

**Maintaining a competitive edge in the mining industry:
The case of Blackrock mine, Northern Cape Province.**

BY

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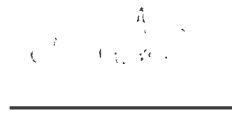
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Prof. Sam Lubbe

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DECLARATION

I, Mudau Avhatakali Mercy, hereby declare that this dissertation titled “Maintaining a competitive edge in a mining industry: The case of Blackrock mine, Northern Cape Province” is an original piece of work completed by myself. All references have been precisely reported and acknowledged. This document has not beforehand, in its entirety or in part, been submitted to any university in order to obtain an academic qualification.



Mudau Avhatakali Mercy

Date: November 2013

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ABSTRACT

The marginalisation the South African mining industry faces unique challenges to remain sustainable. A sustainable competitive advantage can be achieved through continuous innovation and the creation of new ideas (Prasad, 1993). South Africa's mining industry should focus on productivity and cost trends to remain competitive. Operating margins have to remain or become more competitive to attract investments into the industry and to be able sustain the existing operations. For the industry to remain competitive it must be provided with an operating and investment environment that does not disadvantage it in relation to local and global mining organisations (Prasad, 1993). Despite investments, the government derives benefits by getting mines to incorporate authority in their strategic plans and other plans in order to make it an integral part of their domination, as required by the framework. The Blackrock Mine, with its distinct character, mandate and capability permits an investigation to assess the degree to which it has integrated in its strategic Planning and other plans to achieve its objectives and outcomes. This research explores this problem by way of investigating the extent to which the Blackrock mine has integrated the requirements of the framework in its plans, as well as its substructure capability adequacy. This was done through the theoretical and practical approach to the topic. Quantitative and qualitative methods were used to collect data for this study. A questionnaire consisting of three parts has been used in the survey. Key words: competitive intelligence, planning, tools, other industries, knowledge management, strategies, mission statements, SWOT, business knowledge, frameworks, mining, industry re-organisation

TABLE OF CONTENTS

Chapter One: Overview of the Study	10
1.1 Introduction	10
1.2 Background to the Problem Statement.....	10
1.3 Problem Statement	11
1.4 Objectives.....	12
1.4.1 Primary Objectives	12
1.4.2 Specific Objectives of the study.....	12
1.5 Keywords	13
1.6 ResearchDesign	13
1.6.1 Sample Design and Analysis.....	13
1.6.2 Data Collection Instruments.....	13
1.7 Scope of the Study.....	14
1.8 Plan of the Study	14
1.9 Conclusion.....	14
Chapter Two: Overview of the Literature.....	15
2.1 Introduction	15
2.2 Competative Intelligence.....	15
2.3 Planning and Mining	16
2.4 Tools.....	18
2.5 Other Industries	20
2.6 Knowledge Management and Strategy	22
2.7 Vission and Mission Statemants	24
2.8 SWOT.....	26
2.9 Business Knowledge	27
2.10 Frameworks and Mining	28

2.11 Mining Industry Re-Organising	30
2.12 Mining	31
2.13 Research Questions	33
2.14 Conclusion.....	33
Chapter Three: Research Methodology	34
3.1 Introduction	34
3.2 Research Types	34
3.2.1 Qualitative and Quantitative Research	34
3.2.2 What Research Method (s) Used in This Mini-Dissertation	36
3.2.3 What data is required?	37
3.3 Data Collection Method	37
3.3.1 Methods for collecting primary data	37
3.3.2 Questionnaires	38
3.3.3 Sampling Method	39
3.3.4 Types of variables	40
3.4 Ethical considerations pertaining to the Study	41
3.5 Four Traditions of Qualitative Research	41
3.6 The main Steps in Qualitative Research	41
3.7 Conclusion.....	41
Chapter Four: Data Discussion.....	43
4.1 Introduction	43
4.2 Rate of Return	43
4.3 Analysis of Variables	43
4.3.1 Demographic Variables.....	43
4.4 Correlation.....	58
4.5 Conclusion.....	59

Chapter Five: Conclusion and Recommendations	60
5.1 Introduction	60
5.2 Summary of the Study	60
5.3 Response to the Research Questions	61
5.3.1 What are the threats which are posed by the new mines to Blackrock mining?	61
5.3.2 What strength does Blackrock mining has, which might act as basis for creating competitive advantage?	62
5.3.3 What are the key factors/aspects which Blackrock mining should put in place to remain competitive?	63
5.4 Limitations	66
5.5 Managerial guidelines	66
5.6 Conclusion.....	67
REFERENCES	68
Appendix A: Matrix	71
Appendix B: Table of Construction.....	72
Appendix C: Questionnaire.....	76

List of Tables

Table 3.1 Outline of Questionnaire	39
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List of Figures

Figure 4.1: Age Distribution	43
Figure 4.2: Gender Distribution	44
Figure 4.3: What is your highest level of education?	44
Figure 4.4: How long have you been working at the Blackrock mine?	45
Figure 4.5: Was your involvement in strategic planning for the Blackrock mine advisor staff from a Strategic or Business perspective?	45
Figure 4.6: How many strategic planning implementations have you been involved in including this one?	46
Figure 4.7: What type of post are you in at work?	47
Figure 4.8: Your functional area of strategic planning was implemented within the timelines originally stipulated.	47
Figure 4.9: The plan assigned, while assuming you understand strategic planning was appropriate?	48
Figure 4.10: Strategic planning had enough people resources assigned to it in your functional area?	49
Figure 4.11: Your functional area received sufficient and timeous training for strategic planning?	49
Figure 4.12: There adequate management support and commitment throughout the strategic planning.	50
Figure 4.13: Satisfactory accountability was placed on the strategic planning team for their function in the project?	50

Figure 4.14: Project team leaders were sufficiently monitored to ensure that they were fulfilling their functions?	51
Figure 4.15: An appropriate planning measure was implemented for strategic planning?	52
Figure 4.16: The original business case adhered to for project strategic planning?	53
Figure 4.17: Sufficient strategic planning was exercised throughout the phases of the Blackrock Mine?	53
Figure 4.18: Did you participate in any strategic planning event?	54
Figure 4.19: Were you part of a strategic planning team?	55
Figure 4.20: Do you know what the Blackrock Mine Business Plan and how strategic planning impacts upon it?	55
Figure 4.21: The strategic planning was aligned to the business strategy for the 2011/2012 financial year, which the implementation was appropriate to the Blackrock Mine business strategy?	56
Figure 4.22: The concurrent restructuring and centralisation process at Blackrock mine had a negative effect on the strategic planning implementation?	57
Figure 4.23: I attend seminars or workshop on strategic planning?	57

Chapter One

Overview of the Study

1.1 Introduction

In the 21st century business landscape, organisations must compete in a complex and challenging context that is being transformed by many factors from globalisation, frequent and uncertain changes to the growing use of information technologies (Dennis, Hitt and Jackson, 2003). Therefore, achieving a competitive advantage is a major pre-occupation of senior managers in the competitive and slow growth markets which characterise many businesses today. The sources of competitive advantage have been a major concern for scholars and practitioners for the last two decades (Peteraf, 1993). The importance of competitive advantage and distinctive competences as determinants of a firm's success and growth has increased tremendously in the last decade. This increase in importance is as a result of the belief that the fundamental basis of above-average performance in the long run is sustainable competitive advantage (Prasad, 1993).

It is for this reason that organisations are focusing on methods and strategies that are difficult to imitate. One of such methods and strategies is organizational learning through which an organisation is capable of developing intellectual capabilities that are rare and difficult to imitate.

The Chapter includes an overview of the study, a description of the background of the study, which is followed by the problem statement. The research objectives of the study are expressed by showing the primary objective and the specific objectives of the study; these address the purpose of this study. The significance of the study is explained followed by a section that shows the key word used. The research design is explained in three parts namely; research methods, sample design, analysis, and the data collection instruments. The geographical limit and parameters of the study is detailed in the scope of the study followed by the layout of the entire research, ending with a conclusion.

1.2 Background to the Problem Statement

South Africa experienced marginalisation during the apartheid era. Post 1994 the South African mining industry is facing a unique challenges to remain sustainable. One of these challenges is to remain competitive. A sustainable competitive advantage can be achieved through continuous innovation and the creation of new ideas. South Africa's mining

industry has to focus on productivity and cost trends to remain competitive. Operating margins have to remain, or become more competitive to attract investments into the industry, and to sustain the existing operations (Cheung and Li, 2012). For the industry to remain competitive, it must be provided with an operating and investment environment that does not disadvantage it in relation to local and global mining organisations.

Companies following focused differentiation strategies produce customised products for small market segments and success will follow when either the quantities involved are too small for industry-wide competitors to handle economically. Therefore, the extent of customisation requested is beyond the capabilities of the industry-wide differentiator. The important issue for any business adopting this strategy is to ensure that customers really do have different needs and want. In other words that there is a valid basis for differentiation and those existing competitor products are not meeting those needs and wants.

1.3 Problem Statement

Black Rock mine has its operation in the Kalahari district/region in the Northern Cape where it mines manganese. At its establishment in the area, it was competing against BHP Billiton until recently when new players entered the market as well. Blackrock has underground operations whereas all new mines are open pit. This means that their operational costs are better than that of underground operation, and that provides them with high financial advantage as compared to Blackrock (Lukas, 1999). However, the advantage that Blackrock has is that it mines the best manganese product whereas the new mines are fighting for the low grade Mamatwan type of ore. Other areas of competition includes a situation where Blackrock and BHP Billiton used to share 10 trains provided by Transnet to transport raw material to the ports for exports. However as a result of the emergent new mines, the 10 trains have to be shared amongst with three other mines. Therefore, because of this rail reduction, the company has to rely on other means which is road transport – the use of road transport has increased by 20% in the past 3years and this has cost implication since it's more expensive than rail.

The other challenge is the fact that Blackrock and BHP Billiton have to share space with the other mines at the harbour for export purposes. This creates a time and space limiting factor, thereby making it difficult for the mines to export as much raw products as they want (Trumbach, Payne and Kangthan, 2006).

Furthermore, the capacity at the harbour has decreased by 25% on average in the past 3 years. Capacity is also a limiting factor since there's only capacity for 3 products whereas the mine is producing 5 different products. Each time before sending a different product, it must be confirmed because if there is no empty vessel by the time the train arrive at the harbour, the company get penalised (Transnet charges for idle time). The new mines are also posing a threat since they are now competing with the two existing mines, Blackrock and BHP Billiton, for skilled labour to an extent that they even poach employees from each other. As a result of the competition that exists between the new mines and the old mines, the CEO of one of the new mines was a General Manager at Blackrock. This means he may have supplier information and may be using that to their advantage. Blackrock has since lost 3 suppliers since the opening of the new mines (Trumbach, Payne and Kangthan, 2006).

1.4 Objectives

1.4.1 Primary Objective

The primary objective of this study is to investigate the perception of staff on competitive advantage and the progress made in respect to its implementation and procedures followed, thus far, within the Northern Cape Province. The primary objective is divided into the following distinctive specific objectives.

1.4.2 Specific Objectives of the Study

The central objective of the study is to determine the problems around challenges that Blackrock Mine experiences as a result of the mushrooming of new mines in the Kalahari District (Northern Cape Province). The specific objectives of the study are therefore to:

- Understand and gain insight of the competitive advantage which Blackrock has over the new mines, if any.
- Determine areas of weakness for Blackrock Mine on which the new mines could capitalise on;
- Determine strategies that are being put in place by management to gain competitive advantage over the new mines.

1.5 Key Words

Definition, Competitive Intelligence, Planning, Tools, Other Industries, Knowledge Management, Strategies, mission statements, SWOT, Business Knowledge, Frameworks, Mining, Mining Industry Re-organisation.

1.6 Research Design

A scientific method of acquiring knowledge was used as a research method. A systematic investigation of the problem, research question or phenomenon is applied in the method. The method uses socially established principles (Bless and Higson-Smith, 1995).

1.6.1 Sample Design and Analysis

The units of analysis were individual employees from the Blackrock Mine, Northern Cape. The sample units were randomly selected from each stratum. The sampling technique used was a proportionate random stratified sample. Using a simple random sampling in each stratum, each employee in the stratum has an equal chance to be selected into the sample, as such making the sample representative of the population. The consideration of the employee's demographics within a particular work place, therefore it would be ideal to use a random stratified sample proportional to the designation of the target population. The population is 1500 employees of Blackrock Mine, Northern Cape and a sample was derived from it. The sample of 165 was selected to conduct the study to be representative.

Data was analysed by means of tables, charts, graphs and inferential statistics. Statistical analysis was conducted during the study and conclusions and recommendation were made subsequently (Groenewald, 1999).

1.6.2 Data Collection Instruments

A self-administered questionnaire was used to collect the primary data for quantitative analysis. The collection of the primary data was by means of the questionnaire to the workforce who should be the beneficiaries of integrated strategic planning, adequateness of budget allocation of IT Division and enhanced service delivery. The secondary data gathering was conducted by reviewing relevant literature including professional magazines, newspapers, journals, legislation, dissertations and by listening to specialist interviews from the television and radio stations.

1.7 Scope of the Study

The geographical parameter of the study is Kuruman, which is in the Northern Cape Province. The study is limited to employees in the Northern Cape Blackrock mine. The head office has 100 staff members.

1.8 Plan of the Study

Chapter 1: This chapter gives the reader the general representation with regards to the basic importance of the study contained in the introduction. This chapter outlines the research problem and the research objectives are defined.

Chapter 2: This chapter reflects the literature review for the study. The literature that is undertaken relates to the current subject matter. This contains previous studies conducted in strategic planning.

Chapter 3: The chapter outlines the research methodology followed in the study, with the necessary rationale, the research design and analysis followed in the current study. The aspects to be covered are research design, sampling, measuring instrument and data analysis.

Chapter 4: The chapter presents and interprets the findings in relation to the objectives of the research which have been expressed in Chapter 1.

Chapter 5: In this chapter, the outcomes of the study are discussed; conclusions are drawn; and recommendations are made to remedy and provide corrective measures of the research problem.

1.9 Conclusion

The chapter presented an introductory discussion to the study and explained how the research was conducted. A competitive advantage exists when the firm is able to deliver the same benefits as competitors but at a lower cost or deliver benefits that exceed those of competing products. Competitive advantage is a theory that seeks to address some of the criticisms of comparative advantage. Competitive advantage theory suggests that states and businesses should pursue policies that create high-quality goods to sell at high prices in the market. Prasad (1993) emphasizes productivity growth as the focus of national strategies. Competitive advantage rests on the notion that cheap labour is ubiquitous and natural resources are not necessary for a good economy. In Chapter Two a literature review shall be made to place the research problem in the context of the theoretical background of SWOT analysis and use during strategic analysis.

Chapter Two

Literature Review

2.1 Introduction

Chapter two provides the literature and theory in relation to the perception of Blackrock Mine staff on competitive advantage and the progress made in respect to its implementation, procedures followed and the sustainability thereof.

The advantage that Blackrock has is that it mines the best manganese product, whereas the new mines are fighting for the low grade material. Other areas of competition includes a situation where Blackrock and BHP Billiton use to share 10 trains provided by the government to transport raw material to the ports for exports; however, as a result of the emergence of new mines, the 10 trains have to be shared amongst with these three other mines.

The researcher used the following keywords to search for articles: definition, competitive, intelligence, planning, tools, knowledge, management, strategies, mission statements, SWOT, business, frameworks, mining, and re-organisation. Search engines such as Duckduckgo and Google Scholar were used for articles while electronic databases such as Science Direct and EBSCO were also consulted.

