Strategy Implementation Practices and Processes in Defence Evaluation and Research Institutes in South Africa

By

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DECLARATION

I declare that "**Strategy Implementation Practices and Processes in Defence Evaluation and Research Institutes in South Africa**" is my own work and that all sources that I have used in this study have been indicated and acknowledged by means of complete references.

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ABSTRACT

The purpose of this study was to explore the practices and processes executed by middle managers as practitioners during the implementation of strategy. In order to do that, this study investigated the problem of strategy implementation, analysed existing literature, identified the gaps, and explored the roles of middle managers in terms of strategy practices and processes, specifically in the South African Defence Evaluation and Research Institutes (DERI) context. Resources, time and effort are applied to formulating strategy but less of these to the execution of the strategy which includes the emotions, motivations and actions that are intangible during the implementation of strategy. The study therefore attempts to answer the following research question: What practices and processes are employed in strategy implementation in DERIs in South Africa?

The literature study was undertaken with the objective of mapping the research problem and to highlight, through critical discussion, the latest work done on the subject of this study. The gap in relation to research work was identified and the contribution is clear that not much work has been done in this environment.

Research is a systematic process where information on a specific topic is gathered in order to increase understanding of that phenomenon. A qualitative study was performed and data was obtained from several institutes through interviews, documents and questionnaires in order to build a rich database that could be analysed for the required output. Engagement with the first level of management as well as the next level management teams ensured that a representative population group was used during this study. The data was organised, categorised, interpreted, identified, synthesised and generalised. The quotations identified from the text were coded through inductive coding and grouped into categories until a logical theme, category and concept was formed.

The objective of this research was to investigate, identify and understand what the strategy practices and processes are that make highly technical and scientific institutes

execute strategies successfully. The study provided insight into and clarity on the complexity of the strategy implementation process as executed by middle managers, particularly in the South African context. The link was explored between formulation and implementation as applied by middle managers as practitioners and the practices and processes in use were identified.

It was demonstrated that the outcome of this research is applicable to the research problem and also provides an understanding of the phenomenon, namely strategy practices and processes in use at the Defence Evaluation and Research Institutes. It can therefore be concluded that the research objective was achieved.

Key terms:

Barriers to implementation; Defence evaluation and research institutes; Implementation enablers; Implementation practices; Implementation processes; Middle managers; Strategy implementation; Strategy-as-practice; Strategic management; Strategic text and talk; Strategy formulation; Implementation processes.

ACKNOWLEDGEMENTS

This study was a journey for me personally. Throughout this journey there were several experiences, emotions, setbacks, successes and moments experienced. There were times of laughter, learning a lot, reading, reading, reading, persistence, perseverance, late nights, early mornings, long discussions, new friends, new acquaintances, and wonderful experiences. The journey is now complete and looking back, it can be said that the journey was good, and the experience was very enhancing. There is an African proverb that says "If you want to walk fast, walk alone. If you want to go far, walk together." During this journey I never walked alone and was accompanied by people that supported me to complete this endeavour. It is therefore appropriate to acknowledge their contribution towards the progress I made during this undertaking.

Firstly, I would like to thank God for giving me the opportunity, ability and strength to be able to participate in this life-enhancing experience. Secondly, I thank Professor Peet Venter for his continuous support, advice, discussions, friendliness, motivation and professionalism without which I could not have completed this undertaking.

Then also the SBL staff: Tumi, Megan, Rehana, Prof. Okharedia, Prof. Neuland and everybody who supported me during this journey.

Thank you also to all the participants who willingly contributed to the research and added to the effort undertaken. Then last but not least, to my wife and two daughters who never complained but were only ever supportive and indulgent during this journey.

"We walked far"

ABBREVIATIONS

All abbreviations are written out in full when used the first time. The list below is provided for easy reference.

BCG	Boston Consulting Group
BPR	Business Process Re-engineering
CAS	Complex Adaptive Systems
CEO	Chief Executive Officer
DERI	Defence Evaluation and Research Institutes
MBO	Manage by Objectives
RSA	Republic of South Africa
SA	South Africa
SAP	Strategy-as-Practice
SANDF	South African National Defence Force
SWOT	Strengths, Weaknesses, Opportunities, Threats
US	The United States
UK	The United Kingdom

GLOSSARY OF KEY TERMS

Below are some of the key concepts used in this document, together with definitions for clarity purposes.

Barriers to implementation

A barrier to implementation in this context refers to the obstacles, hurdles or stumbling blocks that prevent practitioners from implementing strategy successfully (Malek, 2008; Jooste & Fourie, 2009; Pella, Sumarwan, Daryanto & Kirbrandoko, 2013).

DERI

The term DERI (Defence Evaluation and Research Institutes) refers to the whole organisation of the field of science and engineering where technology is generated and applied through the performance of research and/or development, test and/or evaluation, or operational research in defence applications. The main client is the South African National Defence Force (SANDF) but there are also other commercial and foreign customers.

Divisional implementation

Due to the fact that these institutes are expected to be self-sufficient, they are also responsible for the formulation and implementation of their unique strategies within the bigger organisation. The implementation of their strategies in this context is therefore termed divisional implementation.

Documentary evidence

One of the sources of data defined in the research design was the collection of documentary evidence related to the strategy implementation efforts. This was used as part of the analysis in order to analyse strategy practices and processes within the institutes.

Ethnography

Ethnographic research is a strategy that focuses on describing and interpreting the

social world through first-hand field study (Mouton, 2011).

Implementation enablers

An enabler to implementation in this context refers to the efforts and actions that help and support practitioners to implement their strategy successfully.

Implementation practices

Strategy practices are the activities, ideas, techniques, skills and methodologies which practitioners of strategy use in order to formulate and execute strategies (Whittington, 2002). Implementation practices are carried out by middle managers or practitioners in order to execute strategies. It involves an understanding of their actions which explains how and what managers are doing.

Implementation processes

This refers to the processes used by practitioners during the implementation of strategies.

Materiality and Tools

This refers to those tools through which strategy is implemented by the managers in their implementation role. It involves all the various models and technologies used, as well as tools and academic technologies. Reports, financial statements, project management, management information systems and communication structures are all tools used during the implementation phase.

Middle Managers

For the purpose of this research, the term "middle manager" is defined as somebody who is reporting to top management and also has people reporting to him/her. According to Stoker (2006), middle managers include people who receive and give direction and are close to the day-to-day operations. The managers in the institutes are part of this definition and therefore the research has been directed from this point of view. The middle managers are also the strategists.

Organisational culture

The values and behaviours that contribute to the unique social and psychological environment of an organisation which is used as an enabler to ensure successful implementation.

Practice (Strategy-as-practice)

Practices are the social, symbolic and material tools through which strategy is executed.

Practitioner

A practitioner is someone who is carrying out the strategy. It also includes those directly and indirectly involved in strategy-making.

Process/Praxis (Strategy-as-process)

Praxis is the flow of activities to achieve strategy. It is the stream of activities that achieves strategy over time in order to produce a specific outcome.

Strategic management

Some of the definitions of strategic management summarise it as consisting of the analysis, decisions and actions that an organisation and its management embark on in order to generate and sustain competitive advantages (Gregory, Lumpkin & Taylor, 2005; Drejer, 2002; Thompson & Strickland, 2001).

Strategic text and talk

Strategic text and talk in this sense is one of the practices used by practitioners and includes communication, discussion, guiding, documents, plans, e-mails and instructions, among others (Jarzabkowski & Spee, 2009).

Strategy formulation

Strategy formulation is the process through which an organisation develops its strategies. This includes the environmental analysis, definition of vision and mission, setting of objectives, definition of the strategy and provision of the framework to achieve its objectives (Mintzberg, Lampel & Ahlstrand, 2009; Thompson & Strickland, 2001; Lynch, 2006).

Strategy implementation

Implementation in the context of strategic management has to do with putting plans, actions and implementation into practice. The objective of implementation is to ensure that the set goals and objectives are met as effectively as possible and on time (Thompson & Strickland, 2001; Okumus, 2001).

Strategy-as-practice

Strategy-as-practice (SAP) in the context of this study has to do with how people are doing strategy: Who is doing it, what they are doing, how it is done and what they use to do it. It also specifies who the practitioners are, what tools and methodologies they use, how they use those tools and methodologies, and their origin (Jarzabkowski & Spee, 2009; Whittington, 2006).

Sense-making

Sense-making refers to the activities in an organisation that must determine meaning or make sense of situations within that organisation (Maitlis & Lawrence, 2007; Rouleau & Balogun, 2011; Weick, Sutcliffe & Obstfeld, 2005).

Sense-giving

Sense-giving is the attempt to influence, guide and commit to others in order to influence their actions and direction in the organisation (Lüscher & Lewis, 2008; Rouleau, 2005; Bakke & Bean, 2006; Hope, 2010).

Successful strategy implementation

This is the successful achievement of strategy implementation (defined above) and measured through some tangible measurement such as financial and other measures and means such as the Balanced Score Card.

PREFACE

It was considered necessary to provide a brief background of the researcher so that the reader may know from which background, experience and lens the study was performed in order to be able to fully comprehend and appreciate the contribution, insight and value that has been added by this research.

The researcher is a Senior Manager in Armscor's Research & Development department and currently heads up one of the divisions responsible for research and decision support to the Department of Defence (DOD). Responsibilities range from general management to technical competence areas in engineering, research, manufacturing, project management, strategic management and operations management. The Senior Manager is responsible for giving strategic, operational and technical guidance, the planning and management of the division, including aspects such as management of employees and budgets, and for planning and directing the technical output of the capability in terms of the Department of Defence (DOD) requirements. This varies from Defence Decision Support at Systems level up to National, Joint, Operational, Interdepartmental and Interstate levels. The Senior Manager reports to a General Manager, who in turn reports to the chief executive officer of the organisation.

Previously the researcher gained experience in his departmental strategic management and strategy implementation job in the Research and Development department, reporting to the General Manager. This gave rise to the researcher's curiosity about the practices and processes that practitioners at middle management level in highly technical research and engineering institutes use to implement strategies effectively.

The researcher studied Mechanical Engineering, holds a BSc Hons degree in Operations Management as well as a Master of Business Leadership (MBL) degree.

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

> *It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.*
> (Clarence Darrow, who was the Defence lawyer in the Scopes Monkey Trial (1925), and not Charles Darwin as is often quoted)

To be competitive in today's business environment and as quoted above, calls for superior strategies to be developed and used by an organisation. Strategic management is the game plan used by management to become more effective, achieve organisational objectives, exceed customer expectations and excel in their day-to-day operations (Koch, 2006). It is also about the actions and decisions, processes and choices management makes in order to execute those defined strategies. Furthermore, it is about finding the "fit" between the operations of an organisation and what needs to be done to execute the strategy (Thompson & Strickland, 2001). Following the work of Henry Mintzberg, amongst others, it is indicated that there is a further movement towards strategy being more than just deliberate strategy. There are definite interventions by management in relation to specific practices and processes that indicate how middle managers as strategists and executing actors actually do strategy (Valmra, Metsla, Rannus & Rillo, 2006). Another view, as indicated in the book Strategy Safari by Mintzberg (1998), is where he elaborates on the ten schools of strategic thought. However, this practice approach can be seen as an additional school of thought in terms of how strategy is created and realised.

The complex environment in which businesses operate today is characterised by constant change and instability. Managers are required to detect these changes through specific mechanisms and to quickly react to them. There is thus a requirement for better and improved models and theories to assist management's efforts to deal with this environment. This calls for extraordinary management practices to be utilised in order to be effective in such conditions (Stacey, 2005). The concept of management processes

and theories in these volatile environments is fairly new to management studies and has not yet been clearly defined. An investigation into this subject can therefore make a substantial contribution to current literature.

The literature study revealed that strategy implementation is a very important yet neglected component of the strategic management process and that organisations and practitioners often fail to execute this process adequately (Kaplan & Norton, 2001; Allio, 2005; Sioncke & Parmentier, 2007; Pryor, Anderson, Toombs & Humphreys, 2007; Jooste & Fourie, 2009). This may be partly attributed to the fact that strategy implementation requires certain intangible interventions by practitioners in order to be successful.

1.1.1 Defence Evaluation and Research Institutes (DERI) context

The rationale for this study and the angle from which this research was conducted, was from the viewpoint of how senior managers in the DERIs execute strategy. The acronym DERI refers to the whole field of science and engineering in which technology is generated and applied through the performance of research and/or development, test and/or evaluation, or operational research in defence applications. The DERIs are situated in the Armaments Corporation of South Africa (Armscor), the Council for Scientific and Industrial Research (CSIR) and Denel, and are dispersed between the Ministry of Defence, the Ministry of Science and Technology and the Ministry of Public Enterprises. This implies that all of these institutes are bound to a bigger corporation and the reporting structures as defined by the corporation. These parastatal organisations are consequently governed by the Public Finance Management Act (PFMA) as well as corporate policies, practices and procedures. While the DERIs report into a bigger organisation, they are not funded as cost centres and therefore they must be financially sustainable and generate their own income. All of the DERIs operate in very similar environments and conditions and therefore these entities have been used in this study for comparative purposes. These institutes consist of the following divisions as indicated in Table 1.1 below.

Table 1.1: The DERI context

Armscor
Protechnik Laboratories (Protechnik) is responsible for chemical and biological research.
Hazmat Protective Systems (Hazmat) is a small-scale manufacturing facility that manufactures respiratory protective equipment.
Ergonomics Technologies (Ergotech) is an institute researching ergonomics and human engineering.
Armour Development develops armour and undertakes research in that field.
Defence Decision Support Institute (DDSI) is responsible for decision support to and operational research for the Department of Defence.
The Fluid and Mechanical Engineering Group (Flamengro) is a computer-aided modelling and simulation capability.
The Institute for Maritime Technologies (IMT) is responsible for maritime research for the Navy.
Gerotek Test facilities (Gerotek) do vehicle and product testing.
Alkantpan Test Range (Alkantpan) performs tests and evaluation of ballistics for the local and international markets.
Denel
Denel Overberg Test Range (OTR) is responsible for the evaluation of in-flight testing of advanced guided and aviation systems for the local and international aerospace industries.
CSIR
CSIR Defence, Peace, Safety and Security (DPSS) is responsible for research and development in the defence and security sector.

These institutes operate in highly specialised technical environments and the majority of the workforce is made up of engineers and scientists. They are managed to be self-sustainable by the application of good business principles. Just like any other engineering/scientific environment, these institutes have difficulty in ensuring that their strategies are properly implemented because the technical specialists who manage

these institutes are not necessarily *au fait* with business processes.

As the business and client requirements are constantly changing, the business units must be flexible, adapt quickly and re-align themselves to the changing requirements. Therefore, long-term planning sessions have been replaced with flexible processes in order to adapt to change more readily.

The DERIs can be seen as successful in terms of a sound financial position, people development and retention, client relations and satisfaction and stakeholder support but only limited research has been done on the unique ways in which individuals carry out their strategic agency in this context. The contribution of this study would be to investigate the practices and processes employed during strategy implementation.

1.1.2 Middle manager context

For the purpose of this research, the term "middle manager" is defined as a manager reporting to top management who also has people reporting to him/her. The middle manager in the context of the study is responsible for the day-to-day operations of the institute as well as the formulation and implementation of the strategy.   The responsibility and level of these managers was confirmed by the researcher during the selection of the candidates and during the interviews. The practitioners within the context of this research were defined as those who are implementing strategy. It included those directly involved in strategy implementation as well as those who have a direct influence on the implementation of strategy. In this case, it is the people appointed as middle managers in the relevant DERI institutes. These middle managers also act as practitioner and strategists.

1.2 TOPIC

A topic is the specific subject of the research and serves as guideline for the study. It also names the significance and contribution for the study (Hofstee, 2006). Hofstee suggests the topic-narrowing approach, as indicated in Figure 1.1 below. Strategy

implementation and execution are used interchangeably in the context of this study and must be seen as the same construct for this purpose.

The initial literature review conducted concluded that only a limited number of studies have been done on strategy implementation in South Africa, and very few on the practices and processes that are being employed by managers who are successful in the implementation of projects. This gave an indication that there is a need for further research to be undertaken in the South African context, especially from a practice and process perspective.

From a South African perspective, Jooste and Fourie (2009) argues that the high failure rate of implementation proves that there are barriers to strategy implementation. These failures usually occur during the implementation phase of the strategy in spite of the existence of several books and articles on strategy formulation and organisational development, since there is limited research on strategy implementation or the connection between the two (Aaltonen & Ikävalko, 2002; Yukl & Lepsinger, 2007; Sioncke & Parmentier, 2007; Whittington, 2002; Jarzabkowski & Spee, 2009; Malek, 2008; Markiewicz, 2013; Pella, Sumarwan, Daryanto & Kirbrandoko, 2013; Ogden & Fixsen, 2014).

The researcher's previous experience in the strategic management field, together with the literature review and exposure to and interest in the subject of strategic management, prompted the decision to continue with further research on strategy implementation. In order to get to the topic, it is necessary to narrow down the field or discipline through several iterations, thus ending up with the topic and thesis statement. Primary data, secondary data and personal interests were applied to the model as indicated in Figure 1.1 below (Hofstee, 2006), leading to the topic and purpose for this research.
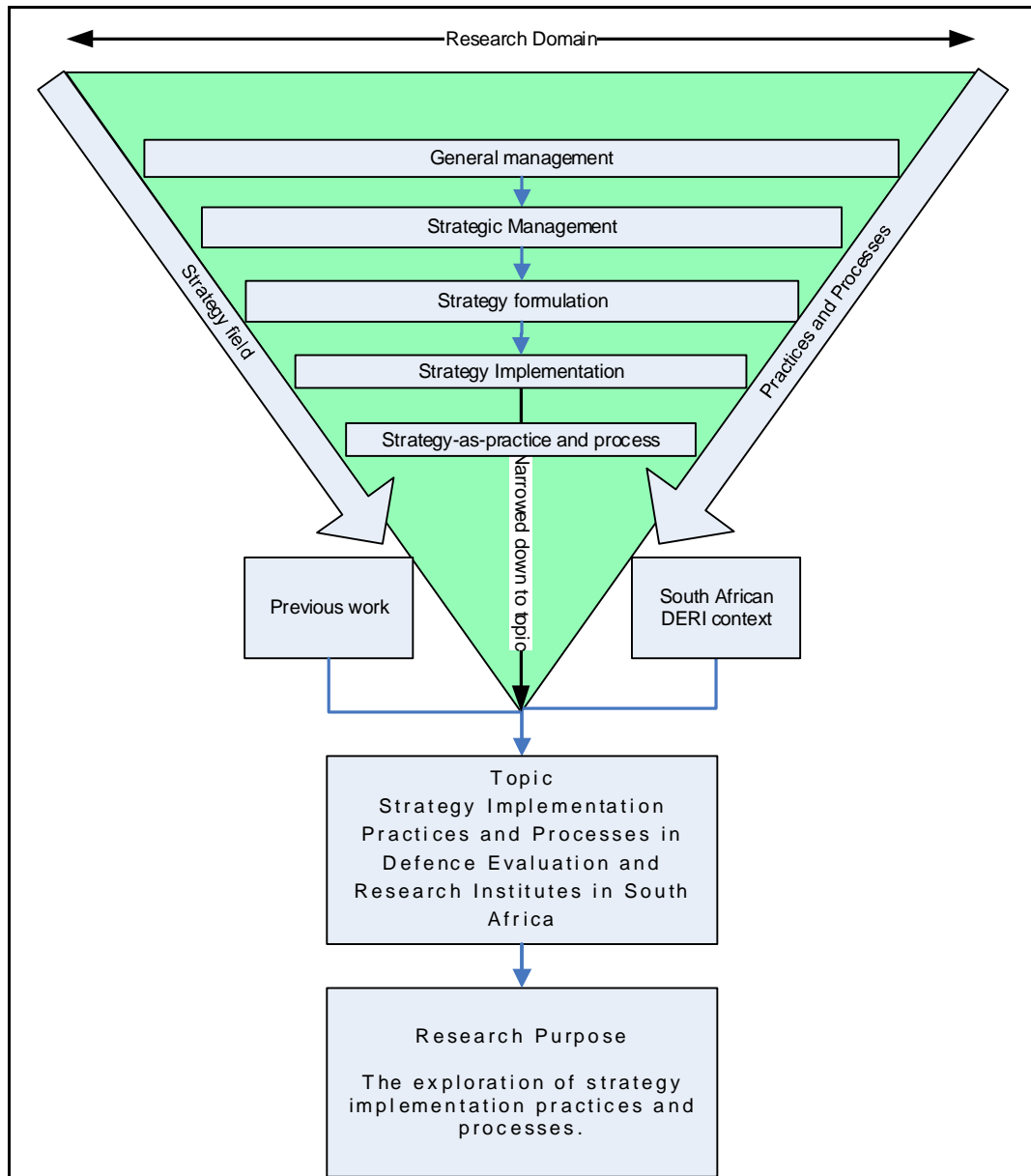
Figure 1.1: Topic Focussing

(Source: Hofstee, 2006)

As a result of the above process, the topic for this study can be formulated as follows:

Strategy Implementation Practices and Processes in Defence Evaluation and Research Institutes in South Africa.

1.3 PROBLEM STATEMENT

Considerable energy and resources are applied to formulating strategy but very little to the implementation of the strategy (Allio, 2005) which includes the emotions, motivations and actions that are intangible during the implementation of strategy (Jarzabkowski & Spee, 2009:70). This showed that there was indeed a need to investigate the practices and processes employed by middle managers to implement strategy. The scope of the work was defined by means of a flowchart for clarification purposes and is contained in Appendix A.

The study investigated the roles of middle managers to establish which practices middle managers as strategists employ during implementation and to identify which activities drive the process of successful implementation strategies.

The gap that currently exists in the literature is mainly in relation to the actual implementation of strategy. The focus of this research therefore is to examine the implementation of strategy from the point of view of a practitioner. There are theoretical principles relating to the implementation of strategies, but they do not include the actual practices and processes in use. This is supported by Hrebiniak (2006) who indicates that the lack of an execution framework hinders the success of the implementation of strategy.

The aim of this research is to determine the practices and processes being utilised by middle managers and strategy practitioners during strategy implementation. This study is a response to the requirement for further research into the implementation of strategy and used empirical work executed in different environments to determine the practices used in the implementation and process of strategy. By using information already published, this study explains how strategy is executed in relation to social practices (Vaara & Whittington, 2012; Jarzabkowski & Spee, 2009; Rouleau, 2013; Whittington, 2006).

The problem statement, therefore, in context of the DERIs, is that the practices and

processes used by strategy practitioners during strategy implementation are not well known, understood, researched or documented.

1.4 STATEMENT OF THE RESEARCH QUESTIONS

From the exploratory information gathered during the literature review, the research questions were compiled (Cooper & Schindler, 2011). The main questions that were derived from this process are indicated below.

Main question

What practices and processes are employed in strategy implementation in DERIs in South Africa?

Sub-questions

1. What practices are employed by middle managers as practitioners in DERIs during the implementation of strategies?
2. What processes are being used to ensure that strategy implementation is successful?
3. What are the roles of middle managers during strategy implementation?
4. What are the enablers for effective and successful implementation of strategies?
5. What are the barriers that prevent effective and successful implementation of strategies?
6. How are materiality and tools used during implementation of strategies?

The purpose of formulating the research question is to determine the content and direction of the research study, and to map it in a matrix against the literature review, the primary data and the secondary data. See Appendix B for the question matrix.

1.5 PURPOSE AND OBJECTIVES OF THE RESEARCH

Following from the problem statement, the management dilemma, personal experience, gaps in the literature, the highly technical research environment of the institutes and the shortcomings in current research, the purpose of this research would therefore be to:

> Investigate what the strategy implementation practices and processes are that make highly technical and scientific institutes execute strategy successfully.

The sub-objectives of the research, in addition to the above, would therefore be to:
- Identify the roles of the middle managers as practitioners.
- Determine the barriers and enablers during strategy implementation.
- Determine how materiality and tools are used during the implementation of strategy.

Sutton (2004) states that proper academic research will always precede work based on intuition, breakthroughs and "flavour of the month" publications. Quality research provides management with tools that are up-to-date, valid and legitimate (Brodu, 2008) as well as information to address management problems (Cooper & Schindler, 2001).

The scope of this study is to explore the problems occurring with the implementation of strategy, analyse existing literature, identify the gaps, and identify and define the practices and processes in use in order to add to the existing body of knowledge in this area of expertise, specifically in the South African context. Owing to changes in the business landscape, there will always be a requirement for further research on strategy implementation.

1.6 SIGNIFICANCE AND BENEFITS OF THE STUDY

It was clear from the literature review that there is a requirement for applied research to assist management practitioners in their day-to-day activities. Business schools are under pressure to add value to the industry by doing research (Kelemen & Bansal,

2002). The main objective of this research was to add to the current body of knowledge on research in the field of Strategic Management and to add value by:

- providing insight into and clarity on the strategy implementation process through certain practices and processes that are not yet clearly defined.
- contributing to the existing literature and focusing on the South African context.
- determining the specific link between formulation and implementation of strategy.
- identifying the practices and processes in use by middle managers.

The requirement for further work in this environment and the significance and benefit of the research performed within this study is confirmed by Jarzabkowski and Spee (2009), where they indicated that limited empirical work has been concluded on the diffusion and institution of strategy within organisations. These authors also stated that limited work has been done on the role of the strategists within their worlds and the interplay and interactions of these practitioners. Jarzabkowski and Spee (2009) also identified the requirement for work on the intangible practices such as expertise, motivations and emotions involved during the strategy process within organisations. Furthermore, these authors identified the requirement to look at practice bundles. This is where the actual doing of strategy is examined and researched such as what processes are being followed, what material artefacts are being used, meetings held, political interests expressed, and actions, tools and interventions being used together as a bundle of practices, in this case during the implementation of strategies. Although some previous studies grouped practices together according to certain phenomena and criteria, research on the interaction between such bundles is lacking. The way these practice bundles interact was identified as a gap in current literature and few empirical studies have done thorough and rigorous examination on practices, bundles and their interaction in a systematic way (Jarzabkowski & Spee, 2009).

This research was done in order to grow the current body of knowledge on strategy implementation practices and processes of middle managers in highly technical research organisations. The study makes an original contribution by identifying these practices, with emphasis on a process in use in this environment and also indicates the

integrated nature of how these practitioners undertake strategy in the context of the DERI environment in South Africa. This study provides insight into how these middle managers perform strategy implementation and can therefore add to the gap that exists between theory and practice, thereby adding to the quest for studies on the strategy-as-practice subject matter and specifically strategy implementation. The chapter which presents the findings validates this statement through a detailed explanation and discussion on the outcomes of the study. The detailed contribution is deliberated in paragraph 7.3 in the concluding chapter.

For the purpose of this research and the contribution made in this regard, the next paragraph will elaborate on what is included in the research through the demarcations indicated above.

1.7 DELINEATION

The demarcations of this study are as follows:

- Although strategic management comprises several modules in terms of theories, the study looked specifically at implementation and constructs underlining the theoretical approach. The demarcation therefore lies in the fact that the specific area for investigation lay in the practices and processes that middle management uses to execute strategy in a shifting and complex environment.
- The study was directed specifically at the South African context.
- It can be assumed that this study is valid for the specific industry in which it was conducted and can therefore only apply to the DERI environment.
- Strategy formulation and implementation or execution are two distinct concepts in the field of strategic management. However, they can be seen as interrelated as they have an impact on and connection with each other. The focus in this study was on the implementation aspect of strategic management although the two are interconnected.

The role of the practitioner, as defined by Jarzabkowski and Spee (2009), is indicated in

Figure 1.2. This research looked at the practitioner, practices and processes in blocks A and D and the organisational processes in blocks B and E at individual and institutional level (micro level). Furthermore, the individual actors as practitioners and as a group of actors (aggregate actor) within the institute's strategic role were also investigated from an organisational or sub-organisational (Meso) level.

Figure 1.2: Typology of strategy-as-practice research by type of practitioner and level of praxis

(Source: Jarzabkowski & Spee, 2009)

1.8 LIMITATIONS

The limitations of this study relate to the fact that this was a cross-sectional study because of time constraints and not a study that was undertaken over a longer period, such as a longitudinal study.

The sample drawn for this study was restricted to the DERI environment and included representation from all the institutes as well as from all levels within the institutes. However, this is only one sector and cannot be seen to be representative of the entire industry in South Africa.

The strategy-as-practice field is a very young discipline in the strategic management environment. Literature and proven research is not very common and while this could be a limitation it may also provide an opportunity to add value to the current body of knowledge.

1.9 ETHICS IN RESEARCH

The SBL was contacted in order to obtain its view and prescripts regarding ethics in research. A submission was made to the ethics committee for approval to commence with the research as indicated. Approval was granted and is attached as Appendix F.

Ethical considerations must apply throughout the life cycle of the research to be undertaken. It refers to the appropriateness of behaviour regarding the rights of those participating. The main consideration in this case came from the fact that people and information were involved. The ethical issues to be discussed include how to handle the design so that it is methodologically sound and morally defensible to all the people involved. The type of research will determine the level to which the ethical issues are addressed. In this case, the following issues were taken into consideration:

- Protection from harm:
  Any participant in a research project must be protected from physical and psychological harm. In this case, such risk is minimal as the right to privacy of the individuals that participated was protected by ensuring that all responses remained anonymous.
- Informed consent:
  Informed consent was received from all participants in the research, as well as from the organisations' principals, as indicated in Appendix G.
- Letter of consent:
  A letter containing the information below was compiled and all participants were asked to sign it as proof of consent given:
  o Brief description of the nature of the research;

- o What the research is about;

- o The purpose of the research;

- o That it is for DBL studies;

- o The nature of their involvement in the research;

- o How long it is going to take;

- o That their participation is voluntary;

- o They can terminate their involvement at any time;

- o That all responses will remain confidential;

- o What will be done with the data;

- o Offer to give feedback if required;

- o Contact details of the researcher; and

- o Signature and acceptance of consent. (All participants gave their consent to participate in this study.)

· Right to privacy:

Research to be undertaken should respect any individual's right to privacy. No information on the responses of any particular participant was given to anyone. All information is kept strictly confidential.

· Deception:

Deception manifests itself in dishonesty. This can occur when a researcher presents findings other than what was agreed to or where the researcher did not provide full information about the research to the participants. This was handled during the beginning of all interviews.

Care was taken throughout the research process that the above issues were addressed and tested against a moral and responsible code of conduct (Bryman & Bell, 2007; Saunders, Lewis & Thornhill, 2009; Cooper & Schindler, 2011; Leedy & Ormrod, 2010). The letter of consent signed by all interviewees is included in Appendix H.

1.10 CHAPTER OUTLINES

The research focused on strategy implementation specifically on the practices and processes in use by the strategy practitioners in DERIs in South Africa. The term 'practitioner' in the context of this study means middle manager and these terms are used interchangeably.

Chapter 1 is the introduction to the study.

Chapter 2 contains the literature review about strategy formulation, implementation and the link between the two. The field was then narrowed down to examine strategy implementation and specifically strategy-as-practice as a focus area for this study. The role of middle managers and several theories within this field are investigated and the practices and processes used by them are explored in the output of the study.

Chapter 3 addresses the philosophy, the design and the methodology of the research. It also addresses issues such as the time horizons, credibility, sampling data collection and ethics.

Chapters 4 and 5 contain the data analysis. Chapter 4 provides the within-case analysis and Chapter 5 presents the cross-case analysis.

The findings and interpretations are discussed in Chapter 6.

The thesis concludes with conclusions and recommendations in Chapter 7.

Figure 1.3 below provides a visual summary of the chapter overview.

Figure 1.3: Chapter overview
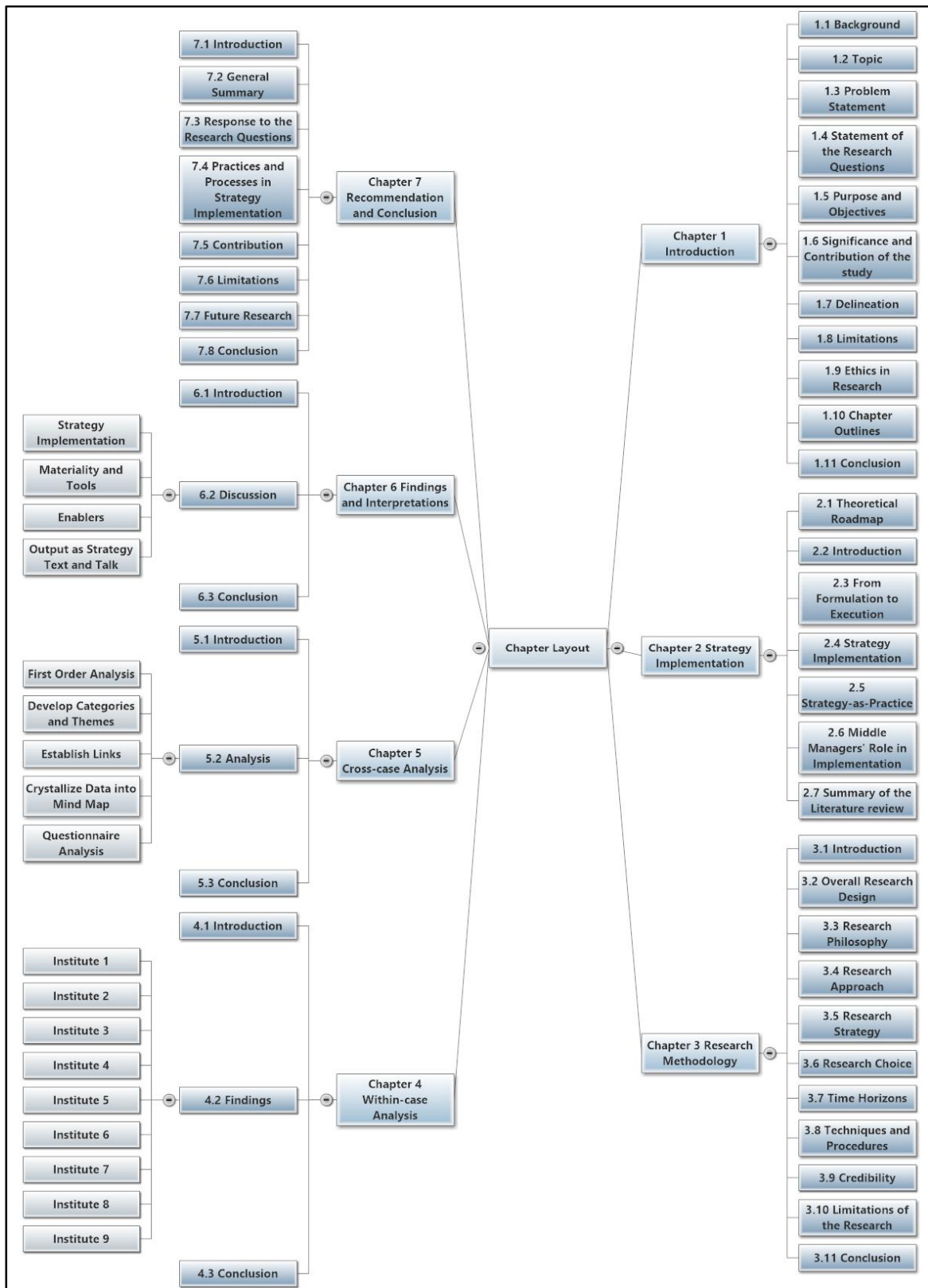
1.11 CONCLUSION

The introductory chapter gave an indication on the problem statement, purpose of the research and research questions in order to explain the context of the research for the chapters and work to follow. It also stated the limitations of the study and elaborated on the significance and contribution of the research done. Lastly, the ethical issues considered during this research were addressed and the delineation of the work outlined. This chapter set the scene for the research and the remaining chapters were outlined in order to guide the reader with regard to the content of the study.

CHAPTER 2: STRATEGY IMPLEMENTATION

2.1 THEORETICAL ROADMAP

The purpose of this chapter is to explore and synthesize the literature relating to this research in the context of the contribution the study claims to make in the strategy-as-practice knowledge area. The chapter starts with an introduction into the strategic management field and then progresses to the strategy implementation subject matter field. The strategy implementation literature is then analysed and synthesized into four main streams in order to identify the gaps in the literature and present a new perspective as part of the outcome of the study. The strategy-as-practice perspective is investigated through the three elements found in the literature as well as the role and functions of middle management during this process.

A theoretical roadmap was compiled in order to ensure that all necessary areas are covered in the study as well as to allow the reader to visualise the process that the researcher used to synthesize the literature into logical knowledge areas as indicated in Figure 2.1 below.
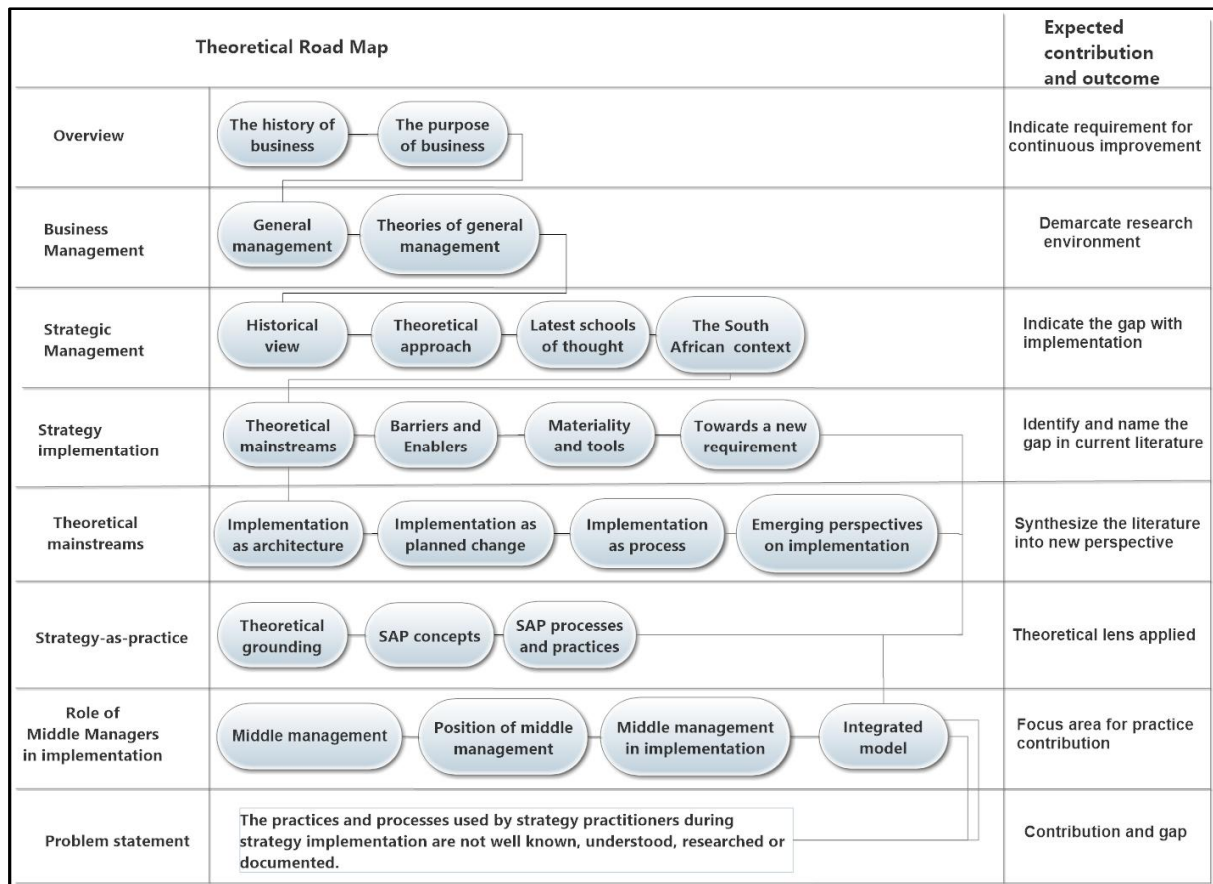
Figure 2.1: Theoretical Roadmap

(Source: Author)

The lens used for this research is practices and processes as indicated in Figure 2.1. A theoretical map was compiled to identify, analyse, evaluate and add to existing literature as indicated in Figure 2.1. This map was used to guide the study.

2.2 INTRODUCTION

2.2.1 History of Business

The starting point is to look briefly at the history of business, the purpose of business and the progress of business management through the years. The purpose of this section is to indicate the progress made over time and the resultant requirement for further development and improvement initiatives in the business management area as

indicated in Figure 2.2 below.
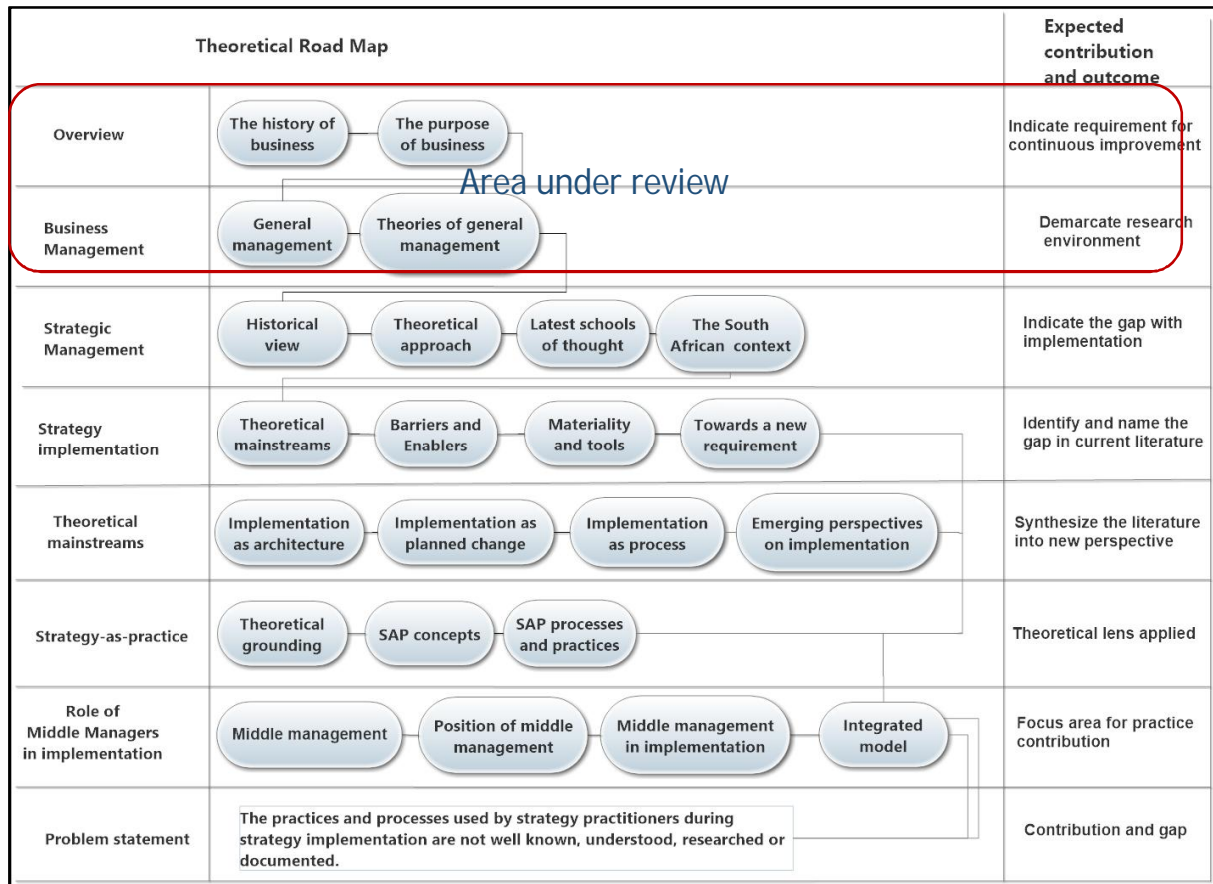
Figure 2.2: Theoretical Roadmap – Overview

(Source: Author)

A fundamental shift is occurring in the world economy. We are moving rapidly away from a world in which national economies were relatively self-contained entities, isolated from each other by barriers to cross-border trade and investment; by distance, time zones and language; and by national differences in government regulation, culture and business systems. And we are moving toward a world in which barriers to cross-border trade and investment are tumbling; perceived distance is shrinking due to advantages in transportation and telecommunications technology; material culture is starting to look similar the world over; and national economies are emerging into an interdependent global economic system.

(Hill, 2003:4)

The history of business as we know it dates back as far as the history of man itself. From the earliest years of mankind humans started trading commodities between themselves in an attempt to obtain or supplement certain things such as grain, precious and semi-precious metals, sugar, salt, fish, meat, coffee and tea. Examples of early rural industries include wagon-making, milling, cotton production and weaving, saw mills, cane mills and furniture manufacture.

This discussion commences with the Industrial Revolution (1760–1850) which was a period in which fundamental changes occurred in agriculture, textile and metal manufacture, transportation, economic policies and the social structure in England. These changes occurred gradually.

The period after the Industrial Revolution was known to be the starting period of business management as it resulted in an increase in population and urbanization and created a new working class. McKenna (2006) considers the starting point of business management as we know it today to be around 1910 when a group of engineers interested in the problems of management developed a way to estimate the costs related to specific production problems being experienced. There was rapid growth that stimulated the field of business management after World War Two (1914−1918), followed by the economic expansion experienced due to increased demand. This resulted in a demand for professional managers and related management development (Miller & Vaughan, 2001). Management of these evolved up to the point of business as it is presently understood.

Taking all the pertinent aspects into consideration, it is evident that the concept of business evolved over time, as indicated in Figure 2.3, from a concept of trading of basic means up to the present models and as described by Hill above, where globalization and its relevant management models are in use in the effective day-to-day management of a business.
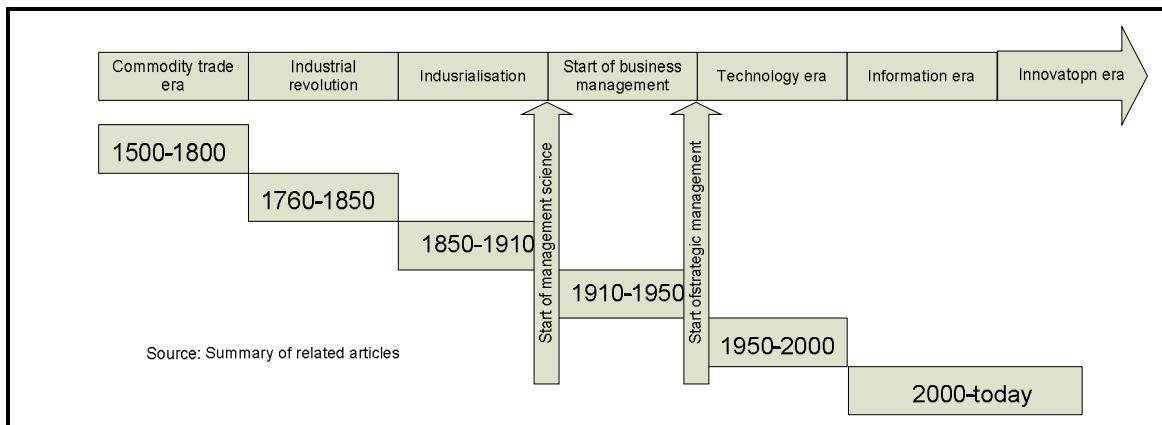
Figure 2.3: Chronology of the history of business

(Source: Author)

In order to be able to investigate this 'business' concept further and to demonstrate the importance of improvement and change, it is necessary to first elaborate on what the purpose of a business is.

2.2.2 The purpose of Business

Business that focuses just on money and does not invest in the future – in its employees, new ideas, markets or products – won't be around for long. Any successful business is part of society and exists to meet society's needs.
(John Browne – Group Executive BP p.l.c.)

As indicated above, there is much more to business and in order to define the term "business" it is important to know what the purpose of a business is. According to Dr Peter Drucker, the purpose of a business lies outside of the business as a part of society and the only valid purpose of a business is to create a customer. He argues that the customer is the foundation of the business and keeps the business in existence (Drucker, 2006). This viewpoint can be challenged, as another purpose of establishing a business is to achieve a certain specific vision or goal as perceived by the business owner. Without the customer, however, there would not be a business or business opportunity. According to Handy (2002), the purpose of the organization – apart from

looking after assets, creating value for shareholders and making profits – is to be able to do something more or better. The success should be measured in terms of outcomes for others as well as for the business.

Another purpose of a business is to create an entity that can ensure efficiency. With systems, resources, processes and assets for its use, the enterprise can ensure greater effectiveness to the benefit of the customer and owner than being operated solely as a basic trading entity. The business concept must also add value to the society in which it operates. It must also add value to the product or service it renders in order to be sustainable (Hill, 2003).

To summarize, it may be concluded that there are several purposes for a business to exist, which can vary depending on the owner's vision and needs, and incorporates adding value in society. As the world and environment in which businesses functioned has changed over time, the need for development and evolution of business and the respective management models and methodologies became evident, as discussed below. Continuous improvement, better management and models, new theories and a more competitive position are the objectives, especially in today's shifting and complex environment. It might appear that the approach for the study is too broad, but the rationale for this is to highlight the requirements for a continuous improvement effort.

2.2.3 General management

Management in the organizational context means the actions and interventions that a person executes to achieve organizational goals, making the best use of all the resources required to achieve the task. This is the field as described above towards which the continuous improvement effort must be directed.

There are many definitions of management; the intention is not to elaborate on the management theories here, but to broadly identify them in order to give context to the research that will follow. The four basic management actions, according to Bateman and Snell (1999), are planning, organizing, leading and control. Within the general

management discipline there are several other functional areas that support the management function of an organization such as Sales, Marketing, Finance, Strategy, Operations, Human Resources, and Legal, amongst others. General Management, according to the Harvard Business School's definition, is concerned with the leadership and management of the enterprise as a whole.

2.2.4 Theories of General Management

It was explained in the first chapter of the literature review that business and its management as we know it today is a fairly 'new' concept, although always having been practised on an *ad hoc* basis. The real evolution of formal management theories only emerged since the Industrial Revolution and the 1900s. Theories around systematic approach, scientific management and administrative management represented some of the earliest schools of thought. In 1916 Henry Fayol, a French mining engineer, one of the founders and pioneers of the science of management, identified five functions and fourteen principles of management (Parker & Ritson, 2005). The functions were planning, organizing, commanding, co-ordinating and control. Of the fourteen principles, the most important elements are specialization, unity of command, scalar chain, and co-ordination by managers (an amalgam of authority and unity of direction). Several other contributors followed and management science developed into disciplines such as quantitative management, systems theory and contingency theory, up to the latest theories found today such as management by objectives, chaos theory, complexity, and more.

At this point it is important to highlight the relevance to the planned research, as the evolution of business and the resultant management methods changed over time, as briefly discussed in the foregoing. There will be a constant drive towards continuous improvement in order to become more effective and to stay competitive. Finding better and more effective management models that can be applied in a practical manner by managers will always be in demand. This study will concentrate on finding clarity on one such area within the strategic management subject matter in the sense of implementation practices and how people actually do implementation in the sphere of

the contemporary environment.

The purpose of the table below is to summarise the above discussion and indicate the contributions to current literature for the specific topic under discussion as indicated in columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is discussed against the results and recommendations of this study in Chapter 7.

Table 2.1 below gives an indication of the contribution from selected literature on "*the requirement for continuous improvement*" as well as the gaps and contributions from the viewpoint of this study.

Table 2.1: Requirement for Continuous Improvement

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Handy, 2002; Hill, 2003; Drucker, 2006; McKenna, 2006; Parker and Ritson, 2005.	Adding value as organisations. Chronological progress from business point of view to continuous improvement.	Contribution to continuous improvement and knowledge generation. Practitioner field requires more rigorous research.
McKenna, 2006; Miller and Vaughan, 2001.	Start of management development.	Contribution to management development

The above literature indicated the progression of business through time and the concept captured relevant to this research is the fact that there is a requirement for continuous improvement as business and the management sciences developed (Handy, 2002; Hill, 2003; Drucker, 2006; McKenna, 2006; Parker & Ritson, 2005). Table 2.1 indicates the contributions in terms of management development, and the value added by business in being more effective and profitable. The quest is therefore to continuously improve on all aspects of the business (McKenna, 2006; Miller & Vaughan, 2001). This relates to the study on strategy-as-practice subject matter in the sense that continuous improvement is required through knowledge generation and research in this area. The

gap that exists in the strategy-as-practice area as indicated in column three can therefore be seen as the contribution to new knowledge.

2.2.5 Strategic management

Figure 2.4 gives a visual presentation of the area that will now be discussed and where strategic management fits into the bigger picture.
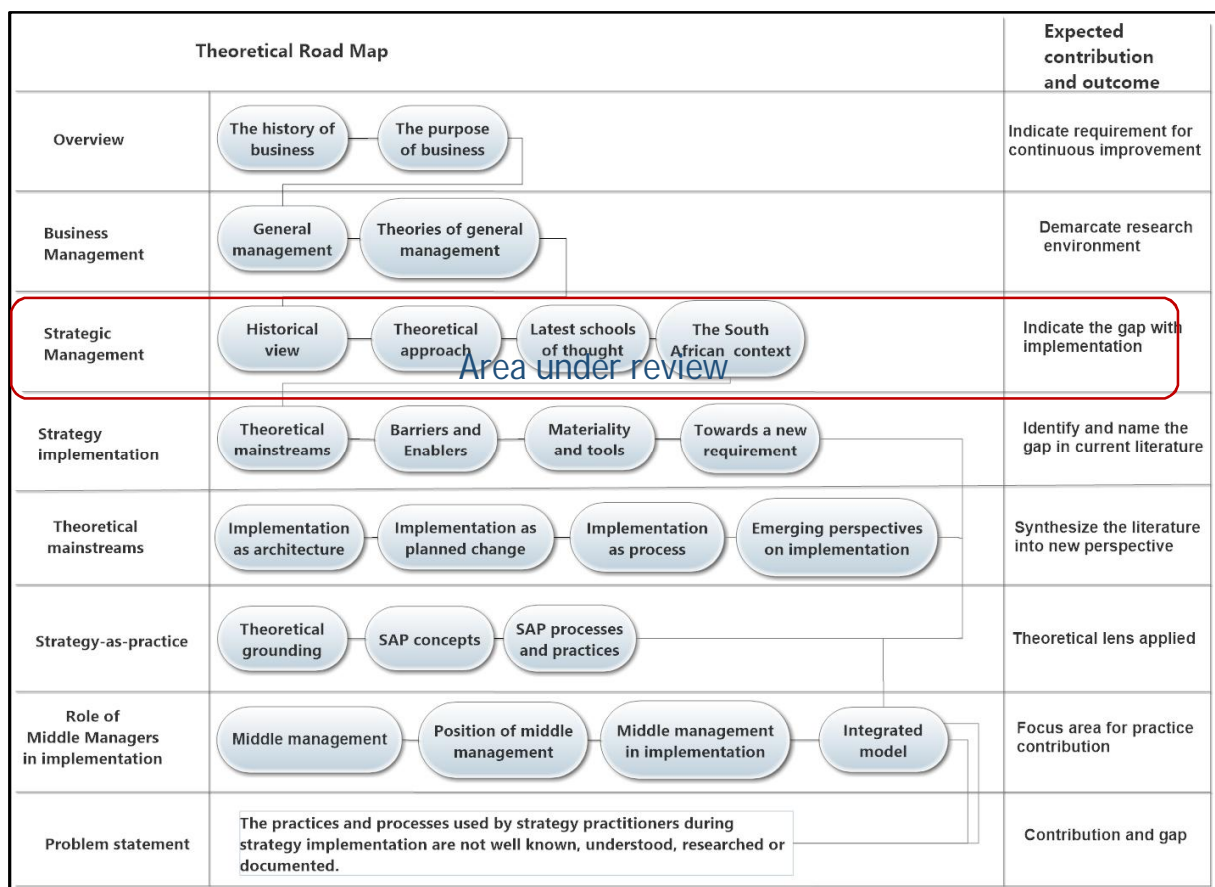
Figure 2.4: Theoretical Roadmap – Strategic Management

(Source: Author)

Strategy as it is understood at the present time originated from the word 'strategos', an ancient Greek word for 'army leader' or 'general'. It is a term employed in the planning and conducting of warfare. According to the Oxford English Dictionary, the term means "a plan designed to achieve a particular long-term aim or the art of planning and

directing military activity in a war or battle". The concept of strategy has been in use since 400–500 BC, and was mainly used in the military from the early days of Themistocles, an Athenian politician and general; Aristides, an Athenian statesman (Ray, 2008); Sun Tzu, a Chinese military strategist; and later Napoleon, Mao Zedong, Douglas MacArthur and Carl van Clausewitz (Collins, 2002). Military strategy today is still very much alive and has become a science practised around the world. It is from the military approach of planning, employing resources and controlling these in order achieve victory, that the concept migrated to business with the objective being to obtain and maintain superior advantage.

Strategy and the strategic management discipline in the business environment originated from the era of Alfred Chandler in the 1950s. Chandler's concept of strategy and structure was one of the first movers towards this management field and since then several others have followed, such as Peter Drucker, Igor Ansoff, Bruce Henderson and Philip Selznik (Koch, 2006).

> *A company's strategy consists of the competitive efforts and business approaches that managers employ to please customers, compete successfully, and achieve organisational objectives.*
> (Thompson & Strickland, 2001:10).

The word "strategy" as defined above, is surely one of the terms used most often in business today, and can be used erroneously in many contexts. The concept of strategy is often misunderstood by employees and managers and used incorrectly in context and application. Stern (2009) notes that in an ever-changing environment businesses find themselves in situations where the word strategy "dazzles some managers and bamboozles [others]". This research aims to explain the concept of strategy and more specifically strategy implementation.

Strategic management is the managerial skill used to formulate, implement and execute a chosen strategy by assessing what organisational capabilities are required to reach organisational objectives and goals. Strategic management involves the management

actions, interventions, choices and processes to, firstly, determine what the mission, vision and objectives of the organisation are (Lynch, 2006). Secondly, it involves the development of processes, plans and projects to ensure that these business's objectives are addressed. Thirdly, it involves the internal management of the organisation including staffing, implementation and co-ordination of the aforesaid to ensure that the strategies are successfully executed (Drejer, 2002).

Strategic management consists of three distinct phases, namely strategy formulation, implementation, and control. The basic principle is that it involves the situational analysis of internal, external, micro, macro, industry, competitor, client and other relevant areas of strategy management (Thomson & Strickland, 2003; Lynch, 2006; Mintzberg, Lampel & Ahlstrand, 2008). After the formulation of the strategy comes the setting of objectives and the crafting and implementation of the strategy (Lynch, 2006). This is a simplified description of the basic approach of most strategy theories and strategy formulation as found in the theory of strategic management.

In the current environment, strategic management is not a linear process. It is a range of iterative actions, decisions, planning and re-planning. Some of the phases can start simultaneously and, after a goal has been established, it can be revisited and adjusted until the desired outcome is achieved. It is a process that is built on several assumptions that can only be tested by implementation. This is a learning experience through feedback systems thus increasing accuracy in the direction that needs to be followed. Any changes in the environment will cause an adaptation of the strategy which will be re-aligned, tested, experienced and tested again in order to be implemented, taking the new direction into consideration (Stacey, 2003; Kaplan & Norton, 2007). This iterative process is the critical success factor for implementation. Implementation is therefore an erratic process of sensing changes, having feedback systems, and interpreting, analysing and adapting accordingly in a continuous loop. Strategic management therefore needs to be approached from a different point of view. The point of departure for this study is to investigate the implementation from a micro-practice point of view (the practitioner's way of executing strategy) as well as from a meso process point of view (organisational processes) as defined in paragraph 1.7.

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic under discussion as indicated in columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is further discussed against the results and recommendations of this study in Chapter 7. Table 2.2 below gives an indication of the contribution from selected literature on "*the gap in implementation*" as well as the gap and contribution from the viewpoint of this study.

Table 2.2: The Gap in Implementation

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Thompson & Strickland, 2003; Lynch, 2006; Mintzberg, Lampel & Ahlstrand, 2008	Strategic management process.	The process that middle managers actually use to implement strategies in their organisations.
Stacey, 2003; Kaplan & Norton, 2007.	Iterative implementation process	What is the iterative process with feedback and adaptation employed in organisations by middle management?

Table 2.2 above indicates that apart from the contributors who have examined the strategic management process (Thomson & Strickland, 2003; Lynch, 2006; Mintzberg, Lampel & Ahlstrand, 2008) as well as work done in complex environments (Stacey, 2003; Kaplan & Norton, 2007), the focus area for the study emanates from the gap identified that the process followed by middle managers during implementation is not defined in the current strategic management process. The 'how' aspect regarding the way in which people implement strategy is still an area of investigation and indicated here as such. The second point is the iterative process and feedback that is also not well researched and written up. This presents the challenge of defining exactly how

people are doing strategy implementation, getting feedback and sensing what is going on as area for investigation.

2.3 FROM FORMULATION TO IMPLEMENTATION

Business is constantly being reshaped by continuous, intense and high velocity changes such as the 9/11 attacks on the World Trade Centre, the United States economic crisis, the fall of Lehman Brothers and the collapse of the global stock market in 2008. The traditional approaches to strategy, though still valid, are no longer adequate in these circumstances. The external environment is more volatile with regard to unpredicted changes and the internal environment is more complex in order to manage this effectively. This calls for exceptional measures to be taken to stay abreast of changes of this nature as well as more progressive approaches to strategic management. This is also where the role of the middle manager has become more prominent and influences the requirement to investigate that role in terms of talk, text, tools and practices. Strategy formulation and the implementation process are important phases in the strategic management field because they are interconnected and therefore cannot be seen in isolation.

One of the leading theorists in the field of strategic management is Mintzberg, who described strategy formulation as the five Ps of strategy: Plan, Ploy, Pattern, Position, Perspective (Mintzberg, Lampel & Ahlstrand, 2008). He then described the ten schools of thought: the design school (process of conception), planning school (formal process), positioning school (analytical process), entrepreneurial school (visionary process), cognitive school (mental process), learning school (emerging process), power school (negotiating process), cultural school (social process), environmental school (reactive process) and configuration school (process of transformation). The first four are typically prescriptive in nature, while the others are more descriptive in formulation (Mintzberg et al, 2008).

The resource-based view, one of the latest additions to strategy literature, explains that resources are valuable, add value, are difficult to copy and can achieve competitive

advantage for a firm (Collins & Montgomery, 2008). Among these resources are assets, capabilities, organisational processes, information and knowledge that can be used to improve efficiency and effectiveness, and the link of strategy implementation to these resources as enablers will be made through this study.

The most recent schools of thought on strategic management seem to be deviating from the traditional schools in their approaches to addressing unpredictable changes and non-linear reactions (Kotter & Schlesinger, 2008). Globalisation has changed the field of strategic management, specifically the relationships between countries, organisations and individuals in relation to culture, technologies, environmental and financial aspects. These changes require a fresh look at strategy (Eisenhardt, 2002).

Eisenhardt contends that strategy in the new economy must be simple and organisationally creative, and that timing is critical during strategy formulation and implementation. Strategy is about being different, the speed of play is fast, and the pace of change is unpredictable because "[w]hether we like it or not, strategy has changed" (Eisenhardt, 2002:91).

Drejer (2002) has defined four schools of thought regarding strategic management. The first three schools are derived from the traditional schools of thought, while the fourth he calls "the emergence of the school of complex strategic management" (2002:20). The environment in which this school operates is changing, discontinuous and unpredictable, with new dimensions and the integration of problems in environmental, economic and technological areas. He states that this does not mean that the first three schools are inferior or no longer valued. They still have their place in the strategic management field, but new approaches are required.

The foregoing was a brief description of the different views of strategy formulation which are in different stages of maturity and use. There have been several contributors to the strategic management field since the 1950s, including the Boston Consulting Group, Henry Mintzberg, Kenichi Ohmae, Tom Peters, Michael Porter, CK Prahalad, Philip Selznik, Peter Senge, Alfred Sloan, Charles Handy, Gary Hamel, Michael Goold, Peter

Drucker, Edward Deming, Alfred Chandler, Igor Ansoff and others (Koch, 2006). Koch identifies six phases of strategy development from the first phase in the 1950s and 1960s, where classic strategic planning was practiced, to the sixth phase which today focuses on the firm's skills and capabilities, core competencies and strategic intent. As strategy formulation changes over time, so does strategy implementation. The focus in terms of formulation moved from rational logical processes to complex interactive processes. Strategy implementation also changed to being more complex and integrated and informs the requirement to investigate strategy implementation from another perspective which is the purpose of the research.

A knowledge gap exists in strategy practices in the emerging and developmental economies such as South Africa. Published South African studies found were on middle manager practices at a university in South Africa (Davis, 2013), strategy-as-practice perspective within an engineering organisation (Sithole, 2011), a strategy-as-practice approach to business rescue (Pretorius, 2013), and a strategy-as-practice perspective on ICT analysis (Govender & Pretorius, 2015). There is limited research on this subject, on who the practitioners are, what tools and methodologies they use, how they are used, and where these tools and methodologies are obtained. It is also stated that the practice perspective can be a means to investigate and shed more light on these gaps (Whittington, 2002). Strategy-as-practice is about exactly what strategists (middle managers in this context) do, and can therefore be used as a lens to investigate and undertake further research into this field (Seidl & Whittington, 2014; Mantere, Aula, Schildt & Vaara; Vaara & Pederson, 2014; Sugarman, 2014). No previous studies could be found on DERIs and specifically on the role of middle managers during the implementation of strategies. This is therefore open for investigation.

From a practice point of view, strategy formulation and implementation cannot be viewed as separate entities and are interdependent of each other as part of a broader integrated strategic management approach. This is difficult to manage and presents a challenge to effective implementation (Hrebiniak, 2006). This informs the requirement to explore what people actually "do" during implementation in these changing environments. The next part will focus on implementation although the strategy-as-

practice view does not separate the two areas.

The purpose of Table 2.3 below is to summarise the above discussion and indicate the contributors to current literature for the specific topic under discussion as indicated in columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is discussed against the results and recommendations of this study in Chapter 7.

Table 2.3 below provides an indication of the contribution from selected literature "*from strategy formulation to implementation*" as well as the gaps identified from the viewpoint of this study.

Table 2.3: From Formulation to Implementation

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Mintzberg, 2009	Prescriptive and descriptive strategy formulation efforts	Emergent practices and process in organisations
Kotter & Schlesinger, 2008	Strategy in non-linear and changing environments	Practices in unpredictable environments
Collins & Montgomery, 2008	Resource-based view on strategy	Practitioner view
Eisenhardt, 2002; Drejer, 2002	Change and unpredictable environments. Emergent strategies	How do practitioners sense change? Emergent, prescriptive and descriptive in one
Hrebiniak, 2006	Integration is difficult and the challenge to effectively execute.	Integrated formulation and implementation

The aim of this part of the literature was to indicate the link between formulation and implementation of strategies. It was also acknowledged that these two cannot be separated but must be seen as an integrated function of strategy implementation. It is

therefore important to look at what was done before in terms of the formulation-implementation link and map that to the gaps relevant to this study. Firstly, prescriptive and descriptive formulation efforts were developed (Mintzberg, 2009) and the need exists to examine emergent practices and processes of practitioners to identify gaps and contributions to this study. Studies were done on strategy in non-linear and changing environments (Kotter & Schlesinger, 2008), but the practices employed by practitioners in such circumstances need to be identified. Work done from a resource base view (Collins & Montgomery, 2008) did not address the actual practitioner view and what is being done in such situations. In shifting environments where emerging strategies are part of the formulation effort and research (Eisenhardt, 2002; Drejer, 2002), the outstanding work includes having perceptions of this change and the integration between formulation and implementation (Hrebiniak, 2006) through specific practices and processes and day-to-day actions.

2.4 STRATEGY IMPLEMENTATION

2.4.1 Background

> *Implementation of strategy is an action-oriented, make-things-happen task that tests a manager's ability to direct organisational change, motivate people, develop core competencies, build valuable organisational capabilities, achieve continuous improvement in business processes, create a strategy-supportive culture, and meet or beat performance targets.*
> (Thompson & Strickland, 2001:345)

Implementation, in the context of strategic management as quoted above, has to do with putting plans, actions and execution into practice. The objective of implementation is to ensure that the goals and objectives are met as effectively as possible and on time. It includes, among others, the activities, choices and allocation of resources, budgets, time-scales, reporting, processes, information, and monitoring and control used to execute the given strategy. Implementation is the final part of strategic management and cannot be seen in isolation from the formulation phase (Okumus, 2001; Hrebniniak, 2006; Ogden & Fixsen, 2014). Implementation and formulation are interconnected and

are regularly reviewed to keep pace with the changing environment. Theoretically from a process perspective, implementation follows formulation. It is an action separate from formulation that only begins once the strategy has been selected and evaluated. Though often assumed to be linear, strategic management is an integrated process where formulation and implementation cannot be separated.

Figure 2.5 indicates the area where the focus for this paragraph will be in terms of strategy implementation.
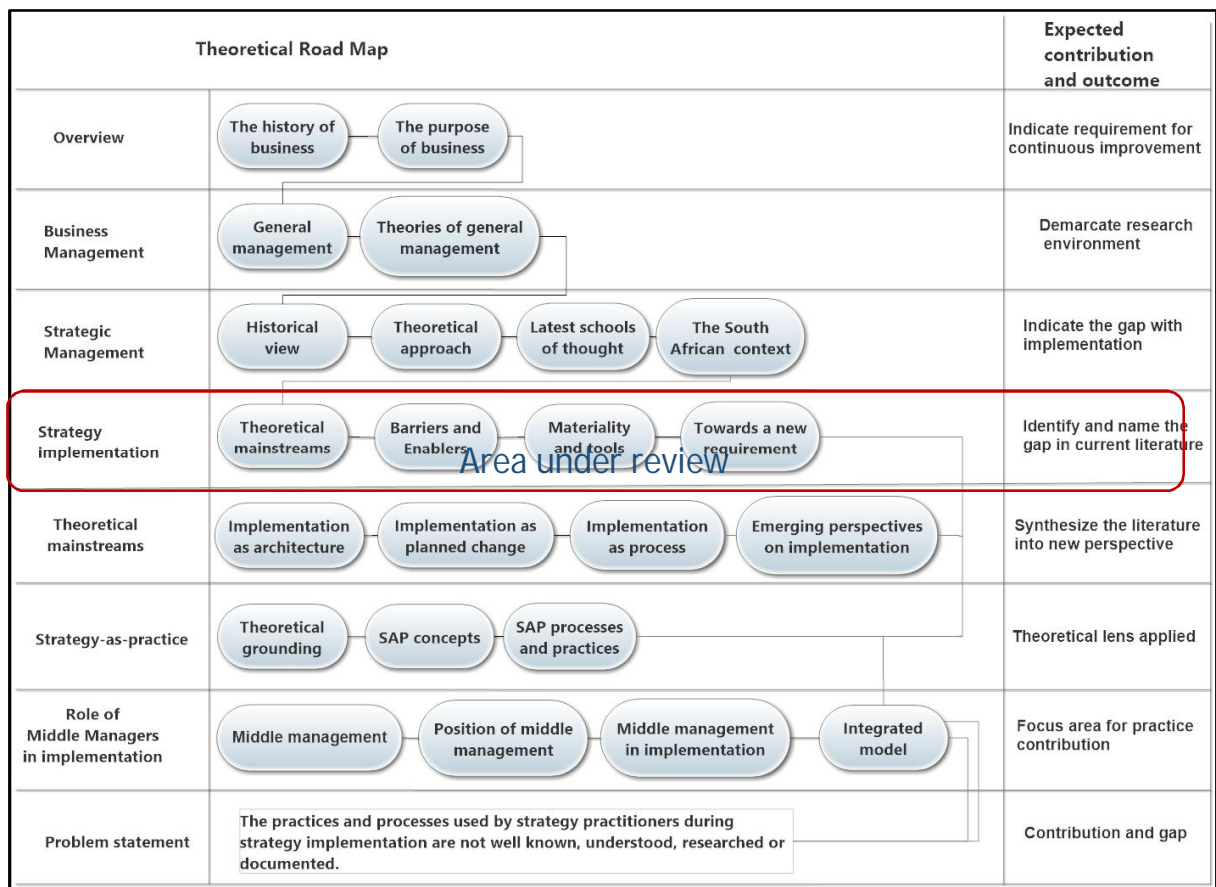
Figure 2.5: Theoretical Roadmap – Strategy Implementation

(Source: Author)

The task of successfully implementing the strategy is the most complicated and time-consuming task of strategic management (Thompson & Strickland, 2001) and has valuable resources allocated to it. According to Yukl and Lepsinger (2007), there is very little value in a good strategy that is not implemented effectively. There is a growing

recognition that the most significant challenges in the field of strategic management are not strategy formulation problems but strategy implementation problems and that the high failure rate of organisational initiatives in a dynamic environment is primarily due to poor implementation of strategies (Kaplan & Norton, 2001; Allio, 2005; Sioncke & Parmentier, 2007; Pryor et al, 2007). Although implementation is an integral part of the strategic process, most of the literature focuses on the formulation of strategy (Aaltonen & Ikävalko, 2002; Yukl & Lepsinger, 2007; Sioncke & Parmentier, 2007; Whittington, 2002; Jarzabkowski & Spee, 2009; Malek, 2008; Markiewicz, 2013; Pella, Sumarwan, Daryanto & Kirbrandoko, 2013; Ogden & Fixsen, 2014).

In a study done by the Economist Intelligence Unit in November 2004 on achieving operational excellence by means of strategy implementation, 276 senior operations executives from North America indicated through a survey that 57% of firms were unsuccessful at executing strategies (Allio, 2005). Consequently, it is not surprising that, after a comprehensive strategy or single strategic decision has been formulated, significant difficulties are often encountered in the subsequent implementation process (Bigler, 2001; Faull & Fleming, 2005; Allio, 2005; Sterling, 2003; Coon & Wolf, 2005; Aaltonen & Ikävalko, 2002; Hrebiniak, 2006; Malek, 2008; Markiewicz, 2013; Pella et al, 2013).

Business strategies and their implementation are dependent on many variables, as described above. It is the mix of management interventions of these variables that makes strategy implementation successful or causes it to fail. In today's shifting, competitive and often turbulent business environment, strategy implementation requires mechanisms and tools that can sense and react to these environmental factors and there is thus ongoing demand for further research in the field of implementation (Okumus, 2001; Grant, 2003; Kaplan & Norton, 2005; Akan, Richard, Helms & Samuel, 2006; Atkinson, 2006; Smith, 2009; Sorooshian, Norzima, Yusof & Rosnah, 2010; Rose & Cray, 2013, Ogden & Fixsen, 2014).

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic under discussion as indicated in

columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is again discussed against the results and recommendations of this study in Chapter 7.

Table 2.4 below gives an indication of the contribution from selected literature on *"strategy implementation"* as well as the gaps identified from the perspective of this study.

Table 2.4: Strategy Implementation contribution

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Bigler, 2001; Faull & Fleming, 2005; Allio, 2005; Sterling, 2003; Coon & Wolf, 2005; Aaltonen & Ikävalko, 2002; Hrebiniak, 2006; Malek, 2008; Markiewicz, 2013; Pella et al, 2013	Indications and evidence on strategy implementation failure and inefficiencies Inability to manage change effectively	Strategy implementation inefficiency in the South African context Focus on the practices and social interventions of successful practitioners
Okumus, 2001; Hrebiniak, 2006; Ogden & Fixen, 2014	Integrated formulation and implementation	How do practitioners integrate horizontally and vertically
Markiewicz, 2013; Ogden &Fixen, 2014	Formulation	Focus on implementation

The first comment to be made is that it was indicated from existing literature that there is evidence about strategy implementation failures and efficiencies and more specifically the inability to manage these changes effectively (Bigler, 2001; Faull & Fleming, 2005; Allio, 2005; Sterling, 2003; Coon & Wolf, 2005; Aaltonen & Ikävalko, 2002; Hrebiniak, 2006; Malek, 2008; Markiewicz, 2013; Pella et al, 2013). The first gap indicated was that there are not many studies done in the South African context, and secondly, there

is a gap in what exactly these practitioners are doing in relation to interventions and actions in order to be successful. The next gap and contribution is what and how practitioners are integrating horizontally between example formulation and implementation (Okumus, 2001; Hrebiniak, 2006; Ogden & Fixen, 2014) and vertically between different methodologies, tools and material matters and also different strategic initiatives. How are these used and executed during the practice approach and how is it defined in terms of formal and sound research?

The next section looks at the theory and literature that exists on the subject of strategy implementation and is divided into four main streams that were identified during the literature study.

2.4.2 Theoretical mainstreams

The strategy implementation theories, constructs and tools used during the past few years came from different schools of thought and contributions in this field continue through research and theory development. At the core of successful implementation lies a deep understanding of how to fine-tune an organisation through better organisational design, the management of organisational processes, resources and the motivation of employees. The initial research done for this study was to determine the literature and research about strategy implementation. The literature was synthesized into four mainstreams as indicated in Figure 2.6 below in order to define a new perspective on the context of the study.
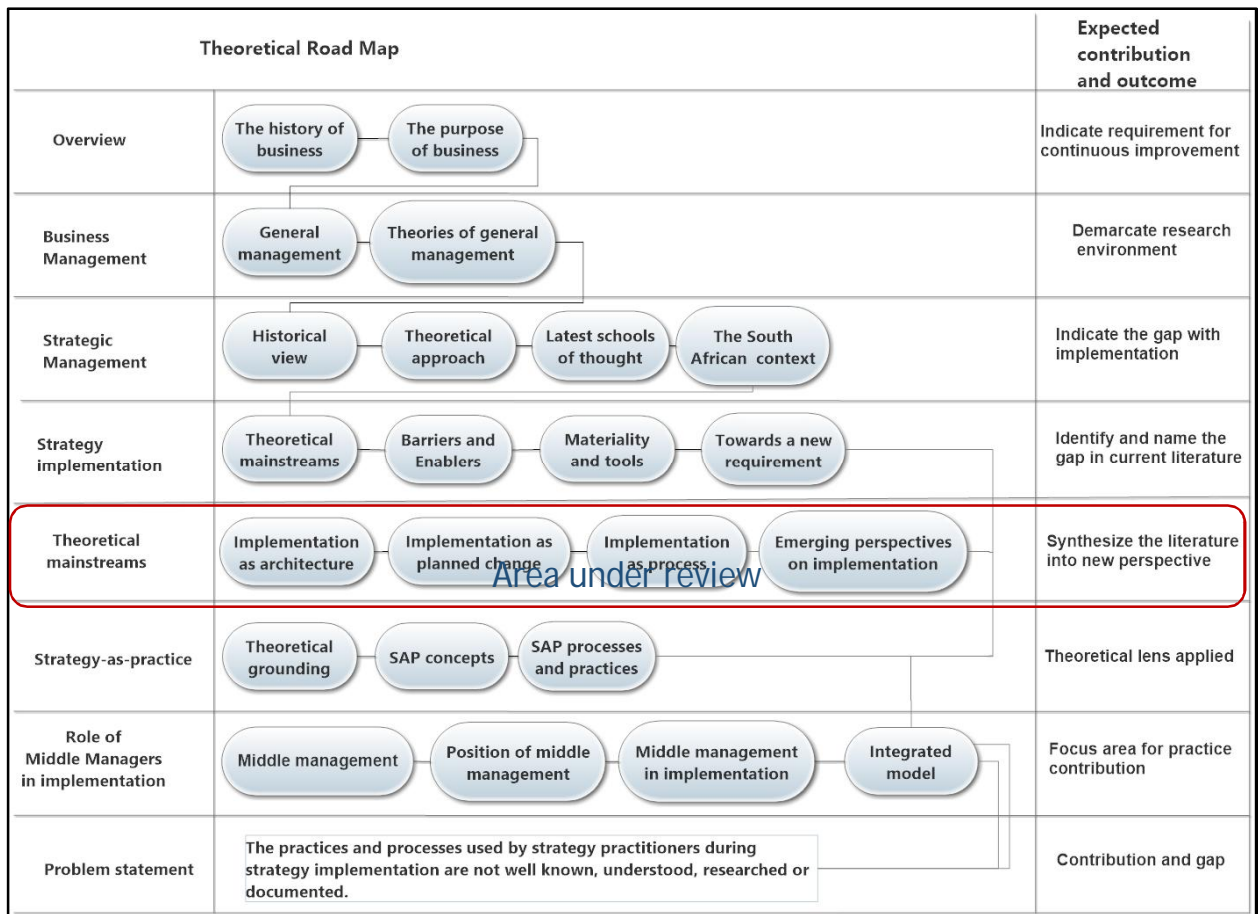
Figure 2.6: Theoretical Roadmap – Theoretical mainstreams

(Source: Author)

Several tools and techniques have been developed by various authors in order to enhance the understanding of the implementation of strategies. These concepts and frameworks are investigated in this study. The literature review revealed four main theoretical streams, defined as:

- Strategy implementation as architecture;
- Strategy implementation as planned change;
- Strategy implementation as process; and
- Emerging perspectives on implementation strategy where the individual's practices executed are of concern to this study.

