and changes in the company structure over the years?
12. Discuss the current company culture.
13. Discuss the company growth rate and what is currently being done to sustain the growth rate – do you envisage any problems in the future?

14. How do you incorporate ethical business conduct into the business units?

15. What is the current business plan executing the current business strategy to achieve the business objectives?

16. How will your current strategy change over the next three years?

**APPENDIX C:
LETTER FROM LANGUAGE EDITOR**

Thursday, October 27, 2011



To whom it may concern

Re: Letter of confirmation of language editing

The MBA mini-dissertation "*The development of a strategic plan for a company in the dust suppression industry*" by Adele de Necker (11732237) was language, technically and typographically edited. The sources and referencing technique applied was checked to comply with the specific Harvard technique as per North-West University prescriptions.

Antoinette Bisschoff

Officially approved language editor of the NWU