The main topics include: definition, competitive intelligence, planning, tools, other industries, knowledge management, strategies, mission statements, SWOT, business knowledge, frameworks, mining, mining industry re-organisation.

2.2 Competitive Intelligence

Xu, Liao, Li and Song (2011) argue that competitive intelligence involves the identification of potential risks and opportunities by gathering and analysing information about the environment to support managers with strategic thinking. Competitive intelligence, industry analysis and environmental scanning are used to evaluate threats and opportunities in the external environment. Key competitors, substitute technologies, potential entrants, customers and suppliers can be developed about a knowledge map (Drew, 1999), and this map could include pointers to sources of knowledge, yellow pages of experts on the corporate intranet, one of the first applications of knowledge management

technology. Some observers have also suggested using intelligent software agents over the internet to collect up-to-date competitive and scientific information.

Cheung and Li (2012) define BI as getting the right information to the right people at the right time. BI constitutes a broad category of applications and technologies for gathering, storing, analysing, and providing access to data to help. Therefore, the concept of business intelligence (BI) system is adopted in various industries in order to meet their specific business requirements.

BI based on the data of mining has been one of the indispensable tools for identifying business opportunities in sales and marketing of new products. The traditional data mining methods based on association rules may be inadequate in completely uncovering the hidden patterns of sales based on transaction record SMEs (Cheung and Li, 2012). It can be seen that trading companies form the backbone of business communities and that SMEs have intelligence requests and ought to consider seeking out relevant information in this regard (Cheung and Li, 2012).

This information is for large enterprises but SMEs also have a need to use BI systems to develop their business. Various software companies and Business Objects attempt to provide powerful and commercial BI systems whereas trading companies focus on Marketing Intelligence (MI) and Customer Intelligence (CI) under the general heading of BI, since MI and CI are the core competency of trading companies which provide value-added services for the customers (Cheung and Li, 2012).

2.3 Planning and Mining

Eppler and Platts (2009) note that the broad aims are translated into specific objectives and plans to achieve these are formulated and include the development of timelines, resource allocations, responsibilities and deliverables. In the planning stage, convergent thinking along a time axis becomes paramount, and here visualisation can assist managers in focusing on a reasonable sequence of goals and actions. At this stage, the social function of visualisation becomes vital and its main benefit is to assist the easy communication of the planned sequence and interdependencies of steps and goals.

Ram, Wu and Tagg (2013) argue that an organisational spending on enterprise resource planning (ERP) systems has flowed in recent years and is expected to continue to grow in the wake of technological advancement in cloud computing and pay-as-you-go solutions. This growth is due to the expected benefits and value promised by ERP systems in

information capabilities and resources, intellectual capital through knowledge creation, improvements in operational, managerial and strategic dimensions. Academic and trade literature validates that implementation of ERP systems remains a complex exercise often resulting in difficulties and failures (Ram, Wu and Tagg, 2013). ERP implementation has frequently led to performance improvements for organisations as well as other tangible and intangible benefits (Ram, Wu and Tagg, 2013).

Yasuda and Iijima (2005) note that the association between an organisation's business strategy and its selection of alliance activities provides a new aspect of analysis for strategic alliances and it is also useful for an organisation's planning of alliance activities as a measure of achieving their business objectives. Furthermore, Yasuda and Iijima (2005) suggest that certain disagreeable characteristics of alliance activities have an adverse impact on the execution of specific business strategy.

By facilitating communication, the use of visualisation can lead to new insights regarding possible positive or negative interdependencies among goals or implementation steps. The visualisation of planning information can also be helpful in the subsequent implementation stage. Sequencing methods are therefore the most common forms of visualisation used at this stage, using chronological rules, categories and graphic structures to organise information such as objectives and actions, and show precedence and interdependency (Eppler and Platts, 2009). Techniques can be generic such as timelines or road-mapping techniques or increasingly specific such as Critical Path Method (CPM) or Project Evaluation and Review Technique (PERT) diagrams.

Planning of the store layout is crucial as retailers encourage customers to flow through more shopping areas and see a wider variety of merchandise through it. The layout of a supermarket has an impact on a retailers overall performance (Cil, 2013). Layouts concerned with improved utilisation of buildings and land but are more concerned with increasing sales. A store's layout main factor is that it contributes to the uniqueness of a store because it helps attract customers' attention. The effects of retail store layouts are too vast to overlook. Cil (2013) note that there is no flawless solution to the layout of a grocery store and discovered that the relationship between products patterns is crucial for effective decision-making and strategic planning in merchandising goods.

Xu, Liao, Li and Song (2011) note that when one tries to identify potential risks in the organisation, it is vital to collect and analyse information about their competitors' products and plans firstly. By doing so, it benefits the organisation with their own strengths and weakness to countervail their competitors with new products and designs.

Strategy development entails the generation of options, subsequently leading to the assessment and reduction of options until a particular course is selected. Thus visualisation methods should first support divergent thinking to assist managers in the development of a great variety of feasible options and scenarios.

2.4 Tools

Trumbach, Payne and Kongthon (2006) note that technology in mining is the submission of text mining tools to science and technology information and is informed by an understanding of technological innovation processes. Text mining proposes approaches to analyse and contextualise enormous amounts of information and it involves extracting information from text and mining the text to discover rules and patterns. In the case of technology mining, it allows an analyst to identify who is doing what research, identify key sources of technical information, identify emerging or unfamiliar research that may intersect functional interests using lists, matrices, maps, and trends obtained from publication databases.

Izhar, Torab, Bhatti and Liu (2013) suggest that there is a shortcoming when it comes to evaluating data in relation to the organisation goals during the organisation modelling development. Modelling the organisation goals is limited to the business process and organisation process. There are a number of tools for modelling the organisation process where most of these tools support the mathematical modelling (Izhar, Torab, Bhatti and Liu, 2013). At the same time, it is important to identify metrics that can measure the relevance of organisation data in relation to the organisation goals. Metrics is important to enable the domain experts or entrepreneurs to evaluate the relevance of organisation data in relation to the organisation goals. The domain experts can identify the relevance of organisation data in achieving the organisation goals and identify the metrics value for the relevant organisation data. The organisation goals ontology is important for the domain experts to apply such knowledge in relation to the organisation goals.

Microsoft takes a lot of care to match bright people to their business strategy. A knowledge audit can be used in conjunction with implementation of a balanced scorecard to ensure that strategic objectives and organisational capabilities are potentially in alignment. Other tools of strategic analysis which can be adapted for knowledge management are the product lifecycle and business portfolio matrices such as the famed Boston Box (Salomons, 1994).

Cil (2012) states that there is a crucial want for new techniques and tools that can intelligently and automatically assists everyone in transforming this data into useful knowledge. Association rule mining can help retailers to efficiently extract this knowledge from large retail databases which viewed such systems as important pieces of the marketing infrastructure. They are interested in instituting information-driven marketing processes, managed by database technology and data mining that enable marketers to develop and implement customized marketing programs and strategies.

Eppler and Platts (2009) argue that the multitude of options can then be assessed and combined with other convergent visualisation tools such as morphological boxes or slide rulers. For these tasks, elaboration methods are used which can provide rules and a relatively open structure to elaborate on information, discover new patterns and build common understandings and develop options. In the divergent phase, techniques such as knowledge mapping, concept mapping and mind mapping can open up areas for consideration, while techniques such as decision trees or morphological boxes can be used to help select particular courses of action in the subsequent convergent phase. An extensive variety of strategy tools exists including mission statements, competitive intelligence, environmental scanning, technology assessment, portfolio matrices, SWOT, core competencies, the value chain, scenario analysis and stakeholder mapping (Drew, 1999).

Xu, Liao, Li and Song (2011) state that the comparative relation map is potentially an operative tool to support enterprise risk management and decision making. Increasingly systems such as intranets and knowledge networks are also being designed for intelligence-gathering and market research purposes, or what one knows one doesn't know. Perhaps somewhat by accident, overlooked or forgotten knowledge may be rediscovered and used that is what one doesn't know one knows (Salomons, 1994).

2.5 Other Industries

Wubbeke (2013) argues that developing downstream industries is in focus. The high-end application of rare earth materials has already become a central aspect of China's rare earth industry development. According to Wubbeke (2013), one must encourage foreign investments such as the environmental management, recycling and reuse of REE as well as high-end application and the manufacture of REE production equipment. The case of REE industry adds to the literature on industry regulation in China by showing that concerns over resource depletion, environmental impacts and low prices in technologically important fields can lead to concerted intervention from the government in an industry deemed strategic (Wubbeke, 2013).

Horta and Camanho (2013) argue that the Construction Industry (CI) in the economy of both developed and developing countries has increased in recent years. This sector has witnessed structural changes such as globalisation, technological evolution and increased regulation, which contributed to a considerable increase in competition among construction companies. Globalisation has become a mandatory fact in the activity of construction companies. The recent developments in transport and communication coupled with the creation of protocols promoted by the World Trade Organisation (WTO) enabled access to markets previously isolated (Horta and Camanho, 2013). One of the important changes in the CI owing to globalisation is the emergence of business opportunities for contractors to expand into new foreign markets. Construction companies, mainly from the developed countries, are adopting strategies of internationalisation that enable them to benefit from the global market and in developing countries, construction companies are acquiring technological, financial and managerial know-how from international companies, narrowing the gap between both.

Drew (1999) argues that society in London provided an opportunity for reflection, learning and presentation of interesting cases. The following are some examples:

- i. Unilever PLC has used knowledge to good effect in its Ragu sauces division and has held a series of workshops around the world to map its knowledge of tomato sauce technology and factors contributing to the taste, texture and quality of the product. Knowledge networks or communities were set up to develop and share new insights. Unilever has given a lot of attention to organisational learning and building knowledge capture into key processes.

- ii. The role of the bank is not limited to lending money but committed to transferring specialist expertise across national boundaries such as was the rapid response to an urgent request by the Pakistani government for advice about premature road pavement failure. The World Bank has adopted knowledge management as a central strategic thrust and officials were considering the new technology. Bank staff in field offices around the world was able to provide timely and appropriate advice within days whereas in the past this would have taken weeks or months. The Bank is making active use of help desks, groupware, surveys and web sites to provide technological support.
- iii. Enterprise Oil reported using knowledge communities to encourage dialogue between peers and for faster problem-solving in an industry troubled by price erosion. Benefits identified have been the avoidance of costly duplication of effort and better awareness of the necessity to capture knowledge for reuse.

In the high tech industry small organisations may take on one of two primary roles in the innovation landscape and other small high tech firms are the research and development arm of other companies. Trumbach, Payne and Kongthon (2006) report that many large companies are using a combination of research and small company alliances as a means to spread their risk and therefore maintain their interests in areas that they may not want to put all their resources (Trumbach, Payne and Kongthon, 2006). This shift allows specific drug organisations to move from drug discovery towards marketing and patient care areas in which small firms do not have the resources upon which to focus.

Other firms are developing and providing products and services in which they must remain ahead of the competition and either way, small firms must have the knowledge to enable them to remain at the forefront of technological advances. Effective R and D is essential for small organisations to remain competitive and R and D in small organisations is more efficient than larger enterprises (Trumbach, Payne and Kongthon, 2006). Small organisations are restricted in resource availability such as cash flow and this limits the spending that is possible. Effective R and D requires foresight to enable a small firm to effectively invest limited R and D funds or to benefit from potential outside sources of R and D where internal R and D funds are not available. These pools of knowledge, related to new product and process technologies, changes in market dynamics, and competitor activity, are critical to the ability of small firms to advance their technological capabilities in preparation for meeting future market needs (Trumbach, Payne and Kongthon, 2006).

2.6 Knowledge Management and Strategy

Drew (1999) argues that it seems that knowledge management is maturing from an innovation to a strategic approach being implemented by the various successful corporations and international organisations. Further evidence for this is the widespread diffusion and use of management tools closely related to knowledge management such as benchmarking and the balanced scorecard. Major international management consultancies increasingly emphasize the development of their own intellectual capital for application in their clients businesses and other roots of knowledge management can be located in BPR, IT management and strategic control literatures.

In the early 1990s, the BPR trend led to a widespread adoption of new systems notably enterprise software by SAP, PeopleSoft, Baan and Oracle. Experience has shown that the success of these extremely costly reengineering projects is related to organisational and cultural issues, often knowledge-related. The Y2K software bug can be viewed as a challenge for knowledge management (Drew, 1999). There are many new smart products on the market which incorporate new technologies. Not least in significance is the growth of the Internet and corporate intranets as platforms for information and knowledge dissemination.

Knowledge management has an attraction for many stakeholders because it is timely and a means of redressing the excesses of earlier approaches such as BPR and downsizing. It is a broad enough umbrella to cover many critical issues and trends. Some features of knowledge management emphasized by its advocates are, holism and humanism: the priority is to make better use of human potential rather than to downsize it a concern with growth and new possibilities by developing new knowledge, support to creative management practices which result in new competencies, making good use of important technological developments such as networks, political and social support because knowledge drives economic growth (Drew 1999).

Managers should keep two different initiatives in mind such as those geared to project management performance and those geared to longer-term outcomes and by concentrating on certain CSFs, translate project goals into longer term delivery outcomes (Ram, Wu and Tagg, 2005).

Drew (1999) argues that a lot of the old rules of competitive advantage are breaking down as clever and aggressive new firms find ways of circumventing or tunnelling through barriers to entry or of rapidly creating entirely new brands such as Amazon.com, Excite and Yahoo.

Eppler and Platt (2009) argue that there are many issues of concern for strategists and knowledge managers. The new knowledge manager should be very careful to gauge corporate commitment and the culture. A distillation of recommendations made by numerous conference speakers is the following:

- a. Preparation is everything! Combine thoughtful analysis with careful consideration of practical issues.
- b. Avoid philosophising and academic abstractions.
- c. Avoid developing integrated knowledge architecture at first attempt.
- d. Look for better ways of doing things the organization is already doing.
- e. Build knowledge networks and communities of practice around important problem areas.
- f. Integrate knowledge management with the firm's strategy.
- g. Seek the full support of top management and the board.
- h. Align evaluation and incentive systems with knowledge sharing.
- i. Know your firm's dominant political culture and adapt your approach accordingly.
- j. Apply knowledge to knowledge management: benchmark and learn from the best practitioners.

Cultural change was an intense preoccupation of IBM and B and it is notable that both companies now are delivering improved results (Eppler and Platt, 2009). In the forthcoming years the world will see further imaginative schemes for acknowledging and rewarding knowledge creation, sharing and use by employees. Many consulting firms reported using knowledge as a basis for staff evaluation and American Management Systems (AMS) requires staff to contribute knowledge as a condition of membership in important internal networks.

Eppler and Platts (2009) argue that the cognitive benefits of visual representations include facilitating elicitation and synthesis of information, enabling new perspectives to allow better exhaustive comparisons and facilitating easier recall and sequencing. The social benefits include integrating different perspectives, assisting mutual understanding, and supporting coordination between people; and finally the emotional benefits include creating involvement and engagement, providing inspiration, and providing convincing communication. In the analysis stage, visualisation is valuable because of its cognitive benefits and it helps with the elicitation and synthesis of data, specifically its synthetic ability enables managers to process more data while avoiding information overload and the attendant mental shortcuts or cognitive biases involved.

Eppler and Platts (2009) note that managers can employ information visualisation methods in this stage to structure a volume of information in an ordered way, enabling synthesis and inference processes. Therefore, structuring methods are commonly used techniques in this stage which typically provide ready-to-use structures to organise and synthesize information. Qualitative data can be structured in many ways as standard structures such as 2 by 2 matrices can be customised by the user for a particular application, or may have already been customised for specific tasks (e.g. the Boston Consulting Group Matrix or the SWOT matrix). Eppler and Platts (2009) note because of the manager's applicable different forms of interactive visualization for strategic management there is a need for research, development, training and evaluation of these methods so that they can effectively help in meeting the wide range of challenges essential in the strategy process. Managers and researchers alike should emphasise visualizing over visualisation conceiving of visualisation as a joint and tentative process rather than a static rendering or aggregation of information.