These four streams were incorporated and synthesized into a conceptual framework.

The literature with respect to strategy implementation was grouped into these four streams as they complement the implementation effort and are discussed in detail in the following section. The four streams were further analysed to indicate the gap in literature and to ensure that the study adds to the current body of knowledge as identified in the objectives of the research.

2.4.2.1 Implementation as architecture

Implementation as architecture in this sense means the architecture of the organisation used to function effectively and which is thereby able to implement strategies effectively. This includes all the internal functions, processes and structures that need to be aligned in order for the organisation to execute strategy successfully (Smith, 2010). The management of strategy implementation requires well-designed and co-ordinated management processes, structures and resources (Floyd & Lane, 2000; Getz & Lee, 2011) as enablers during the implementation process and to ensure that implementation is done effectively. The discussion that follows will highlight the use of organisational architecture as an enabler for successful strategy implementation.

Architecture models:
Initial research done by Waterman, Peters and Phillips (1980) found that strategy implementation is a relationship between several factors including architecture, structure, systems, style, staff, skills and subordinate goals. McKinsey and Company developed the McKinsey 7-S model as indicated in Figure 2.7 below that defined strategy, structure, systems, staff, skills, style/culture and shared values as some of the factors for effective strategy implementation (Palatkova, 2011).
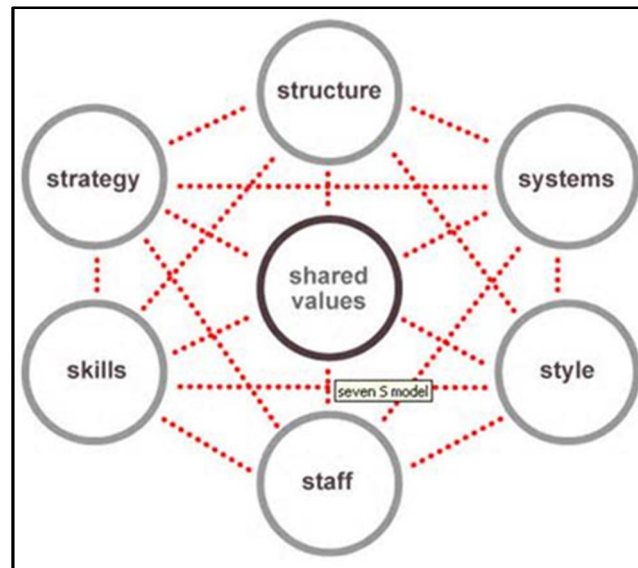
Figure 2.7: McKinsey 7S Framework

(Source: Peters, 2014)

Research done on organisations that had difficulty in implementing strategies revealed a number of problems such as management roles in implementation, communication, commitment, comprehension, organisational systems, organisational learning, control mechanisms, organisational culture, motivation, commitment, resources, co-ordination, roles and responsibilities, capabilities, performance measures, competing activities and environmental conditions (Beer & Eisenstat, 2000; Frigo, 2002; Allio, 2005; Zagotta & Robinson, 2002; Mankins & Steele, 2005; Smith, 2010, Ogbeide & Harrington, 2011; Ahmadi, Ali, Yashar, Mohammadreza & Jamshid, 2012).

Implementation factors such as strategy formulation, organisational structure, culture, people, communication, control, leadership, human resources (HR) management, executive style and project management were identified by Thompson and Strickland (2001); Jooste and Fourie (2009); Sorooshian et al (2010); Ĉater and Puĉko (2010); Gottschalk and Yngve (2010); and Hákonsson, Burton and Lauridsen (2012). Operational planning, clarifying roles and objectives, monitoring operations and performance and solving operational problems were further factors identified that could improve implementation (Yukl & Lepsinger, 2007). These are all in support of the

implementation effort and are also part of how an organisation's architecture is aligned to execute properly.

Research done on sixty Indonesian organisations indicated that there were nine capability shortages experienced in the successful implementation of strategies. These are financial capability, leadership, continuous improvement, information technology, culture, organisational structure, human resource competence, change management, and the strategy management office (Pella et al, 2013). These are all in support of the organisational architecture required for the successful implementation of strategies.

The Galbraith Star Model is a model of organisational design that supports strategy implementation as the organisational architecture context changes (Kesler & Kates, 2010). The organisational architecture depicted in Figure 2.8 below is called the Galbraith Star Model. Here the concepts are divided into five categories, the first being the strategy that defines the direction of the organisation. The structure refers to the functional structure as well as location of decision-making. Processes are concerned with the flow of information in order to operate effectively. Rewards and reward systems is about motivating people to perform and achieve organisational goals. The last category of the model is about the people (human resources) which influence and regularly explain the employees' mind-sets and skills. This model can support managers in designing an organisation conducive for strategy implementation as indicated in the literature. It is notable that this structure is becoming less important in the fast-changing business environment where processes, rewards and people become more important. It was also indicated that different strategies will lead to different organisational designs. The five concepts in the model are integrated and inter-linked. The organisation comprises more than just the structure and the alignment between such constructs will lead to effectiveness and, in this case, also implementation effectiveness.
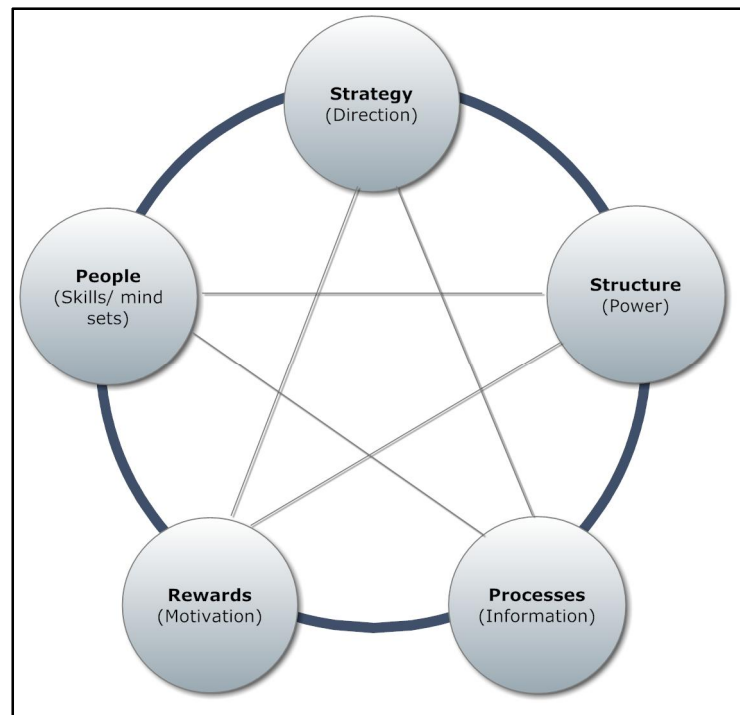
Figure 2.8: Galbraith Star Model

(Source: Galbraith, 1995)

Architecture concepts:

Organisational architecture in terms of structure, functions, components, people, processes, infrastructure, equipment, technologies, information, training, support and IT, among others, was identified by Bijata and Piotrkowski (2014) as having an impact on the success of strategy implementation. Other factors that were identified through the literature review were motivation and organisational commitment (Smith, 2009). Mann, Yuheng and Mann (2011) identifies supply chain contract as a tool to ensure effective strategy implementation and also indicates that organisational architecture forms part of the design of all aspects of the organisation.

According to Ogden and Fixsen (2014), implementation research is also emerging as a new paradigm. They indicated that research was being done in order to develop and evaluate methods related to the complex implementation-specific variables which are part of the latest research proposals. Rose and Cray (2013) identified internal and external factors for their proposed model that influence strategy implementation. The major internal factors identified were managers' actions, employees' actions and

organisational flexibility. These were then further broken down into leadership, communication, participation, resistance to change, and flexibility in management, amongst others.

Strategy implementation requires management to use all resources, processes and systems available to be effective. One of the options is the use of business models in conjunction with strategy as the architecture for strategy implementation (Mansfield & Fourie, 2004). Enterprise architecture, according to Robertson, Ross and Weil (2006), is the design and use of IT systems to ensure implementation and that more specific processes are implemented properly. Their study on several international organisations indicated that having efficient enterprise architecture in IT, infrastructure and process can improve strategy implementation.

The purpose of Table 2.6 below is to summarise the above discussion and indicate the contributors to current literature for the specific topic in discussion as indicated in columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. The identified gaps in literature and contribution is discussed in relation to the results and recommendations of the study in Chapter 7.

Table 2.6 below provides an indication of the contribution from selected literature on "*implementation as architecture*" as well as the gaps identified from the viewpoint of this study.

Table 2.5: Contribution to Architecture

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Ogbeide & Harrington, 2011; Smith, 2010; Ahmed, et al, 2012	Architecture constructs in support of implementation	What are the organisational architecture components used by middle managers during implementation
		Integrated nature of architectural

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
		components
Kesler & Kates, 2010	Organisational architecture shapes with context	Continuous re-alignment
Rose & Cray, 2013	Employee actions and organisational flexibility	Practice approach acts in support of flexibility in implementation

Current literature identified several architecture components in support of implementation used by organisations (Ogbeide & Harrington, 2011; Smith, 2010; Ahmed et al, 2012). It was further identified how this architecture is aligned with the context in which such an organisation operates as well as how employees and the organisation adapt to the environment and the extent of their flexibility (Kesler & Kates, 2010). The contribution from this study would be to identify these architecture components used by middle managers, how they are used in an integrated manner, how they are aligned with changing circumstances and whether there is the required flexibility in this practice approach (Rose & Cray, 2013). Architecture views implementation as a desirable end state but does not explain how organisations get there; that is where the practice approach can make a valuable contribution. The above indicated that there is a link between strategy formulation and implementation through the use of organisational architecture, the application of resources and the effective application of organisations in support of strategy implementation. From a critical point of view, this stream looked at the different components of organisational architecture with the focus of the impact on strategy implementation. However, they are discussed in isolation and not necessarily using an integrated or balanced perspective. This strengthens the requirement to explore the practice approach and identify how these integrated and balanced practices are currently being used to execute strategy successfully.

2.4.2.2 Implementation as planned change

The second stream of theory for strategy implementation is the use of change management and planned change. According to Weller (2010), effective strategy implementation requires an effective change management process. This has a direct influence on strategy implementation as well as on the organisational architecture. The area under review is indicated below.
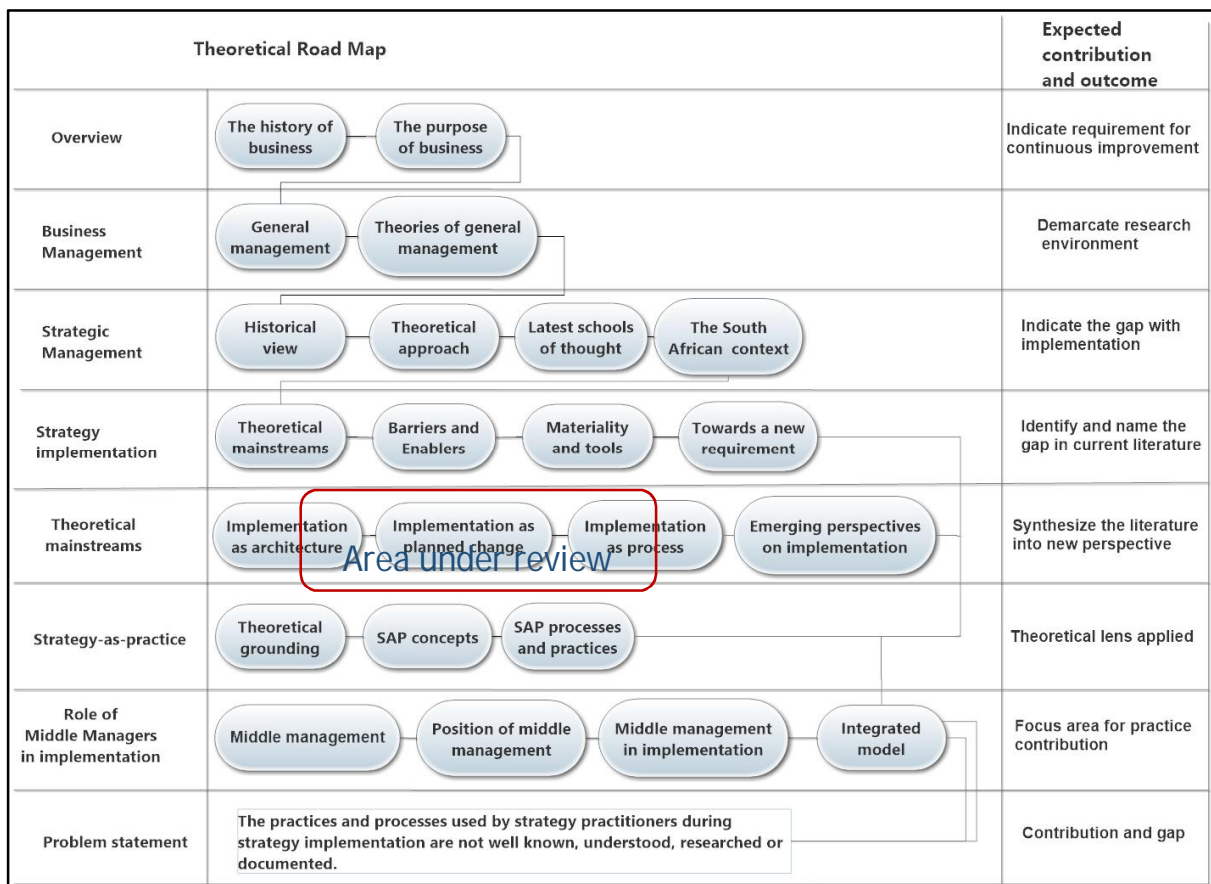
Figure 2.9: Theoretical Mainstream – Implementation as Planned Change

(Source: Author)

Change is inevitable in the business arena and therefore the business strategy needs to accommodate these changes through the use of a change management process (Gans, 2011). The process advocated by Gans (2011) commences with an assessment of the impact of the change, then builds an effective team, obtains buy-in from the top management through communication, training, expecting resistance, recognising and

rewarding success, and continuously monitoring and adjusting progress.

There were several contributors in this field (Hughes, 2007; Whelan-Berry & Somerville, 2010; Van den Ven & Sun, 2011) including Kotter's model (1995; 1996) which identified eight steps for change management; these are creating a sense of urgency for the intended change, creating a guiding coalition, developing a vision and strategy, communicating the changed vision, empowering broad-based action, generating short-term wins, consolidating gains and producing more change, and anchoring the new approaches in the corporate culture. Although Appelbaum, Habashy, Malo and Shafiq (2012) criticises Kotter's model for a lack of empirical research, it is still widely used. Defining a change process used by practitioners as part of the practice approach is also a contribution to addressing this gap.

In his model Kotter also indicated that the rate of change is continuously increasing and that a new methodology of change leadership is required to cope with and manage such change. He contended that realising the urgency of these changes is what makes managers successful in their change management efforts (2013). Kotter further states that management requires a new kind of leadership to cope with change. Hrebiniak (2006) agrees that the biggest obstacle to strategy implementation is the inability to manage change. Merrel (2012) defines six activities in his model on effective change management which he calls the "big six". These are leading, communicating, learning, measuring, involving and sustaining. Merrel argues that irrespective of what type of change is required, the six-step approach to change management ensures success.

Lewin's (1947) classical three-step model as well as his force field analysis model are also tools used to manage the change required in the implementation process and managing the required change. Lewin considered three steps when describing the process of change: unfreezing the current level, changing or moving to the new level, and freezing at the new level. The first step, unfreezing, involves the identification of the present problem or challenge or situation to be changed. Strategies are developed to strengthen the driving forces and weaken or reduce the restraining forces. It is during this phase that people in the organisation begin to realise that the change is needed

and will be of value in realising the achievements of the organisation.

The second step of the process involves changing or moving to a new level. It is here that the actual change occurs and the driving forces have equalised or overcome the restraining forces. A detailed plan is constructed for implementing the change, and the change is executed within the organisation. In the final step of Lewin's process, refreezing, the change is stabilised at the new level within the organisation. Although Lewin included the idea of permanency at the new level, he did not imply that the organisation was now immune to future change (Bozak, 2003). The three-step model of unfreeze, change and refreeze has been in use for some time and is also not without criticism. Some of the criticism indicated that it is too simplistic and that change is continuous and open-ended. Others indicated that it does not include transformational change or the dynamics within the organisation which is more complex than indicated (Burnes, 2004).

Lewin's Force Field Analysis is a powerful strategic tool used to understand the need for change in both corporate and personal environments. This implies that there are two forces keeping the system in equilibrium and any change required needs some intervention in both of the forces in order to bring about the change. This can be achieved by changes to either the driving forces or the restraining forces. This is useful to understand how people move through change and why they resist change. There will always be driving forces that make change attractive to people, and restraining forces that work to keep things as they are (Lewin, 1947). Successful change is achieved by either strengthening the driving forces or weakening the restraining forces. This is summarised in Figure 2.10 below.
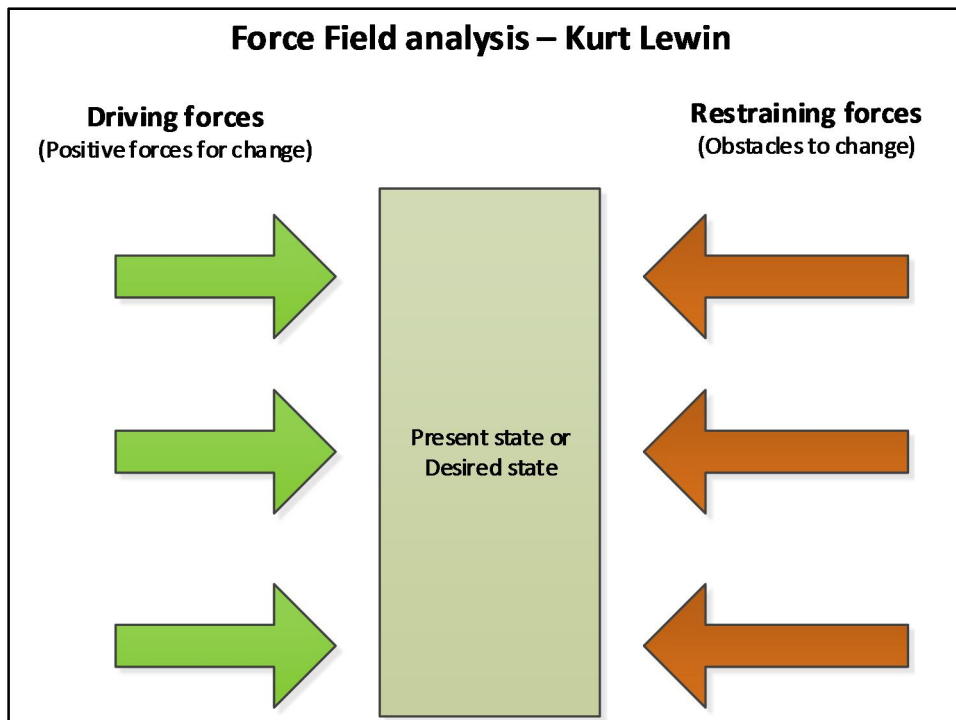
Figure 2.10: Kurt Lewin force field analysis

(Source: Lewin, 1947)

Another view of strategic change management uses the notions of sense-making and sense-giving by managers in organisations as part of an integrated approach which, according to Banker (2012), makes implementing organisational change easier.

Sense-making is defined as the focus on the activities in an organisation that determine meaning or make sense of situations within that environment (Weick, 1985). Gioia and Chittipeddi (1991) describes it as a process through which the changes are envisioned, signalled, re-visioned and energised. Strategic change is accomplished by means of changing the way things are done in an organisation which is, *inter alia*, about the interaction and communication between people. This includes the different roles of stakeholders in this process − how people sense, make sense and understand meaning in the organisational context.

Sense-making is a social process that responds to uncertainty and reacts to it through examining and understanding what is going on in the specific situation. It is an

interpretive process which different stakeholders, on different levels, use to understand the environment (Maitlis & Lawrence, 2007; Rouleau & Balogun, 2011; Weick et al, 2005). Research has emphasised the importance of sense-making for middle and senior management and has also demonstrated the importance of other enablers such as communication, comprehension, process and the cognitive side of sense-making in understanding the world.

What follows from sense-making is the attempt to influence the process and to communicate that to others. It is the action of guidance given to others to influence their actions and interpretations. Responsive organisational change is initiated by the actors and transferred to the next level, whether upwards, downwards or laterally, through a reciprocal process of social interaction, as is the case with sense-making. This is referred to as sense-giving (Lüscher & Lewis, 2008; Rouleau, 2005; Bakke & Bean, 2006; Hope, 2010). Both sense-making and sense-giving can be used for organisational change management and as models for implementing strategies, as indicated above.

Strategic change can be achieved by creating change programmes that can deliver strategy and manage and co-ordinate resources to achieve the goals of change management. Franken, Edwards and Lambert (2009) identified certain key elements such as strategic change portfolio alignment, strategic change execution and change capability improvement, and defined an approach to assist practitioners to deal with the execution of strategy changes. They also carried out research that looks specifically at change management programmes in support of strategy implementation.

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic in discussion as indicated in columns one and two. It also indicates the contribution made from this study relating to the specific topic in the third column. This identified gap in literature and contribution is discussed against the results and recommendations of this study in Chapter 7.

Table 2.7 below gives an indication of the contribution from selected literature on "*implementation as planned change*" as well as the gaps identified from the viewpoint of this study.

Table 2.6: Contribution to Planned Change issues

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Gans, 2011; Van Den Ven & Sun, 2011; Somerville, 2010; Appelbaum, et al., 2012; Merrel, 2012.	Change management process to effect the change during implementation, formal interventions and initiatives.	How do practitioners sense and implement change? What are the formal initiatives and change management process?
Banker, 2012; Rouleau & Balogun, 2011.	Sense-making and sense-giving in response to uncertainty.	Sense-making and sense-giving through cognitive translation of practices.

The abovementioned literature review expands on the theoretical stream identified for strategy implementation as planned change. This identified the importance of managing change during implementation efforts, as well as models and suggestions on how to execute organisational change management programmes in terms of strategy implementation (Gans, 2011; Van Den Ven & Sun, 2011; Somerville, 2010; Appelbaum, et al., 2012; Merrel, 2012). Sense-making and sense-giving were identified as ways to influence the change management process and structured manipulation of how the environment looks, what is going on, how to react to that, and how to communicate, influence and co-ordinate efforts within the organisation (Banker, 2012; Rouleau & Balogun, 2011.). The major shortcoming identified from this is that it does not elaborate on how these are done by the relevant managers. The gap is found in how middle managers sense and implement that change, what process they use and how they translate that into practice. There is some criticism against certain of these models of planned change, namely that they are old and require some revision in relation to emerging paradigms.

2.4.2.3 Implementation as process

Implementation is the process of putting the intended strategy into action (Ikävalko, 2005; Hrebiniak, 2006). The next theoretical stream is about implementation as process, where implementation is designed as a process by management in order to execute it successfully. The area that will be addressed here in terms of the theoretical streams is indicated in Figure 2.11 below.
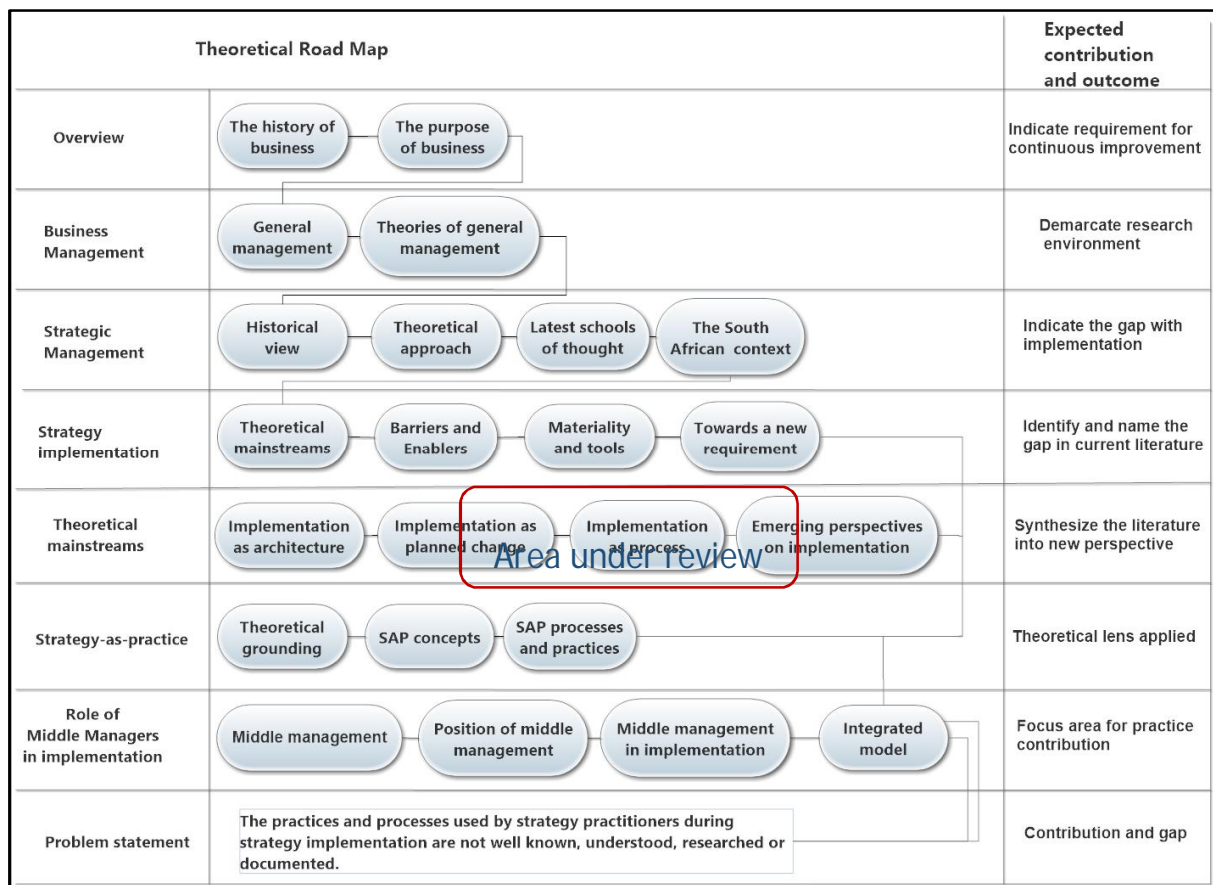
Figure 2.11: Theoretical Mainstream – Implementation as Process

(Source: Author)

Implementation is influenced by the content of the strategy, the context of the organisation and the process of managing the change (Pettigrew, 1987). Pettigrew maintains that these factors are interrelated and affect one another so the process of

implementation may be more effective if they are applied in context. According to Pettigrew (1987), it is accurate to suggest that "effective implementation of an average strategy beats average implementation of a great strategy every time". Yet companies nonetheless often fail to carry out their strategies in ways that improve the likelihood that they will be implemented effectively. In their model for strategy implementation, Aaltonen and Ikavalko (2002) match the planned and the realised strategies with a view to reaching the organisational vision. According to them, the components of strategy implementation − communication, interpretation, adoption and action − are not necessarily successive and cannot be detached from one another, which leads to an integrated approach. This integrative process approach was supported by Raps (2004) who stated that the four implementation factors he described (culture, organisation, people, and control systems and instruments), must be seen and applied in an integrated manner through a process of implementation. Kaplan took the balanced scorecard further, noting that it complements the McKinsey 7-S model by creating a multi-dimensional approach which demonstrates the interconnectedness and linkages between the constructs, ensuring effective implementation (Kaplan, 2005).

Hrebiniak (2006) agrees with the previous writers and indicates that, although formulation and implementation are two separate parts of the strategic management process, they are interdependent on each other. Therefore, the planning and implementation must be integrated to ensure sound implementation.

The Strategy Execution Framework (SEF) is an innovative model designed to indicate that implementation is managed as a process between strategy-making systems and operational systems (Malek, 2008). Malek identified an integrated systemic process to be followed during execution and designed his model accordingly. The basis is a complex visual model that shows the interaction between the various framework components. The model consists of the concepts of ideation, vision, nature (as the three strategy-making systems) and engagement, synthesis and transition (as the three operational systems). The purpose is to connect the top part of the organisation's strategy to the bottom or operational part of the strategy. As indicated in Figure 2.12 it is the alignment of the purpose, strategy, culture and identity through engagement with

projects, programmes and operations that this execution framework is based on.
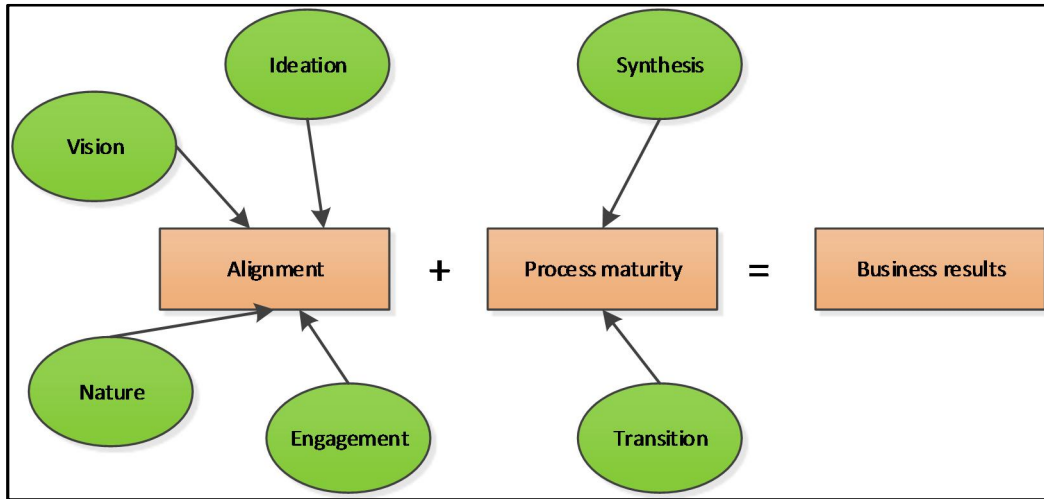
Figure 2.12: Strategy execution framework

(Source: Malek, 2008)

Markiewicz (2013) takes the strategic management process further by using strategic maps through a process of transformation of intangible assets into tangible financial results. Markiewicz used the BSC system as a basis and strategy maps to illustrate implementation efforts in different perspectives. Pella et al (2013) identified seven potential problem areas found during the implementation process, namely, the mission statement, corporate scorecard, key performance indicators, action plan, performance appraisal, and control and monitoring systems. They also identified nine capability shortages that can affect the execution of strategies. This was highlighted in the architecture part of the theory stream as it relates to the organisational part of implementation. Rados (2011) indicated that the problems experienced with the strategy implementation process relate to communication, organisational structure, definition of tasks and activities, information systems, control, defined responsibilities and authorities of key employees. Added to this is the issue of evaluation and control as part of the process to implement strategies successfully (Vele, 2012). Vele contends that systems and processes need to be part of the process to evaluate performance and to effect corrective measures where necessary during the implementation phase.

According to Koch (2006), strategic management must be formulated and executed by involving all the people who will be exposed to the strategy during implementation, and it should preferably be the same group of people. Koch argues that strategy formulation and implementation must be adapted as circumstances change and as business conditions change. His most important observation, which is relevant to this research, is that if people do not understand and believe in their strategy, they will not take ownership and strategic implementation will fail. According to Robert (2004), two of his "ten deadly sins" that lead to strategic malaise are, firstly, the fact that people cannot implement a strategy that has not been revealed to them and, secondly, that people do not implement what they do not understand. This means that strategy-makers must ensure that the employees are part of the process of formulation as well as being part of the comprehension and communication process. Strategy cannot be undertaken in isolation and, even if the employees are not strategic thinkers, they must still be made part of the process. It is extremely important that the strategy is communicated to the "executors" in ways they can understand as part of the process in order for them to be supportive of it. If the strategic intent and relevant plans are not properly verbalised, this is likely to make proper implementation impossible.

Stanton Marris, a leading strategy consulting firm in the United Kingdom, compiled a report entitled *Strategy evolution: Adapting to a new world* (2009). For their study, Stanton Marris interviewed 45 top executives in the environment of leading and executing strategy. They identified some of the critical issues and risks in making strategy work. They found that one of these highlighted risks is that of managing the human risk of the business and people who make these strategies work (Stanton Marris, 2009). Their comment "remember the popular belief that 50% of strategies fail. There is a better way" provides another view of the fact that human intervention is one of the drivers of strategy implementation. In the Stanton Marris report (2009), it is argued that, in order to be successful, the personal, emotional and human sides of the business capabilities need to be focused on, and that whatever aspect of strategy implementation needs to be addressed must be included. Stanton Marris identified "5 Cs" as risks that need to be addressed to ensure successful implementation, namely capability, capacity, commitment, control and communication. It is about a simpler, more

powerful language that can "cut through the noise" (Stanton Marris, 2009). It is also about making it more iterative, interactive, memorable and understandable. They argue that these are the types of issues to be addressed as part of the process of communication in order to ensure successful implementation.

A last view on this assertion is from the school where project management is also seen as an enabler in the strategy implementation process. In this case, evidence was produced where project management as process was used to implement strategies (Longman & Mullins, 2004). Further work was done indicating that following a project strategy during implementation yielded organisational success (Yang, 2012).

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic under discussion as indicated in columns one and two. It also indicates the contribution made from this study relating to the specific topic in the third column. This identified gap in the literature and the related contribution is discussed against the results and recommendations of this study in Chapter 7.

Table 2.8 below provides an indication of the contribution from selected literature on "*implementation as process*" as well as the gaps identified from the viewpoint of this study.

Table 2.7: Contribution to Implementation as Process

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Pettigrew, 1987	Implementation is influenced by the content, context and process of managing the change	Integrated process from an individual practitioner perspective
Aaltonen & Ikavalko, 2002; Raps, 2004	Process integration of communication, interpretation, adaptation	Little work on process integration by practitioners on middle management

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
	and action during implementation	level
Hrebiniak, 2006	Planning and implementation are interdependent and integrated	Very little work done on the interdependency and integrated nature of implementation in this context

From the above theory and research, it was indicated that the theory stream of strategy implementation processes had produced a considerable amount of literature. Implementing strategies as a defined and structured process can be used by management in order to ensure successful implementation. However, it must be noted that, although the process was broadly defined above, it was not defined in terms of what, how and why it is being done. Processes are generally presented as normative – or a way that must be followed. How it actually occurs in practice is neglected. The finer detail as addressed in the strategy-as-practice approach are not made visible and the relationship to what actually happens in practice is not evident from this. It is for that reason that this research will attempt to obtain data to address the gap that exists in the current body of knowledge. Specific gaps are found in the integration process between all the constructs (Raps, 2004; Hrebiniak, 2006) identified in this literature from a practitioner point of view. There is limited research on this integrated process and how it is done and the current study can therefore be viewed as a valuable contribution. As indicated previously, the processes followed by practitioners are not defined but vary between individuals and some generic processes. The contribution in this case would be to evaluate the data and define the generic process followed by practitioners in this study.

2.4.2.4 Emerging perspectives on strategy implementation

The last theoretical stream for discussion is that of adaptation. It implies that strategy

implementation is an adaptive action that evolves from irregular events, the organisation as a living system, from complex environments, from the point of a learning organisation and in an absorptive capacity, to mention a few. Part of this mainstream is also the strategy-as-practice field, which is mentioned briefly here but will be discussed in more detail later in the chapter due to the focus on that field for this study. The issue here focuses specifically on individual practices as part of the strategy-as-practice approach and is indicated in Figure 2.13 below.
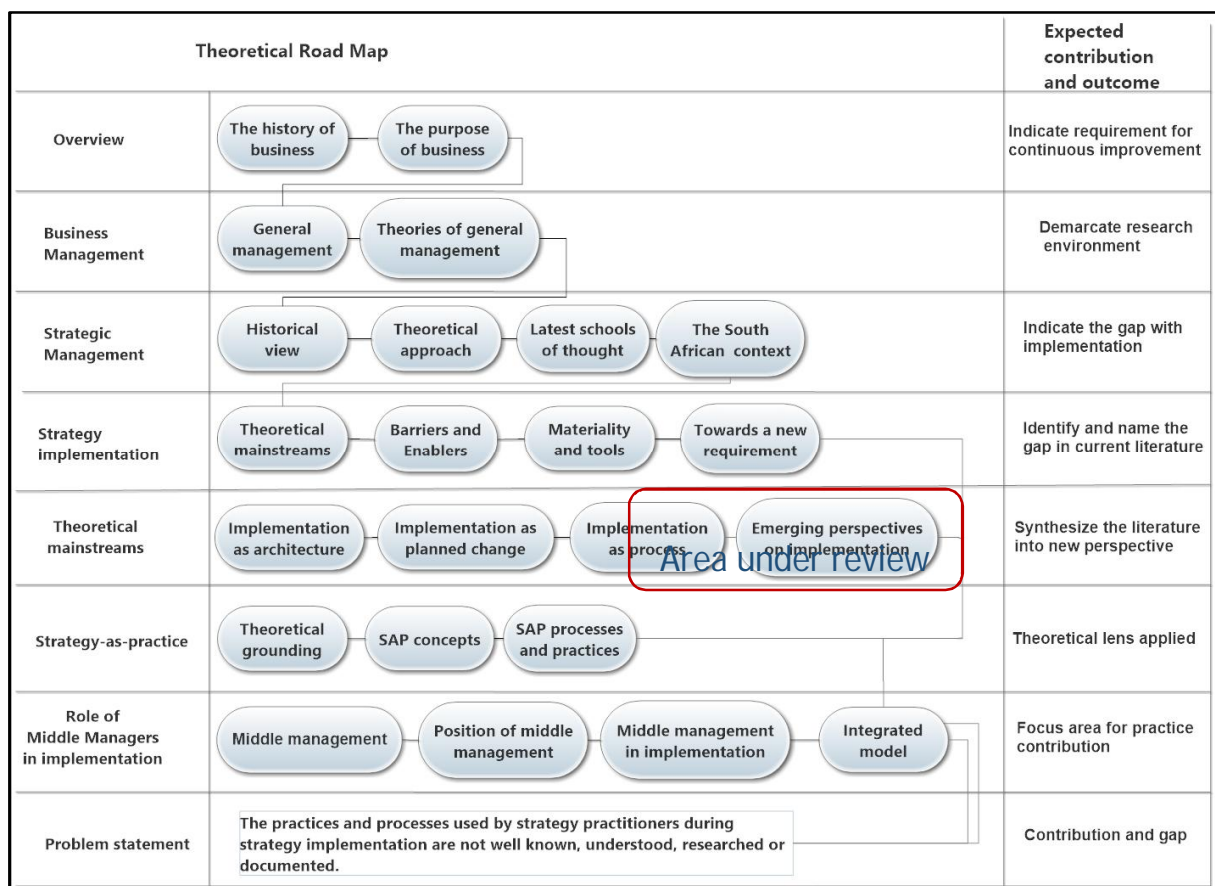
Figure 2.13: Theoretical Mainstream – Emerging perspectives

(Source: Author)

Work done by Grant (2003) indicates that strategic planning changes in volatile and unpredictable business environments. This requires that strategies are also creative and adaptive. Strategy as an emergent process and adaptive to the environment became more relevant as a process of planned emergence was evident. Grant's findings

indicated that strategic planning changes in line with environmental fluctuations in turbulent and unpredictable situations. He also indicated that the planned emergence concept in use in these organisations is aligned with the concept of the complexity theories and the complex adaptive systems theories (Grant, 2003). It is from this angle that, firstly, business as a complex adaptive system is investigated.

In 1950, the well-known biologist Von Bertalanffy considered living organisms in order to explain complex systems. He distinguished between closed and open systems. He argued that open systems continuously interacted with the environment and therefore had the capability to constantly adapt to the environment, depending on the varying circumstances. This phenomenon is transposed to the business environment, in that constant change, fluctuations, randomness and the external and internal environment of the organisation change continuously. An organisation can be seen as an open system that reacts to these changes, and therefore it can be considered an adaptive system (Torlak, 2004). Another view is that of Russel Ackoff in his concept of "systemic thinking". According to Allio (2003), who interviewed Ackoff on this issue, the systemic thinking of Ackoff suggests that problems are solved by thinking in terms of the interactions of the parts; and of the parts with the whole; and, together with the environment, this creates the properties of the whole. This implies that one needs to combine the synthetic thinking model, which analyses *why* it works the way it does with *how* it works. Systemic thinking does exactly that by combining the two concepts. The purpose of an organisation was described previously to be more than merely making a profit. A corporation must be treated as a social system which links up with the purpose of an organisation and can therefore be seen as a system in society. Complex adaptive systems consist of a large number of agents, all acting according to their own rules, interacting between each other and also adjusting their behaviour to that of the others (Stacey, 2005). All living organisms can be seen as complex adaptive systems (CAS). Complex adaptive systems evolve or emerge from interaction between agents within themselves, as well as between the agents and the environment. This causes the system to adapt to environmental changes in order to survive (Burnes, 2005).

It can be seen from the visual representation in Figure 2.14 below that an organisation

exists as a system within a complex environment, with multiple functions that are interconnected. These functions react continuously and randomly to any variation in the environment, as well as amongst themselves. The organisation also acts as a living system and adapts to certain variables on a continuous basis. These interconnected non-linear interactions are highly adaptive and generic and they receive constant feedback in order to adapt to the sensitive environmental conditions.
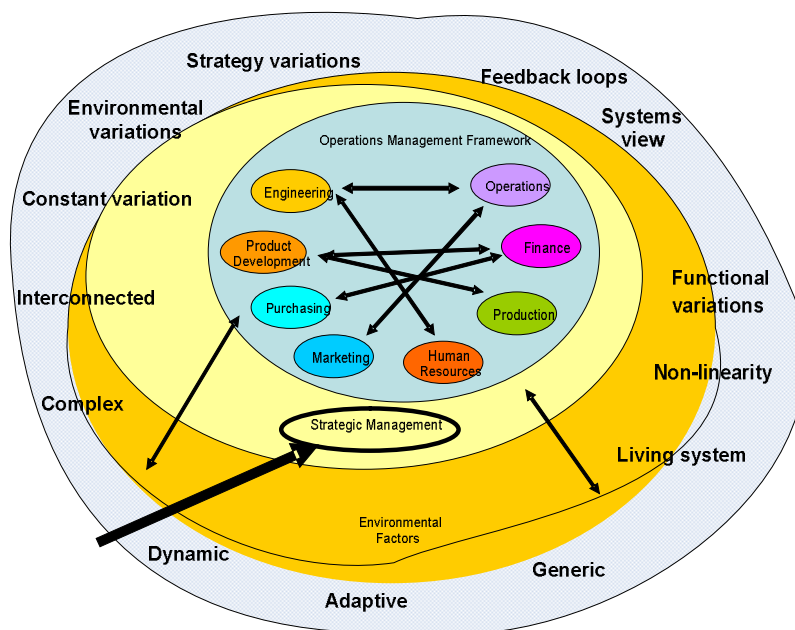
Figure 2.14: Illustration of business as a complex adaptive system

(Source: Author)

The illustration above shows the complex nature of a current business which is non-linear in feedback and acting as a living system. Together with leadership and good corporate citizenship, the organisation can be managed as a system, taking cognisance of more than the sum total of the parts. Complex systems constantly adapt to local conditions and interactions. The agents in the system consistently modify the behaviour of that system. There is change and adaptation taking place through feedback, learning and co-evolution. In the field of management theory, this means that managers manage for the emergence of beneficial logic. They respond to strong and weak signals, amplify or dampen the response based on a vague idea of the objective to be achieved, and make decisions accordingly (Snowden, 2008). Snowden observes that the complex

adaptive systems theory gives a theoretical base to common sense.

What is important to acknowledge is that there are continuous interactions between the components in a system. These interactions constantly vary. There is constant feedback between these components and they adapt to new conditions very quickly. This is a metaphor that explains the complexity of the business environment and describes business as a complex adaptive system. Management intervention is required to be able to ensure that this order must create stability. Stability will not be generated by itself. Organisations can only survive if they constantly sense, react, improvise and adapt to these changes. To be able to achieve that, organisations need to implement structures, communication, policies and practices that will promote these conditions of self-organisation (Burnes, 2005; Stacey, 2003; Stacey, 2005).

The constant interaction between people in an organisation and between other organisations and the environment causes the change that requires problem-solving and affords opportunities to excel. This interaction also creates a self-organised culture of learning and emergence (Glor, 2007; e Pina & da Cunha, 2006). The environments are aligned by means of interaction and response. Learning organisations design the structure, culture and strategy in such a way that it creates optimal learning opportunities. Learning and emergence are some of the key success factors in adaptive systems. They require attention and therefore leadership plays an ever-increasing role in such organisations (Torak, 2004; Solow & Szmerekovsky, 2006; Stacey & Griffen, 2005).

The scope of the intended research is to look at strategy implementation as an integrated part of complex, dynamic, adaptive systems used in the business management environment as described above. Implementation is a complex process within an integrated system, with constant variations and changes, and mostly takes place by means of intangible management interventions and processes. These management actions have been investigated in this study by looking at the practices and processes that are executed in this "extraordinary management" approach.

The implementation effort is an integrated part of all the functional areas of the management of the organisation. This requires a holistic view during the design of implementation frameworks. However, research in this area is still lacking. The most important aspect is that, independently of the process or theory (linear or non-linear) that was chosen to formulate the given strategy, it must still be implemented. It needs to be crafted, re-crafted, adapted and re-implemented as the situation, environment, or any of the variables change. The challenging part of strategic management is that it is an integral part of a complex system that is interconnected to these variables and requires constant feedback in order to be successful. Without these specific actions, feedback, adaptation, corrective actions and re-alignment, strategy implementation will continue to be one of the most neglected areas of strategic management and this exploration has formed the basis for the research to be undertaken. There are new ways of looking at strategy implementation, creating environments to ease implementation, or ways of doing implementation successfully. These were also investigated and, for the purposes of this study, the issues of the learning organisation, absorptive capacity, as well as strategy-as-practice were looked at as emerging ways of ensuring successful implementation.

In our view, the kind of learning that will define the twenty-first century is not taking place in a classroom—at least not in today's classroom. Rather, it is happening all around us, everywhere, and is powerful. We call this phenomenon the new culture of learning, and it is grounded in a very simple question: What happens to learning when we move from the stable infrastructure of the twentieth century to the fluid infrastructure of the twenty-first century, where technology is constantly creating and responding to change?

(Thomas & Brown, 2011:17)

Thomas and Brown explain that to make organisations excel and to stimulate superior performance requires "organisational learning". This happens in organisations where there is a definite drive to establish a culture of learning. It is about an organisation's ability to renew and adapt continuously to changing conditions and requirements. This

also means that the business acts as a living system (Steward, 2001). Learning is related to innovation, flexibility and entrepreneurship, all of which add to the operating and intellectual power of the organisation. The learning organisation is positioned as a place where people continuously strive to increase their capacity and outcomes, where they build on their thinking patterns, and where they are learning together. The learning organisation supports both individual learning and team learning. Organisational learning is related to understanding how organisations learn, how the learning contributes to collective learning, and how that, in turn, assists the organisation to adapt to the environment. It fosters creative and critical thinking across boundaries. Organisational learning is the ability to gain insight and understanding from experience through several actions, such as observation, experimentation and analysis, to examine successes and failures, and to respond to that learning (Skuncikiene, Balvociute & Balciunal, 2009). Learning is a system of actions, actors, symbols and processes that allow an organisation to change information into knowledge that escalates adaptive capacity (Wesner, 2010.) To compete successfully in changing business environments, organisations must have the ability to learn quickly from the environments. Continuous learning can produce a competitive advantage and therefore organisations must strive to create learning cultures and develop employees' competencies (Mohanty & Kar, 2012). Organisational learning is a system of actions and changes manifested in the individual expression of attitudes, knowledge and skill to support organisational goals. The organisation facilitates learning and development of employees by transforming the organisation into one which has a learning culture (Lyle, 2012). A continuous learning system creates a favourable environment to achieve that. Learning is a continuous part of everyday life and, if set as a goal in the organisation, influences perception, behaviour, thinking, attitudes, values, beliefs, systems, strategies, practices and procedures (Sushil, 2007). The learning organisation also creates an environment conducive to successful strategy implementation.

Absorptive capacity is very closely related to organisational learning (Lane, Koka & Pathlak, 2006). Although organisational learning is concerned with development of insights, knowledge and association of past and future actions, absorptive capacity is about identifying, assimilating and applying external knowledge and, in this case,

executing strategies successfully (Roberts, Galluch, Dinger & Grover, 2012; Daspit &
D'Souza, 2013). In the environment of globalisation, innovation and time-to-market
pressures, absorptive capacity can be defined as the capability to integrate and apply
knowledge from external sources in order to be more competitive (Manfreda, Kovacic,
Indahar & Trkman, 2014; Cohen & Levinthal, 1990). Absorptive capacity influences
strategy implementation because it ensures that the organisation is empowered with the
knowledge required to ensure success. This will be discussed during the interpretation
of the results in Chapter 6. This also links up with translation and sense-giving as key
success factors during implementation in Chapter 7.

The purpose of the table below is to summarise the above discussion and indicate the
contributors to current literature for the specific topic in discussion as indicated in
columns one and two. It indicates the contribution made from this study relating to the
specific topic in the third column. This identified gap in literature and the contribution is
discussed against the results and recommendations of this study in Chapter 7.

Table 2.9 below gives an indication of the contribution from selected literature on some
of these "*emerging perspectives*" as well as the gaps as seen from the viewpoint of this
study.

Table 2.8: Contribution from selected literature on Emerging Perspectives

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Grant, 2003	Strategic planning as emergent process in unpredictable environments.	Practices in response to emergence
Stacey, 2005; Snowden, 2008	Business as a complex adaptive system	Integrated nature of management during strategy implementation
Thomas & Brown, 2011;	Learning organisation to	How do middle managers

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Lyle, 2012.	renew and adapt to changing conditions	adapt to environmental changes through learning?
Roberts, Galluch, Dinger & Grover, 2012; Daspit & D'Souza, 2013	Absorptive capacity through identification, assimilation and application of external knowledge.	How is external knowledge applied during strategy implementation?

One of the major emerging perspectives from the literature study is the strategy-as-practice view. This is about how people are actually doing strategy, the practices undertaken to execute strategy, and the processes that are involved. Limited research has been done in this subject field, particularly in South Africa where the actions, intangibles and interventions by managers are not well researched. This area was identified as a lens through which the research has investigated the action of middle managers during strategy implementation. The current literature address areas where strategy is seen as an emergent process coming from unpredictable environments (Grant, 2003). What is still not well defined is how middle managers respond to such environments through actions, processes and behaviour. Some theories have indicated that business is a complex adaptive system that can adapt to changing environments and that a learning organisation can adapt to such changes (Stacey, 2005; Snowden, 2008). How does this impact on middle managers and how do they react to this? How do they learn from within such a living system and how do they implement as part of such a system? (Thomas & Brown, 2011; Lyle, 2012). How do they apply internal and external knowledge as part of the enablers at their disposal? (Roberts, Galluch, Dinger & Grover, 2012; Daspit & D'Souza, 2013). These are questions emerging from this research in the process of attempting to close the gap that exists and as part of the contribution made in this regard.

2.4.2.5 Summary of the theoretical mainstreams

In summarising the four theory streams identified and as part of the synthesis of literature into a new perspective, Table 2.10 below gives a summary of the four theory streams, together with a description and some of the contributors' names in the field.

Table 2.9: Theoretical mainstreams

Theory stream	Description	Contributors
Implementation as architecture	Organisational architecture, structure, processes, equipment and resources in support of implementation	Galbraith & Kazanjian, 1986; Peters & Waterman, 1980; Bijata & Piotrkowski, 2014; Robertson, Ross & Weil, 2006; Jooste & Fourie, 2009
Implementation as planned change	Change management, sense-making and sense-giving leading change, strategic change	Kotter, 1996; Gans, 2011; Whelan-Berry & Somerville, 2010; Franken, Edwards & Lambert, 2009; Rouleau, 2005; Weick, 1985
Implementation as process	Systems and process, strategy implementation framework, 5Cs, project management	Pettigrew, 1987; Hrebiniak 2006; Raps, 2004; Kaplan & Norton, 2005; Malek, 2008; Robert, 2004; Longman & Mullins, 2004; Mintzberg, Lampel & Ahlstrand, 2009.
Emerging perspectives on implementation	Organisation as living system, complex adaptive systems, complexity, learning organisation, strategy-as-practice, absorptive capacity	Grant, 2003; Torlak, 2004; Stacey, 2005; Allio, 2003; Snowden, 2008; Glor, 2007; Jarzabkowski, 2008; Lane, Koka & Pathlak 2006; Cohen & Levinthal, 1990.

The discussion above identified organisational architecture, planned changed efforts, organisational processes and individual practices as the four streams that have an impact on strategy implementation from a strategy-as-practice approach. The gaps and contributions for each concept were identified, explained and motivated as part of the overall contribution of this study. All of them have an impact on implementation separately but there is also an integrated view where they play an integrated role on implementation. Figure 2.15 below is a representation of the relationship and impact of these and this forms the basis from which practice approach in this study was addressed.
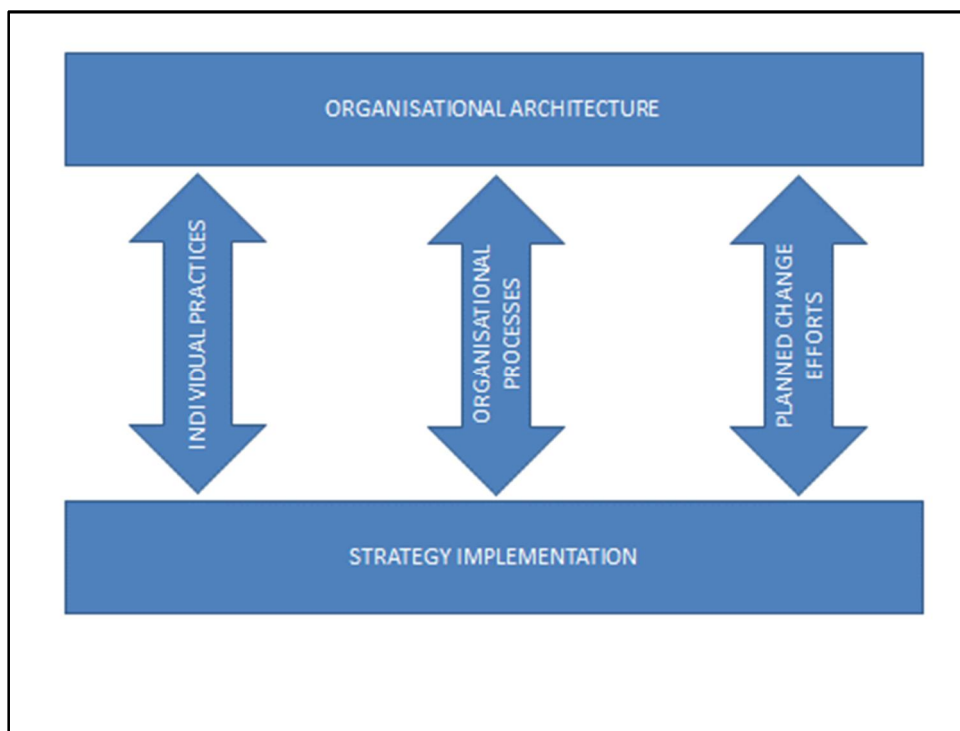
Figure 2.15: The Synthesised Four Theoretical Mainstreams during Strategy Implementation

(Source: Author)

The basis on which this conceptual model was designed as output from the synthesis performed on the literature was made in accordance with the gaps identified from the literature and with the objective being to incorporate the areas with impact on the implementation effort. The first concept is the strategy implementation effort that is the

main theme for this study and therefore the influence of all four theory streams is indicated on the implementation effort.

The first building block in support of the implementation effort was the organisational architecture with all of the components inherent in the architecture presented. This is defined as the internal functions, processes and structures that are aligned in order for the organisation to operate successfully. In the context of this research it is, amongst others, the functions, processes and structures required and in use by middle managers to implement their strategies successfully. This is indicated in Figure 2.15 above. In parallel and in support of the architecture concept are the planned change efforts as a cognitive intervention by middle management to ensure successful implementation. This includes formal change management processes, as well as informal and intangible interventions by these middle managers during the effort to implement strategies. This is indicated in a two-way relationship that has an impact on implementation as well as on organisational architecture. The reason for the two-way arrows in all three of the other concepts are an indication of the integrative nature of the relationship as well as the impact an intervention may have on both implementation as well as organisational architecture. The next stream of concern is implementation as process and is the process used in putting all of the actions into practice. It concerns all processes utilised by middle management in order implement successfully. The two-way relationship and integrated nature of the implementation and formulation is important to note due to the impact on the other constructs. Lastly, the model incorporated emerging perspectives on strategy implementation as a fourth stream, looking at practices, integration, environmental sensing and application of external knowledge, *inter alia,* as further constructs to include in the model that synthesised the literature and guided the study.

The approach as indicated in Figure 2.15 above was used to define the relationships of the other constructs included in this study on the practices and processes of strategy implementation. In order to arrive at the integrated model, it is also important to include other constructs found during the literature study such as identifying current barriers and enablers during implementation and identifying and defining those that are relevant to middle manager practices during implementation.

2.4.3 Barriers and enablers to strategy implementation

Making strategy work means execution, implementation and carrying out specific tasks and actions as decided upon by management. However, implementation fails because it is reliant on enablers that support implementation and barriers that prevent successful implementation. The area of review on the literature roadmap is indicate below in Figure 2.16.
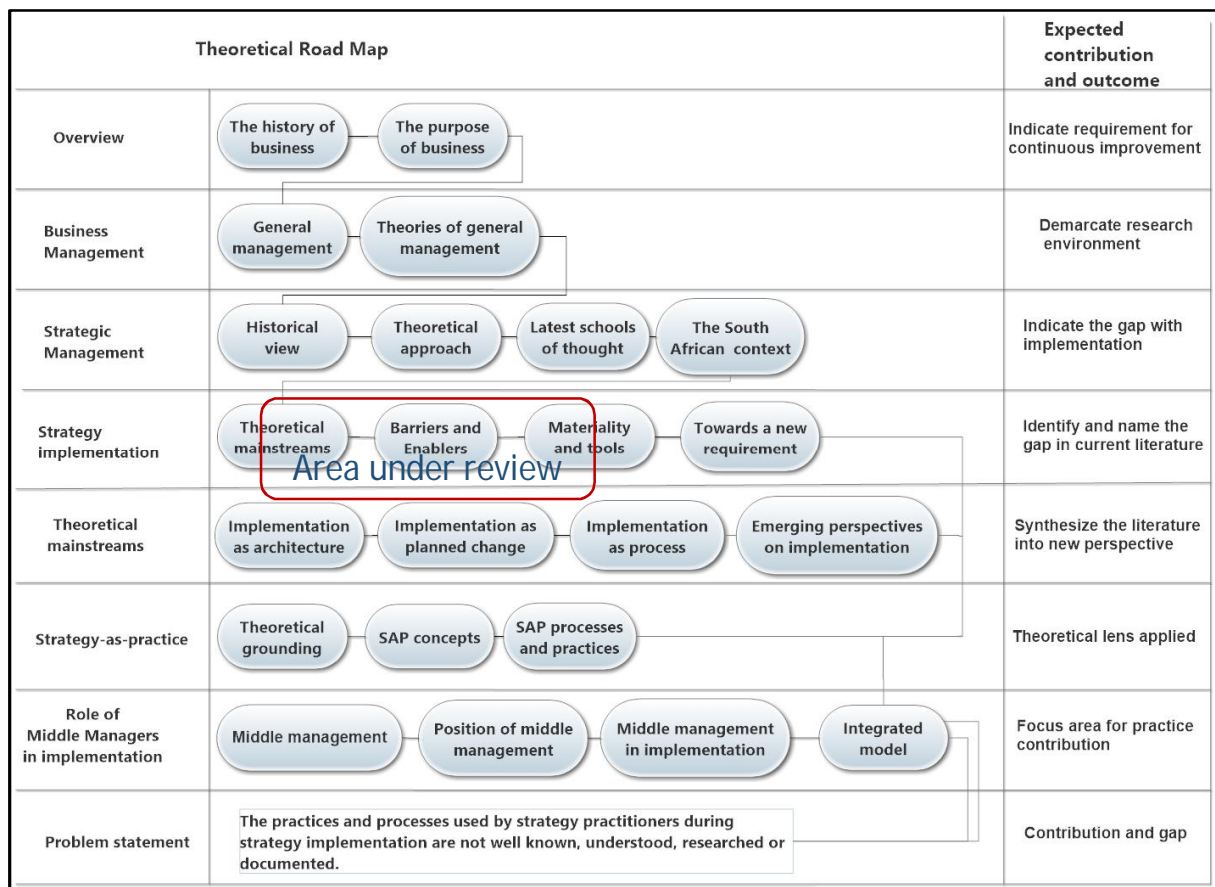
Figure 2.16: Strategy Implementation – Barriers and Enablers

(Source: Author)

Barriers identified through a study done in 2007 of 700 senior executives (Malek, 2008) identified inability to manage change, organisational structure, inadequate information sharing, unclear communication, vague strategy, lack of ownership of strategy, lack of guidelines for executing strategy, lack of understanding organisational structure, inability

to obtain buy-in, lack of incentives in support of strategic objectives, and insufficient financial resources and management support during implementation. Another study (Heide, Grønhaug & Johannessen, 2002) also identified barriers or obstacles found in the Norwegian ferry industry through interviews with managers, middle managers and staff. Barriers revealed in this study were communication, organisational structure, learning, personnel management, culture, politics and resources. Jooste and Fourie's (2009) research on the perceptions of South African business leaders focused specifically on strategic leadership. They also defined barriers to, and key drivers of, effective strategy implementation. Both of these − barriers and drivers − consist primarily of the intangible actions or practices and processes that managers must undertake during implementation. Barriers identified in strategy implementation were ineffective communication of the strategy, no comprehension of the strategy, strategic direction by the leaders, goals not aligned with the strategy, allocation of resources not aligned with the strategy, alignment of culture, inadequacy of change management, strategy formulation, top manager support, control, ethical principles, competence, core competencies, human capital development and social capital development. Furthermore, they found that drivers of strategy implementation are structure, allocation of resources, culture, a performance management system, strategic leadership, training and development, and information systems (Jooste & Fourie, 2009). In addition, other obstacles identified were the inability to manage change, poor strategy, no guidance or model on implementation, inadequate information sharing, unclear responsibilities and working against the power structure (Hrebiniak, 2006). Problems related to a corporate scorecard, key performance indicators, information technology, competence, performance appraisal, strategy management office and financial support were all obstacles identified as impacting on poor strategy implementation (Pella et al, 2013). Some of these concepts will be used for designing the interviews and the questionnaires. Figure 2.17 below indicates the relationship and impact that barriers and enablers have on the implementation of strategy and the need to focus on this aspect of the research in identifying the gap and contribution in this regard.
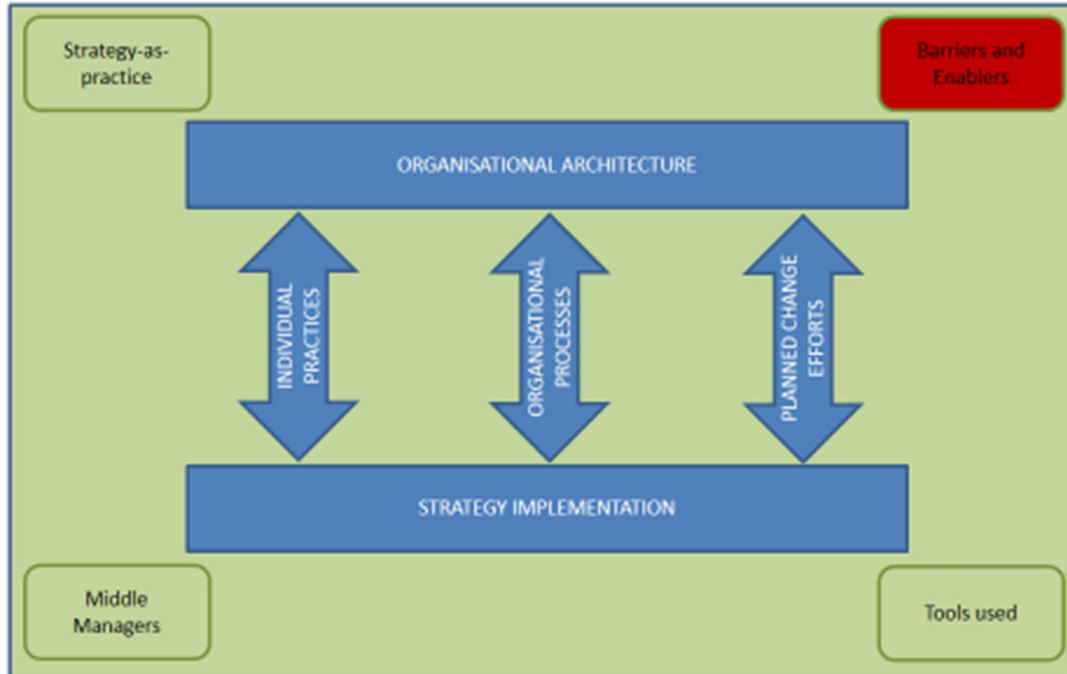
Figure 2.17: Barriers and Enablers during Strategy Implementation

(Source: Author)

The above are some of the barriers to the successful implementation of strategy as identified during the literature review as one of the objectives of the study. The implementation constructs identified earlier in the study can also be seen as barriers. For instance, if leadership is a good example of an implementation construct, then poor leadership would be a barrier to implementation. The purpose of identifying the barriers was to ensure that a comprehensive study of existing constructs was done, thereby identifying gaps that exist to be used in the study.

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic under discussion as indicated in columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is

discussed against the results and recommendations of this study in Chapter 7.

Table 2.11 below gives an indication of the contribution from selected literature on some of these "*barriers and enablers*" as well as the gaps identified from the viewpoint of this study.

Table 2.10: Contribution on Barriers and Enablers

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Malek, 2008; Hrebiniak, 2006; Pella et al., 2013	Identified barriers during implementation	Alignment and integration into practices
Jooste & Fourie, 2009	Intangible barriers and enablers	Intangible interventions and practices by middle managers

Contributions to the current literature were made by several academics and include a wide range of perspectives; this includes intangible enablers that are difficult to define (Malek, 2008; Hrebiniak, 2006; Pella et al., 2013; Jooste & Fourie, 2009). The gap lies in the fact that there are not many intangible interventions from a middle manager's point of view and therefore it can be seen as an opportunity to add value to the current literature. How these barriers and enablers are aligned and integrated into the day-to-day activities and 'how' they are implementing strategies may also be considered.

2.4.4 Tools used in implementation

There is evidence, as indicated below, that managers use certain tools to assist them with strategy implementation. Brief reference is made here to some of these tools and the study has identified the tools being used by the DERIs. The area under review is indicated below in Figure 2.18.
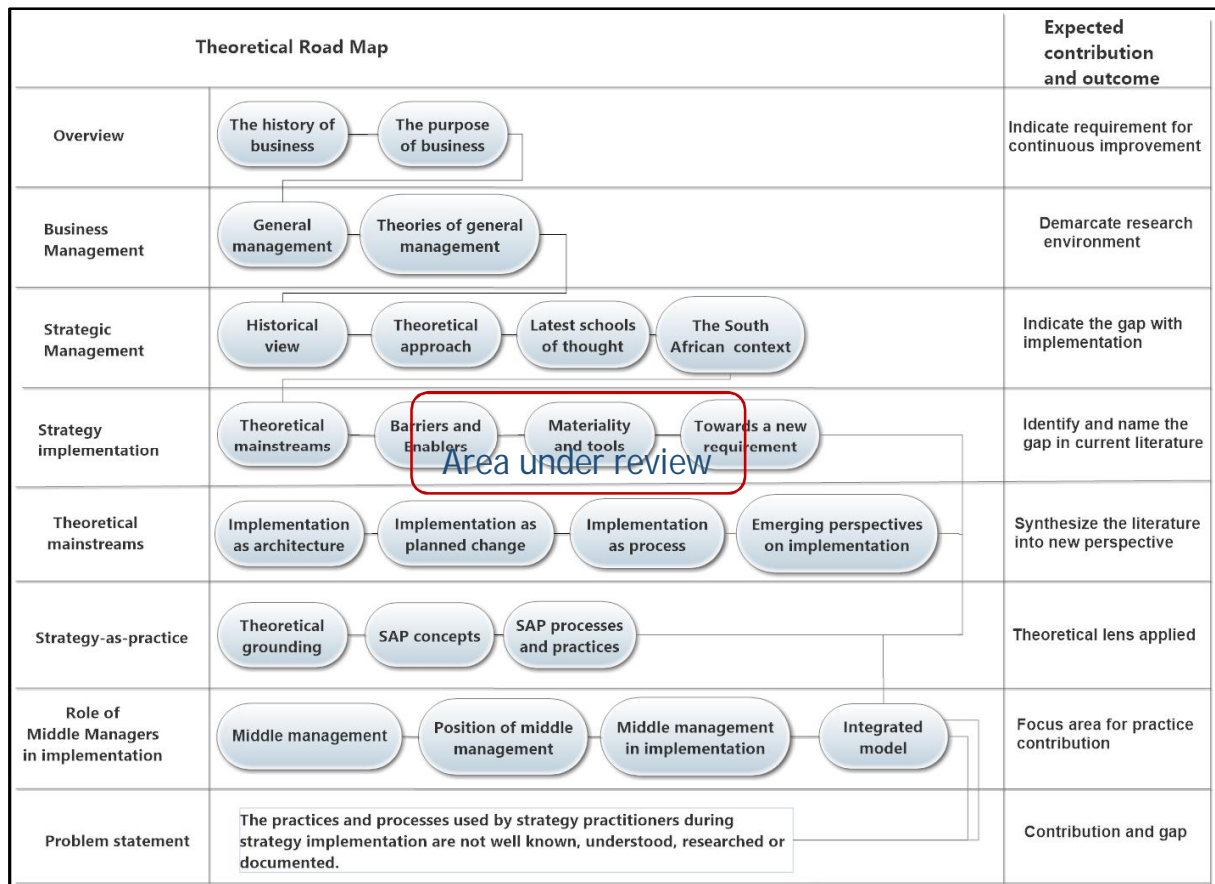
Figure 2.18: Strategy Implementation - Materiality and Tools

(Source: Author)

Within the strategy-as-practice perspective there are certain physical, social and material tools that are in use during the process of doing strategy. These are highlighted and described and the aim is to identify the gaps that exist in this construct in order to add to existing literature on the use of these tools by practitioners.

The balanced scorecard is one of the most popular tools currently in use in strategy performance management. Introduced in 1992, it uses the financial, customer, internal process and learning and growth perspectives in an organisation to measure performance and achieve objectives (Kaplan & Norton, 2007). The main focus is to monitor the strategy, evaluate progress and manage the process of strategy implementation.

Kaplan and Norton (2005) state that 95% of employees are unaware of or do not understand their organisation's strategy. They found that the gap lies between formulation and implementation. They also argued that, apart from the tool developed by themselves to assist in implementation, a dedicated office of strategy management is also required in order to ensure proper implementation. They argue that using the strategy map concept as management structure will align strategy and structure during the implementation effort, making it more effective (Kaplan & Norton, 2006). The relationship to the strategy-as-practice quest is indicated in Figure 2.19 for clarity.
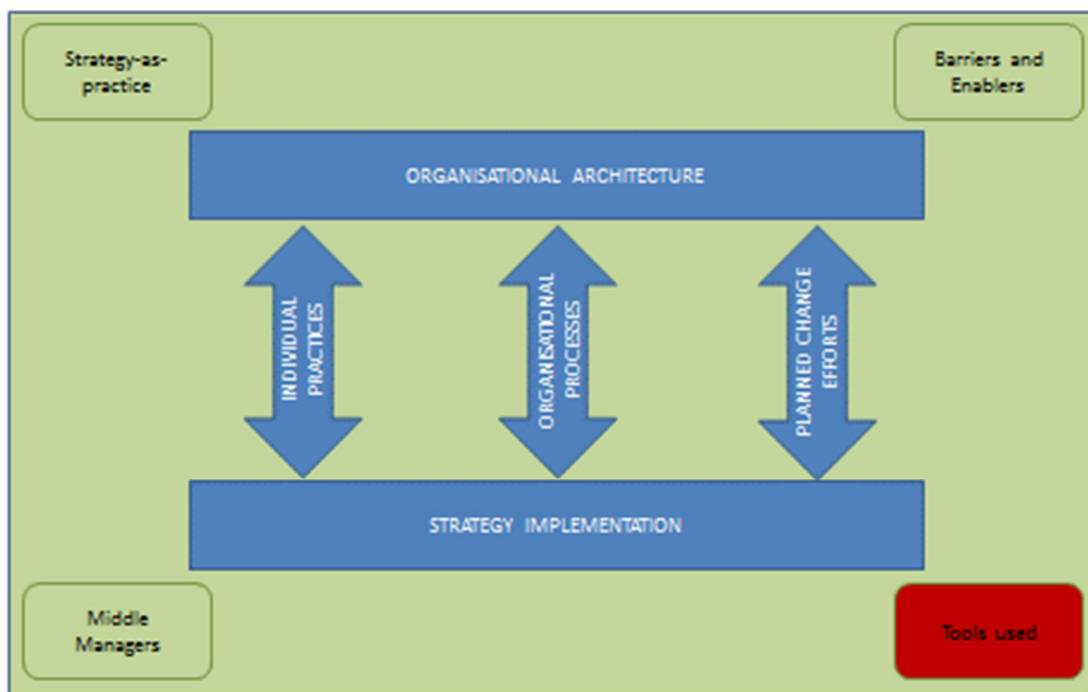
Figure 2.19: Tools used During Strategy Implementation

(Source: Author)

Management accounting systems are also tools that can be used in strategy implementation. Naranjo-Gil and Hartmann (2006) argue that when they are used together with management team interaction they can help strategy implementation by supplying relevant information as an enabler.

Another option is to use project management as a tool to ensure that strategies are implemented at all levels so that all levels "buy in" and execute the chosen strategies. To ensure that this is done effectively, project management is driven by specific deliverables and back-up plans (Longman & Mullins, 2004). Longman and Mullins (2004) point out that, along with some of the constructs of implementation frameworks such as strategy, goals, leadership, processes, human capabilities, culture and performance systems, project management can be an important tool to use in strategy implementation. There are other tools such as emails, meetings, models, theories and concepts that are being used, and one of the purposes of this study was to identify the management tools being used by the DERIs.

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic in discussion as indicated in columns one and two. It also indicates the contribution made from by study relating to the specific topic in the third column. This identified gap in literature and contribution is discussed against the results and recommendations of this study in Chapter 7.

Table 2.12 below gives an indication of the contribution from selected literature on some of the "*tools used during implementation*" as well as the gaps found from the viewpoint of this study.

Table 2.11: Contribution on Tools used in Implementation

Literature	Contribution relevant to this study	Gap and contribution from the viewpoint of this study
Kaplan & Norton, 2007	Balanced Score Card	Identify other tools used at middle management level
Naranjo-Gil & Hartmann, 2006	Management accounting systems	Existing systems in use to be used for implementation
Longman & Mullins, 2004	Project management	Management tools at middle manager level

Apart from the existing tools and material artefacts in use such as the Balanced

Scorecard, accounting systems and project management as identified above (Kaplan &Norton, 2007; Naranjo-Gil & Hartmann, 2006; Longman & Mullins, 2004), the outcome of this is to identify others used at middle manager level and not previously identified and also to look at how these are integrated into the practices and processes during strategy implementation. This would be the value and contribution added from this perspective.

2.4.5 Conclusion

The last decade of the twentieth century saw a rapid increase in the speed of business processes, information, innovation and globalisation, which resulted in a shift in management methodologies. Managing and utilising knowledge have become the most important tools to stay competitive in fast-changing environments. Extreme, high-paced transformation is reshaping the face of business in all industries around the world and traditional approaches to business management are no longer adequate. Strategy implementation has to include all components of implementation as an integrated approach (Raps, 2004). Organisations have had to adopt newer and more efficient management models and tools in order to remain competitive. This has led to a new paradigm in the management field with the purpose of being effective in shifting economies and environments.

Strategy implementation, as discussed previously, has to do with putting the plans and actions in place to be able to execute the chosen strategy. In the linear approach to strategic management, implementation will typically entail the implementation of the plans established by means of planning, following up on progress and reporting on the progress. There are monitoring and control activities that will drive the implementation process. This approach is still very valid and recent theorists have also brought critical competencies into the equation, such as leadership, culture, communication, processes, motivation, skills, structure and others in order to implement strategy successfully. The purpose is not to dismiss them, but to include them in the proposed exploration which aims to add another dimension to implementation, namely the concept of complex adaptive systems theory.

From the above, it can be seen that there is a need to ensure that the intangible, extraordinary, social interventions and processes become part of the whole process in order to ensure successful implementation. A discussion of this practice approach and new concept in the strategic management field follows below.

2.5 STRATEGY-AS-PRACTICE

The results suggest that a combination of two broad theoretical lenses provides useful analytical insight. These are strategy-as-practice and strategy-as-process
(Jarzabkowski & Wilson, 2002:355).

It was identified during the literature review that there is a need to investigate the implementation of strategies in today's complex and rapidly changing environment. During the exploration of the theory, the strategy-as-practice field emerged as a suitable way to conduct the theoretical investigation. The area for review is indicated below in Figure 2.20 as a signpost on the progress so far.
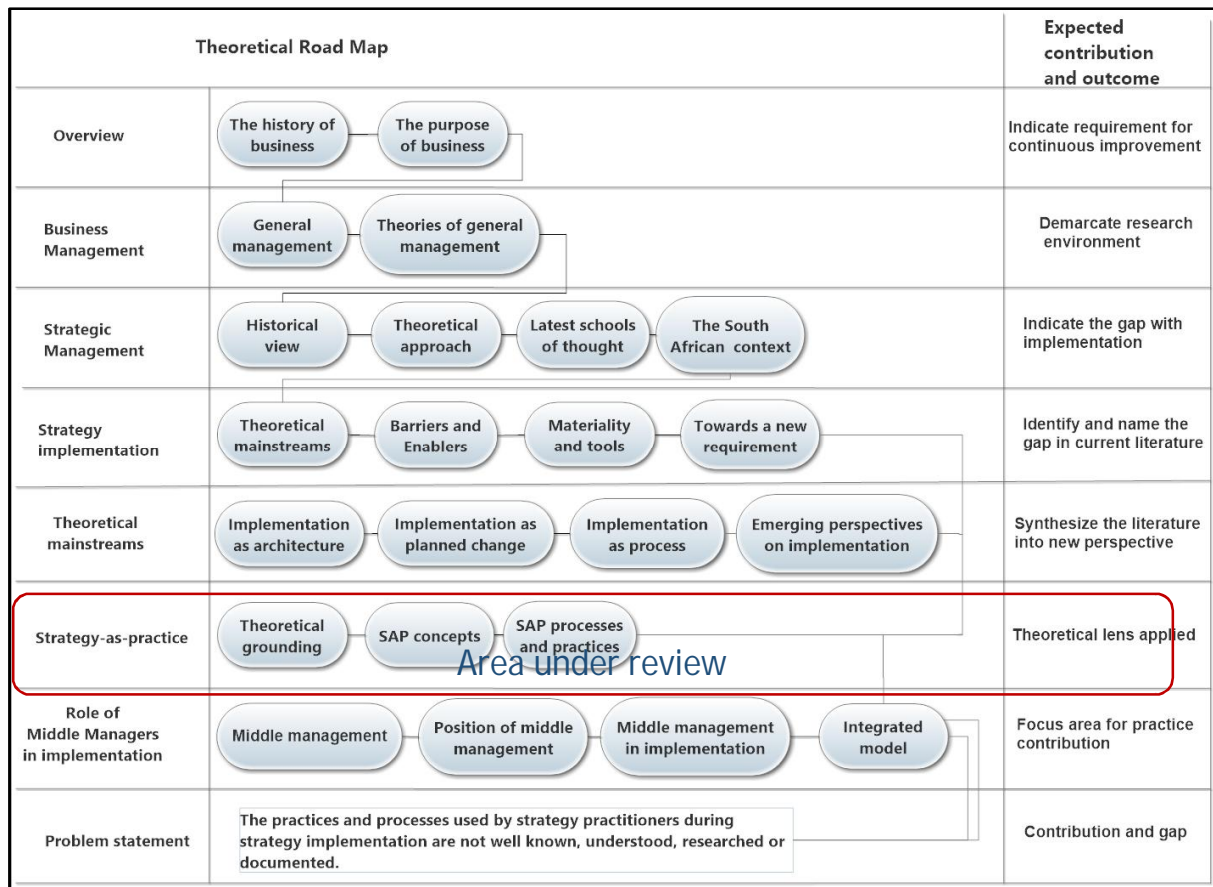
Figure 2.20: Theoretical Roadmap – Strategy-as-Practice

(Source: Author)

The theoretical lens used for this study thus concentrated on the strategy-as-practice field as described below. In this approach, formulation and implementation are not seen as separate entities.