2.7 Vision and Mission Statements

Organisations develop vision or mission statements as a means of communicating identity and exerting broad guidelines for strategic decision-making and control. A well-crafted mission describes the directions an organisation wants to pursue or avoid and significant focus on knowledge can be introduced into such a statement (Drew, 1999). Unilever emphasises the transfer of new knowledge for the benefit of society and especially the emerging economies that is developing and transferring global knowledge to local people everywhere. KPMG developed a new mission statement a couple of years ago with knowledge as a central focus.

Yasuda and Iijima (2005) note that the organisation Intel's growth strategy of existing products in new markets can be categorised as market development whereas Samsung underlines its mission as the digital convergence revolution which provides total solutions to customers through proliferation of its product portfolio. This was expressed in the CEO's message that Samsung's first task in this mission is to create an internal climate for innovation that encourages convergence and collaboration on the technical, product, and business levels (Yasuda and Iijima, 2005). Its strategy is to transform itself into a digital e-company capable of achieving its vision through innovation of new products for the existing markets such as product development.

Jackson (2011) argues that the initiation of the VLE was due to the growing complaints with existing systems and a number of standalone systems existed. Due to its large student base and on-going commitment to providing high-quality education, the director was concerned that existing systems were highly ineffective and would not be sufficient in supporting the long-term strategic needs of the college. Senior managers valued a solution which would allow for evaluation of course performance, quality control and resource allocation. Users felt that existing systems were very user unfriendly and cumbersome and the lack of systems integration between departments resulted in data duplication and information accuracy was a pressing concern acting as a source of irritation for departmental administrators. Lecturing staff shouldered much of the administration burden and were asked for the same information several times throughout the year detracting from their focus on delivering high quality teaching. Users valued a real-time system which was more reliable and enable effective communication between departments.

To overcome these challenges, the director introduced a number of measures to take the college forward. These included investing in technology, staff development and training, a plan to set up a college wide staff room in the near future to break down departmental boundaries, and developing a college-wide vision and common goals to bring staff members together as an interrelated unit. The director took the view that technology would redesign organisational processes or as Jackson (2011) puts it, using the power of modern information technology to radically redesign business processes in order to achieve dramatic improvements in performance.

Drew (1999) suggests that missions and visions cascade comes down to objectives and targets which may be part of a balanced scorecard. Drew (1999) argues that the Balanced Scorecard is a tool for organisational learning and improvement and a performance

measurement system. The four perspectives of a Balanced Scorecard are financial, customer, internal business process, growth and learning includes strategic objectives for training, development, technology and teamwork. The internal business process perspective might include objectives for innovation and business process improvement.

Chemical Bank's Scorecard mentions knowledge of the product/service selection and financial markets as elements of customer, learning and growth objectives (Drew, 1999). Knowledge-related objectives can easily be suggested for these perspectives such as Mobil Oil's Scorecard includes core competencies and skills (Drew, 1999).

2.8 SWOT

Drew (1999) describes a knowledge map to be an invaluable component of a SWOT analysis for uncovering the strengths and weaknesses of corporate knowledge. In looking for new opportunities the firm could focus on knowledge creation with customers and other stakeholders. Developing strategies for operational excellence requires benchmarking and quality review of existing processes as part of the SWOT. Process mapping is an essential first step and may be enriched by mapping important related knowledge sources at the same time as mapping the work activities.

Wubbeke (2013) notes that the geopolitical narrative sees control over natural resources as a decisive factor for prevailing in power struggles in an anarchic world. The Chinese policy and the relevance of REE form military applications and national security triggered US government intervention in the REE industry in 2010 (He, 2013). The public debate in China sometimes has such age political framing as well (Wübbeke, 2013). There is a widespread concept of a defence war in which China must defend its natural resources against the offensive of the West. The official news agency Xinhua titled China declares Rare Earth Defence War (Drew, 1999) asked whether it will be easy for China to win the rare earth defence war. Contrary to this alarm, Chinese politicians did not get carried away by the geopolitical narrative.

SWOT can aid in preventing some of the disasters of re-engineering projects in which important organisational memory and competencies become lost. Knowledge maps can be constructed to summarise the important forms of knowledge for the parts of a business such as the know-how of innovation and process capabilities, know-what of professional expertise, the know-why of business dynamics and know-who of vital personal, political

and social relationships. When a knowledge map is used in some way for systematic comparison or evaluation this may lead to a knowledge audit (Drew, 1999)

2.9 Business Knowledge

Eppler and Platts (2009) note that most of the organic matter in water body is Dissolved Organic Carbon (DOC). It may be expected that soluble metal-organic complexes can be formed and this may tend to increase the dissolved friction of the metal. DOC derived from degradation of plant and animal tissues has functional groups that can form with metals. Humic and fulvic acids can form quite stable complexes (Salomons, 1994).

Trumbach, Payne and Kongthon (2006) argue that permitting access of the right information at the right time and in the right fields is the whole point of technology mining and is the basis of the advocacy of technology mining as an instrument of competitive advantage.

Cil (2012) argues that the success of retail business is influenced by its fast response and its ability in understanding consumers' behaviours. The analysis of transaction data is the key for taking advantage of these new opportunities which enables supermarkets to understand and expect customer behaviour has become a crucial technique for effective decision-making and strategy formation.

Izhar, Torab, Bhatti and Liu (2013) argue that the overall performance and innovation objectives have become a backbone for every organisation for the achievement the organisation goals. Entrepreneurs can be seen as an organisational community that use knowledge to develop and recognise leaders and facilitating the decision making process. Therefore, entrepreneurs will take actions that should be aimed to improve and encourage the community by developing and facilitating focused leadership.

Leadership is important for the achievement of the organization goals. Therefore, it is very crucial for entrepreneur within the organisation to identify the relevant data within the organisation. In this context, organisations need to identify the relevance of data in order to support their decision making. The existing data must be accurate and relevance to assist every decision making in relation to the organisation goals (Izhar, Torab, Bhatti and Liu, 2013).

2.10 Frameworks and Mining

Eppler and Platts (2009) note that strategic planning processes are among the most challenging tasks that manager's face in today's compound market place. It can be an overwhelming challenge to take into account the developments of technologies, societal trends, the behaviour of competitors, customers and regulators, all within a changing legal, environmental and financial framework. This synthesis can be seen to address the following questions for each stage of strategising:

- a. What type of strategy content needs to be represented?
- b. What are the expected advantages of using visualization for strategising?
- c. What are the appropriate visualization formats or methods that can be used?

The three perspectives when strategized against the stages of strategizing form ones framework for strategy visualisation. The framework contains various informative pointers for the practice of strategy visualisation such as in the content view. The framework illustrates the strategic information that should be visualised, in the benefit view it emphasises the specific benefit to be sought by applying visualisation while the methods view indicates which tools should be used.

Therefore, for practising managers the methods view is very useful by distinguishing between among four types of visualisation methods that are used along the strategy process (Eppler and Platt, 2009). These four main genres are based on the reasoning outlined and provide specific social, cognitive or emotional benefits for each phase. However, the categorisation of the visualisation formats should not be seen as absolute. For instance, it may sometimes make sense to apply sequencing methods in the analysis phase such as to re-construct an emergent strategy or to use a structuring method in the method in the implementation phase.

Taplin (2006) argues that change initiatives in manufacturing organisations have shown how new work practices have remained temporary, or have been partially introduced, or done so within the framework of old operating principles that instead of organisational innovations designed to improve operational effectiveness some organisations seek meagre efficiency gains that involve little systemic change.

Effectiveness is defined as procedures designed to sustain long-term operational performance in a wide range of activities such as flexibility, productivity, quality and speed of throughput and which can entail indirect cost savings. Efficiency refers to direct cost lowering organisational changes that are short term oriented and involve direct attempts to improve labour productivity.

Jiao, Zhang and Helander, (2006) recommend a framework called acquisition of requirements (ACRE) to assist practitioners in understanding the strengths and weaknesses of each of the methods for requirement elicitation. Furthermore, an integrated approach to the elicitation of customer requirements by combining picture sorts, fuzzy evaluation, laddering, neural network techniques to map customer requirements to design specifications and to develop taxonomy of product requirements to assist in traditional qualitative market research. To elicit knowledge from customers (ELK), the taxonomy of customer requirements is deployed as an initial concept graph structure in the methodology for question probe a method used in the development of expert systems.

While ELK aims at making customer information useful to the designer, the taxonomy developed for ELK is overall to be a domain independent framework. A key component of Quality Function Deployment is the customer requirement framework to aid the designer's view in defining product specifications. While QFD excels in converting customer information to design requirements, it is limited as a means of actually discovering the voice of customers (Jiao, Zhang and Helander, 2006). This expansion process with the customers and marketing staff within the same framework the errors due to the interaction failure during customer decision-making process are diminished.

Lake and McInnes (2012) argue that the development of cognitive skills, such as critical thinking, clinical reasoning and problem solving is important because there is evidence that delayed or poor development may cause newly qualified practitioners to reinforce the gap between research evidence, academic teaching and clinical practice resort to ritualistic behaviour and routines rather than evidence based or autonomous practice. The importance of learning is evident in programme documentation and regulatory frameworks. However, there is a tendency to focus on theoretical knowledge and technical skills with limited information on strategies and techniques for mentors to support and facilitate cognitive skill development.

2.11 Mining Industry Re-Organisation

Lukas (1999) notes that strategic balance between adaptability and adaption in the degree of and emphasis in market orientation is defined by the strategic type of a business. Izhar, Torab, Bhatti and Liu (2013) argue that it is imperative to develop an ontology model in the context of the organisation goals as an effort to understand the organisation goals structure. The metrics model is essential to evaluate the organisation data in relation to the organisation goals, the development of the organisation goals ontology and metrics model can also assist in the process of evaluating the organisation data in relation to the organisation goals.

Furthermore, Izhar, Torab, Bhatti and Liu (2013) note that the concept of the organisation goals ontology is concerned with unifying organisation data from unrelated resources. Professionals are trained to analyse organisation data but the increase in the amount of the organisation resources such as data, information, knowledge and tool have become a problem in applying the organisation data because they do not have enough accurate and relevance data to assist the reliability of decision making. Even though the organisations have a huge amount of data but they do not have the data that they actually need.

Taplin (2006) states that organisations should ensure that their capabilities are appropriate to their strategic needs, as many organisations, have changed or attempted to change their internal operating structures to enhance quality and production flexibility. Recent changes have been to adopt activities such as lean production. Just in time techniques (TQM) and other collaborative links with suppliers and buyers often referred to collectively as high performance work practices (HPWP).

High performance work practices (HPWP) is efficient for the use of labour proficient through devolving better decision-making power to line workers for creative problem solving. These processes are increasingly unavoidable if organisations are to maintain a manufacturing presence in the face of sustained foreign competition (Taplin, 2006).

Thus, the trustworthiness of organisation data in relation to meeting the organisation goals is questioned and it poses an issue that how optimally the selected data may be used for better decision making and fully achieving the organisation's goals. In order to identify the relevance of organisation data in relation to the organisation goals, metrics model is developed. Metrics can be used to evaluate the vast amount of organisation data as an

effort to support the decision making in relation to the organisation goals (Izhar, Torab, Bhatti and Liu, 2013).

2.12 Mining

Technology mining is a means by which an organisation can build its knowledge base by obtaining an extensive perspective of the technological field. The organisation can identify the spectrum of research across the field and identify the strengths and weaknesses of its external partners (Trumbach, Payne and Kongthon, 2006). Technology mining can also be operated to identify potential partners based on corresponding or required skills of the organisation by building the dominion knowledge base of the organisation to increase its absorptive capacity and its ability to learn.

While external relationships are a powerful means for learning and can benefit an organisation by evading spending cash, re-inventing the wheel as disproportionate dependence on external sources may degrade an organisations internal skills. Degradation of these internal skills may cause the dilution of its core competencies and a weakening of the firm's competitive advantage. Thus, a balance must be maintained between the use of internal and external sources and utilisation of information (Trumbach, Payne and Kongthon, 2006).

The Tanzanian police swept clean the Bulyanhulu area in 1999 in order to make room for Canadian transnational Barrick Gold and buried 52 artisanal miners in their pits using Sutton Resources company bulldozers (Sutton Resources was purchased by Barrick in 1999) (Emel, Huber and Makene (2011). Comparable to colonial times, this moment represents a change from encouraging the interests of small-scale miners toward the unabashed promotion of large international mining capital.

Prior, Giurco, Mudd, Mason and Behrisch (2012) argue that miners seek to exploit new or higher quality deposits, are increasingly facing issues of land use and water use conflict. Proposed coal mines in the agriculturally rich Liverpool Plains area of Central New South Wales have resulted in mine operators suffering considerable backlash from the community arguing that mining is disrupting agricultural production, and will challenge Australia's future food security. In the Bowen Basin of Central Queensland, coal-seam gas exploitation is influencing the quality and quantity of water available for local fruit growers (Prior, Giurco, Mudd, Mason and Behrisch, 2012).

How to manage an over-abundance of water following severe flooding in the Bowen Basin in 2011 has also been an issue and flooded mines had to be pumped clear before production can resume, causing pollution concerns in the community.

Emel, Huber and Makene (2011) note that the contracts with international companies, Venezuelan oil resources provide the basis for “21st Century Socialism and in the name of patrimony for all South Africans, the African National Congress is studying nationalisation of mines. In other historical periods of rising prices for minerals and commodities nationally owned mining companies, sovereign-wealth funds, and other state instruments have asserted their sovereignty over internal resources. Thus, sovereignty like governance cannot be envisioned in terms of the state exercising self-determination but can only be theorised in relation to the multiple social relations and political forces struggling over resources and territory. These theories not only force us to understand the ways in which resource sovereignty is not territorially circumscribed but also that the state is not the sole source of sovereign power. Subterranean sovereignties: capital, landlord states, and mineral governance mining are an industry distinguished from all others by the fact that in it the interests of the landowner and the capitalist coincide.

After major gold discoveries appeared in the Lupa territory in 1921 (Emel, Huber and Makene, 2011), the colonial state began to consider revising the legislation to focus more on instituting these kinds of advantages for large foreign capital investment. It became apparent that abundant mining capital would not be interested in investing in the territory’s gold deposits until greater legal protection could be provided than existed under the current law.

Under the 1920 law, there was nothing to prevent small prospecting interests from obtaining licenses next door to large enterprises and the criteria for land allocation to mining interests was not clearly delineated. In the realm of law, sovereignty over property regimes is used to construct a knowable, homogenous, and divisible geography, where capital’s territorialized investment is assured through the legal guarantees of the centred sovereign state. Moreover, in capital intensive activities like large-scale gold mining where the time between initial investment and returns can be long, capital also must be assured a fixed temporality of investment in which contracts can be expected to last throughout the length of the project (Emel, Huber and Makene, 2011).

The reluctance of the government to fix these problems, despite the new law or multiple review commissions and the continued onslaught of criticism in the press, in Parliament, and from residents living near mining areas, suggests that despite the rhetoric of fiscal insufficiency, there are enough key actors satisfied with the current balance of power or interlocking sovereignty over resources to discourage serious revisiting of contracts and the 1998 law. Nothing in the 2010 mining law improves the revenue or compensation situation for local government or local people living near the mines (Emel, Huber and Makene, 2011). The role of the state as the abstract landlord of national territory, the attractive fiscal terms offered to foreign investors, and the violent dispossession of local residents all point to substantial overlaps between contemporary and colonial relations between sovereignty, territory and mineral resources.

2.13 Research Questions

Much of the problem statement had been solved. However, there are still some items missing and the research questions help with this. These are:

- 1) What are the threats which are posed by the new mines to Blackrock mining?
- 2) What strength does Blackrock mining has, which might act as basis for creating competitive advantage?
- 3) What are the key factors/aspects which Blackrock mining should put in place to remain competitive?

2.14 Conclusion

The chapter has addressed many of the issues that impact on the relation to the perception of Blackrock Mine staff on competitive advantage and the progress made in respect to its implementation, procedures that are sufficient for self-sustenance. It also showed the issues that were not addressed and the next chapter will discuss the research methodology.

Chapter 3

Research Methodology

3.1 Introduction

The aim of the study is to determine the extent to which information quality impacts on the quality of managerial decisions. To validate this, it is obligatory to collect information from targeted population using correct methodology and analyse the responses.

The research questions arrived at are: 1) What are the threats which are posed by the new mines to Blackrock mining? 2) What strength does Blackrock mining have, which might act as basis for creating competitive advantage? 3) What are the key factors/aspects which Blackrock mining should put in place to remain competitive?

In the previous chapter, the research problem was stated in terms of three questions that remain unanswered from the literature reviewed. This chapter explains the research methodology used in this study to give answers to the raised questions. Research methodology refers to the steps or approach taken to link the research questions and objectives to data collection, analysis, and interpretation in a logical manner (Diamantopoulos and Schlegelmilch, 2000). The methodology to be used for a particular research problem must always take into account the nature of the data that will be collected in the resolution of a problem (Leedy and Omrod, 2005).

3.2 Research Types

3.2.1 Qualitative and Quantitative Research

Research can be categorised as qualitative, quantitative or referred to as triangulation. The nature of the data and the problem for research will direct the research methodology (Leedy and Ormrod (2005). If the data is verbal the methodology is qualitative and if the data is numerical the methodology is quantitative.

Quantitative analysis is a formal, objective, systematic process in which numerical data are utilised to obtain information about the world. It involves either identifying the characteristics of uniqueness or discovering the probable correlation among two or more phenomenon (Maxwell, 2005). It is neither intended to involve experimental investigation by changing or modifying the situation under investigation, nor does it aim to determine

the cause-and-effect relationships, and it is intended to examine the situation as it is without any alteration (Leedy and Ormrod, 2005).

Quantitative methods involve systematic evaluation of alternative actions as a basis for choice between them. Furthermore, Grayson (1980) emphasises that the application of quantitative method involves setting up models of the problems to be analysed, selecting inputs to the models which quantify the judgements of those responsible for organisational decision and deriving the model's outputs from inputs.

Berg (2004) argues that some people avoid quantitative methods because of their inability to understand and interpret statistical or computational data and models. These data and models omit support to make problematic decisions easy in different environments.

The simplest definition is to say that quantitative analysis involves methods of data collection and analysis that are non-qualitative. Berg (2004) defines quantitative analysis as focusing on quality, a term referring to the essence or ambience of somewhat. Quantitative method examines the extent to which differences in one characteristic or variable are related to differences in one or other characteristics or variables (Leedy and Ormrod, 2005).

Qualitative approaches have two things in common such as:

1. They focus on phenomena that occur in the natural settings
2. They involve studying those phenomena in all their complexity (Leedy and Ormrod, 2005).

Qualitative researchers aim to produce understandings of social reality with a focus on interpretation rather than quantification. This is based on a belief that there are different versions of understanding and the aim is to give an accurate voice to these (Creswell, 2003). Qualitative researchers believe that the researcher's ability to interpret and make sense of what he or she sees is precarious for understanding any social phenomenon (Creswell, 2003)

Creswell (2003) states that qualitative research can reveal the nature of certain situations, settings, processes, relationships, systems, or people, enable a researcher to increase new sights about a particular phenomenon; develop novel concepts or theoretical perspectives about the phenomenon or discover problems that exist within the phenomenon, allow a researcher to test the validity of certain assumptions, claims, theories, or generalisations

within real-world contexts and provide means through which a researcher can judge the effectiveness of particular policies, practices, or innovations.

Cassel and Symon (1994) note the distinctions between quantitative and qualitative methodology are the following:

a). Qualitative

- a) Counting only if clearly necessary.
- b) Favour greater personal investment in the data.
- c) Encourage substantial flexibility in research procedures-no strong prototyping models to follow.
- d) Focus more on understanding organisational processes and less predicting outcomes.
- e) Heavily grounded within the local context in which the phenomena of interest occur. As a result generalising empirical results to a larger population or other settings can be problematic.
- f) More explicit about participants' reactions.

b). Quantitative

- a) Bias toward counting.
- b) Favour a more detached, impersonal orientation toward the data.
- c) There are relatively clear mental model for the research designs - more rule driven.
- d) Focus more on predicting outcomes and less on process variables.
- e) It is typically presented as more context-free and therefore more generalizable.
- f) Less focus on participant reactions.

3.2.2 What Research Method (s) Used In This Mini-Dissertation?

The qualitative approach can serve the purposes of description, interpretation, verification and evaluation. Quantitative research is aiming at observation studies, correlation research, development designs and survey research (Leedy and Ormrod, 2005). This study is approached with a quantitative research methodology as the study aims at examining the correlation.

3.2.3 What data is required?

Primary and Secondary Data

Primary data refers to innovative information that is collected by the researcher for the research study at hand by data obtained through interviews and surveys. Secondary data refers to information that has beforehand been gathered by someone else for another purpose which can be reused by the researcher. Secondary sources include books, journal articles, and reports among others. Ritchie and Lewis (2003) refer to primary data as layer closest to the truth and secondary data as a layer farther away, which are not derived from the truth itself but from the primary data instead. For this study both primary and secondary data were used. To extract meaning from the data one employs what is called research methodology (Ritchie and Lewis, 2003). A survey was used to acquire primary data and secondary data was drawn from organisational annual reports, company magazines and available literature in the academic field.

3.3 Data Collection Method

3.3.1 Methods for collecting primary data

There are several kinds of research methods that can be used to collect primary data. Interviewing is the common data gathering method in qualitative research and it can be described as the meeting of two persons to exchange information and ideas through questions and responses, resulting in communication and joint construction of meaning about a particular topic (Esterberg, 2002). In qualitative studies, interviews are often quite open-ended, however in survey research interviews are fairly structured (Leedy and Ormrod, 2005).

a) Interviews

According to Leedy and Ormrod (2005), in quantitative research interviews are more structured than in qualitative research. In a structured interview, the researcher asks a standard set of questions and nothing more

b) Survey

A survey is characterised by the systematic collection of numeric / quantitative data from a group of entities using direct observation (Creswell, 2003). The aim of a survey may be to:

- Describe (exploratory research);

- Examine correlations and associations;
- Explore differences;
- Identify a trend; and
- Test a theoretical model.

In this study, the primary data was collected by means of survey using a structured questionnaire which was emailed to the SP financial units who were asked to fill in the questionnaire as well disseminate it to other decision makers in their areas. The reason for taking this route is time and cost efficiency given the geographic location of business units and the size of the company. A survey is the better way of getting a picture of the current state of a group, a community, an organisation, an electorate, a set of corporations and a profession. These surveys are snapshots, pictures of a particular point or period in time, although there are longitudinal surveys which take place over longer periods (Creswell, 2003). Leedy and Ormrod (2005) concur with that by stating that the survey research captures a fleeting moment in time as a camera takes a single-frame photograph of an on-going activity.

A survey was conducted to test the association between information quality and managerial decisions, with an aim to establish the extent to which the information quality impact on managerial decisions. The preferred design for the survey was cross sectional because there was no sufficient time to do observations of participants over a long time.

3.3.2 Questionnaires

The questionnaire was used as the data-gathering tool. This allowed for the collection of quantifiable and qualitative data and allow for the analysis of this data to determine patterns and relationships. The financial personnel who were selected were asked using e-mail to complete the survey and the proposed survey questionnaire was on word document. A copy of the questionnaire is attached as a convenience to the participant and to prevent the loss of the questionnaire from being cited as a reason for the lack of a response.

Questionnaire should be as brief as possible and solicit that information is essential to the research project (Leedy and Ormrod, 2005). In order to aid in maximising the number of responses to the questionnaire the number of questions was limited to no more than 15 questions.

The first section of the questionnaire was aimed at gathering biographical data on the respondents including age, gender, qualifications; and frequency as well as the level of decisions that are normally made by a respondent, while the second section focused on specific questions with regards to the extent the Blackrock mine strategy planning. Other questions required a yes or no answer and others were open ended questions where the respondent is expected to support their response by providing details. To ensure that respondents shared a common notion of strategy planning, a definition was given in the questionnaire. The table below refers to the questionnaire outline.

A short disclaimer describing the purpose of the study -Refer to Appendix A	
A reminder - Refer to Appendix B	
Questionnaire – Refer to Appendix C	
‘Thank You’ Note – Refer to Appendix D	
Section 1 Questions 1 to 5	Gathers biographical data on the respondents including age, gender, and qualifications
Section 2 Questions 6 to 7	Looks at frequency in strategy planning as well as the level of decisions that are normally made by a respondent.
Section 3 Questions 8 to 15	Focuses on specific questions with regards to the strategy planning.

Table 3.1: Questionnaire Outline

3.3.3 Sampling Method

Sampling strategy that is, design and size depends on the research paradigm. The quantitative method requires random and representative sampling characterised by bigger samples (Leedy and Ormrod, 2005). Fink (1995) defines sampling as a means of taking any portion of the population as representative of the target population. A population is a set of all cases of interest (Shaughnessy and Hilbrook, 2003).

Shaughnessy and Hilbrook (2003) have provided a table for the establishment of the appropriate sample size (S) based on the size of the population (N). In terms of this study, for $N = 165$, $S = 165$, therefore, for this study, S will be taken as 165. Thus, a minimum of 165 completed questionnaires was required for meaningful conclusions to be drawn from the data gathered from the survey.

3.3.4 Types of variables

Each question in a questionnaire or collected in quantitative research, gives rise to a variable. A variable is thus an empirically observable characteristic of some phenomenon that can take on more than one value or response category such as gender, job level, level of agreement with a statement, profit, percentage of budget spent on advertising (Berg, 2004).

Nominal variables -the response categories can be placed in any order and the numbers assigned to the response categories have no other property except to serve as labels.

Ordinal variable - the response categories have a certain order and the numbers assigned to the response categories also have an order.

Ratio variable - a numerical variable where there is some standard unit of the property being measured. The distance between consecutive numbers is the same. Hence one can make accurate statements on the differences between cases.

Combinations of variables were used in the survey. In order to identify participants, nominal and ordinal variables would be used. Survey questions would vary from ordinal to ratio variables, depending on how the questions are posed.

3.4 Ethical Considerations Pertaining to the Study

Reinard (2001) argues that the researcher may delete all names from the data and report on the categories of responses to help ensure confidentiality of the respondents. In this study, participants remained anonymous and the participation was entirely voluntary as it is considered unethical to use any personal details of respondents in the report which can identify who the respondent is. Each respondent was informed of the exact nature of the research and participation in the survey will be entirely voluntary. Participants will be assured that the information provided would not be used for any purpose other than stated.

If this type of research has been conducted by other researchers, the researcher ensured not to commit plagiarism and to give credit to all authors that were drawn from to compile the body of knowledge for the research study.

3.5 Four Traditions of Qualitative Research

Gubrium and Holstein (1997) suggest the following four traditional steps of qualitative research:

1. Naturalism: provides rich descriptions of people and interaction in natural settings.
2. Ethnomethodology: seeks to understand how social order is created through interaction and communication.
3. Emotionalism: a concern with subjectivity and gaining access to inside experience.
4. Postmodernism: emphasises on talking methods and the sensitivity to different ways social reality can be constructed.

3.6 The main Steps in Qualitative Research

Prasad (1993) suggests these six steps of work computerisation to be used for qualitative research:

Step 1: General research questions.

Step 2: Selecting relevant site/s and subjects.

Step 3: Collection of relevant data

Step 4: Interpretation of data.

Step 5: Conceptual and theoretical framework, tighter specification of research questions and collection of further data.

Step 6: Writing up findings.

Silverman (1993) is accurate when mentioning that pre-specified theories can be and sometimes are tested with qualitative data but the generation of theory tends to be the preferred approach. The sequence of steps in qualitative research involves the generation of theories rather than the testing of theories that are specified.

3.7 Conclusion

This chapter defined the research design and methodology used in this study. Further, it looked at instrumentation, research type, population, sampling method, and data gathering methods from a theoretical perspective.

A discussion of how these were applied in this study was also presented. Justifications for the choices made were given. The next chapter presents the study findings that would be used in rejecting or accepting the raised questions.

CHAPTER 4

OVERVIEW OF THE STUDY

4.1 Introduction

In the previous chapter, research methodology was discussed and the research questionnaire was structured. Research questions were made to assist the researcher with the testing and further understanding of the problem. This chapter discusses the research findings and provides analysis and interpretation of data. In the survey, certain specific questions were asked and the analysis was done based on the application of Pearson correlation coefficient and value. The Pearson correlation method correlates that are listed variables with each other and indicate which of the resulting relationships are statistically significant (Diamantopoulos and Schlegelmilch, 2004). The p-value provides better information on how far down in the significant region the results lay.

The layout of this chapter begins with the rate of return of the questionnaires at 4.2 then 4.3 is the discussion and analysis of variables. Section 4.4 deals with the correlation coefficient analysis for coefficients greater than or equal to 0.3 in the negative and in the positive, while 4.5 is the conclusion

4.2 Rate of Return

One sixty five (165) questionnaires were distributed in the Blackrock mine to personnel of all salary levels and both genders. A total of 162 questionnaires were returned meaning that the rate of return was 97%.

4.3 Analysis of Variables

4.3.1 Demographic variables

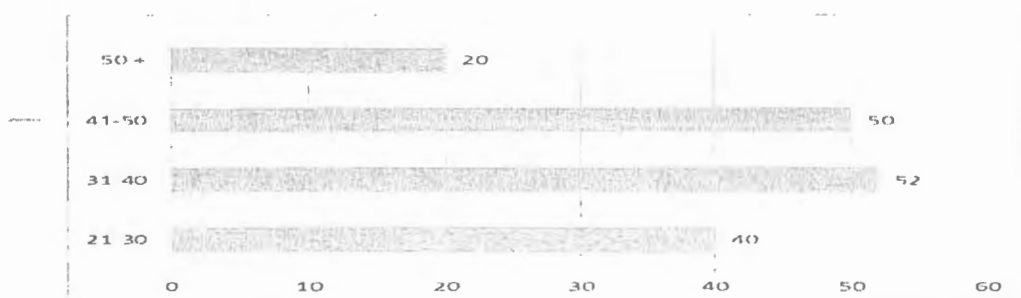


Figure 4.1: Age Distribution

The majority of respondents as shown in figure 4.1 were aged between 31 and 40 years, this implies that the majority of the employees are aged between 31 and 40 years, which is an average age group within the working class that may have acquired sufficient work experience to understand the role of skills development and its significance in managerial decision making.