2.5.1 Theoretical grounding

The strategy literature has some surprising gaps. It is largely silent about what strategists do in their day-to-day work.
(Whittington, 2002:C1)

Strategy-as-practice concentrates mainly on how people actually do strategy in order to understand the activities or practices being executed by management (Valmra et al,

2006). It is about who is doing it, what and how they do it, what they use and how this impacts on the formulation and implementation of the realised strategy (Jarzabkowski & Spee, 2009; Splitter & Seidl, 2011). It is also contended that strategy-as-practice is not only something that an organisation has but something that people do (Paroutis, Heracleous & Angwin, 2013). This requirement has arisen during the past two decades owing to the inadequacy of current theories on strategic management and the absence of investigation into the intangible human side of strategy formulation and implementation. This means that strategy-as-practice must address the human emotions, actions and motivations that shape the implementation of strategy (Raps, 2004; Carter, 2013).

Strategy-as-practice must also address the interactions between different levels within the organisation and specifically between different levels of employees, according to Jarzabkowski & Wilson (2002), who contend that there are interrelationships between organisational structures and players in direction setting, monitoring and control, allocation of resources and processes of interaction. It is also related to the trans-disciplinary approach and application between all organisational disciplines (Whittington, 2011).

Strategy-as-practice is concerned with a means to investigate the social complexity and causal ambiguity in the resource-based view by investigating the dynamics and practices underlying this phenomenon and defining the process that constitutes strategy through this perspective (Ambrosini, Bowman & Burton-Taylor, 2007; Baeta, Brito &Souza, 2014).

The strategy-as-practice concept defines three main terminologies: practitioners, practices and praxis.

Practitioners are those who are doing strategy. It includes those directly involved in making strategy as well as those who have a direct influence on the making of strategy. It can also refer to a group of people that is situated inside or outside an organisation.

Practices are those tools through which strategy is executed. They involve all the

various routines, dialogues, theories, models and technologies used, as well as tools and academic technologies. They include reviews, meetings, sessions, away-days, academic analysis, operational analysis, analytical tools, strategic planning practices, ideas, techniques, methodologies, PowerPoint and Excel, to name just a few.

Praxis is the flow of activity to achieve strategy. It is about the stream of activities through which strategy is realised over time, and what is actually done and includes the real work that practitioners do as they execute practices. It is the work and routines of reviewing, analysing, manipulating strategy talk, lobbying, integration and the everyday actions performed during strategy implementation (Jarzabkowski & Spee, 2009; Whittington, 2002; Jarrat & Stiles, 2010; Mahoney & McGahan, 2007; Herepath, 2014; Vaara & Durand, 2012; Degravel, 2012).

The strategy-as-practice field has experienced rapid growth and recently there have been several workshops, groups, forums and conferences addressing this topic which makes further research relevant. Whittington (2002) argues that there is very little research being done on this subject, on who the practitioners are, what tools and methodologies they use, how they are used, and where they are obtained. He also states that the practice perspective can be a means to investigate and clarify these gaps. Strategy-as-practice is about exactly what strategists (middle managers in this context) do, and can therefore be used as a lens to investigate and consider further research into this field (Whittington, 2002; Seidl & Whittington, 2014; Mantere, Aula, Schildt & Vaara; Vaara & Pederson, 2014; Sugarman, 2014).

2.5.2 Strategy-as-Practice concepts

It is apparent that doing strategy is a set of social processes through which strategy is created and realised. For the purposes of this research the model as defined by Johnson, Melin and Whittington (2004) is used to indicate the context and level in which this research is to be conducted. It is not intended to deal with strategy process and content at the organisational level but rather at the level where strategy actually happens. According to Whittington et al (2004), there are three levels of strategy, as

indicated in Figure 2.6 below. First is the supra-organisational level, where the organisational culture and processes are institutionalised by certain institutional practices shaped and influenced by national, industry and professional cultures, business schools and consultants determining the practices and processes to be applied in such organisations at that level. It would also most likely be coming mainly from the design-planning-analytical school of thought as promoted by Mintzberg. The next level is the organisational level. A more "prescriptive" approach is being followed here in terms of creating models and tools for strategy content and process development. The process side lies more in the arena of the "design" school and the "planning" school where a more prescriptive approach is likely to be followed. The third level is the micro level, where the process and content are being defined by the people who actually do strategy (Whittington et al, 2004). This is where the focus of this study will fall.
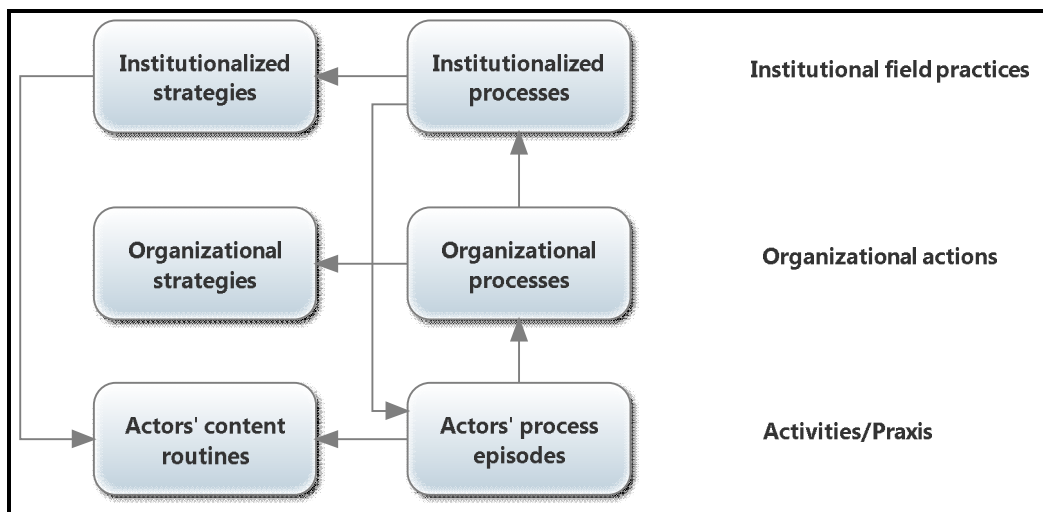
Figure 2.21: The three levels of strategy

(Source: Johnson, Melin & Whittington, 2004)

The model also indicates the relationships between the levels, but for the aims of this study the lower or micro and meso level and its activities will be further investigated. This is due to the fact that the practitioners mainly practice on the micro level within guidelines and processes coming from the meso level and therefore this is the choice of this delineation.

2.5.3 Strategy-as-Practice processes and practices

The area to be investigated at the micro level is strategy practices and processes. Process, in this sense, is about how practitioners use their experience and common-sense to produce results. It is a combination of their social skills and professional knowledge of strategy tools to yield the required effects. Practice, on the other hand, contains the organisation's dynamic capabilities used to produce the required outcome. It is achieved through actions such as strategic alliances, product or service development, and decision-making (Valmra et al, 2006). It can also be seen as being in addition to the practices, as described in the strategy-as-practice theory above. Krause (2007) indicates the importance of process in this context and argues that process cannot be seen in isolation and that it must be complementary to the whole strategic drive.

In order to arrive at a model to be used in the context of this research, it was decided to use the model as proposed by Valmra et al (2006), which combines the four components of strategy-as-practice theory of Jarzabkowski, the taxonomy of sense-making and sense-giving of Gioia and Chittipeddi, and the ten managerial roles of Floyd and Lane as indicated in Figure 2.22.

The seven functions of practices/generic activities of strategy-making	The four components of SAP			
	Strategy routines	Strategy process concepts	Strategy tools	Behavioral norms and beliefs
Understanding the organization and the environment.				
Generating new ideas and initiatives				
Designing a strategy				
Communicating a strategic direction				
Making strategic decisions at any level of management.				
Agreeing about means of implementation				
Control and Adjustment				

Practices and Processes

Figure 2.22: Four components and seven functions of strategy practices.

(Source: Valmra et al, 2006)

The figure indicates the interrelation between the four components of SAP and the seven managerial functions used during the strategy process of the organisation. The model indicates the organisational practices that shape micro activities and how the micro activities shape the strategy process. The first part of the model is defined by the organisational practices consisting of the four components of strategy-as-practice: strategy routines, strategy process concept, strategy tools and behavioural norms and beliefs. The second axis of the model consists of the seven managerial activities during strategy making. These are how sense-making takes place, how the strategy is defined, how it is communicated, the way in which decisions are made, how the strategy is implemented and how it is controlled. Together, as indicated in Figure 2.22, it makes up the strategy practices and processes used to influence the strategy process. The relevance of the above matrix to the research is to map practices and processes by using managerial roles of strategizing and map each one of them on the basis of the different components of SAP. This format was used to define the practices and processes in use during the implementation process and has been used as the basis for the design section to define and develop the questionnaires for the surveys.

2.5.4 Strategy-as-practice consolidated

Strategy-as-practice is considered to be what people are doing and the activities and actions of the practitioners (Johnson, Melin & Whittington, 2003). It is also about how people use tools, practices, routine interactions and conversations, amongst others, to execute strategy. Meaning is added through visualisation and actualisation through communication and to co-ordinate individual and the system's actions (Davis, 2012; Verwey & Davis, 2012). Rouleau (2013) summarised the work done by various contributors (Table 2.2) into five different views of practice. The first is the practice as managerial action and is mainly concerned with the daily routines of managers related to implementation and what managers actually do in order to execute, initiate, co-ordinate support, collaborate and contextualise in their day-to-day routines. There is a definite intervention together with interpretation and skills required to arrive at such an interpretation. The second view is that of practice as a set of relational, discursive and material tools. In this view the manager uses a set of tools such as workshops, meetings, planning, talk and text to support them during this effort. Thirdly, practice as knowledge refers to the tacit and social knowledge used during the implementation process. The social skills are prominent here and managers rely on that to guide their actions and practices. Next is the practice in the sense of organisational resources, routines, processes and capabilities used to support the effort. Lastly, there is practice as discourse in society, organisations and individuals and the impact on these. The brief summary above is contained in Table 2.12 below, indicating the five perspective views, the academics and their main contribution.

Table 2.12: Five views of practice in strategy-as-practice research

	PRACTICE AS MANAGERIAL ACTION	PRACTICE AS SET OF TOOLS	PRACTICE AS KNOW-LEDGE	PRACTICE AS ORGANISATIONAL RESOURCES	PRACTICE AS GLOBAL DISCOURSE
Main research question	How do managers and others strategise?	How do managers and others use the tools of strategy?	How do managers and others perform strategy?	How do organisational practices shape strategic competitive advantage?	How does strategy discourse produce managers and organisations?
Main theoretical influences	Management and organisation theories	Communication and language theories	Social sciences theories	Management and organisation theories	Critical theories
Seminal authors	Mintzberg, 1973	Barry & Elmes, 1997	Hendry, 2000	Mintzberg & Waters, 1985	Knights & Morgan, 1991
Typical works	Balogun & Johnson, 2005; Paroutis & Pettigrew, 2007; Nordqvist & Melin, 2008; Angwin, Paroutis & Mitson, 2009; Whittington, Cailluet & Yakis-Douglas, 2011	Hodgkinson, Whittington, Johnson & Schwarz, 2006; Jarzabkowski & Seidl, 2008; Giraudeau, 2008; Pälli, Vaara & Sorsa, 2009; Kaplan, 2011; Jarzabkowski, Spee & Smets, 2013	Samra-Fredericks, 2003; Rouleau, 2005; Mantere, 2008; Clarke, Kwon & Wodak, 2011; Whittington, 2006	Salvato, 2003; Stensaker & Falkenberg, 2007; Ambrosini, Bowman & Burton-Taylor, 2007; Regnér, 2008	Samra-Fredericks, 2005; Laine & Vaara, 2007; Whittington, Jarzabkowski, Mayer, Mounoud, Nahaplet & Rouleau 2003; Carter, Clegg & Kornberger, 2010
Unit of analysis	Managerial activities	Strategic plans, tools and meetings	Routines, conversations and interactions	Organisational routines, capabilities and	Extra-organisational discourses

	PRACTICE AS MANAGERIAL ACTION	PRACTICE AS SET OF TOOLS	PRACTICE AS KNOW-LEDGE	PRACTICE AS ORGANISATIONAL RESOURCES	PRACTICE AS GLOBAL DISCOURSE
				processes	
Main method-ologies	Interviews, shadowing, diaries	Interviews, observation, video ethnography	Ethnographic research (participant observation)	Case studies	Documents
Main contribution s	A deeper comprehension of managerial roles, skills and abilities related to strategising	A stronger comprehension of the informal procedures of strategic planning	A better interpretation of contextual and hidden characteristics of strategising	A renewed understanding of the organisational level	A critical understanding of the institutional and disciplinary role of strategy

(Source: Rouleau, 2013)

This literature has guided the research in order to draw as much as possible from the data obtained. The contribution from a practice perspective is that it will add to the existing literature as well as to address the gap that exists in the current body of knowledge by exploring the practices and processes in the specific environment.

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic in discussion as indicated in column one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is again discussed against the results and recommendations of this study in Chapter 7.

Table 2.13 below gives a further indication of the contribution from selected literature on some of the "strategy practices" as well as the gaps identified from the viewpoint of this study.

Table 2.13: Contribution on Strategy-as-Practice view

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Valmra, 2006	Activities and practices by management	Not many empirical studies on research organisations
Jarzabkowski & Spee, 2009; Splitter & Seidl, 2011; Paroutis, Heracleous & Angwin, 2013	Who, what how and how this impacts on implementation	Human emotions, actions and motivations that shape implementation of strategy
Jarzabkowski, P & Wilson, DC. 2002; Davis, 2013	Top teams and middle managers in universities	University context may differ from highly scientific and research organisations
Ambrosini, Bowman & Burton-Taylor, 2007; Baeta, Brito &Souza, 2014	Social complexity and causal ambiguity	Social skills applied in implementation
Jarzabkowski & Spee, 2009; Whittington, 2002; Jarrat & Stiles, 2010; Mahoney & McGahan, 2007; Herepath, 2014; Vaara & Durand, 2012;	Everyday actions during implementation	From an integrated formulation and implementation view

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Degravel, 2012		
Whittington, 2002; Seidl & Whittington, 2014; Mantere, Aula, Schildt & Vaara; Vaara & Pederson, 2014; Sugarman, 2014	Strategy-as-practice lens for further research	Focus on strategy implementation specifically
Krause, 2007	Importance of integrated process as part of implementation	Process as an integral part of everyday practices

Although strategy-as-practice is a new field in development, there are several contributors to this subject matter. These are indicated in the table above and include topics such as management activities (Valmra, 2006), impact on strategy (Jarzabkowski & Spee, 2009; Splitter & Seidl, 2011; Paroutis, Heracleous & Angwin, 2013), influence of top teams and middle managers, everyday actions (Jarzabkowski & Wilson, 2002; Davis, 2013), social skills impact (Ambrosini, Bowman & Burton-Taylor, 2007; Baeta, Brito &Souza, 2014), integration (Krause, 2007) and many more. There were also certain gaps identified such as impact in research organisations such as the DERIs not being done before. This may also be valid for highly technical and engineering organisations. The human emotions, actions and motivations that shape implementation need to be identified, as well as the practices, how social skills are combined with functional knowledge to implement effectively, how integration is done and how and what forms part of all the everyday activities. Another gap is to focus implementation and examine the 'how' from a strategy-as-practice point of view as indicated in the literature. These are all the gaps identified and contributions that are made by this study.

2.5.5 Conclusion

The above discussion contained an investigation into the practitioners, practices and praxis on strategy-as-practice as a lens for examining strategy implementation in the present environment. It was a way of investigating the difficult intangible actions and interventions that make strategy implementation succeed or fail. Based on the

information above regarding the formulation of strategy and the latest schools of thought, it was decided to use the strategy-as-practice theories to further investigate the topic and guide this research. This was therefore used as the basis for the development of the research design component of the study. Lastly, from a strategy-as-practice view, formulation and implementation are integrated and cannot be separated from each other. Therefore, implementation/execution of strategy in the context of this research refers to formulation and implementation. The remainder of the research, the design, data collection, analysis, interpretation and recommendations will be drawn from this practice and process perspective.

2.6 MIDDLE MANAGERS AS STRATEGY PRACTITIONERS

During the strategy-as-practice discussions, there were often references to the practitioners and the people who are actually doing strategy. It was therefore necessary to define the "who" in this context and try to relate it to the theory regarding the research to be undertaken. The practitioners within the context of this research were defined as those who are executing strategy. It included those directly involved in strategy implementation as well as those who have a direct influence on the execution of strategy. In this case, it is the people appointed as middle managers in the relevant DERI institutes.
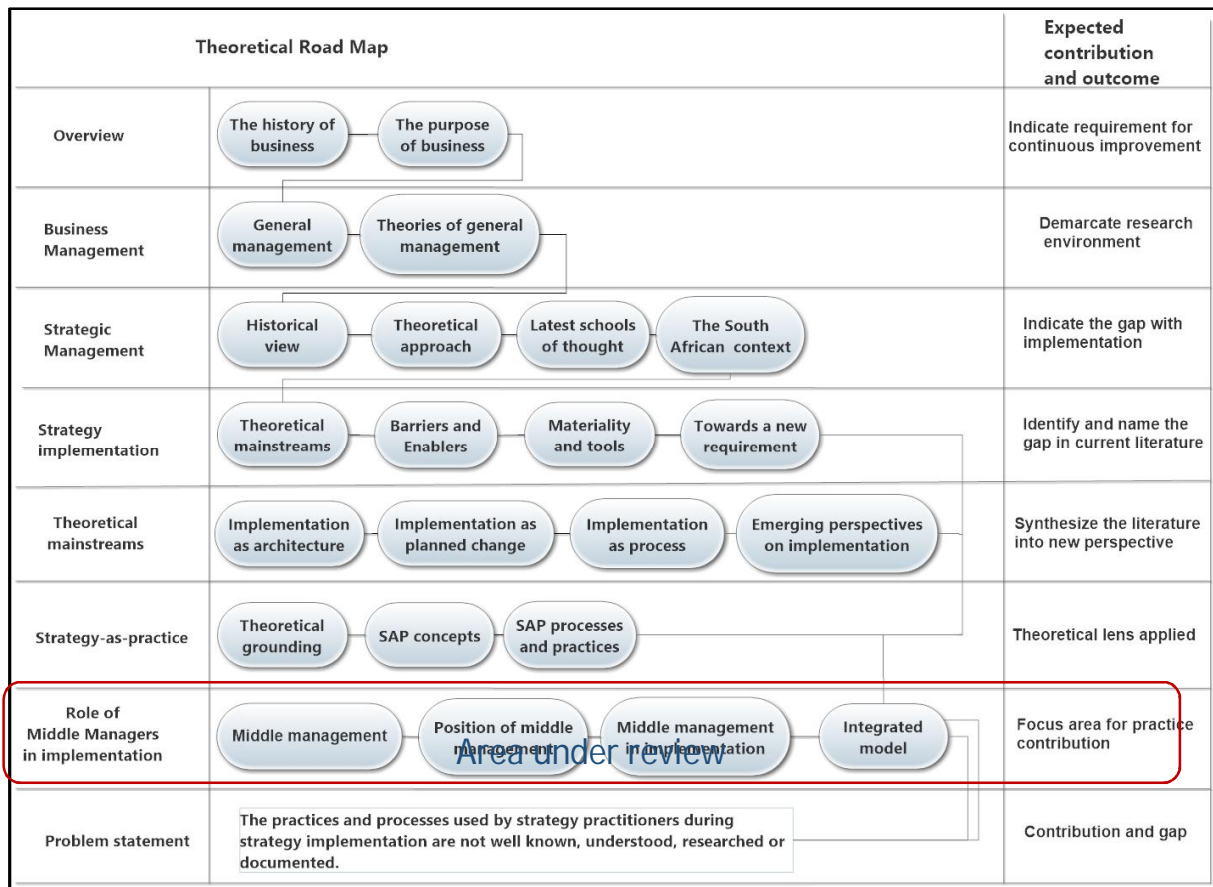
Figure 2.23: Theoretical Roadmap – Role of Middle Managers

(Source: Author)

2.6.1 Middle managers

For the purpose of this research, the term "middle manager" is defined as someone reporting to top management and who also has people reporting to him/her. Furthermore, there seemed to be a change in the role of management where the strategic decisions are being decentralised to the level of managers who are trained and able to make such strategic decisions. The knowledge and experience are also said to reside with the middle managers involved with the actual operations of the organisations (Jansen van Rensburg, Davis & Venter, 2014). According to Stoker (2006), middle managers include people who receive and give direction and are close to the day-to-day operations, the employees and the client environment, but are also in a position to see and understand the bigger picture. They can therefore exert influence both upwards

and downwards on management actions within the organisation; this informs the requirement to consider strategy implementation from a middle manager's point of view. The managers in the institutes are part of this definition and therefore the research has been directed from this point of view as indicated in Figure 2.24 below.
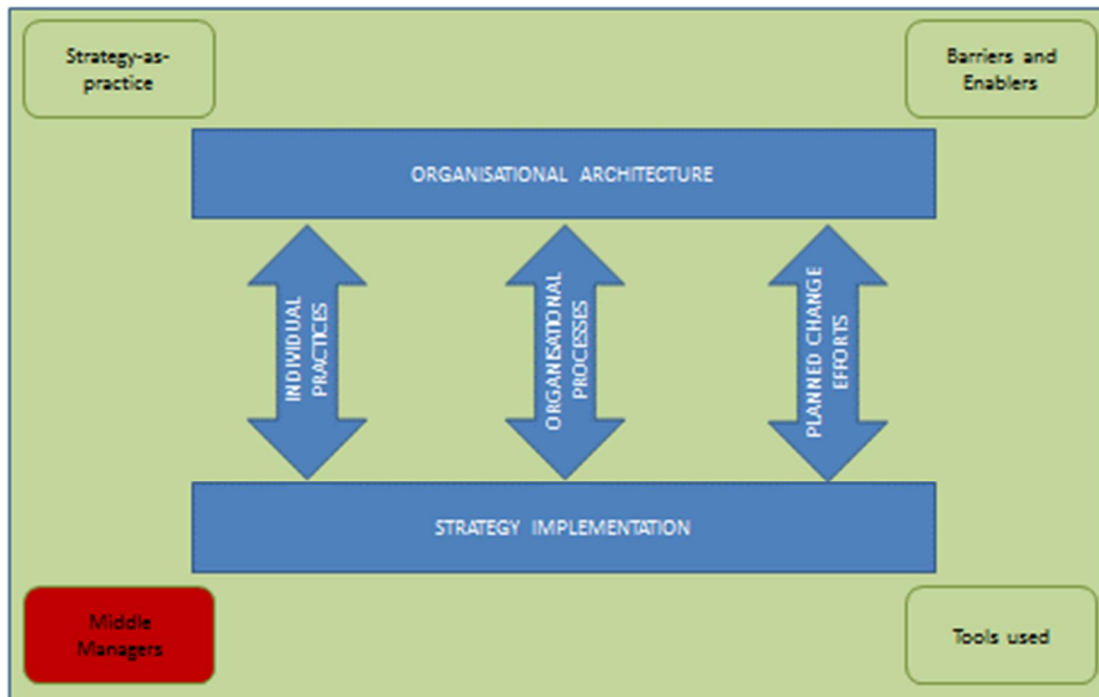
Figure 2.24: Middle Managers' role during Implementation

(Source: Author)

2.6.2 The position of middle managers

The unique position of the middle managers in the organisation provides them with the opportunity to influence organisational strategy implementation activities (Rouleau & Balogun, 2011). The advantage of occupying this position is the insight they have on the external environment as well as the internal operations of the institute. They are closer to the client and the markets and have the visibility of the requirements and service delivery and are therefore in a position to effectively manage and control such actions (Rouleau & Balogun, 2011). Middle managers are in the best position to

influence and advise upwards and downwards due to their familiarity with the technical aspects, operations and organisational processes.

2.6.3 The role of middle managers during implementation

Middle managers play an important role in strategy implementation through their various roles and activities (Rouleau & Balogun, 2011; Teulier & Rouleau, 2013). Middle managers contribute to organisational strategies through their strategic roles, techniques and practices (Wooldridge, Schmid & Floyd, 2008). Their roles and influences on strategy implementation are described by Mair and Thurner (2008) in the interpretation of environmental conditions, specifically, through their internal and external network relationships. The task of strategy implementation is also guided by managing performance to control the output (Floyd & Wooldridge, 1994). Further studies revealed that middle managers influence and implement strategies through participative management styles, strategic alignments and good internal communications. It was also found that being close to the people actually doing the work as well as including and consulting with the staff gave them the advantage required for effective implementation (Salih & Doll, 2013). Studies performed within the South African context included middle manager practices at a university in South Africa (Davis, 2013), strategy-as-practice perspective within an engineering organisation (Sithole, 2011), a strategy-as-practice approach to business rescue (Pretorius, 2013), and a strategy-as-practice perspective on ICT analysis (Govender & Pretorius, 2015).

The above literature and contributions added to the investigation into the practitioners of strategy implementation as part of the strategy-as-practice lens that has been used for this research. The role of the practitioners was then further refined to include the function of the middle manager for the purpose of this study.

The purpose of the table below is to summarise the above discussion and indicate the contributors to current literature for the specific topic under discussion as indicated in columns one and two. It also indicates the contribution made by this study relating to the specific topic in the third column. This identified gap in literature and contribution is

discussed against the results and recommendations of this study in Chapter 7.

Table 2.14 below provides an indication of the contribution from selected literature on the *"role of middle managers during strategy implementation"* as well as the gaps identified from the viewpoint of this study.

Table 2.14: Contribution on Middle Managers Role

Literature	Contribution relevant to this study	Gaps and contributions from the viewpoint of this study
Stoker, 2006	Manage and direct within the bigger picture	Who are these managers?
Jansen van Rensburg, Davis & Venter, 2014	Holders of knowledge and experience during the operations of organisations	How is this knowledge and experience used and applied during implementation?
Rouleau & Balogun, 2011; Teulier & Rouleau, 2013	Unique position in influencing implementation	Limited information about middle managers during implementation
Davis, 2013; Sithole, 2011; Pretorius, 2013; Govender & Pretorius, 2015	South African context on middle managers and practices	Practice and process integrated view during implementation

Several contributions were made in this environment and also in the South African context where the most recent work from Davis (2013) investigated middle managers' strategy practices at a South African university. A contribution by Jansen van Rensburg, Davis and Venter (2014) defined the middle managers as holders of knowledge and experience in organisations. It is from that point of view that this study defines the middle managers in the DERI organisations and how they apply that knowledge and experience during strategy implementation. There was some information available regarding the unique position of these managers in the

organisation (Rouleau & Balogun, 2011; Teulier & Rouleau, 2013) and the influence they have on implementation. This provides for a specific contribution from this study. Furthermore, in addition to the current contributions made, the gap would also be to define the unique position of middle managers in South African organisations, examine how they implement strategies in the organisation, and how they integrate all the day-to-day action in order to be successful.

2.7 CONCLUSION

There will always be a requirement for new theories, thus the requirement for development and research in this area of management studies. The environment in which business operates changes continuously, and it is important to have knowledge of all the resources available to the manager to be able to cope effectively within a given situation to the benefit of the organisation. Management issues will continue to presents challenges in the complex business environment with important decisions to be made in order to rectify a situation immediately. If the implementation of strategies does not bring the desired result, another method is searched for and followed, until the right solution is found on an iterative basis. Management is not an exact science but rather a combination of art, science, formulated methodologies, intuition, investigation, analysis and simulation, combined with extensive experience. However, these intangible practices and processes that management follows in such environments are not well researched and defined, giving rise to the gap and pointing to the contribution made by this study in this regard. The exploration process that can assist in explaining what managers actually do in these complex environments in order to execute strategy successfully will add value to the existing literature and discourse.

2.8 SUMMARY OF THE LITERATURE SURVEY

During the literature review it was established that research on strategy implementation has been limited although it is a growing field of interest. There is currently a shortage of South African and African studies, with most of the work being done in the American, Eastern and European areas. At a conference held in Germany in 2009, it was discussed whether doctoral education could become a useful resource in educating

future leaders. Of the 23 countries attending, South Africa was the only country from the African continent (Herman, 2009). This is an indication that the requirement for studies and research relating to the African context is far greater than realised, which makes research such as this relevant and necessary.

The objective of this research is therefore to investigate strategy implementation in the South African context and to explore practices and processes used by middle managers in strategy implementation. The literature study highlighted certain aspects to be considered in strategy implementation in the context of this research. The first such aspect is that there is a challenge with the successful implementation and implementation of strategies, as identified by several researchers, and that there is a need for further work to be done on implementation. The scope of the literature study was indicated in the theoretical roadmap in Figure 2.25 below.
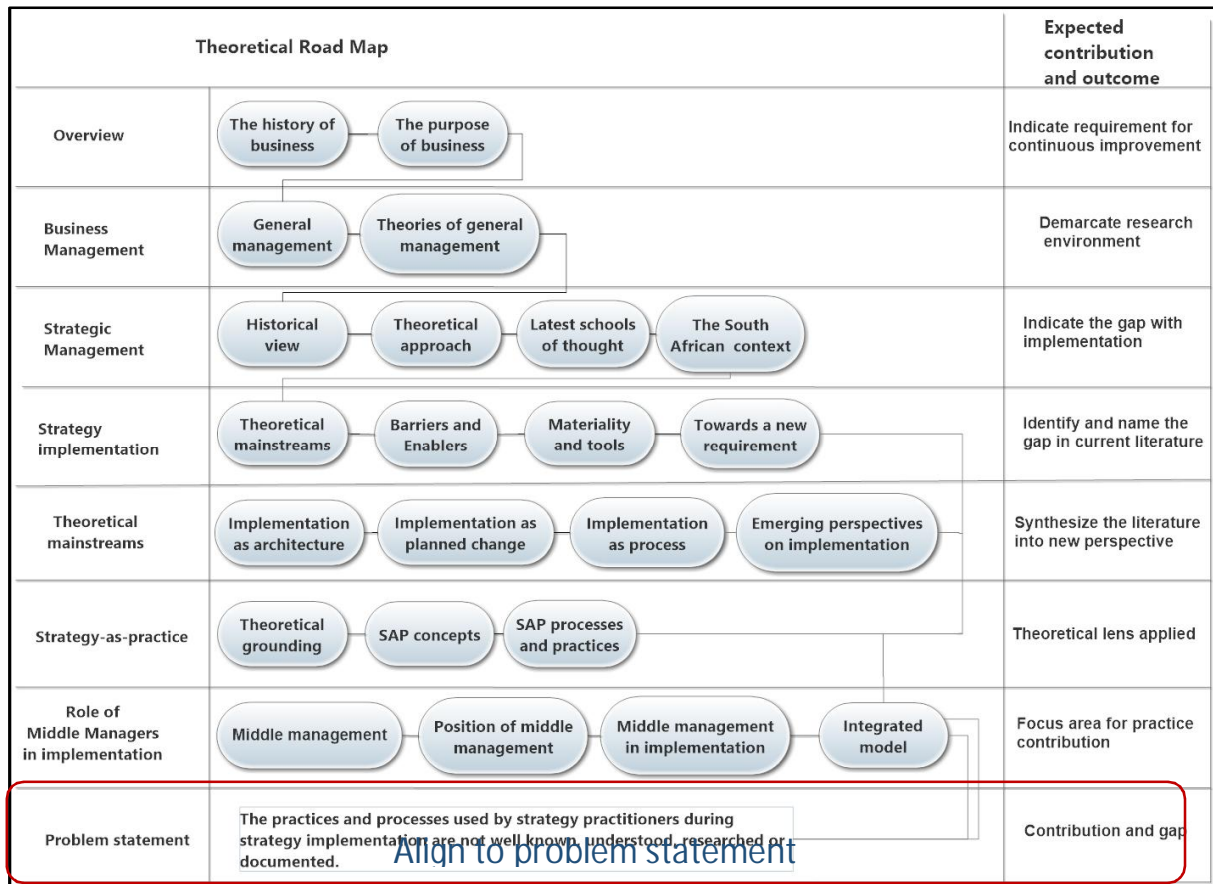
Figure 2.25: Theoretical Roadmap conclusion

(Source: Author)

The different areas indicated above were investigated on the basis of relevance and new literature was scrutinised. An emerging perspective was synthesised from the relevant literature as indicated and used to identify and demonstrate the gaps that exist as well as the contribution being made by this study. This is indicated in the roadmap above and it was demonstrated that the literature is aligned with the objectives of the study, in support of the problem statement. A new perspective was synthesised from the literature as indicated in Figure 2.26 below.
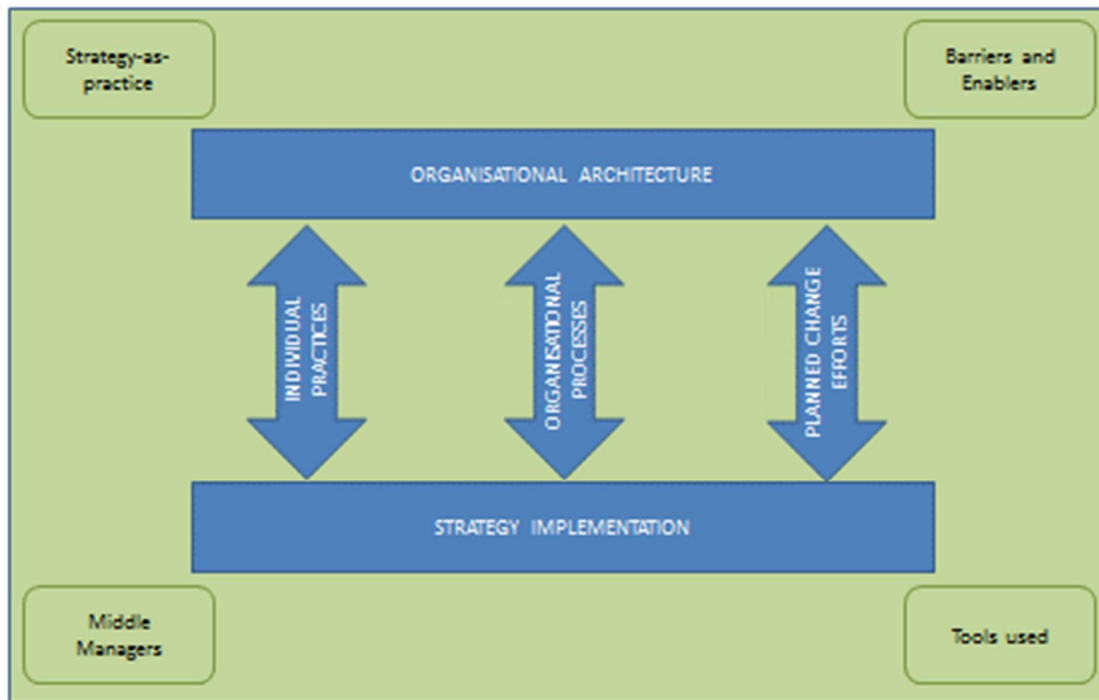
Figure 2.26: Consolidated synthesis of literature

(Source: Author)

The above figure is a representation of how the literature was synthesised into the perspective presented. It indicates the four streams of theory as discussed in the literature section and how these interact and integrate during strategy implementation. The impact and influence of organisational architecture, planned change efforts, organisational processes as well as individual practices on strategy implementation was demonstrated and the gaps relating to this study were indicated. In addition, the role of middle managers is central to the theme and their influence is defined as output from this study. There are certain tools used and specific barriers and enablers that were identified and used during implementation as drawn from current literature. These were all included in this perspective in the context of the strategy-as-practice, with the outcome being to define and identify the practices and processes in use by middle managers in the DERI context as the contribution from this study.

The work that has already been done on implementation was explained in detail. These constructs can be divided into tangible and intangible actions used during implementation. The intangible actions required to successfully implement strategies were identified and are included in the output. The fact that there must be total integration between the formulation and the implementation process was highlighted. One of the major factors for success in strategy implementation is that the people in the organisation must understand it. This means that they must understand the formulation process as well as its implementation. It is the business of all employees to implement and to support strategies (Hlatshwayo, 2011). This aspect is often neglected, as the implementers of the chosen strategy are not always knowledgeable in the relevant areas. Thus, in order to execute it effectively, the strategy must be clearly conveyed and comprehended. Mintzberg and Westley observed that strategy-making is not only a conceptual process but also a representational process consisting of images; and that it is often conceived, communicated and comprehended in terms of metaphors and images (Mintzberg, Lampel & Ahlstrand, 2008). Mintzberg also talks about strategic thinking as a visual process, and notes that, to be a strategic thinker and a visionary, it is necessary to see the different views of one's environment and what people aim to achieve.

The purpose of the practice approach is to present the intangible concepts as well as the relationships between them. A good framework can convey the concept easily and understandably, instead of requiring extensive discussion to explain it (Platts & Tan, 2004). The amount of data required to understand the strategy, the complexity of the environment, the common picture between employees of what needs to be done, the shared goals to be achieved, and the involvement of all levels of employees are all factors that can be achieved by successfully communicating and visualising the strategy in order to successfully execute it. Visualisation transforms raw data into clear pictures that people can understand. It is an accessible form of knowledge representation and a vehicle to help people to make sense of complexity, simplify ideas and ease the transfer of these between people. It is the *corpus callosum* between the right brain (responsible for conceptual, strategic and visionary thinking) and the left brain (responsible for the detail, planning and implementation). In other words, it is the communication media

between the designer and the user. That is why the strategy-as-practice approach is seen as a major contribution to current knowledge.

The literature study demonstrated that a comprehensive study was completed, indicating that all areas of the subject matter were scrutinised. The objective was to map the research problem and the current literature domain and to highlight, through a critical discussion, the latest work done on the subject of this study. The gap in research work was identified and further work was suggested that formed the basis for the exploration. The contribution is clear in the sense that not much work has been done in this environment and this study will thus contribute to the existing body of knowledge. The research design was then formulated to obtain the answers to the research questions. Lastly, the definition of the practices and processes of middle managers in relation to strategy implementation concluded the value added in that it can be used as a guideline for further research.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

In virtually every subject area, our knowledge is incomplete and problems are waiting to be solved. We can address the holes in our knowledge and those unresolved problems by asking relevant questions and then seeking answers through systematic research
(Leedy & Ormrod, 2010:1).

As indicated by Leedy and Ormrod (2010:1), the purpose of this research was to seek answers to the research questions set out in section 1.4 and to contribute to the existing body of knowledge on strategy implementation. Research is a systematic process where information on a specific topic is gathered in order to increase understanding of that phenomenon (Leedy & Ormrod, 2010). According to Saunders, Lewis and Thornhill (2009), research is about finding things out by following a systematic approach and thereby increasing knowledge. This chapter was concerned with the methodology used to obtain data for this study as well as the design methodology used for the study.

The purpose of the study was to explore the practices and processes executed by managers during the implementation of strategy. The strategy-as-practice perspective allows for micro-level detail to be included as part of the approach and therefore a research approach was chosen that can produce such rich data and best answer the research questions during this study. In order to do that, the study investigated the problem of strategy implementation, analysed existing literature, identified the gaps, and explored the roles of middle managers in strategy practices and processes, specifically in the South African DERI context.

The structure of the research design and methodology chapter was based on the guidelines provided by Hofstee (2006) as depicted in Figure 3.1 below. The

methodology section defined the instruments, data and analysis to be used for the study. Research instruments were investigated to identify the most appropriate one for this research and the method for data collection and the analysis methods have been indicated. This is followed by the section on limitations, ethical considerations and conclusions.
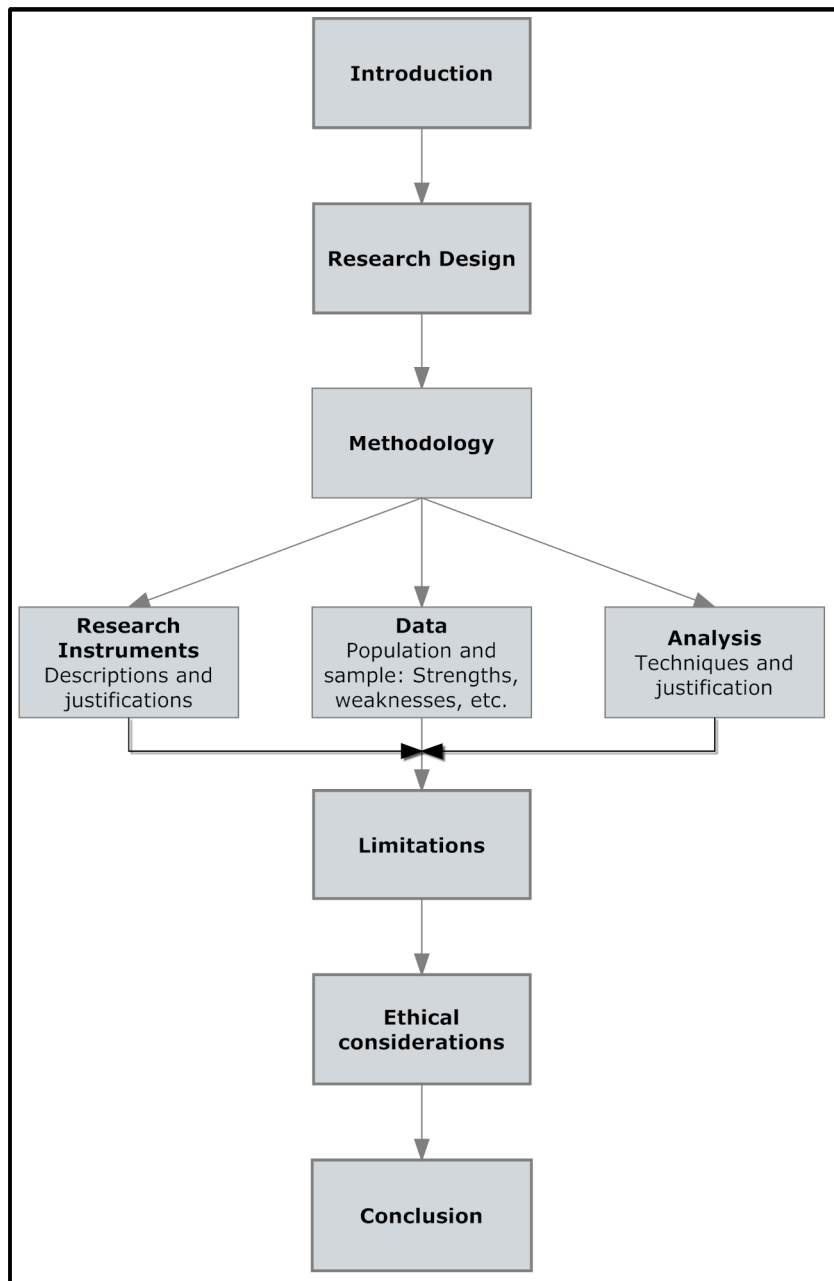
Figure 3.1: Research design methodology

(Source: Hofstee, 2006:112)

Following this approach ensured a sound chronological flow to build up to the design and methodology so as to define and justify the tools and methodologies used for this specific research.

3.2 OVERALL RESEARCH DESIGN

The research design is the overall plan that has been followed to address the research questions. The research strategy is the selection of the correct methodology or tool to answer the research question (Saunders et al, 2009). The term "methodology" refers to the theory and process of how the research is to be undertaken, while the term "design" refers to the blueprint of the chosen research design itself (Mouton, 2011). For the purpose of this research, the terminology "Research Methodology" and "Research Design" has been used as described in Table 3.1 below.

Table 3.1: Research design and methodology comparison

RESEARCH DESIGN	RESEARCH METHODOLOGY
Focuses on the end product: What kind of study is being planned and what kind of result is aimed at?	Focuses on the research process and the kinds of tools and procedures to be used
Point of departure = Research problem or question	Point of departure = Specific tasks (data collection or sampling) at hand
Focuses on the logic of research: What kind of evidence is required to address the research question adequately?	Focuses on the individual (not linear) steps in the research process and the most "objective" (unbiased) procedure to be employed

(Source: Mouton, 2011: 56)

Several research theories were found in the literature review. The methodologies might vary slightly between theorists but the basic foundations are similar. Three different design types have been highlighted here, namely the Descriptors of Research Design

by Cooper and Schindler (2011); the Three Worlds Framework by Mouton (2011); and the Research Onion by Saunders et al (2009). After investigating these approaches to research methodology, it was decided that the methodology followed for this research was based on the "research onion" as defined by Saunders et al (2009) and depicted in Figure 3.2 below.

The basic principle of the "research onion" is that the research methodology starts by looking at the research philosophy which contains the assumptions that determine the strategy and method to be used in the design of the research. The next step was to determine whether to follow a deductive or inductive approach to the research design. After that, the purpose of the research and the research strategies or designs were defined. The type of data was defined as either quantitative or qualitative, and the data collection techniques and analysis procedures were explained. The time-frame within which the research was done was defined and issues of credibility addressed. The research ethics were discussed and lastly, the data collection and analysis were described (Saunders et al, 2009).
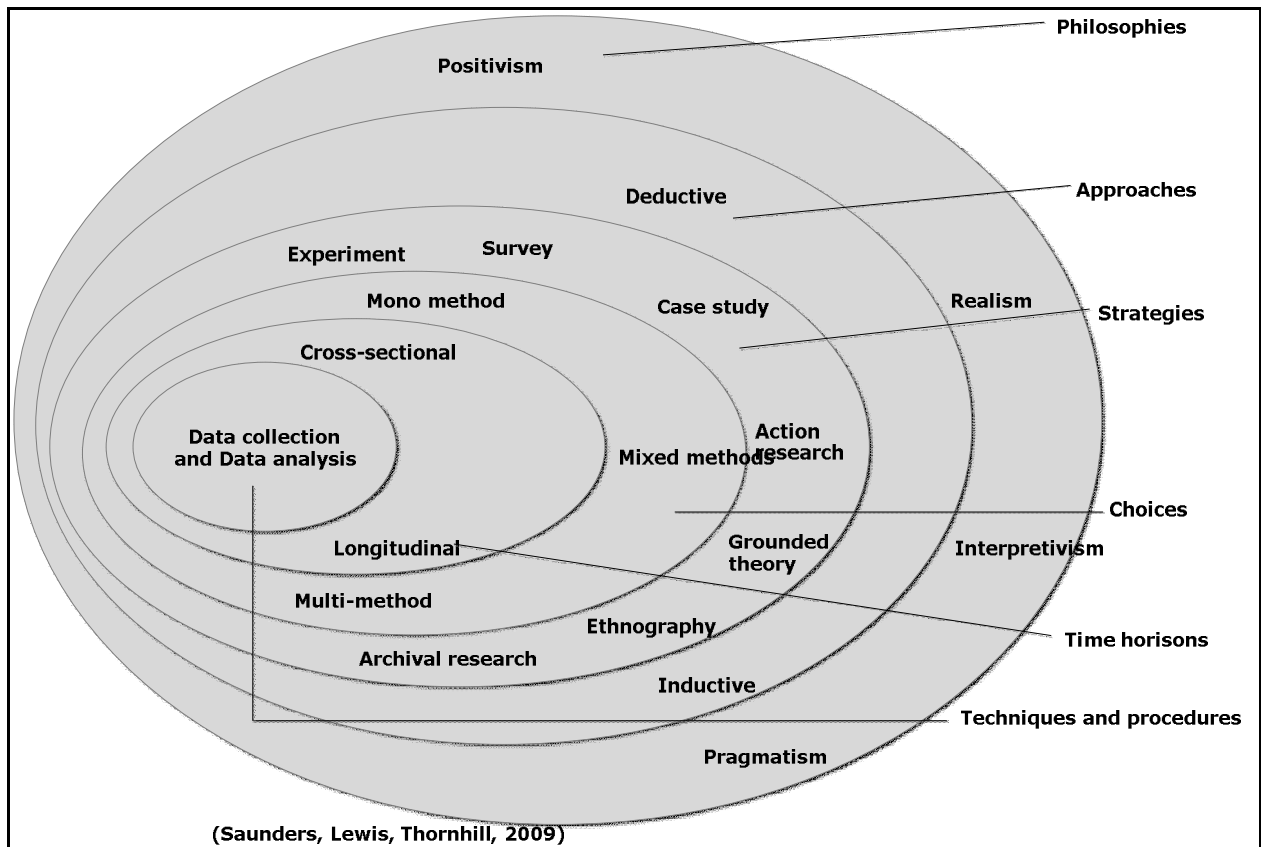
Figure 3.2: The research onion

(Source: Saunders, Lewis & Thornhill, 2009)

3.3 RESEARCH PHILOSOPHY

The research philosophy guides and defines the rest of the process, decisions, designs and methods required to define the methodology. During the analysis of the data for this study, it was decided that a pragmatic approach would be the best option to follow for this research.

Pragmatism argues that the most important determinant is the research question but that there can be more than one approach, paving the way for mixed methods (Saunders et al, 2009). This means that, in principle, the pragmatism philosophy lies in the practical observable consequences of the research. This approach is also the best way to answer the research question and focus on applied practical research. It is also

the best fit for mixed-method research and has therefore been chosen for this study.

Knowledge is attained through both observable phenomena and subjective meanings, depending on the research question. The focus of this study is on practical applied research which integrates different perspectives to assist in the interpretation of the data collected. The researcher adopts both objective and subjective points of view (Saunders, et al, 2009).

3.4 RESEARCH APPROACH

Deductive reasoning is the drawing of conclusions from premises (Mouton, 2011). The deductive approach is used where a hypothesis is drawn from theory and the research is designed to test the hypothesis (Saunders et al, 2009). This implies that a deduction or hypothesis is being made from a statement of theory or model in order to test the theory. It can also be used to clarify the meaning of a concept through deductive reasoning. As a general approach, deduction links more to positivism and the natural sciences, based on scientific principles, whereas induction focuses on achieving an understanding of meaning (Bryman & Bell, 2007).

Inductive approaches, on the other hand, involve the movement from observations and findings to theory, where theory is the outcome of the research (Bryman & Bell, 2007). This is particularly useful in the social sciences, where the cause-effect link includes the human effect and its influence on the variables. It includes alternative explanations about processes or actions and also includes the context in which these events are taking place. This is particularly useful where some of the variables are intangible issues and need to be handled accordingly. Induction emphasises the understanding of the meanings humans attach to events. It supports the collection of qualitative data and allows for a more flexible structure to permit changes in research emphasis as the research progresses. It also supports the fact that the researcher is part of the research process and is less concerned with the need to generalise (Saunders et al, 2009). The type of research approach chosen for this study was therefore inductive.

3.5 RESEARCH STRATEGY

3.5.1 The purpose of the research

The purpose of the research within the context of this study is to investigate the problem identified, analyse existing literature, identify the gaps and explore the practices and processes executed by middle managers during strategy implementation. This has been done in order to add to the existing body of knowledge in this area.

The specific purpose of this research study was to explore the practices and processes carried out by middle managers during strategy implementation. This was therefore an exploratory study to find out what happened; to understand a problem; to ask questions and to evaluate the phenomenon (Saunders et al, 2009; Cooper & Schindler, 2011).

3.5.2 Research design

The research design is the plan of how the research questions will be answered. It contains clear objectives and specifies the sources from which data will be collected, the constraints, time issues and ethical considerations. The design must be aligned with the type of study and the approaches as determined in the previous sections. All decisions and methodologies used for the research have to be defensible. To assist with the choice of the design, several models were investigated to motivate for the research design chosen.

This study has used a mixed-methods approach which includes both quantitative and qualitative data collection methods. When the data collection generates numerical data, this is called quantitative data. The measurements are made in units, amounts or quantities. It can also be done and measured in terms of rulers, metres and measuring equipment (Leedy & Ormrod, 2010). Qualitative data generates and uses non-numerical data that is typically obtained through interviews and by categorising data. This looks at the qualities of the data and is used where data is collected about complex behaviours or situations (Leedy & Ormrod, 2010). A study may contain both methods and therefore

multiple methods can be used according to the requirements of the research design. This study has combined both the quantitative and qualitative research methods to build on the strengths of the two and to eliminate the weaknesses inherent in them. This means that one method must compensate for the weakness in the other, and vice versa. The intention is that they should complement each other (Saunders et al, 2009; Cooper & Schindler, 2011).

The combination of both qualitative and quantitative methods has been used specifically because the study falls within the business management research field, which is not as tangible as the natural sciences with regard to quantitative methodologies. The qualitative research will be followed by quantitative research to validate the qualitative findings. This calls for triangulation in design approach, which will use the questionnaire as the quantitative method and the semi-structured interview and document analysis as the qualitative method for data collection.

This study was evaluated on its theoretical approach to determine a valid design to be used. It was decided to base the design of this study on a case-study approach, specifically the ethnographic case study. The strength of ethnographic research through case studies is that it provides high construct validity, in-depth insights and establishes rapport with research subjects. The weaknesses are a lack of generalisability of results, non-standardisation of measurement, and the fact that data collection and analysis may be time-consuming.

A comprehensive summary of the design including design classification, applications, meta theory, mode of reasoning, strengths, limitations and main sources of error is given below in Table 3.2.

Table 3.2: Ethnographic research: Case studies

Description/Definition	Studies that are usually qualitative in nature and that aim to provide an in-depth description of a small number (less than 50) cases	
Design classification	Empirical	Hybrid data
	Text and numeric	Low control
Key research questions	Exploratory and descriptive questions	
Typical applications	Case studies of companies or organisations (business studies); case studies in social work research (focus on the family; household; small communities); case studies in political science where countries/nations or regions are studied as cases.	
Meta-theory	Various sociological theories (symbolic interactionism; Verstehen) and other more humanistic-interpretive traditions (phenomenology; semiotics; cultural anthropology) are intellectually linked to ethnographic case studies.	
Conceptualisation/mode of reasoning	Inductive; a-theoretical. No hypothesis is formulated. In some cases certain "general ideas" or "expectations" act to guide the empirical research.	
Selection of cases/sampling	Theoretical or judgment sampling.	
Mode of observation/sources of data	Participant observation; semi-structured interviewing (individual and focus group); use of documentary sources and other existing data.	
Analysis	Analytical induction (Znianiecki); grounded theory approach (Glaser & Strauss).	
Strengths	High construct validity; in-depth insights; establishing rapport with research subjects.	
Limitations	Lack of generalisability of results; non-standardisation of measurement; data collection and analysis can be very time-consuming.	
Main sources of error	Potential bias of researcher; lack of rigour in analysis. The best introductory texts are by Stake (1995) and Yin (1994).	

(Source: Mouton, 2011)

The information above gives an indication of the type of research and design that was followed during this study. The method used for data collection and analysis will be discussed next.

3.6 RESEARCH CHOICE

The preceding evaluations were done in order to define the research design which is influenced by the research questions, research objectives, philosophical approach and the angle from which the study is being approached.

Figure 3.3 shows the different research choices that were considered in order to decide on the method used for this research. The first choice is between the mono- and multiple methods. The mono-method is when a single data collection and analysis technique are to be used. The mono-method is not under consideration for this study as was indicated in the previous sections. Therefore more than one method was used for the reasons provided above. This is called the multiple method and consists of two elements, namely the multi-method and the mixed-method.

Multi-method refers to the use of more than one data collection and analysis technique, whether quantitative or qualitative. Both quantitative and qualitative data collection methods have been used for this study.

The mixed-method approach is used when both quantitative as well as qualitative techniques and procedures are to be used in a research design. According to Saunders et al (2009), mixed-method research is used when the quantitative and qualitative methods are used simultaneously (in parallel) or after each other (in sequence) but are not combined. The mixed-method approach combines quantitative and qualitative collection techniques and analysis procedures for use in the research design and other stages, such as during the research question generation and questionnaire design phases. This means that one can take quantitative data and qualitise it (convert it into narrative that can be analysed qualitatively) or take qualitative data and quantitise it

(convert it into numerical codes and analyse that statistically) (Saunders et al, 2009; Cooper & Schindler, 2011).
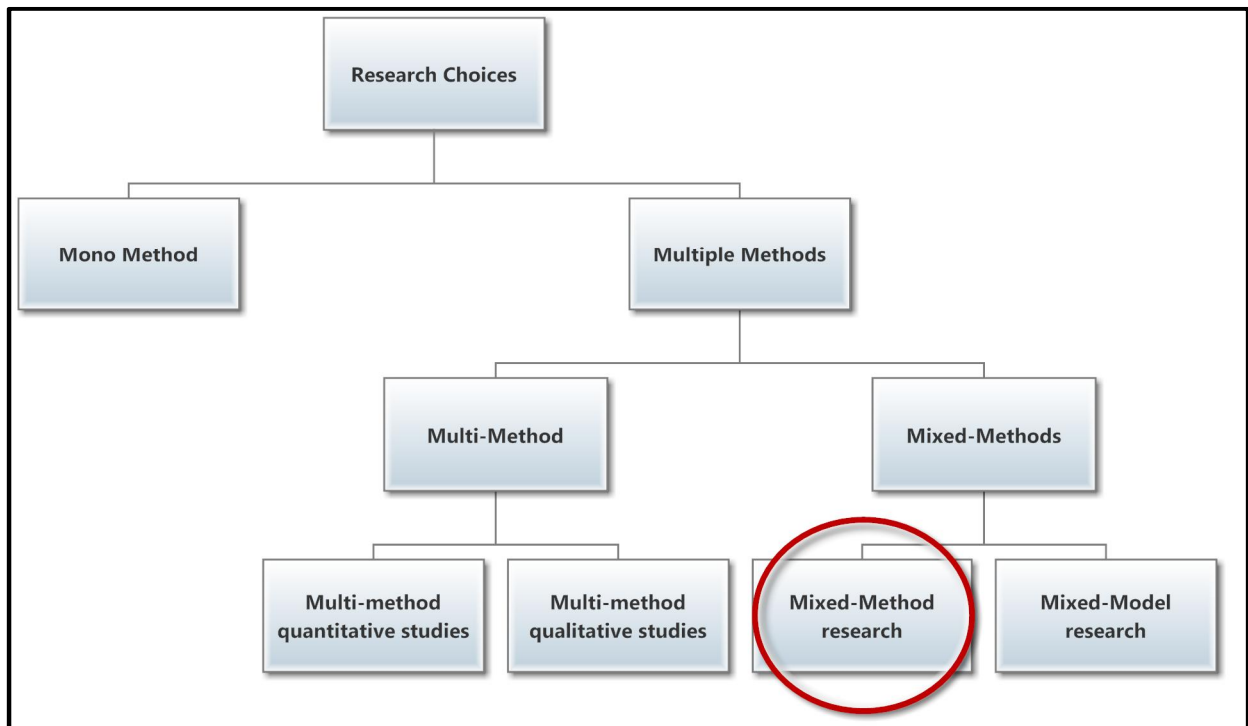
Figure 3.3: Research choices

(Source: Saunders, et al, 2009)

Based on the above, it was decided to use the mixed-method approach and, specifically, more than one data collection technique and analysis method in triangulation to ensure that the data integrity is maintained. Triangulation is the use of two or more independent sources of data collection technique to validate research findings (Mouton, 2011). The design approach of this study has used the semi-structured interview and document analysis as the qualitative method for data collection. This was used to formulate the design of the questionnaire used as the quantitative method of collection data that followed.

3.7 TIME HORIZONS

The time-frame for this type of research was cross-sectional as the research cannot be

done over a long period of time due to time constraints in terms of the objective of the study. The time-frame is addressed by taking a snapshot of a specific time for a specific study. The approach is to do interviews, distribute questionnaires and collect the data over a short period of time. It also entails the collection of data at a single point in time in order to collect quantifiable data for analysis (Bryman & Bell, 2007; Saunders et al, 2009; Cooper & Schindler, 2011).

3.8 TECHNIQUES AND PROCEDURES

This section will elaborate on which sampling techniques were used for the study and the rationale for choosing them. It will also identify and explain the choice of data collection methods and how the data was collected. Finally, it explains the data analysis methodologies based on the different analysis procedures followed to get to a strong set of data for analysis.

3.8.1 Sampling

The basic idea of sampling is to draw a conclusion about the total population by investigating only a few elements within the group. Sampling is closely connected to the goals, objectives and outcomes of the research to be undertaken and therefore the sampling method and design is chosen accordingly.

Good sampling ensures that an accurate representative sample of the population is being used in the research. Researchers use a random selection of elements to reduce the risk of sampling bias through several methods of sampling and design and in order to select a representative sample. Issues to consider are the target population, the parameters of interest, the sampling frame, the appropriate method and the size of the sample (Cooper & Schindler, 2011).

Sampling errors are likely to occur in any design. It is unlikely that this will be present to a significant extent in the probability sampling environments. Tests can be done to indicate the statistical significance of sampling errors and conclusions can be drawn

from these tests. However, shortcomings do exist in the non-probability sampling environment and they must be noted as a limitation.

Another aspect to be considered is generalising on the outcome of the research due to the type of sample used. This must be clearly analysed during the findings as it might have an impact on extrapolating the findings into other environments.

3.8.1.1 The population

The target population for this study, as defined in the title, is demarcated as the DERIs in South Africa. The term DERI (Defence Evaluation and Research Institute) as defined previously refers to the whole field of science and engineering in which technology is generated and applied through the performance of research and/or development, test and/or evaluation, or operational research in defence applications. The main client of the DERI is the South African National Defence Force (SANDF) but there may also be other commercial and foreign customers.

3.8.1.2 The sample

A census is the use of an entire population in a study (Bryman & Bell, 2007). The objective of this study was to conduct a census as all the DERIs are included in the population for this study. This means that the unit of analysis was the DERIs, and as all of the DERIs were used in this study, a census was used as the sampling technique. This is feasible as the population is relatively small.

The design used for this study was a multiple-case study design. The unit of observation has been done by means of purposive sampling. The sample used for the interviews and questionnaires was confined to the middle managers as practitioners within the institutes and included the senior managers and domain managers. That was based on a judgemental/purposive sample to ensure that the managers selected are involved in the strategy process as practitioners. Jarzabkowski and Whittington (2008) define practitioners as those who are directly involved in strategy making as well as

those who are influencing strategy. The institutes' management consists of the senior manager with three to five domain managers reporting to the senior manager. The semi-structured interviews were done with the senior managers and the questionnaires were done with three to five persons per institute at the next level who are making or influencing strategy, depending on the size of the institute.

The type of sample for this study was purposive sampling and specific judgemental sampling as part of the non-probability sampling group, as it enabled the researcher to use own judgement to select cases that will best answer the research question in order to reach the research objective. This is usually used when there is a small sample of cases (Saunders et al, 2009). This is indicated in Figure 3.4 below.
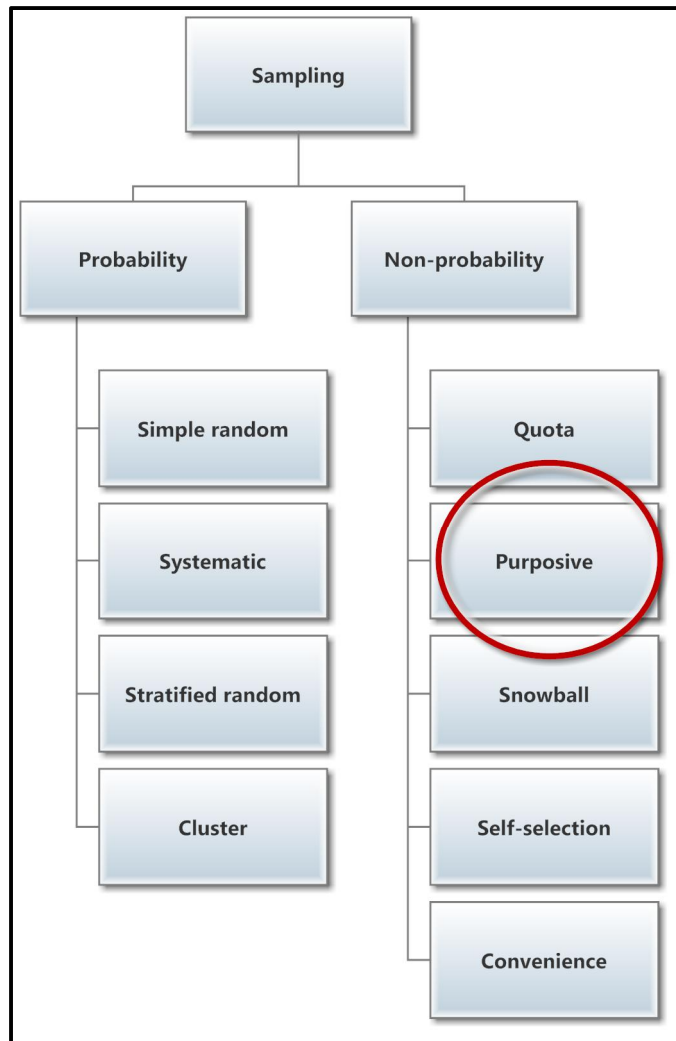
Figure 3.4: Sampling techniques

(Source: Saunders et al, 2009)

Taking the sample to the lower levels in the organisation was not considered at this stage as it was not part of the intention of the study as indicated in section 1.7. This was done to align the sampling with the purpose of the research, which is to explore practices and processes as performed by middle managers as practitioners in the DERIs.

The study was done as a case study, and specifically as a multiple case study approach, as all the DERIs have been used in the sample for the study.

3.8.1.3 Participating environment

The target population for this study, as indicated above, is the DERIs in South Africa. The DERIs are situated in the Armaments Corporation of South Africa (Armscor), the Council for Scientific and Industrial Research (CSIR) and Denel, and are dispersed through the Ministry of Defence, the Ministry of Science and Technology and the Ministry of Public Enterprises. This implies that all of these institutes are bound to a bigger corporation and to reporting as defined in those structures. These are all parastatal organisations and are consequently governed by the Public Finance Management Act (PFMA), corporate policies, practices and procedures. Although the DERIs report into a bigger organisation, they are not funded as cost centres but must all be financially sustainable and generate their own income. All the DERIs operate in similar environments and conditions and therefore, due to the similarities, these entities were used in this study for comparative purposes and are outlined in Table 1.1. The operations and type of work done by the DERIs are further discussed in the findings section. Two smaller divisions (Armour Development and Flamengro) are managed as part of two of the bigger divisions and were therefore not listed separately. The population will from here onwards consist of and be named as follows:

Protechnik, Hazmat, Ergotech, DDSI, IMT, Gerotek, Alkantpan, Denel Overberg Test Range (Denel OTR) and CSIR DPSS.

3.8.2 Data collection instruments

There are certain prescriptions for data collection, depending on the research questions, objectives and design of the study. It is thus important to first clearly define the collection methods.

The design option for this study was a multiple case-study approach. The data collection method was a multi-method design where semi-structured interviews, the questionnaire and the document analysis was executed in triangulation in order to increase the validity of the outcome. The questions below, as well as the findings during the literature review, were used to define the areas of investigation and research to be used in this study.

Main question

The main question to be addressed in the research was: "What practices and processes are employed in strategy implementation in DERIs in South Africa?"

Sub-questions

The sub-questions to be addressed were the following:

1. What practices are employed by middle managers as practitioners in DERIs during the implementation of strategies?
2. What processes are being used to ensure that strategy implementation is successful?
3. What are the roles of middle managers during strategy implementation?
4. What are the enablers for effective and successful implementation of strategies?
5. What are the barriers that prevent effective and successful implementation of strategies?
6. How are materiality and tools used during implementation of strategies?

Figure 3.5 below indicates the three data collection instruments and their application in triangulation.
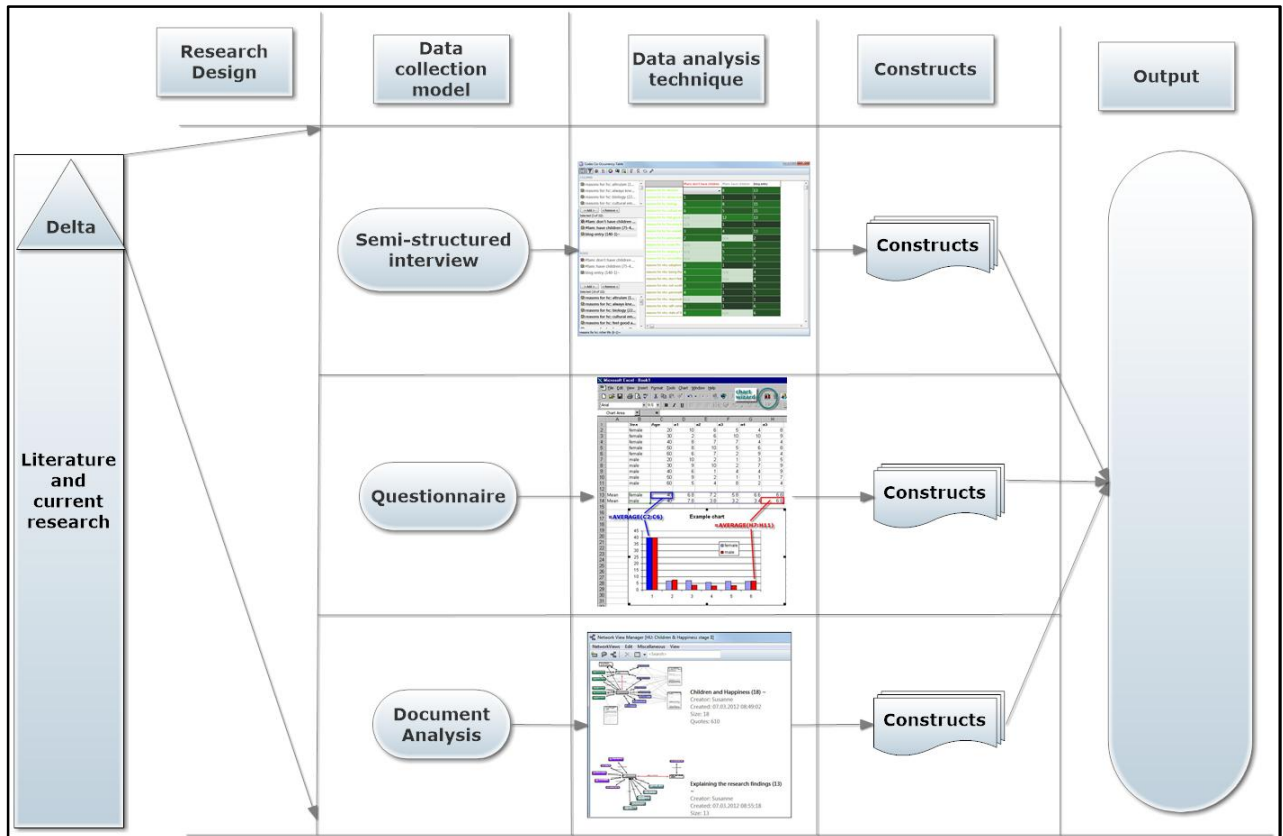
Figure 3.5: Triangulation applied in the design

(Source: Author)

The purpose and design of the research was scrutinised and it was decided to use the mixed-method approach, specifically, a triangulation between the questionnaires, semi-structured interviews and documentary analysis. Table 3.3 below details the choice with regard to applicability and advantages.

Table 3.3: Design applicability and advantage

Design type	Applicability	Advantages
Semi-structured interviews/ In-depth interviews	Yes	Valid and reliable data, flexibility
Questionnaire	Yes	Empirical data
Documentary analysis	Yes, as secondary data	Fewer resource requirements, immediately available, permanence of data and supports triangulation

3.8.2.1 Semi-structured interviews (in-depth interview)

The first data collection method was the semi-structured interview as part of a triangulation process for this research. An interview is defined by Saunders et al (2009) as a discussion between two or more people. The nature of the interview should be consistent with the objective and methodology of the study.

The semi-structured interview progresses through a list of themes and questions to be covered, but it can vary from interview to interview. This flexibility is required to be able to give explanations and context, should they be required, during the interview. This also allows for additional questions that may be required for clarity. While the interview may be recorded, notes must also be taken (Robson, 2002). The format for this study was the face-to-face interview at the premises of the specific DERI or any other convenient location. The semi-structured interview as part of the non-standardised interview group is indicated in Figure 3.6 below.
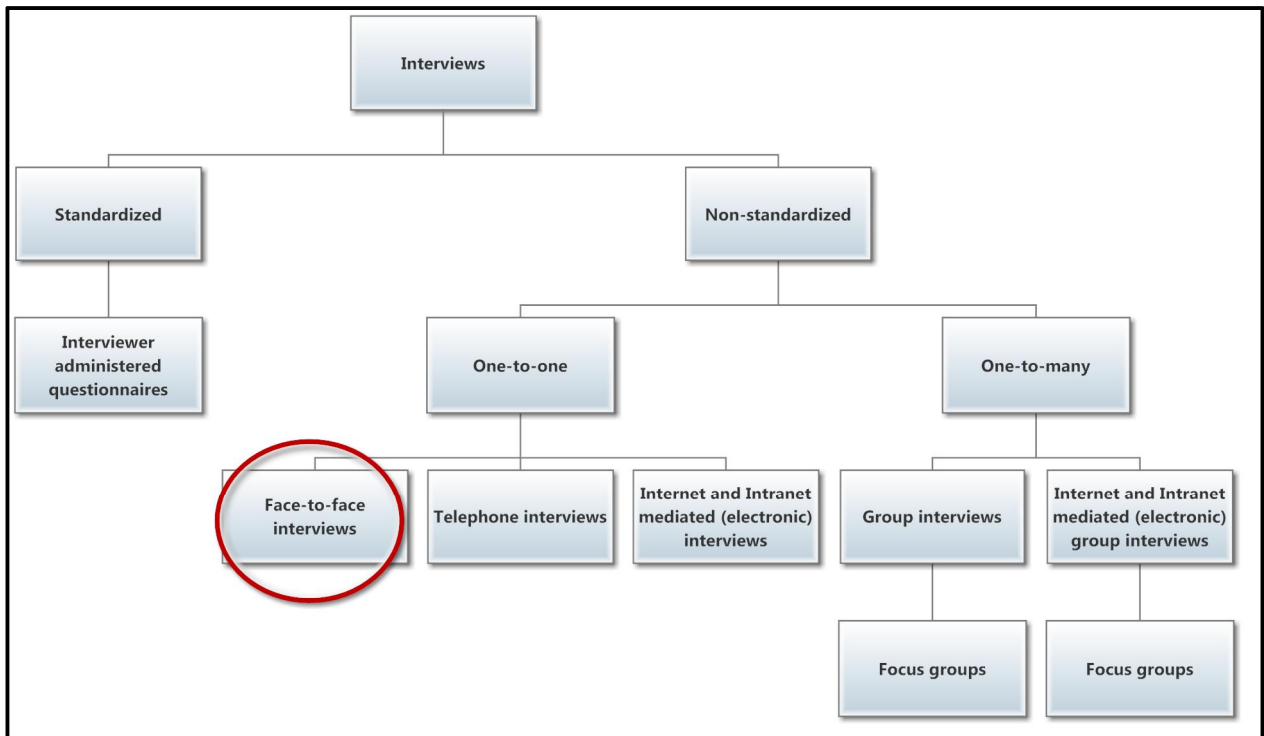
Figure 3.6: Forms of interview

(Source: Saunders et al, 2009)

This study has gathered data to be analysed qualitatively (Cooper & Schindler, 2011). This is usually done as part of a case study strategy to understand the what, how and why, according to Saunders et al (2009). The semi-structured interview is done in order to clarify and explore themes that may emerge from the questionnaires. Semi-structured interviews are also used as part of mixed-method research, as in this case, to triangulate the findings from the questionnaires and validate them (Bryman, 2006).

Permission was obtained from the relevant organisations to proceed with the study and to set up appointments for conducting the interviews. All institutes were approached and interviews were scheduled with the relevant managers in a boardroom at their premises to ensure a quiet area without disturbances. In most cases, the semi-structured interviews were held with the executive manager or divisional manager but some of the institutes added other managers, such as a management group or the institute's internal executive committee. One interview was held with each institute. The criteria for inclusion used was that the manager interviewed must comply with the criteria of a

middle manager as defined in Chapter 2. These managers must also be involved in the implementation of strategy and be actively involved as strategy practitioner. Although there are different names and wording for these managers and groupings, it was confirmed that they all adhere to these inclusion criteria. It was further confirmed that these institutes, and consequently the managers, have people reporting to them and they are in turn reporting into the bigger organisation to a higher order. This was highlighted in paragraph 3.8.1.3. The inclusion and exclusion criteria are presented in Table 3.4 below.

Table 3.4: Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Responsible for the sustainable management of the institute.	No responsibility in terms of management.
Responsible for strategy formulation and implementation in the institute.	No responsibility or influence on strategy.
Be more than 2 years in this management position.	Less than 2 years' management in relevant position.
Have at least one management level above and one level of subordinates below.	Part of corporate executive and/or no subordinates.

All of the identified organisations were included for interviews and all managers participated. The interviews were scheduled after the budget cycle was completed and before the beginning of the next financial year.

The units of analysis were the institutes through which the within-case and across-case analyses were done, taking into consideration the practices and processes of the middle managers as practitioners within these organisations. The units of analysis are managerial activities, practices, tools, routines, conversations and interactions, organisational routines, capabilities and processes (Rouleau, 2013).

The format of the semi-structured interview was based on the research question and the

research guide was used to provide broad guidelines of what was to be discussed, namely a set of issues, themes or questions on specific topics, which allowed the interview to be open and flexible and the interviewee to respond accordingly. The interviews were conducted as a high-level discussion and the interviewer used the themes to guide the discussion to obtain relevant information. The structure of the interview was flexible and allowed for additions, explanations and questions to be added should they be necessary. The same structure was used for all interviews. Ample time was allocated to allow for the interviewee to clearly express and explain events, patterns, forms and situations. The interview guide is included as Appendix C.

The interviews were recorded with a Philips voice recorder. The total interview time recorded was fourteen hours and forty-four minutes (14h44) for all the institutes. The next step was to transcribe the recordings and for that a transcription software package called Express Scribe™ was utilised. The interviews were transcribed and the transcriptions were edited, firstly by the person who did the transcriptions, and secondly, by the researcher who performed the interviews. Editing was required because the transcriber did not have the context of what was discussed and because there were times when a word could not be heard clearly and another word with a different meaning was used in the text. The editing iterations performed on the transcriptions were done to ensure that the correct context was captured and that it gave a true reflection of what was said. It is important to ensure that the interview is transcribed verbatim and therefore even when the transcription is edited, sentence structure and grammar may not be correct. The intention was to capture the content and context of the discussions and the transcripts had to be a true reflection of what was said. Furthermore, notes were kept by the researcher to note any observation or additional information captured during the interview for clarity purposes should it be required at a later stage. The intention was to analyse the content captured during the interviews and document analysis and not the interpretation of the researcher. This also ensured that the researcher bias is kept to a minimum. All the names of individuals and institutes were replaced with pseudonyms to uphold anonymity, and therefore the quotations referenced in the text of this study will also reflect that. The transcriptions were not added to the thesis as an annexure, due to the sensitivity of the work being done at the

institutes. This is also to protect the individuals who participated in the study. The quotations was used during the analysis phase and all source documents will be retained for three years, as prescribed.

The transcriptions totalled 11 documents containing 111,648 words. The transcriptions were done in MSWord and after an iterative editing process the documents were prepared according to the requirements to be imported into Atlas.ti™ . As a substantial amount of information was involved, it was fed into the qualitative data analysis software Atlas.ti™ . The analysis was based on inductive coding, which means that the text from the source documents was used to deduce certain constructs or categories that were grouped in order to arrive at a summary from which the outcome originates (Thomas, 2003). The analysis and interpretations are discussed in Chapters 4 and 5.

3.8.2.2 Documentary evidence

The next method for collecting data was the use of existing documents from the organisations that were compiled for different purposes. Such data may be from previous research, statistics, publications, minutes of meetings, financial statements, marketing material, and strategic and operational plans. These documents are useful sources as part of the triangulation approach to answer the research questions. They are usually only available from the organisation that produced them and therefore access to this data must be negotiated; however, some of the data required may be available from the Internet or from annual reports and published documents (Saunders et al, 2009).

The advantage of this approach is that the data is already in existence, is usually of high quality and is almost immediately available. The disadvantage is that it might have been compiled for another purpose than that intended for this study (Bryman & Bell, 2007). In total, 51 documents consisting of 589 pages were received from the institutes and all were scrutinised, ranging from Word documents and documents in PDF format to hard copies and e-mail formats. These documents were drawn into Word, \pdf or scanned for use in Atlas.ti™ . Documents that were of poor quality in the PDF format were re-typed into MSWord to make them workable. Scanned documents were not always readable

but all constructs were captured as far as possible. Most of the documents presented did not contain any sensitive information, but where there were matters of a sensitive nature, abstracts of these were used for analysis purposes. Some of the documents were also condensed into one document, making it easier to import and analyse for the specific institute concerned.

Finally, the documents from the semi-structured interviews as well as the document analysis were re-worked, edited and sifted into the required formats and content. A total of 37 documents were imported into Atlas.ti™ , consisting of more than 850 pages. This was used to do the qualitative analysis for this research for the within-case as well as the cross-case analyses.

3.8.2.3 Questionnaires

The next data collection method used for this study was the questionnaire. Questionnaires are not particularly good for exploratory research, although their use in mixed method research has the advantage that it is linked with other methods in a multiple-methods research design. This exploration allows for information to be obtained following the outcome of the semi-structured interviews. It complements the other two data collection methods through a quantitative analysis (Saunders et al, 2009; Cooper & Schindler, 2011; Bryman & Bell, 2007). The type of questionnaire used for this study is depicted in Figure 3.7 below, indicating the different types of questionnaires.
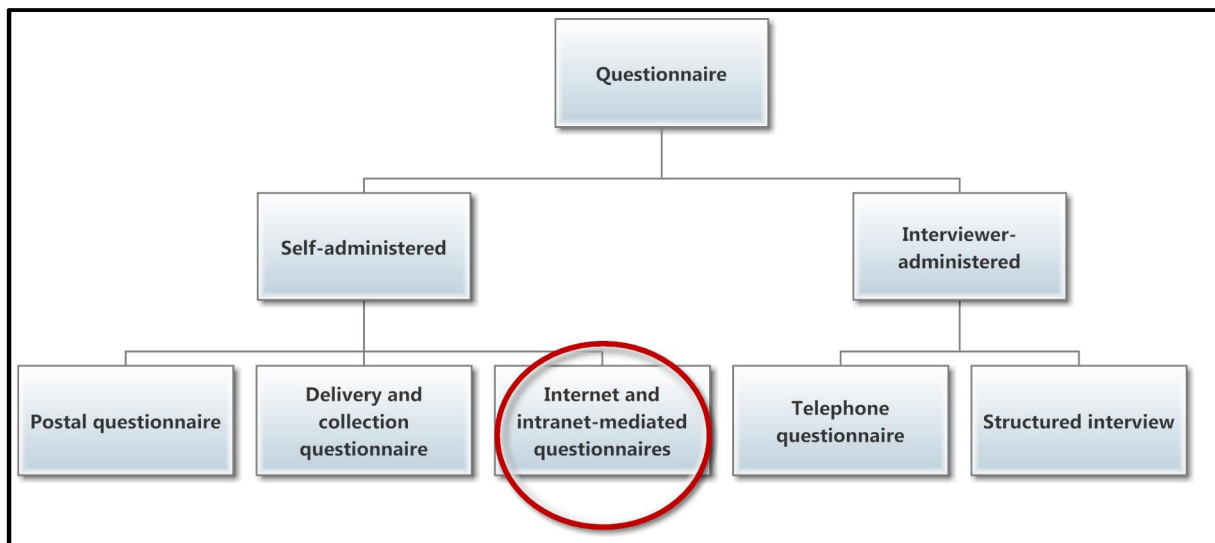
Figure 3.7: Types of questionnaires

(Source: Saunders et al, 2009)

This study used a self-administered questionnaire. The questionnaire followed the semi-structured interviews to address any matters that became evident during interviews, and was used as part of the triangulation data set during the analysis phase.

The questionnaires that were administered yielded a response rate of 71% which was acceptable according to Saunders et al (2009). The purpose of the questionnaire was to obtain primary data on the research problem and the results from the interviews and document analysis. The objective was to firstly use the data from this tool to explore the data developed from this research, and secondly, to prioritise the constructs that evolved from this by including the next level of management in the questionnaire. This ensured that a more representative sample was used to establish the validity of such an outcome.

The questionnaire was designed using the outcome from the analysis of the interviews and documents to confirm the validity and priorities of the concepts. This means that the questionnaires were developed after this analysis was completed. The Unisa School of Business Leadership was approached to design the layout and administer the questionnaire in order to avoid bias. The design was done by breaking the questions

down into investigative questions, which were then further broken down into measurement questions to measure the outcome quantitatively. Certain design criteria were included in the questionnaire to influence the response rate, reliability (trustworthiness), and the validity of the data collected. The purpose of each individual question was established. The questionnaire had a clear layout with regard to simplicity of understanding and easy response (Saunders et al, 2009; Cooper & Schindler, 2011; Bryman & Bell, 2007; Valmra et al, 2006; Jooste & Fourie, 2009; Jarzabkowski & Wilson, 2002; Floyd & Lane, 2000; Eisenhardt & Brown, 1998).

The main purpose of the questionnaire was clearly explained in the covering letter (see Appendix D) that was part of the e-mail send out to all respondents. The measurement of the results was done on a four-point Likert scale that prioritised and plotted the results on a four-quadrant plot to identify the strengths and gaps of the institutes. The second purpose of the questionnaire was to verify the output from the qualitative analysis and to see which of the constructs found in the literature review and the interviews were present in the divisions, to give some form of prioritisation to these and to indicate gaps that might exist between the outcome and practice.

A pilot test was conducted to detect weaknesses and to test the design and processes of the questionnaire. It also helped to increase the validity of the results and ensured that the tool that was used for this purpose was working properly to avoid any major problems. A selected group from one of the institutes was used for the pilot study. The pilot questionnaire was sent to seven respondents and six responses were received. Table 3.4 below shows the response check from the Unisa School of Business Leadership and indicates the date the questionnaire was accessed, the unique key for the questionnaire, the date submitted and then the question responses.

Table 3.5: Pilot questionnaire response

2014-09-05	RSAC-9NNHM7	2014-09-05	Yes	Yes
2014-09-06	RSAC-9NP7VD	2014-09-06	Yes	Yes
2014-09-08	RSAC-9NRG93	2014-09-08	No	Yes
2014-09-08	RSAC-9NRHF7	2014-09-08	Yes	Yes
2014-09-08	RSAC-9NRKKU	2014-09-08	Yes	Yes
2014-09-09	RSAC-9NSMVV	2014-09-09	Yes	Yes

A few corrections were made to the questionnaire, such as link errors, semantic errors and instructions, and the final questionnaire was sent to the recipients on the list intended for this purpose. The questionnaire is included in Appendix E.

Four points on the Likert scale were used, as the output from the questionnaires was used for prioritisation and validation as nominal and ordinal data obtained. This was to define descriptors of descriptive statistics and to identify gaps in the outcome of the analysis. It was not the intention to carry out a rigorous statistical data analysis but to support the qualitative analysis in terms of quantification.

3.8.3 Data analysis

The analysis techniques performed on the above data varied according to the purpose, research design, data collection methodology and specific analysis required. For the purpose of this research, content analysis in an inductive process was used and descriptive statistics were used to do further quantitative analysis. Furthermore, a within-case analysis and a cross-case analysis were performed to ensure that a comprehensive analysis was done to achieve a high-quality outcome.

3.8.3.1 Content analysis

Content analysis is an objective, systematic and quantitative research technique of the visible content of some form of communication (Cooper & Schindler, 2011). It follows a systematic process and draws interpretations from it through a coding process. It can be used to analyse audio, video, written and secondary data for research purposes.

Bryman and Bell (2007) define it as an approach used to analyse documents and texts (printed or visual) and to quantify content in terms of predetermined categories in a systematic and reproducible manner. It is an approach used to analyse documents and not a means to generate data.

Content analysis is a highly transparent method and can therefore be seen as an objective method of analysis. It is also useful when doing analysis in the social sciences, which is not as tangible as the other types of data. It is also a very flexible method in the sense that it can be applied to a variety of types of information. In this case, it was used on the semi-structured interviews as well as on the documentary analysis. The disadvantage of this method is that the analysis is only as good as the documents that were used for the analysis. It is therefore necessary that all the documents used for this analysis are scrutinised for authenticity, credibility and representativeness (Bryman & Bell, 2007).

Figure 3.8 provides a roadmap of how the design and process that was described in this chapter were executed during the research. It indicates the sources of information used during the data collection, the instruments used to collect such data, preparation of data and what analysis was performed. It also describes the output from the analysis as well as the controls that were built into the design.
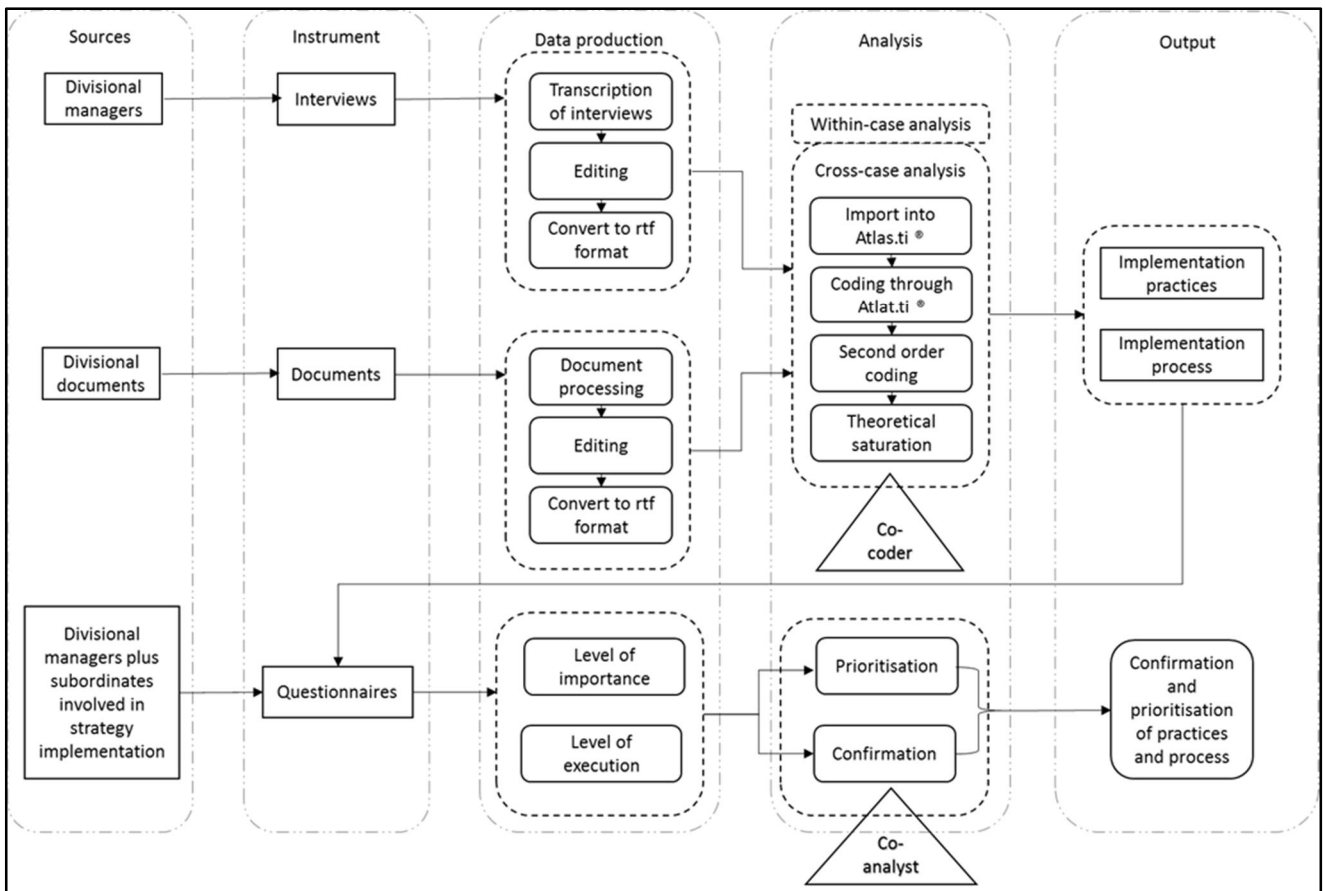
Figure 3.8: Research design and process

(Source: Author)

The content analysis for this study was done in two phases where the interview data and the data from the documents were analysed and used to create certain themes, categories and constructs used during implementation. The initial analysis was done by the researcher, using a qualitative software package called Atlas.ti™ . This ensured that the results were of required quality and that trustworthiness of the results was increased. A co-coder was used to minimise bias and the role and profile of the co-coder is discussed in paragraph 3.8.3.4.

The second phase used this information as input and a questionnaire was administered to a bigger group than in phase 1 to validate and prioritise the outcome of the study. The second phase of the analysis utilised a questionnaire and a co-analyst was used to minimise bias. The "why" factor is not always visible with content analysis, and

therefore a further analysis of the interviews was required.

3.8.3.2 Case analysis

Analysing data is the most important but also the most difficult part of the process. There is usually extensive data that needs to be analysed and that makes it difficult to synthesise down to final conclusions (Eisenhardt & Brown, 1998). According to Yin (2003), case studies can be very valuable in a contemporary real-life context where the "how" and "why" questions need to be answered and the researcher has very little control over proceedings. However, there are methodologies and software in support of such analyses and the within-case and across-case analyses are defined here as the methods used for this study. The within-case analysis ensured, as first-order analysis, that the researcher is familiar with the data as a first-order theory generation effort. The cross-case analysis compels the researcher to look beyond the first-order analysis and analyse the data through several lenses, creating a more comprehensive analysis (Eisenhardt, 1989). The number of cases required to make a valid contribution can range from four to ten or fifteen cases (Eisenhardt, 1989; Miles & Huberman, 1994; Perry, 2001). In this study, it was decided that nine cases were sufficient to make a deduction for this specific population.

3.8.3.3 Within-case analysis

Within-case analysis typically involves a detailed write-up of the case and the generation of insight through descriptions and visualisation (Eisenhardt, 1989). The purpose of this type of analysis is to be familiar with each of the cases on an individual basis and to allow patterns and concepts to become visible, allowing the researcher to understand the detail of each case. Following this will help the researcher to draw first-order conclusions from the analysis and accelerate the cross-case process. The structure used for this was determined and guided by the literature and objectives of the research and is indicated below:

- Overview of activities;

- Strategic talk and text;
- Divisional implementation;
- Materiality and tools;
- Implementation practices;
- Implementation processes;
- Implementation enablers;
- Barriers to implementation; and
- Documentary evidence.

The next step was to populate the data from the research into the analysis and do the within-case analysis from there. This was done to identify and group the information from the analysis into the practice domains identified for the output of this study.

Within-case analysis required the researcher to become familiar with the data for each case on an individual basis and then, through analysis, to allow the patterns and interpretations to emerge in order to make deductions from them (Eisenhardt, 1989). Thereafter, the cross-case will be used to generalise patterns, as discussed next.

3.8.3.4 Cross-case analysis

Due to the extensive amount of data involved in such a study, and in order to avoid premature conclusions and to prevent false deductions, it is important to undertake a good cross-case comparison and analyse the data in many divergent ways (Eisenhardt, 1989). To achieve the research objective, data processing was done to make sense of the data obtained and an explanation of how that was achieved is indicated below.

Themes can be obscured by the data and therefore a secondary inductive process was applied to the data. The adapted inductive approach (Thomas, 2003) was applied as follows:

- It condensed extensive and diverse raw text data as obtained through Atlas.ti™ into a brief summarised format.

- It did first-order analysis and trends.
- It developed categories and themes from the summarised data.
- It established the links between the concepts that emerged from the inductive analysis.
- It crystallised this onto a mind map to visualise the output.

From the documents received, it appeared that most processes and plans were well written, due to the corporate compliance that is enforced by the bigger organisation. However, the practices investigated are found at the lower level and are completely dependent on the divisional managers' vision and leadership because the managers use their social skills combined with professional knowledge to execute certain practices and activities so as to ensure successful implementation.

The analysis techniques performed on the data varied according to the type of design, data collection methodology and specific analysis required. For the purpose of this research, the techniques used were content and thematic analysis as qualitative analysis, as well as some form of quantitative analysis through the questionnaires.

After the data from the interviews and the document analysis was cleaned up and made ready for importation into Atlas.ti™ , the analysis part of the process started; 37 documents consisting of more than 850 pages and approximately 158,603 words made it through the clean-up and editing process to be used for analysis. These documents have not been attached to the thesis as an appendix because of the anonymity requirement, but are available and will be stored for a period of three years should they be required. The output reports are attached as appendices.

By this stage, the data contained information from the interviews as well as the documents provided by the institutes for analysis. Content analysis was used during this phase, which is an objective, systematic and quantitative research technique of the visible content of communications (Cooper & Schindler, 2011). It follows a systematic process and draws interpretations from it through a coding process. It can be used to analyse audio, video, written and secondary data for research purposes.

Content analysis is a highly transparent method and can be seen as an objective method of analysis. It is also a very flexible method in the sense that it can be applied to a wide variety of types of information. In this case, it was used on the semi-structured interviews as well as on the documentary analysis. As described above, an inductive coding process was used to examine each of these documents which carefully selected relevant text and coded it in terms of a grouping, construct or category in relation to strategy practices and processes.

Coding refers to the process of assigning themes, categories, concepts or codes to portions of relevant text that are of interest to the topic being researched. The process of coding goes through a number of iterations of coding and re-coding until some form of saturation is achieved in the allocation of the codes. The first half of the data and documents from this study constantly produced new codes and as the second half progressed, fewer and fewer codes were established, pointing to theoretical saturation.

To keep bias to a minimum and to ensure that the quality and trustworthiness of the analysis is on an acceptable level, a co-coder was used after the initial qualitative analysis. The co-coder is a lecturer at a local university who also gives training in qualitative analysis software. A briefing was conducted beforehand and all aspects of the research, literature, design and outcome were scrutinised where after the co-coder did another order coding in order to check and confirm the coding that had been done. The feedback, comments and recommendations that were proposed by the co-coder were included in the analysis, and are provided in Appendix I. The output from this analysis is provided in Appendix J for reference purposes. The next step was a further analysis of trends through the identified strategy-as-practice lenses seen in Chapter 5.

3.8.3.5 Questionnaire

The purpose of the questionnaire was to confirm the validity and to prioritise the implementation practices found during the study. The questionnaire that was administered was analysed by means of a quantitative data analysis through IBM

SPSS®, an advanced statistical analysis software package. Although not many quantitative deductions could be made from this due to the nature of the results, a descriptive analysis gave a better outcome which is discussed in Chapter 6. A co-analyst with extensive experience on questionnaire analyses from the Unisa School of Business Leadership was also used to validate the findings made during the analysis.

The analysis from the questionnaire was included in the discussion and the results were plotted on a graph with four quadrants as indicated in Graph 3.1 below. From this graph, certain conclusions could be drawn. The top left quadrant indicated a high level of importance but also a low level of implementation. This area represents areas for improvement as regards better implementation. The bottom right quadrant indicates areas identified which represent a high level of implementation but a low level of importance. Those are typically areas that are not important in continuing with, not worth the effort and are seen as a weakness. The top right quadrant of the graph indicates concepts of high importance that are seen as strengths. The ideal situation is to be able to identify the areas for improvement and keep all these areas in the strength area. Furthermore, by plotting the concepts on such a graph, the gaps between importance and implementation are identified and indicate areas for future improvement.
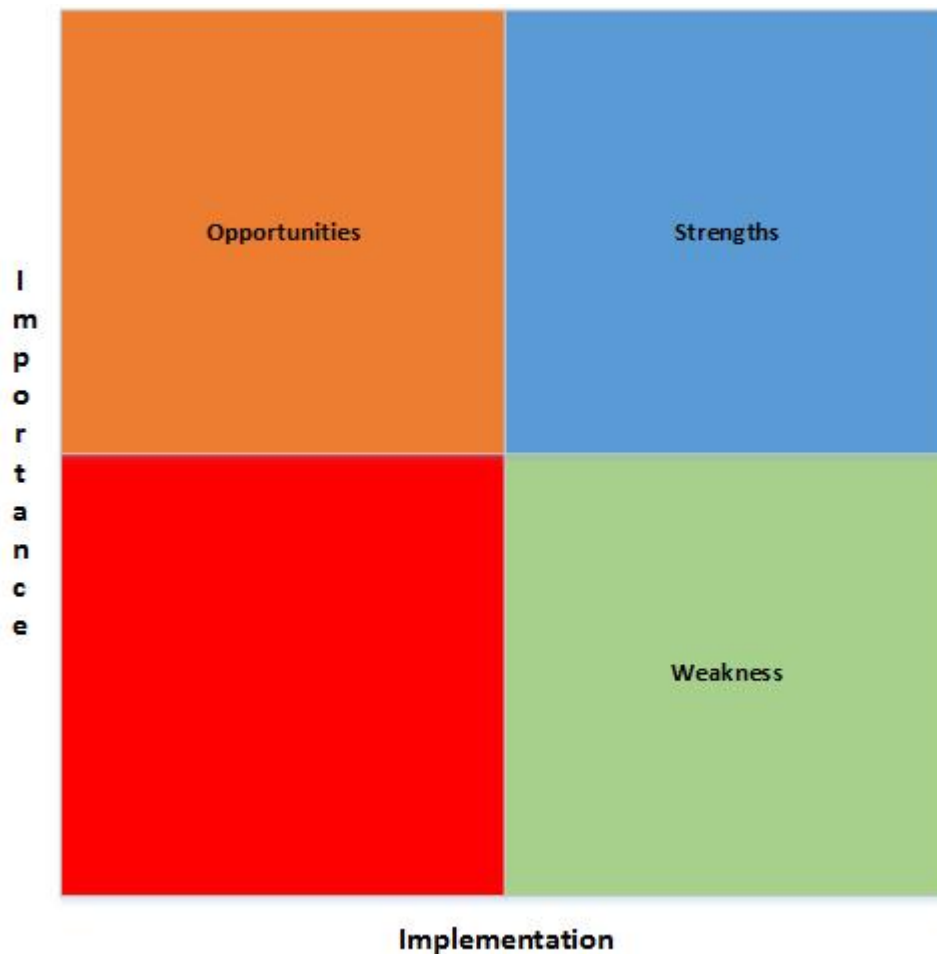
Graph 3.1: Implementation/Importance grid

(Source: Author)

The framework as indicated above consists of the four themes and the analysis and interpretation follows in Chapter 6.

3.9 CREDIBILITY OF THE RESEARCH FINDINGS

Trustworthiness:

Trustworthiness in a qualitative study is to ensure that the study undertaken is credible, transferable, dependable and confirmable, according to Lincoln and Guba (1985). The study undertaken was mainly a qualitative study and therefore the focus in the credibility of the research findings was on the trustworthiness of the data. The design, methodology and the analysis demonstrated proper trustworthiness of the outcome.

Credibility:

Credibility refers to the believability and value of the findings (Houghton, Casey, Shaw & Murphy, 2013) and means the quality of being believed or accepted as true, real or honest. Credibility is an evaluation of whether or not the research findings represent a credible interpretation of the different types of data produced by the study (Lincoln & Guba, 1985). In this study, it means that certain actions were carried out to ensure that the findings and interpretations made were a true reflection of the intent or original data obtained for this study.

The first method to address credibility was to use triangulation as a data gathering method to ensure that the information collected came from more than one source, thereby eliminating bias and getting a bigger spread. The data was obtained from semi-structured interviews as well as from documents obtained from the DERIs, such as strategic plans, marketing material, plans and procedures. This ensured that the data from all these different sources was representative of information available for this study.

Furthermore, a questionnaire was sent out to a bigger group within each DERI with the purpose of confirming the outcome of the qualitative analysis, as well as to prioritise and identify gaps between implementation in the DERIs, thereby confirming that what was found in the study was aligned with the original data supplied.

Transferability:

Transferability is the degree to which the findings of this inquiry can apply or transfer beyond the bounds of the project (Lincoln & Guba, 1985). Thomas (2003) indicated that the findings are shaped by the assumptions and experiences of the researcher who decides what is more important and what is less important in the data. Different researchers are likely to yield findings that are not identical and not necessarily transferable. However, the supposition is that similar studies can be transposed to other organisations and areas beyond the boundaries of this study. More of these options will be identified in section 5.5 where suggestions for future research are made.

Dependability:

Dependability is an assessment of the quality of the integrated processes of data collection, data analysis and theory generation (Lincoln & Guba, 1985). The triangulated approach ensured that the data collection method was sound. This was done with a 100% sample, or census, of all the DERIs and it can therefore be said that it is representative of the total population identified. The next process to ensure dependability of the results was done during the coding of the data. The data was analysed by means of a qualitative coding process and in order to eliminate coder bias as well as to ensure that a quality process was executed on the data analysis, a co-coder was used. The report from the co-coder is attached as Appendix I and all proposals made therein were incorporated into the coding and analysis.

The next phase of the analysis was to use a questionnaire to validate some of the findings of the research. The questionnaire was compiled from the data from the analysis of this study. This was reviewed by a review group and then a separate pilot group was used to ensure that the questionnaire was ready for administration. The Unisa School of Business Leadership Information Technology department was requested to administer the questionnaire to the identified group. This was done to ensure anonymity and objective consolidation of the outcome. This was then further analysed by the researcher and a co-analyser who was used to eradicate bias.

All these steps were taken to ensure that the quality of the output in terms of data, analysis and interpretation adhered to acceptable standards, as required for such a study.

Confirmability:

Confirmability is a measure of how well the inquiry's findings are supported by the data collected (Lincoln & Guba, 1985). It is also an indication of the degree of neutrality of the researcher, or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation or interest.

This was mainly done by the use of the questionnaire that was developed from the constructs of the output of this study. The intention of the questionnaire was to confirm that the output, which is the finding of the study, was aligned with the participants' views. Furthermore, feedback will also be given to the contributors on the outcome and how it can be operationalised. This also helps to confirm the trustworthiness of this study.

The above explains the actions performed to ensure that the research delivered credible results and could be used for the purpose of this study.

3.10 LIMITATIONS OF THE RESEARCH DESIGN

All research studies have their limitations, and the researcher must report on these limitations.

Limitations of the study are listed below. The sampling method can be seen as a limitation due to the fact that judgmental sampling can be open to bias. The fact that a census was done is an effort to overcome this limitation. The title specifies the DERIs, and a limitation is that the findings can only be generalised to that industry and not to a bigger grouping. This was highlighted as an opportunity for further research during the conclusion of the study. The researcher is also a limitation as he is not a full-time business research practitioner. With the help of the study leader and the subject matter experts at the School of Business Leadership, this aspect was mitigated. The fact that this was a cross-sectional study for a specific point in time can also be seen as a limitation. A better view could have been a study done over a longer period, as in longitudinal studies, but the time-frame of this study did not allow it. Finally, the qualitative side of the research can also be seen as a limitation, in that it is sometimes seen to be too subjective, difficult to replicate and cannot always be generalised. This was addressed by using a combined method for data collection and analysis for the study, and the limitation was therefore changed into a strength.

3.11 CONCLUSION

The purpose of the research was to translate the research questions into answers through the use of tools and methodologies and to add to the current body of knowledge. This chapter was concerned with the methodology used to obtain data for this study and the research design and methodology used for this study.

The methodology and design of how to achieve the above outcome was addressed and a blueprint for the design was presented as indicated by means of the research onion developed by Saunders et al (2009).

The research design is the plan of how the research questions will be answered. It contains clear objectives and specifies the sources from which data will be collected, the constraints and time issues. The design is aligned with the type of study and the approaches as determined by the type of study. All decisions and methodologies used for the research need to ensure that quality and rigour is defensible. To assist with the choice of the design, several models were investigated to motivate for the research design selected. It was indicated that a pragmatic philosophy was used for this study. The research approach was inductive through the use of a multiple-case study. Therefore, the method of data collection and analysis was based on a mixed-method approach through qualitative as well as quantitative methodologies. The time frame for this study was cross sectional in the sense that it was done for a specific time-frame or snapshot in time. The last part of the study, or the core of the onion, was the data collection and analysis, followed by the conclusion and recommendations. The following chapters provide the analysis and findings that resulted from the study.

CHAPTER 4: WITHIN-CASE ANALYSIS

4.1 INTRODUCTION

The first analysis performed was the within-case analysis with the aim being to allow the researcher to become familiar with the data for each case on an individual basis and then, through analysis, to allow the patterns and interpretations to emerge in order to make deductions from them (Eisenhardt, 1989). Within-case analysis typically involves a detailed write-up of the case and the generation of insight through descriptions and visualisation (Eisenhardt, 1989). The purpose of this type of analysis is to be familiar with each of the cases on an individual basis and to allow patterns and concepts to become visible, allowing the researcher to understand the detail of each case. This will help the researcher to draw first-order conclusions from the analysis and accelerate the cross-case process. The structure used for this was determined and guided by the literature and objectives of the research and is indicated below:

- Overview of activities;
- Strategic talk and text;
- Divisional implementation;
- Materiality and tools;
- Implementation practices;
- Implementation processes;
- Implementation enablers;
- Barriers to implementation; and
- Documentary evidence.

The next step was to populate the data from the research into the analysis and do the within-case analysis from there. This was done to identify and group the information from the analysis into the practice domains identified for the output of this study. Thereafter, the cross-case was used to generalise patterns.

The within-case analysis was done through a process where the documents, interviews and questionnaire results for each institute were individually analysed and coded. Thereafter, the findings were written up and the summary was analysed and presented. The analysis was based on the theoretical constructs found in the literature and the headings for exploration were based on the interviewee background, overview of activities, strategic talk and text, divisional implementation, materiality and tools, implementation practices, implementation processes, implementation enablers, barriers to implementation, and documentary evidence. The purpose was to gain insight into the data through write-up and dissection and to make some first order conclusions.

4.2 FINDINGS

The findings were broken down into the different institutes and each case analysed separately. This allowed for a first order analysis through the various constructs and the results are presented. The analysis and detail of each of the institutes are indicated below. These details are then summarised at the end of the chapter indicating and highlighting the relevant areas, patterns and details that can be taken from this analysis. The figures depicting the implementation process that was compiled for each institute was defined from either the documents received from the institutes or as interpreted by the researcher during the interview as obtained from the field notes.

4.2.1 Institute 1

Interviewee background:

The interviews performed at this institute were done with two of the managers. One was the acting senior manager and the other was the financial/operational manager. The reason for this was that the institute had not had an appointed senior manager for some time and these two individuals were interviewed in order to get a representative opinion.

Manager 1 is an electronics engineer who started working on projects and was later tasked to initiate project management into the organisation as a formal tool to execute projects. He had also been the divisional manager for the past fifteen years and was then appointed as operations manager to investigate business processes within the institute. He was also acting in the senior manager position responsible for the executive management of the institute awaiting the appointment of a new senior manager and reports to the General Manager.

Manager 2 has been with this institute for twenty-three years and is the business manager responsible for the business operation functions. The main responsibilities are the financial and operational functions and he is also part of the management team.

Overview of activities:

Institute 1 was established to provide science-based technological support to enable the client to carry out its military operations. Through the combined expertise and dedication of professional staff, Institute 1 today provides a techno-scientific foundation for the exploration, conceptualisation, improvement, modernisation, in-service engineering and maintenance of systems that ensure that the client accomplishes its national role and responsibilities in an optimal manner. The facilities at Institute 1 include specialised facilities, tracking ranges, acoustic and magnetic measurement facilities, radar and infrared evaluation ranges, small survey vessels, mechanical and electronic laboratories as well as a library on specialised subjects. These resources support the client in the areas of test and evaluation, operations and technology that are of strategic importance to the client. Scientific and technical knowledge and the skills of the institute's operational workforce are focused in specific domains. This institute supplies a service to one client only and therefore the strategy, structure and service offerings are aligned in such a way that most efforts are directed towards service delivery to this one client with only minimal effort towards marketing, client expansion and market development.

Strategic talk and text:

A three-year business plan was produced in which a detailed business and environmental analysis was done. The objectives were stated clearly and all the plans derived from this were contained in separate plans. Goals were quantified and the strategic as well as operational goals were identified and managed from this. These plans are used to execute the strategies and plans as indicated by one of the managers below.

Reporting is done in line with achievements of goals and progress through various tools and practices. The main strategic goals are to maintain technology support and support capability, maintain professional client relationships, maintain a positive financial position, establish stable fully staffed divisional structures and processes, ensure knowledge retention and sustainability (workforce rejuvenation), participation in technology awareness programmes, participation in acquisition programmes, successfully complete major projects, improve functionality and engineering of capabilities, provide technological support to the client, maintain minimum sustainable capability in client-defined domains, maintain 10 per cent commercially funded business and establish a stable funding model.

Divisional implementation:

Plans are used as a basis for implementation and all plans address implementation actions. Implementation is not managed as a separate task and a highly integrative approach is applied. Several sensors and information-gathering practices are in use in order to know and understand the environment. This is done through analysis, discussions and meetings, among other activities, and then incorporated into the strategic plans. Strategic plans are usually compiled once and updated annually. They are not seen as strategy formulation but rather as update and implementation. Reporting is done monthly in the operational areas and quarterly to the corporation. Client relationships, engagement and re-alignment is implemented to define requirements and output.

Planning is done in line with the client requirements and is then translated into service offerings and the business planning. The output is the service to be delivered on the one hand while on the other hand the business strategy must be implemented.

Materiality and tools:

Reports, financial statements, project management, management information systems and communication structures are all tools used during the implementation phase. Some of that is done to meet corporate requirements and some are implemented based on the preference of the manager. Benchmarking is done to evaluate the service of the institute against similar service providers by means of visits, discussions, correspondence and co-operation, among others. This will aid the drive to deliver effective, relevant and current services to the client. The International Organization for Standardization (ISO) system is used as a tool within the organisation to ensure that implementation is enforced. Through that discipline, forums, methodologies and standardisation are implemented and any non-conformance is reported and addressed. The Balanced Score Card (BSC) is the tool that the institute uses to measure performance because it was designed to support the implementation of strategies. Corporate goals are cascaded down to the institute level and are also cascaded up into the institute from the lower levels. This ensures that the total spectrum of strategic and operational goals is contained and is then contracted to individuals in support of the implementation drive. Several types of environmental tools are in use during implementation as the re-alignment is dependent on the changes that occurred during the period under review.

Implementation practices:

Discussions are part of the day-to-day functions between employees, managers and clients. Other functions are client relationships, sense-giving, planning, environmental scanning, work sessions, meetings, stakeholder engagement, reviews, strategic sessions, teams and culture.

Implementation processes:

Although no clear and definitive strategic implementation process is in use, there are

several other types of processes identified that are in support of implementation. These are strategic management process, multi-year planning process and corporate planning cycle process. Furthermore, implementation is integrated in the annual planning cycle and the implementation process was found to be an informal, cognitive approach through a strategic analysis done by the manager. Processes used during implementation are also inherited from the wider organisation except for the technical processes required to execute specific work.
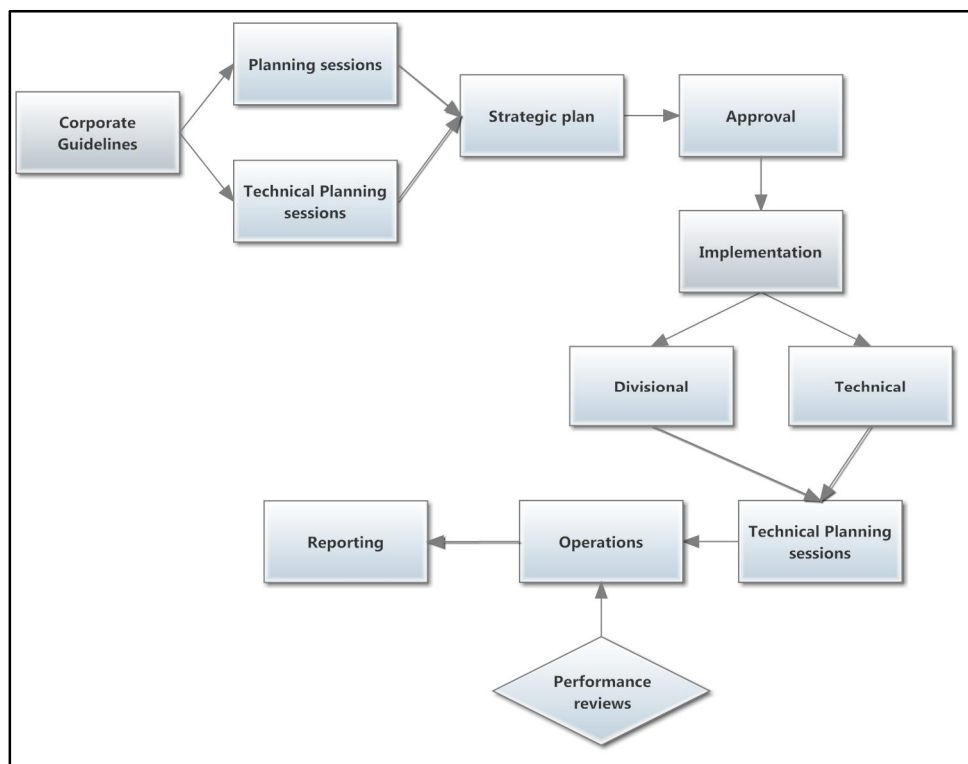
Figure 4.1: I1 Implementation process

Implementation enablers:

Leadership is seen as one of the key enablers to successful implementation, while others that were mentioned were buy-in, funding, client requirements and a research culture.

Barriers to implementation:

The lack of leadership in the institute led to a lack of direction and vision resulting from the non-placement of the senior manager. This was seen as a barrier due to poor

communication and bureaucracy.

Documentary evidence:

Documents obtained from the institute were the business plan, financial plan, stakeholder engagement plan, succession plan, knowledge retention plan, risk management plan, health and safety management plan and the business analysis that was performed.

Table 4.1: I1 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	Where I am coming from - I was qualified as an Electronics Engineer and I came here and started working on projects mainly on instrumentation and then went mostly into Project Management. I was given then the job to formulise Project Management in the Institute which I did for a number of years and was then taken up into the divisional management (Transcription).
Overview of activities	Research and development facility with an engineering capability through science based technological support (Transcription).
Strategic talk and text	That happens on especially these first and second planning meetings. We've got 3 planning meetings through the year. The first meeting where the N1's requirements are set. It is not a lecture it is discussion – a work session and the N1 would say where they want to go (27:12:38:38).
Organisational implementation	On our yearly planning session – it normally happens in May then we look at the results of these services survey that comes out in about March/April. Then obviously we look at that and then we try to come up with ideas and suggestions how to improve services the quality of the services and there we determine actions and from a session like that we bring it to our services meeting. We also normally have a feedback to the lower level people (26:25:106:106).
Materiality and tools	We have a Management Information System – it is home grown. We looked for packages and we found that either the packages were inadequate or too expensive. With Corporate's approval we

	wrote our own MIS. We based it on the MIS that we've been running since I1 started and we gave our project costing and traceability to spending patterns and to underspending and overspending that type of thing (27:40:130:130).
Implementation practices	Our engineers and our scientist do go overseas they go and visit similar institutes and clients over there. They benchmark themselves from our quality side we normally ask them to go and benchmark them and to write a report how we are doing compared to other institutes over the world (26:10:48:48).
Implementation processes	Those things are pretty much in place. It is more on the official strategic session as we know it where the leadership would typically go away for a day or two and look at I1's vision and mission and all those things and have some brainstorming and come back with new directions or whatever is accepted there and implemented (26:4:19:19).
Implementation enablers	You are right – the leadership or the lack of leadership is impacting on that but I1 is very lucky for all these years to have a very good culture especially on the technical side on the high level technical side (26:14:72:72).
Barriers to implementation	The corporate situation is – I won't say it is a barrier but it is certainly a hindrance. It is getting tighter and tighter and it takes more time and energy that we don't have to get things done. To get simple things done like purchases. Things that our people should not been spending so much time. We are not an acquisition company we buy once-offs and it takes a lot of our energy and our time. It is not a barrier but it is certainly slowing us down (27:38:111:111).
Documentary evidence	The strategy is written in our blue book - our long term planning document and it is done every year and it is done in 3-year cycles. We always plan a 3-year cycle window (27:4:26:26).

Note: This table only contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were made.

4.2.2 Institute 2

Interviewee background:

The interviews were done with the senior manager who is responsible for the executive management of the institute. He has experience in lecturing at university level and experience of the institute and the research environment. He also worked at the corporate head office and is familiar with the environment. He was appointed to this division for the past two years and is responsible for all aspects of the institute, such as strategic, operational, technical and tactical implementation reports to the General Manager.

Overview of activities:

Institute 2 is a research and development division concerned with specific defence and protection solutions to the client. Established as a private company, it was acquired by Armscor because it provides essential defence capabilities which were no longer viable in the private sector.

It is a multi-disciplinary facility specialising in the protection of personnel, the evaluation of materials for the procurement of protection equipment, the detection of substances as well as the provision of quality control and assurance support for defensive products.

Institute 2's mission is to serve as a technology base to enable the Department of Defence personnel to identify, protect and develop solutions that will protect soldiers from adversaries.

Strategic talk and text:

The business plan is updated every year and also contains sub-plans. It defines the vision and mission and is followed by the business analysis. The business objectives are clearly defined and quantified and are addressed through the strategic, financial, operational, stakeholder, environmental and health and safety plans.

Divisional implementation:

The plans are managed and implemented by the senior manager and address objectives such as cost-beneficial service delivery, completing all project work on time at the right quality and within budget, maintain/improve viability of the institute, maintain ISO 17025 accreditation, maintain proficiency approvals, improve Black Economic Empowerment (BEE) spend, aim for no safety incidents/effective SHE system, maintain status as a primary research facility, maintain a knowledgeable scientific base (with suitably qualified staff), continuously upgrade equipment, increase the income from industry work and improve efficiency. These objectives were captured in clear manageable plans and are managed accordingly in relation to implementation. Some of the plans, as indicated, are broken down into the next level of plans and allocated to the responsible environment for implementation and reporting.

Materiality and tools:

Some of the tools used during implementation are project planning, environmental scanning, SWOT, financial statements, management information systems, MS Project, discussions and specific measurements. According to the manager, time is not well managed as science is not measurable and the BSC is not optimally used.

Implementation practices:

Certain practices are in use to direct the institute to achieve its objectives. Client engagement is done by means of discussions, meetings and engagements to define the client's requirements. These need to be translated into objectives to be able to implement them effectively. Translation of the environment into actions, plans and targets happens through meetings, stakeholder meetings, project meetings, progress meetings, divisional meetings, workshops, conferences and strategic sessions. Translation and implementation also happens through environmental scanning, monitoring and control, reporting and planning.

Implementation processes:

There were not many visible implementation processes but the planning process is integrated into planning with iterative updates annually. Corporate processes are comprehensive, and ISO processes ensure work methodologies and output are

consistent so that client satisfaction is sustained.
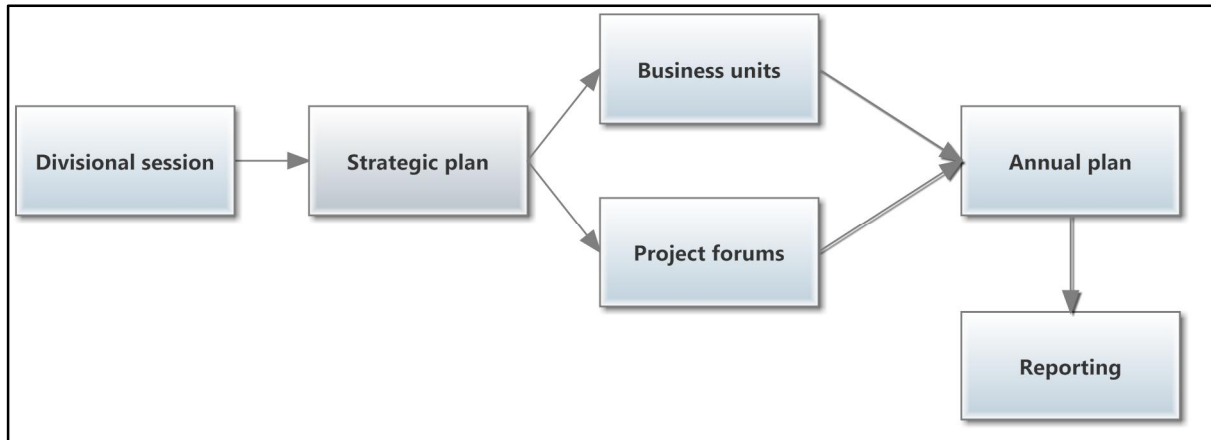
Figure 4.2: I2 Implementation Process

Implementation enablers:

Enablers for successful implementation to be effectively structured are good leadership, research culture, teamwork, living the values, proper and timeous communication, buy-in from the lower levels, a supportive structure and funding aligned with requirements.

Barriers to implementation:

The response received regarding the barriers perceived within this institute in relation to strategy implementation was indicated as internal organisational bureaucracy and decision-making as the first barrier to effective strategy implementation. Interpersonal conflict was also reported as a major barrier.

Documentary evidence:

This institute supplied the business plan, financial plan, stakeholder plan, human resources plan and risk management plan.

Table 4.2: I2 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	For myself I did most of my degrees at the University and then lectured and then went to the University to do my PhD and went back and then from there I joined several tertiary institutions. Then I joined the institute and became senior manager in 2009 (Transcription).
Overview of activities	Research and development division concerned with certain defence and protection solutions to the client (Transcription).
Strategic talk and text	You know communication well I would say that in certain levels you know there are areas where we communicate in our work through maybe reports throughout the year when you finish a certain phase you will write a report that the client looks at. I think that is also a part of the communication (31:54:173:173).
Organisational implementation	I mentioned we had a strategic session, we had it in the beginning of the year and out of that came a number of objectives that we put down on paper and those who are actually transferred over to our divisional meeting and was actually monitored (31:30:37:37).
Materiality and tools	We used the SWOT analysis or I would look at the strengths, weaknesses, opportunities and I think in some of the Scientists that they might even then say that you can develop strategies by maybe looking at using your strengths for the opportunities like ST that type of thing. We never actually get to that level but we did the SWOT analysis. We looked at from that where do you want to go? We feel that there are opportunities that can use our strengths to exploit those opportunities (31:49:144:144).
Implementation practices	We had a workshop here where we discussed what are the things that we should be looking at with all the stakeholders? In all the areas we do that where we try to get what we are looking at. What direction are we supposed to take? Then the attendance of conferences that is where we also see what are the trends and what are the other laboratories looking at (31:1:25:25).
Implementation processes	Also I think I mentioned the process where we at the end of the year we look at the work that was done and then in the beginning

	of the year we look at updating the 3-year plans and from there once we know how much funding we are getting for that year we start our planning for that year and what are the activities that are going to be done (31:39:81:81).
Implementation enablers	For the implementation of the strategy? One of the very important things that I think is the ownership of the strategy. If you can get your teams or your groups in your division to actually buy into the strategy I think half of the job has been done (31:46:107:107).
Barriers to implementation	Strong bureaucratic processes – tenders, recruitment (16:18:324:324)
Documentary evidence	The 5-year breakeven plan is shown below which shows a net operating loss from 2015/2016 onwards due to higher increases (5.0%) in cost of sales (3.76%) compared to the income (14:2:277:277).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were drawn.

4.2.3 Institute 3

Interviewee background:

Manager X is an engineer with a postgraduate qualification and extensive experience in science and research. His experience stretches over 27 years, mostly in the military research environment with approximately 15 years in management. The responsibility of all aspects of management as well as technical excellence and service delivery also lies with this management function. He reports to the General Manager.

Overview of activities:

Institute 3 is an engineering capability and has provided comprehensive and efficient services in several aspects to the Department of Defence. It functions as a team of interdisciplinary qualified specialists with extensive experience in applied solutions for military and commercial clients. People are the most vital component in any operation and therefore Institute 3 aims to provide solutions to optimise human performance, reduce work-related risks, and improve overall productivity. The services provided are

divided into three interlinked domains and primarily include research, databases and test and evaluation. Institute 3 is a leading specialist consultancy, providing a comprehensive service and is also an inspection authority in occupational hygiene approved by the Department of Labour.

Strategic talk and text:

Institute 3 supplied a comprehensive plan with a clear vision and mission as well as well-defined strategic objectives. The institute's roles and responsibilities are defined in terms of the capabilities required to execute their mandate. A very strong customer-oriented approach can be seen in all the plans and actions. Goals are well defined and quantified.

Divisional implementation:

The work performed is to the satisfaction of the client due to certain measures being implemented. There are successful HR plans for retaining personnel, the division offers high quality services and specialised products to the military and commercial customers through sound applied research and consultation. Engagement plans and measurements ensure that satisfied customers support the work done, thereby ensuring early high order cover. This means there are adequate suitably qualified staff numbers to perform the work and to maintain a sustainable financial position.

Materiality and tools:

Some of the tools used during implementation are the ISO system, customer feedback that measures satisfaction, finances, project management, budgeting, communication forums, the BSC and performance feedback on implementation.

Implementation practices:

Practices are the actions performed by managers to execute their responsibilities successfully and, in this case, include structure, collaboration, alliances and benchmarking which is done by means of international research. Client requirements, client engagement down to user level, reporting, control, monitoring and environmental scanning through a SWOT analysis, translation, talk, text, discussion, meetings and

informal discussions to extract information not always visible in documents, are all used in the implementation effort. Other practices are continuous improvement, values, effectiveness of people, competent skills and a specific work culture. Strategic sessions are not only for formulation but for implementation as well and planning must be aligned to the strategy which is aligned to clients' needs. Measurement of implementation is lacking and there is no formal implementation practice and process. However, Institute 3 does execute strategies productively. Improvements in project management need to be implemented in this organisation where directing and sense-giving happens through a cognitive management and implementation approach.

Implementation processes:

ISO, planning and budget processes are used during this effort but no implementation process was defined.
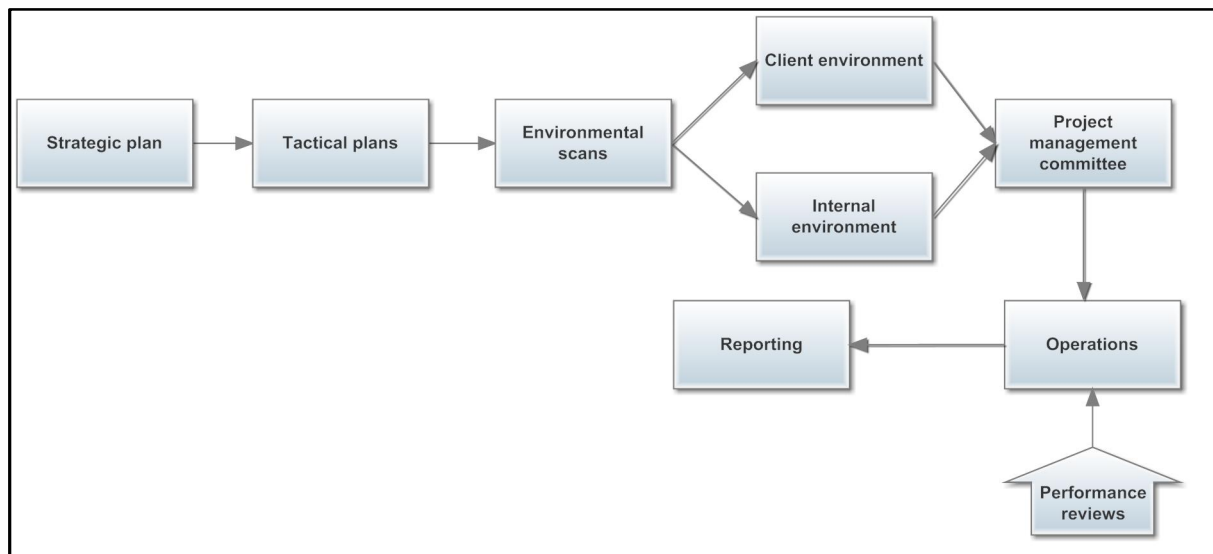
Figure 4.3: I3 Implementation process

Implementation enablers:

Customer orientation, teamwork, funding, resources, trust, communication, leadership and motivation were identified as enablers in this institute. The manager, as technical expert and manager of this organisation, must translate and communicate the implementation of activities.

Barriers to implementation:

Bureaucracy was identified but should be replaced with flexible decision-making which is more descriptive of the actual problem.

Documentary evidence:

A business plan was supplied by the Institute and all the other plans were included as appendices to the main document. These included risk management, capability plan, safety, health and environmental plan, human resources plan, marketing and stakeholder plan, financial plan and several reports.

Table 4.3: I3 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	Briefly I am an Engineer with a post-graduate qualification. Although I call myself an Engineer all the research background that I have was on science. I have been working for 27 years in the Military environment and approximately fifteen years in some kind of management with some management responsibility. I was appointed as an Executive Manager (Transcription).
Overview of activities	Institute 3 is an engineering capability and has provided comprehensive and efficient services in several aspects to the DOD.
Strategic talk and text	Apart from doing the strategy process and putting that into a plan and type of monitoring what you are indeed doing through feedback once a month we don't have a formal thing to drive strategy implementation (28:45:87:87).
Organisational implementation	You need experience, you need insight not only in the area that you are working in but in the wider scheme of things. You must be able to analyse what is happening in the world regarding the Military where the developments are and we get that information perhaps too late, but anyway we have to react to that (28:14:32:32).
Materiality and tools	We measure our stakeholder engagement we measure that once a year through a process of all the things that we said that we will do

	and how we perform against that. That is like looking at yourself and deciding how well you did it (28:39:81:81).
Implementation practices	That is one thing and it is more difficult and more reserved to that, but there is also the possibility of extracting information that you would never be able to get by informal interaction. I use it from time to time to extract information from the client about the way that we perform on certain projects (28:7:20:20).
Implementation processes	Then we have a slot where we say new things that we must do and we don't do SWOT analysis anymore we do TOWS. So the people get very energetic and support a lot of the initiatives (28:23:20:20).
Implementation enablers	That is why it is also important that you get people within an organisation that is scientists, research scientists that is able to do things on their own. That will read up on areas of interest beyond what is happening in the work environment. Those people are very few (28:17:38:38).
Barriers to implementation	I don't think it is a barrier I think it is a dead stop to innovate research. It is a huge problem (28:59:135:135).
Documentary evidence	Formally we go through all the plans that we have done (28:2:14:14 There is a little bit of strategy and there is multi-year research plans there is elements of strategy in there but is not to drive it and that is sad (28:57:123:123).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were made.

4.2.4 Institute 4

Interviewee background:

Manager of Institute 4 is an engineer with 25 years' experience within this institute. The purpose of the job is to manage the business in generic terms as well as to provide technical expertise in a specialised client support function. His functional expertise combined with his management experience leads to success in a complex environment.

He reports to the General Manager.

Overview of activities:

Institute 4 comprises a team of scientists, engineers and operational specialists that renders a broad range of services. Services are delivered on the basis of a Centre of Excellence, benchmarked against international norms and practices, and applying multi- and inter-disciplinary methodologies with a joint and integrated focus. They provide a continuous source of knowledge and skills to the client environment, which also serves as a form of DOD corporate memory. In terms of size, structure and capabilities, Institute 4 reflects and can be tailored to the current and future requirements of the client environment as required. This is demonstrated by the projects currently being executed to satisfy the DOD's requirements.

The scope of services inherent in this institute includes, but is not limited to, the following: political analysis, specific studies, decision support, engineering support and logistics support.

Strategic talk and text:

The strategic plan document defines the direction for the next three years and also defines the vision, mission and objectives very clearly. The objectives are broken down into plans that address each of the issues. These plans are managed with MS Project and link up with the strategic objectives, BSC perspectives and measurements to align all implementation efforts to the main strategy.

Divisional implementation:

The strategic plan defines the output required for implementation and a project management approach is used to manage implementation properly. Main issues are service delivery, operational efficiency, employee training and development, knowledge management, capacity retention and building, personnel retention and financial sustainability. The plans are allocated to a responsible person with goals and deadlines and reporting occurs accordingly.

Materiality and tools:

Project management, ISO, mind maps, financial statements, environmental analysis, SWOT, BCG and the Ansoff matrix are used.

Implementation practices:

This includes client engagement, meetings, e-mails, personal communications, work sessions, strategic sessions, sense-making, conferences, management information systems, culture, mapping capability to client requirements, training and development and teamwork.

Implementation processes:

ISO, Corporate, Division-specific implementation process and processes that define work methodologies.
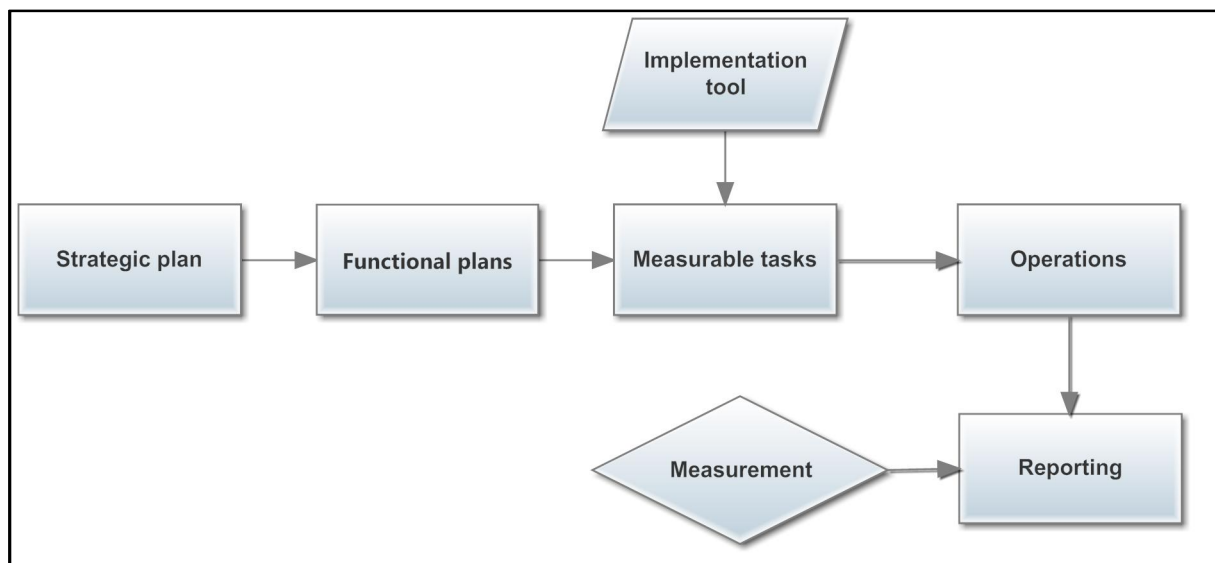
Figure 4.4: I4 Implementation process

Implementation enablers:

The respondents were asked to indicate which enablers contribute positively to effective strategy implementation in their institute. What emerged was that leadership is a cardinal enabler to ensure successful implementation. The other enabler from this environment was efficient processes in support of implementation.

Barriers to implementation:

Bureaucracy (inflexible decision-making) and a lack of proper management information systems.

Documentary evidence:

Institute 4 supplied a strategic plan that included the financial plan, operations plan, human resources plan and stakeholder engagement plan.

Table 4.4: I4 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	My background to why I am sitting here briefly is that I have over 25 years of experience within the institute in support of the Department of Defence. Basically the role within the DERI structure is one of managing a business in generic terms which is aimed at giving strategic level decision support to the DOD (Transcription).
Overview of activities	Institute 4 comprises a team of scientists, engineers and operational specialists that renders a broad range of engineering and scientific services (Transcription).
Strategic talk and text	However, having said that I think that in terms of recognising the profile of our staff members by taking cognisance of their concerns by bringing their issues to the table for discussion either at Management meetings or at a strategic level communicating again back down (30:117:112:112:).
Organisational implementation	In addition to that the individual Domain Managers make a point of taking the strategic plan looking at what aspects of that strategic plan are of particular importance to that domain. That is then drilled down to a further detail in management and domains communicated to the various domain staff accordingly (30:18:31:31).
Materiality and tools	The main tool we have within our corporate environment and in D1 on employee level is what is referred to as the balanced score card and during our strategic session we try always to remember that is going to be our measurement tool (30:33:55:55:). One of our

primary tool sets is the balanced score card our performance measurement system. This is a tool that I think D1 uses slightly differently to some of the other areas within the organisation for the simple reason we have an understanding as Managers of what the guys have to achieve. We put down goals that we feel are realistic and achievable and are lined and derived from our strategic plan (30:107:100:100).

Implementation practices	In my experience the main driver to the successful implementation of a particular strategy is where there is buy-in there is ownership there is an understanding why the strategy is important. If we just look at saying to ourselves this is a strategy we are going to put it on your some form of plan or contract we are going to measure how you do it without communicating and without explaining I think that will be failure in our environment (30:72:78:78).
Implementation processes	We have documents and processes – those documents and processes are available again to all members of the staff by means of our Intranet system (30:56:67:67).
Implementation enablers	So we have the initial communication from the Senior Management position – that is the whole staff. We have detail communication between the Senior Manager and the Management team. Then we have communication from the management team members to their staff members (30:22:37:37).
Barriers to implementation	We pride ourselves on having a fairly quick reaction time to client requests and changes to client requests. However, with certain corporate targets and processes that quick reaction time can be strangled by us perceived very often to be unnecessary red tape (30:47:67:67).
Documentary evidence	We go from the strategic plan down to various operational plans maybe of a high level a financial strategy or an HR strategy. Those are then cascaded down to the point where it is quantifiable and measurable (30:35:55:55). We do have a formal strategy. In fact our strategy we see as very much a living thing which is revisited at least twice a year by the Management team (30:8:31:31).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were drawn.

4.2.5 Institute 5

Interviewee background:

The interview was scheduled with the divisional manager who started his career in quality management and then moved to the laboratories at one of the other institutes. In this post, the job is to produce surpluses from the operations and to manage all resources as effectively as possible. He has a technical diploma as well as a degree in commerce in support of the type of work that he is required to do. He reports to the General Manager.

Overview of activities:

Institute 5 is a specialised manufacturing facility of industrial and military systems and one of only a few companies in the world that has this capability. Commercial products are currently manufactured to benefit the workforce of companies, individuals in the mining, industrial, chemical, agricultural and private sectors of society. All products are approved (homologated) by the National Regulator of Compulsory Standards (NRCS).

Strategic talk and text:

The business plan described the vision and mission as well as the objectives of the organisation. It started off with an analysis internally as well as externally by means of known analytical tools. Thereafter followed the financial plan as well as the marketing plan, HR plan and SHEQ plan and included the administrative and works procedures. Implementation is mainly linked to sales targets and plans were produced addressing strategic and operational issues in support of implementation efforts. Targets were well quantified and clear.

Divisional implementation:

Comprehensive plans drive the strategy implementation and that is translated into

specific targets and goals which included the maintenance and expansion of the customer base, the delivery of high quality products on time, exceeding the sales target (increase turnover), obtaining ISO 9001:2008 certification, maintaining low cost leadership (by improving manufacturing processes and lowering costs), replacement and maintenance of old machinery and equipment, product development, the addition of products to the product range, successfully introducing them to the market, maintaining profitability, satisfying the clients (client satisfaction measurement), reaching budgeted sales and turnover targets (income statement), ratios that reflect low cost leadership, execution of capital replacement plan, and financials that reflect a feasible and sustainable entity.

Materiality and tools:

Sales, Cost-of-Sales and financial statements, ISO, environmental analysis, planning, benchmarking, strategic analysis, management information systems, software, BSC, client surveys, MS project, Excel, SWOT.

Implementation practices:

Strategic sessions, talk, communication, mapping intent to implementation, client requirements, engagement, meetings, sense-giving, e-mails, project management, reporting, reviews.

Implementation processes:

ISO, corporate, divisional, operating procedures.
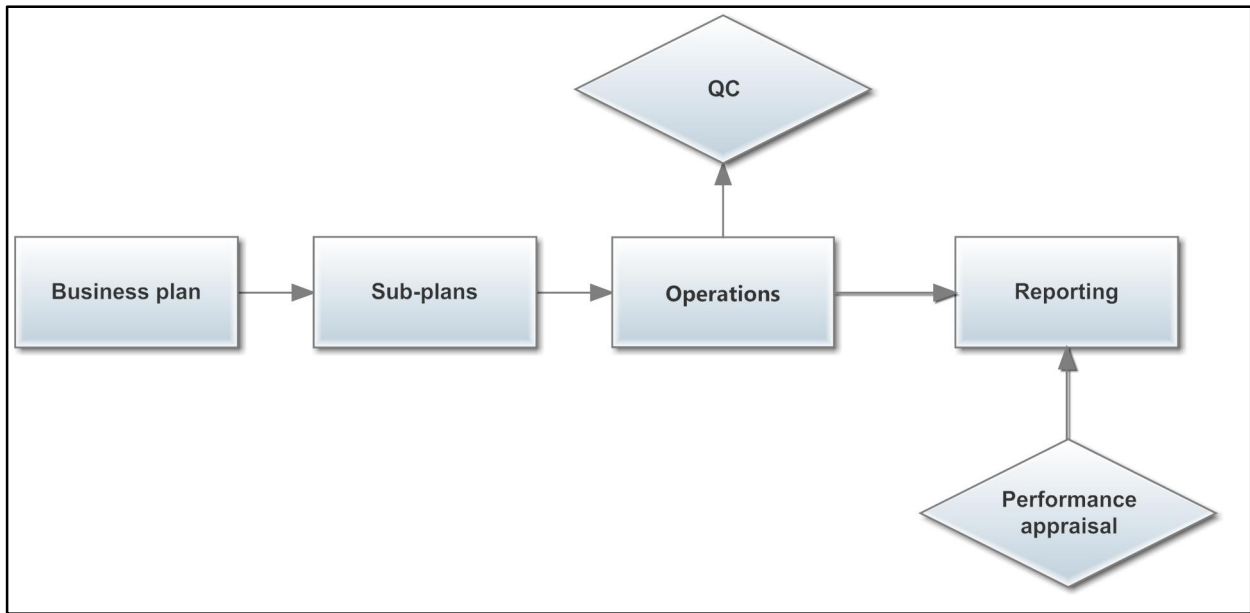
Figure 4.5: I5 Implementation process

Implementation enablers:

Continuous improvement, teamwork, leadership, values, culture conducive to implementation and aligned with the intent of the institute.

Barriers to implementation:

Bureaucracy with long time-frames and no decisions made. Lack of proper information systems.

Documentary evidence:

Institute 5 produced a business plan, a financial plan, a marketing plan, HR plan, SHEQ plan and a document indicating the value chain of the organisation.

Table 4.5: I5 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	I started off within the organisation quite a few years ago. First in the quality assurance industry doing quality assurance. Then I was in another institute and from there I moved over to the institute where we currently are. My responsibility here is to manage the division to make sure that we make a profit. A few years ago we

were supposed to just break even because we do have a strategic role (Transcription).

Overview of activities

We are a manufacturer organisation and where some of the other divisions are either doing research or testing and I think we are one the only one within the division which is a manufacturing organisation which is a bit unique (Transcription).

Strategic talk and text

What we do is during meetings we enforce and we talk about. You get a new employee from a new company and there it might be that a certain norm is important. What we do is that we constantly talk in meetings and emails and during our discussions one of our one-on-one's in the office is what we need to do (32:36:36:36).

Organisational implementation

Our strategy if we look at generic ones is still the low costs we take that old model of strategy implementation and then from that we have also identified some of the grand strategy part what is important to us is that typically those things growth, product development, alliances, investments but the important things for us there is that we have a growth strategy as well that falls from the low cost strategy (32:8:23:23).

Materiality and tools

The remote environment comprises factors that originate beyond, and usually irrespective of, any firm's operating situation: political, economic, social, technological, legal, environmental and military factors. The environment presents firms with opportunities, threats and constraints but rarely does a single firm exert any meaningful reciprocal influence (6:17:61:61). Some are run on ACCPACC some run on Pegasus like us some run a Project Management programme (32:43:43:43).

Implementation practices

The culture says we must work accurately we must look at the quality we must make sure the quality is fine we cannot accept this – reinforcing walk the talk doing that over and over again the people start doing it that way (32:38:36:36). As I said this slow poison is by telling people around you working with you – it is maybe a little bit of leadership as well, but that is where you

influence them (32:11:23:23).

Implementation processes	I've got a business plan or strategic plan and that plan in it, it tells you the model that we use and that model is still very old – the old models where we start off by saying what is our vision and things and whatever and we do an internal analysis and an external analysis and a SWOT analysis and from that we look at the strategies at the grand strategies and from that we have our objectives and from our objectives we do a implementation of how we are going to implement it by plans and then from that it circles back so it is very old the old strategic management plan model which we refer to (32:50:94:94).
Implementation enablers	It is not only clients that are important but it is also important to identify and maintain a good relationship with all other stakeholders. Long term relationships are built with suppliers to ensure continuation in the supply of good quality raw materials on time (6:19:74:75).
Barriers to implementation	We have to wait a week to get approval. Sometimes 2 weeks and if it goes higher sometimes a month because it depends on the levels that you need approval (32:42:43:43).
Documentary evidence	We just reference what documents do we further have like a financial plan, a marketing plan, a stakeholder plan and then we at the end we just call that attachments. Those attachments are plans of its own like a marketing plan, like a stakeholder plan, the financial plan which must be read in conjunction with that (32:51:94:94). Marketing - Product, place, price and promotion is documented in the Marketing Plan (6:34:239:239).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were made.

4.2.6 Institute 6

Interviewee background:
The interview was conducted with the acting manager at this institute who was in an acting capacity for the past year. He was involved in the military for 21 years and has been at this institute for the past 13 years as a manager. He also has vast management and strategic management experience from the military and has applied that in his current job. He reports to the General Manager.

Overview of activities:
Institute 6 provides a client-focused ordinance test and evaluation service with the objective of adding value to the client's products through a professional cost-effective service. To achieve this, long term relationships with its customers and the protection of their intellectual property are maintained. It strives to exceed the required quality standards and expectations. The facility is suitably situated for these types of tests with well-equipped assembly, machine and electronic workshops that cater for most maintenance and repair requirements. Weapons, ammunition, spares and equipment can be stored under tight security according to the requirements of the customer. Services such as test management, logistics planning and specification development make it an excellent choice for the clients' test and evaluation capabilities.

Strategic talk and text:
Institute 6 provided a business plan that included sub-plans such as a financial plan, strategic plan, stakeholder plan, HR plan and SHEQ plan. The vision and mission is clearly stated with the relevant consequential objectives that emanate from that. The plans are derived from strategic sessions held and then translated into the different plans with actionable sub-plans.

Divisional implementation:
All plans are broken down into sub-plans and managed through the management review forum established for that purpose. Action plans are defined in the strategic

improvement action plan and managed in terms of action, responsibility and due date. Some of the items are continuous improvement of customer satisfaction, diversification of service delivery to increase market share and be sustainable, increase profit margins to break-even, increase client weapon storage facility, upgrade security systems to address client concerns, self-reliance to support all client requirements, establishment of an environmental test facility and meeting the objectives of the financial business plan.

Materiality and tools:

Management information systems, BSC, financial systems, environmental analysis, SWOT.

Implementation practices:

Management reviews, reviews, client requirements, training and development, communication, sense-giving, continuous improvement, stakeholder engagement, client relationships, strategic sessions, planning, strategic analysis, informal discussion, teambuilding sessions and translation of above into implementation.

Implementation processes:

Strategic improvement action plan with responsibilities and target dates, ISO, corporate, divisional and operational processes.
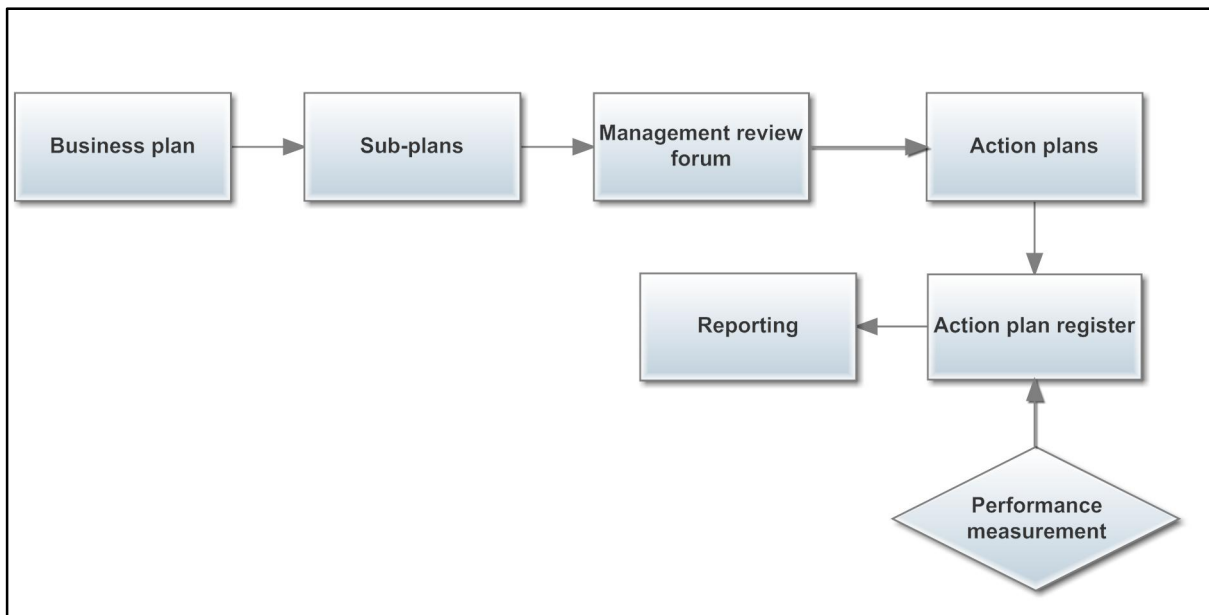
Figure 4.6: I6 Implementation process

Implementation enablers:

Effectiveness of client relationships, culture, team, trust, values and leadership.

Barriers to implementation:

Bureaucracy.

Documentary evidence:

Institute 6 provided a business plan that included a financial plan, strategic plan, stakeholder plan, HR plan and SHEQ plan.

Table 4.6: I6 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	I have been in the Military for 21 years as a soldier. I retired with a severance package in 1999 as a full Colonel and then I joined institute 6 as the Manager Test and Range Management. In January 2013 I also became the acting Senior Executive Manager again up to today. Based on the current situation at institute 6 probably am the most suited person to do that type of work,

because of my knowledge and experience of the work (Transcription).

Overview of activities

Institute 6 provides a client-focused ordinance test and evaluation service with the objective of adding value to the client's products through a professional cost-effective service (Transcription).

Strategic talk and text

Prepare for the strategic sessions start your SWOTs then they say can we go to the Lodge and have a lunch. I want you to go I want you to get out of this atmosphere you must get out of the work situation you must be able to think and apply your mind without been called to the phone every 2 minutes or so. Those sessions are one of the tools (24:88:93:93).

Organisational implementation

Then we have a lot of discussions on that and we also have a Management review whereby we look at our plans of the past year and we review that. We look at them and we say what we put into this plan. Why did we put it into this plan? Was it effective yes or no? Was it effectively managed yes or no, because sometimes it didn't work but it was never managed properly? We look at that and we get to this way forward action where we say right now this is the way forward plan for the new financial year (24:28:29:29).

Materiality and tools

The ISEM system is not a strategic planning system. The ISEM system is more a measurement system whereby it takes a long time to complete all these questionnaires but when we are finished it gives you an idea of if you are doing well and where you are not doing well, but more on the personnel side (24:28:29:29). We are doing the strategic session, but you present your SWOT and that is if we have it, finished it there and no discussions on anything else - for me that is not the way I learned when I did these things in the Military. I learned that you need to brainstorm a little bit. You need to talk about it and because you do it in isolation first you have ideas from one division which is not necessarily the same as the other division or the other division also discussed it, but they felt that it was not a strong or a weak point or an opportunity but

that one feels it is. You need to look at it and say what is actually meant by this, because that is the way that the people at the bottom feel they are involved in this whole thing. With my strategic session when I was in charge – I said let us look at it and let us discuss your SWOT. You have given it and you have put it on the board on the side of the wall. I would say there Manager – there is your SWOT – let us discuss it – after we discussed it we start prioritising (24:30:29:29).

Implementation practices	We managed to do that by good service delivery by a professional approach and by being able to stay abreast with technology and in a sense of measuring what the client wants (24:2:14:14). What I actually wanted to say is just keep the people informed – make them part of the problem and they become part of the solution and I am not saying we do not have problems – throw it open to them and say how do we handle this (24:69:53:53).
Implementation processes	We also use Head Office's practises to guide you but we also use our own processes, procedures and policies and practices to try and manage the company effectively to implement it effectively (24:34:41:41).
Implementation enablers	Yes I can give you copies and as I say we do not use a formal strategic tool that is documented, but we do what is required. There is a combination of a variety of tools which is in your head and not on a document (24:83:87:87).
Barriers to implementation	You cannot stand there and talk on high level they will not understand what you are saying and that is a problem we have because many Head Office people will come here over the past 6 months. They come here with this Patterson system and this is the strategy on the EE plan and then they talk and they give these nice little lecturers that they have given to all the other people and they walk out and our people sit there with dumbstruck and say what the hell did this guy actually tell us now (24:68:53:53).

Documentary ***evidence***	The operational management of the day to day functioning of the company is another issue from where it is strategically incurred. What we also do we look at our previous years' strategic plans and we have a way forward documents – the way forward plan is a combination of all our so-called strategic plans (24:25:29:29).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were made.

4.2.7 Institute 7

Interviewee background:

The manager at this institute has been in this post for the past 6 years and is mainly concerned with technologies and how to apply them in this environment as well as the generic management activities such as resource management and allocation, facility maintenance and marketing. This institute puts an emphasis on people management as it is producing output that has to be effective. The manager has a technical background with more than 20 years in this environment and the institute was performing well during his term. He reports to the General Manager.

Overview of activities:

Institute 7 is a multi-disciplinary organisation providing accredited independent test and evaluation services and other relevant services and development programmes to the security forces, defence and other industries locally and internationally by utilising its unique technologies, skills, expertise, facilities and equipment. Through this, it focuses on supporting the full product life cycle. Institute 7 offers a professional quality engineering service with a vision of becoming a globally recognised quality testing and engineering authority.

Strategic talk and text:

The strategic plan from this institute defines the vision and mission and an analysis performed to achieve its objectives. This plan is then further broken down into the

financial plan, stakeholder plan, HR plan, SHEQ plan, risk plan and environmental plan. These address all issues coming from the analysis and translate them into actions for implementation.

Divisional implementation:

The different strategic plans indicated above are used to allocate resources and responsibilities to execute these plans successfully. These are broken down into strategic activity plans to ensure proper implementation. Some of the items are to streamline the business processes, balance the need for flexibility and agility with the need for corporate compliance, increase utilisation by DOD and other departments, expansion to local and international markets, improve productivity, break even and improve customer satisfaction ratings.

Materiality and tools:

SWOT, strategic activity plan, project management, ISO, financial measures, client perception measurement, performance appraisal, BSC, benchmarking.

Implementation practices:

Stakeholder engagement, client relationships, sense-making, meetings, client requirements, sense-giving, lobbying, meetings, exhibitions, project management, strategic sessions, communication, culture, continuous improvement, networking.