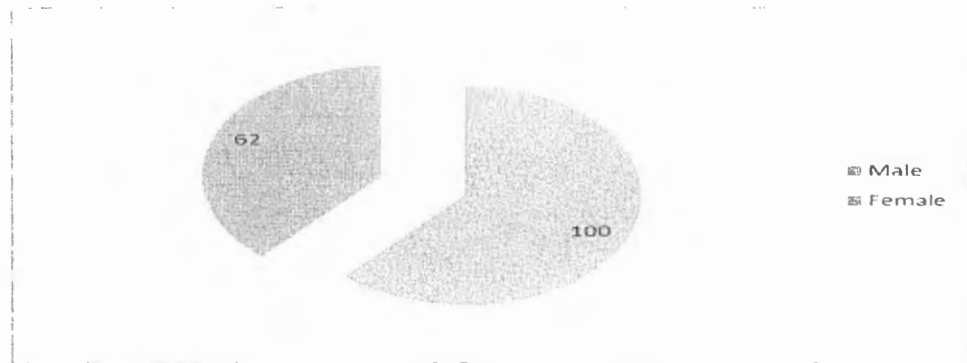


Figure 4.2: Gender Distribution

Figure 4.2 indicates that out of a total sample of 162 respondents, 100 were male. No choice was given to sex and the sample breakdown is considered as being a rational representative of the demographics of Blackrock mine employees. These figures reflect that the personnel in the management roles are dominantly male. There is strong racial and gender bias in the experience of joblessness and black people, especially female South Africans. South African females were denied access to development and had received no recognition for their skill levels and on-the-job knowledge (Cheung and Li, 2012). The burden of unemployment falls on the African population because jobs that exist for them are casual, low-wage and are without benefits.

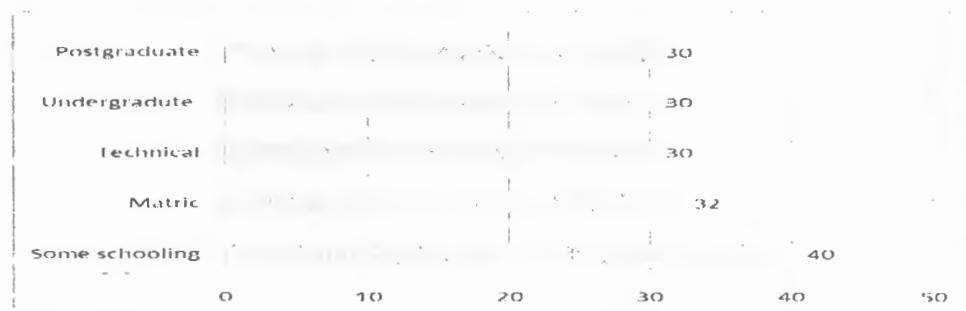


Figure 4.3: What is your highest level of education?

Figure 4.3 indicates that the respondent's education status is at good levels, as the majority of the respondents have a diploma or a degree. Forty respondents have some schooling. Thirty two respondents have passed matric, thirty respondents have a technical

diploma, thirty respondents have an undergraduate degree and thirty respondents have a postgraduate degree. The respondents' educational status is an indicator for the better handling of projects and the mine should consider improving their employee's education through further studies.



Figure 4.4: How long have you been working at the Blackrock mine?

Most of the respondents have a working history of between under 2 years and over 40 years. There were fifty two that worked from under 2 years. There were twenty four workers from 2 to 3 years. There were twenty two workers from 4 to 5 years. There were twelve workers from 6 to 7 years. There were twelve workers from 8 to 9 years. There were forty workers who have been working for over 10 years. This is a good spread from the study. Figure 4.2 shows that males have been interacting in business development to do their activities frequently than women and thus females are better skilled. Ram, Wu and Tagg (2013) argue that an organisational spending on enterprise resource planning (ERP) systems has flowed in recent years and is expected to continue to grow in the wake of technological advancement in cloud computing and pay-as-you-go solutions.

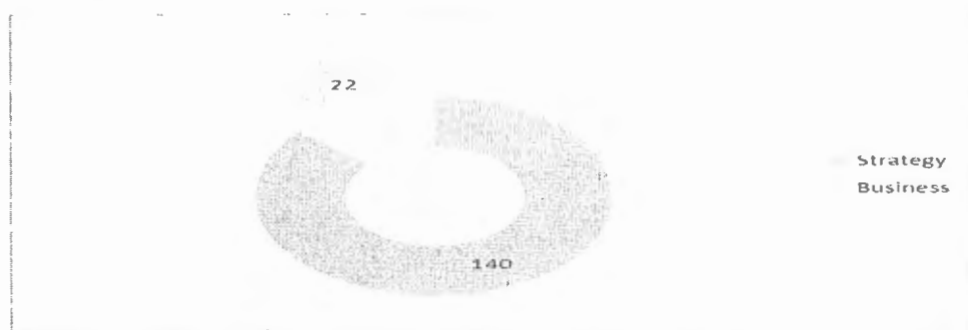


Figure 4.5: Was your involvement in strategic planning for Blackrock Mine advisor staff from a Strategy or Business perspective?

Figure 4.5 shows that most respondents were involved in strategic planning for Blackrock Mine advisor staff from a business perspective. One hundred and forty respondents were involved in involved in strategic planning for Blackrock Mine advisor staff from a business

perspective and twenty two respondents involved in strategic planning for Blackrock Mine advisor staff from a strategy perspective. It seems that the respondents who have involvement in the strategic planning development with a business perspective interact in activities often and are likely to do all their activities in less than several times a week than the rest of the respondents. Yasuda and Iijima (2005) note that the association between an organisations business strategy and its selection of alliance activities provide a new aspect of analysis for strategic alliances and are also useful for an organisations planning of alliance activities as a measure of achieving their business objectives. Furthermore, Yasuda and Iijima (2005) suggest that certain disagreeable characteristics of alliance activities have an adverse impact on the execution of specific business strategy.

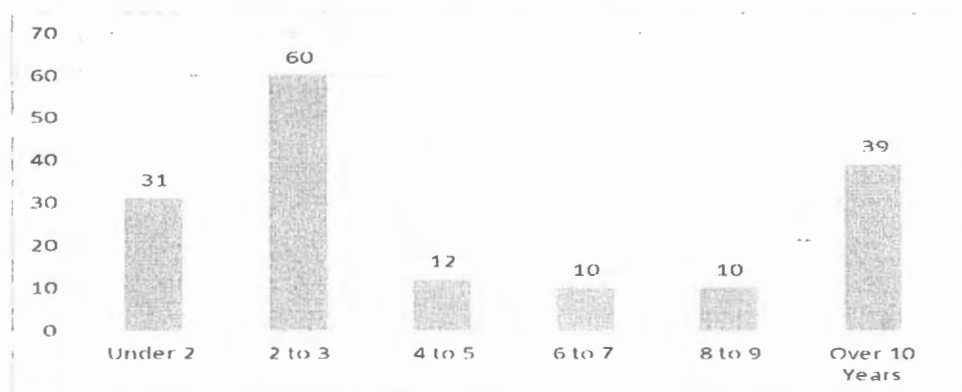


Figure 4.6: How many strategic planning implementations have you been involved in including this one?

Figure 4.6 shows that thirty one respondents have been involved in under two strategic planning implementations including this one, sixty respondents have been involved 2 to 3 strategic planning implementations including this one, twelve respondents have been involved 4 to 5 strategic planning implementations including this one, ten respondents have been involved 6 to 7 strategic planning implementations including this one, ten respondent has been involved 8 to 9 strategic planning implementations including this one, thirty nine respondents have been involved over 10 year strategic planning implementations including this one. Decision making is based on the involvement of government's agencies and large organisations causing the authority of external often foreign capital. There is a noticeable gap between government desire to improve the business environment and its actual achievements. By facilitating communication the use of visualisation can lead to new insights regarding possible positive or negative interdependencies among goals or implementation steps. The visualisation of planning

information can also be helpful in the subsequent implementation stage. Sequencing methods are therefore the most common forms of visualisation used at this stage, using chronological rules, categories and graphic structures to organise information such as objectives and actions, and show precedence and interdependency (Eppler and Platts, 2009).

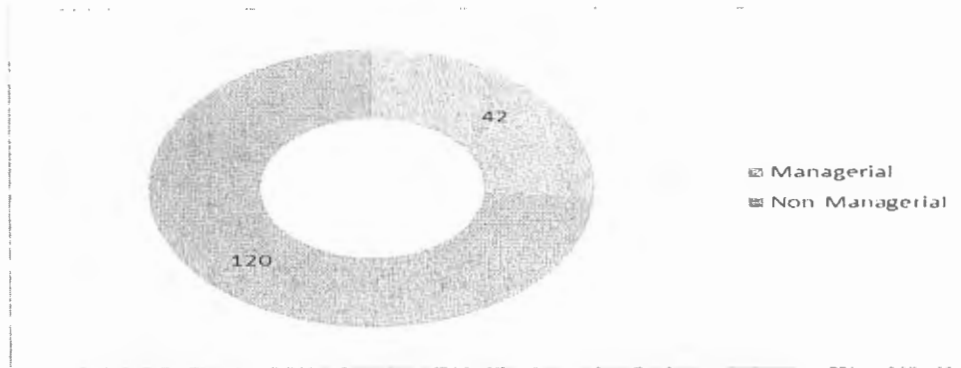


Figure 4.7: What type of post are you in at work?

Figure 4.5 indicates that most respondents are in non- managerial positions at work (120). There are 42 in a management position. The national response to the recession provided little in terms of the strife for equity. The tripartite contract between South Africa's government, business and labour reached in February 2009 did not deal implicitly with this transformational imperative. Other tools of strategic analysis which can be adapted for knowledge management are the product lifecycle and business portfolio matrices such as the famed Boston Box (Salomons, 1994).

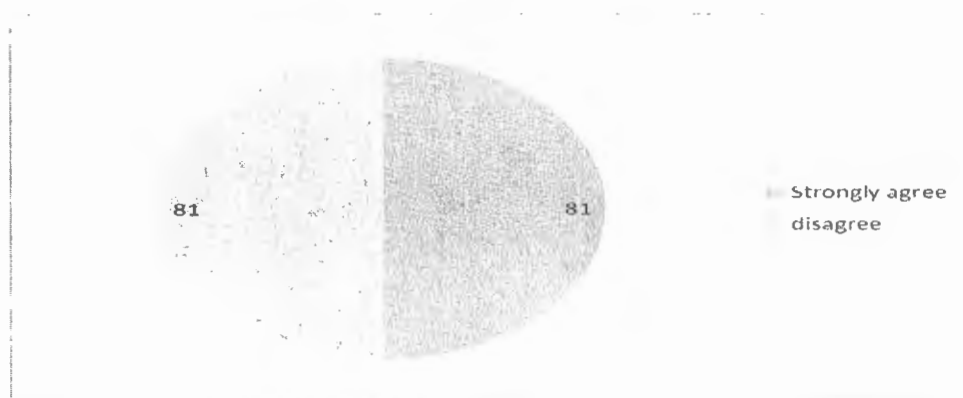


Figure 4.8: Your functional area of strategic planning was implemented within the timelines originally stipulated?

Most of the respondents (81) strongly agree that their functional area of strategic planning was implemented within the timelines originally stipulated whereas eighty one respondents disagree that their functional area of workflow planning was implemented within the

timelines originally stipulated. The lack of management and networks between fearfulness with training and self-employment start-ups have led to a disorganised approach to informal micro-enterprise support. Eppler and Platts (2009) note that the broad aims are now translated into specific objectives and plans to achieve these are formulated and includes the development of timelines, resource allocations, responsibilities and deliverables. In the planning stage, convergent thinking along a time axis becomes paramount, and here visualisation can assist managers in focusing on a reasonable sequence of goals and actions. At this stage, the social function of visualisation becomes vital and its main benefit is to assist the easy communication of the planned sequence and interdependencies of steps and goals.

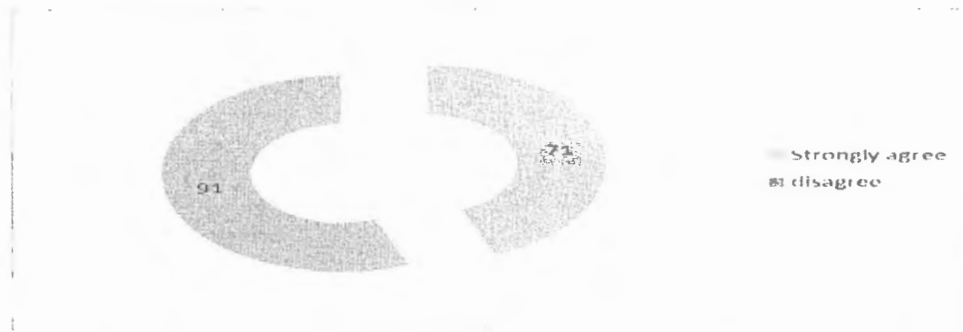


Figure 4.9: The plan assigned, while assuming you understand strategic planning was appropriate?

More than half of the respondents (91) disagree that the plan assigned while assuming that you understand strategic planning was appropriate whereas seventy one respondents strongly agree that the plan assigned while assuming that you understand strategic planning was appropriate. A person who is able to perform complex tasks while working without help or supervision is an experienced and well trained worker. Therefore, employee attitudinal and social skills are regarded to be critical for one to be successful. Trumbach, Payne and Kongthon (2006) note that technology mining is the submission of text mining tools to science and technology information and is informed by understanding of technological innovation processes. Text mining proposes approaches to analyse and contextualise enormous amounts of information and it involves extracting information from text, mining the text to discover rules and patterns. In the case of technology mining, technology mining allows an analyst to identify who is doing what research, identify key sources of technical information, identify emerging or unfamiliar research that may intersect functional interests using lists, matrices, maps, and trends obtained from publication databases.

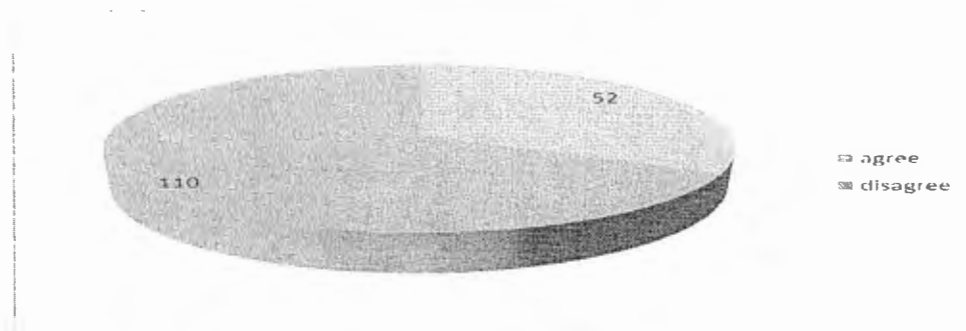


Figure 4.10: Strategic planning had enough people resources assigned to it in your functional area?

One hundred and ten respondents disagree that strategic planning had enough people resources assigned to it in your functional area whereas fifty two respondents agree that strategic planning had enough people resources assigned to it in your functional area. This means that the majority of the respondents know what the importance of adequate people resources to be allocated throughout but there is a lack of judgement by other members. Large companies are using a combination of research and small company alliances as a means to spread their risk and therefore maintain their interests in areas that they may not want to put all their resources (Trumbach, Payne and Kongthon, 2006). This shift allows specific drug organisations to move from drug discovery towards marketing and patient care areas in which small firms do not have the resources upon which to focus.

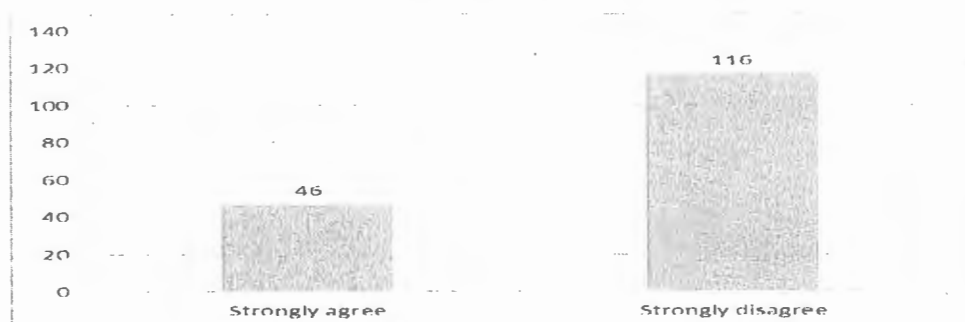


Figure 4.11: Your functional area received sufficient and timeous training for strategic planning?

Figure 4.11 indicates that the majority of respondents strongly agree (46) that their functional area received sufficient and timeous training for strategic planning. One hundred and sixteen respondents strongly disagree that their functional area received sufficient and timeous training for strategic planning. This is a negative result. Jackson (2011) argues that to overcome many challenges the director should introduce a number of measures to take the organisation forward. These include investing in technology, staff development and

training, a plan to set up a college wide staff room in the near future to break down departmental boundaries, developing a college-wide vision and common goals to bring staff members together as an interrelated unit.

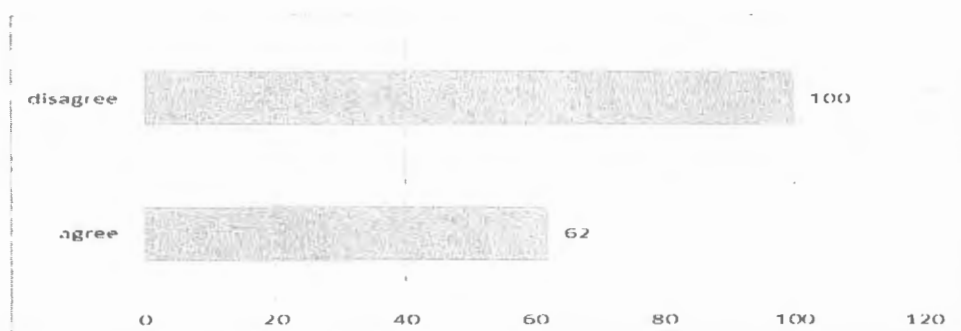


Figure 4.12: There was adequate management support and commitment throughout the strategic planning?

Figure 4.12 indicates that one hundred respondents disagree that there was adequate management support and commitment throughout the strategic planning and sixty two respondents strongly agree that there was adequate management support and commitment throughout the strategic planning. This means that the majority of the respondents do not identify what the importance of adequate management support and commitment throughout the workflow planning is and the organisation needs to look at this. Furthermore, the respondents rely and need leadership qualities from a manager to lead them. Leadership is important for the achievement of the organisation goals and it is crucial for an entrepreneur within the organisation to identify the relevance data within the organisation (Izhar, Torab, Bhatti and Liu, 2013). The existing data must be accurate and relevance to assist every decision making in relation to the organisation goals (Izhar, Torab, Bhatti and Liu, 2013).



Figure 4.13: Satisfactory accountability was placed on the business for their function in the project?

Figure 4.13 indicates that the majority of the respondents strongly agree (45) that there is satisfactory accountability placed on the Business for their function in the project. One hundred and seventeen respondents disagree that there was satisfactory accountability placed on the Business for their function in the project This is a negative finding. Most of the respondents acknowledge that accountability placing in the business is essential for their success in projects. This is in accordance with Cil (2013). Planning of the store layout is crucial as retailers encourage customers to flow through more shopping areas and see a wider variety of merchandise through it .The layout of a supermarket has an impact on a retailers overall performance (Cil, 2013). Layouts concerned with improved utilisation of buildings and land but are more concerned with increasing sales. Any stores layout main factor is that it contributes to the uniqueness of a store because it helps attract customers' attention and the effects of retail store layouts are too vast to overlook. Cil (2013) notes that there is no flawless solution to the layout of a grocery store and discovered that the relationship between products patterns is crucial for effective decision-making and strategic planning in merchandising goods.



Figure 4.14: Project team leaders were sufficiently monitored to ensure that they were fulfilling their functions?

Less than half of the respondents (72) agree that project team leaders were sufficiently monitored to ensure that they were fulfilling their functions whereas ninety respondents strongly disagree that project team leaders were sufficiently monitored to ensure that they were fulfilling their functions. Relational identities, in contrast, define the self in terms of specific roles or relations including others in the definition of one’s own self-identity. Therefore, every identity level provides an alternative basis for self-regulation and alternative ways to define leadership. Managers should keep two different initiatives in mind such as those geared to project management performance and those geared to longer-

term outcomes and by concentrating on certain CSFs, translate project goals into longer term delivery outcomes (Ram, Wu and Tagg, 2005).

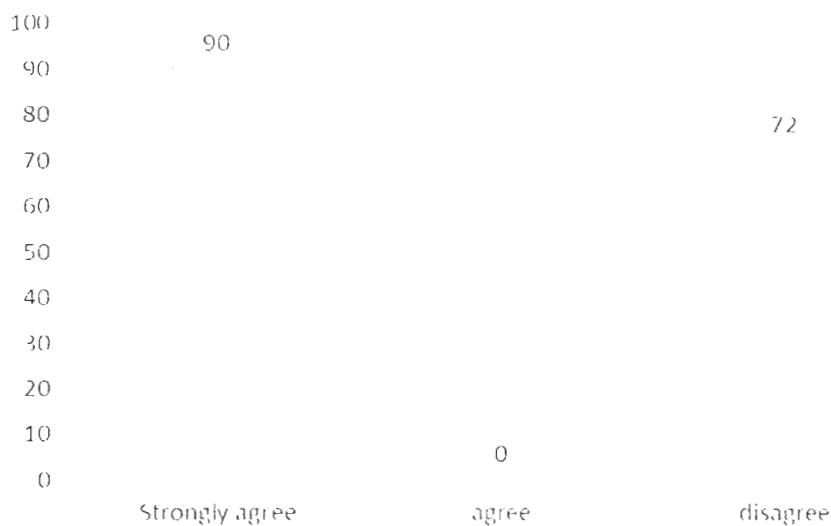


Figure 4.15: An appropriate planning measure was implemented for strategic planning?

Figure 4.15 indicates that ninety respondents strongly agree that an appropriate planning measure was implemented for strategic planning and seventy two respondents disagree that an appropriate planning measure was implemented for strategic planning. The majority of respondents believe that appropriate planning measures implemented strategic planning is necessary to complete and complete their work. Drew (1999) argues that the Balanced Scorecard is a tool for organisational learning and improvement and a performance measurement system. The four perspectives of a Balanced Scorecard are financial, customer, internal business process, growth and learning includes strategic objectives for training, development, technology and teamwork. The internal business process perspective might include objectives for innovation and business process improvement. Knowledge management has an attraction for many stakeholders because it is timely and a means of redressing the excesses of earlier approaches such as BPR and downsizing. It is a broad enough umbrella to cover many critical issues and trends. Some features of knowledge management emphasized by its advocates are, holism and humanism: the priority is to make better use of human potential rather than to downsize it a concern with growth and new possibilities by developing new knowledge, support to creative management practices which result in new competencies, making good use of important technological developments such as networks, political and social support because knowledge drives economic growth (Drew 1999).



Figure 4.16: The original business case adhered to for project strategic planning?

Figure 4.16 shows that ninety two respondents disagree that the original business case was adhered to for project strategic planning whereas seventy respondents strongly agree that the original business case was adhered to for project strategic planning. The majority of the respondents acknowledge how important the original business case is adhered to for project workflow planning. This is a positive result. Eppler and Platts (2009) notes because of the manager's applicable different forms of interactive visualization for strategic management there is a need for research, development, training and evaluation of these methods so that they can effectively help in meeting the wide range of challenges essential in the strategy process. Managers and researchers alike should emphasise visualizing over visualisation conceiving of visualisation as a joint and tentative process rather than a static rendering or aggregation of information.

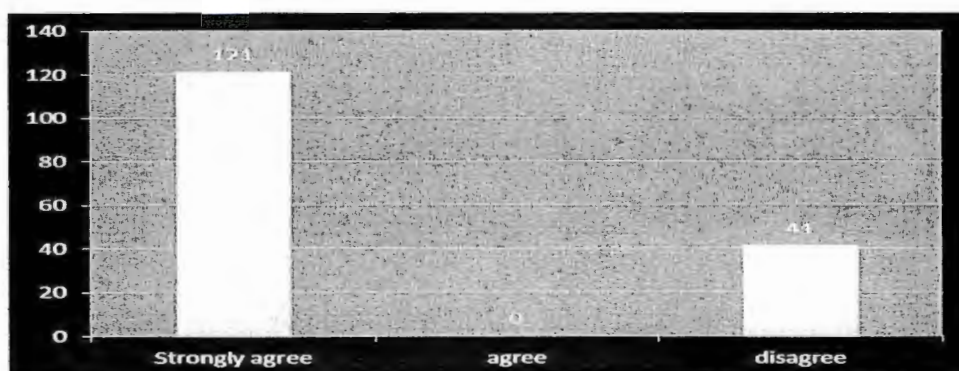


Figure 4.17: Sufficient strategic planning was exercised throughout the phases of Blackrock Mine?

Figure 4.17 indicates that one hundred and twenty one respondents strongly agree that sufficient strategic planning was exercised throughout the phases of Blackrock mine and forty one respondents disagree that sufficient strategic planning was exercised throughout the phases of Blackrock mine. In the divergent phase techniques such as knowledge mapping, concept mapping and mind mapping can open up areas for consideration, while

techniques such as decision trees or morphological boxes can be used to help select particular courses of action in the subsequent convergent phase. An extensive variety of strategy tools exists including mission statements, competitive intelligence, environmental scanning, technology assessment, portfolio matrices, SWOT, core competencies, the value chain, scenario analysis and stakeholder mapping (Drew, 1999).

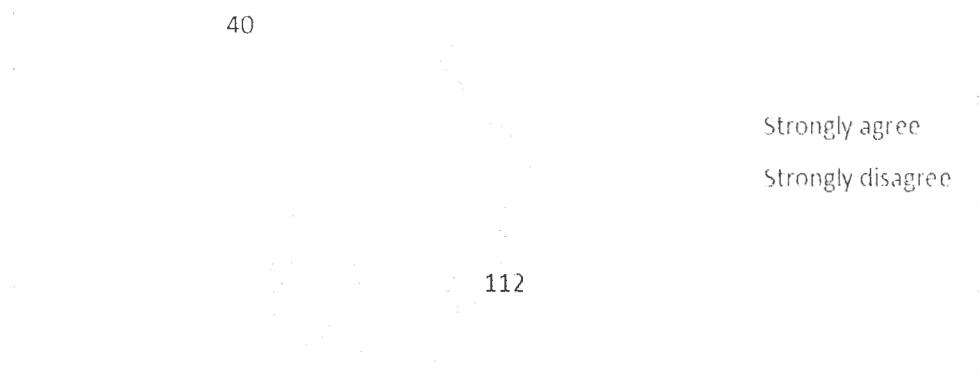


Figure 4.18: Did you participate in any strategic planning event?

Figure 4.18 indicates that some of the respondents (40) agree that they did participate in a strategic planning event whereas one hundred and twelve respondents strongly disagree that they participated in a strategic planning event. This is because the majority of the respondents believe that there are weaknesses in their development or noticed weaknesses in the leaders who lead them. This means that the majority of the respondents believe that there are weaknesses in their development in the leaders who lead them. The social benefits include integrating different perspectives, assisting mutual understanding, and supporting coordination between people (Eppler and Platts, 2009). Therefore, the emotional benefits include creating involvement and engagement, providing inspiration, and providing convincing communication. In the analysis stage, visualisation is valuable because of its cognitive benefits and it helps with the elicitation and synthesis of data, specifically its synthetic ability enables managers to process more data while avoiding information overload and the attendant mental shortcuts or cognitive biases involved.

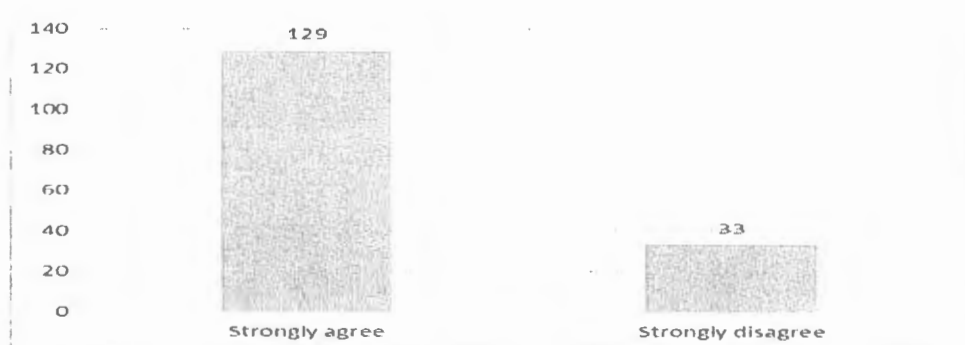


Figure 4.19: Were you part of a strategic planning team?

Majority of the respondents (129) were part of a strategic planning team. Thirty three respondents were not part of a strategic planning team. This indicates that most of the respondents depend on on communication for all their work issues and it is important for workers to be proactive within their work place in their daily activities for administration and development skills. Lake and McInnes (2012) state that by acquiring skills such as excellent communication skills, assertiveness, and adaptability requires an environment where one can learn from their mistakes without fear of harming their career. Jiao, Zhang and Helander (2006) recommend a framework called acquisition of requirements (ACRE) to assist practitioners in understanding the strengths and weaknesses of each of the methods for requirement elicitation. Furthermore, an integrated approach to the elicitation of customer requirements by combining picture sorts, fuzzy evaluation, laddering, neural network techniques to map customer requirements to design specifications and to develop taxonomy of product requirements to assist in traditional qualitative market research.

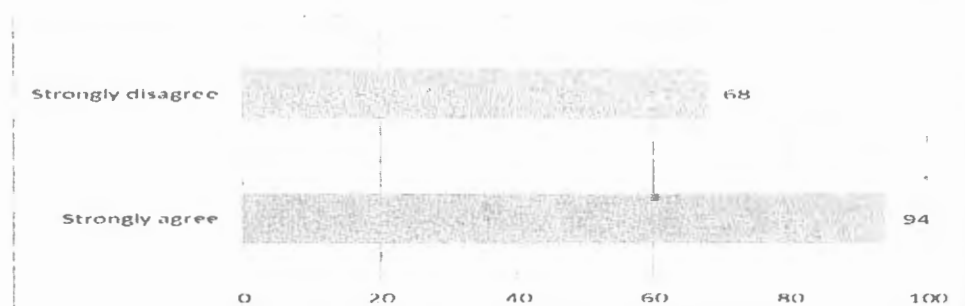


Figure 4.20: Do you know what the Blackrock Mine Business Plan and how strategic planning impacts upon it?

Figure 4.20 shows that the majority of respondents (94) know what the Blackrock Mine Business Plan and how strategic planning impacts upon it whereas sixty eight respondents do not know what the Blackrock Mine Business Plan and how strategic planning impacts upon it. This because most of the respondents are in a n non-managerial position who have

better skills or experience and have the ability to communicate well with other members with confidence and how strategic planning impacts upon it. This is a positive result. Lake and McInnes (2012) argue that the development of cognitive skills, such as critical thinking, clinical reasoning and problem solving is important because there is evidence that delayed or poor development may cause newly qualified practitioners to reinforce the gap between research evidence, academic teaching and clinical practice resort to ritualistic behaviour and routines rather than evidence based or autonomous practice. –The importance of learning is evident in programme documentation and regulatory frameworks. However, there is a tendency to focus on theoretical knowledge and technical skills with limited information on strategies and techniques for mentors to support and facilitate cognitive skill development.