Implementation processes:

ISO, corporate, divisional, operational, quality processes.
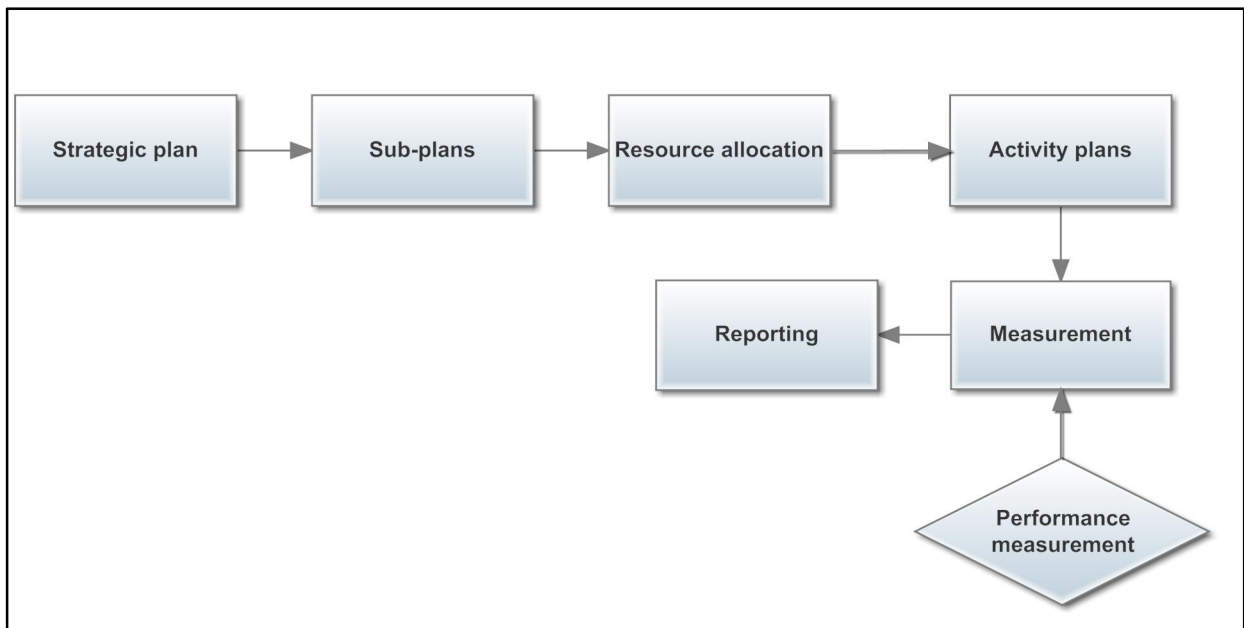
Figure 4.7: I7 Implementation process

Implementation enablers:

Training and development, funding, teams, values, team building, integrity, leadership.

Barriers to implementation:

Bureaucracy including corporate processes, long decision times, lack of decisions made.

Documentary evidence:

The documents received from this institute contained a strategic plan which included the financial plan, stakeholder plan, HR plan, SHEQ plan, risk plan and environmental plan.

Table 4.7: I7 Verbatim quotations in support of findings

Topic	*Verbatim quote examples*
Interviewee background	Six years ago I became the acting SME for institute 7 which is basically the Senior Manager for the Facility which I have been for the past 6 years. My major responsibility is to look at the technology, where technology is going in terms of capabilities.

What is happening? What is required? From a strategy point of view it is looking at maintaining your capability growing, your capability to comply with future requirements and to keep your people and you know how in a situation where you can supply (Transcription).

Overview of activities

Institute 7 is a multi-disciplinary organisation providing accredited, independent test and evaluation services and other relevant services and development programmes to the security forces, defence and other industries locally and internationally (Transcription).

Strategic talk and text

So it is a matter of lobbying with the clients or also lobbying with your competition telling them that one is going to establish this capability. What are your plans? Do you want to establish the same capability, because then we are going to be in competition and so we need to talk to our competition as well to make sure what they are doing (29:34:31:31). We may have a braai once a month where we get all the technical and all the test guys together to informally sit around the fire where we braai a piece of meat and discuss what is happening and that is work related (29:59:104:104).

Organisational implementation

What we try to focus on is to generate new business, maintain capabilities, technology and markets and we need to try and focus on that during strategic sessions (29:27:125:154). Yes, we have one session per year where we look at strategy short term and long term and we also look at issues. We give the Managers opportunity to list where most say 10 most important issues and we address it at these functions or sessions (29:57:104:104).

Materiality and tools

One of the major tools that we need to consider all the time is technology and the changes in technology. How to use that in order to improve our service and productivity and capability (29:76:136:136). The most objective measurement will be to look at the financial performance of the company. To look at the

financial situation and to look at the profit that we make and the breakeven situation which we are striving towards (29:14:18:18).

Implementation practices	So we have formal sessions and then we have informal stuff - behind the scenes which is not always well supported by either Management, but I think that is very important it works in our environment and to us it is very important (29:61:104:104). Leadership is definitely one of them and you know Management they must set their example in the way they treat clients and the way they treat colleagues and the way they treat other Managers in that environment so leadership is very important also in terms you sometimes need to make decisions in terms of strategy and business (29:65:123:123).
Implementation processes	There are processes which we use to work and we try to implement some of these strategies (29:53:74:74).
Implementation enablers	Culture and leadership is important. Communication and support and I think the image that you need to maintain and your value system that you want to portray. You must live your values (29:70:123:123).
Barriers to implementation	That is I would say perhaps the most significant stumbling block when it comes to employing strategies and operating in a commercial environment with the bureaucracy that we have (29:74:129:129).
Documentary evidence	We have standard strategic plans which you are familiar with – the HR plan, the financial plan and at G1 we have the ISEM plan where we implemented the ISO model. The most significant document for your purposes, will be our Stakeholder and Strategy Plan, because a lot of our strategies is spelled out in that document. It covers the employees, the community, the clients and the suppliers. It covers all our stakeholders in that document. I think it is quite comprehensive and it is a live document it is a document that we manage and that we neglect to look at the progress (29:79:163:163).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were drawn.

4.2.8 Institute 8

Interviewee background:

The interview here was conducted with three managers who form part of the executive in managing this organisation. The first is the executive manager accountable for the total responsibility of personnel, output and funding. He has extensive experience in this environment and also has a strategic and operational responsibility in managing this unit. He reports to the Group Executive: Operations. Manager 2 is responsible for the operations and implementation of the business plan and to ensure that all performance areas are achieved. He also has a role in the output of employees in relation to service delivery and research. Manager 3 is in charge of output and strategic direction in that context. He also has a domain in one of the technical competence areas and is responsible for the total management of that. He has extensive experience in research, science and engineering environments.

Overview of activities:

Institute 8's role as national defence science, engineering and technology (SET) capability is integral to the country's security. It is recognised by the national Department of Defence and others in the defence domain as a prime R&D agency and operates as its strategic "in-house" science and technology defence capability in many areas. Understanding the immediate and longer term defence challenges and needs, it functions as a ready, dynamic and agile SET power base with a significant range of skills, expertise and world-class tools and equipment. Involvement permeates business processes at all levels of the systems hierarchy and supports defence strategy and planning, tactics, doctrine and design. In particular, the value of its contribution lies in the development and evaluation of technologies that support smart buying, smart use and the effective and informed management of defence capabilities, systems and infrastructure. Skills development is an important component of the approach. The engineering and other specialists contribute to developing capacity, competence and

expertise among South Africa's armed forces, opening up new fields of technical interest and skills for them. International partnerships also bolster the expertise and keeps its capabilities and applications at the forefront of technology. This institute provides the armed forces with the ability to detect threats, secure borders and defend and protect the lives of the people in South Africa.

Strategic talk and text:

The strategic plan provided clearly stated the intent, vision, mission and strategic objectives. The objectives are stated with indicators and due dates and are managed as key performance indicators. It is managed through the business units and reported accordingly. The drive is to have a business development strategy as well as a growth and impact strategy. It is managed through strategic and operational plans. Output includes financial strategy, human resources strategy, commercialisation plans and IP management.

Divisional implementation:

The implementation is done and managed at business unit level with reporting on the Key Performance Indicators (KPIs) by means of managing the business plan. The goals are aligned to those of the bigger corporation and implemented accordingly with regular reviews on corporate and lower levels. Business units go through a strategic planning process producing strategic and operational plans followed by implementation. The main areas of focus are to contribute to a better appreciation of crime, violence and conflict and the development of innovative and effective science and technology solutions; to be the "in-house" science and technology capability of key state departments; and to partner with the local defence and aerospace industry. It also intends to collaborate and undertake joint projects with selected international and local organisations and laboratories and to contribute to national science, engineering and technology themes, industry development initiatives and human capital development objectives. It also aims to develop and maintain strategic national research capabilities, facilities and infrastructure.

Materiality and tools:

Performance appraisal, KPI targets, strategic framework and progress of the unit are tracked specifically in the management team meetings. Spreadsheets and presentations as well as other management tools are also in use. This institute operates through projects and enterprise resource management tools that support project level implementation. Measurement of impacts on the customer environment is done.

Implementation practices:

Planning, business development forums, strategic discussions, participatory planning process, structure, reviews, communication and other mechanisms to communicate to staff in different ways, strategic sessions, translating strategic objectives into specific smart milestones, client requirements, reporting, management meetings including one long session per month which can be used for more strategic issues. Performance appraisal, sense-making, strategic analysis, informal discussion, environmental scanning, client relationship, stakeholder engagement, client requirements, sense-giving.

Implementation processes:

Regarding the strategic implementation cycle and process, there is an annual business planning process, strategic and operational processes, systems engineering processes, research processes, customer relationship management process and project management process.
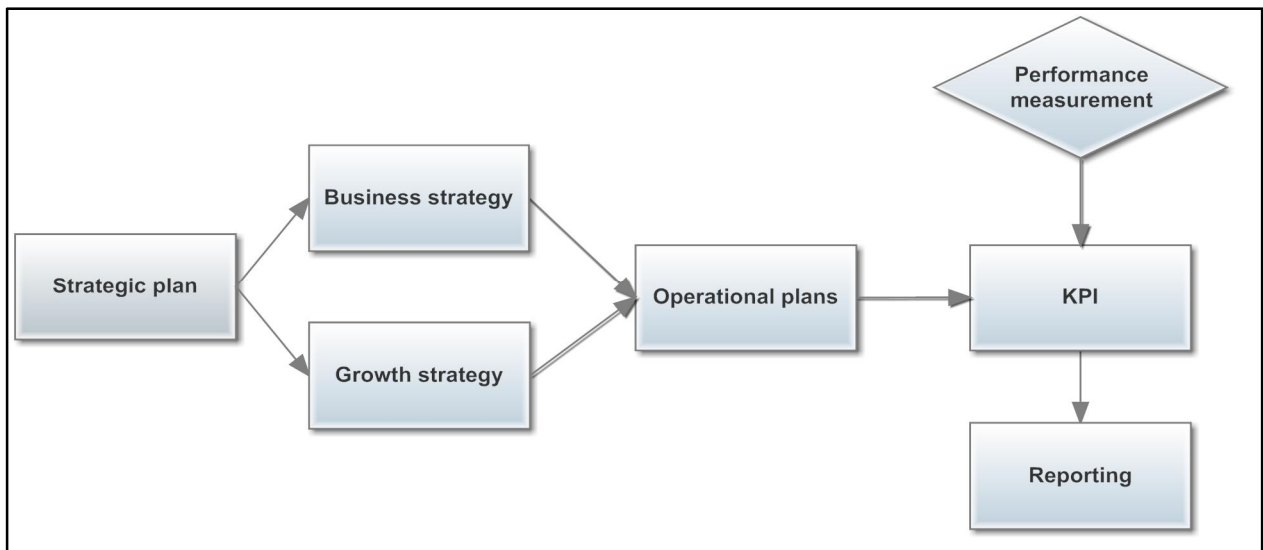
Figure 4.8: I8 Implementation process

Implementation enablers:

Funding, teams, leadership, culture.

Barriers to implementation:

Administrative overload.

Documentary evidence:

Institute 8 provided documents outlining the scope of work and intent. The strategic three-year plan was also provided that indicated its vision, mission and strategic objectives. This plan also included the risk management plan and other strategic initiatives.

Table 4.8: I8 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	I used to be the manager for a different unit since October last year I have been deployed to the institute as the interim manager after the previous managers' contract came to an end (Manager 1). I am the Operational Manager within DPSS. My role is mainly ensuring that our Business Plan for the year is taken forward and

meets all of our KPI targets actually in the short term but also provide some strategic direction in the long term (Manager 2). I am the Strategic Research Manager. I am looking after co-ordinating the strategy process (Manager 3).

Overview of activities	Institute 8 is a national defence science, engineering and technology (SET) capability and is integral to the country's security.
Strategic talk and text	I have business development forums where strategic discussions occur throughout the course of the year and that is just based on planning sessions that we have (37:32:76:76).
Organisational implementation	There is an annual business planning process or strategic and operational processes (37:13:71:71). We have weekly Management meetings of which one per month is a long session which can be used for more strategic issues (37:27:71:71).
Materiality and tools	In institute 8's case we hold at least two not necessarily away days but two dedicated sessions to look at our strategy (37:17:71:71). So in many cases many people would not really understand bigger strategic directions that we are going in. It is only the new initiatives where we have to put more effort but then we try to get the buy-in with the Management team or the leadership team and various strategic sessions and we get their buy-in and we then tend to report back on the progress against that and that will be communicated to the wider unit at these meetings (37:55:112:112).
Implementation practices	I would say it starts with having a participative planning process. So the leadership team are inherently on board – they own the strategy and we actually did not mention it but we involve a few people outside the formal Management team as well which I think helps with that (37:51:110:110).
Implementation processes	There is an old school of thinking that processes is everything, so as long as we can define all the processes we are safe. That is the approach that will give you a lot of problems with creativity and

	there is an opposite end of that which is a few practices and for communicating for getting people to be creative together and so for us it is to find the balance between those two worlds (37:64:144:144).
Implementation enablers	Obviously it's very important to team work and none of our projects are one person – 90% is team based so I suppose team work – there is a project team but there is team as a management team so team work in general is necessary an essential thing (37:67:199:199).
Barriers to implementation	The barrier is not the governance our biggest challenge is to get everyone on the same page. To get everyone to understand where we are heading and why and as you said earlier get that understanding right through to the bottom level (37:66:185:185).
Documentary evidence	One is growth and impact strategy and the other is business development and strategic alliances strategy (37:9:55:55). What is our financial strategy and what is Human Resources strategy, commercialisation plans and IP (37:20:71:71).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were drawn.

4.2.9 Institute 9

Interviewee background:

The interview was conducted by three of the managers from the executive committee (a name for the internal management structure). The first manager is the chief executive and is responsible and accountable for the oversight of all activities in the institute. The second manager is responsible for the financial aspects of the institute and the third manager is from the operations section. This division is also a separate business unit within the group and the manager responsible for this division reports to the CEO.

Overview of activities:

Institute 9 is a well-established, fully-integrated, multipurpose test facility. The experience gained from hundreds of tests since its establishment in the mid-Eighties has confirmed the ability of Institute 9 to manage and execute any combination of air, ground and sea flight tests, rendering invaluable quality assurance services to defence forces and the armament industry in the development of advanced weapon systems, their commissioning into service and operational evaluation. In addition, the institute can provide mobile telemetry support in remote locations during space missions. The focus of Institute 9 is on the evaluation of flight performance, rather than the destructive power of weapons. The vast majority of firings are thus performed with inert warheads and/or telemetry packs. Its array of measuring systems, sophisticated support facilities, experienced personnel and unique location make Institute 9 a well-equipped and effective test range by international standards.

Strategic talk and text:

A three-year corporate strategic plan is done based upon guidelines coming from the corporate group. Objectives are cascaded down from the bigger group and incorporated into the corporate plan. The vision and mission is clearly defined and strategic relevance and strategic drivers are also clearly defined. The strategic drivers are growth, revenue and improved customer relationships and the values of the organisation. These are communicated through the use of PowerPoint presentations.

Divisional implementation:

Corporate objectives are defined in the corporate plan according to the institute's specific strategy. These are implemented through an executive committee (Excom) and managed accordingly. Goals are clearly defined and the resultant plans compiled with clear, quantified objectives. The value system adopted by the organisation was also evident. All these strategic objectives are then translated into a business plan and actions are allocated to it. The strategy does not vary from year to year very much. The facility must be maintained, it must be enhanced, knowledge must be transferred, sales targets must be achieved and the facility must be marketed and utilised effectively. These actions must be done and executed in a cost-effective and efficient

manner.

Further specific actions focussed on were growth, revenue and improving customer relationships, increase profitable sales and diversify markets to be sustainable, brand and re-position the institute, build relationships with the South African defence and security community, strengthen relationships with international clients, form smart partnerships, locally and internationally, increase productivity, efficiency and profitability, ensure operational excellence, deepen supplier development, drive cost efficiency and improve cash management, achieve improved profitability, enhance capabilities and foster innovation, supply strategic defence capabilities, meet DOD product aspirations and customer needs, advance technology through Research & Development and innovation, encourage an entrepreneurial culture, create a dynamic and vibrant organisation, develop leadership talent and human capital, intensify transformation and boost skills development in support of the National Development Plan (NDP).

Materiality and tools:

During the implementation phase there are several tools and aids in use to support the team. In this case, Key Performance Indicators are used in this organisation. These measurements are derived from the strategic objective and applied in order to ensure successful implementation. All of the objectives are cascaded down to the other levels in the organisation and cover all aspects of the business. These are evaluated during the year as well as at year end and remuneration is linked to the performance system. Management information systems are used by the organisation to ensure that decisions can be made based on sound information of all aspects of the business. Apart from the financial system that is used to measure and report, project management is also used through dedicated software that provides a management information system. The system reports on service delivery which is applied to the organisational level for analysis and action. The environmental analysis is not done every year but when it is done, SWOT analysis and environmental scans are used for this purpose. The measurement of finances indicated that this institute is successful and sustainable.

Implementation practices:

Planning is the first objective of the institute to ensure sustainability. The drivers of this institute are to grow revenue and improve customer relationships, to increase productivity, efficiency and profitability, to enhance capabilities and foster innovation, and lastly, to create a dynamic and vibrant organisation. These goals are achieved by aligning the planning with these objectives. Planning usually takes place between September and November. Once the plans are approved, they are executed. Benchmarking is used by the institute to align service delivery with similar organisations and to ensure that all aspects of the organisation achieve the required level of output. A number of industry benchmarks have been set for the group and are used to continuously improve and implement the objectives of service delivery and implementation. These are sense-giving, environmental scanning, reporting, client relationships, client requirements, stakeholder engagement, continuous improvements, strategic sessions, meetings and communication.

Implementation processes:

The budgeting process is used to initiate strategic planning and implementation. There is no formal strategic management process, it is used as the Excom sees fit. There is a focus on implementation and operations. To do this, there are documents on procedures, corporate guidelines, policies and practices as well as lower level operating and testing procedures and ISO.
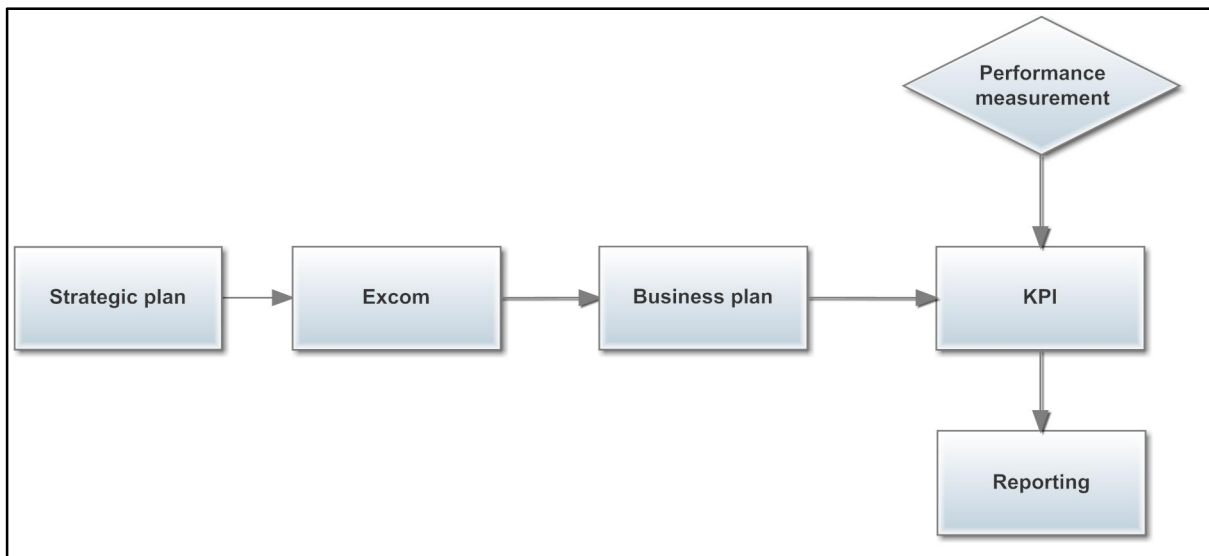
Figure 4.9: I9 Implementation process

Implementation enablers:

Teamwork, taking ownership of responsibilities, effectiveness, values and culture.

Barriers to implementation:

The biggest barrier is caused by not empowering people to execute their responsibilities.

Documentary evidence:

A three-year corporate plan was submitted that contains all relevant plans and strategic drivers.

Table 4.9: I9 Verbatim quotations in support of findings

Topic	Verbatim quote examples
Interviewee background	I am the manager. The buck stops here. I have to do everything and oversee everything and I think my biggest task is to provide an environment for my EXCO members in the different departments so that they can execute their job (Transcription).

Overview of activities	A well-established, fully-integrated, multipurpose test facility (Transcription)
Strategic talk and text	We are currently driving a process where we focus on each one of these drivers or values for a specific period through discussions in our meetings. Through highlighting examples of someone living for example performance or integrity. We ensure that is embedded in the organisation (25:43:144:144).
Organisational implementation	If you look at possibly one of the things that is running for a lot of years it is to enlarge our market base. That is part of that strategy but we have a separate already well defined strategy that we already formulated over the years that is also updated every year to ensure that we can still follow that strategy. There is more detail in terms of action plans or what we need to do this year (25:80:287:287).
Materiality and tools	That is one part of it the other part is what I already mentioned is our monthly meetings where we are using the Q-music system so there is a number of reports coming from that so that we can monitor on a company level of how we are doing, but the inputs are received from the different testing evaluation of each test (25:36:118:118).
Implementation practices	I do have a formal Marketing strategy document - this thick. Also the details of action plans. That we follow according to that strategy. It is fluid as we update it as we go along. There is also a lot of other strategies and action plans that is also following out of that pillars that we follow (25:81:288:288).
Implementation processes	We've got a lot of formal reference documents with procedure documents – policy documents. A lot of our own not part of the group and for each of those documents somebody is responsible (25:53:173:173).
Implementation	We use these four drivers as guidelines, but within these four

enablers	drivers we look at various specific things, but we use that as a framework/making our plans (25:3:14:14).
Barriers to implementation	None mentioned.
Documentary evidence	I can give you part of our Corporate Plan that is the previous year it is not a new one. The new one is not finalised yet and all the strategy part is in here. You can have that. I can give you quite a few examples of the PowerPoint slideshows and I can give you our strategic drivers. I can give you our values if you want that. I can give you our business overview and this one I am going to present to the dash board within 2 weeks' time just to confirm our strategic relevance our vision, our mission our core products, the number of employees our strategic drivers the 4 drivers down there and then the high level areas in this specific area of the institute and this is the strategic road map (25:79:268:2668).

Note: This table contains examples of some of the verbatim quotations processed from the institutes. The detailed analysis contained extensive data from which the analysis, interpretation and recommendations were drawn.

4.2.10 Summary

Overview of activities:
The main activities in all of the institutes are technical, research, development, testing, evaluation and engineering support. It is a complicated environment and all of the managers are involved in the technical aspects whilst being responsible for the total executive management of the organisation. Most institutes have a mandate to support the South African National Defence Force (SANDF) and some also have commercial clients. The strategies and the implementation therefore varies from institute to institute due to the diverse nature of the work. The output varies between areas of competence in test and evaluation facilities and services, production, laboratories, engineering support, research facilities and services, and design services.

Therefore, the insight generated from this type of analysis is that the way the strategy is executed is dependent on the very specific nature and output of the organisation. Some focus on operations, some on marketing, some purely on customer satisfaction, some on break-even, some on people development and some on service delivery impact. The implementation of strategies within the selected group of institutes depends on the management team, maturity level of the organisation, stage in the life cycle/service offering, client requirements and other factors.

Strategic talk and text:

Most of the institutes produced proper well-defined business plans in which detailed business and environmental analyses were done. Although this is a corporate requirement according to governance requirements, it is well accepted, implemented and used by all the institutes in this study. The vision and mission as well as the objectives were clearly stated. The goals were quantified and the strategic as well as operational goals were identified and managed from this. The formats varied between the institutes but the generic structure contained the relevant information.

The implementation of these goals was the focus of this research and throughout the study the overlap between formulation and implementation was addressed. The plans, actions and tasks that are used to execute the strategies were scrutinised and analysed as part of the analysis. Reporting by the institutes was done in line with the achievement of their goals and its progress through various tools and practices was also the objective of this research. The purpose of identifying the strategic talk and text in terms of strategies, plans and documents is that the formulation and compilation precedes the implementation and therefore the implementation efforts cannot be investigated without such plans. According to the results of this study, implementation also contains actions that are present in the formulation functions and therefore this study has commented on the overlap between the two.

Divisional implementation:

Implementation or execution of the relevant strategies is done in different ways within

the institutes and the practices and processes unique to each institute have been discussed in order to achieve the objectives of this study. It was found that there is total integration between the plans that are produced and their implementation. There is also a practical hands-on approach with regard to implementation from the strategic level down to the tactical environment. Corporate requirements also have an impact on the implementation of strategy and this is mainly due to the governance requirement for formal plans and reporting. This forces institutes to formalise their thoughts, plans and implementation to a level where it can be communicated both upwards and downwards. The actual implementation is a combination of social skills and technical or functional expertise and is not always tangible. This is done through several practices and processes such as sense-making, meetings, informal discussions or talks, interaction and engagements. This is a cognitive intervention that translates environmental factors into actions and tasks which results in successful implementation.

Materiality and tools:

This refers to those tools through which strategy is implemented by the managers in their implementation role. It involves all the various models and technologies used, as well as tools and academic technologies. These include academic analysis tools, operational analysis tools, analytical tools, strategic planning tools, ideas, techniques and methodologies. It can even include software such as PowerPoint and Excel. Moreover, there are tools which are uniquely designed or developed for use during implementation. This section is about the ways that managers use these tools for the implementation of strategic projects.

Project management is in use in most of the institutes for projects but it was also indicated that it could be applied in many other areas of their businesses. Some of the tools found in use in the institutes as part of the implementation process were project management, ISO systems and processes, reviews, text, talk, visual representation, project planning, environmental scanning and analysis, SWOT, financial statements, management information systems, MS Project, BSC, customer feedback that measures satisfaction, finances, project management, budgeting, communication forums, BSC and performance feedback on implementation, mind maps, BCG and Ansoff matrix.

Implementation practices:

Implementation practices are carried out by middle managers or practitioners in order to execute strategies. It involves an understanding of their actions which explains how and what managers are doing. The institutes are mostly small entities in a technical environment and have a hands-on and practical approach to implementation. The practices they employ are done through discussions, client relationships, sense-giving, planning, environmental scanning, work sessions, meetings, stakeholder engagement, reviews, strategic sessions, workshops, conferences, teams and culture. Client engagement is done by means of discussions, meetings and engagements to define the clients' requirements. These then need to be translated into objectives in order to implement them effectively. This is done by translation of the environment into actions, plans and targets and includes structure, collaboration, alliances, continuous improvement, values, effectiveness of people, competent skills, a specific culture, e-mail, talk, communication, sense-making, management information systems, mapping capability to client requirements, training and development, teamwork and mapping intent to implementation.

Benchmarking is used by the institutes to align service delivery to similar organisations and to ensure that all components of the organisation are on the required level of output. A number of industry benchmarks have been set and are used to implement and continuously improve the objectives set in terms of service delivery and implementation.

Sense-making and strategic analysis happens through two practices. Firstly, there are formal meetings where report-backs from the competence areas are done on any strategic issues and warning indicators or trends are raised. Secondly, there are monthly report-backs.

Informal discussion happens regularly in the form of a discussion about what is happening in the environment. Environmental scanning, for instance in the Defence Review, is used to take cognisance of the evolving requirements of the industry.

Client relationships are sustained by hosting people from the stakeholder community in meetings where these relationships are built. Stakeholder engagement is done through touch points into the stakeholder community to achieve a multi-level relationship and an understanding of the requirements of the stakeholders and the customers.

Sense-giving needs much more focus than is currently the case to ensure that everyone shares the same expectations of implementation.

These actions describe the way that these institutes typically execute strategies. A detailed discussion of this is provided in Chapter 6.

Implementation processes:

Although no clear and definitive strategic implementation process is in use, there is evidence of processes that are followed by the managers. Implementation is integrated into the annual planning cycle and the implementation process was found to be an informal, cognitive approach through a strategic analysis done by the manager with iterative updates done annually. Processes used during implementation are also inherited from the organisation except for the technical processes required to execute specific work. Processes identified that are in support of the implementation effort were the strategic management process, multi-year planning process, and corporate planning cycle process. Others, such as the ISO processes, ensure that work methodologies and output are consistent and that client satisfaction is sustained. The budgeting process is used to initiate strategic planning and the implementation of projects is derived from that. One of the institutes mentioned that there is no formal strategic management process except that which the Exco sees fit to utilise and that the focus is on implementation and operations.

There are documented procedures, corporate guidelines, policies and practices visible in the divisions as well as lower level operating and testing procedures. Other visible processes are strategic implementation cycles, annual business planning, strategic and operational, systems engineering, research, customer relationship management and

project management processes.

Each institute used some form of implementation process and all of the other formal processes are used in support of that effort. Most did not fully realise that an informal process is being followed. Implementation is mainly done through an unintentionally high level process where the functional knowledge is combined with social skills to ensure implementation. These processes are indicated by means of a flow chart as presented for each institute individually above.

An attempt was made to synthesise a generic approach or methodology used universally by these institutes from the individual within-case analysis as well as the information received from the study together with the process diagrams indicated above. The purpose was to investigate a strategy-as-process outcome that could be generalised for this population. The generic implementation actions by the managers that originated from this analysis are:

1. Environmental scan, sense-making;
2. Translation and sense-giving;
3. Re-alignment, adjustment;
4. Monitor, co-ordinate and control.

This generic process derived from the data is indicated in Figure 4.10 below.
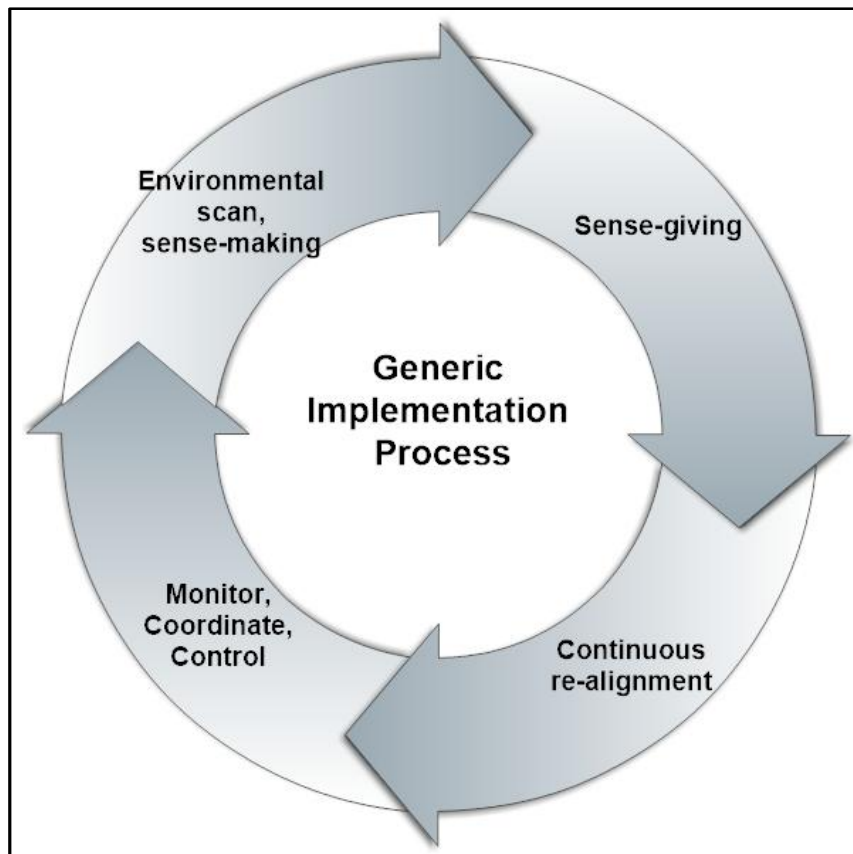
Figure 4.10: Generic implementation process of the institutes

The process perspective, as part of the analysis, indicated that some form of implementation process is being followed. In some cases, that was not known to the managers while in others there was a good understanding of the processes to be utilised to execute the strategy successfully. This study's contribution is to make these processes visible to the managers to empower them to consciously use them to their benefit and to execute their strategies at an improved level. The detail of this process is discussed in the interpretation chapter.

Implementation enablers:

Enablers are traits, skills, interventions or things purposely done by the managers or organisations to ensure effective implementation. There are different sides to each of these enablers. Leadership is seen as one of the key enablers to successful implementation. Leadership, in terms of ensuring that a direction is set, communicated, monitored and controlled, is required for effective implementation. Leadership might

mean taking control and sensing, through client interaction, what is going on in the client environment. The enablers are listed in this paragraph as part of the analysis and are discussed in detail in Chapter 6. Some of the enablers that were found during the study are client requirements and a research culture to be effectively structured for proper implementation, teamwork, living the values, proper and timeous communication, buy-in from the lower levels, a supportive structure and funding aligned with requirements. Customer orientation, resources, trust and motivation were also identified as enablers. The manager, as a technical expert, must translate and communicate the implementation and activities as well as acting as a manager in this organisation. Teamwork includes a participatory planning process with the leadership team and the involvement of people outside the formal management team. Leadership is the key to a participatory planning process and, through action and direction, can lead the implementation process. The management team must ensure that all stakeholders buy into the strategic objectives and the specific initiatives to achieve them. All organisations must ensure that there is a culture that enables effective learning and support of the implementation processes. These enablers that were found through the analysis will be discussed and interpreted in Chapter 6.

Barriers to implementation:

The main barrier to effective implementation was identified by most of the institutes as bureaucracy. Upon deeper investigation, it was found that this barrier is about corporate processes, long decision times and a lack of decision-making skills. Another barrier mentioned was that the lack of leadership in the institute created a lack in direction and vision. This came from the fact that there had been no manager appointed for the past eight years in that institute and all incumbents were only acting managers. Communication that was not being properly cascaded down as well as upwards was also seen as a barrier.

4.3 CONCLUSION

The level at which this research study is pitched is at a micro and meso level within an organisational structure. It targets the managers combining their social skills with their professional knowledge to produce results (Valmra et al, 2006). It can also be assumed that, due to the fact that these institutes are all in a break-even situation and sustainable in economic, social and environmental terms, they can be viewed as successful. This means that what they are doing is working and therefore the quest is to investigate their practices and processes. All of these entities report into a bigger corporate environment and their goals and objectives are defined at that level. The context of their operating environment is that they are all subject to the same corporate strategies, policies, practices and procedures. However, these are on a high strategic level and give only broad guidelines in terms of direction. Although the processes are defined, they mainly address compliance and governance issues. It is therefore left to the managers to make the operations and strategies at institute level work. The responsibility of the managers covers the total spectrum from strategic level down to operational and specialist technical level. It also ranges from human resources management to finance, operations, marketing and technical output. The activities that these managers perform and the social practices that they use to execute strategy are the key to this study. Furthermore, the workforce of these institutes typically consists of skilled labour which can vary from artisans and technicians to engineers and scientists in a research-and-development and test-and-evaluation environment. As these high-level knowledge workers are in a specific organisational culture group, it adds to the complexities and challenges of management in such an environment.

The analysis helped the researcher to draw certain conclusions and deductions from the data obtained. The patterns and concepts that became evident during the analysis were captured clearly in the summary part of the chapter. These were related to the gaps in the literature and therefore address the gap as indicated in the contribution part of the study. As the first analysis highlighted certain phenomena and was used to write up the detail, understand the individual cases, allow patterns to occur and understand the detail behind each case, the next phase in the analysis is to conduct a cross-case study.

CHAPTER 5: CROSS-CASE ANALYSIS

5.1 INTRODUCTION

Following the detailed analysis performed on the within-cases, the cross-case analysis has also been done to ensure that all angles were investigated and all possible patterns that might emerge from the data were considered. To avoid false deductions by coming to early conclusions, it is necessary to do a cross-case comparison and analyse the data in divergent ways (Eisenhardt, 1989). Because there is a large amount of data it necessitated the analysis of data across these divergent cases as well. This allows for credible deductions as they were also done in triangulation with the other methods of analysis.

5.2 ANALYSIS

An adapted general inductive approach by Thomas (2003) was applied to understand the scope of the data and arrive at the deductions as required in terms of the objectives of the research. This approach is a systematic procedure for analysing qualitative data guided by specific objectives. It allows research findings to emerge from frequent, dominant or significant themes inherent in the raw data.

5.2.1 First order analyses and trends

There are several output documents that were drawn from the qualitative analysis that was performed:

- Semi-structured interview recordings;
- Semi-structured interview transcriptions;
- Documents received for the document analysis;
- Word count;

- · Code frequencies;
- · Links between codes;
- · Groundedness; and
- · Density.

The first report to consider was the summary of the codes that came out of the study. The documents were analysed and coded up to a point where theoretical saturation took place. This list formed the basis from which all further analysis was done.

Table 5.1 below shows the summarised first-order codes drawn from the Atlas.ti™ reports in alphabetical order.

Table 5.1: Coding concepts

Code-Filter: All
HU: Document analysis File: [C:\Users\Hentie\Documents\DBL\DBL2014\AtlasTi\HUs\Doc Analysis\Document analysis.hpr7] Edited by: Hentie Date/Time: 2014-09-02 03:54:13
Benchmarking Bureaucracy Client relationship Client requirements Communication Continuous improvement Culture Effectiveness Environmental scanning Funding Implementation tools Informal discussion Leadership

Management activities

Management Information Systems

Measurement

Meetings

Performance appraisal

Planning

Plans

Process development

Project management

Reporting

Reviews

Sense-giving

Sense-making

Stakeholder engagement

Strategic analysis

Strategic sessions

Strategies

Strategy tools

Strategic intent

Teams

Training and development

Values

The above codes emerged from the analysis based on the coding process described. The coding that was done does not fully incorporate the complexity of the intellectual activity of coding as defined in the Grounded Theory of Glaser and Strauss (1967). In Atlas.ti™ , coding is the procedure of associating code words with selections of data or text. Technically speaking, "coding" is the relationship between a quotation and a code and gives context to the analysis done. The output from this can be used for various reasons, in this case to provide an explanation for implementation practices and processes. This is also the basis for the entire concept of the final output of this study. A detailed analysis and discussion on this will follow. In order to ensure that these

codes are understood correctly, a list of the codes is attached as Appendix K with an explanation of what is meant by each of them as found during the study. These codes can be reported as strategy implementation constructs and will be referred to interchangeably as "concepts" or "constructs".

The next analysis involved the code frequency report. This report gave an indication of the number of times a code was used during the analysis. The objective was to indicate the importance and/or priority that could be allocated to these codes so as to rank them in order of preference. This analysis was also used to indicate any statistical significance that emerged from the data. An example of the output report from Atlas.ti™ resulting from the qualitative analysis is indicated in Figure 5.1: Code grounding. The details are contained in Appendix L with more detail and clear resolution.

Figure 5.1: Code grounding

The implementation constructs are ranked in order of repetition or frequency as can be seen from the analysis of the data obtained. As is apparent in the screenshot, the number of times a construct was repeated or coded in the documents is indicated. The

output from the software was captured in Excel to analyse it further. This is indicated in Table 5.2 below where the count from the document analysis was used to make certain deductions.

Table 5.2: Construct (Code) tabulation

Column1	Institute 1	Institute 2	Institute 3	Institute 4	Institute 5	Institute 6	Institute 7	Institute 8	Institute 9	TOTALS:
Implementation tools	25	8	13	9	6	4	3	37	5	110
Strategic analysis	17	10	14	26	9	9	9	5	4	103
Client requirements	14	12	15	4	12	5	9	17	7	95
Planning	7	3	9	11	10	17	6	14	14	91
Communication	20	1	11	4	2	4	4	22	1	69
Stakeholder engagement	13	4	16	4	12	2	5	11	1	68
Plans	3	3	17	9	8	5	3	14	0	62
Teams	4	3	9	1	2	6	5	15	5	50
Process development	9	5	7	2	11	3	2	3	5	47
Culture	10	5	2	7	2	4	2	7	3	42
Strategies	8	3	6	5	3	3	5	2	6	41
Training and development	9	5	9	1	5	0	2	7	2	40
Continuous improvement	4	3	8	1	4	10	2	8	0	40
Meetings	13	2	7	3	4	1	3	5	1	39
Measurement	2	5	13	1	2	0	5	7	3	38
Client relationship	7	6	9	2	3	1	2	7	1	38
Performance appraisal	1	1	16	1	0	5	3	6	4	37
Values	10	2	9	4	1	2	4	3	0	35
Leadership	2	2	5	5	9	0	1	6	4	34
Sense-giving	1	2	5	1	4	2	4	7	7	33
Environmental scanning	6	1	3	4	1	3	1	4	10	33
Strategic sessions	2	6	3	1	6	2	3	7	2	32
Management Information System	7	1	1	7	3	3	2	4	0	28
Management activities	3	1	6	2	3	2	2	6	0	25
Bureaucracy	7	7	3	2	1	1	2	1	1	25
Sense-making	5	0	5	0	2	3	0	7	2	24
Funding	1	4	3	2	4	0	3	2	3	22
Effectiveness	6	3	1	1	1	3	0	4	3	22
Reviews	2	2	2	2	5	0	0	6	2	21
Informal discussion	4	3	5	0	1	1	0	6	1	21
Strategy Tools	4	5	4	2	1	2	1	0	1	20
Strrategic Intent	1	0	2	2	1	2	4	5	1	18
Reporting	1	2	2	2	2	1	2	2	2	16
Benchmarking	1	3	5	0	2	2	0	3	0	16
Project Management	4	5	1	0	3	0	2	0	0	15
TOTALS:	233	128	246	128	145	108	101	260	101	1450

The conclusion to be drawn from the table is that although it could not be positively deduced that constructs used more frequently were more important than others, it may be observed from Table 5.2 above that some of the constructs were used more frequently than others during the practices executed by the managers. The variation between the institutes on each of the constructs is too large to be able to deduce that a positive relationship exists between the institutes on each of the respective concepts. It is also obvious that there are institutes that focus on certain constructs more than others.

The first assumption to be tested was that the more frequently a construct was used, the higher the priority or importance. The next step was to establish whether there was any correlation between the institutes as regards the importance of the concepts they used. In this sense, it meant the number of times that the construct appeared in the text. The output from this analysis was then exported to Excel and analysed. Raw data is not of much use until it is organised and presented in a manner that can be analysed. In order to make sense of this data it was grouped into a frequency distribution table which made the data more manageable. A quantitative analysis was not feasible as the data represented qualitative values. For this type of data, a contingency table would be more appropriate when counts relating to qualitative data are involved.

For the purpose of clarity, the following terminology will be used in this study. The Atlas.ti™ terminology of family, sub-family and code will be replaced with theme, category and construct. This means that the constructs will be grouped into categories which will then be grouped into themes as indicated below.

  Theme (Family)

      Category (Sub-family)

          Construct (Code)

The next part of the analysis was done to investigate whether the frequencies found in the data had any significance.
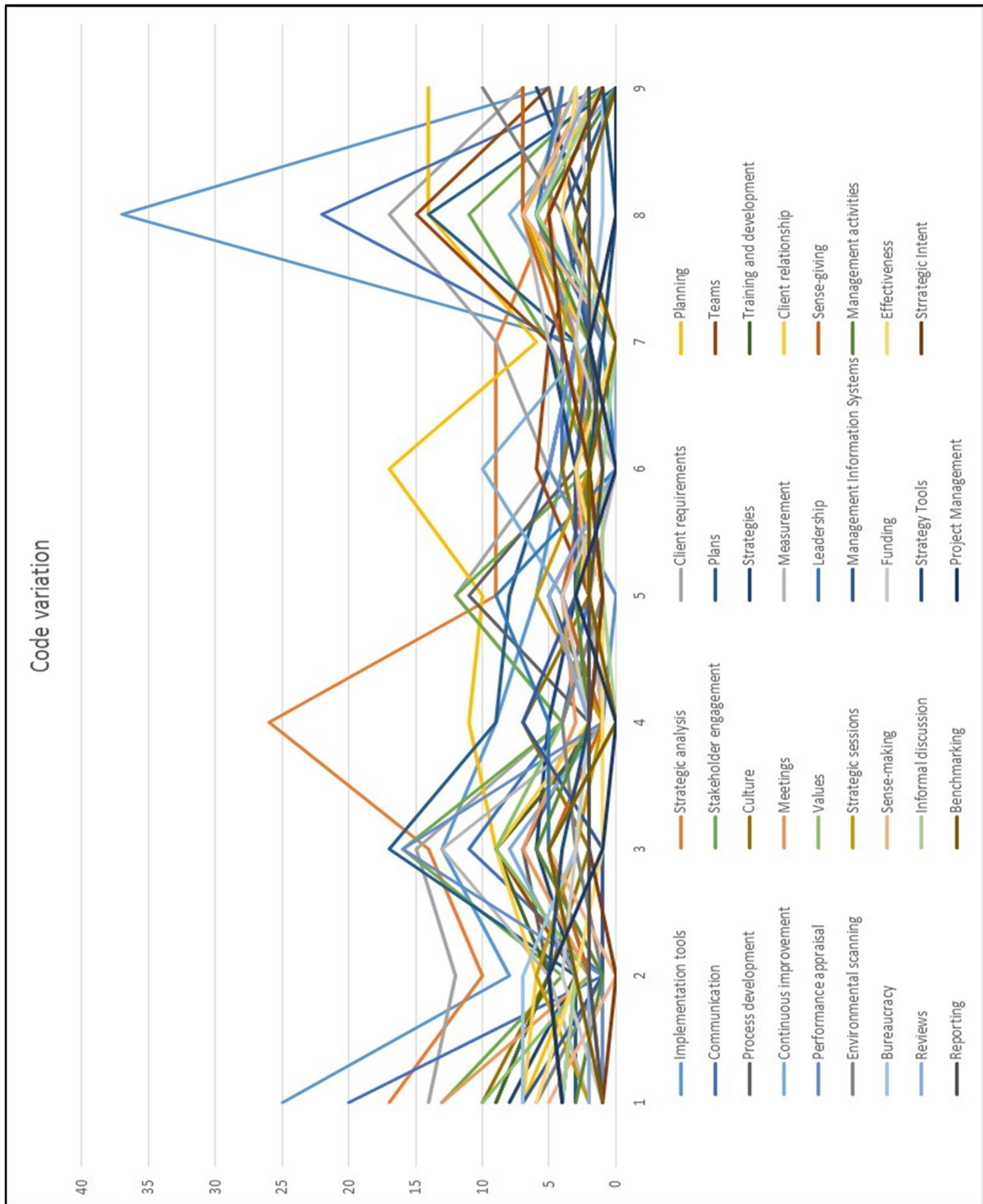
Graph 5.1: Code variation

Graph 5.1 indicates the variation in the counts found for each construct for each of the nine institutes. It could be clearly seen that no pattern or deduction could be made from

these counts. This also confirmed that contingency tables or tabulation and total counts was more appropriate for this type of analysis. Furthermore, it could not be established and proven that the more frequently the concepts emerged from the analysis, the higher their priority or importance.

However, it is obvious that there is a definite ranking in frequency, as indicated in Graph 5.2 below, demonstrating that there are concepts that were mentioned more frequently than others. This will be further analysed when the questionnaire is added to the analysis later in the discussion.
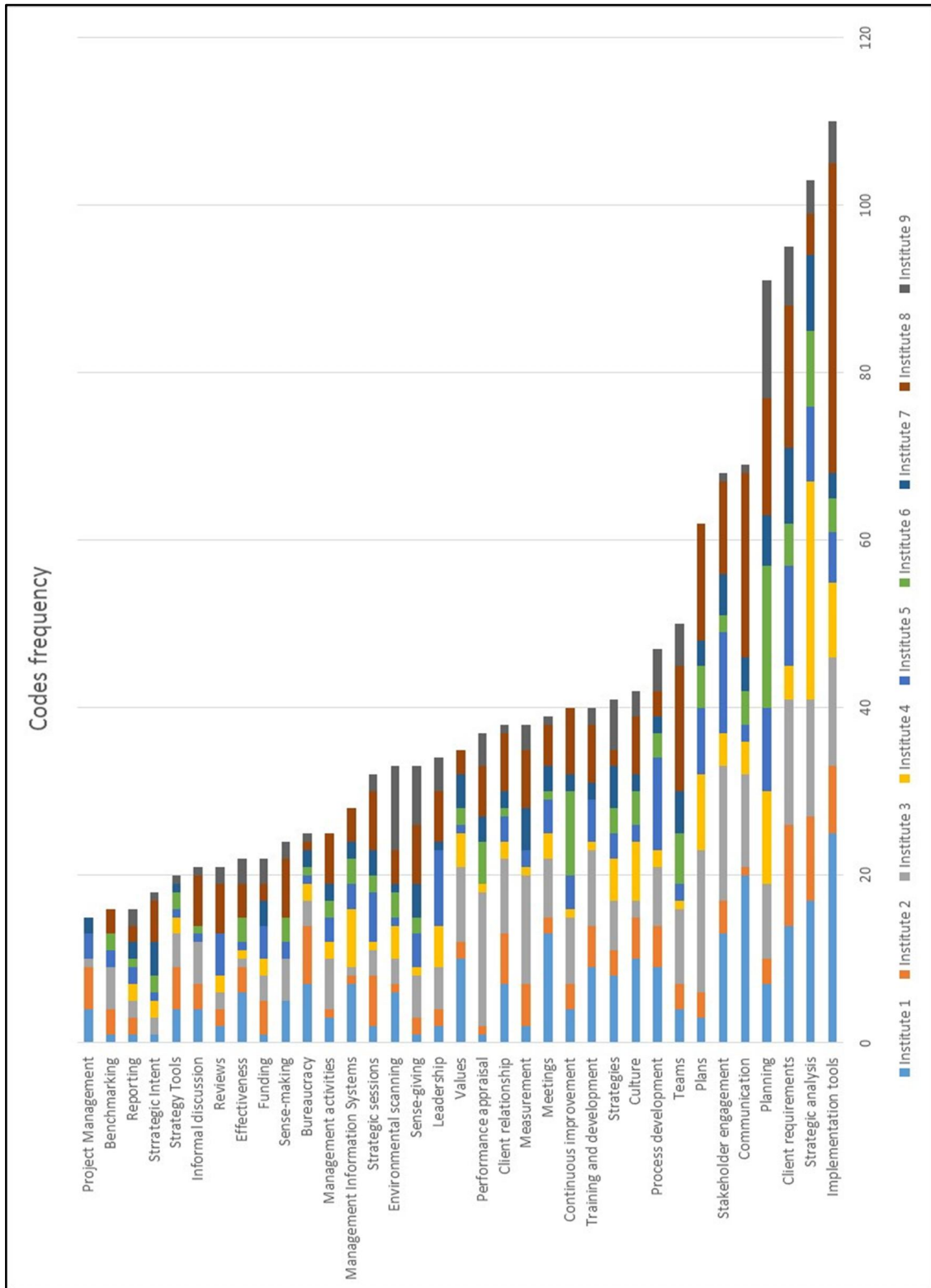
Graph 5.2: Code frequency

Graph 5.2 indicates that there are seven constructs that dominated the discussion. These are implementation tools, strategic analysis (implementation view), client requirements, planning, communication, stakeholder engagement and plans. Although planning and plans appear high on the frequency table, not many of the institutes use project management as a tool in the implementation of their day-to-day projects even though most stated in the questionnaire that it is an important tool. The bureaucracy issue was also mentioned by most of the institutes. This included long lead times, slow decision-making and administrative burdens. This indicated that bureaucracy is a barrier to implementation as indicated by the study. As the study attempted to identify practices for strategy implementation, such a barrier needed to be transformed to the opposite practice and enabler and therefore the opposite of bureaucracy was used going further with the analysis. Upon deeper investigation, the opposite of bureaucracy was found to be "flexible decision-making" which is a more descriptive and practical depiction and better aligned with the projected outcome of the study so as to propose practices used in strategy implementation.

The next analysis that was done was on the family frequency report or themes as indicated in Table 5.3 below. This data came from the qualitative analysis that was exported to Excel and further analysed. These categories were used to extract the themes to be used in defining the output outlined in Chapter 7. The first observation was that there was a consistent relationship between the institutes and the themes they used. This may be due to the fact that more data gives more stable relationships, and therefore a lower variation between the institutes exists for this data set. This is not a statistically proven relationship merely a qualitative observation.

Table 5.3: Theme (family) tabulation

Column1	Institute 1	Institute 2	Institute 3	Institute 4	Institute 5	Institute 6	Institute 7	Institute 8	Institute 9	TOTALS:
TOTALS:	277	150	276	145	154	115	111	330	123	1681
Strategy Practices & processes	138	82	153	80	96	64	63	177	77	930
Organisational Culture	83	37	67	28	31	31	24	81	20	402
Materiality and Tools	45	25	35	21	17	13	14	52	19	241
Strategic Output	11	6	21	16	10	7	10	20	7	108

This indicates that the four themes that derived from the analysis can be used to make certain deductions. They will then be further broken down into categories for more

clarity. These themes were discussed in detail in paragraph 5.2.2.

From Graph 5.3 below, the frequency and, more specifically, the more regular use of these themes became evident. The "strategy practices and processes" is the theme which is used the most. This indicates that this theme requires closer scrutiny to find out exactly what it entails. The reason for this is not the importance or priority of the theme, but the number of constructs that can be contained in this theme which can only be seen when it is broken down into categories. The same applies to the next theme of "organisational culture" and the other two themes identified in the study.
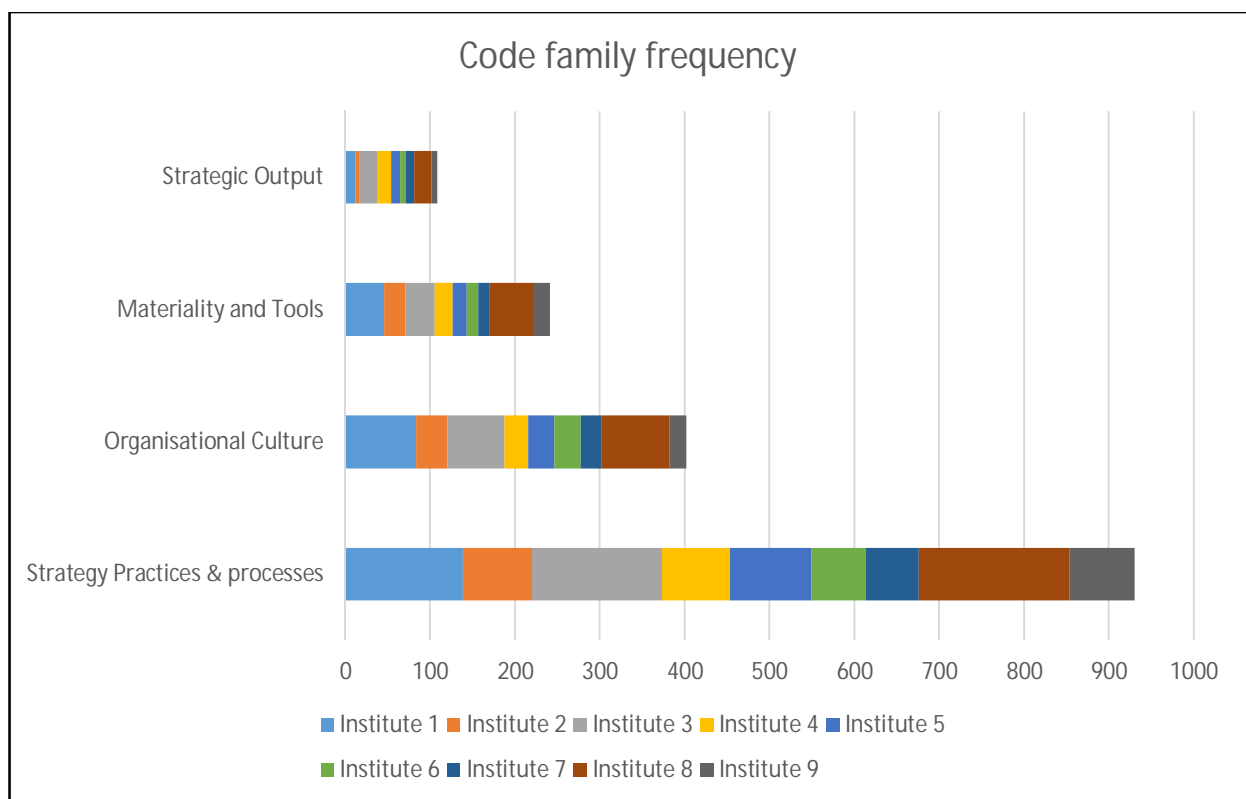
Graph 5.3: Theme (family) frequency

5.2.2 Develop categories and themes from the data

The qualitative analysis as indicated in the codes list above revealed the constructs that occurred most frequently in the raw data. This provided the basis for the definition of the practices to be established. The main purpose of this inductive approach was to allow these findings to emerge from the data in an unstructured qualitative manner. The list

above was then further synthesised into themes and categories.

The themes identified were based on the analysis that was done during the qualitative analysis. The theme of "practices and processes" was initially two separate themes but due to the commonality of the codes found in them, it was decided to combine them into one theme for the purpose of this research. The first order network diagram is indicated in Figure 5.2, indicating this commonality as first order analysis. The aim of the method of analysis here was to indicate which of the constructs were listed in more than one of the themes, to define the relationship and to analyse it in order to uncover the categories inherent in them.
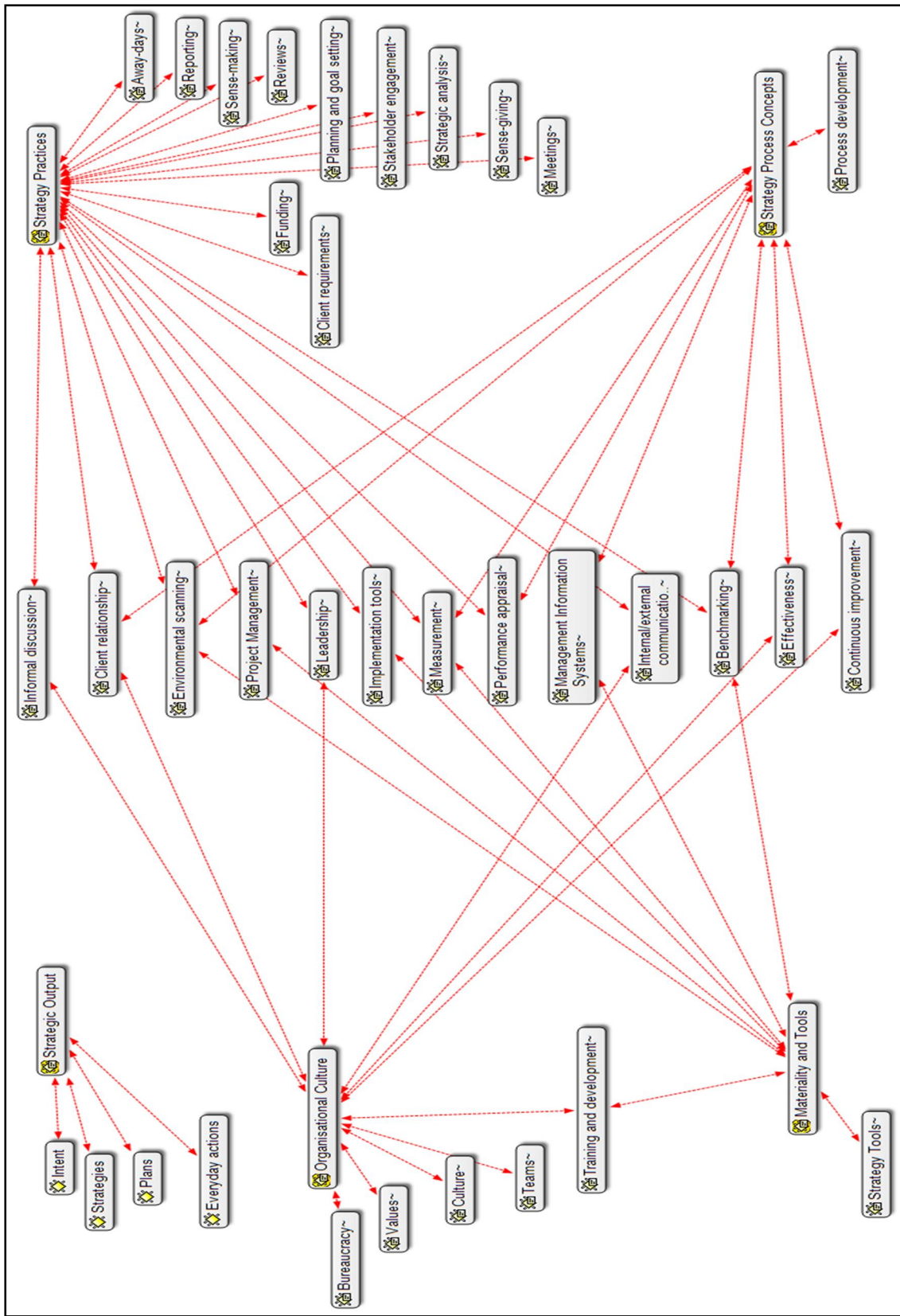
Figure 5.2: Network diagram

The themes that emerged from the analysis were:

- Practices and processes;
- Materiality and tools;
- Organisational culture; and
- Strategic talk and text.

The "practices and processes" and "materiality and tools" themes were further broken down into categories. The categories that were revealed by analysing the "practices and processes" theme implemented at the institutes are:

- Execute ongoing environment assessments;
- Continuous alignment of strategy;
- Co-ordinate efforts of all involved;
- Monitor progress; and
- Control the effort.

The categories found in the "materiality and tools" theme were:

- Implementation tools; and
- Sense-making tools.

5.2.3 Establish the links between the constructs

The next part of the analysis showed that most of these codes were interconnected. In order to synthesize a sensible definition of the practices and processes, a next order mind map was constructed where these linkages were indicated as well as the output achieved from the information gathered for the analysis. This is indicated in Figure 5.3. The linkages were established during the coding process where similar codes emerged in more than one theme. That implied that a specific code was present in more than one implementation function and that resulted in the creation of such links.
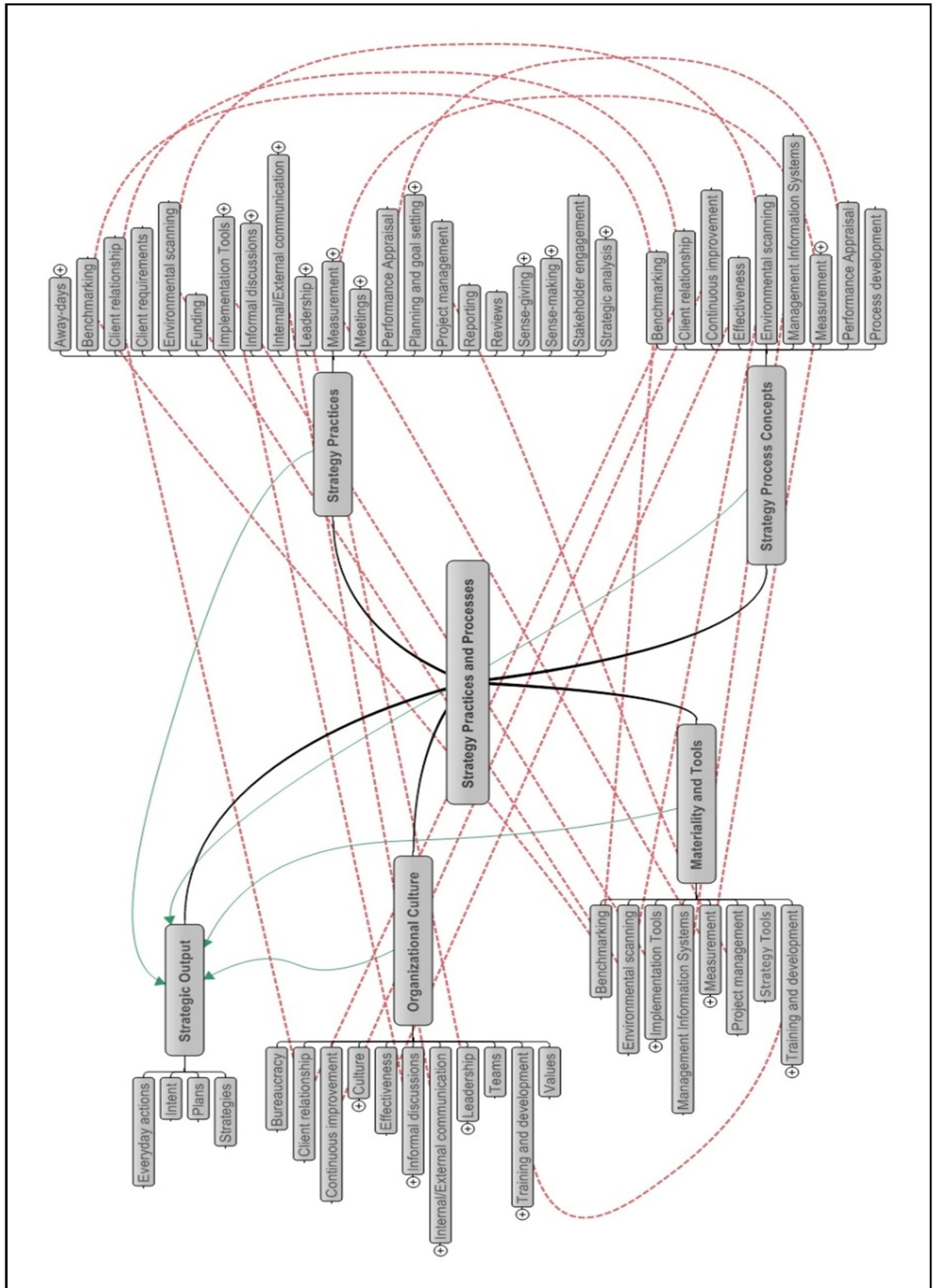
Figure 5.3: Interrelated nature of the practices

For instance, client relationships are part of "culture", as well as part of "processes and practices" and are therefore linked accordingly. The analysis indicated that this is due to the different contexts in which the construct exists. A key to successful implementation is a culture that must be focused on client relationships. The practice must be such that client relationships become part of the implementation process in order to have direct access to the client and thereby know what is going on in the external environment. The practices must also ensure that client relations are maintained to support and strengthen the planning, output and value added to the client environment. The rest of the integrative nature is indicated in the network diagram for clarity purposes and to analyse the data to achieve the output required.

The fact that some of the constructs were repeated within other codes or families indicated the interrelationships between these concepts and therefore they could not be separated. This interconnectivity is demonstrated in Figure 5.3 above in terms of process, concepts, practices, strategy formulation and implementation through the links indicated. The final network diagram that developed from the qualitative analysis software programme after the synthesis was completed is indicated in Figure 5.4 and, from this, the final discussion was concluded.
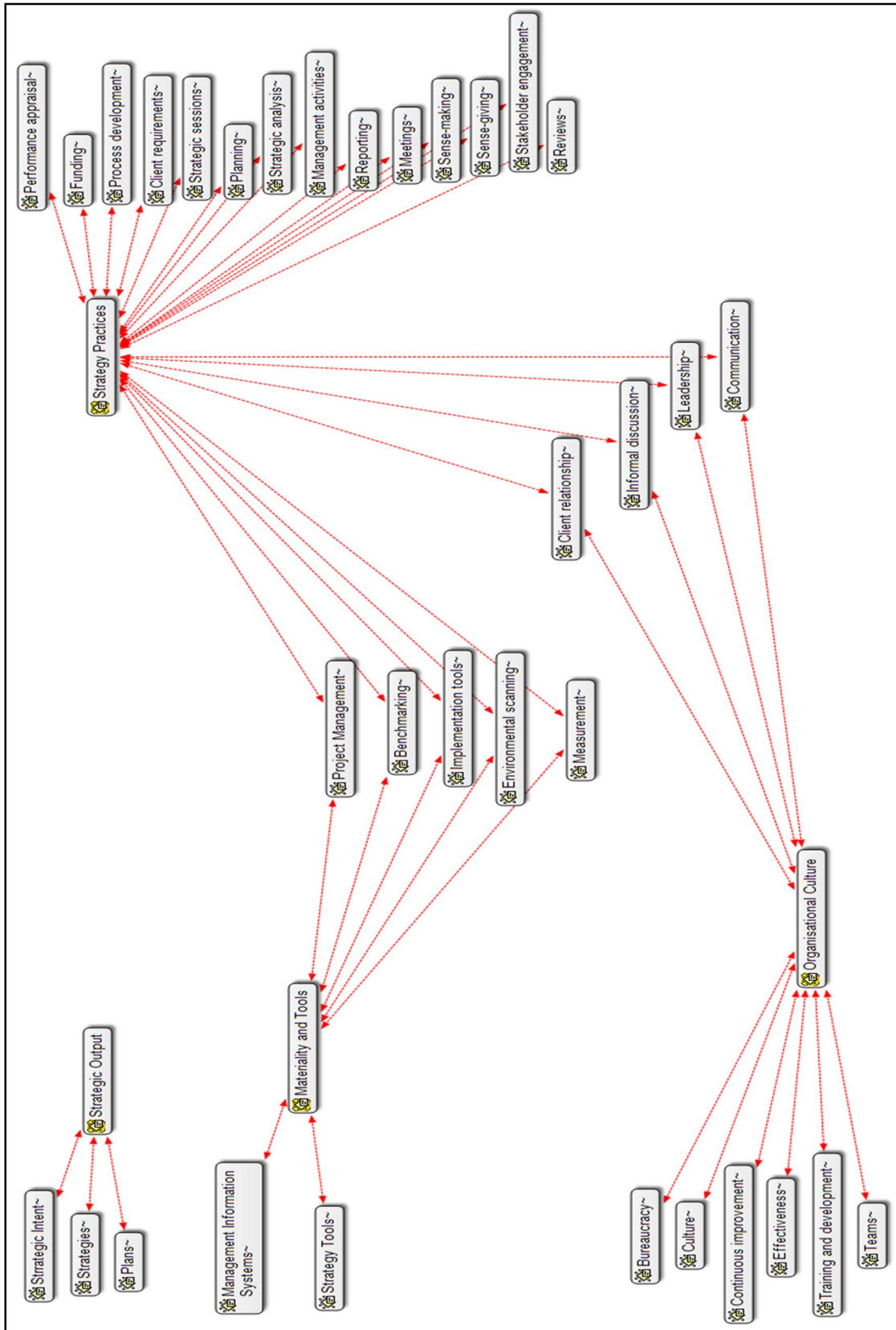
Figure 5.4: Linking the codes to themes

Figure 5.4 shows that there is a very prominent integration of the implementation constructs and the processes that means that they cannot be separated. This will be elaborated on in detail during the discussion and is also indicated in the final definition of these practices and processes.

Strategy as process:

The research showed that another process emerged from the analysis. It became clear that, apart from the practices used by managers, there is also a generic process that is used by the managers during implementation. The strategy implementation constructs that came out of the study were confirmed through the qualitative analysis and were also confirmed by means of the questionnaire that was sent out to the respondents. These constructs were grouped into categories and themes that gave a logical flow of events to explain how these practices were employed. The flow of activities that came from this analysis can also be called the "process". Process is defined by Lynch (2006) as the actions of strategy and how these are linked together and interact with each other during implementation. The strategy implementation process that was identified through the data and that emerged from the evidence collected for this study is indicated below:

1. Execute ongoing environmental assessments.
2. The continuous alignment of strategy.
3. Co-ordinate efforts of all involved.
4. Monitor the implementation progress.
5. Control the efforts of all involved.
6. Use of tools to implement.
7. Establish and maintain enablers conducive to implementation.
8. Define and re-align strategic output.

The above can be highlighted as the process followed by managers to execute strategy implementation as process. This process is clearly defined later in the discussion chapter.

5.2.4 Crystallise data into mind map visualisation

The above inductive analysis produced results that were captured in the mind map illustrated in Figure 5.5 below. From the first order analysis, the implementation constructs were identified through the qualitative coding process. These constructs were analysed into themes and after analysis was done, categories were assigned to them.
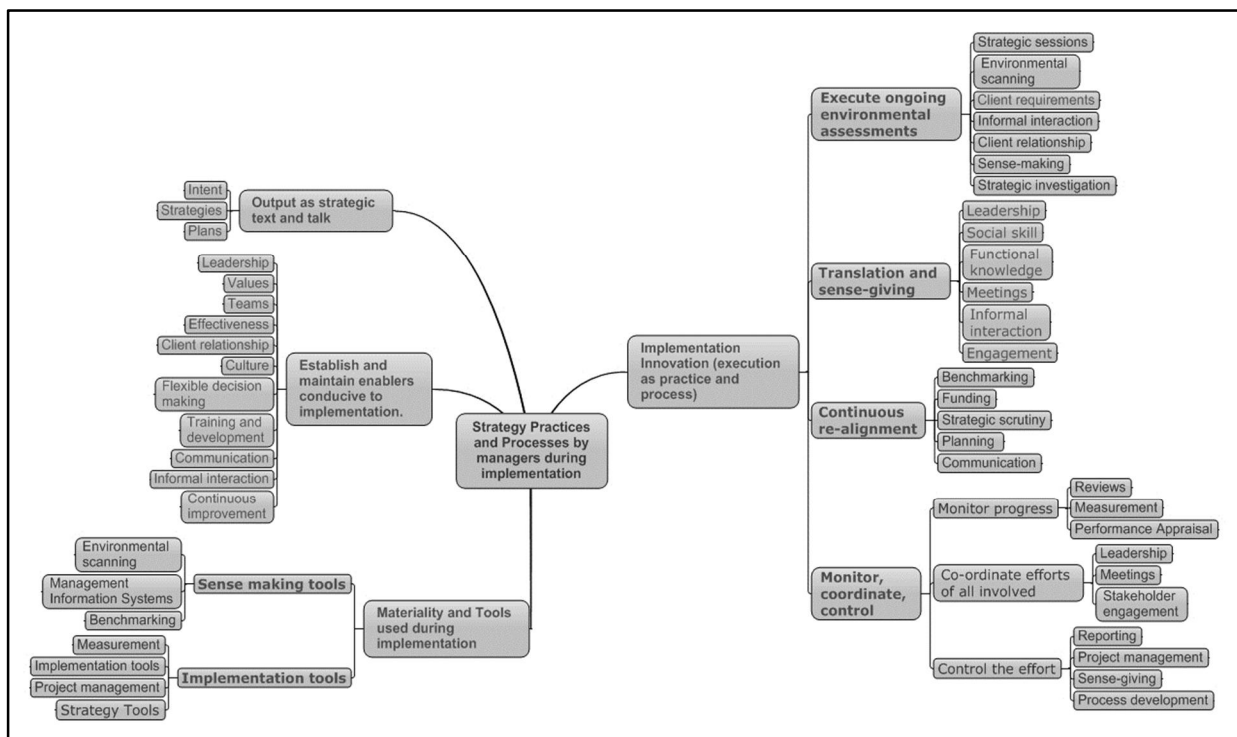
Figure 5.5: Implementation in context

The purpose of this section was to analyse the results and introduce the mind map in order to visually indicate the constructs that appeared during the process of analysis.

5.2.5 Questionnaire analysis

The purpose of the questionnaire was to obtain primary data on the research problem and specifically to prioritise and identify possible gaps within implementation actions. This was done by taking a bigger sample and involving the next level of management in

this effort.   This ensured that a more representative opinion was obtained which guaranteed the validity of the output. The questionnaire was designed using the coding output as a basis and also to identify specific gaps between the perceived importance of such a framework and the level of implementation performed in the institutes.

Some overall observations confirmed that the response rate of 71% which was achieved was acceptable for this type of study (Saunders et al, 2009). The deductions made from this study can therefore be assumed to be representative for this identified group. The first part of the questionnaire was designed to determine whether the respondent was, firstly, involved in management in the institute and secondly, involved in strategy formulation and implementation. From the responses below, it can be seen that all respondents indicated involvement in management, whereas two persons indicated no involvement in strategy formulation and implementation. The intention was not to use this as a disqualifier for the study but purely to indicate the level of involvement.

The next two questions of the first part of the questionnaire indicated whether the institute produced a formal strategic plan, and if it followed a formal strategic management process. The purpose of this was to establish the existence and validation of a strategic management practice within the institutes. To these questions, 96% responded that they do have a formal plan and 88% of the respondents indicated that they follow a formal process in formulating the plan. From the above indicators, it can be deduced that the response from all of the participants was acceptable as valid data to be used for this study.

Table 5.4: Investigative questions

Are you involved in management?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	25	100.0	100.0	100.0

Are you involved in formulation and implementation?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	23	92.0	92.0	92.0
	No	2	8.0	8.0	100.0
	Total	25	100.0	100.0	

Do you have a formal strategic plan?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	24	96.0	96.0	96.0
	No	1	4.0	4.0	100.0
	Total	25	100.0	100.0	

Do you follow a formal process?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	22	88.0	88.0	88.0
	No	3	12.0	12.0	100.0
	Total	25	100.0	100.0	

The results from the questionnaires were obtained from Unisa in an Excel spreadsheet and imported into SPSS™ for further analysis. Owing to the nature of the results, it was decided to use frequency tables as output for the research and to do the analysis from those tables. These tables were included in the discussion where each of the constructs and outcomes was discussed in detail. The observations were made from a holistic point of view and are therefore of value for discussion in this section.

The first frequency table was the relationship of the perceived importance of the constructs which were plotted against the level of implementation perceived in the institutes. The output from the coding, interviews and responses to the questionnaires ratifies the validity of the constructs on implementation. It also includes a bigger group from the institutes and can be seen as a more representative sample of the management group and the opinions of the institutes. The response was analysed and

the data from the frequency tables was plotted on a scatter graph on four quadrants as indicated in Graph 5.4 below.
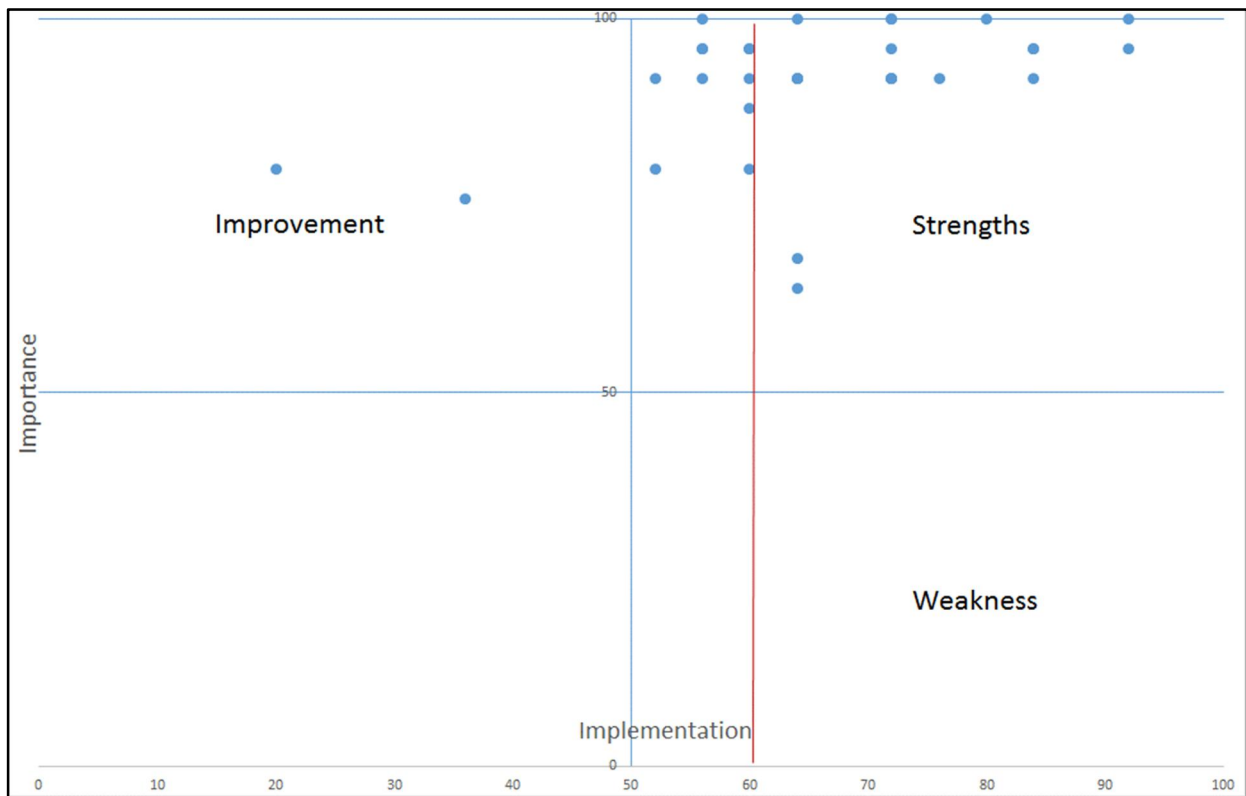
Graph 5.4: Importance vs implementation plot

From the graph, it can be seen that most of the opinions obtained indicated that these constructs are highly significant to the implementation effort. That confirms the validity of the constructs extracted from the qualitative analysis. The next observation from the graph is that the results obtained for the rating of the level of implementation in the institutes indicates that there are some areas where the implementation is good and there are some areas that could be improved on. The value in the contribution from this study is the fact that this identifies areas for improvement that can be used by the institutes. The area with high importance and low implementation was regarded as presenting opportunities for improvement; the area where implementation is seen to be important as well as a high level of implementation is regarded as a strength; and the area where the importance is low and the implementation is high is regarded as a weakness or an area that is irrelevant or represents a fruitless effort.