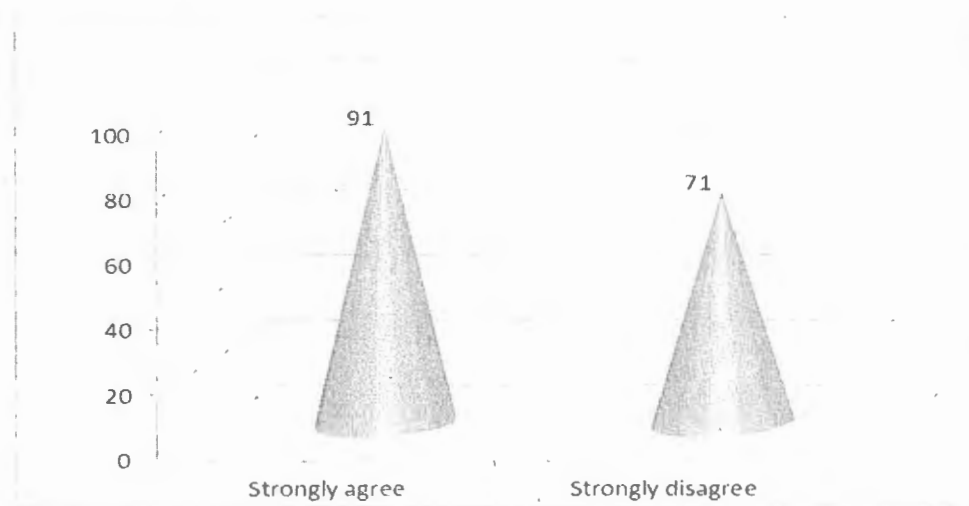


Figure 4.21: The strategic planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Blackrock Mine business strategy?

Figure 4.21 indicates that the majority of respondents agree (91) that strategic planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Blackrock Mine business strategy whereas seventy one respondents strongly disagree that the strategic planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Blackrock Mine business strategy. This is a positive result. This means that most of the respondents believe that the strategic planning was aligned to the business strategy and it is necessary for further developments at the Blackrock Mine.

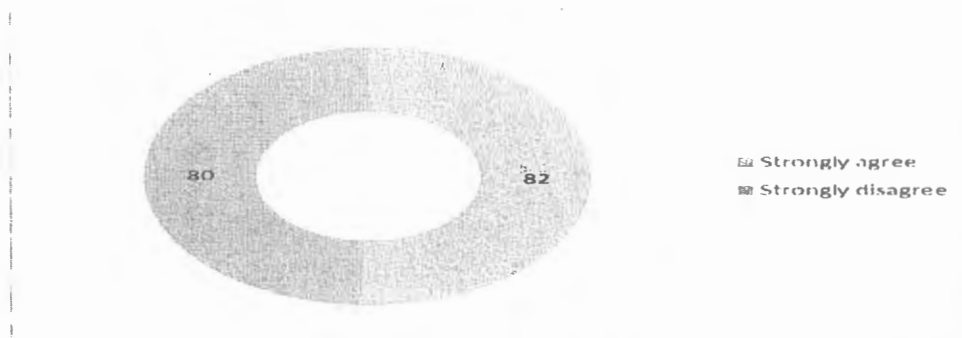


Figure 4.22: The concurrent restructuring and centralisation process at Blackrock Mine had a negative effect on the strategic planning implementation?

Figure 4.22 indicates that eighty two respondents strongly agree that the concurrent restructuring and centralisation process at Blackrock Mine had a negative effect on the strategic planning implementation whereas eighty respondents strongly disagree that the concurrent restructuring and centralisation process at Blackrock Mine had a negative effect on the strategic planning implementation. This indicates that most of the respondents believe that from the integration of restructuring and centralisation processes at the Blackrock Mine has motivated them positively in their daily planning. By facilitating communication, the use of visualisation can lead to new insights regarding possible positive or negative interdependencies among goals or implementation steps. The visualisation of planning information can also be helpful in the subsequent implementation stage. Sequencing methods are therefore the most common forms of visualisation used at this stage, using chronological rules, categories and graphic structures to organise information such as objectives and actions, and show precedence and interdependency (Eppler and Platts, 2009).

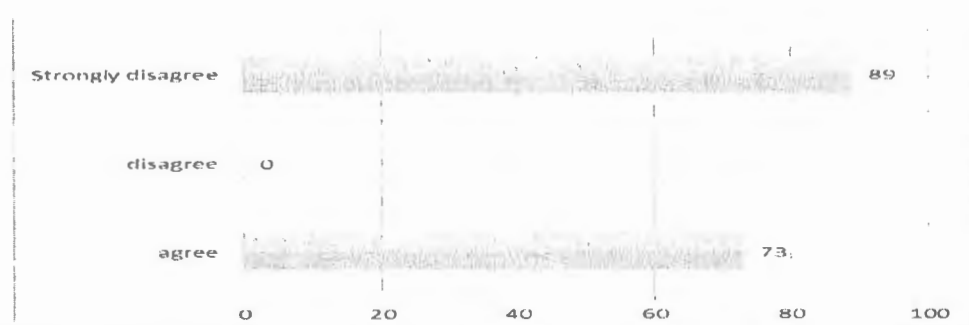


Figure 4.23: I attend seminars or workshop on strategic planning?

Figure 4.23 indicates that eighty nine respondents strongly disagree that they attended seminars or workshop on workflow planning whereas seventy three respondents agree that they attended seminars or workshop on workflow planning, nine respondents agree that

they attend seminars or workshop on workflow planning This means that the employees are in non-managerial positions and there is a must for further training to be implemented by the Blackrock Mine to improve their workers skills in strategic planning and there is changing circumstances and a lack of communication among team members. Drew (1999) argues that society in London provided an opportunity for reflection, learning and presentation of interesting cases. Unilever PLC has used knowledge to good effect in its Ragu sauces division and has held a series of workshops around the world to map its knowledge of tomato sauce technology and factors contributing to the taste, texture and quality of the product (Drew, 1999). Knowledge networks or communities were set up to develop and share new insights. Unilever has given a lot of attention to organisational learning and building knowledge capture into key processes.

4.4 Correlation

The correlation between the years working and age shows +0.899- a positive association. This means that workers are happy with the team leaders and older people are capable in their functions. The correlation between the project team leaders were sufficiently monitored to ensure that they were fulfilling their functions and status shows +0.894- a high positive association. This means that employees are happy in their workplace and have sufficient resources from managers for their development. The correlation qualification and age shows +0.889 – a positive association. This could be interpreted that people are satisfied with the role of organising and are well educated and trained for their positions at work. The correlation between qualification and was there adequate management support and commitment throughout the strategic planning shows -0.779 – a very high negative association. This means employees are not satisfied with the mines' management support and commitment or other team members in the strategic planning as they lack delegation skills. The correlation between was there adequate management support and commitment throughout the strategic planning and the plant assigned while assuming you understand strategic planning was appropriate shows +0.872- a positive association. This means that the workers in a managerial position are well trained, skilled and part of workflow events implementing these strategies. The correlation between an appropriate planning measure was implemented for strategic planning and the strategic planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Blackrock Mine business strategy shows +0.951- a positive association. This means most of the employees who are in a managerial

position a have an understanding on what strategic planning policy is and are able to align appropriate business strategies for Blackrock mine. The correlation between I attend seminars or workshop on workflow planning and the concurrent restructuring and the concurrent restructuring and centralisation process at Blackrock Mine had a negative effect on the strategic planning implementation shows $+0.676$ – a positive association. This means that the employees believe that there is a lack of managerial skills throughout phases of the projects and this need to be addressed by Blackrock mine. The correlation between did the original business case adhered to for project strategic planning and do you know what the Blackrock Mine Business Plan and how strategic planning impacts upon it this shows $+0.534$ – a positive association. This shows that most of the workers between the ages of 31-40 years are well educated and know what the strategic planning entails. The correlation between an appropriate planning measure was implemented for strategic planning and were you part of a strategic planning team shows $+0.676$ – a positive association. This means that the workers in a managerial position are well trained, skilled and part of a team and the events implementing these strategies.

4.5 Conclusion

The next chapter discusses all the work done and comprises of the summary of the study, addresses findings per research questions, identifies gap areas, provides opportunities and future research opportunity. Conclusion of the study will be drawn and recommendations will also be outlined.

In this chapter detailed results of the research have been provided. The results have been demonstrated in the form of graphs and stats. A correlation analysis has been also provided to see the relationships between main variables in this study. The analysis of the results revealed that age, level of education and years of experience are not determinants of whether respondents are positive or negative about the improvement of resources at Blackrock mine. The findings have also established a link between literature that was reviewed in this study with the data which was collected and presented. The study used a quantitative approach to describe and analyse the findings, followed by the findings and measures of association statistics.

The next chapter presents the recommendations as per the results displayed in this chapter. The recommendations and conclusion will add value in the existing literature. Further research areas are also suggested as an indication of gaps in this field of study.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study investigated the current strategy planning processes at the Blackrock mine as well as how this department interacts to make the process run smooth in order to ensure the success of the process in line with the organisations goals and objectives.

There is appropriate strategy planning processes in place but the majority in non – managerial positions does not understand the role they play in this process. Most of the employees do not understand the organisation’s vision and mission statement and the flaw between departments seemed to be communication. Planning sessions are held and contingency plans are made but not successfully implemented and not filtered correctly to bottom line staff.

Accordingly, the study was concerned with posing the following questions in the main: (1) What are the threats which are posed by the new mines to Blackrock mining? (2) What strength does Blackrock mining has, which might act as basis for creating competitive advantage? (3) What are the key factors/aspects which Blackrock mining should put in place to remain competitive?

This chapter will present the summary of the study, and address the findings per research question. It will also provide managerial guidelines for opportunities, conclusion of the study will be drawn and recommendations will also be outlined.

5.2 Summary of Study

The research study was informed by the review of literature which included the following concepts: competitive intelligence, planning and mining, tools, knowledge, management, strategies, mission statements, SWOT, business, frameworks and mining and re-organisation. This was to enable the research study to be defined and suggested appropriately with relevant definitions, theories and other empirical studies. A variety of research methods such as qualitative and quantitative were used. The research methods looked at instrumentation, research type, population, sampling method, and data gathering method from a theoretical perspective.

A questionnaire was developed and used to gather primary data based on demographics, e.g. age, gender, years of service in the department, and position. Other related questions were used to further extract information or data from the sample population.

5.3 Response to the Research Questions

The main findings of this research in relation to each research question are now discussed. Each question is followed by a discussion of the findings relating to that question.

5.3.1 What are the threats which are posed by the new mines to Blackrock mining?

Competitive intelligence industry analysis and environmental scanning are used to evaluate threats and opportunities in the external environment. Key competitors, substitute technologies, potential entrants, customers and suppliers can be developed about a knowledge map (Drew, 1999). This map could include pointers to sources of knowledge, yellow pages of experts on the corporate intranet, one of the first applications of knowledge management technology.

The traditional data mining methods based on association rules may be inadequate in completely uncovering the hidden patterns of sales based on transaction record SMEs (Cheung and Li, 2012). It can be seen that trading companies form the backbone of business communities and SMEs have intelligence requests and ought to consider seeking out relevant information in this regard (Cheung and Li, 2012).

The advantage that Blackrock has is that it mines the best manganese product whereas the new mines are fighting for the low grade material. Other areas of competition includes a situation where Blackrock and BHP Billiton use to share 10 trains provided by the government to transport raw material to the ports for exports, however as a result of the emergent new mines, the 10 trains have to be shared amongst with three other mines.

Cultural change was an intense preoccupation of IBM and B and it is distinguished that both companies now are delivering improved results (Eppler and Platt, 2009). Many consulting firms reported using knowledge as a basis for staff evaluation and American Management Systems (AMS) requires staff to contribute knowledge as a condition of membership in important internal networks.

Under the 1920 law, there was nothing to prevent small prospecting interests from obtaining licenses next door to large enterprises and the criteria for land allocation to mining interests was not clearly delineated. In the realm of law, sovereignty over property regimes is used to construct a knowable, homogenous, and divisible geography, where

capital's territorialized investment is assured through the legal guarantees of the centred sovereign state. Moreover, in capital intensive activities like large-scale gold mining where the time between initial investment and returns can be long, capital also must be assured a fixed temporality of investment in which contracts can be expected to last throughout the length of the project (Emel, Huber and Makene, 2011).

5.3.2 What strength does Blackrock mining has, which might act as a basis for creating competitive advantage?

The organisation can identify the spectrum of research across the field and identify the strengths and weaknesses of its external partners (Trumbach, Payne and Kongthon, 2006). Technology mining can also be operated to identify potential partners based on corresponding or required skills of the organisation by building the dominion knowledge base of the organisation to increase its absorptive capacity and its ability to learn.

While external relationships are a powerful means for learning and can benefit an organisation by evading spending cash, re-inventing the wheel as disproportionate dependence on external sources may degrade an organisations internal skills. Such a degradation of these internal skills may cause the dilution of its core competencies and a weakening of the firm's competitive advantage. Thus, a balance must be maintained between the use of internal and external sources and utilisation of information (Trumbach, Payne and Kongthon, 2006).

Microsoft takes a lot of care to match bright people to their business strategy. A knowledge audit can be used in conjunction with implementation of a balanced scorecard to ensure that strategic objectives and organisational capabilities are potentially in alignment. Other tools of strategic analysis which can be adapted for knowledge management are the product lifecycle and business portfolio matrices such as the famed Boston Box (Salomons, 1994).

Drew (1999) argues that a lot of the old rules of competitive advantage are breaking down as clever and aggressive new firms find ways of circumventing or tunnelling through barriers to entry or of rapidly creating entirely new brands such as Amazon.com, Excite and Yahoo. There are clearly many issues of concern for strategists and knowledge managers.

The new knowledge manager should be very careful to gauge corporate commitment and the culture. A distillation of recommendations made by numerous conference speakers is the following:

- ❖ Preparation and thoughtful analysis with careful consideration of practical issues.
- ❖ Avoid philosophising and academic abstractions.
- ❖ Avoid developing integrated knowledge architecture at first attempt.
- ❖ Look for better ways of doing things the organisation is already doing.
- ❖ Build knowledge networks and communities of practice around important problem areas.
- ❖ Integrate knowledge management with the firm's strategy.
- ❖ Seek the full support of top management and the board.
- ❖ Align evaluation and incentive systems with knowledge sharing.
- ❖ Know your firm's dominant political culture and adapt your approach accordingly.
- ❖ Apply knowledge to knowledge management: benchmark and learn from the best practitioners.

Eppler and Platts (2009) argue that the cognitive benefits of visual representations include facilitating elicitation and synthesis of information, enabling new perspectives to allow better exhaustive comparisons and facilitating easier recall and sequencing. The social benefits include integrating different perspectives, assisting mutual understanding, and supporting coordination between people; and finally the emotional benefits include creating involvement and engagement, providing inspiration, and providing convincing communication. In the analysis stage, visualisation is valuable because of its cognitive benefits and it helps with the elicitation and synthesis of data, specifically its synthetic ability enables managers to process more data while avoiding information overload and the attendant mental shortcuts or cognitive biases involved.

5.3.3 What are the key factors/aspects which Blackrock mining should put in place to remain competitive?

Drew (1999) argues that society in London provided an opportunity for reflection, learning and presentation of interesting cases. The following are some examples:

- a. Unilever PLC has used knowledge to good effect in its Ragu sauces division and has held a series of workshops around the world to map its knowledge of tomato

sauce technology and factors contributing to the taste, texture and quality of the product.