The fact that none of the concepts fell into the weakness quadrant can be ascribed to the fact that the analysis already excluded irrelevant concepts as practices. This was concluded from the qualitative analysis and coding performed. The two constructs that fell into the opportunity area were bureaucracy and benchmarking, as they were perceived to be important but not well executed. If the scale is moved to be 60%, as indicated by the red line, more areas for improvement are included such as strategic sessions, environmental scanning, strategic analysis, communication, meetings, project management, sense-giving, culture, training and development, continuous improvement and values. The rest are all seen as strengths and are identified as such in the graph. The other two concepts that lie on the low end of the importance scale are the use of strategy tools and process development during implementation. They were perceived to be the least important although the implementation was seen to be of high importance. Nevertheless, they still fell within the strength block. These constructs are discussed in detail in the discussion section of this report and specifically address the relevance and detail to the practice and process effort.

The above is confirmed by Graph 5.5 below, but the concept to be demonstrated by this graph is the difference or delta between the perceived importance and level of implementation in the institutes. Most of the concepts were identified as important as indicated previously, due to the coding process followed. However, the level of implementation was not always perceived to be good by the bigger target group from these institutes. The graph indicates the areas for improvement in relation to the gap within implementation that must be given attention in improvement efforts in implementation. This also confirms the theory that organisations are experiencing challenges in implementation efforts.
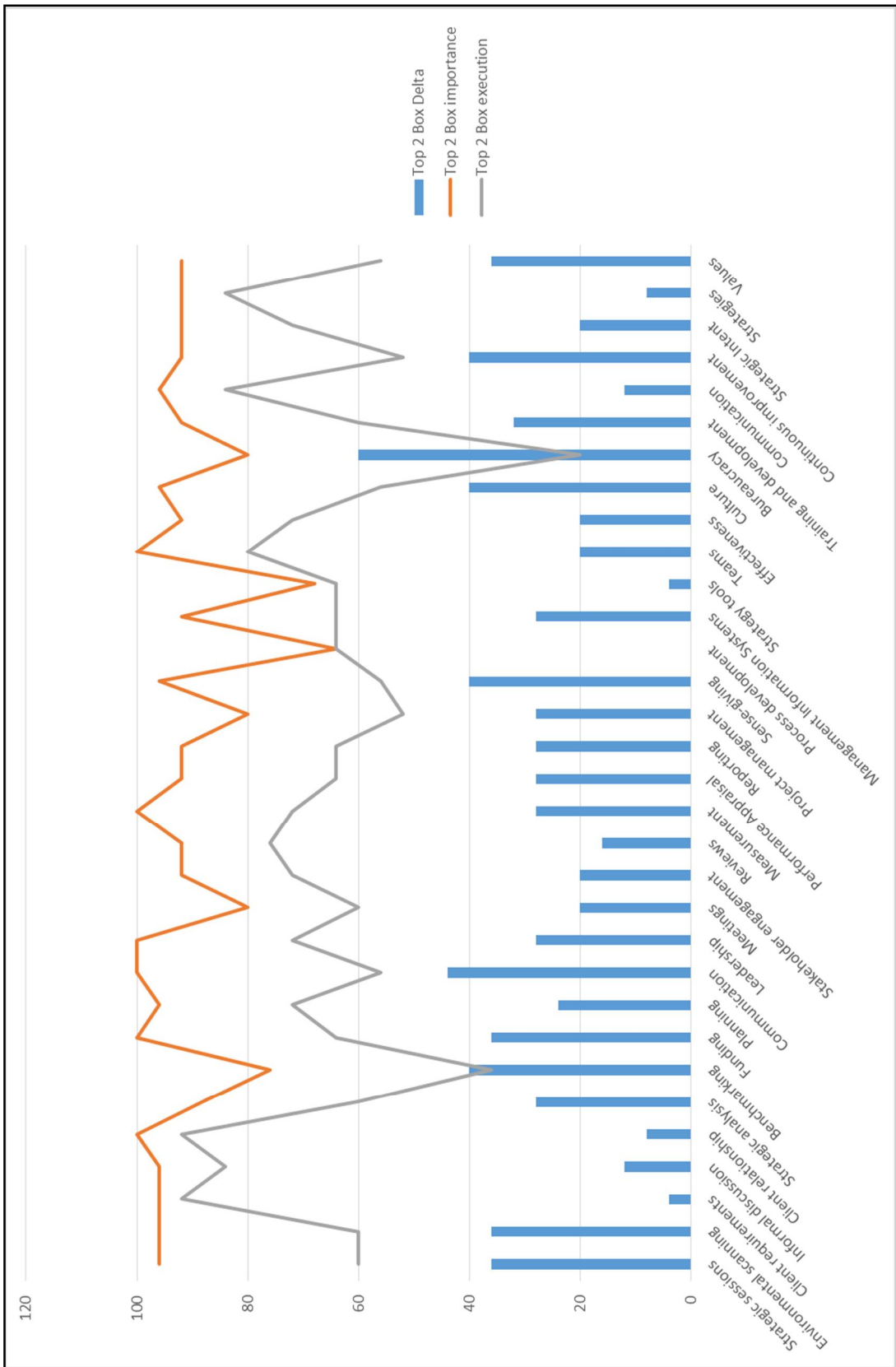
Graph 5.5: Importance/Implementation gaps

Both Graph 5.5 above as well as Graph 5.6 below indicate these gaps. The construct "strategic sessions" shows that importance was rated high and implementation relatively low. This indicates a considerable gap and means that there is room for improvement in using strategic sessions more effectively as a tool to ensure better implementation. This will be highlighted during the final integrated process and practice where these sessions are not only used to formulate but also to identify what is happening in the environment, monitor existing plans, control implementation and re-align going forward as part of such sessions. The second observation and example is that of "process development" and where the importance and implementation was perceived to be low. That implies that process development is not seen as an important implementation enabler although there are merits in using that for implementation processes. This might be due to the many processes in place in these organisations. The next observation shows the importance of communication as an implementation construct. The importance of communication was highlighted throughout the study and it is also perceived that the institutes execute well in terms of communication. The observation from this is that good communication must be sustained and used as it was indicated to be an enabler for successful implementation.

The quadrant where the importance was low and the implementation was high was due to the fact that the inductive coding analysis already excluded such constructs from the analysis. Such a scenario means that actions are taken that will have no impact in that environment. These actions are regarded as a waste of time and show a need to re-focus.

The last comment is that the construct of bureaucracy also came out low on implementation and high on importance. Upon further analysis, the implementation construct or enabler was rather "flexible decision-making". Therefore the term bureaucracy will be replaced in the final model with "flexible decision-making".

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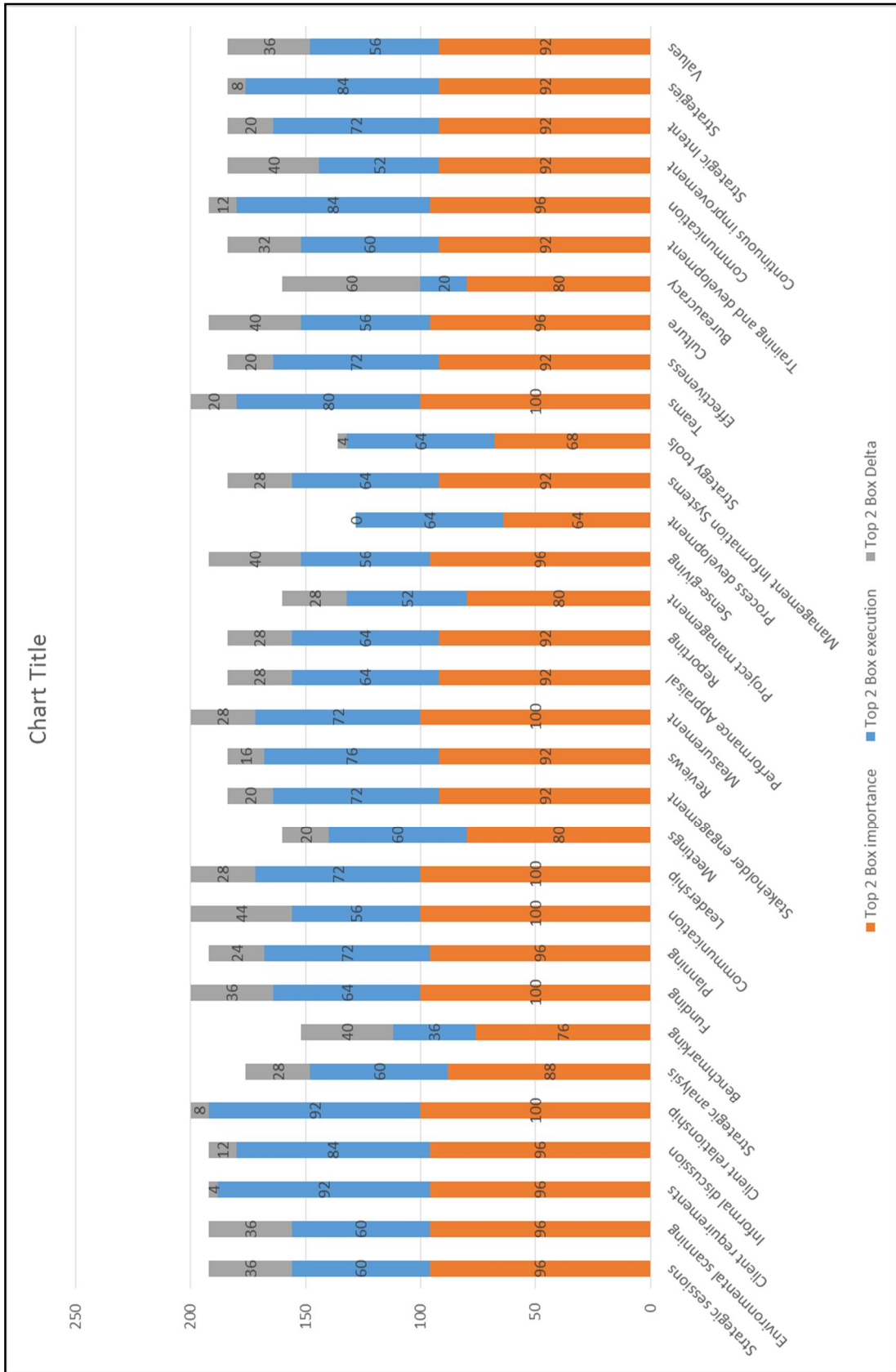
Graph 5.6: Improvement areas

The above graphs gave a high level analysis of the questionnaires and also identified areas for improvements that can be communicated to the institutes. By identifying the gaps as indicated above, these tools can be used to focus on areas of concern as well as areas of excellence. The main focus is to indicate the delta between the importance of the concepts and their implementation.

5.3 CONCLUSION

The cross-case analysis yielded a set of codes that were grouped into families and then grouped into themes. The result from a strategy implementation point of view supported the exploration of strategy practices and processes that served to achieve the objectives of this study. The next chapter explores and defines the detail found from the previous two chapters and discusses and interprets these results as regards the research outcome. The final chapter will then give the conclusion and recommendations through a summary of the outcome.

CHAPTER 6: FINDINGS AND INTERPRETATION

6.1 INTRODUCTION

The purpose of the research was to explore strategy implementation practices and processes executed by middle managers in the DERI institutes. The data was obtained from these institutes through a triangulation process of interviews, documents and questionnaires. These were analysed through a within-case as well as cross-case analysis. The outcome was a rich amount of data analysed to be presented and interpreted in order to contribute to existing literature. In this chapter, the details of the constructs that emerged from this study are presented and discussed. It is also important to indicate that up to this point, the term constructs was used for the output of the analysis from this study. As the objective of the study was to identify practices and processes used during strategy implementation, it will from now on be referred to as 'practices' and/or 'processes'. It is important to ensure that the link to the research questions is maintained and therefore it is indicated below for reference.

Main question:

What practices and processes are employed in strategy implementation in DERIs in South Africa?

Sub-questions:

1. What practices are employed by middle managers as practitioners in DERIs during the implementation of strategies?
2. What processes are being used to ensure that strategy implementation is successful?
3. What are the roles of middle managers during strategy implementation?
4. What are the enablers for effective and successful implementation of strategies?
5. What are the barriers that prevent effective and successful implementation of strategies?
6. How are materiality and tools used during implementation of strategies?

The practices and processes are defined and discussed with relevant examples of the what, how and why managers execute strategy. Furthermore, the uniqueness of the practices as executed by these managers is also described in this chapter through narrative and discourse in order to create a clear understanding of what they mean in the context of implementation. Finally, the summary and conclusion will bring the practices and processes together in Chapter 7 which illustrates and demonstrates the value and contribution of the work done.

6.2 DISCUSSION

During the literature study several lenses were used to describe and define the practices and processes used during strategy implementation. The gaps were identified and the study was structured to answer certain research questions and to achieve the objectives set for this study. The literature was synthesised into the perspective presented in Figure 6.1 below. It indicates the four streams of theory as discussed during the literature section and how these interact and integrate during strategy implementation. The impact and influence of organisational architecture, planned change efforts, organisational processes as well as individual practices on strategy implementation was demonstrated and the gaps relating to this study were indicated. In addition to that, the role of middle managers is central to the theme and their influence is defined as output from this study. There are certain tools used and specific barriers and enablers that were identified and used during implementation as identified from current literature.
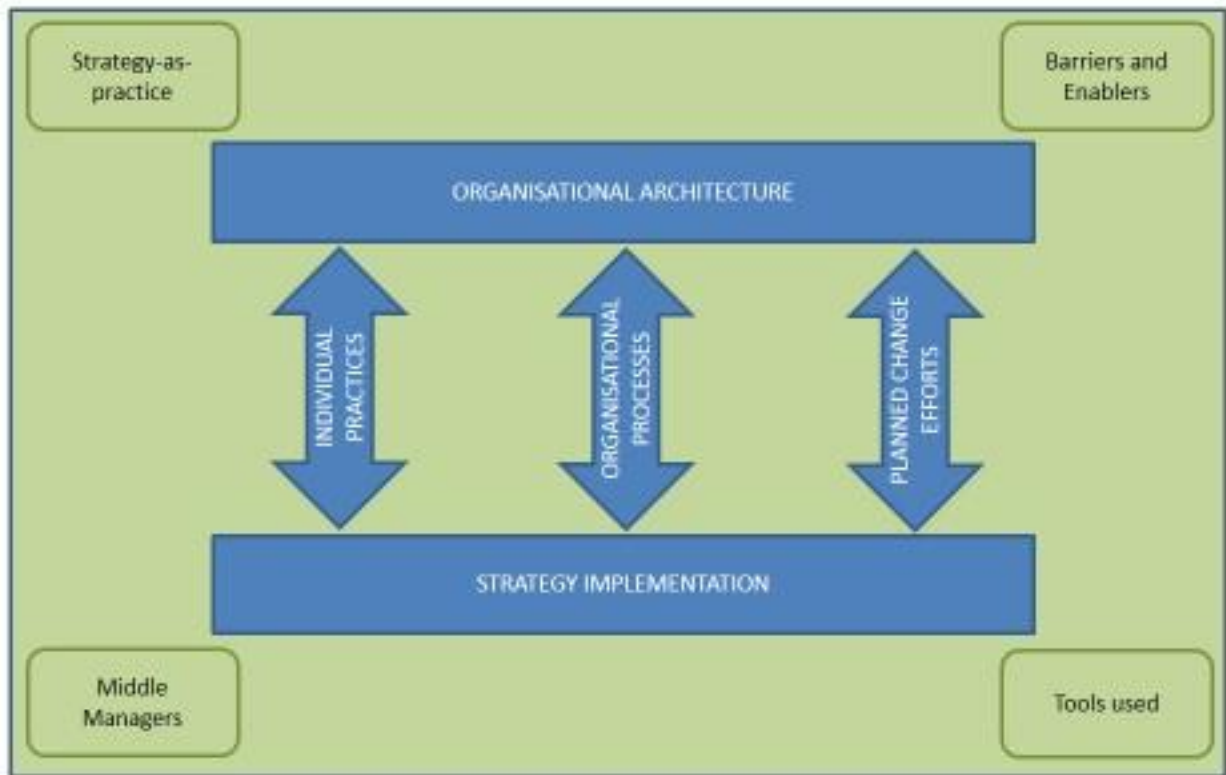
Figure 6.1: Consolidated synthesis of the literature

(Source: Author)

All of the above factors were investigated during the research and the results, analysis and findings were represented in the context of the strategy-as-practice and process as indicated in Figure 6.2 below. The conceptual model from the literature was linked to the outcome of the research to define and identify the practices and processes in use by middle managers in the DERI context as the contribution from this study and as indicated in the mind map in order to visualize these practices and processes.

The practices explored in this study comprised four themes identified from the analysis which are encompassed in the strategy practices and processes executed by middle managers during implementation.

The themes derived from this are:

- Strategy innovation (implementation as practice and process).
- Materiality and tools used during implementation.
- Establish and maintain enablers conducive to implementation.
- Output as strategic text and talk.

The discussion that follows breaks these themes down into the categories as identified during the analysis and then further into the constructs which were used in the explanation of the practices and processes as output of this study. The themes, categories and practices from an integrated perspective are indicated in Figure 6.2 which indicates the context in which the practices are discussed.

The findings as described in this chapter are derived from the interviews held, document analysis and questionnaire administered. To validate the point made in this and to report on the findings and interpretation thereof, there are some verbatim quotations referred to, or references made but not all quotations were included in the text as it will be too cumbersome. However, it is part of the data obtained during this study and it is included in the summarized findings.

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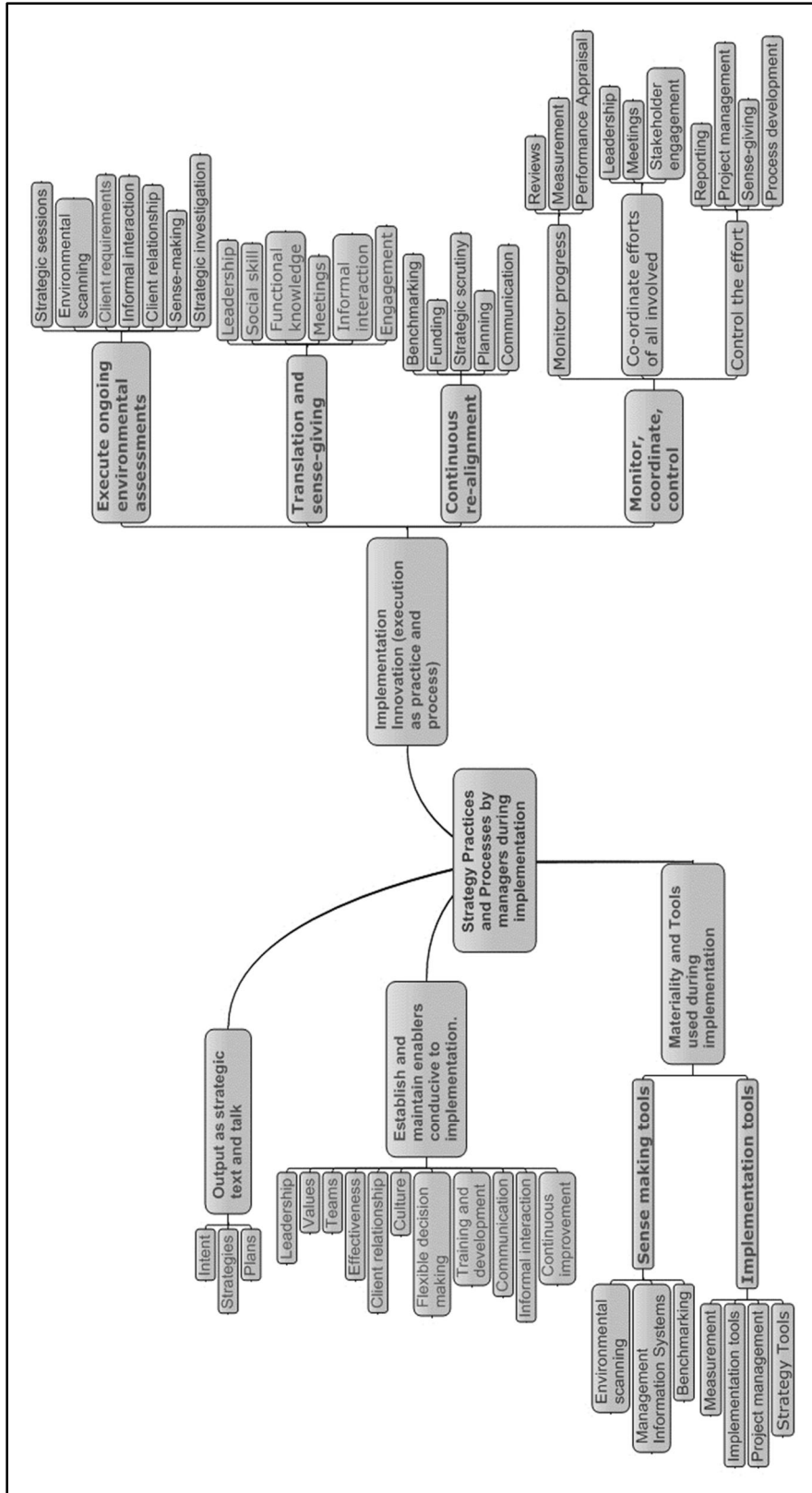
Figure 6.2: Implementation in context

(Source: Author)

The reference system that was used during the dataset refers to the direct quotation made by the individuals or in certain documents as follows: "quote directly from the source" (34:1:13:13). This refers to the primary document number (34 in this case), quotation number (1 in this case), beginning line number (13 in this case) and ending line number (13 in this case).

The codes indicated above are clarified and defined in the following sections by using the context in which they were used as well as combining them with the relevant definitions from the literature review. The description of how these terms were used gives clarity on the context in which they were used in this study and is discussed in more detail below.

6.2.1 Strategy implementation (implementation as practice and process)

Strategy practices are the activities, ideas, techniques, skills and methodologies which practitioners of strategy use to formulate and execute strategies (Whittington, 2002). The results were discussed and categorised in terms of the process that derived from the research.
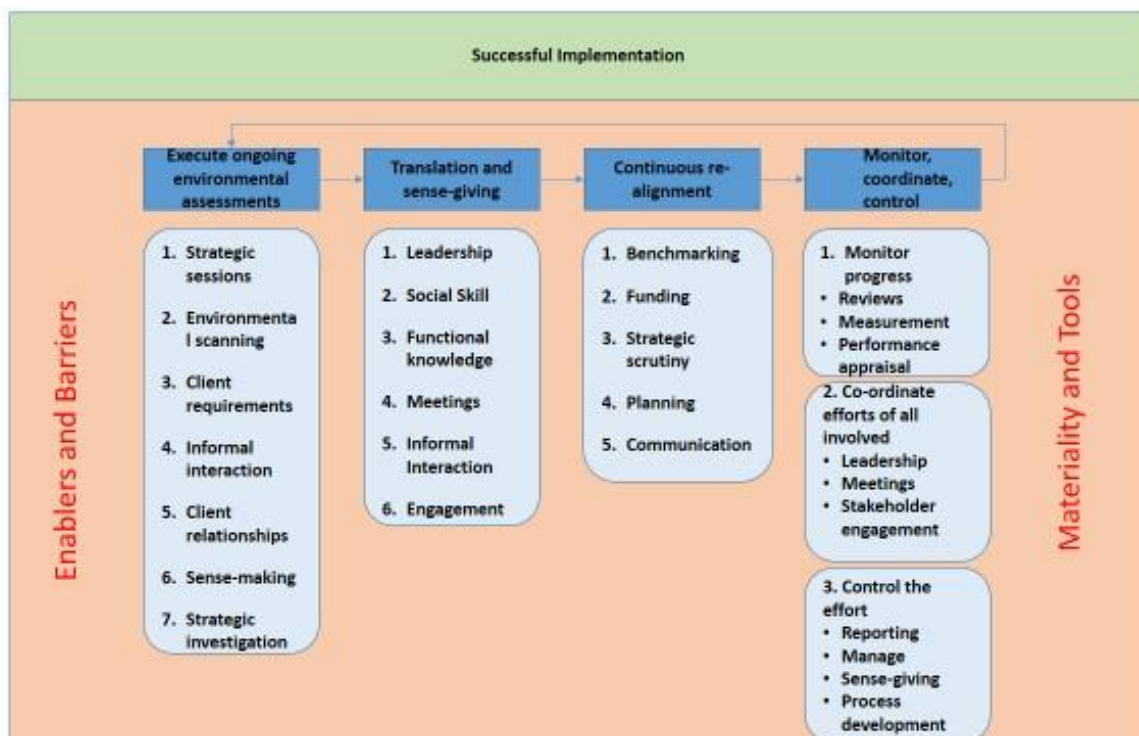
Figure 6.3: Categorisation of results

The generic process was defined as indicated in the blue blocks in Figure 6.2 and comprise a continuous iterative process between environmental assessments, translation, re-alignment and monitor and control actions and practices as indicated below. There are also specific enablers and barriers that have an impact on strategy implementation as well as certain materiality and tools used during these practices employed by middle managers. This sequence of reporting was therefore selected to give more structure to the outcome of the research.

The results from the data analysis indicated the activities of managers which were categorised, grouped and integrated as follows:

> *6.2.1.1 Execute ongoing environmental assessments*
>
> *6.2.1.2 Sense-giving as translation*
>
> *6.2.1.3 Continuous re-alignment*
>
> *6.2.1.4 Monitor, co-ordinate and control.*

6.2.1.1 Execute ongoing environmental assessments

The environment is constantly changing and an organisation must be able to adapt to such changes in order to survive. The environment in which these institutes operate shifts continuously and therefore they must scan the environment to ensure that the implementation plans are still aligned with it. For example, there are budget cuts which have an impact on implementation. There are also changes in client requirements and priorities as the main client deploys into Africa. The volatile situation in Africa dictates that the SANDF can and does change overnight as new and additional threats are revealed. That context adds to the requirement that the DERIs be constantly aware of these changes in the landscape and make adjustments to the implementation of their strategies. Figure 6.3 gives an indication of the area of the results that are being discussed here.
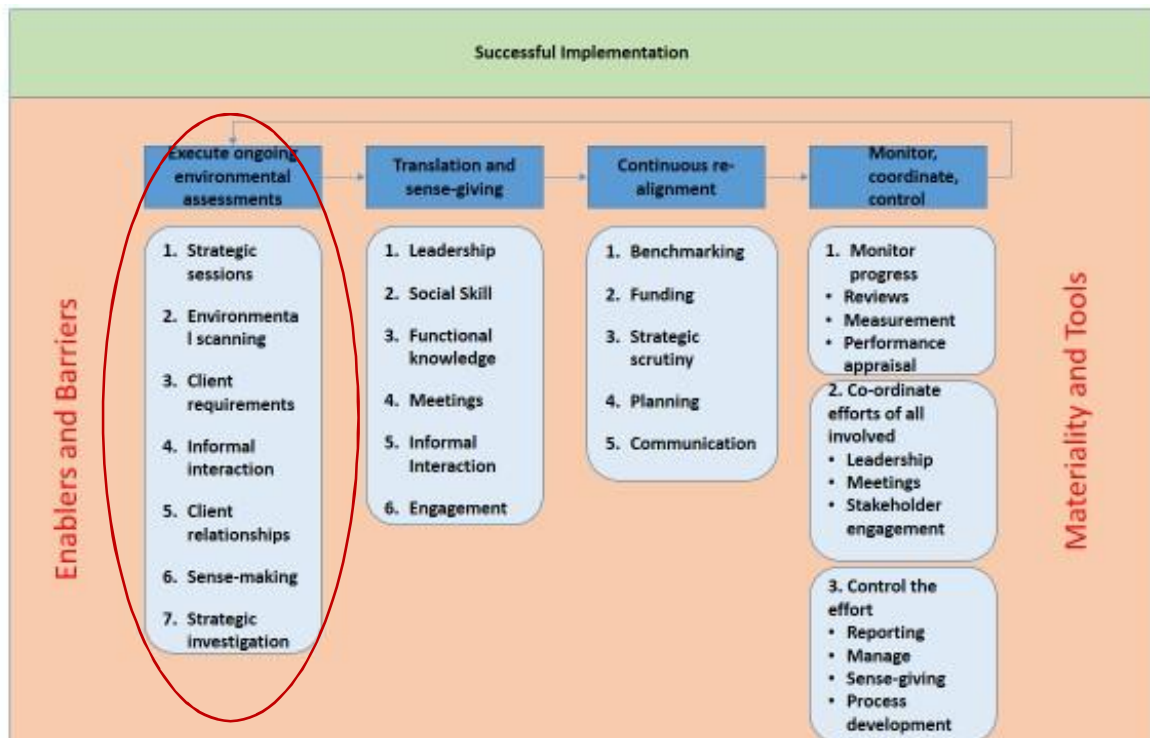
Figure 6.4: Environmental assessment

The middle managers do this through strategic sessions, environmental scanning, client requirements, client relationships, sense-making and strategic investigation. The areas that were identified as practised by managers are described below. The relevance to the implementation of strategy in terms of practices and processes is highlighted, discussed and demonstrated.

Strategic sessions:

This is a collective term used for strategic sessions that are held away from the office where a structured process is worked through to determine direction and formulation of strategy and also how to execute that strategy.

From the analysis of the data collected in this study, it is evident that the institutes are using strategic sessions to initiate their planning, strategies and focus. These sessions are used as part of the implementation process to determine shifts in the external environment, client environment and the internal environment. They are also used as reporting, planning and guiding forums. These sessions also act as a forum to provide input into the planning and implementation processes.

Although the format of strategic sessions is not the same for all the divisions, such away planning sessions are conducted during their annual planning cycles. There were a few comments that showed that these sessions were not conducted in all the divisions due to the fact that they had acting managers rather than permanent managers, but it was nevertheless clearly stated that they are a requirement. This is where managers from the lower levels consult in their various environments and present their findings to the session for discussion and decisions for implementation as indicated by a respondent who said that it was used "from having our own little strategic session to implementing some results" (30:55:41:41).

These sessions vary from once a year during the annual planning cycle to less formal sessions where people can put their issues on the table, to team-building sessions where these issues are also discussed. Below are some examples from the data collected which illustrates this practice.

Table 6.1: Verbatim quotes on sessions

Implementation activity	Example from data
Strategic sessions	*"Then back here we have sessions with our EXCOM members, sometimes it is a breakaway session or sometimes it is just in this boardroom"* (31:7:14:14). *"Firstly obviously I look at what is the corporate top strategy. We quickly have a strategic session and that comes from Top Management where we try to implement and align with what they want"* (38:3:22:22). *"Our strategy process is we sit around a table for a day and we have a braai in the evening and everybody gets an opportunity to say something and do something"* (34:30:75:75).

During such sessions, the vision, mission and strategic process are formalised, and as these plans are required at corporate level, they are done in line with the annual cycles. These managers also have additional sessions where internal issues and planning are handled in order to align with the guidelines from the higher level sessions as well as to

align with the environmental scans. These sessions where strategic and operational issues can be discussed for decision-making are more informal, as indicated in the quotations.

Table 6.2 below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Table 6.2 indicates the perceived importance of strategic work sessions such as away days to be 96% for the top two box indicators. This means that 56% indicated that these sessions are important and 40% indicated that they are very important. With regard to implementation, 52% indicated that the implementation is good and only 8% said that it is excellent. This not only identifies and confirms the importance of strategic sessions, but also indicates that there is a gap in the implementation. All the other practices are to be analysed in this manner and viewed accordingly.

Table 6.2: Strategic work sessions

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	14	56.0	56.0	60.0		
	Very important	10	40.0	40.0	100.0	96.0	40.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2Box	Top Box
Valid	Poor	5	20.0	20.0	20.0		
	Fair	5	20.0	20.0	40.0		
	Good	13	52.0	52.0	92.0		
	Excellent	2	8.0	8.0	100.0	60.0	8.0
	Total	25	100.0	100.0			

To summarise, it was found that the institutes are having away days, strategic sessions, conferences, seminars and work sessions, among others, and that these are held as required by the corporate or defined by the relevant manager during implementation

efforts. However, it seems that the managers have varying formats to extract information from these sessions that allows them to manage the organisation and execute strategies as well as to satisfy corporate requirements. This relates back to the literature model where these types of sessions, extraction of information and feedback systems indicates what and how these middle managers use individual practices, organisational processes and formal change management initiatives during strategy implementation.

Environmental scanning:

This is a process through which an environmental scan is done internally as well as externally in relation to industry, competitors, suppliers and complementors. This includes political, environmental, social, technological, legal, economical and, specifically in this environment, military factors (PESTLEM).

One of the major threats that came out of the interviews was that the institutes are very aware of the changing environment in which they operate and that most of them are geared to be able to react in good time to such changes. The environmental scan is interrelated with many other categories found in this study as mentioned earlier. Sense-making, informal discussions, meetings and tools are used to understand and react to the environmental challenges. The output from this analysis is intended to be the input to the "what" of implementation and can be used by the managers to translate such factors into actionable interventions as part of implementation as one respondent explained:

> *That is why the strategic planning and therefore benchmarking is very important in your strategic setting, benchmarking as well as your environmental scanning to know what will requirements be in the test and environmental arena within the next 3 or 5 years* (39:8:12:12).

Summary

Implementation activity	How	Why
Environmental scanning	Sense-making, informal discussions, meetings, tools, client feedback, industry analysis, situational exploration, monthly feedback sessions, discussions, peruse publications, policies and strategies, presentations and briefings.	To determine what is going on in the external environment, client environment, and internal environment and it is critical to align implementation activities to this.

Examples from the data collected:

… your environmental scanning to know what will requirements be in the test and environmental arena within the next 3 or 5 years (39:8:12:12).

Table 6.3 below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Table 6.3 below indicates the level of importance in order to assess external environmental factors as well as the gap in implementation as described above. Importance was rated to be 96% in the important and very important category, whereas the implementation effort was indicated to be 56% good implementation and 4% excellent implementation efforts.

Table 6.3: External environmental factors

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	9	36.0	36.0	40.0		
	Very important	15	60.0	60.0	100.0	96.0	60.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	9	36.0	36.0	40.0		
	Good	14	56.0	56.0	96.0		
	Excellent	1	4.0	4.0	100.0	60.0	4.0
	Total	25	100.0	100.0			

The types of methodologies used in executing these scans varies from formal tools and methodologies to very informal discussions and engagement. There is an ongoing effort in client feedback, industry analysis and situational exploration. The institutes have monthly feedback and discussions and they peruse publications, policies and strategies in their efforts to understand the arena in which they operate. Other major sources of information are presentations and briefings which took place in all the relevant forums with the intention of making sense of the environmental changes, as the respondent below concurs:

> *Certainly we are looking at what is happening within that environment, but I must say it is one or two people within the organisation that actually tries to actively support that. You need experience, you need insight not only in the area that you are working in but in the wider scheme of things. You must be able to analyse what is happening in the world regarding the military where the developments are and we get that information perhaps too late, but anyway we have to react to that* (34:15:32:32).

Client requirements:

This is the process of determining and defining client requirements to ensure that implementation is aligned with these requirements.

All the work executed at these institutes is related to client requirements and all of these

requirements are available in written form. In the research environment specifically, constant engagement is of the utmost importance. There is a requirement to regularly track progress, examine changes in environments and the resultant work output and reporting spheres. The external environment is also shifting continuously and therefore the process of initiating change and changing implementation efforts and adapting must be flexible. This will ensure greater effectiveness, better service delivery, longer term vision and more output directed towards the client.

It is also important for staff to attend engagement forums, conferences and meetings where trends are discussed and are defined for the clients' environments. Meetings, discussions, work sessions and interaction with the clients allows the institution to precisely define the clients' requirements.

The research and testing environment must determine what the client actually wants and then include that in the output to add value to it. This is then subjected to client feedback to ensure that the expectations are met and the services are aligned with the expectations and requirements. This is done informally during meetings and discussions, as well as formally through surveys and questionnaires. It is not an easy practice as explained below:

> *That is probably one of the biggest problem areas within our environment that our client does not have a formal requirement generations forum. They don't even have a filter to get all their requirements together. They develop requirements but it is very much on an ad hoc basis and there is no structure to how they formulate what the requirements are and to document it—they don't do it. Frequently we hear of something [and] we know that we can indeed provide a service (34:9:26:26).*

Summary

Implementation activity	How	Why
Client requirements	Engagement forums, conferences, meetings, informal discussion, trends, engagement with the client in order to precisely define the requirements first obtained through an extraction process of meetings, discussions, work sessions and interaction.	There is a requirement to regularly track progress, look at changes in the client environment and the resultant work output, reporting and align implementation actions to that.

Example from data:

On a different level if there are client requirements that is known to us they talk to the Test Managers. If there are client requirements that is not part of our current process Manager 3 has a list – he made a list of these things. We do have a formal client feedback after each test where they also can list some of these things (25:26:95:95).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The question asked during the survey was about clear client requirements to align capabilities in terms of service delivery for the institutes. The client requirements are, as indicated above, a very difficult practice to define, but also, as indicated in Table 6.4 below, a very important (84%) requirement for implementation. It can also be seen that the level of implementation was also indicated to be high (92% in the top two boxes) and this means that the institutes are successful in getting client requirements, defining them and using them as key success factors in their strategy implementation efforts.

Table 6.4: Client requirements

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	3	12.0	12.0	16.0		
	Very important	21	84.0	84.0	100.0	96.0	84.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	2	8.0	8.0	8.0		
	Good	10	40.0	40.0	48.0		
	Excellent	13	52.0	52.0	100.0	92.0	52.0
	Total	25	100.0	100.0			

The challenge remains to ensure that the requirements are properly defined and that the institutes can structure their service offerings properly. There is no formal requirements process within the main client body. There are areas which are more structured but the biggest challenge is that there is no centralised requirements formulation process within the Defence Force. This can be attributed to several reasons, such as the complex environment in which the client operates, uncertainty, and the volatile situation in Africa, among others. This is outside of the control of the institutes and the institutes must, in most cases, translate the higher level requirements from the client into lower level tasks and output according to the client's needs. This also has a big impact on implementation efforts as the capability needs to be aligned with current and/or changing requirements. This is not done in isolation but as part of a collaborative approach.

Informal interaction:

These are discussions and interactions such as talks, text, e-mail, Facebook, social media and others that occur outside of formal and organised forums that can help the middle manager to establish what is happening in the environment and align implementation accordingly.

The initial code that came from the analysis was called "informal discussion" but, upon deeper investigation and analysis, it was changed to be "informal interaction" as it involves more than only discussion. This typically included talks, discussions, e-mails,

meetings, phone calls, functions, and social engagements, among others. This is also part of the materiality concept in use at the institutes. In an environment where the requirements are not always clear and where the constant scanning of the environment is an ongoing activity, informal discussions become a tool to obtain such information. This came out very clearly from the analysis of the data by this study. There are several ways that these are orchestrated, as mentioned below:

> *Specific and dedicated actions are planned with these people such as presentations, meetings, work sessions, personal appointments, conferences, memberships of organisations, social events and recreational activities* (1:4:164:164).

Summary

Implementation activity	How	Why
Informal interaction	Talk, discussion, e-mail, meetings, phone, functions, social get-togethers, engagement.	Requirements are not always as clear and where a constant scan of the environment is an ongoing activity, to use informal interaction as a tool or practice to obtain such information. This is not only to get information from the client environment, but also for internal issues and progress that needs attention.

Example from data:

> *Specific and dedicated actions are planned with these people such as presentations, meetings, work sessions, personal appointments, conferences, memberships of organisations, social events and recreational activities* (1:4:164:164).
>
> *Within … any organisation you have a very strong informal communication network. That is where you normally pick up problem areas in behaviour by tapping into the informal communication network* (36:69:72:72).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your

institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The use of informal discussions in order to establish developments in the external environment was another practice rated by the questionnaire. In Table 6.5 it was indicated that both the importance and implementation is rated fairly high at 96% and 84% respectively. The gap between importance and implementation is not wide but still indicates some room for improvement.

Table 6.5: Informal discussions

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	13	52.0	52.0	56.0		
	Very important	11	44.0	44.0	100.0	96.0	44.0
	Total	25	100.0	100.0			
		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	4	16.0	16.0	16.0		
	Good	15	60.0	60.0	76.0		
	Excellent	6	24.0	24.0	100.0	84.0	24.0
	Total	25	100.0	100.0			

The importance of informal interaction is that, together with the relationship and trust built over time, certain information is more readily available and can be better extracted than within formal sessions. This is not only to get information from the client environment, but also of internal issues and progress that needs attention. The informal discussions are also used to obtain and distribute information, as indicated below.

> *Within the … particular domain within any organisation you have a very strong informal communication network. That is where you normally pick up problem areas in behaviour by tapping into the informal communication network* (36:69:72:72).

Client relationship:

Client relationship is the connection between the client and the service provider to ensure good working relationships and thereby be in a position to extract and feed

information to the benefit of implementation, as a respondent observed:

An uninvolved end user or client will be detrimental to the value proposition. Interdependency is required for a healthy co-operative long term working relationship (4:25:375:375).

The relationship with the client is one of the key success factors for the institutes, as the client is the sole reason for their existence. This was pointed out in paragraphs 4.2, 5.2, 6.2 and 7.2 in this study, and an emphasis was placed on establishing, building and maintaining good client relationships:

Sometimes you must be bold in advising your client in what he is going to need. That is a more difficult one to manage but that you can only do when you have the trust of the client (34:16:32:32).

There is daily interaction between the institutes and the client environment due to the close support that is being given to the client. Therefore, the requirement for solid relations and value added support to be given to the client is top priority for successful operations. Institutes also get tangible feedback in the form of client surveys in order to identify areas for improvement. This helps with "extraordinary relationship creation, value delivery exceeding stakeholder expectations and continuous improvement" (Stacey, 2005) as is necessary for successful operations.

One of the comments made was that the institute values the views of customers and suppliers and wants to be seen as suppliers of good quality products and, in turn, add value to the products of the suppliers. Strengthening relationships, having good working relations, being client focussed, and adding value were also mentioned. The managers identified client ownership, client-funded services, engagement, relation-building events, among others, as being important in their relationship-building efforts with the client:

Then as I also said we need to know what is coming within 3–5 years so that we can gear up for that when it is needed. You need to try to establish networking and relationship building and see what is coming from the client's side (35:75:136:136).

It was evident that the institutes build and develop client relationships on a continuous basis as quoted above. This is done through meetings, visits, exhibitions, road shows, work sessions, social interactions and several other engagement forums. The relationships between the institutes and their clients are such that there are daily engagements with each other through these forums, both formally and informally. This is continuously done in order to build these relationships and to define client requirements. This will be discussed in the next section.

Summary

Implementation activity	How	Why
Client relationships	Daily interaction, close support, value added support, successful operations, tangible feedback, client surveys, client ownership, engagement, relation-building events, meetings, visits, exhibitions, road shows, work sessions, social interaction and several other engagement forums, formally and informally.	To build and develop client relationships on a continuous basis in order to define client requirements, knowing what is going on and required in the environment and aligning implementation to that.

Example from data:

An uninvolved end user or client will be detrimental to the value proposition. Interdependency is required for a healthy co-operative long term working relationship (4:25:375:375).

Sometimes you must be bold in advising your client in what he is going to need. That is a more difficult one to manage but that you can only do that when you have the trust of the client (34:16:32:32).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The alignment between client needs and implementation efforts was also investigated

and the feedback was such that 100% of the respondents indicated that it is both important and very important, as indicated in the top two boxes in Table 6.6 below. The implementation level in terms of implementation gave a rating of 92% for the same category, indicating good to excellent implementation efforts.

Table 6.6: Aligning client needs

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	6	24.0	24.0	24.0		
	Very important	19	76.0	76.0	100.0	100.0	76.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	2	8.0	8.0	8.0		
	Good	13	52.0	52.0	60.0		
	Excellent	10	40.0	40.0	100.0	92.0	40.0
	Total	25	100.0	100.0			

Apart from building on these client relationships to define requirements, the secondary use of these interactions is to use them as environmental scanning sensors in order to understand what is going on in the client environment.

Sense-making:

This focuses on the activities in an organisation that must determine meaning or make sense of situations within that environment in order to support and inform the implementation effort.

During the overarching category of knowing about developments in the environment, the practice of sense-making showed what managers are doing during implementation. This is about interpretation of the environment and goes hand-in-hand with environmental scanning. It is mostly about the activities in an organisation that must determine meaning or make sense of situations within that environment (Weick, 1985).

Once the manager has all the information through various tools and scans, the activity is meant to determine what it means to the organisation and what must happen with the

information to translate it into actions. This is not process-driven or tangible and is one of the aspects where social skills and professional experience are used to make sense and meaning to be put into action. Another point was that the information obtained through the scan, client interaction, among others, needs to be assimilated into a further breakdown of plans, tasks and activities in order to get to the implementation practices as mentioned in the title.

> *We had to look at new business to try and anticipate what is coming, because these guys know what is planned in the next 3 to 5 years and we need to anticipate what is coming so that we can gear ourselves to service that market* (35:7:6:6).

This implied that there were conscious actions by the managers to take the information from the scans and translate it into useful actions which is used to make sense of the environment and to understand what the implications are for the business and act accordingly.

Summary

Implementation activity	How	Why
Sense-making	Interpretation of the environment goes hand-in-hand with environmental scanning	To determine what it means to the organisation and what must happen with the information and translate it into actions. The information is used to make sense of the environment and to understand what the implications are for the business and act accordingly.

Example from data:

> *We had to look at new business to try and anticipate what is coming, because these guys know what is planned in the next 3 to 5 years and we need to anticipate what is coming so that we can gear ourselves to service that market* (35:7:6:6).

Strategic investigation:

This is the process through which a strategy is analysed, defined and implemented and,

in this case, the strategic investigation is made in order to be informed and to execute it successfully.

> *The strategic gap is determined in terms of listing all the issues from domains as well as divisional level and managing the strategies that address these issues in terms of the approved Strategic Management Process (SMP)* (3:36:506:506).

What is meant by this is that the strategic investigation is done by management in terms of best practices that are to be employed and how to do them. That is part of the previous practices done through environmental analysis, customer feedback and informal discussion, among others. This also, once again, indicates the integrative nature and interconnectedness of all of these practices with each other. It also indicates, in line with the strategy-as-practice approach, that implementation cannot be divorced from the strategy formulation process and must be managed as a total integrative and iterative process. Strategic investigation includes the total process as described above whereas environmental scanning is just one part of it.

Strategic investigation is part of formal strategic formulation and implementation and, in this case, the investigation part of the implementation process is indicated. In this context, it is about the strategic investigation that was done through a formal process that followed from the mission statement, vision, objectives, scans and implementation or tools such as the SWOT.

> *These strategic requirements were analysed and concepts developed to accomplish a business strategy for the institute to be in alignment with the intent of the major stakeholders* (4:18:224:224).

Summary

Implementation activity	How	Why
Strategic investigation	Environmental analysis, customer feedback, informal discussion, done through a formal process followed from mission, vision, objectives, scans and	To determine what it means to the organisation and what must happen with the information to translate it into actions. The information is

| | implementation or other tools such as the SWOT. | used to make sense of the environment and to understand what the implications are for the business and act accordingly. |

Example from data:

The strategic gap is determined in terms of listing all the issues from domains as well as divisional level and managing the strategies that address these issues (3:36:506:506).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The strategic planning effort by means of a clearly defined strategic analysis was investigated and the feedback indicated that 88% of respondents acknowledged the importance of the practice. However, 56% indicated that implementation is good, while 32% said fair. This places the implementation effort on the lower end of the scale, thus indicating an area for improvement as seen from Table 6.7 below.

Table 6.7: Strategic analysis

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	3	12.0	12.0	12.0		
	Important	14	56.0	56.0	68.0		
	Very important	8	32.0	32.0	100.0	88.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	2	8.0	8.0	8.0		
	Fair	8	32.0	32.0	40.0		
	Good	14	56.0	56.0	96.0		
	Excellent	1	4.0	4.0	100.0	60.0	4.0
	Total	25	100.0	100.0			

It was found that implementation is an integrated phase in the total strategic management process and cannot be separated or used in isolation of the strategic

management process. Therefore, strategic analysis will be a continuous iterative action during strategy implementation as indicated by the institutes. It was demonstrated that this approach has contributed to a transparent process of strategy implementation for the organisation and indeed to identifying potential issues timeously.

6.2.1.2 Translation and sense-giving

Sense-giving is the action of guidance given to others to influence their actions and interpretations and, in this case, the guidance from middle managers to execute strategies.
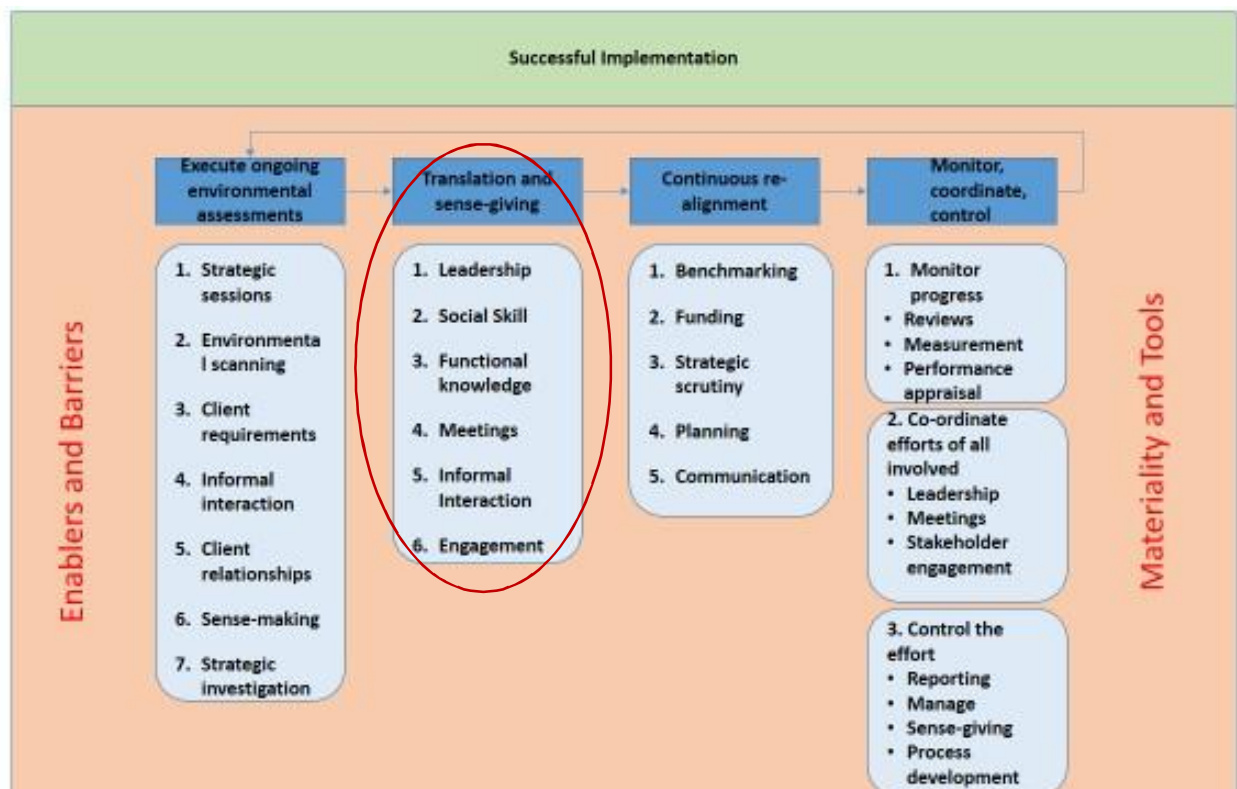
Figure 6.5: Translation and sense-giving

Responsive organisational change is initiated by the actors and transferred to the next level, whether upwards, downwards or laterally, through a reciprocal process of social interaction. This is referred to as sense-giving (Lüscher & Lewis, 2008; Rouleau, 2005; Bakke & Bean, 2006; Hope, 2010). Sense-giving, in the context of strategy implementation in the institutes, refers to leadership, social skills, functional knowledge,

meetings and certain engagement actions as discussed below.

Leadership:

This is the trait that comes from a person who leads and, in this case, the leadership that is exhibited to give direction and lead the implementation process.

The information received from the data indicated leadership as a critical success factor and enabler to execute strategies effectively. The leader must be able to think strategically and translate that into tactical actions in order to execute them effectively. The leadership must be able to take the lead and initiate these actions and also ensure that they are cascaded downwards so that the next level of management gives the required guidance. The team effort was highlighted as a very important practice during the analysis and therefore a leader would be a required to take charge and lead the group. Leading by example was also mentioned and the impact that this has on the output of the divisions, in this case, the conversion of events in the environment, strategies and changing circumstances into strategic and operational tasks and actions.

> *I think there should be a visionary leader that knows what will work and where things are going and how do you know that needs to go out and talk to people and if you got a relationship with clients and people out there you start getting the information and you get a feel these things inter-relate and they connect and you get a feel what is happening in the industry and where things are moving and where things are going* (32:18:23:23)

It is the responsibility of leadership to take action and to give direction in relation to the strategic way forward. The action of implementation is the role of leadership which must give guidance on all activities relating to the implementation of strategy.

Social skill and professional knowledge:

This is when managers combine their social skills with their professional knowledge in order to produce results (Valmra et al, 2006).

The role of middle managers is crucial to the success of strategy implementation and is

highly dependent on other factors apart from those mentioned previously. The social skills and personality traits required during implementation ensure that this is addressed successfully. There are definite interventions by middle managers as strategists and executing actors of specific practices and processes to implement strategy:

> *The leader must be someone that thinks strategically who can lead the people onto a certain path and keep them there. Remember, a manager will tell you what to do, a leader will show you what to do. That is the difference but I also say that and I said it earlier that you need some guidance from the top* (24:71:59:59)

As indicated above, it is the social skills combined with professional or functional knowledge that makes these managers excel. The environment of the institutes is a technical research and support context and technical people do not always possess the required social skills for this role. These skills are an important enabler for the role of sense-giving and providing guidance and must be developed and used by managers.

> *I think on your intangibles, your behaviour, your team spirit, I think that you can also maybe not measure on figures but you can quickly pick up if there is a team spirit or not. By your management style, servant management style or your living out of your values at the end of day will only be proved if you have a smiling workforce or a workforce that is unhappy* (33:73:81:81).

Meetings:
This is an organised gathering of people for discussion or supporting and co-ordinating the strategy implementation effort.

There are several ways during which the sense-giving actions are transferred. Having meetings is one such activities that provides a formal co-ordination forum for the implementation of strategy. There are management meetings, project meetings, domain meetings, line meetings, client meetings, employee meetings and many more. The principle is that these act as forums where the sense-giving actions are communicated and co-ordinated with the rest of the organisation.

Then the next level is a Line Management forum. We also have a next level of Management and we do involve them as well and tell them about the drivers—what we are doing and our action plans (25:9:14:14).

That happens on especially these first and second planning meetings. We've got three planning meetings through the year (27:12:38:38)

The meetings vary in format and purpose and can range from management meetings, project meetings, safety meetings to technical meetings as indicated above. They also vary in composition and can include management, employees, clients, or other stakeholders or attendees, depending on the purpose. These meetings are used as co-ordinating forums for management to execute its mandate to implement strategy as required by the institutes' management.

During meetings you constantly plant the seed and later on try to enforce that (32:12:23:23).

Informal interaction:

These are discussions and interactions that occur outside of formal and organised forums such as talks, texts, e-mail, Facebook, social networking, that can help the middle manager to give guidance around implementation. This typically includes talks, discussions, e-mails, meetings, phone calls, functions, social get-togethers, engagements, among others, during which the middle manager gives guidance and executes sense-giving. There is ongoing interaction during the guidance and sense-giving role and management must ensure that it includes the people involved and the message is transferred properly.

Our strategy comes from interaction with each other from talking about certain things from discussing certain things (24:54:41:41).

Engagement:

Engagement is the process by which an organisation involves people who may be affected by the decisions it makes or who can influence the implementation of its decisions. In this case, the engagement is crucial in the successful implementation of strategy.

Engagement was conducted on an ongoing basis through scheduled decision-making forums, scheduled visits and client work sessions as well as through ad hoc meetings. (10:4:227:227)

Stakeholders in this context are the clients, employees and the society within which these institutes operate. The engagements include, typically, presentations, meetings, work sessions, personal appointments, conferences, membership of organisations, social events, recreational activities and others.

6.2.1.3 Continuous re-alignment

As the environment and the situations change, it is necessary to continuously adapt and align the direction of the divisional implementation effort to that of the changed environment.
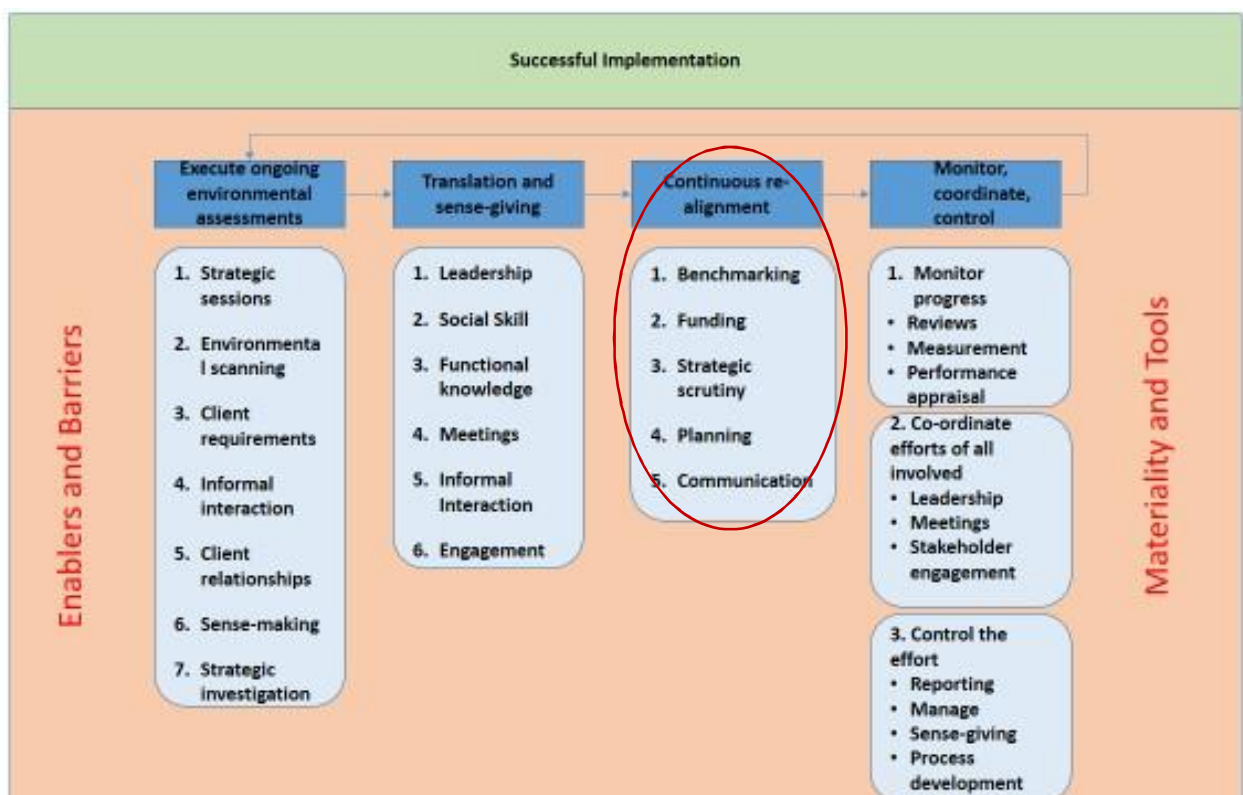
Figure 6.6: Continuous re-alignment

The use of benchmarking, the alignment of funding with the shape, size and output of

the institute, the use of strategic scrutiny to align the new direction, the use of proper planning and the implementation of sound internal and external communication structures and forums were identified as key to success in aligning the implementation of strategy.

Benchmarking:

This is a standard against which a product or service is being made or compared. Benchmarking refers to the effort and actions in comparing the services or products of one organisation to that of another. It is usually done to improve offerings as part of the continuous improvement effort and to ensure client satisfaction. Benchmarking also emerged from the data as being used regularly by the institutes to ensure that they are current and add value to the output that they deliver to the client. This ensures that client requirements are met, which, in turn, is critical to the sustainability of the institutes. Re-alignment can be done should there be a mismatch between the current direction and the implementation effort.

> *The services described above are delivered by a CoE, benchmarked against international norms and practices, applying multi- and inter-disciplinary methodologies with a joint and integrated focus* (3:9:373:373).

This means that these institutes use benchmarking as a tool to ensure continuous improvement in their different environments. Whether it is test and evaluation or research in terms of product development or operational research being conducted, there is an ongoing benchmarking effort to ensure that the services and/or products delivered are current and aligned with the implementation efforts.

Furthermore, the institutes use other entities such as universities to complement and supplement their service offerings, and a high degree of collaboration exists to ensure the output is benchmarked against international norms and standards.

> *Our engineers and our scientists do go overseas. They go and visit similar institutes and clients over there. They benchmark themselves. From our quality side, we normally ask them to go and benchmark them and to write a report how we are doing compared to other institutes over the world* (32:10:48:48).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The question relating to this was about benchmarking to other similar environments in order to measure the operational effectiveness of the institute. The importance as indicated in Table 6.8 below came out at 76% for the top two boxes, which can be seen as fairly important, but the level of implementation of the institutes is very low. It was measured at 36% for the top two boxes, which means that 64% lies in the bottom two boxes and indicates a very low level of benchmarking actually being done at the institutes.

Table 6.8: Benchmarking

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	6	24.0	24.0	24.0		
	Important	11	44.0	44.0	68.0		
	Very important	8	32.0	32.0	100.0	76.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	4	16.0	16.0	16.0		
	Fair	12	48.0	48.0	64.0		
	Good	8	32.0	32.0	96.0		
	Excellent	1	4.0	4.0	100.0	36.0	4.0
	Total	25	100.0	100.0			

This benchmarking is not only necessary to have a yardstick for purposes of comparison, but to undertake situational awareness and environmental scans of what is going on in other similar environments. It is thus being used as a standard for measuring own services against those of similar service providers, and as a tool for environmental analysis.

> *Benchmarking as well as your environmental scanning [is done] to know*

what will requirements be in the test and environmental arena within the next 3 or 5 years (39:8:12:12).

Funding:

Funding includes the economic sustainability factor as a resource to ensure execution of the mandate.

The biggest enabler certainly is money. That is the biggest enabler for what we are doing. In everything that we do, even from generating strategy to executing projects—that is it (34:65:147:147).

The above statement indicates that funding is a driver of what the institutes do. This might seem to be simple, but funding varies and middle managers can only implement what is funded and therefore strategy implementation must be aligned with the funding allocation. Institutes are funded by means of contracts awarded and managed on break-even. Very limited funds are allocated by way of grants to sustain the facilities and capabilities. Funding is a major enabler of these institutes and therefore critical if their capabilities are to be sustained. They have to account for all costs, as any private business has to do, and the costs are then recovered through a number of sources of income. Income is generated through orders, transfer payments, contracts, agreements and sometimes grants. This can be through Armscor, the government or commercial business through the private sector or in the international arena. None of the work is guaranteed and strategies need to be constantly aligned towards the requirements of the industry. This implies that the continuous alignment of strategy needs to be done in relation to the funding available. This is a direct enabler of the strategic success and direction of the divisions. There are also secondary objectives that need to be achieved, such as being aligned with the corporate goals of transformation and rejuvenation.

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation

or strategy implementation progress made.

This can only be achieved through the alignment of strategies to the funding and ensuring sustainability of the facilities. The question was whether funding of the institute, as an enabler, is aligned to the requirements of clients. This is a very obvious question as no organisation can operate without sustainable funding; that is indicated in the response of 100% in the top two boxes of Table 6.9 below on the importance of the funding. However, when looking at the gap between that and reality, it is clear that the response of 64% means that these institutes are not funded fully according to their requirements and it is therefore crucial to address this situation as it relates to the survival of these institutes' capabilities, their strategies and their alignment.

Table 6.9: Funding

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	9	36.0	36.0	36.0		
	Very important	16	64.0	64.0	100.0	100.0	64.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	3	12.0	12.0	12.0		
	Fair	6	24.0	24.0	36.0		
	Good	10	40.0	40.0	76.0		
	Excellent	6	24.0	24.0	100.0	64.0	24.0
	Total	25	100.0	100.0			

Strategic scrutiny:

The process through which the strategy is scrutinised, analysed and dissected in order to align implementation with strategy.

The institute's strategy is revisited continuously but major scrutiny of its vision, mission and strengths, weaknesses, opportunities and threats (SWOT) are addressed annually (4:1:211:211).

The strategic scrutiny in this case is the analysis that is done during the alignment of strategy to goals and objectives by the managers and the activities they undertake to implement these strategies. Business objectives have been identified in terms of

business strengths, weaknesses, opportunities and threats. These are done through several processes such as customer analysis, mission, vision, value systems, strategic objectives, critical success factors, and structures, among others. It is done through annual business planning processes as well as strategic and operational analysis. Several tools are used during this process which will be discussed later, but the important aspect is that this is used to align strategy in order to achieve objectives.

It is thought that this approach has contributed to a transparent formulation of strategy for the organisation and indeed to identifying potential threats timeously to develop annual objectives and short-term strategies that are compatible with the long-term objectives and grand strategies. It is also done to implement the strategic choices by means of budgeted resource allocation, in which matching of tasks, people, structures, technologies and reward systems are emphasised.

> *Identify the most desirable options by evaluating each option in light of the company's mission* (7:6:48:48).

The strategic way forward is the culmination of the process whereby all the organisational functions and resources are integrated and co-ordinated to implement formulated strategies. These are aligned to the environment to ensure the long-term objectives and competitive advantage through adding value for the stakeholders. These were identified by the managers as indicated below.

> *You go through your vision and mission statements, your objectives, your SWOT analysis for your division and then how you are to deliver a service that you are mandated to* (39:2:12:12).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

To the question of how important some form of strategic analysis is during the planning

phase by means of a clearly defined strategic analysis, the response was 88% important and very important. Once again the implementation was lacking at 60% for the good and excellent categories, with only 4% in the excellent category, thus indicating a lack of implementation as in Table 6.10.

Table 6.10: Strategic analysis

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	3	12.0	12.0	12.0		
	Important	14	56.0	56.0	68.0		
	Very important	8	32.0	32.0	100.0	88.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	2	8.0	8.0	8.0		
	Fair	8	32.0	32.0	40.0		
	Good	14	56.0	56.0	96.0		
	Excellent	1	4.0	4.0	100.0	60.0	4.0
	Total	25	100.0	100.0			

Planning:

This is the process of planning specific actions to be performed during implementation and then setting goals to achieve them.

> *Formal statement of business goals, the reasons why they are believed attainable, and the plan for reaching those goals* (11:9:383:383).

This term refers to the activity that follows the strategic analysis and is done specifically to align the planning cycle to the goals that came out of the analysis. Planning activities in the institutes must be aligned to their goals. Planning includes the budgeting cycle and specific financial goals.   Also identified were human resources, operational, stakeholder marketing and many more goals that need to be aligned with the operational planning.

The planning also needs to synchronise with the corporate planning cycle in each of the relevant environments.

> *In your strategic planning those are the inputs that you need before you can start your strategic planning—to see what are those requirements and then*

that those requirements be set into objectives and goals to be reached (39:13:18:18).

Some of the planning at the lower level is based on projects. It is usually a team effort and consolidates upwards to support the divisional and ultimately the corporate goals. All of these planning cycles need to be synchronised. Some of the institutes are working on key performance indicators which are contracted to them and they then plan accordingly. These key performance indicators are cascaded down to the domains and are planned and contracted accordingly. These are captured in a business plan that meets the key performance indicators for the year in the short term but also provides some strategic direction in the long term.

> *We must also state that within the majority of our projects environments and in our portfolios, we always have a 3-year planning horizon aligned with the DOD medium planning horizon* (36:30:49:49).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The objective here was to determine whether operational and strategic planning is aligned with strategic objectives. The importance as indicated by the participants was rated at 96% for the top two boxes, which indicates that this alignment is seen as very important. The implementation of such planning also received an average rating of 72% in the good category and 28% in the fair category, with none in the poor and excellent areas, thus indicating an average planning effort as seen in Table 6.11 below.

Table 6.11: Planning

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	11	44.0	44.0	48.0		
	Very important	13	52.0	52.0	100.0	96.0	52.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	7	28.0	28.0	28.0		
	Good	18	72.0	72.0	100.0	72.0	0.0
	Total	25	100.0	100.0			

The planning cycle is a top-down and bottom-up approach. Guidelines are given from the top in relation to corporate planning and objectives. At the same time there is a planning and goal setting process that is done on the project level within the domains and cascades up into the corporate environment. In the end, these are synchronised to make the activities performed in the planning phase part of the alignment of strategies and plans to corporate objectives.

Communication:

This is communication that takes place internally with the employees as well as with external stakeholders during the implementation process.

We will create more visibility of their service that they provide and value that they add by means of attendance, presenting and publishing of symposiums, lectures, journals, magazines, functions, events, communication sessions and client focussed forums (1:5:161:161).

The practice here is the internal communication to the employees as well as the external communication to stakeholders regarding the direction and alignment of the strategic direction that the institutes pursue based on the results obtained from them. There are several methods of communication, such as formal communication and informal communication. It can be by means of meetings, reviews, seminars, conferences, letters, e-mails or specific sessions. The institutes consistently try to encourage employees to participate in and contribute to discussions, whether it is on

project level or part of strategic discussion or the communication and buy-in of strategy.

They talk to their people, they get ideas from the people and it comes up to the top (30:14:23:23).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Communication was viewed by most to be one of the most important issues to address within the institutes. This can also be seen from the results in Table 6.12 where it was indicated to be 100% important and very important. Keeping the people informed about the direction and goals will ensure that implementation is executed. Making them part of the solution and getting their commitment is important for success and can be achieved through continuous communication through several forums as well as groupings such as the management team, colleagues, and one-on-one, amongst others. This also demonstrates transparency to the rest of the organisation. This, in turn, develops trust that is critical in the development of good working relationships.

For the implementation of the strategy? One of the very important things that I think is the ownership of the strategy. If you can get your teams or your groups in your division to actually buy-in to the strategy I think half of the job has been done (37:46:107:107).

Table 6.12: Communication

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	12	48.0	48.0	48.0		
	Very important	13	52.0	52.0	100.0	100.0	52.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	10	40.0	40.0	44.0		
	Good	12	48.0	48.0	92.0		
	Excellent	2	8.0	8.0	100.0	56.0	8.0
	Total	25	100.0	100.0			

The same applies to all other stakeholders. It is important to continue to have a good communication strategy by ensuring that communication works properly on all levels. It is just as important to ensure effective communication with the client environment as with the internal environment. This links up with the importance of the previous practices of environmental scans, client relationships and stakeholder engagements.

> *I also think that is how it is being communicated. How do you communicate? Not only with your employees but also with your customers, with your stakeholders— that is the important thing to create that environment and behaviour on your side* (39:42:38:38).

Summary

Implementation activity	How	Why
Benchmarking, funding, strategic scrutiny, planning, communication	The use of benchmarking (other entities, universities and facilities), the alignment of funding with the shape, size and output of the institute (strategy implementation must be aligned with the funding allocation), the use of strategic scrutiny to align the new direction (customer analysis, mission, vision, value system, strategic objectives, critical success factors, structure, etc.), the use of proper planning (business, operational, project) and the implementation of sound internal and	To also continuously adapt and align the direction of the divisional implementation effort to that of the changed environment. Managers need to ensure that they also align their implementation efforts to the new direction due to changes in the environment. The strategic scrutiny in this case is the analysis that is done during the alignment of strategy to goals and objectives by the managers and activities they

external communication structures and forums were identified as key to their success in the alignment and implementation of strategy.	are doing to implement these strategies.

Example from data:

… benchmarked against international norms and practices, applying multi-and inter-disciplinary methodologies with a joint and integrated focus (3:9:373:373).

Formal statement of business goals, the reasons why they are believed attainable, and the plan for reaching those goals (11:9:383:383).

How do you communicate? Not only with your employees but also with your customers with your stakeholders – that is the important thing to create that environment and behaviour on your side (39:42:38:38).

6.2.1.4 Monitor, co-ordinate and control

6.2.1.4.1 Monitor progress

The next activity that became evident as executed by managers was the monitoring of progress during the implementation of strategies. This was done by means of reviews, some form of measurement and performance appraisal of the outcomes in order to monitor the progress of implementation actions.
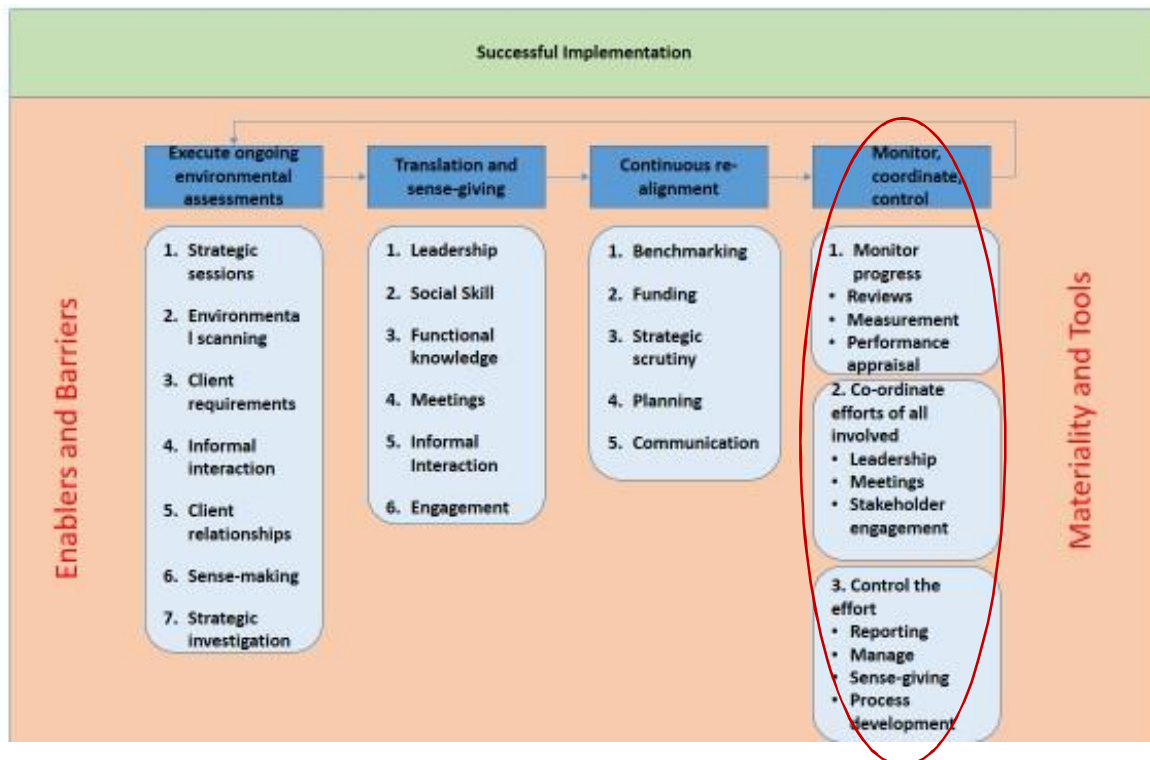
Figure 6.7: Monitor, co-ordinate and control

Reviews:

These are formal assessments with the intention of making changes if necessary. This refers to the review of processes, plans and activities to ensure effective implementation.

> *During the ISO review meetings we can see if you achieved that. It is a way of checking if we have achieved objectives* (38:27:30:30).

It became apparent from the analysis that most of the institutes are using reviews extensively to assess several aspects from the business environment in order to monitor progress related to the actions that were implemented strategically. That can include formal and informal reviews and can vary from reviews of strategic plans to operational procedures and tasks. These reviews are done by different people, depending on the purpose of the review and the required outcome. Most institutes implement some form of formal ISO system that also helps to ensure continuous reviewing, monitoring and implementation of corrective actions as continuous improvement efforts are made.

As such, the documents are prepared for the target audience and the necessary review processes are sustained to achieve this (4:22:358:358).

One of the managers mentioned that,

… we have a lot of discussions on that and we also have a management review whereby we look at our plans of the past year and we review that. (24:48:29:29)

This emerged not only for the management documents but also down to the project level where reviews are used to monitor the progress of activities on different levels. These are done at monthly intervals, in view of the level of urgency or importance, or are handled as scheduled meetings.

Improvement opportunities are identified during the Annual Management Review meeting and documented in the Management Review minutes as per the ISO Quality System Management Requirement (7:26:145:145).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Table 6.13 below provides an overview of the importance and implementation level of formal reviews of strategic plans as a method to monitor the progress of strategy implementation and as discussed above.

Table 6.13: Reviews

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	11	44.0	44.0	52.0		
	Very important	12	48.0	48.0	100.0	92.0	48.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	5	20.0	20.0	24.0		
	Good	14	56.0	56.0	80.0		
	Excellent	5	20.0	20.0	100.0	76.0	20.0
	Total	25	100.0	100.0			

Measurement:

This is the action of measuring in order to determine if implementation and corrective measures had the desired effect.

> *The most objective measurement will be to look at the financial performance of the company. To look at the financial situation and to look at the profit that we make and the break-even situation which we are striving towards (35:14:18:18).*

The next practice that surfaced from the analysis of the category of monitoring progress was the measurement practice. There is a well-known saying: "to measure is to know". This practice came out very clearly from all institutes, specifically the measurement of various aspects of the strategy implementation effort. The measures found at the institutes varied from tangible measurements such as financial and quantitative measurements to some such as perceptions that are not so tangible and difficult to measure. Some of the types of measurements were financial (income, cost of sales, operating expenses, order cover and cash flow), client satisfaction, employee perception, people performance, project performance and many more. The shortcoming was that although all managers identified certain measurements and agreed that measurement was used to monitor progress, not all used it to the extent that the implementation effort could be measured against it.

> *No, we measure very badly on how well we implement the strategy but now I can tell you that I think there is a lot of subconscious measurement as well. Approximately eight years ago we developed a whole role, mandate, requirements, functions all of those things that we did and every year I certainly have a look at that and see if we are indeed still doing that and how well we are doing that (34:44:81:81).*

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate
> how important you think each of the concepts are and secondly how your
> institute has performed in terms of the actual level of strategy implementation
> or strategy implementation progress made.

The measurement of achievement of goals was done during the questionnaire and the
group indicated in Table 6.14 that it is important (44%) and very important (56%). With
regard to implementation, it was indicated that they are measuring well, which can be
attributed to the fact that the bigger organisations require certain indicators and
measurements to assist with decision-making, thereby assisting institutes to measure
effectively.

Table 6.14: Measurement

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	11	44.0	44.0	44.0		
	Very important	14	56.0	56.0	100.0	100.0	56.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	7	28.0	28.0	28.0		
	Good	15	60.0	60.0	88.0		
	Excellent	3	12.0	12.0	100.0	72.0	12.0
	Total	25	100.0	100.0			

One of the suggestions was to measure the impact of the output of the institutes on the
client environment but in the context of monitoring progress of the implementation effort,
the objective must first be defined before it can be part of this practice. Measurements
at project and task levels can also be used as indicators of the progress of
implementation. Some institutes measure their key performance indicators to see what
progress is being made. One shortcoming identified was that not everyone and not all
efforts in terms of measurement are aligned with the strategic objectives, and therefore
they are not aligned with monitoring the progress in terms of implementation, thus

leaving space for improvement in some areas.

> *We have our goals we have our objectives and how to measure it, on the financial side, on the HR side, on the deliverables that you deliver to your client that need to be measured in order for you to determine success* (39:31:30:30).

Performance appraisal:

This is an act of assessing individual, project or organisational performance to ensure that all goals are aligned with the intended strategy.

> *The customer feedback as a measure of customer perception on the service elements is captured in the customer satisfaction survey analysis* (4:29:553:553).

The performance appraisal was another practice identified as activity or practice used by the managers to monitor the progress of implementation. Several tasks, actions, projects and processes to be implemented are identified during the strategic management process. There are several evaluation systems in use and they vary from institute to institute. These systems also measure employee performance, project performance, client perceptions, employee satisfaction, and the institute's performance, among others. There are both formal and informal or adapted systems. Some institutes use the Balanced Score Card system and some are contracted on Key Performance Indicators as formal measurement systems.

> *The most important part is that you have everything there on the table, but the measurement part − performance measurement part − that is very important, because, without that, you cannot really manage the deviation on your plans* (39:36:30:30).

There are also the types of databases, such as Excel, that are used to do some form of measurement. These systems are used by the managers, apart from the corporate intention, to track certain activities and outputs that are directly in support of strategy implementation. Financial performance is also used as a measurement system in terms of sales, cost of sales, operating expenses and growth.

Perception measurement of what your employee perceives it to be and then your results at the end of the day. That is the way that you can measure this success of these operations (39:72:75:75).

In order to ensure that it is done, managers contract these outputs to individuals to execute. This forms part of the performance appraisal process and will be discussed later. Relevant to the monitoring of implementation is the fact that managers use the performance appraisal system to see the progress in terms of certain tasks and activities that are in support of implementation.

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Table 6.15: Performance appraisal

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	13	52.0	52.0	60.0		
	Very important	10	40.0	40.0	100.0	92.0	40.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	9	36.0	36.0	36.0		
	Good	11	44.0	44.0	80.0		
	Excellent	5	20.0	20.0	100.0	64.0	20.0
	Total	25	100.0	100.0			

The question relating to this was whether the employees' individual performance appraisal is aligned with implementation efforts. From Table 6.15 it can be seen that this was viewed as important by 92%, whereas 64% of respondents see the implementation level to be lying in the good and excellent areas.

Summary

Implementation activity	How	Why
Reviews, Measurement and Performance Appraisal	Reviews are held through formal processes such as prescribed by ISO, management meetings and project forums as activities to monitor progress. It is also done by informal assessment through discussion, engagement and systems that can give the required feedback to management.	These are done to be able to monitor progress on strategic and operational activities and progress.
	Measurement are done through tools such as the BSC, Excellence model, Financial system, Integrated services model, and annual performance measurement through formal processes and tools. Deliverables to the client, client satisfaction, client value added are measured through engagement and formal as well as informal surveys.	It is important to monitor, measure and evaluate progress in an objective and sound manner against set goals.

Example from the data:

It is reviewed within the Management Team before it is approved and promulgated and communicated to our staff (30:49:67:67).

A perception measurement in your team or in your division – I think that is a starting point with your implementation part so that you know where those gaps are (33:46:45:45).

We have our goals, we have our objectives and how to measure it. On the financial side, on the HR side, on the deliverables that you deliver to your client that need to be measured in order for you to determine success (33:31:30:30).

6.2.1.4.2 Co-ordinate efforts of all involved

Ensuring effective implementation requires some form of co-ordination of all activities and the inclusion of all involved. The main practices that came from this study were the effect of leadership on this, the use of meetings in the co-ordination effort, and the involvement of stakeholders as part of the co-ordination effort.

Leadership:

The trait that comes from a person who leads and, in this case, the leadership that is exhibited to ensure that all efforts in strategy implementation are aligned and effected efficiently.

> *The leader must be someone that thinks strategically, who can lead the*
> *people onto a certain path and keep them there. Remember, a manager will*
> *tell you what to do, a leader will show you what to do. That is the difference,*
> *but I also say that, and I said it earlier, that you need some guidance from the*
> *top* (30:71:59:59).

In order to co-ordinate all the efforts in strategy implementation, you need to have a leader who can execute the required activities through the use of leadership skills. This is the senior manager in the case of the institutes as well as the management teams at the next level. The team effort was identified as a very important practice during the analysis and therefore a leader is required to take charge and lead the group. Also mentioned was leading by example and the impact that this has on the output of the divisions. It is the responsibility of leadership to take the organisation forward, to take action and to give direction in relation to the strategic way forward. The action of implementation is the role of leadership and therefore in decision-making and co-ordination of all activities relating to the implementation of strategy.

> *Once you have made that decision you must be able to defend and motivate*
> *that decision. Leadership is very important in our environment* (38:17:23:23).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate

how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The request was based on the fact that management takes control of strategy implementation through the demonstration of good leadership. The response on the importance was, as also indicated above, 100% important and very important. The outcome of the implementation level was 72% on the top two boxes, indicating, in Table 6.16, a good level but also that there is improvement required.

Table 6.16: Leadership

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	7	28.0	28.0	28.0		
	Very important	18	72.0	72.0	100.0	100.0	72.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	4	16.0	16.0	16.0		
	Fair	3	12.0	12.0	28.0		
	Good	15	60.0	60.0	88.0		
	Excellent	3	12.0	12.0	100.0	72.0	12.0
	Total	25	100.0	100.0			

Leadership, in this sense, is the act of managing, co-ordinating and controlling the efforts related to strategy implementation. It is about giving guidance to the rest of the organisation to ensure that all are aware of the direction and that all efforts are going into that direction.

Meetings:

These are organised gatherings of people for discussion or other purposes of supporting and co-ordinating the strategy implementation effort.

> *Specific and dedicated actions are planned with these people such as presentations, meetings, work sessions, personal appointments, conferences, memberships of organisations, social events and recreational activities* (1:4:164:164).

This relates to the activity identified through the analysis of having a more formal co-ordination forum for the implementation of activities. Meetings are used to communicate and co-ordinate all such activities amongst the stakeholders. There are also other purposes, not only for controlling the implementation effort. The level of the meetings varies, from the project environment where these activities are co-ordinated on the lowest level, to formal management meetings where these are addressed in a specific manner.

> *On the forums or the other meetings importantly there are your structured forums or your structured meetings* (39:57:57:57).

The meetings vary in format and purpose and can range from management meetings, project meetings, safety meetings to technical meetings. They also vary in composition and can include management, employees, clients, other stakeholders or attendees, depending on the purpose. The important point to understand in the context of the analysis done is that these meetings are there to be used as co-ordinating forums for management to execute their mandate and implement strategy as required by the institutes' management.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The results of the above question are shown in Table 6.17 below indicating that meetings are seen to be an important forum that supports the implementation of strategy in the institutes even though the implementation thereof is lagging at 60% and seen as an area for improvement.

Table 6.17: Meetings

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	5	20.0	20.0	20.0		
	Important	14	56.0	56.0	76.0		
	Very important	6	24.0	24.0	100.0	80.0	24.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	9	36.0	36.0	40.0		
	Good	14	56.0	56.0	96.0		
	Excellent	1	4.0	4.0	100.0	60.0	4.0
	Total	25	100.0	100.0			

Stakeholder engagement:

Stakeholder engagement is the process by which an organisation involves people who may be affected by the decisions it makes or who can influence the implementation of its decisions. In this case, the stakeholders are crucial in successful implementation and therefore so is the requirement to engage.

> *It is equally important to ensure that the institute engages with all their stakeholders* (1:3:164:164).

The above quotation is supported by the questionnaire in that 72% of the respondents indicated the importance of stakeholder engagement plans to ensure that stakeholder relationships are sustained.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

They also indicate that the implementation level in the institutes is good to excellent, as indicated in Table 6.18 below. This was also evident from the interviews as being one of the most important actions addressed at the institutes.

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Table 6.18: Stakeholder engagement

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	7	28.0	28.0	28.0		
	Good	11	44.0	44.0	72.0		
	Excellent	7	28.0	28.0	100.0	72.0	28.0
	Total	25	100.0	100.0			

Stakeholders are groups and individuals who affect and are affected by the achievement of the organisation's mission, goals and strategies. They include the organisation's suppliers, competitors, government and regulatory organisations, unions and employee groups, the financial community, owners and shareholders, and trade associations (16:1:348:348).

Stakeholders are all those who are influenced by the operations of the institutes. Therefore, all co-ordination efforts must be inclusive of these entities so that they are consulted. Specific and dedicated actions are planned with stakeholders, such as presentations, meetings, work sessions, personal appointments, conferences, membership of organisations, social events and recreational activities. The institutes value all the inputs and influences of these stakeholders and put much effort into engagement and collaboration with these entities.

Stakeholder engagement was conducted on an ongoing basis through scheduled decision-making forums, scheduled visits and client work sessions as well as through ad hoc meetings (11:4:227:227).

It is not only clients who are important to the institutes; it is just as important to identify and maintain a good relationship with all other stakeholders. Long-term relationships are built with suppliers, clients and the community to ensure continuation of good relationships and mutual benefits. Stakeholders are persons, entities or groups who are directly or indirectly affected by the institutes, as well as those who may have interests in these institutes and/or the ability to influence its outcome, either positively or negatively. Stakeholders may include locally affected communities or individuals and their formal and informal representatives, national or local government authorities,

politicians, religious leaders, civil society organisations and groups with special interests, the academic community, or other businesses. The stakeholders were defined by the institutes through the interviews in terms of their engagement with them, specifically towards the co-ordination of implementation efforts.

> *I think the most important part of your strategic planning is your engagement with your clients with the parent company as well as your employees, because you need to take your employees with you, whatever directions you are going into* (9:19:24;24).

Summary

Implementation activity	How	Why
Leadership, meetings, stakeholder engagement.	Leadership was viewed as a trait that drives successful strategy implementation. This is done through taking ownership, take control and co-ordinate efforts through discussions, meetings and several engagement forums defined by the team. These are done through formal and informal interactions and engagement. Meetings in several formats and purposes are used to manage these actions.	To guide, co-ordinate and lead implementation.

Example from data:

> *Team spirit has to do with the environment that they are operating in and how your team leader or your divisional leader or divisional manager create that environment and make them part of the decision-making* (33:74:81:81).

> *At monthly intervals urgent or otherwise important issues are addressed as part of the scheduled personnel meetings* **(3:3:211:211)**

> *Then in support of that we have one-on-one portfolio meetings between Portfolio Managers and Domain Managers and members of the management team and the Senior Executive Manager. This is an opportunity for the Senior Executive Manager to focus more closely on a given portfolio* (30:100:94:94).

6.2.1.4.3 Control the effort

The control part of implementation is important as without proper control mechanisms in place, the institutes indicated that implementation will fail. This is concerned mainly with reporting, project management, sense-giving and process development in the strategy implementation context as indicated by the quotation below.

> *It involves three basic stages which are strategy formulation, strategy implementation and strategy evaluation and control* (3:38:509:509).

Reporting:

The action to give a spoken or written account of progress and achievements in terms of the progress of strategy implementation.

> *Monthly financial reports are prepared and include detail such as the financial information on the income statement (monthly and year-to-date), balance statement, profit and loss per month, debtor's age analysis, loan account and creditor information* (4:31:755:755).

The reporting effort in most organisations was found to be very comprehensive, partly due to the governance and compliance requirements of the PFMA and corporate requirements. All institutes must adhere to these reporting structures and report as such. There are monthly financial reports, operational reports, annual reports, quarterly reports, BEE, human resources reporting and many more.

> *For example, at the end of each month we need to report on what is happening in our departments. That is compiled into one report which is discussed on an EXCO level* (31:27:96:96).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The question in this case was to define the importance of management reporting to keep track of implementation activities within the institute, and secondly the degree to which this is executed. This was perceived to be important as 92% of the responses were located in the top two box areas, whereas the implementation scored lower at 62% in the top two box areas in Table 6.19. This indicates an opportunity for improvement in this area.

Table 6.19: Reporting

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	14	56.0	56.0	64.0		
	Very important	9	36.0	36.0	100.0	92.0	36.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	8	32.0	32.0	36.0		
	Good	15	60.0	60.0	96.0		
	Excellent	1	4.0	4.0	100.0	64.0	4.0
	Total	25	100.0	100.0			

There are, moreover, reporting requirements defined by the relevant managers of each institute and designed and defined to keep track of activities and progress on outstanding tasks. These include financials, projects, personnel, strategy and operations, among others. All of these are used in conjunction with the corporate requirements as reports to assist with the controlling and co-ordination part of their activities in relation to strategy implementation.

Project Management:

This refers to the actions and interventions executed to manage a project successfully and can be used to manage any project such as strategy implementation in this case.

Support systems for financial planning, project planning, record keeping and planning implementation are well entrenched within the organisation (4:12:197:197).

Project management is used in most of the institutes as best practice to execute the projects and project-related work. Most have well established project management systems and planning in place, and most work can be accounted for in terms of targets on projects. Some institutes indicated that they focus on tasks and use a tailored approach to project management while in some cases, people see only tasks and not a project view at all, which might seem to be an isolated view in terms of the bigger organisation.

> *I use a MS Project linked to a centralised system and we do weekly timesheets. So everything is measured in time and people don't like that. Even I don't like to do it, but that is the best way of doing it. Anybody can at any time ask but how much time did you spend on that and we can tell them exactly what it is* (34:59:129:129).

The successful execution of projects, whether technical or not, is in support of the strategic initiatives of the institutes, which means that project management reinforces strategy implementation, even though it may not be optimally utilised. Some institutes use project management as a tool to manage matters outside of the technical environment as well. Unfortunately, not all use the advantages of project management to their benefit, as a planning tool as well as a mechanism to ensure accountability and best practice.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The objective of this question was to ascertain the importance of using project management of strategic initiatives as an implementation tool and to determine the level of implementation achieved. This is indicated in Table 6.20 below. The importance was indicated to be 80% and the implementation to be 52% in the top quadrants of the plot.

This indicated the requirement to look at project management as a tool during implementation. Furthermore, 40% indicated that they are doing it fairly, which means that 92% indicate that they are doing it fairly well to excellently. It can therefore be deduced that, although the implementation level is low, it is seen as important and there are efforts to use project management as a tool to implement strategies, although it is also seen as an area for improvement.

Table 6.20: Project management

Valid		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Not important	1	4.0	4.0	4.0		
	Slightly important	4	16.0	16.0	20.0		
	Important	15	60.0	60.0	80.0		
	Very important	5	20.0	20.0	100.0	80.0	20.0
	Total	25	100.0	100.0			

Valid		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	2	8.0	8.0	8.0		
	Fair	10	40.0	40.0	48.0		
	Good	9	36.0	36.0	84.0		
	Excellent	4	16.0	16.0	100.0	52.0	16.0
	Total	25	100.0	100.0			

Sense-giving:

This is the action of guidance as a control mechanism by the middle manager given to others to influence their actions.

> *I think you should not conclude now that we get a strategy from corporate,*
> *we get some guidelines that are common to all the units* (50:34:83:83).

The task here is for the manager to give strategic and technical guidance to the division derived from corporate guidelines. The institutes' diversity makes it critical that each manager uses his or her skills and professional knowledge to draw from corporate guidelines what strategy to follow for his/her relevant area. The activities include the collation of information which means that information must be processed, translated and interpreted into actions and activities in order to give guidance to the rest of the division in terms of strategy definition and implementation. This is what is called sense-giving in

this context.

> *… but at my level I had to make sure that in terms of the direction that we are taking at the institute, I have to make sure that we are in the right direction (37:3:19:19).*

The major activity in this regard is thus the interpretation and guidance by the manager as derived from high-level corporate guidelines which is translated into a clear strategic direction, and the control of that effort in order to ensure effective implementation.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

One of the characteristics of managers is to be able to use information from the environmental scan and translate it into tasks, actions and strategies. Therefore, management must be able to interpret strategy and provide guidance to lower levels. The importance of this was indicated to be high from the respondents, with 96% indicating thus in the top two boxes of the survey. However, the implementation aspect did not fare well as only 56% responded in the top two boxes, whereas 76% indicated only fair to good implementation (see Table 6.21 below). The conclusion derived from this is that either training or awareness is needed to decrease the gap identified here.

Table 6.21: Sense-giving

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	10	40.0	40.0	44.0		
	Very important	14	56.0	56.0	100.0	96.0	56.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	2	8.0	8.0	8.0		
	Fair	9	36.0	36.0	44.0		
	Good	10	40.0	40.0	84.0		
	Excellent	4	16.0	16.0	100.0	56.0	16.0
	Total	25	100.0	100.0			

Process development:

This is the design and development of a series of actions to standardise and execute work in a specific manner in order to execute strategies successfully.

> *A new position to adapt to where you anticipate the environment is going. You need to be very flexible. I don't think we would ever get to the point where we are going have a formal − everyone does the same kind of process for developing strategy or for implementing strategy* (50:65:146:146).

Another important aspect that emerged from the analysis during the control part of implementation was the process development practice. This is about the development of processes and practices required to ensure that the whole implementation effort is done as effectively possible. Furthermore, as indicated above, it cannot be a one-size-fits-all approach to process development. The activities identified here are to ensure that the divisional strategy and goals are clearly identified and that the process development requirements are in support of implementation. Activities that were identified were the definition of process requirements, process reviews and development, and the implementation of processes in support of strategy implementation. This is also part of the ongoing continuous improvement effort required to remain current with changes in the landscape.

> *Those processes we draw up with inputs from the people like the project leaders. It is an ISO process. They say if the process is not good and we sit and we review it and we change it if necessary* (33:49:181:181).

One of the managers mentioned that the strategic way forward is the culmination of the process whereby all the organisational functions and resources are integrated and co-ordinated to implement formulated strategies which are aligned with the environment to

ensure achievement of the long-term objectives and competitive advantages through adding value for the stakeholders.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Table 6.22 below indicates the outcome of the view of formal process development initiatives as an enabler. This was not perceived to be as important as the other practices as it is lower on the scale. However, 40% still indicated that it is important and 24% indicated that it is very important. The implementation level was at 64% in the top two box rating and, when taking the next lower level into consideration, it gives an indicator of 100%. This indicates a much smaller gap between importance and implementation, which shows that implementation performed better than with the rest of the study. A possible explanation of this is the fact that due to the ISO requirements as well as the corporate requirements and structures, the processes are fairly structured, resulting in this outcome. Furthermore, also due to the practice approach as found in most of the institutes, the importance is not seen to be that high as these are already implemented from another level in the organisation.

Table 6.22: Process development

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	9	36.0	36.0	36.0		
	Important	10	40.0	40.0	76.0		
	Very important	6	24.0	24.0	100.0	64.0	24.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	9	36.0	36.0	36.0		
	Good	16	64.0	64.0	100.0	64.0	0.0
	Total	25	100.0	100.0			

The types of processes vary from corporate requirements to processes specific to the institutes. It also varies from institute to institute, depending on the type of output and the work being done. Some of these are enforced from a corporate environment and are usually related to governance issues which are not negotiable. The other more institute-related processes are designed and developed around the management and are in support of the implementation of strategy and the execution of work. All the institutes are ISO rated which means that there is a structured way of process development and approval to the benefit of the environment and in support of strategy implementation.

Summary

Implementation activity	How	Why
Reporting, Project management, Sense-giving, process development.	Reporting is done through normal processes and as required by the bigger corporations but there are reports defined by middle managers to support them to track progress on projects, strategy and operational tasks. Some use reporting structures and some use project management structures to achieve this. The guidance and control part of this task comes from the ability of the middle managers to translate the strategies into tasks and control the execution of that precisely.	The main purpose of this activity is to control and manage the strategy implementation effort. This must ensure effective control and requires specific interventions from the middle manager's side.

Example from data:

Once a quarter all of those projects status reports are consolidated into a report to our contracting authority (30:105:94:94)

Currently we are doing that on a monthly basis with the Project Office looking at the capacity utilisation. We then also look at the status report and start looking what success stories – what is going well, what is happening on the project and also most importantly what risks have been identified in the project environment. Those are then addressed there, but they are also taken to the portfolio level meeting for further discussion and even identification of which issues need to be escalated even higher (30:104:94:94).

This means that D1 must define and implement processes to administer and manage the MOAs through various forums (2:11:445:445).

6.2.2 Materiality and tools used during implementation

From the study it was evident that in the institutes there are two main areas of using tools in the implementation phase. Firstly, tools are used to analyse, scan and assess the environment in which they operate, and secondly, when actually implementing their strategies.
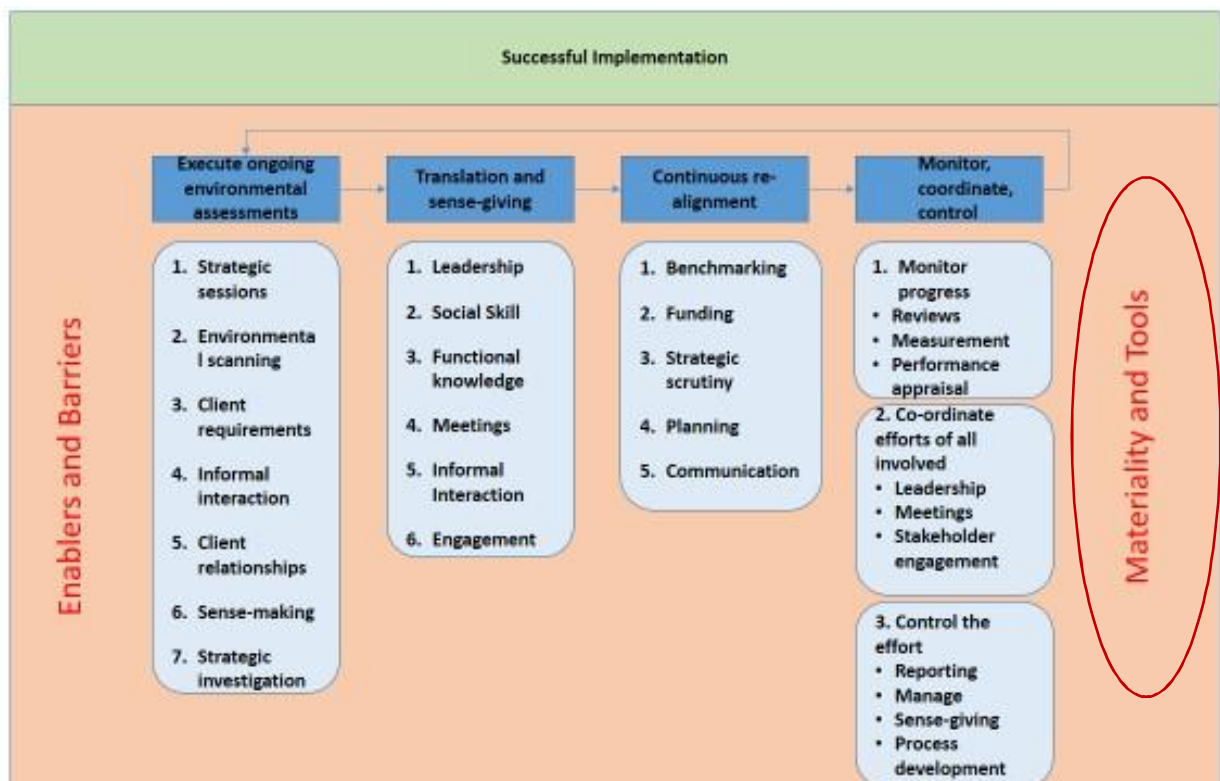
Figure 6.8: Materiality and Tools

6.2.2.1 Sense-making tools

This section relates to the outcome and practices that emerged from the study regarding what type of tools the managers are using during the scanning and assessment part of the activities as indicated in the beginning of the analysis. It

concerns the sense-making, environmental scanning, benchmarking and typically the tools and activities they use for these purposes.

Normally we have used the SWOT analysis, environmental scans (31:39:124:124).

The tools used in this environment include, for instance, environmental scanning, PESTLEM (Political, Economical, Social, Technological, Legal, Environmental and Military) analysis, SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis, benchmarking, business analysis, industry analysis and situational analysis. Certain formal tools are used, but there are also tools defined by the managers themselves to obtain the required information and make decisions in support of strategy implementation. However, as seen from Table 6.23, such tools are regarded as important during implementation but the institutes are not using them properly.

That is why the strategic planning and therefore benchmarking is very important in your strategic setting, benchmarking as well as your environmental scanning to know what will requirements be in the test and environmental arena within the next 3 or 5 years (39:8:12:12).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The use of strategy tools is considered, such as the Balanced Scorecard (BSC), among others.

Table 6.23: Strategy tools

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	8	32.0	32.0	32.0		
	Important	13	52.0	52.0	84.0		
	Very important	4	16.0	16.0	100.0	68.0	16.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	3	12.0	12.0	12.0		
	Fair	6	24.0	24.0	36.0		
	Good	13	52.0	52.0	88.0		
	Excellent	3	12.0	12.0	100.0	64.0	12.0
	Total	25	100.0	100.0			

6.2.2.2 Implementation tools

We also have the balanced score card where we have objectives and, during those quarterly meetings and half yearly meetings, we can see that we are achieving those objectives (38:28:30:30).

During the whole implementation effort as indicated above, tools and methodologies are used by the managers to support them in their decision-making and management efforts. The tools vary through the institutes, from formal theoretical tools and models to tools and spreadsheets purposely developed for the application required. In some areas, such tools are used extensively, and in other areas to a lesser extent. The bottom line is that all use some form of implementation tools to assist in the managing implementation.

To analyse the source of competitive advantage, a systematic way of examining all activities a firm performs and how these activities interact is necessary. The basic tool for doing so is the value chain (10:1:31:31).

Some of the tools found are listed below:
- Project management: Microsoft Project management;
- Quality Assurance/ISO;
- Balanced Score Card;
- South African Excellence Model (SAEM);
- Strategy SWOT;
- Integrated Service Excellence Model (ISEM);
- Budgets and forecasting;
- Specific planning methodologies;

- Key Performance Indicators (KPA/KPI);
- Self-designed models: Strategic Improvement Action Plan;
- Strategic roadmaps;
- Strategy maps;
- Value chain;
- Mind maps;
- Enterprise Resource Planning (ERP); and
- Enterprise Project Management (EPM).

Our strategy is revisited continuously but major scrutiny of its vision, mission and strengths, weaknesses, opportunities and threats (SWOT) are addressed annually (4:1:211:211).

The above is a summary of the tools identified during the interviews, but it was decided to also determine what the bigger respondent group's perception was regarding the most widely found tools in terms of value. A summary of Tables 6.24 to 6.29 indicates the use of strategy measurement tools in use and whether they are perceived to be valuable to the respondents. From the results, it was seen that there were mixed perceptions on the value of these tools. The five most popular tools were being used for evaluation purposes, with the Balanced Score Card being the most popular with 88% of the respondents. Of these, 40% indicated that it is valuable and 32% indicated that it is slightly valuable. The reason for this became apparent during the interviews and concerns the application of the model in the corporate environment. The next most popular tool is the Key Performance Indicators, with a 40% response from the group. Of these, 28% indicated that it is valuable and 12% that it is very valuable. The Core Competencies model was acknowledged by 36% of the respondents. Of these 20% indicated it to be valuable and 16% to be very valuable. These results correlate with the results found in the lower execution level of tools used during implementation. There is a gap experienced as indicated in the results between implementation and importance. This means that implementation tools to measure and implement strategies can be used more widely and effectively if applied and implemented correctly.

Table 6.24: Balanced Score Card

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Not valuable	2	8.0	9.1	9.1		
	Slightly valuable	8	32.0	36.4	45.5		
	Valuable	10	40.0	45.5	90.9		
	Very valuable	2	8.0	9.1	100.0	48.0	8.0
	Total	22	88.0	100.0			
Missing	System	3	12.0				
Total		25	100.0				

Table 6.25: Key Performance Indicators

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly valuable	4	16.0	28.6	28.6		
	Valuable	7	28.0	50.0	78.6		
	Very valuable	3	12.0	21.4	100.0	40.0	12.0
	Total	14	56.0	100.0			
Missing	System	11	44.0				
Total		25	100.0				

Table 6.26: Strategy maps

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly valuable	3	12.0	60.0	60.0		
	Valuable	2	8.0	40.0	100.0	8.0	0.0
	Total	5	20.0	100.0			
Missing	System	20	80.0				
Total		25	100.0				

Table 6.27: Performance metrics

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly valuable	2	8.0	33.3	33.3		
	Valuable	4	16.0	66.7	100.0	16.0	0.0
	Total	6	24.0	100.0			
Missing	System	19	76.0				
Total		25	100.0				

Table 6.28: Core competencies

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly valuable	1	4.0	10.0	10.0		
	Valuable	5	20.0	50.0	60.0		
	Very valuable	4	16.0	40.0	100.0	36.0	16.0
	Total	10	40.0	100.0			
Missing	System	15	60.0				
Total		25	100.0				

Table 6.29: Other systems

		Frequency	Percent
Missing	System	25	100.0

Most of the institutes are using their management information system not only for reporting but also as a tool to manage and control implementation. It is through the information derived from these different systems that they can assess and make decisions accordingly. Although the management information systems used differ, the systems generally used are financial management, project management, knowledge management, configuration and data management, stock control and human resources systems as well as stakeholder databases, master record structures and time sheets. It can be said that the use of tools for implementation efforts and for the management thereof is quite extensive in the majority of the divisions and is therefore one of the ways in which they practise strategy.

Support systems for financial planning, project planning, record keeping and planning implementation are well entrenched within the organisation (4:12:197:197).

Another grouping of tools used is measurement tools, namely for the action of measuring. Apart from the financials, which also measure progress against targets, there are incentives to measure progress of strategy implementation or the achievement of objectives. Client satisfaction is a good example that came out of the study which is used to measure whether the implementation efforts were successful in achieving the required outcome. From here, the strategy would be adapted if required and measured

again until the intervention yields the required results. Other similar examples that came out of the study were personnel satisfaction measurement, order cover and financial measurement, but it was also found that although there is a need for proper measurement, it is not done to the required level.

In order to support the enquiry regarding tools used, a question was included that relates to the use of management information systems in the institutes to manage implementation. The results are indicated in Table 6:30 below where 92% indicated that the use of such systems is important (top two box areas). Furthermore, 64% indicated good and excellent implementation (top two box areas).

Table 6:30: Management information systems

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	15	60.0	60.0	68.0		
	Very important	8	32.0	32.0	100.0	92.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	3	12.0	12.0	12.0		
	Fair	6	24.0	24.0	36.0		
	Good	13	52.0	52.0	88.0		
	Excellent	3	12.0	12.0	100.0	64.0	12.0
	Total	25	100.0	100.0			

From the above, the measurement issue was identified as a very strong practice and therefore it can be assumed that it is one of the most critical issues to address during strategy implementation. If implementation activities are not measured, it is not possible to know what the effectiveness of such implementation activities might be.

> *We have our goals, we have our objectives and how to measure it, on the financial side, on the HR side, on the deliverables that you deliver to your client that need to be measured in order for you to determine success (39:31:30:30).*

The practice of project management also came out very specifically from the study as it

is regarded as important to address the actions and interventions executed in implementation. Most of the institutes use project management principles on the technical work and project work. As successful execution of projects is also one of the objectives, it can be said that this already addresses project management in relation to the implementation of strategies. Based on the outcome, only some of the institutes use project management as a tool to address management activities as well. However, most did acknowledge that it could be a very helpful tool.

Summary

Implementation activity	How	Why
Sense-making tools and Implementation tools	PESTLEM, SWOT, benchmarking, business analysis are tools that the middle managers use to scan, analyse and understand the environment in which they operate. This is the internal as well as external environments. These tools are used in different formats and some have formalised tools with measurement and specific outcomes, whilst some have these informally and in the back of mind. The information is then processed into the rest of the system and specific actions and tasks follow from here. Project management, BSC, Integrated services excellence model (ISEM), KPA, Value chain and many more are tools used by the middle managers during the implementation effort. There is no standard and it very much depends on the preference of the middle manager on which to use and to what extent. Some are used during the analysis, some during performance appraisal and some during measurement in implementation. Middle managers do rely on some or other tool in support of their implementation effort.	These are mainly used to understand and to be able to make sense of the environment. These tools are used as support during the implementation effort and to ensure effective implementation.

Examples from the data:

Specific and dedicated actions are planned with these people such as presentations, meetings, work sessions, personal appointments, conferences, memberships of organisations, social events and recreational activities (1:4:164:164).

SAEM model as a tool for strategic planning guidance (4:1:278:278).

Implement the Integrated Service Excellence Model (ISEM) (4:2:278:278)

The basic tool for doing so is the value chain (9:3:31:31).

6.2.3 Establish and maintain enablers conducive to implementation
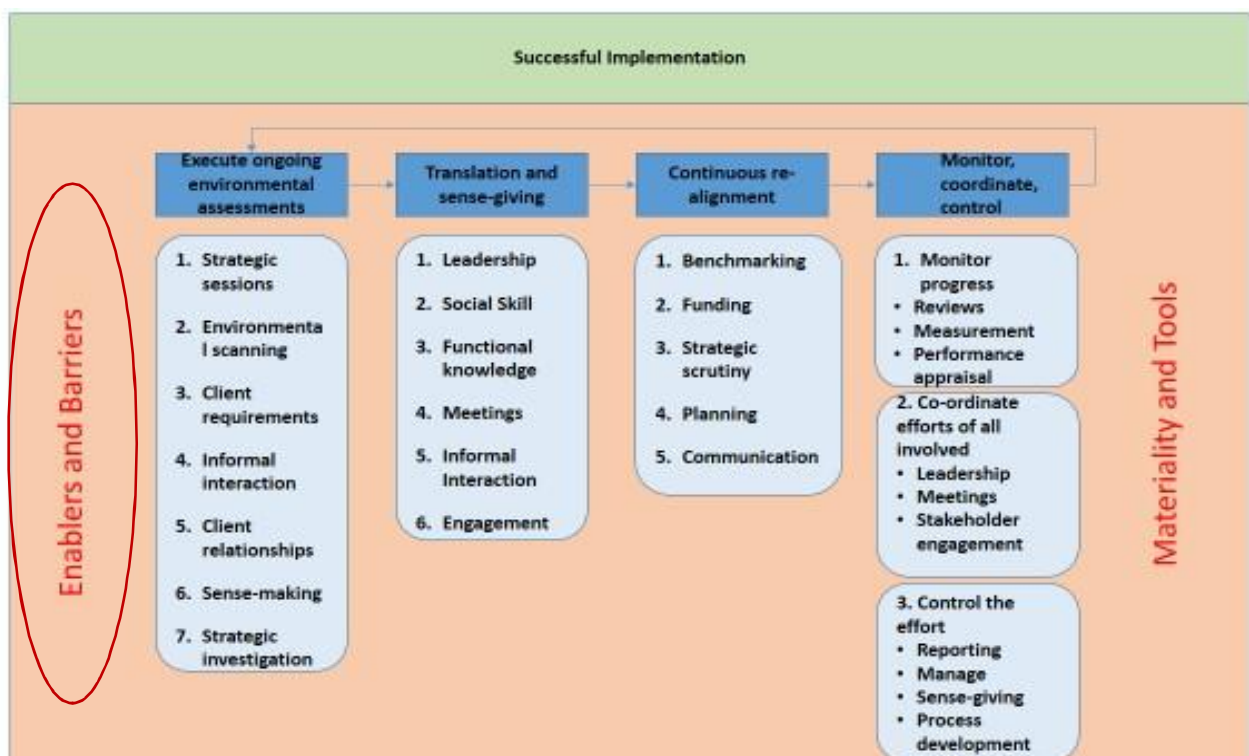
Figure 6.9: Enablers conducive to implementation

Organisational culture:

The values and behaviours that contribute to the unique social and psychological environment of an organisation which is used as an enabler to secure successful implementation.

Another practice that came out very clearly from the study is the fact that all managers talked about the influence of the organisational culture on the success of the organisation and, in this case, specifically in terms of implementation efforts.

Culture I mean all organisations have a culture − it is a supportive culture and

I think we try to create the right culture that enables. That is maybe of the softer parts of implementing this strategy, is creating the right type of culture (50:68:199:199).

Culture, in this sense, relates to the customs, ideas, social behaviour, performance and output of people in an organisation that is created over time by the group. The main category that emerged from this was the effect of values and behaviour in order to achieve a cultural environment.

We talked about it when we started off as well, saying that you can have processes and all of these things in place if you work with people and deliver a service that culture or behavioural norm and values as you said, taking ownership and making it yours (31:50:150:150).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Creating the correct culture in an organisation to implement strategy effectively came out as an important task of the manager. The respondents indicated that the importance level is 96% in the important and very important levels. This was based on the question of whether the culture in the institutes supports the values required for successful strategy implementation. However, it was also indicated that the level of implementation lies at 56%, indicating a considerable gap between importance and implementation, as seen in Table 6:31 below.

Table 6:31: Organisational culture

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	1	4.0	4.0	4.0		
	Important	15	60.0	60.0	64.0		
	Very important	9	36.0	36.0	100.0	96.0	36.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	3	12.0	12.0	12.0		
	Fair	8	32.0	32.0	44.0		
	Good	13	52.0	52.0	96.0		
	Excellent	1	4.0	4.0	100.0	56.0	4.0
	Total	25	100.0	100.0			

The discussion that follows will elaborate on this point of corporate culture. Culture is about creating a participatory environment, teamwork, effectiveness, leadership and trust, client relationships, and living out the identified and agreed upon values in order to have a conducive environment for implementation, as found during this research.

Values:

These are the operating philosophies or principles that guide an organisation's internal conduct as well as its relationships with its customers, partners, and shareholders. This is used as an enabler for the successful implementation of strategies.

> *One example that I can highlight, we have adopted a set of values in the corporate group. Previously each business entity had his own set of values. It has been decided that we are adopting a set of corporate values. We are currently driving a process where we focus on each one of these drivers or values for a specific period through discussions in our meetings. Through highlighting examples of someone living for example performance or integrity. We ensure that is embedded in the organisation* (31:43:144:144).

The issue of values was identified in the analysis as being an implementation practice. The category "values" comprises values, leadership, teams, effectiveness, client relationships and culture as practices identified by the study. The values are seen as a set of behavioural guidelines that act as a guide for people in the institute. This was

emphasised by all the institutes as being one of the key success factors, as the output and work are done by people and people management is therefore one of the main focus areas.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

On the question of the importance of management living the values in the institute, the answer was that it was seen by 92% to be in the top two box areas, indicating its importance as shown in Table 6.32 below. Whether the values of the institutes are embodied by management and executed accordingly only yielded a result of 56%, indicating an area for improvement. This is also highlighted by the following quotation from the interviews:

> *Your value system, for example, is no use of having a value system on paper [if] you don't live it* (39:40:38:38).

Table 6.32: Values

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	5	20.0	20.0	28.0		
	Very important	18	72.0	72.0	100.0	92.0	72.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	3	12.0	12.0	12.0		
	Fair	8	32.0	32.0	44.0		
	Good	8	32.0	32.0	76.0		
	Excellent	6	24.0	24.0	100.0	56.0	24.0
	Total	25	100.0	100.0			

Firstly, the values were very evident in all of the divisions. Some have adopted the corporate values and, in some cases, a few were added due to the diversity of the type

of work conducted and the environment. Some of the values that emerged were:

- Impartiality;
- Leading by example;
- Results-driven;
- Customer-focussed;
- Care and respect for others;
- Excellence;
- Professional;
- Objective;
- Competent;
- Well qualified;
- Performance-driven;
- Integrity;
- Innovative;
- Caring;
- Responsible;
- Trustworthy; and
- Team approach.

Leadership:

The activity of leading a group of people or an organisation or the ability to do this to ensure that all efforts in strategy implementation are aligned and realised efficiently.

The next practice for discussion that emerged from the study was leadership. This refers to the trait that comes from a person who leads. Leadership was also identified as a key practice to strategic success as identified in the literature study. In this case, it was also identified as being essential for strategy implementation.

> *The leader must be someone that thinks strategically who can lead the*
> *people onto a certain path and keep them there. Remember a manager will*
> *tell you what to do, a leader will show you what to do. That is the difference*

but I also say that and I said it earlier that you need some guidance from the top (30:71:59:59).

Leadership, as referred to above, means upwards as well as downwards. Leadership here was identified as leading, giving direction, living the values and driving strategy at all levels in the organisation. In some cases, the lack of leadership was a concern, which is the opposite of what is discussed here. However, it is still identified as being key to implementation.

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

In the questionnaire, this topic stated that management takes control of strategy implementation through the demonstration of good leadership. The reply to this was that 100% found it important and very important, indicating the relevance and importance of this practice. The observation from this was that the implementation was also on a good level of 72%, which indicates that the leaders walk the talk in terms of strategy implementation.

Table 6.33: Leadership

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	7	28.0	28.0	28.0		
	Very important	18	72.0	72.0	100.0	100.0	72.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	4	16.0	16.0	16.0		
	Fair	3	12.0	12.0	28.0		
	Good	15	60.0	60.0	88.0		
	Excellent	3	12.0	12.0	100.0	72.0	12.0
	Total	25	100.0	100.0			

Leadership, in this context, was referred to as leadership in all areas, strategically and technically, and all other facets of the business. It is the intangible trait that is required to guide the institute in the right direction as explained below:

> *To me ethical leadership and you have mentioned behaviour, etc. I think ethical leadership combined with servant management and leadership* (39:39:38:38).

Teamwork:

The process of working collaboratively with a group of people to achieve a goal and to execute strategies effectively.

The next practice is about teams and working together in the institutes. Owing to the nature of the work in the institutes as well as the widely used concepts of integrated project teams, teamwork is cardinal to the output of all the divisions. Teams in this context are inter- and multi-disciplinary teams.

> *Team spirit has to do with the environment that they are operating in and how your team leader or your divisional leader or divisional manager create that environment and make them part of the decision-making. That will determine the team spirit and that can be measured on a social front* (39:74:81:81).

The team concept is also not only about project teams and working together in that context. It is also about the team within the institute. There are management teams, domain teams, certain functional teams and the institute team as a whole. Issues identified to make these teams more effective include participatory management, communication, rewards, input, collaboration, value added and recognition, among others.

> *In the end the team approach is a very good approach and the whole modern way of thinking about management is now a participative management and democratic type of decision-making* (30:74:59:59).

Teamwork at the institutes is regarded as very important. This was demonstrated by the feedback and the fact that 100% of the responses lay in the top two boxes. The

institutes are all working in integrated project teams with a variety of functions in order to deliver the required output. That is the reason for their success, as well as the reason for the importance of this, as indicated in the quotation below:

Most important is to have all your people, your whole team on board (39:24:30:30).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The implementation level also indicates that teamwork is valued and implemented to a very effective degree giving a high implementation rate of 80% as indicated in Table 6.34 below.

Table 6.34: Teamwork

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	12	48.0	48.0	48.0		
	Very important	13	52.0	52.0	100.0	100.0	52.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	4	16.0	16.0	20.0		
	Good	16	64.0	64.0	84.0		
	Excellent	4	16.0	16.0	100.0	80.0	16.0
	Total	25	100.0	100.0			

Effectiveness:

This is the degree to which objectives are achieved and the extent to which targeted problems are solved. In contrast to efficiency, effectiveness is determined without reference to costs and whereas efficiency means "doing the thing right", effectiveness means "doing the right thing", thereby creating a culture of effectiveness that supports all implementation efforts.

The next value to look at is that of effectiveness. This was identified through the study as one of the practices required for strategy implementation by the managers. In order to be successful in your business, effectiveness of systems, people and processes needs to be at a high level. All the institutes are managed on a break-even basis and are responsible for their own income and funding. Therefore, ineffectiveness in any area of the institute cannot be tolerated. The deliverable must be of top quality, and client engagement must display an effective organisation. It also emerged that the goal is to work towards an effective organisation in all aspects of the business, as well as the establishment of a culture of effective people as it is people who are delivering the service and output.

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

Table 6.35 below indicates the importance of effectiveness as perceived by the response group to be 92% in the top two boxes group, demonstrating the validity of the discussion above. The implementation or effectiveness within the institutes is also fairly good at a level of 72% in the same category, indicating commitment towards this effort.

Table 6.35: Effectiveness

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	15	60.0	60.0	68.0		
	Very important	8	32.0	32.0	100.0	92.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	6	24.0	24.0	28.0		
	Good	14	56.0	56.0	84.0		
	Excellent	4	16.0	16.0	100.0	72.0	16.0
	Total	25	100.0	100.0			

> *This puts the focus on knowledge management, standardisation, integration and collaboration efforts in order to deliver the required service to the client environment* (3:76:350:350).

Other issues that came out of the analysis were responsiveness, quick reaction, efficiency and output driven, effectiveness of support, capacity utilisation and management effectiveness. It is thus important to address these issues from a management and practice point of view in order to be successful in strategy implementation.

Client relationships:

The relationship between the client and the relevant people within the institute in order to ensure customer satisfaction in support of successful implementation.

Relationships with clients were discussed comprehensively under the practice part of the analysis. This is where management creates an environment where everybody in the institutes is aware of and nurtures an atmosphere where client relationships are valued. As mentioned already, the relationship with the client is one of the key factors of success in the institutes, as the client is the sole reason for the existence of these divisions. Solid relationships and value added support to be given to client are required for successful operations. Interaction with the client also brings the advantage of knowing what is going on in the client's environment.

> *We do however have separate sessions with our clients in preparation for this. We expect our Management team members to, on a regular basis, almost on a daily basis, to communicate with our clients* (36:42:49:49).

It is not only for management members, but for all in the divisions to ensure constant engagement with the client. This happens through the integrated project teams, meetings and other engagement forums in this environment.

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The alignment between client needs and implementation efforts was demonstrated by the indication of importance of 100% together with an implementation level of 92% which indicates the effectiveness of the development of a culture conducive to client relations as well as the impact of that on implementation efforts, as seen in Table 6.36 below.

Table 6.36: Client relationships

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Important	6	24.0	24.0	24.0		
	Very important	19	76.0	76.0	100.0	100.0	76.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	2	8.0	8.0	8.0		
	Good	13	52.0	52.0	60.0		
	Excellent	10	40.0	40.0	100.0	92.0	40.0
	Total	25	100.0	100.0			

Establishing, enhancing and maintaining good client relationships was demonstrated on several occasions, and in the case of management it means to create an environment where everyone in the organisation can easily engage and interact with the client environment, thus sustaining good client relationships.

Bureaucracy—Flexible decision-making:

Corporate administrative procedures and processes that are very complicated. This was changed to flexible decision-making after the analysis and interpretation.

One of the issues that emerged was the bureaucracy of long and cumbersome administrative processes. This is, of course, not a driver of but rather a barrier to strategy implementation, but it is included in the finding and analysis due to the fact that it was identified very prominently.

> *Decision making is currently being influenced by bureaucracy and decisions are not forthcoming* (3:65:446:446).

It was also indicated that decision-making was a big concern as decisions take a long time or are simply not happening which has a negative impact on the operations of the institutes. These institutes work with military, commercial and international clients and, in order to deliver an effective service, it is imperative to have an efficient decision-making environment. Furthermore, bureaucratic processes in terms of administration, purchasing, tenders and recruitment were all seen to have a negative impact on the operations of the institutes.

> *There are no executive decisions anymore because everything is managed by the organisation* (34:2:14:14).

Some complained about the cumbersome processes encountered in the environment, the corporate not helping to streamline matters but rather complicating matters by making it more difficult and time-consuming to perform simple actions such as purchasing, which should be done much more effectively. Another comment was made on the commercial business that is required for some institutes to be sustainable and that this was an important part of the business portfolio bringing in additional income. Long and tedious processes make it difficult therefore to stay competitive.

> *One of our biggest challenges is that the corporate procedures and policies are not conducive to commercial business* (35:71:129:129).

The managers are accountable for the sustainability of the divisions but they

complained that their executive powers are taken over by a bureaucratic environment that, even though they are not able to make decisions, they are still accountable for in the performance of their divisions. The comment was made that this affects innovative research.

> *In terms of my role I would say I would just make sure that we deliver the product or deliver the service of course taking in account all the constraints that we have.   The legislation in our environment is highly regulated* (37:2:19:19).

The requirement for lean, effective and supportive processes and practices within the bigger organisation was echoed by most of the institutes in order to become more effective. This must be seen as a continuous improvement area and such barriers must be dealt with should the organisation want to become more effective.

> *I think to implement, we need to be able to make quick and fast decisions* (38:40:43:43).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The question was asked whether corporate processes and procedures support effective operational activities and the importance of this is indicated in Table 6.37 below. However, the response on whether corporate processes and procedures support effective operational activities was the lowest for the practices identified. This implies that some work needs to be done to look at the support from the corporate environment.

Table 6.37: Bureaucracy

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Not important	2	8.0	8.0	8.0		
	Slightly important	3	12.0	12.0	20.0		
	Important	12	48.0	48.0	68.0		
	Very important	8	32.0	32.0	100.0	80.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	13	52.0	52.0	52.0		
	Fair	7	28.0	28.0	80.0		
	Good	4	16.0	16.0	96.0		
	Excellent	1	4.0	4.0	100.0	20.0	4.0
	Total	25	100.0	100.0			

There are advantages to being part of a bigger organisation and there are some success factors that can be ascribed to the bigger environment. If this is a barrier, it must be given urgent attention as such barriers can influence highly diverse environments negatively. The corporate environment must ensure that it can cater for types of business units within its domain. It is therefore required to be structured and staffed for such knowledge organisations where creation of knowledge, sharing of knowledge and providing of knowledge services are essential for sustaining the organisation.

Training and development:

The social and human sustainability factor in training and development is a critical success factor for implementation in service delivery and achievements of objectives.

Training and development was mentioned by all the institutes as an important factor required for an organisation to be successful. This applies not only to newly appointed employees but to everyone, in order to stay abreast of changing technology and environmental advances.

The challenge for the near future is to ensure that these appointments are empowered, developed and retained in order to support the client as required. An Employee Training and Development (ETD) programme is

being implemented in order to achieve this objective (3:82:471:471).

The important part of this practice is the requirement identified by the managers to create an organisation that is in support of training and development. This also links up to other practices such as effectiveness, service delivery, output and empowerment in support of effective implementation. The fact that these institutes are staffed by highly trained and qualified engineers and scientists makes training and development a very important initiative. The creation of a learning culture and learning organisation was also mentioned as being of paramount importance in the execution of successful operations and service delivery. Training was identified as one of the critical success factors as part of the required culture for the implementation of strategies, as indicated in Table 6:38 below. Part of the training and development practice was that of skills transfer. This, together with succession, was regarded as imperative to ensure sustainability of the institutes. All of this would ensure that the organisations have an effective and efficient workforce, thereby creating a culture conducive to implementation.

> *The continuous objective will be to maintain well trained and motivated staff with the ability to offer client orientated services* (6:13:430:430).

The table below relates to the question:

> When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy execution or strategy implementation progress made.

The implementation level or application of training and development as a behavioural norm in support of implementation still needs some attention, as the response by the group was at a level of 60% in the top two box areas. This also lies at 96% in the fair to good categories but improvement of this is achievable.

Table 6.38: Training and development

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	15	60.0	60.0	68.0		
	Very important	8	32.0	32.0	100.0	92.0	32.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Fair	10	40.0	40.0	40.0		
	Good	14	56.0	56.0	96.0		
	Excellent	1	4.0	4.0	100.0	60.0	4.0
	Total	25	100.0	100.0			

Communication:

Creating a culture of effective communication that is undertaken internally with the employees as well as with external stakeholders during implementation.

> *Create more visibility of their service that they provide and value that they add by means of attendance, presenting and publishing of symposiums, lectures, journals, magazines, functions, events, communication sessions and client focussed forums* (1:5:161:161).

Communication in this sense was understood as sharing information with all stakeholders and, in this case, specifically as regards strategy implementation. It was seen as an important practice by the managers to communicate upwards and downwards in the organisation in order to share, get input and get buy-in to the strategic direction they want to take. The importance of communication was already identified in the previous paragraphs, but of importance here is to nurture and develop an environment favourable to effective communication. By creating a culture of regular communication, it is ensured that guidance is received from the top management as well as inputs from the lower levels. Strategic direction is easily communicated in such environments and a communicative culture ensures that information flows easily and correctly to the required levels and that all can contribute to the direction of the organisation. It is also about sustaining the information and, through continuous consultation, people are empowered through information. This is done through various means and forums, for instance e-mails, electronic broadcasts, discussion groups,

meetings, presentations, work sessions and conferences.

> *They talk to their people, they get ideas from the people and it comes up to the top* (30:14:23:23).

The other part of communication is with the clients and other stakeholders. During the previous discussions it emerged very clearly that the key to success was, amongst other things, client relationships, client requirements, knowing what is going on in the environment, engagement actions, and monitoring and control. None of this is possible if there is no effective and good quality communication. Communication to all levels is seen as an enabler for successful implementation as it emerged from the qualitative analysis and all institutes confirmed the importance of communication to success in implementing strategies.

> *I also think that is how it has been communicated. How do you communicate? Not only with your employees but also with your customers with your stakeholders – that is the important thing to create that environment on your behaviour side* (39:42:38:38).

Informal interaction:

This is creating a culture of interaction in the form of social, text, talk and engagement that occurs outside of formal and organised forums.

The informal communication network and specifically informal discussion emerged as an important component or enabler used by the institutes to communicate, obtain information and distribute information to all stakeholders. The main aspect relative to the topic under discussion is that the managers use this to sustain the informal discussion and networks and create an environment where these can be used to their benefit. This was also identified in the previous paragraphs.

> *Within the not a particular domain within any organisation you have a very strong informal communication network. That is where you normally pick up problem areas in behaviour by tapping into the informal communication network* (36:69:72:72).

Clearly there is also the possibility of extracting information that would not be available through informal interaction. It is used from time to time to obtain information from the client on how the performance on certain projects is perceived by the client.

I think that is one of the areas that are not done adequately through a formal process, but I think it is very valuable to have informal feedback on how we are indeed performing (34:6:20:20).

There are benefits from this and mention was made of how the success of informal discussion and the information obtained in this manner could not usually be obtained through formal means. That is why it was identified as being important to sustain the informal discussions and networks and an environment where they can be used to the advantage of the manager in strategy implementation.

Continuous improvement:

A continuous improvement culture as an ongoing effort to improve products, services or processes in order to satisfy clients' needs and execute them effectively.

Owing to the emphasis on good client relationships and adherence to client requirements, continuous improvement becomes a daily effort and is therefore made part of the day-to-day management in these organisations.

Are we there − what are those things that we need to improve on? We are talking about continuous improvement throughout − continuous improvement will always be there from day one (39:32:30:30).

The change that all organisations are faced with was frankly discussed in the literature part of the study. The institutes face this continuous change, as they mentioned through this study, as mention was made on several occasions of the effort required to ensure that they stay abreast of technology and development. This is specifically valid in the case of these institutes as all of them employ the latest technologies, tools, methods and thought processes in the execution of their work.

One of the major tools that we need to consider all the time is technology and the changes in technology. How to use that in order to improve our service

and productivity and capability? (35:76:136:136)

The purpose of continuous improvement is to ensure that improved products and services are being delivered, to stay competitive and to ensure that service delivery meets client expectations, as identified by these institutes.

Good relationship creation, value delivery, exceeding stakeholder expectations and continuous improvement will be the cornerstones of the institute's stakeholder strategy (16:2:350:350).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The response group indicated that it is important to have clear processes defined in terms of the implementation of continuous improvement efforts in the institute, as shown in Table 6.39 below.

Table 6.39: Continuous improvement

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	13	52.0	52.0	60.0		
	Very important	10	40.0	40.0	100.0	92.0	40.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	2	8.0	8.0	8.0		
	Fair	10	40.0	40.0	48.0		
	Good	13	52.0	52.0	100.0	52.0	0.0
	Total	25	100.0	100.0			

What must we do to increase our productivity and efficiency and profitability, those kinds of things? (31:5:14:14).

It was made clear that in order to be sustainable, continuous improvement is one of the processes employed to ensure that strategic objectives are being met. However, when it comes to the implementation level, the rating supplied by the respondents was low at 52% in the top two box areas, indicating room for improvement.

Summary

Implementation activity	How	Why
Culture, values, leadership, effectiveness, client relationship, flexible decision-making, training and development, communication, informal interaction, continuous improvement	Influence customs, ideas, social behaviour, performance and output of people in an organisation that is created over time by the group. This happens through the integrated project teams, meetings and other engagement forums in this environment. Leading, giving direction, living the values, driving strategy at all levels in the organisation. In integrated project teams, teamwork is cardinal to the output of all the divisions. Creating a culture of effectiveness supports all implementation efforts. This happens through the integrated project teams, meetings and other engagement forums in this environment.	To positively influence the organisational culture on the success of the organisation and, in this case, specifically in terms of implementation efforts. Seen as a set of good behavioural guidelines that act as a guide to people. Leadership is still identified as key to implementation. In order to be successful in your business, effectiveness of systems, people and processes needs to be at a high level. Creating a culture of effectiveness supports all implementation efforts. Bureaucratic processes in terms of administration, purchasing, tenders and recruitment were all seen to have a negative impact on the operations of the institutes.

Example from data:

Culture − I mean all organisations have a culture − it is a supportive culture and I think we try to create the right culture that enables. That is maybe of the softer parts of implementing this strategy, is creating the right type of culture (50:68:199:199).

Your value system for example is no use of having a value system on paper but you don't live it (39:40:38:38).

To me ethical leadership and you have mentioned behaviour, etc. I think ethical leadership combined with servant management and leadership (39:39:38:38).

Team spirit has to do with the environment that they are operating in and how your team

leader or your divisional leader or divisional manager creates that environment and makes them part of the decision-making. That will determine the team spirit and that can be measured on a social front (39:74:81:81).

We do however have separate sessions with our clients in preparation for this. We expect our Management team members to on a regular basis almost on a daily basis to communicate with our clients (36:42:49:49).

Decision-making is currently being influenced by bureaucracy and decisions are not forthcoming (3:65:446:446).

The challenge for the near future is to ensure that these appointments are empowered, developed and retained in order to support the client as required. An Employee Training and Development (ETD) programme is being implemented in order to achieve this objective (3:82:471:471).

Are we there − what are those things that we need to improve on? We are talking about continuous improvement throughout − continuous improvement will always be there from day one (39:32:30:30).

6.2.4 Output as strategic text and talk

To define and re-align strategic talk and text is about the output generated through all the practices and processes performed by the managers in the institutes. Part of it is required in terms of corporate requirements and part of it is a requirement from the relevant managers to ensure proper documentation, planning and implementation of strategies. The three main themes that emerged were strategic intent, strategies, and plans, which are discussed below.

Strategic Intent:

This is what you do to plan or achieve. Strategic intent is the intent defined in relation to the direction the organisation envisages to pursue. It is defined in a vision, mission and strategic objectives. The detail is contained in the strategic plans, but it emerged that it is done by all as a required output and to formally crystallise the intent of the institute. Examples of intent from different sources are indicated in the quotations below.

- *Grow revenue and improve customer relationships* (7:59-7:105 scanned document).
- *Break-even strategy* (17:9:360:360).
- *Expand foreign client base with new marketing initiatives* (26:3:78:78).

The intent of the institutes is mostly captured in the formal plans. The purpose of determining whether the divisions have this formally written into the plans is to clarify whether a formal process is followed and the output crystallised into tangible documents. This is used for various purposes, namely communication, stakeholder buy-in, implementation and control. The most important use of these is to ensure that it is formalised and that it can be managed in a formalised way.

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

To support the above findings, the question posed to the target group was to determine if the institutes defined strategic intent through the formal statement of the vision, mission and strategic objectives in a strategic plan. This was indicated to be important by 92% in the top two box areas, and the implementation of this was perceived to be 72% in the good and excellent categories, as depicted in Table 6.40.

Table 6.40: Strategic intent

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	9	36.0	36.0	44.0		
	Very important	14	56.0	56.0	100.0	92.0	56.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	6	24.0	24.0	28.0		
	Good	12	48.0	48.0	76.0		
	Excellent	6	24.0	24.0	100.0	72.0	24.0
	Total	25	100.0	100.0			

Strategies:

A plan of action designed to achieve a long-term overall aim. Strategies as output from the institutes mean that all the activities and information from the process followed by the managers are captured in documents defining the way going forward in a prescribed or other format, formally and informally.

> *The strategy is written in our blue book − our long term planning document and it is done every year and it is done in 3-year cycles. We always plan a 3-year cycle window* (33:4:26:26).

Although there are certain activities performed by the managers during the implementation process that are not tangible, one of the themes emerging from the practices is to re-align the strategy and the management of such re-alignment. This is done by means of formalised plans and activities. The following types of formalised plans were identified during the study:

- Strategic plan;
- Business plan;
- "Blue book";
- Strategic roadmap;
- Financial strategy;
- HR strategy;
- Marketing strategy;
- Operational strategy;
- Stakeholder engagement strategy; and
- Growth strategy.

Although the managers put considerable time and effort into activities and intangible actions during the implementation phase of strategies, there is still the requirement, either from the corporates or themselves, to crystallise these actions and plans formally into a tangible document, for various reasons such as management and co-ordination, visibility purposes, communication and others. The advantage, independent of the purpose, is the fact that the strategic output in the management of implementation is

now visible and can be visualised, managed and communicated as key success factors identified for successful implementation.

These strategic requirements were analysed and concepts developed to accomplish a business strategy to be in alignment with the intent of the major stakeholders (4:18:224:224).

The table below relates to the question:

When thinking about strategy implementation in your institute, please rate how important you think each of the concepts are and secondly how your institute has performed in terms of the actual level of strategy implementation or strategy implementation progress made.

The existence of formal documented strategic and tactical plans was validated through the questionnaire as well as the perceived importance of such plans. From the response in Table 6.41, 92% indicated that it is important and very important and 84% indicated that it is executed in a good and excellent manner.

Table 6.41: Strategies

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Slightly important	2	8.0	8.0	8.0		
	Important	17	68.0	68.0	76.0		
	Very important	6	24.0	24.0	100.0	92.0	24.0
	Total	25	100.0	100.0			

		Frequency	Percent	Valid Percent	Cumulative Percent	Top-2-Box	Top Box
Valid	Poor	1	4.0	4.0	4.0		
	Fair	3	12.0	12.0	16.0		
	Good	17	68.0	68.0	84.0		
	Excellent	4	16.0	16.0	100.0	84.0	16.0
	Total	25	100.0	100.0			

Plans:

A detailed proposal for doing or achieving something.

… If you look at what we call our business plan, but our business plan also entails to start with our vision and mission etc. It starts with that − you have

your executive summary telling you what it is all about, your business analysis that is a very important part. Your financial plan, your stakeholder strategy plan, your HR plan, your SHEQ plan, those are the plans that are incorporated into your business plan (39:62:63:63).

The next form of strategic output as quoted above is the culmination of plans derived from the strategic intent and formalised strategies (Talk and Text). The plans are the actual detail derived from the strategies and that is where all the actions to be communicated are captured. This is also where the detail regarding implementation is articulated.

Typical plans found at the institutes were:

- Marketing plan;
- Promotions plan;
- Client satisfaction corrective action plan;
- Succession plan;
- Rejuvenation plan;
- Transformation plan;
- Risk management plan;
- Client engagement plan;
- Knowledge retention plan;
- Health and safety management plan; and
- Skills development plan.

The details of the human resource planning, including the succession planning, skills analysis, rejuvenation planning and mentoring are included in the human resource planning (4:26:392:392).

These plans are compiled, monitored and re-aligned by the institutes on a continuous basis in an effort to ensure proper implementation. The actions are allocated and communicated to the relevant people and progress is measured as it proceeds. In

some cases these plans are managed by means of project management, as mentioned earlier, but not as a general rule. The plans are mostly managed at forums and management meetings and co-ordinated as such. It was found that the use of these plans was to ensure that proper implementation of strategies is being done and executed.

The results from the research undertaken were discussed and was further discussed and elaborated on above. The codes from the qualitative analysis were used as practice and a description of what is meant by each one was elaborated on in accordance with the relevant theme identified. It was also found that these practices were repeated or duplicated but in different contexts depending on the theme and category in which it is used. This was identified and explained. It was found that some of the codes are interconnected and that the links that exist between the practices that emerged are important and should be explained. This is therefore translated and articulated in terms of a definition of the practices and processes as identified in the objective of the study.

Talk and communication:

Talk and communication as strategic output is about the communication of information and the transfer of information to stakeholders internally and externally.

> *Communication to me is one of the best tools there is and I say you must communicate continuously because if you don't communicate continuously people forget that this is our strategy and this is where we are going to you must just bring them back on the road again. That to me is critical.* (24:76:59:59)

Talk and communication is about sharing information with all stakeholders and, in this case, specifically with regard to strategy implementation. The idea is to share and convey the direction and what the implementation actions are about to all stakeholders. This can be done through both formal and informal methods. It was seen as an important practice by the managers to communicate upwards and downwards in the organisation in order to share and obtain input and buy-in to the strategic direction they

want to take. By creating a forum for regular communication, it is ensured that guidance is received from the top management as well as inputs from the lower levels. Strategic direction is easily communicated through such events and this ensures that information flows easily and correctly to the required levels and all can contribute to the direction of the organisation. It is also about sustaining the information and through that continuous consultation people become empowered. These are done through various means and forums and include both formal and informal structures.

Formal meetings and forums are held by the institutes to ensure that clear communication transfers the message regarding implementation plans and actions. There are different types of forums and the most common found were executive committee (Exco) meetings, domain meetings, departmental meetings, performance appraisal sessions, work sessions, communication sessions, information sessions, one-on-one meetings, management meetings and stakeholder sessions.

> *We ask the Line Management Forum for inputs and then it more or less depends on the Exco members around the table to do that in their different departments to motivate the guys and tell them about the implementation etc. Communication is very important.* (25:52:160:160).

Informal talk and communication were highlighted as being crucial from the data obtained and typically consisted of *ad hoc* conversations, engagements, social interactions, recreational activities, tea sessions, visits, informal communication networks, exhibitions, shows and road shows. Confirming the above, it was observed that *"communication is mainly through the domain leaders to project teams"* and

> *… within any organisation you have a very strong informal communication network. That is where you normally pick up problem areas in behaviour by tapping into the informal communication network.* (30:69:72:72)

Furthermore, it was noted that,

> *… exhibitions, shows, doing a road show to clients locally and go and speak to the clients and get from them you know what their planning is for the next three years where technology goes and then also to get their requirements in*

terms of what technology do we put in place to service their needs in the next 3–5 years" (29:24:25:25)

and

… specific and dedicated actions are planned with these people such as presentations, meetings, work sessions, personal appointments, conferences, memberships of organisations, social events and recreational activities. (1:4:164:164)

All of these formal and informal talk and communication activities are used to convey and transfer strategic implementation actions and plans to the stakeholder environment as part of the strategic output.

Summary

Implementation activity	How	Why
Strategic intent, strategies, plans, talk and communication	Most of the institutes captured their strategic intent in a formal document. This reflects what they want to achieve and gives guidance to their strategy. It also captures the vision, mission and objectives. The strategies varied from the different institutes and each is unique in terms of the output produced. Strategic plans are used as high level plans for these institutes and several plans and documents are produced within each different environment. Plans are used in most areas to guide lower levels as well as to report against progress. Strategic talk and communication is also widely used to analyse, gather information, give guidance, get buy-in and convey the direction within the organisation. Most managers confirmed the importance of this.	Documented guidance and direction are used to communicate strategies. Communication was identified as one of the key enablers and therefore strategic documents, plans, talk and communication are of importance during strategy implementation.

6.3 CONCLUSION

This chapter reported on the findings from the cross-case analysis that was done on strategy practices and processes as executed by managers in the DERIs in South Africa. Data was obtained from several institutes through interviews, documents and questionnaires in order to have a rich database that could be analysed for the required output. Engagement with the first level of management as well as the next level management teams ensured that a highly representative poll was used during this study. All institutes were involved and were very helpful and interested in participating in this study.

The information was gathered as indicated above and the data was organised, categorised, interpreted, identified, synthesised and generalised. The quotations identified from the text were coded through inductive coding and grouped into categories until a logical theme, category and practice was formed. This was then used as a basis from where the discussion for the analysis was concluded. It also gives some interpretation of what was found in the results and concludes with a description and illustration of the practices and processes employed during strategy implementation as derived from the data collected. In conclusion, there is a discussion on the limitations of the results, as well as a proposal for future research and summary.

CHAPTER 7: RECOMMENDATIONS AND CONCLUSION

7.1 INTRODUCTION

This study aimed to define what practices and processes are in use by middle managers in the defence evaluation and research institutes in South Africa during the implementation of strategies. Implementation of strategies is the most neglected area of strategic management and therefore required investigation.

There are current theoretical principles relating to the implementation of strategies, but they do not include the actual doing of strategy, practices during implementation and tools in use. The aim of this research was to determine what middle managers, as strategy practitioners, are actually doing to execute strategy, and what processes are being utilised in the implementation of their strategies. The answers to the questions were based on the findings from this specific research and are discussed in this chapter.
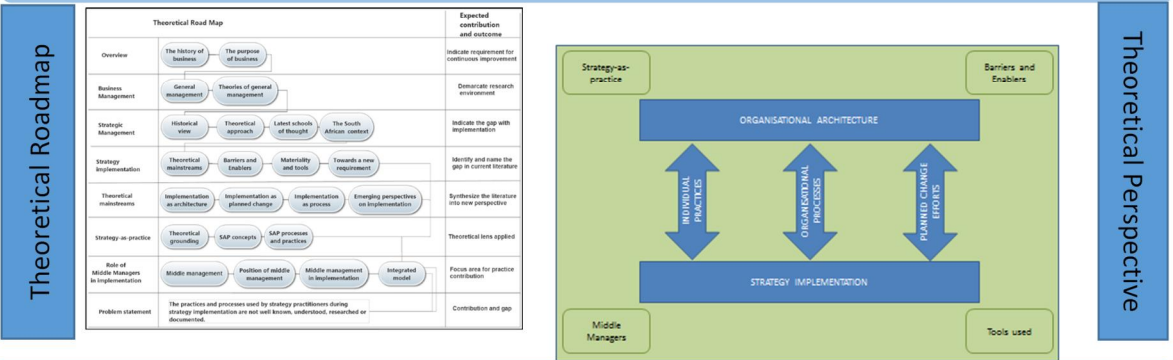
7.2 GENERAL SUMMARY

The purpose is to summarise the discussion undertaken thus far and link that with the final output of this study. This aims to explain the process followed during the study, the gaps identified in current literature, and the contribution made in this regard and also to demonstrate how this link is closed by the final framework presented. Thereafter the detail of the process will be explained. Figure 7.1 indicates the flow of how the study was executed, from the research question to the proposed conceptual framework on strategy implementation practices and processes.
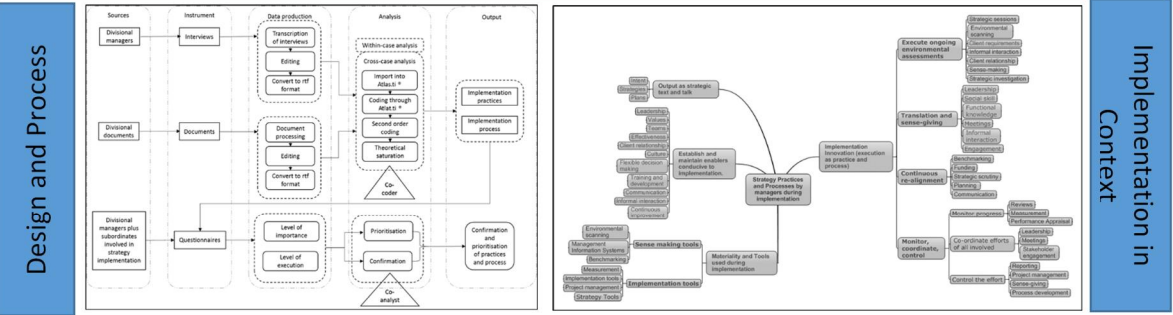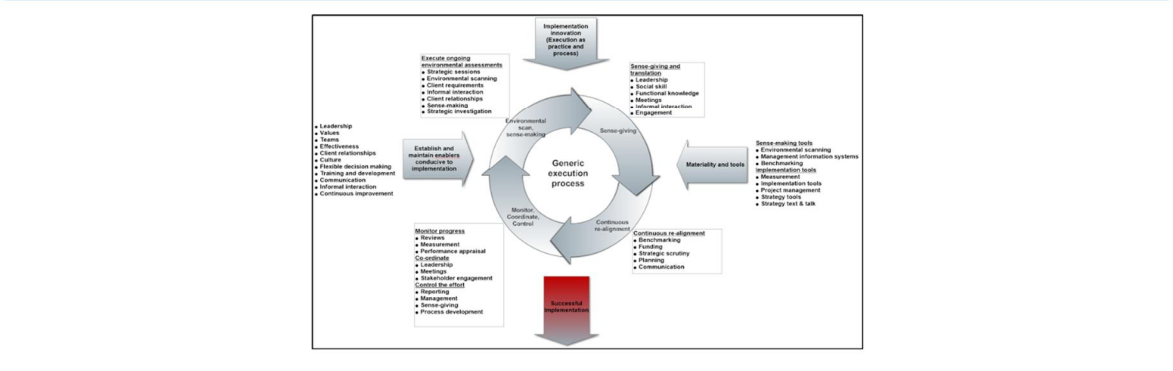
Figure 7.1: The research completed in this study

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An explanation of Figure 7.1 follows. Firstly, a theoretical roadmap was presented during the literature review to ensure that all necessary areas are covered in the study. The purpose was to allow the reader to visualise the process that the researcher used to synthesize the literature into discrete knowledge areas as well as a high level indication of the expected outcome and contribution to existing literature. This is indicated in Figure 7.2 below.
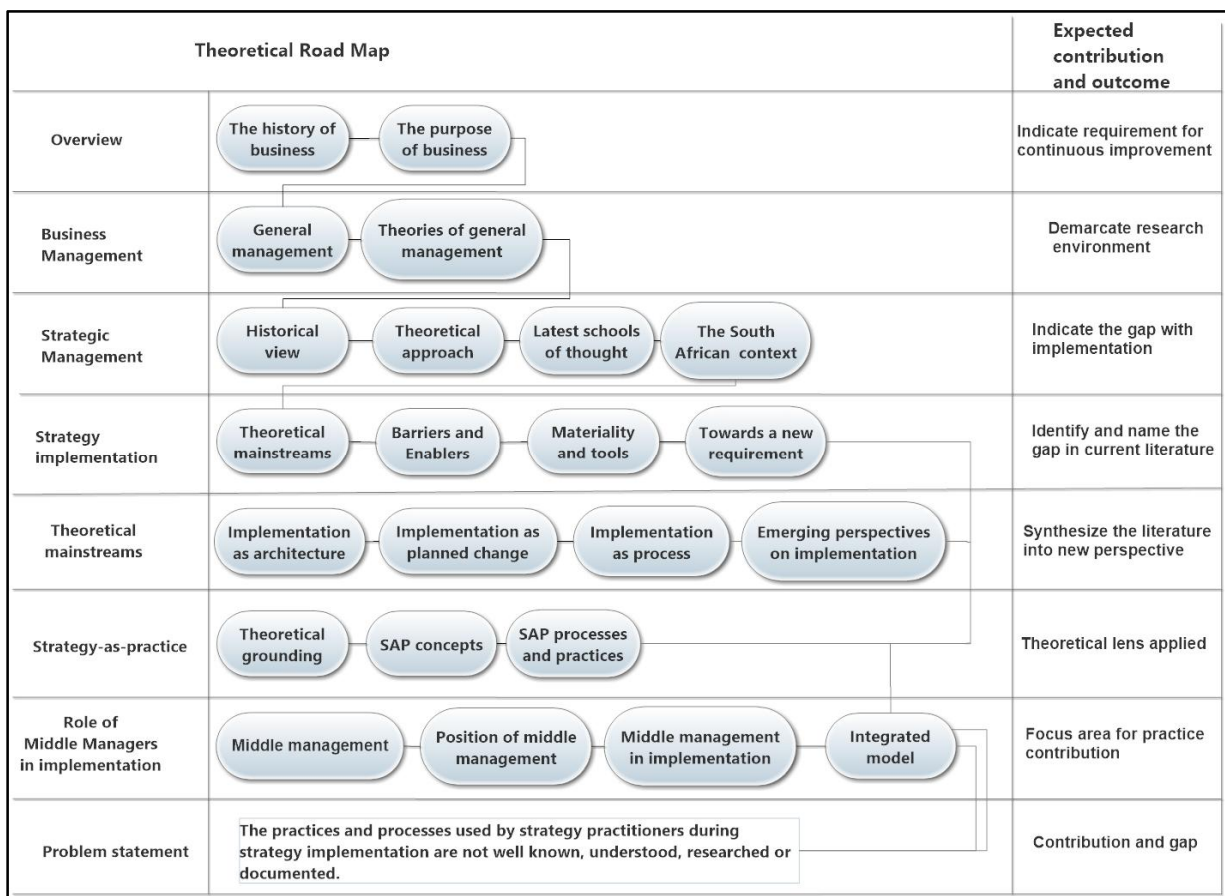
Figure 7.2: Theoretical Roadmap

Secondly, the literature was then synthesised into a new perspective as indicated in Figure 7.2 above. It also indicates the areas where the gaps exist and which this study addressed. The literature with respect to strategy implementation practices was grouped into four streams of theory. These four streams were further analysed to indicate the gaps in literature and to ensure that the study contributes to the current body of knowledge as identified in the objectives of the research. These were defined as strategy implementation as architecture; strategy implementation as planned change;

strategy implementation as process; and emerging perspectives on implementation strategy. Of specific interest was the way in which the individual's practices were executed. These four streams were incorporated and synthesized into a conceptual framework as outlined in Chapter 2. Furthermore, added to this framework were the strategy-as-practice perspective, the role of middle managers, barriers and enablers relevant to implementation as well as tools used during strategy implementation. Integrating all of these constructs led to the final framework as indicated in Figure 7.3 below.
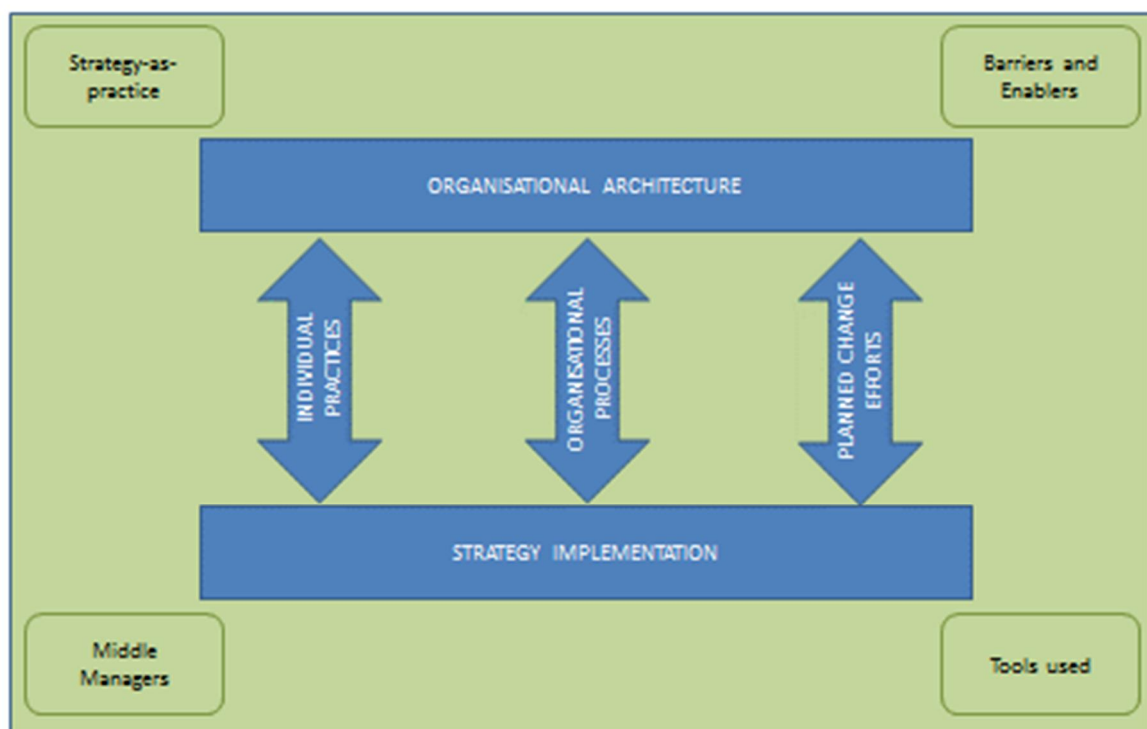
Figure 7.3: Consolidated synthesis of literature

Thirdly, the next step was to design the research so as to obtain as much information possible to get to the required output related to the framework defined above. Figure 7.4 is the blueprint of how the research methodology was defined and the research designed as well as the process that was followed during the research. It indicates the sources of information used during the data collection, the instruments used to collect such data, preparation of data and what analyses were performed. It also describes the

output from the analyses as well as the controls that were built into the design. This was mapped to the gaps and contribution from the research in order to arrive at consistent and valid data and resultantly reliable conclusions.
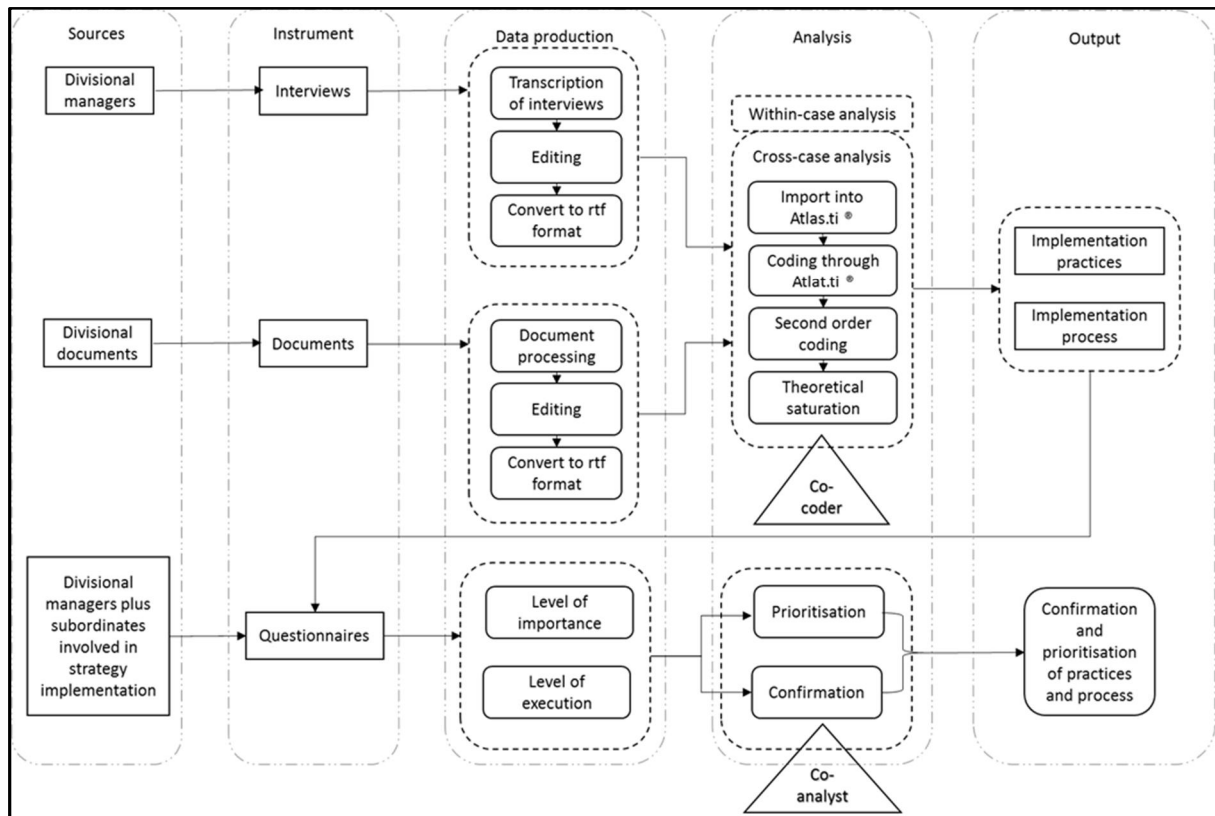
Figure 7.4: Research design and process

Fourthly, the data from the research, as well as the output produced, was then translated into the mind map indicated in Figure 7.5 below. This is an effort to visually represent the output from the study in terms of practices and processes that emanate from the work done from the research.
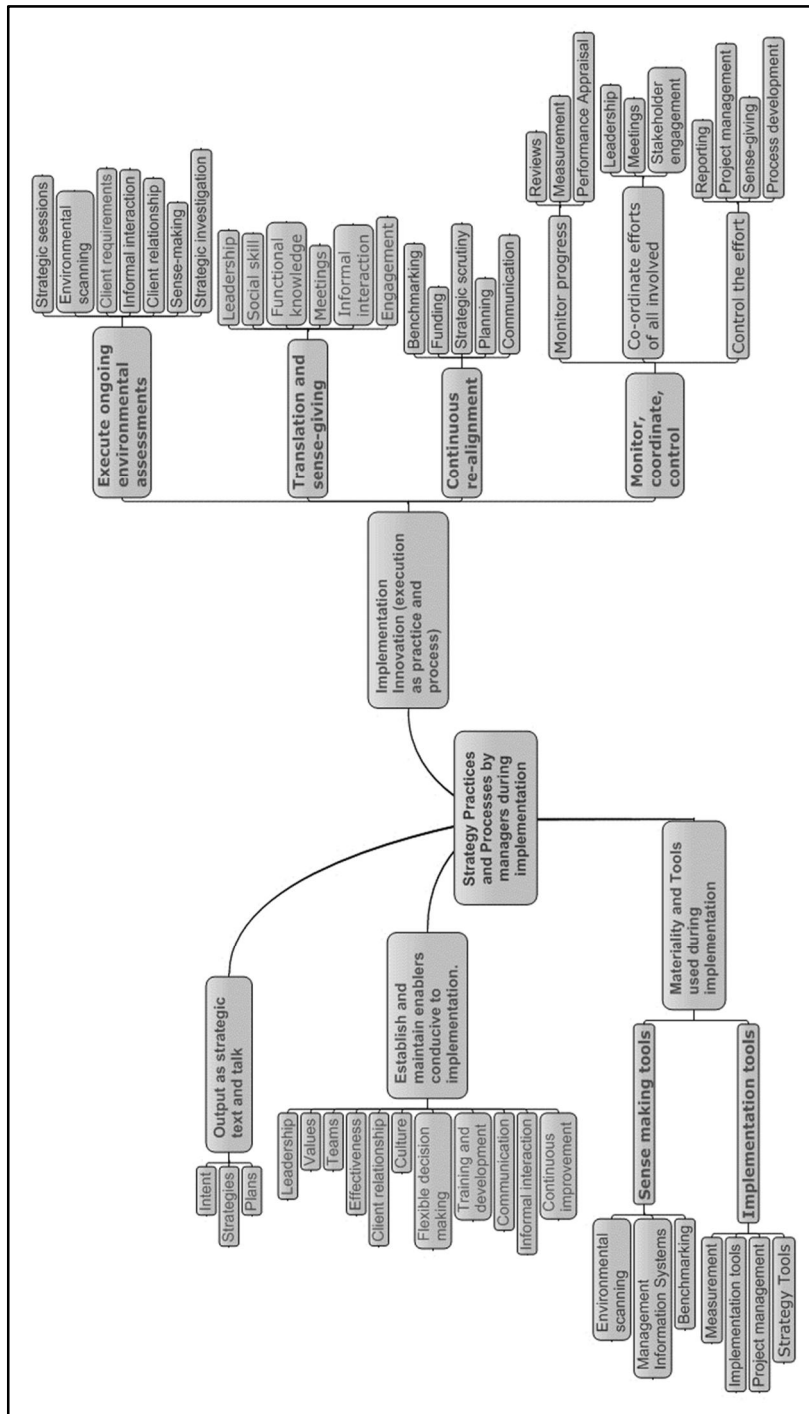
Figure 7.5: Implementation in context

Lastly, all of the practices, processes, context and content of the study are captured in a framework that defines and visualises the integrated view of how the result of the research produced a new perspective on strategy implementation practices and

processes in use by middle managers in the DERI environment in South Africa. It brings all the concepts together in an integrated view as output and contribution to current strategy-as-practice perspectives and provides a higher view of how the output can be viewed and value added. The 'what' and 'how' of strategy implementation practices and processes are identified and defined and it successfully answers the research question.
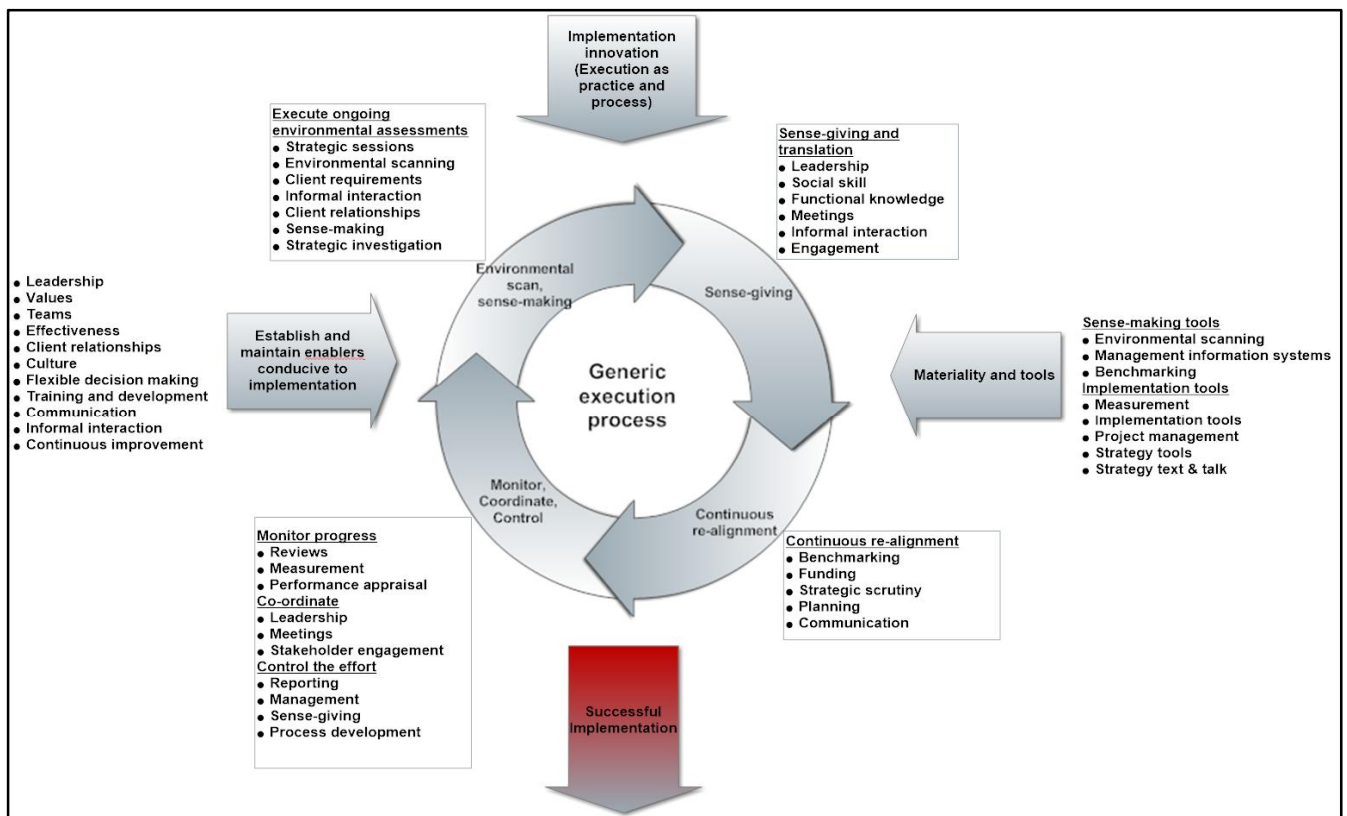
Figure 7.6: Strategy practice and process integrated

The above discussion indicates the process followed and output generated by this study. It starts off with the objectives and research questions. It then progresses to define the gaps and contributions from current literature. That information was used to design the research performed and then executed. The data were analysed and a framework synthesised to represent the output of the research as a contribution to existing work as well as new knowledge being developed. This therefore demonstrates that the circle is completed in relation to the study that was performed. A discussion on the detail now follows.