- b. Knowledge networks or communities were set up to develop and share new insights. Unilever has given a lot of attention to organisational learning and building knowledge capture into key processes.

Yasuda and Iijima (2005) note that the association between organisations business strategy and its selection of alliance activities provide a new aspect of analysis for strategic alliances and is also useful for an organisation planning of alliance activities as a measure of achieving their business objectives. Furthermore, Yasuda and Iijima (2005) suggest that certain disagreeable characteristics of alliance activities have an adverse impact on the execution of specific business strategy.

The use of visualisation for communication can lead to new insights regarding possible positive or negative interdependencies among goals or implementation steps. The visualisation of planning information can also be helpful in the subsequent implementation stage. Sequencing methods are therefore the most common forms of visualisation used at this stage, using chronological rules, categories and graphic structures to organise information such as objectives and actions, and show precedence and interdependency (Eppler and Platts, 2009). Techniques can be generic such as timelines or road-mapping techniques or increasingly specific such as Critical Path Method (CPM) or Project Evaluation and Review Technique (PERT) diagrams.

Wubbeke (2013) argues that developing downstream industries is in focus. The high-end application of rare earth materials has already become a central aspect of China's rare earth industry development.

According to Wubbeke (2013), one must encourage foreign investments such as the environmental management, recycling and reuse of REE as well as high-end application and the manufacture of REE production equipment. The case of REE industry adds to the literature on industry regulation in China by showing that concerns over resource depletion, environmental impacts and low prices in technologically important fields can lead to concerted intervention from the government in an industry deemed strategic (Wubbeke, 2013).

Academic and trade literature validates that implementation of ERP systems remains a complex exercise often resulting in difficulties and failures (Ram, Wu and Tagg, 2013). ERP implementation has frequently led to performance improvements for organisations as well as other tangible and intangible benefits (Ram, Wu and Tagg, 2013).

Other firms are developing and providing products and services in which they must remain ahead of the competition and either way, small firms must have the knowledge to enable them to remain at the forefront of technological advances. Effective Rand D is essential for small organisations to remain competitive and Rand D in small organisations is more efficient than larger enterprises (Trumbach, Payne and Kongthon, 2006). Small organisations are restricted in resource availability such as cash flow and this limits the spending that is possible.

Taplin (2006) argues that change initiatives in manufacturing organisations have shown how new work practices o remain temporary, or have been partially introduced, or done so within the framework of old operating principles that instead of organisational innovations designed to improve operational effectiveness some organisations seek meagre efficiency gains that involve little systemic change. Effectiveness is defined as procedures designed to sustain long-term operational performance in a wide range of activities such as flexibility, productivity, quality and speed of throughout and which can entail indirect cost savings. Efficiency refers to direct cost lowering organisational changes that are short term oriented and involve direct attempts to improve labour productivity.

Competitive intelligence involves the identification of potential risks and opportunities by gathering and analysing information about the environment to support managers with strategic thinking (Xu, Liao, Li and Song, 2011). Competitive intelligence, industry analysis and environmental scanning are used to evaluate threats and opportunities in the external environment.

Key competitors, substitute technologies, potential entrants, customers and suppliers can be developed about a knowledge map (Drew, 1999). This map could include pointers to sources of knowledge, yellow pages of experts on the corporate intranet, one of the first applications of knowledge management technology. Some observers have also suggested using intelligent software agents over the internet to collect up-to-date competitive and scientific information.

5.4 Limitations

The use of sampling in this study limited the chance of associates of the target population to be included in the sample. This limited the potential of the study to extract a complete picture of the challenges from the perspective of other members.

5.5 Managerial Guidelines

From the results of this study the following guidelines are given to the Blackrock mine in the Northern Cape that should have a sustainability solution or are planning to develop and implement sustainability in the future:

- Employees in at Blackrock mine training should be implemented whereby they understand the roles that they play in the process in relation to other departments in the chain of events.
- Monitoring and implementation of material covered have to be monitored by the team leaders of the respective sections in the mine.
- A system needs to be put in place in order to track queries as well as turnaround time to enable the reduction in costs of duplicating tasks .
- Plans discussed at the beginning of the month must to be implemented by respective team leaders.
- Manpower need to be increased during peak times to ensure quantity and quality of work is produced in the turnaround time.
- New or better tools and resources are needed for workers to be able to finish their tasks / daily goal to produce in their shifts, which no delays set other workers behind.
- Contingency plans should be in place to provide for absenteeism achieved by employing experienced casual staff who understands the processes clearly and so that any additional costs for staff will be less.

- Culture acceptance embracing of change needs to be taught amongst staff and with dealing with change in the mine.

5.6 Conclusion

All departments in the strategy planning process should be aware and understand the flow of other departments in order to facilitate the smooth running of processes and thereby positively contributing to the final goal, the bottom line. Furthermore, findings can improve organisational performance, quality of education and development of human resources.

The objectives of the strategy planning processes is to redefine and reconstruct the components of lengthy business cycles so that the time required to execute a task is minimised and the transfer time between tasks is eliminated. This means that there will be improved efficiency through the elimination of many task steps. The value adding will be able to bring from control over processes, which enables the business unit in redesigning their processes.

Xu, Liao, Li and Song (2011) note that when one tries to identify potential risks in the organisation, it is vital to collect and analyse information about their competitors' products and plans firstly. By doing so it benefits the organisation with own their strengths and weakness to countervail their competitors with new products and designs. Strategy development entails the generation of options, subsequently the assessment and reduction of options until a particular course is selected. Thus visualisation methods should first support divergent thinking to assist managers in the development of a great variety of feasible options and scenarios.

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APPENDIX A: MATRIX

	Computer Intelligence	Planning	Tools	Other Industries	Knowledge Management and Strategy	Vision and Mission Statement	SWOT	Business Knowledge	Framework	Mining Industry and Re-Organisation	Mining
Workflows and e-Science 1		•	•	•	•	•	•	•	•	•	•
A deductive system for proving workflow models 2	•										
Correctness criteria for dynamic changes in workflow systems 3	•			•	•		•		•		
A reference architecture for workflow management systems 4		•		•		•		•	•	•	•
Realtime scheduling of Workflow Management Systems based on p-time Petri net model with hybrid resources 5	•	•	•		•			•		•	
Meta workflow as a control and coordination mechanism for exception handling in workflow systems 6			•		•	•			•		•
Understanding user differences in open-source workflow management 7	•			•	•	•		•		•	•
A model-driven workflow fragmentation framework for collaborative workflow architectures and systems 8	•	•	•		•			•	•		•
Handling signature purposes in workflow systems 9		•				•		•			•
Dynamic workflow change in PDM systems 10		•						•	•	•	•
Evolution design of user interfaces for workflow information systems 11	•		•	•		•		•	•	•	
Information assurance metric development framework for electronic bill presentment and payment systems 12				•				•		•	•
Recommender system based on workflow 13				•	•	•		•	•	•	•
Metagraphs in workflow support systems 14	•	•	•		•	•			•		
Modelling business process with workflow systems Alternative approaches 15			•	•	•	•			•	•	
A security framework for a workflow-based grid development platform 16	•	•			•	•		•	•	•	
An operational approach to the design of workflow systems 17					•			•	•	•	•
Integrating AI planning techniques with workflow management system 18		•			•		•		•		•
The design of intelligent workflow monitoring with agent technology 19	•		•	•		•	•	•			•
Collaborative filtering based on workflow space 20		•						•			•
Goals description and application in migrating workflow system 21		•		•			•	•			
Developing a reusable workflow engine 22				•	•	•	•	•			•
A framework for risk assessment based on analysis 23	•					•					•
Estimated financial savings associated with health information exchange 24		•		•		•	•		•		
A reference model for team-enabled workflow management systems 25		•		•		•	•		•	•	

APPENDIX B: TABLE OF CONSTRUCTION

Questionnaire Development Matrix

Questionnaire Section	Types of Research Question	Question Nr.	Development Matrix				
			Survey Question/ Statements	Response Options	Data Type	Appropriate Data Measure	Appropriate Statistical Test
Section I	Demographic Questions	1.1	Please tick your age group in the appropriate block:	21-30, 31-40, 41-50, 51-60, 60+	Discrete	Ordinal	Basic descriptive statistics, single group t test, the z proportions test the X^2 test. (Use demographic data to characterise your respondents)
		1.2		Male - Female	Dichotomous	Nominal	
		1.3	What is your gender?		Discrete	Ordinal	
		1.4		1-2, 3-4, 5-6, 7-8, 9-10, 10+	Discrete	Ordinal	
		1.5	How long have you been working Blackrock Mine in the Northern Cape Province?	Financial - Business	Dichotomous	Nominal	
		1.6		1, 2, 3, 4, 5+	Discrete	Ordinal	
			Was your involvement in strategic planning for Blackrock Mine advisor staff from strategy or Business perspective?	Managerial - Non-Managerial	Dichotomous	Nominal	
			How many strategic planning implementations have you been involved in including this one?				
			What type of post are you in at work?				

Section 2	Section 2	What are the threats which are posed by the new mines to Blackrock mining?	2.1	Your functional area of strategic planning was implemented within the timelines originally stipulated.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum (= Cline)	Scalar (Likert Scale)	Any member of the X^2 family or correlation tests, e.g., Phi coefficient, the contingency coefficient and Cramer's V, the lambda coefficient or the uncertainty coefficient (U) or the Pearson significance test. (Continuous data reveal attributes of whatever studies,
			2.2	The plant assigned while assuming you understand financial literacy was appropriate.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
			2.3	Strategic planning had enough people resources assigned to it in your functional area.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
			2.4	Your functional area received sufficient and timeous training for strategic planning.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
			2.5	There adequate management support and commitment throughout the strategic planning.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
			2.6	Satisfactory accountability was placed on the strategic planning team for	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
			2.7					
			2.8					
			2.9					
			2.10					

Section 3	What strength does Blackrock mining has, which might act as basis for creating competitive advantage?	3.1	Sufficient strategic planning was exercised throughout the phases of Blackrock Mine.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	Any member of the X^2 family or correlation tests ...
		3.2	Did you participate in any strategic planning event?	Yes - No ²	Dichotomous	Nominal	Basic descriptive statistics, single group t test, the z proportions test the X^2 test.
		3.3	Were you part of a strategic planning team?	Yes - No	Dichotomous	Nominal	
Section 4	What are the key factors/aspects which Blackrock mining should put in place to remain competitive?	4.1	Do you know what the Blackrock Mine Business Plan and how strategic planning impacts upon it	Yes - No	Dichotomous	Ordinal	Any member of the X^2 Any member of the X^2 family or correlation tests, e.g., Phi coefficient, the contingency coefficient and Cramer's V, the lambda coefficient or the uncertainty coefficient (U) or the Pearson significance test.
		4.2	The strategic planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Blackrock Mine business strategy.	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	(Continuous data reveal attributes of whatever one studies, allow one to determine
		4.3	The concurrent restructuring and centralisation process at Blackrock Mine had a negative effect on the strategic planning implementatio	Strongly Agree - Agree - Disagree - Strongly Disagree	Continuum	Scalar (Likert Scale)	
		4.4					

			n. I attend seminars or workshop on strategic planning .				general trends and establish significant correlations = correlations between two attributes)
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APPENDIX C: QUESTIONNAIRE

FOR OFFICE USE ONLY: Respondent Code: _____

“Factors in maintaining a competitive edge in a mining industry at Blackrock Mine”

Graduate School: North-West University

Researcher: Mercy Madua

Supervisor: Prof S Lubbe

Note to the respondent:

- We need your help to understand the factors affecting maintaining a competitive edge in a mining industry Blackrock Mine
- Although we would like you to help us, you do not have to take part in this survey.
- If you do not want to take part, just hand in the blank questionnaire at the end of the survey session.
- What you say in this questionnaire will remain private and confidential.

The questionnaire as three parts:

Part 1 asks permission to use your responses for academic research.

Part 2 asks general personal particulars like your age, gender etc.

Part 3 to 5 asks questions relating to the use of maintaining a competitive edge in a mining industry.

How to complete the questionnaire:

1. Please answer the questions as truthfully as you can. Also, please be sure to read and follow the directions for each part. If you do not follow the directions, it will make it harder for us to do our project.
2. We are only asking you about things that you and your fellow colleagues should feel comfortable telling us about. If you don't feel comfortable answering a question, you can indicate that you do not want to answer it. For those questions that you do answer, your responses will be kept confidential.
3. You can mark each response by making a tick or a cross, or encircling each appropriate response with a PEN (not a pencil), or by filling in the required words or numbers.

Thank you very much for filling in this questionnaire.

Part 1: Permission to use my responses for academic research

I hereby give permission that my responses may be used for research purposes provided that my identity is not revealed in the published records of the research.

Initials and surname: _____

Postal address: _____ Postal code: _____

Contact numbers: Home: _____ Cell: _____

No	PART 2: GENERAL PERSONAL PARTICULARS			
	<i>Please tell us a little about yourself</i> <i>Please mark only ONE option per question below.</i>		8.	The plan assigned, while assuming you understand strategic planning was appropriate? ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
1.	How old are you? ☐ under 21 years ☐ 21-30 years	☐ 31-40 years ☐ 40-50 years ☐ Over 50 years		
2.	What is your gender? Male	Female	9.	Strategic planning had enough people resources assigned to it in your functional area. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
3.	What is your highest level of education? ☐ Some schooling or less (low or high) ☐ Matric ☐ Technical qualification ☐ Undergraduate degree		10.	Your functional area received sufficient and timeous training for strategic planning. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
4.	How long have you been working Blackrock Mine in the Northern Cape Province? ☐ under 2 years ☐ 2-3 years	☐ 3-4 years ☐ 5-6 years ☐ 7-8 years ☐ Over 9 years	11.	There adequate management support and commitment throughout the strategic planning. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
5.	Was your involvement in strategic planning for Blackrock Mine advisor staff from a Strategy or Business perspective? ☐ Strategy ☐ Business		12.	Satisfactory accountability was placed on the strategic planning team for their function in the project. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
6.	How many strategic planning implementations have you been involved in including this one? ☐ under 2 ☐ 2-3 ☐ 3-4	☐ 5-6 ☐ 7-8 ☐ Over 9	13.	Satisfactory accountability was placed on the business for their function in the project. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
6.	What type of post are you in at work? ☐ Managerial ☐ Non-Managerial		14.	Project team leaders were sufficiently monitored to ensure that they were fulfilling their functions. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree

	PART 3: The threats which are posed by the new mines to Blackrock mining? <i>Please mark only ONE option per question Below</i>	14.	An appropriate planning measure was implemented for strategic planning. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree.
7.	Your functional area of strategic planning was implemented within the timelines originally stipulated. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree	15	The original business case adhered to for project strategic planning. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree.
No.	PART 4: What strength does Blackrock mining has, which might act as basis for creating competitive advantage? <i>Please mark only ONE option per question below.</i>	19	Do you know what the Blackrock Mine Business Plan and how strategic planning impacts upon it ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
16.	Sufficient strategic planning was exercised throughout the phases of Blackrock Mine. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree.	20.	The strategic planning was aligned to the business strategy for the 2011/2012 financial year that is the strategic planning policy was appropriate to the Blackrock Mine business strategy. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
17	Did you participate in any strategic planning event? Yes No	21.	The concurrent restructuring and centralisation process at Blackrock Mine had a negative effect on the strategic planning implementation. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree
18	Were you part of a strategic planning team? ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree	22.	I attend seminars or workshop on strategic planning. ☐ Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree.
No.	PART 4: What strength does Blackrock mining has, which might act as basis for creating competitive advantage? <i>Please mark only ONE option per question below.</i>		THANK YOU FOR YOUR TIME THE END