7.3 RESPONSE TO THE RESEARCH QUESTIONS

As a first-order conclusion it is important to relate the research questions back to the initial questions that were asked and establish whether these questions were answered satisfactorily. Table 7.1 below gives a summary of the questions as well as the results obtained from the study.

Table 7.1: Results of research questions

What practices and processes are employed in strategy execution in DERIs in South Africa?	
Sub-questions	Results of the questions
What practices are employed by middle managers as practitioners in DERIs during the execution of strategies?	Strategic sessions, environmental scanning, client requirements, informal interaction, client relationships, sense-making, strategic investigation, leadership, social skill, functional knowledge, meetings, informal interaction, engagement, benchmarking, funding, strategic scrutiny, planning, communication, monitor progress, reviews, measurement, performance appraisal, co-ordinate efforts of all involved, leadership, meetings, stakeholder engagement, control the effort, reporting, project management, sense-giving, process development
What processes are being used to ensure that strategy execution is successful?	Execute ongoing environmental assessments, translation and sense-giving, continuous re-alignment, monitor, coordinate, control
What are the roles of middle managers during strategy implementation?	Practitioner, leader, implementer, guide, oversight, report, communicate, sense-making, sense-giving
What are the enablers for effective and successful execution of strategies?	Leadership, values, teams, effectiveness, client relationships, culture, flexible decision making, training and development, communication, informal interaction, continuous improvement
What are the barriers that prevent effective and successful execution of strategies?	Bureaucracy
How are materiality and tools used during execution of strategies?	Sense-making tools: Environmental scanning, management information systems, benchmarking Implementation tools: Measurement, implementation tools, project management, strategy tools

Table 7.1 indicates the results of the research questions and answers firstly what practices are employed by middle managers during strategy implementation. The summary as found during the research is contained in the table as well as the rest of the research questions. The outcome of the study was to define strategy implementation practices and processes as executed by middle managers. The contribution was a representation of the practices and processes employed by the practitioners (middle managers) in implementing their strategies successfully, thereby achieving the objective of the research and accomplishing the contribution made in this regard. Lastly, there was a discussion on the limitations of the results, as well as a proposal for future

research and the conclusions that are being discussed below.

7.4 PRACTICES AND PROCESSES IN STRATEGY IMPLEMENTATION

Strategy-as-practice has been concerned with a means to further investigate the social complexity and causal ambiguity in the resource-based view, by investigating the dynamics and practices underlying this phenomenon and defining the process that constitutes strategy through this perspective (Ambrosini et al, 2007).

The objective of the study was to identify the practices and processes used during strategy implementation in these institutes. These were captured in the mind map and also in the following paragraph as output for this study. These practices and processes were then put into context following the discussion on how they are being applied in actual contexts in these environments. Furthermore, the data obtained through the secondary objectives augmented the primary objective and ensured that rich data verified the outcome of the research as indicated in this chapter. The outcome of the data verified and contributed to the objectives through the identification of the practices and processes. The generic implementation process was highlighted as found during the study. The links between formulation and implementation were also established and the role of the middle manager during this whole process was defined. Lastly, the output of this research was consolidated into an integrated approach of how these practices and processes are being applied as identified during the study and aligned with the purpose of the study.

The practices identified in this study derived from the source data and some structure was given to it in order to indicate patterns and flows. The outcome from this study was outlined in the mind map in Figure 7.5 and each of the practices discussed in detail in the preceding paragraph.

The four themes are indicated with the categories identified from the research. The codes from the qualitative analysis were identified as practices, on which the final outcome was based. The foundation of this is that the strategy practices and processes found during implementation for this study were grouped into four themes: firstly, strategic innovation (implementation as practice and process); secondly, materiality and tools used during implementation; thirdly, to establish and maintain enablers conducive to implementation; and fourthly, output as strategic text and talk. These themes and categorising are addressed by Jarzabkowski and Spee (2009) as "practice bundles" where they clearly identified the requirements and gaps for further research in this field.

The strategic innovation aspect was then clustered into four categories in order to clearly capture their essence. The categories are to execute ongoing environmental assessments, translation and sense-giving, continuous re-alignment and monitoring, and co-ordinate and control. Furthermore, the materiality and tools used during implementation were categorised into sense-making tools and implementation tools. The third theme was to establish and maintain enablers conducive to strategy implementation and the last theme contains the output as strategic text and talk as identified during the research.

This was then conceptualised by allocating the relevant practices to categories and themes as indicated below:

1. Strategy innovation (implementation as practice and process)
   1.1   Execute ongoing environmental assessments
       1.1.1 Strategic sessions
       1.1.2 Environmental scanning
       1.1.3 Client requirements
       1.1.4 Informal interaction
       1.1.5 Client relationships
       1.1.6 Sense-making
       1.1.7 Strategic investigation

2.2   Implementation tools

      2.2.1   Measurement

      2.2.2   Implementation tools

      2.2.3   Project management

      2.2.4   Strategy tools

3. Establish and maintain enablers conducive to implementation

    3.1   Leadership

    3.2   Values

    3.3   Teams

    3.4   Effectiveness

    3.5   Client relationships

    3.6   Culture

    3.7   Flexible decision-making

    3.8   Training and development

    3.9   Communication

    3.10   Informal interaction

    3.11   Continuous improvement

4. Output as strategic text and talk

    4.1   Intent

    4.2   Strategies

    4.3   Plans

    4.4   Talk and communication

The above was discussed, analysed and interpreted in detail in Chapter 6 and it is important to contextualise how this is applied and used in practice as an output of this study.

The following part of the conclusion will attempt to bring all that was found before into context and will explain the ways that middle managers are doing strategy and executing strategy in their day-to-day tasks in order to add to the current literature (Whittington, 2002). It is a difficult subject as these practices are not always tangible and easy to define, but the outcome of the research is presented in such a manner to

be able to see and understand what these intangible, social and cognitive practices and processes entail during the implementation endeavours by middle managers to sustain the institutes productively. Firstly, the context in which the practices are applied is discussed and explained. Secondly, the processes of the institutes were synthesised into a generic process and is presented. Then the role of the middle manager was contextualised through the practices found during the research. Finally, all of the above is brought together to explain the challenging nature of how practices and processes are applied during implementation by middle managers.

Practice in context:

Figure 7.8 below indicates the relationship between the different themes derived from the research. The first practice in the figure is the establishing and maintaining of enablers conducive to implementation that will have an impact on the practices and processes that relate to effective implementation. This is due to the fact that it acts as an enabler that supports an environment of effectiveness, client orientation and other factors that will support the manager in his/her implementation efforts. There are also certain materiality and tools that are used by these practitioners. These vary from sensors to evaluate the environment to management information systems, measuring tools, implementation tools and others. They are used in varying degrees according to the preferences of the managers. Jarzabkowski and Spee (2009) also identified these as enablers during the strategy-as-practice literature review.
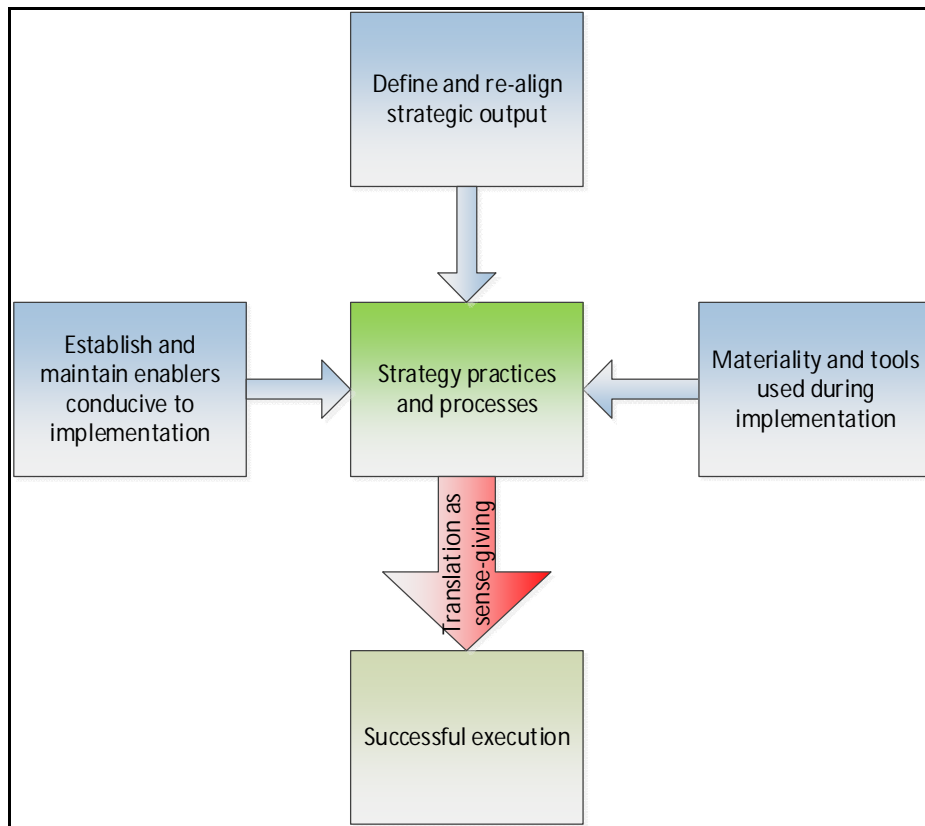
Figure 7.7: Practices and processes in context

(Source: Author)

The third theme in Figure 7.8 is the strategic output which is also viewed as part of the practice and process approach. This means that there are certain strategic outputs, in this case identified as strategic text and talk, which are communication, discussion, guiding, documents, plans and instructions, among others. This also forms part of the context within which practices and processes are defined for this research. These three themes are then, in the context of practices and processes, translated through a sense-giving approach to execute strategies as indicated in the figure. The findings in support of this view are provided in the data below.

Implementation activity	How	Why
Strategic Output	Strategic output is generated through several documents, processes, communication effort,	Part of the corporate requirements are documented in processes and plans

meetings, plans and instructions. These are compiled, reviewed, distributed and implemented through all levels in the organisation.	and part of this is an effort to ensure buy-in from all levels as well as to promote visibility of the direction internally and externally.

Example from data:

The strategy is written in our blue book - our long term planning document and it is done every year and it is done in 3-year cycles. We always plan a 3-year cycle window (27:4:26:26).

We have standard strategic plans which you are familiar with – the HR plan, the financial plan and at G1 we have the ISEM plan where we implemented the ISO model. The most significant document or for your purposes, will be our Stakeholder and Strategy Plan, because a lot of our strategies is spelled out in that document. It covers the employees, the community, the clients and the suppliers. It covers all our stakeholders in that document. I think it is quite comprehensive and it is a live document, it is a document that we manage and that we neglect to look at the progress (29:79:163:163).

We go from the strategic plan down to various operational plans maybe of a high level a financial strategy or an HR strategy. Those are then cascaded down to the point where it is quantifiable and measurable (30:35:55:55).

Generic implementation process:

The next observation is the generic process resulting from this study. The process of strategy implementation explored during this study contains a continuous circle of events with feedback loops as indicated in Figure 7.9 below.
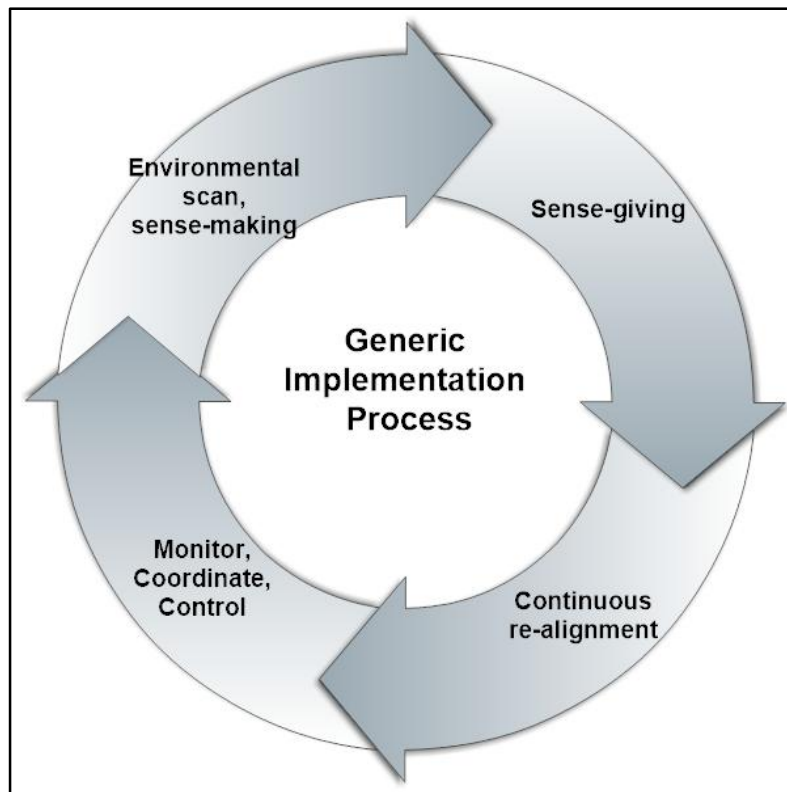
Figure 7.8: Generic implementation process

(Source: Author)

This generic implementation process as indicated above is about scanning the environment in order to make sense of the business landscape. Secondly, it is about employing skills and knowledge to translate what is found in the environment into actionable interventions. The next step is about re-alignment or confirmation that the implementation actions are aligned with current environments. Thereafter follows continuous monitoring, co-ordination and control. The figure indicates the iterative process of this circle of events until such time as a new strategic direction is defined that requires new implementation efforts. This is supported by the following findings:

Summary

Implementation activity	How	Why
Implementation process	Extracts from the interviews on implementation processes:	Although most of the institutes don't really follow formal implementation processes, they do follow some or

It involves three basic stages which are strategy formulation, strategy implementation and strategy evaluation and control.

Apart from conducting the strategy process and putting that into a plan and type of monitoring, what you are indeed doing is getting feedback once a month.

The environmental scan that is performed, as part of its business analysis, results in a SWOT analysis. SWOT analysis is revised during planning or strategy sessions and is used to define the elements that constitute the strengths, weaknesses, opportunities and threats.

A strategic session was held at the beginning of the year from which a number of objectives emerged and those who are actually transferred over to the divisional meetings where it was actually monitored.

other process in general, derived from experience or some form of training. The main reason is the continuous drive to be successful in the day-to-day operations, sustainability and ensure that the required services are delivered.

Example from data:

Process - The strategic gap is determined in terms of listing all the issues from domains as well as divisional level and managing the strategies that address these issues in terms of the approved Strategic Management Process (2:20:506:506).

Sense-giving - So you get your broad guidelines in terms of direction as strategy from above, but being a diverse unit from the others you define your own strategy as well (37:6:51:51).

Continuous re-alignment - In this process we will measure organisational performance, using benchmarking, and continuously evaluate progress toward measurable goals (10:5:267:267).

Monitor, Co-ordinate, Control - We monitor and do analysis and monitor our trends of changes (25:38:124:124).

Scanning, sense-making - The normal Political, Economic, Social, Technological, Legal, Environmental and Military (PESTLEM) analysis was used (2:10:427:427).)

It is important to touch briefly on the link between formulation and implementation. Figure 7.10 indicates the link but also the fact that these two factors cannot be separated. Formulation is done as part of the strategic management process and, as indicated in Figure 7.10, precedes the implementation phase.
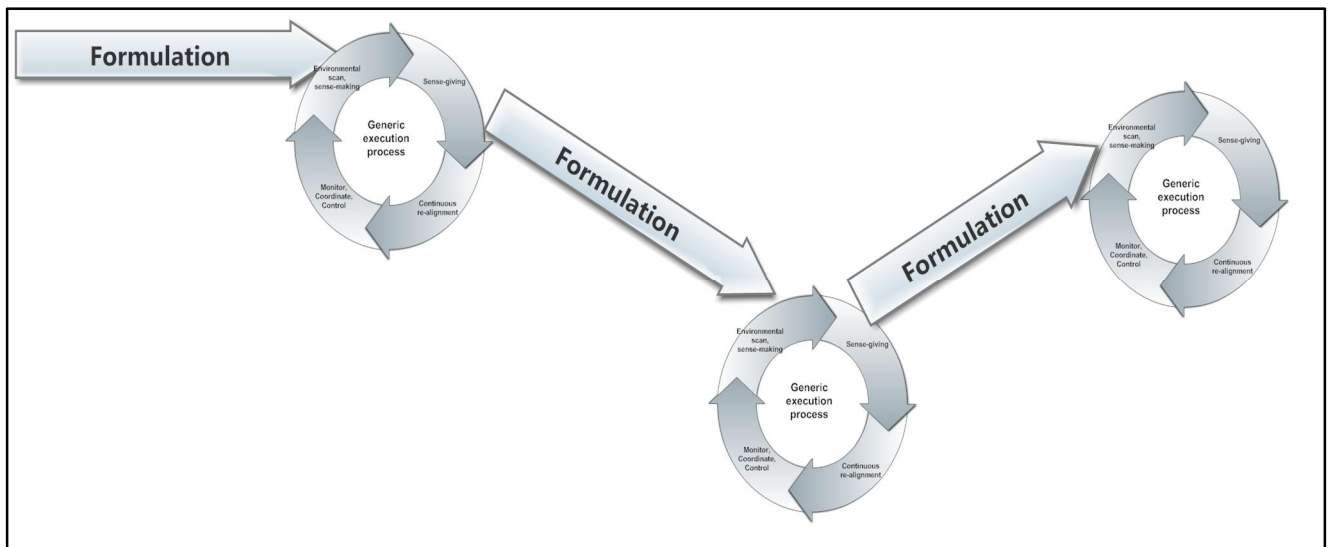
Figure 7.9: Formulation/implementation link

(Source: Author)

From the figure it can be seen that there is a strategic direction coming from formulation and thereafter implementation follows the generic circular process as indicated. It was found that this is an iterative process not bound to time but based on changing circumstances. Some of the institutes indicated that this formulation process is done annually and some bi-annually due to corporate requirements. Some institutes indicated that it is done only when the requirement arises but the majority indicated that formulation is not re-done every year and is done in an iterative manner as indicated below. However, should there be a change in direction required, the formulation process will start again, followed by implementation as indicated below. The relationship between these two is indicated due to the fact that they are closely interconnected.

The middle manager in context:

Figure 7.11 explains the middle manager's role during the implementation phase as derived from the output of this study. Middle managers report to top management and also have other managers reporting to them. They therefore operate in the middle of the organisational hierarchy (Floyd & Wooldridge, 1992) which is why they are called "middle managers". In this sense, they are the practitioners with the knowledge and experience to execute strategies as indicated in Figure 7.11. The top management, in

this context, gives high level guidance and oversight. The middle managers must execute at all level of operations and align with the indicated direction. They also report upwards as part of their implementation duties as indicated by Floyd and Wooldridge (1992). Middle managers also practice downward communication and guidance as indicated in the practices identified during the study.

Figure 7.10: Middle managers' role in implementation

(Source: Author, inspired by the organisational architecture model from Venter (2006))

The middle of the block in Figure 7.11 represents the practices, processes and context in which middle managers execute. There are inputs to this process that are indicated as the capability or business units that need to be managed. The capability consists of
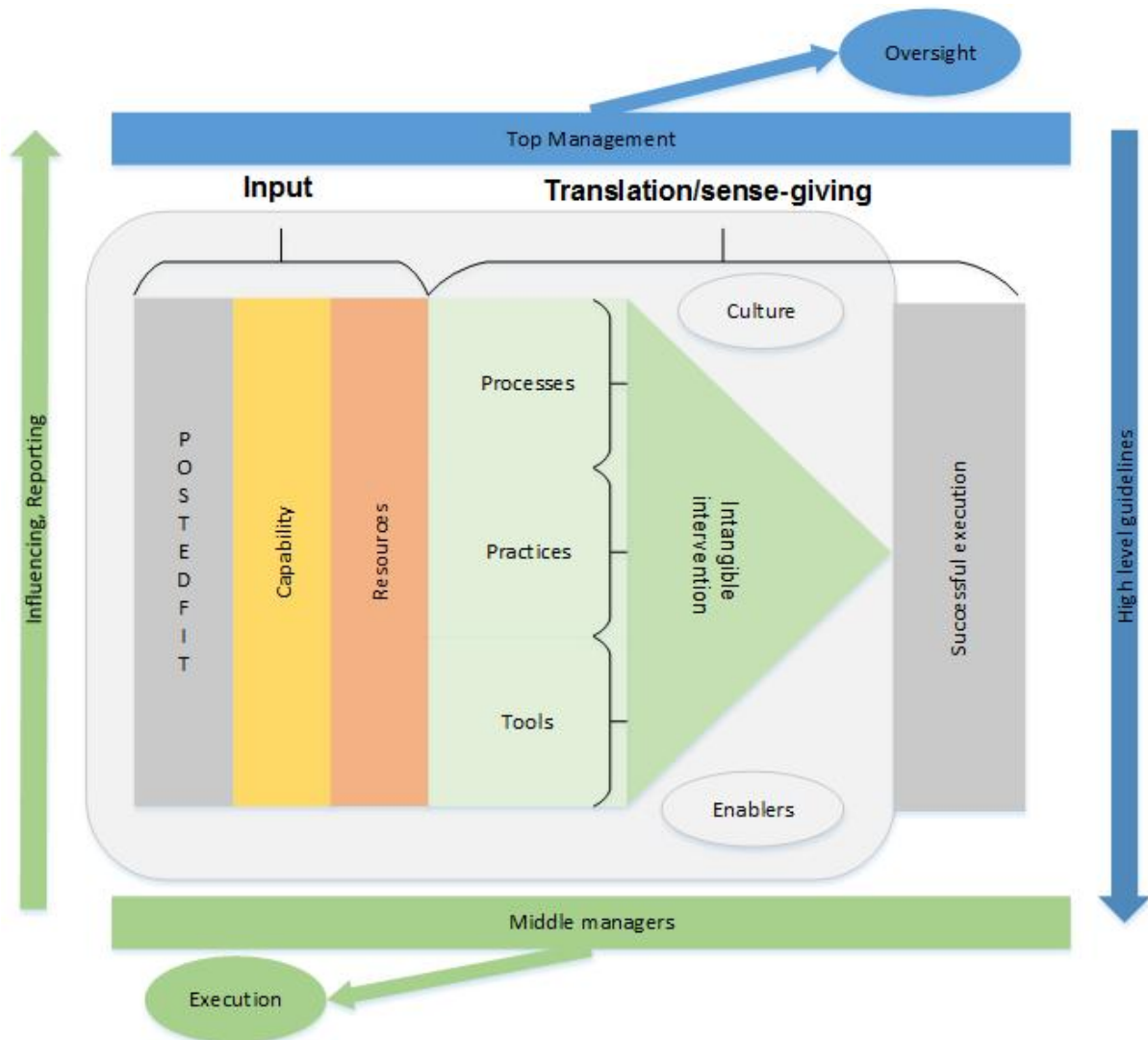
elements such as people, organisation, support systems, training, equipment, processes, facilities, information and technologies. These are necessary elements to manage implementation in the context of this study. They can be described as follows:

> P – Employees, client/s, society
>
> O – Corporate, departments, institutes
>
> S – Support functions, funding, knowledge management, retention, efficiency
>
> T – Training, development, skilled
>
> E – Equipment, testing, measuring, during implementation of job
>
> P – Processes, process development, corporate policies, processes, and
>
> > practices, divisional processes, ISO
>
> F – Facilities and buildings
>
> I – Information, MIS, software
>
> T – Technology development, enhancement, aligned with requirements
>
> L – Leadership
>
> T – Translation/sense-giving

These capabilities are used during the implementation phase together with resources within the organisation as inputs into the implementation process. It is notable that culture emerged very strongly during this study, specifically the creation of a culture conducive to successful implementation containing enablers such as living the values, effective leadership, good teamwork, driving effectiveness, client-oriented, flexible, communicating, interaction, and continuous improvement. Together with certain identified enablers, middle managers create an environment within which they are executing through sense-giving as indicated in the drawing.

The next part of Figure 7.11 indicates the practices, processes and tools used by middle managers during implementation. These were described in detail which included the what, how and why they were employed during implementation. Finally, sense-giving which happens through intangible interventions in context with social skills and professional knowledge (Valmra et al, 2006) allows the institute to execute strategies according to the goals and objectives it sets. The purpose of this paragraph was to

visually highlight the role of the middle manager as practitioner in this process and the context of the other three themes found in this study.

Applied practices and processes integrated:

Having identified and described the context of the practices, the processes and the role of the middle manager in this setting, these themes are integrated in order to provide a whole picture of how they fit together. This allows the study to conclude the data analyses, findings and interpretations into a recommendation applicable to the practices and processes found in the DERIs and to outline the implementation process.

Figure 7.12 below is the final product that integrates these three practices into a single model where the themes of the practices, the process, the materiality and tools, the culture and the strategic output are combined to explain the 'what' and the 'how' of the practices and processes used during the implementation of strategies by middle managers. It can be seen that implementation innovation as input into this model through strategy implementation as practice and process produces successful implementation. This is done by means of a culture conducive to implementation and with particular materiality and tools as enablers to support this effort. Next, the process as identified is used to achieve this through the practices that are derived from the study. These practices are grouped and allocated to each of the four phases of the process as they are used and applied as indicated from the research. The details of these were discussed in Chapter 6. These practices form an iterative generic process that is continuously aligned with changing circumstances. There are progress monitors and actions and plans that are co-ordinated and controlled by leadership. Sense-giving is the part where social skills and professional knowledge are used to guide and lead implementation efforts. Figure 7.12 below contextualises the details as discussed in Chapter 6 into a single model.
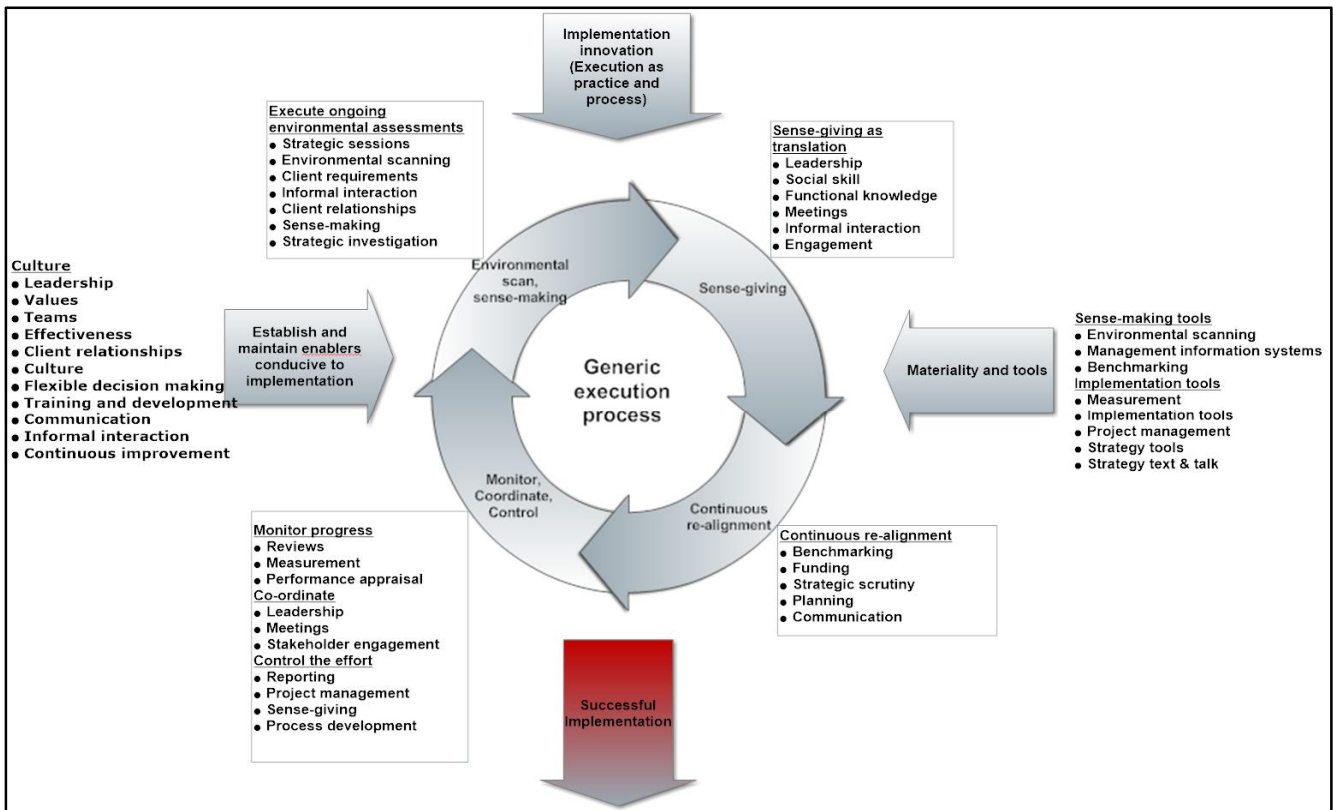
Figure 7.11: Strategy practice and process integrated

(Source: Author)

As an inductive approach was being followed in this study, the output of the research ended in a definition of practices and processes in use during the implementation of strategies and answers the 'what' and 'how' questions. It also supports the research done in order to arrive at the required methodological rigour achieved during the study. The practices and processes outlined above were derived as output from the research done during this study and this therefore adds value to the current body of knowledge.

7.5 CONTRIBUTIONS

The contributions from the study were tested against recent directives for future research in the strategy-as-practice field and specifically with regard to the theoretical and methodological challenges as indicated by Rouleau (2013). The question of knowledge accumulation is raised and in the case of this research, the creation of new

knowledge through strong research streams with the production of rich data in the different areas was indicated. This also developed into a reliable and valid set of data from empirical phenomena indicating the contribution to knowledge creation as indicated in Chapter 1. The support of the notion to move from looking at a perspective only to proposing a theoretical contribution was done in this instance. Furthermore, in examining the methodological side, it is important to ensure that the contribution comes through empirical and robust design to allow for the new phenomena to be crystallised into new knowledge. Ethnographic studies, with critical reflexivity and knowledge validity, are required in such knowledge generation. This was also demonstrated during the research and was discussed and elaborated during the interpretations (Vesa, 2012; Langley, 2010; Stensaker & Falkenberg, 2007; Chia & Rasche, 2009; Vaara & Whittington, 2012).

The contribution of this study was also made in terms of the areas for further knowledge production as indicated by Rouleau (2013) and Vaara and Whittington (2012). They indicated that there is a requirement for the further development of research to encompass the sociological theories where the contribution must be made where middle managers will use their social skill combined with their functional knowledge to identify, apply and practice certain actions during their implementation efforts. Added to this are the identification and analysis of specific empirical issues as indicated in Figure 7.6 that demonstrate the contribution derived from this study. Furthermore, this study builds on the organisational ethnographic research in the effort of understanding the doing of strategy. These are captured in the hidden knowledge of practitioners and the output of this study encapsulated those practices and processes into a conceptual model as contribution to the subject matter field of strategy-as-practice.

Five contributions are made that were not addressed in any study thus far.

Firstly, previous studies focused mainly on drivers and barriers to implementation, as mentioned by Jooste and Fourie (2009), whereas this study established how divisional managers practice strategy in the research and engineering environments and how they actually do strategy. It highlighted the practices being employed in order to be

successful as well as the processes that are used during the implementation of strategy. It also adds to the body of knowledge with relation to enablers and barriers of strategy implementation from the middle managers' point of view.

Secondly, this study identified and described the context of smaller business units within a bigger corporate environment, and the context and impact of this on the practices employed in order to be successful.

Thirdly, the study identified the interconnected nature of the practices found in the results, thereby highlighting the complexity of strategy implementation found in contemporary organisations.

Fourthly, the study identified the practices and processes used during the implementation of strategies, thereby adding to the strategy-as-practice body of knowledge. This relates to the exploration of practices and processes during implementation from the middle managers' point of view, bringing practice and process together into an integrated context as indicated in Figure 7.6. These were tested and validated through this study.

Fifthly, the role of middle managers is developed to either stimulate further research or be used by institutes and/or corporates to stimulate successful implementation and best practices. The social skill and personality traits required during implementation are an area for further investigation (Valmra et al, 2006).

An additional added value found during the feedback was that these managers were not aware of the practices that they execute during the day-to-day management. By identifying these and making them more visible to the managers, the practices and the success of those practices was made visible which will empower the managers to employ them more consciously, making them even more effective. Furthermore, through this contextualisation, practitioners may be made aware of what these practices and processes are and use them to assist in their implementation efforts.

7.6 LIMITATIONS

The biggest limitation in terms of this study is the fact that only the DERI environment was used for the study. The sample drawn for this study was restricted to the DERI environment and included representation from all the institutes as well as from all management levels within the institutes. However, this is only one sector in the industry and may not be seen to be representative of the total industry in South Africa. This is acknowledged but was so selected in view of the specific uniqueness of the DERI environment. The DERI environment consists of 11 institutes, and therefore it is only a small part of the total industry in South Africa. The study can therefore not be generalised to the bigger population, but it does encourage further research. The study was done using a qualitative approach. In Chapter 3 it was highlighted that a general inductive approach for qualitative data analysis is an acceptable approach in social science research. The study touches on intangible practices that cannot be easily measured. This can be seen as a limitation but was deemed to be the best method for this type of study.

Furthermore, this study relates to the fact that because of time constraints this was a cross-sectional study. Undertaking this type of study over a longer period of time can be considered as a proposal for future research.

The strategy-as-practice field is a very young discipline in the strategic management environment. Literature and proven research is not very common and although this could be seen as a limitation, it could also be seen as an opportunity to add value to the current body of knowledge.

7.7 FUTURE RESEARCH

During the course and journey of this study, several lessons, experiences, shortcomings, alternatives, and many more aspects were experienced and learned. In order to share this, it is appropriate to make some recommendations for further research. What follows is a list of possible areas to be investigated further, from the

point of view of the researcher:

1. It is recommended that further research be done into the field of strategy-as-practice in general, seeing that this is lacking in South Africa.
2. It is recommended that such further research should encompass specifically the engineering and technical environments, as these present some unique characteristics.
3. The research could be expanded into listed companies, in order to have a more representative sample from the South African environment.
4. Another area that could usefully be investigated is the specific implementation practices that were identified in the output, such as project management, benchmarking or performance appraisals, and to study each of the specific practices in a wider context.
5. As this study looked mostly at the micro and meso environment, research into the macro environment would also be a possibility for further study.
6. A longitudinal study can have more data over a period of time and therefore provides another opportunity for further research.
7. Private companies should also make for an interesting study, because of the differences between the corporate environment and entrepreneurial practices.
8. From a theoretical point of view, the output may be used to build a case for further investigation in terms of theory development.

7.8 CONCLUSION

The gap that was identified in the beginning of this study was to look at the strategy implementation from a practitioner point of view, mainly in relation to the actual implementation of strategy practices and processes.

The unique contribution of this study was the execution of empirical research in order to answer the research questions. The contribution further added to the question of how these practices came to constitute the implementation and process of strategy. It also provided views on how strategy is accomplished with regard to the social practices and

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provided a strong set of published data. Furthermore, the interventions and actions by middle managers as practitioners during strategy implementation were revealed. The objective of this research was to investigate, identify and understand what the strategy practices and processes are that make highly technical and scientific institutes execute them successfully. The study provided insight into and clarity on the complexity of the strategy implementation process as executed by managers through certain practices and processes. A contribution was made to the existing literature by giving more insight into the South African context.
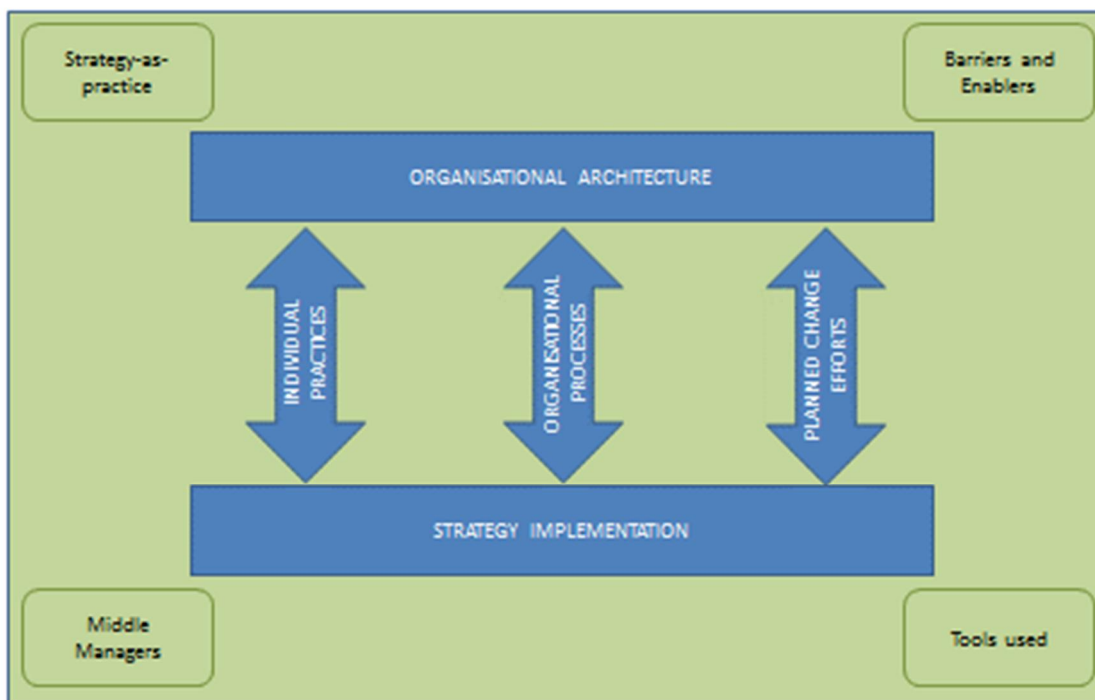
Figure 7.12: Consolidated synthesis of literature

(Source: Author)

Figure 7.13 above is a representation of how the literature was synthesised into the perspective presented. It indicates the four streams of theory as discussed in the

literature section and how these interact and integrate during strategy implementation. The impact and influence of organisational architecture, planned change efforts, organisational processes as well as individual practices on strategy implementation was demonstrated and the gaps relating to this study were indicated. In addition to that, the role of middle managers is central to the theme and their influence is defined as output from this study. There are certain tools used and specific barriers and enablers that were identified and used during implementation as identified from current literature. All of these were included in this perspective in the context of the strategy-as-practice, where the outcome was to define and identify the practices and processes in use by middle managers in the DERI context, as the contribution from this study and the link back to the model was demonstrated. The link was explored between formulation and implementation as applied by middle managers as practitioners. The practices and processes in use were identified which contributed to the existing body of knowledge.

It was demonstrated that the outcome of the research in question is applicable to the research problem and also provides an understanding of the phenomena concerned, namely, strategy practices and processes in use at the DERIs. It can therefore be concluded that the research objective was achieved.

In conclusion,

> *We don't decide on a day that we are going to spend this day on strategy. It is part of our daily processes* (25:75:251:251)

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APPENDIX A: SCOPE OF WORK

Research Scope of Work

Strategy Formulation	Different schools of strategic management → Exploration → Outcome: Understanding of various theories			
Strategy Implementation	Existing research on Implementation → Outcome: Local and International trends → Unknown 1 Implementation in SA DERIs → Identify gap			
Constructs of Implementation	Unknown 2 What are the issues? → Define issues not researched yet → Design Research proposal → Outcome: Contemporary Implementation Concepts			
Strategy as Practice	Unknown 3 Define Practices and processes → Practices and Processes in DERIs	Output 2 / Output 1	A definition of strategy implementation practices and processes	
Research Design	Unknown 4 Methodologies and Analyses → Output practice and process contructs	Output 3 / Output 4		
Contribution	Definition Requirements Development → Quantify and Qualify → Conclusion and reccommendation → **Defined implementation practices and processes**			

APPENDIX B: QUESTION MATRIX

Topic											
Strategy Implementation Processes and Practices in Defence Evaluation and Research Institutes in South Africa											
Management Dilemma											
The conscious and unconscious interventions and actions by strategy practitioners are not well known, understood or documented during strategy implementation.											
Major question											
What are the processes and practises employed by middle managers in the DERIs during strategy execution?											
	Literature chapters							Primary data			
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	Questionnaire	Interview	Document analysis	Other
1. Strategic management	X	X	X								
What is strategic management?		X									
What are the processes for strategic management?			X	X							
What are the latest schools of thought?				X	X						
Can process be excluded?				X	X						
What seminal work was done?			X	X							
Emergent and prescriptive strategies?			X								
Delineation?				X		X					
2. Implementation											
Is there an inability/inefficiency to execute, implement and translate strategies successfully Globally/ DERIs?				X				X	X		
What methods are used to implement strategies as found in literature and practice?				X				X	X	X	
What is the relationship between strategy implementation and the intangible interventions of/in an organisation?				X	X						
What can be done to increase the success of strategy implementation?											
What practices and processes are being employed in strategy implementation?			X	X				X	X	X	
What are the existing theoretical constructs and/or key intangible actions required for successful strategy implementation?				X					X		
What are the constructs for strategy implementation?				X				X	X		
What are the leading indicators/KSF for implementation?				X				X			
What are the processes that can potentially assist in the successful implementation of strategy?									X		
Can a theoretical framework add to the success of the process of strategy implementation?								X			
3. Middle manager as practitioner											
Practitioners in impementation?						X					
What is the role of middle manager?						X		X			
What are the implementation actions?						X					
4. Strategy as Practise											
What is strategy as practise?					X						
What practises are being used by practitioners?					X				X	X	
What tools are being used?					X				X	X	
How is materiality used in implementation?				X					X		
5. DERI context											
What is the DERI environments?											
What is effective strategy implementation in a DERI environment?									X		
How effective is strategy implementation in the DERIs environments?										X	
Are there any succes in implementation in the DERIs?									X	X	
Objective											
The exploration of strategy implementation processes and practises in the DERIs.											

APPENDIX C: INTERVIEW GUIDE

Interview Guide

Name:	X		Date:	24/06/2013	Division:DDSI	
Title:	Y		Gender:	M	Years employed here: 5	Total years employed 5
Interviewer:			Recorder check:		Location:	

Note:
Tick the item when done on the agenda.
Tick the area of interest when information was received

Criteria	x	Tick	Note
Agenda			
1. Introduction			
2. Cover letter			
3. Interview guide			
4. Administrative questions			
5. Investigative questions			
6. Closing			
The following information must be extracted during the interview but are not to be asked specifically or directly			
Investigative questions			
1. What are the practices employed by yourself during the implementation of strategies?			
2. What processes are being used to ensure successful strategy implementation?			
3. What are the drivers for effective and successful implementation of strategies?			
4. What are the barriers that prevent effective and successful implementation of strategies?			
5. How are materiality and tools used during implementation?			
6. How do you ensure lower level buy-in at the division?			
Note: The above must be used to extract information on the following:			
Strategy routines (Training, projects, reporting, planning, goal setting, BSC, networking, e-mails, informal discussions, Performance appraisal, meetings, away days, lobbying,) Tools, various routines, dialogue, theories, models and technologies used, as well as tools and academic technologies. It includes reviews, meetings, sessions, away-days, academic analysis, operational analysis, analytical tools, strategic planning practices, tools, ideas, techniques, methodologies, PowerPoint and Excel.			
Strategy process concepts (Processes, strategic planning, budgeting and planning) Execute practices, the work and routines of reviewing, analyzing, manipulating strategy talk, lobbying, and the everyday actions performed during strategy execution			
Strategy tools (Porter 5 forces, KSF, SWOT, BCG, 3D, drawings, and diagrams)			
Behavioural norms and beliefs (how do we do things around here? Preparation, speed, culture, specific to the division)			

Comments:
"

APPENDIX D: QUESTIONNAIRE COVERING LETTER

Questionnaire Cover Letter

Research – Strategy Implementation

Mr HL Jansen van Rensburg

_____

June 24, 2013

To whom it may concern

I am busy with my DBL degree at the Unisa Business School and the title of my thesis is "_Strategy Implementation Processes and Practices in Defence Evaluation and Research Institutes in South Africa_". I have concluded the literature study as well as the research methodology and design. I am now in the process of doing the research part on strategy processes and practices as executed by senior managers and other practitioners. This will be done through a triangulated approach by means of a semi-structured interview, a questionnaire and document analysis of the relevant strategic plans, business plans and other relevant documentation that can be used for this purpose. Copies of the intended questions and formats are included for your perusal. The interviews will be conducted in person and the questionnaire will be administered electronically and completed by the individual at own leisure. The documents will be used to analyze what practices and processes are in use in the Institute and will be requested formally from the relevant Institute. That can typically be Annual reports, Strategic plans, Business plans, Brochures and Marketing material. The interviewees will be the Senior manager at the Institute as well as the next level of Domain managers to be interviewed.

I would like to assure you that all information will be kept strictly confidential and will be used for the purpose of this research only. Each interviewee will also receive a letter of consent of which a copy is attached to this letter for your information. Feedback will be given to the individuals on the outcome of the research and to yourself as well.

I hereby ask if you would be so kind as to spend some time and complete the attached questionnaire at your earliest convenience. The completed questionnaire can be returned to me by e-mail at ▮▮▮▮▮▮▮▮▮▮ or I can pick it up from you should that be required. My contact details are on the questionnaire as well.

Your kind co-operation in this regards is appreciated. Thank you for your time in completing the questionnaire. I am looking forward to analyzing the results forthcoming from you.

Hentie van Rensburg

Student number ▮▮▮▮▮▮▮

Unisa SBL

APPENDIX E: QUESTIONNAIRE

Dear Prospective Participant

Student research project

I am a Senior Manager in the Armscor Research & Development Department and am currently busy with research at the Unisa Graduate School of Business Leadership. The title of my thesis is *"Strategy Implementation Processes and Practices in Defence Evaluation and Research Institutes in South Africa".* The research investigates the strategy implementation processes and practices of the Defence Evaluation and Research Institutes (DERIs). The literature study and the research methodology and design have been concluded. The process of doing the research part on strategy processes and practices as executed by senior managers and other practitioners is now in progress. A triangulated approach has been used by way of a semi-structured interview and document analysis of the relevant strategic plans, business plans and other relevant documentation. The next part is to administer a questionnaire in order to validate some of the findings and to prioritize some of the constructs that have emerged from the study. You have been selected as a potential participant in the research because of the nature of your position in your organization. The questionnaire will be administered electronically and can be completed by the individual at his or her own leisure; it will take approximately 20 minutes.

I would like to assure you that all the information that you provide will be kept strictly confidential and will be used for the purpose of this research only. Your name will not be published anywhere and no one will be able to connect you to the answers you give. Your answers will be given a fictitious code number or a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Being part of this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you agree and give consent to participate in this study. You are free to withdraw at any time and without

giving a reason for doing so. The benefit of this study is that it might help to understand and write up what people are actually doing to be successful through strategy practices. Thank you for taking the time to read this information sheet and participate in this study. I look forward to analysing the results pertaining to the information supplied by you.

Your kind co-operation in this regard is much appreciated.

Hentie van Rensburg

X – Tick this box if you give consent to participate in this study and wishes to continue.

<u>*Strategy as Practice Questionnaire*</u>

<u>Note:</u> Institute means the organization, division, department or functional structure that you are working in. The questionnaire is divided into four areas (Part A, Part B, Part C and Part D) and for clarity purposes, each of these is defined with a description of each relevant area. Also note that the questions relate to your involvement on a <u>strategic level</u> as part of a management team in your institute.

<u>*Part A - General:*</u>

The first section concerns your personal involvement as part of management in your institute and the output of your strategic management process:

1. *Are you involved in management in your institute?*
   <u>*Yes/No*</u>

2. *Are you involved in the formulation and implementation of strategy in your institute?*
   <u>*Yes/No*</u>

3. *Does your institute produce a formal strategic plan or document?*
   <u>*Yes/No*</u>

4. *Does your institute follow a formal strategic management process?*
   <u>*Yes/No*</u>

<u>*Part B - Importance:*</u>

The following questions relate to the level of importance of each of the concepts of strategy implementation in your institute as perceived by you. The rating scale ranges from 'Not important' to 'Very important', and you are requested to rate each of the statements below.

<u>*When thinking about strategy implementation in your institute, please rate (on a scale of 1 to 4) how important you think each of the following concepts is (1 equals not important, and 4 equals very important):*</u>

	Not important 1	*Slightly important 2*	*Important 3*	*Very Important 4*
<u>*Strategic sessions*</u> 1. *Strategic work sessions such as away-days, etc.*				
<u>*Environmental scanning*</u> 2. *To assess external environmental factors in order to understand the milieu in which your institute operates.*				
<u>*Client requirements*</u> 3. *Clear client requirements to align capabilities in terms of service delivery.*				
<u>*Informal discussion*</u> 4. *The use of informal discussions in order to establish what is going on in the external environment related to your institute.*				
<u>*Client relationship*</u> 5. *The alignment between client needs and implementation efforts.*				
<u>*Strategic analysis*</u> 6. *Strategic planning by means of a clearly defined strategic analysis.*				
<u>*Benchmarking*</u> 7. *Benchmarking to other similar environments in order to measure the operational effectiveness of your institute.*				
<u>*Funding*</u> 8. *That funding of your institute, as an enabler, is aligned to the requirements of clients.*				
<u>*Planning*</u> 9. *Aligning all operational and strategic planning with strategic objectives.*				

Communication 10. Communication of strategies to all stakeholders.				
Leadership 11. That management takes control of strategy implementation through demonstration of good leadership.				
Meetings 12. That meetings at your institute is in support of the implementation of strategy.				
Stakeholder engagement 13. Stakeholder engagement plans to ensure that stakeholder relationships are sustained.				
Reviews 14. Formal reviews of strategic plans as a method to monitor the progress of strategy implementation.				
Measurement 15. The measurement of achievement of goals.				
Performance Appraisal 16. That the employees' individual performance appraisal is aligned with implementation efforts.				
Reporting 17. Management reporting to keep track of implementation activities.				
Project management 18. Project management of strategic initiatives as an implementation tool.				
Sense-giving 19. For management to interpret strategy and provide guidance to lower levels.				
Process development 20. Formal process development initiatives as enabler.				
Management Information Systems 21. Management Information Systems in your institute in order to manage implementation.				
Strategy tools 22. The use of strategy tools such as the Balanced Score Card (BSC), etc.				
Teams 23. Teamwork.				
Effectiveness 24. Individual tasks that are aligned to the				

implementation effort.				
Culture 25. *That the culture in your institute supports the values required for successful strategy execution.*				
Bureaucracy 26. *Corporate processes and procedures support effective operational activities.*				
Training and development 27. *Training and development as a behavioural norm in support of implementation.*				
Communication 28. *Communication between all levels in the organization.*				
Continuous improvement 29. *Having clear processes defined in terms of the implementation of continuous improvement efforts in your institute.*				
Strategic Intent 30. *The definition of strategic intent through the formal statement of the vision, mission and strategic objectives in a strategic plan.*				
Strategies 31. *Formal documented strategic and tactical plans.*				
Values 32. *That the values of your institute are embodied by management.*				

Part C - Level of execution:

The following questions relate to the execution level of strategy implementation in your institute. The rating scale ranges from 'poor' to 'excellent', and you are requested to rate how poor or good each of the statements below are executed in your institute.

When thinking about strategy implementation in your institute, please rate (on a scale of 1 to 4) how your institute has performed in terms of the actual level of strategy execution or strategy implementation progress made (1 equals poor, and 4 equals excellent):

	Poor *1*	*Fair* *2*	*Good* *3*	*Excellent* *4*

Strategic sessions 33. *Strategic work sessions such as away-days, etc.*				
Environmental scanning 34. *To assess external environmental factors in order to understand the milieu in which your institute operates.*				
Client requirements 35. *Clear client requirements to align capabilities in terms of service delivery.*				
Informal discussion 36. *The use of informal discussions in order to establish what is going on in the external environment related to your institute.*				
Client relationship 37. *The alignment between client needs and implementation efforts.*				
Strategic analysis 38. *Strategic planning by means of a clearly defined strategic analysis.*				
Benchmarking 39. *Benchmarking to other similar environments in order to measure the operational effectiveness of your institute.*				
Funding 40. *That funding of your institute, as an enabler, is aligned to the requirements of clients.*				
Planning 41. *Aligning all operational and strategic planning with strategic objectives.*				
Communication 42. *Communication of strategies to all stakeholders.*				
Leadership 43. *That management takes control of strategy implementation through demonstration of good leadership.*				

Meetings 44. *That meetings at your institute is in support of the implementation of strategy.*				
Stakeholder engagement 45. *Stakeholder engagement plans to ensure that stakeholder relationships are sustained.*				
Reviews 46. *Formal reviews of strategic plans as a method to monitor the progress of strategy implementation.*				
Measurement 47. *The measurement of achievement of goals.*				
Performance Appraisal 48. *That the employees' individual performance appraisal is aligned with implementation efforts.*				
Reporting 49. *Management reporting to keep track of implementation activities.*				
Project management 50. *Project management of strategic initiatives as an implementation tool.*				
Sense-giving 51. *For management to interpret strategy and provide guidance to lower levels.*				
Process development 52. *Formal process development initiatives as enabler.*				
Management Information Systems 53. *Management Information Systems in your institute in order to manage implementation.*				
Strategy tools 54. *The use of strategy tools such as the Balanced Score Card (BSC), etc.*				
Teams 55. *Teamwork.*				
Effectiveness 56. *Individual tasks that are aligned to the implementation effort.*				

Culture 57. _That the culture in your institute supports the values required for successful strategy execution._				
Bureaucracy 58. _Corporate processes and procedures support effective operational activities._				
Training and development 59. _Training and development as a behavioural norm in support of implementation._				
Communication 60. _Communication between all levels in the organization._				
Continuous improvement 61. _Having clear processes defined in terms of the implementation of continuous improvement efforts in your institute._				
Strategic Intent 62. _The definition of strategic intent through the formal statement of the vision, mission and strategic objectives in a strategic plan._				
Strategies 63. _Formal documented strategic and tactical plans._				
Values 64. _That the values of your institute are embodied by management._				

Part D – Performance measurement Tools:

Which of the following tools are used by your institute as performance measurement tool and also indicate the value of these tools perceived by you?

	Not valuable	_Slightly valuable_	_Valuable_	_Very valuable_
Balanced scorecard (BSC)				
Key performance indicators				
Strategy maps				

Performance metrics				
Core competencies				
Any other formal performance management system Specify:				

Thank you for making time to complete this questionnaire.

APPENDIX F: ETHICAL CLEARANCE CERTIFICATE

Graduate School of Business Leadership, University of South Africa PO Box 392, Unisa, 0003, South Africa
Cnr Janadel and Alexandra Avenue, Midrand, 1685, Tel: +27 11 652 0000, Fax: 011 652 0299
Website: www.sblunisa.ac.za

2 December 2013

Ref #: 2013_SBL_011

Supervisor: Prof P. Venter (ventep@unisa.ac.za)

Student researcher: Mr HL Jansen van Rensburg (hentie@armscor.co.za)

GRADUATE SCHOOL OF BUSINESS LEADERSHIP RESEARCH ETHICS REVIEW COMMITTEE (GSBL RERC)

This is to certify that the application for research ethics clearance submitted by Mr HL Jansen van Rensburg (student #: 33393303) for the study

Strategy Implementation Processes and Practices in Defence

Evaluation and Research Institutes in South Africa

has received ethics approval.

The research ethics application for the abovementioned research project was reviewed by a sub-committee of the GSBL RERC in compliance with the Unisa Policy on Research Ethics, on 3 October 2013. Final approval was granted on 7 November 2013.

Please be advised that the committee needs to be informed should any part of the research methodology as outlined in the ethics application (2013_SBL_011) change in any way or if any ethical problems are encountered during the course of the study. If you need further support regarding the ethical aspects of this study you may contact the Chairperson, Dr Retha Visagie (Visagrg@unisa.ac.za). This certificate is valid for the duration of the project.

The GSBL Research Ethics Review Committee wishes you all the best with this research undertaking.

Dr R.G. Visagie (Chairperson of the Graduate School of Business Leadership Research Ethics Review Committee)

On behalf of Dr F. du Toit

Deputy Chairperson of the Graduate School of Business Leadership Research Ethics Review Committee; dutoitf@unisa.ac.za

APPENDIX G: APPROVAL LETTER

Permission Letter

Research – Strategy Implementation

Mr HL Jansen van Rensburg

Armscor R&D Department
370 Nossob Street
Erasmuskloof
September 9, 2013

I am busy with my DBL degree at the Unisa School for Business Leadership and the title of my thesis is *"Strategy Implementation Processes and Practices in Defence Evaluation and Research Institutes in South Africa"*. I have concluded the literature study as well as the research methodology and design. I am now in the process of doing the research part on strategy processes and practices as executed by senior managers and other practitioners. This will be done through a triangulated approach by means of a semi-structured interview, a questionnaire and document analysis of the relevant strategic plans, business plans and other relevant documentation that can be used for this purpose. Copies of the intended questions and formats are included for your perusal. The interviews will be conducted in person and the questionnaire will be administered electronically and completed by the individual at own leisure. The documents will be used to analyze what practices and processes are in use in the various Institutes and each Institute will be formally requested to supply the required information as it pertains to the Institute concerned. Such documents may typically be annual reports, strategic plans, business plans, brochures and other marketing material. The persons to be interviewed will be the Senior Manager at the Institute and the next level of domain managers.

I would like to assure you that all the information that you provide will be kept strictly confidential and will be used for the purpose of this research only. Each interviewee will also receive a letter of consent, a copy of which is attached to this letter for your information. Feedback on the outcome of the research will be given to the individuals that were interviewed, and also to you.

Your permission is herewith requested that I may initiate the proposed research in your department and engage with the relevant divisions, make appointments with individuals and obtain the information required as described above.

Your kind approval and co-operation would be highly appreciated. Thank you for your time to consider my request. I look forward to hearing from you.

Hentie van Rensburg

Student number:

Unisa SBL

Approved:

Acting GM R&D
17/9/2013

APPENDIX H: LETTER OF CONSENT

PARTICIPANT INFORMATION SHEET

RE: Participation in research study UNISA SBL

Dear Prospective Participant

Student research project

I am a Senior Manager at the Armscor R&D Department and is currently busy with my Doctor of Business Leadership studies at the Unisa Graduate School of Business Leadership and the title of my thesis is "Strategy Implementation Processes and Practices in Defence Evaluation and Research Institutes in South Africa". My research investigates on the strategy implementation processes and practices of DERIs. As part of this research I am personally interviewing strategists in the DERIs and have selected you as a potential participant in the research due to the nature of your position in your organization.

I would like to assure you that all the information that you provide will be kept strictly confidential and will be used for the purpose of this research only. Your name will not be published anywhere and no one will be able to connect you to the answers you give. Your answers will be given a fictitious code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

Being part of this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form, a copy of which is attached to this letter for your information. You are free to withdraw at any time and without giving a reason.

The time required from yourself will be restricted to two hours and feedback on the outcome of the research will be given to the individuals that participated, and also through the published article that will be distributed. The benefit of this study is that this might help to understand and write up what people are actually doing to be successful in divisions through strategy practices.

Your kind co-operation in this regard is much appreciated. Thank you for taking the time to read this information sheet and participate in this study. I look forward to analysing the results pertaining to the information supplied by you.

Hentie van Rensburg

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time.

I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the interview for analysis purposes and possible completion of a questionnaire.

I have received a signed copy of the informed consent agreement.

Participant name & surname.. (please print)

Participant signature...Date....................

Researcher's name & surname..(please print)

Researcher's signature...Date....................

Witness name & surname...(please print)

Witness's signature..Date.......................

APPENDIX I: CO-CODER REPORT

Feedback and Review notes

- Naming conventions for documents are good. (A;B;C; D; E; G; H; I; O; P) 9 groups (B and A seem to be the same) 37 docs.

- Check the documents with a low number of codes allocated. Make sure they have been coded thoroughly e.g.:

  o A1 Business plan.pdf – Not coded

  o H1 value chain 27 08 2013 Appendix 5A.rtf; I1 ANNEXURE VI.rtf; G1 Stakeholder.pdf; C1 WoG Fact Sheet.pdf; C1 SET.pdf; A1 STRATEGIC IMPROVEMENT ACTION PLAN 2013-14 - Issue 1.rtf; P1-2013 Business Plan - Annexure I Financial Plan (2) 15-8-20131.rtf; H1 Financial Plan August 2013 Annexure 1.rtf; G1 Business plan 12.pdf; P1-2013 Business Plan - Annexure II Stakeholder Plan (2) 15-8-20131.rtf

- You have defined your codes very well using the comments. Well done.

- I am a bit concerned that you may have been too broad with some of the codes. E.g. Implementation tools. This means that you have 1 code with 106 quotes, but little info about what those tools are without reading all the info. You can leave it as is it is not technically incorrect, it will just make it more work to write up. I suggest we don't go fiddle with this as you are already very advanced in your analysis process.

- The code allocation seems to be done appropriately in line with the code definitions and seems to be justifiable. Quotations are also long enough to reflect context. There are also no redundant quotations and overlap.

- The code families seem appropriately allocated and in line with your research questions. Although it may have been easier if you separated drivers and barriers. Again it will just mean a bit more time engaging with the relevant quotes during the right-up to answer those two particular aspects, so not a problem. You have also allocated all your codes so no data is neglected. (Well done.)

- With the document family allocations. Please check Institute 8- there is a document noted B1 that I am not sure is in the correct place.

- Renumber all your docs: Click P-Docs-Miscellaneous-Renumber all.

- You might find some use from using the cross tabs function in Atlas.ti™. It is called a Codes-Primary Documents Table. You access it through the Analysis menu. It is a very user friendly function. It is divided into six blocks. The top and bottom two on the left represent elements you can have in the cross-tab. The open top and bottom block represent what will be in the table so you just select the elements on the left and move them over with the arrows >>> when you have all the elements you want you click create report. I attach an example excel sheet.

APPENDIX J: DOCUMENT ANALYSIS

Insert document analysis.html here

Document analysis

Generator: ATLAS.ti WIN 7.0 (Build 91)
Date: 2014/09/02 05:12:39 AM

Original ATLAS.ti project: document

Table of Contents

General:

Author(s): Hentie
Created: 2014/02/28 05:03:34 AM. Modified: 2014/09/02 04:51:10 AM.

Statistics:

- Co-Authors: 0
- Primary Texts: 37
- Quotations: 1210
- Codes: 35
- Codings: 1363
- Memos: 7
- Primary Document Families: 9
- Code Families: 4
- Memo Families: 0
- Network Views: 2
- Code-Code Links: 0

- Hyper-Links: 0

Primary documents:

P 1: D1 Stakeholder engagement Plan 2013_2016v2.rtf

File origin: D1 Stakeholder engagement Plan 2013_2016v2.rtf [unmanaged path] - media type: richtext
17 quotations

Codes (15): Client requirements, Communication, Effectiveness, Implementation tools, Informal discussion, Management Information Systems, Meetings, Sense-making, Stakeholder engagement, Strategic analysis, Strategies, Strategy Tools, Teams, Training and development, Values

Memos (0):

P 2: D1 Strategic Plan 2013 - 2016 (2A).rtf

File origin: D1 Strategic Plan 2013 - 2016 (2A).rtf [unmanaged path] - media type: richtext
66 quotations

Codes (22): Benchmarking, Bureaucracy, Client requirements, Communication, Culture, Effectiveness, Environmental scanning, Implementation tools, Leadership, Management Information Systems, Meetings, Planning, Process development, Sense-giving, Sense-making, Stakeholder engagement, Strategic analysis, Strategies, Strategy Tools, Teams, Training and development, Values

Memos (0):

P 3: E1 Business plan editedv2.rtf

File origin: E1 Business plan editedv2.rtf [unmanaged path] - media type: richtext

Comment: This is only one document for this division as it contains all the plans

48 quotations

Codes (26): Benchmarking, Bureaucracy, Client relationship, Client requirements, Communication, Culture, Effectiveness, Funding, Implementation tools, Management Information Systems, Meetings, Performance appraisal, Planning,

Plans, Process development, Project Management, Reporting, Reviews, Sense-giving, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Teams, Training and development

Memos (0):

P 4: G1 Business plan 2013-ANNEXURE II - ISEM plan.rtf

File origin: G1 Business plan 2013-ANNEXURE II - ISEM plan.rtf [unmanaged path] - media type: richtext
16 quotations

Codes (14): Benchmarking, Client relationship, Client requirements, Continuous improvement, Implementation tools, Performance appraisal, Planning, Process development, Reviews, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools

Memos (0):

P 5: G1 business plan 2013-ANNEXURE III - stakeholder strategy and plan 2014.rtf

File origin: G1 business plan 2013-ANNEXURE III - stakeholder strategy and plan 2014.rtf [unmanaged path] - media type: richtext
14 quotations

Codes (13): Client relationship, Communication, Continuous improvement, Effectiveness, Implementation tools, Measurement, Performance appraisal, Planning, Plans, Stakeholder engagement, Strategic analysis, Strategies, Training and development

Memos (0):

P 6: H1 Business v1.rtf

File origin: H1 Business v1.rtf [unmanaged path] - media type: richtext
42 quotations

Codes (15): Effectiveness, Environmental scanning, Implementation tools, Performance appraisal, Planning, Plans, Process development, Reporting, Reviews, Stakeholder engagement, Strategic analysis, Strategies, Strategy Tools, Training and

development, Values

Memos (0):

P 7: H1 Financial Plan August 2013 Annexure 1.rtf

File origin: H1 Financial Plan August 2013 Annexure 1.rtf [unmanaged path] - media type: richtext
8 quotations

Codes (5): Funding, Management Information Systems, Measurement, Plans, Reporting

Memos (0):

P 8: H1 Marketing plan .rtf

File origin: H1 Marketing plan .rtf [unmanaged path] - media type: richtext
11 quotations

Codes (7): Client relationship, Client requirements, Environmental scanning, Planning, Strategic analysis, Strategies, Values

Memos (0):

P 9: H1 value chain 27 08 2013 Appendix 5A.rtf

File origin: H1 value chain 27 08 2013 Appendix 5A.rtf [unmanaged path] - media type: richtext
3 quotations

Codes (3): Implementation tools, Plans, Strategic analysis

Memos (0):

P10: I1 ANNEXURE III.rtf

File origin: I1 ANNEXURE III.rtf [unmanaged path] - media type: richtext
11 quotations

Codes (9): Benchmarking, Continuous improvement, Informal discussion, Management activities, Measurement, Planning, Reviews, Stakeholder engagement, Training and development

Memos (0):

P11: I1 ANNEXURE VI.rtf

File origin: I1 ANNEXURE VI.rtf [unmanaged path] - media type: richtext
3 quotations

Codes (3): Plans, Process development, Reporting

Memos (0):

P12: I1 Business Plan 2013-14.rtf

File origin: I1 Business Plan 2013-14.rtf [unmanaged path] - media type: richtext
19 quotations

Codes (9): Funding, Management Information Systems, Planning, Plans, Project Management, Strategic analysis, Strategies, Training and development, Values

Memos (0):

P13: O1.pdf

File origin: O1.pdf [unmanaged path] - media type: pdf

Comment: This is the scanned version from documents received from this Institute

17 quotations

Codes (6): Planning, Plans, Strategic analysis, Strategies, Strategic Intent, Values

Memos (0):

P14: P1-2013 Business Plan - Annexure I Financial Plan (2) 15-8-20131.rtf

File origin: P1-2013 Business Plan - Annexure I Financial Plan (2) 15-8-20131.rtf [unmanaged path] - media type: richtext
6 quotations

Codes (4): Management Information Systems, Measurement, Performance appraisal, Plans

Memos (0):

P15: P1-2013 Business Plan - Annexure II Stakeholder Plan (2) 15-8-20131.rtf

File origin: P1-2013 Business Plan - Annexure II Stakeholder Plan (2) 15-8-20131.rtf [unmanaged path] - media type: richtext
6 quotations

Codes (7): Continuous improvement, Measurement, Performance appraisal, Stakeholder engagement, Strategic sessions, Strategies, Teams

Memos (0):

P16: P1-2013 Business Plan (2) 15-8-20131.rtf

File origin: P1-2013 Business Plan (2) 15-8-20131.rtf [unmanaged path] - media type: richtext
22 quotations

Codes (14): Bureaucracy, Client relationship, Client requirements, Continuous improvement, Funding, Measurement, Planning, Project Management, Stakeholder engagement, Strategic analysis, Strategies, Strategic Intent, Teams, Training and development

Memos (0):

P17: G1 Business plan 12.pdf

File origin: G1 Business plan 12.pdf [unmanaged path] - media type: pdf
4 quotations

Codes (4): Performance appraisal, Plans, Stakeholder engagement, Strategic analysis

Memos (0):

P18: A1 Business plan.pdf

File origin: A1 Business plan.pdf [unmanaged path] - media type: pdf
5 quotations

Codes (2): Plans, Strategies

Memos (0):

P19: A1 MANAGEMENT REVIEW.pdf

File origin: A1 MANAGEMENT REVIEW.pdf [unmanaged path] - media type: pdf
10 quotations

Codes (4): Communication, Implementation tools, Meetings, Reviews

Memos (0):

P20: A1 STRATEGIC IMPROVEMENT ACTION PLAN 2013-14 - Issue 1.rtf

File origin: A1 STRATEGIC IMPROVEMENT ACTION PLAN 2013-14 - Issue 1.rtf [unmanaged path] - media type: richtext
3 quotations

Codes (3): Plans, Strategic analysis, Strategic Intent

Memos (0):

P21: G1 Business plan 12.pdf

File origin: G1 Business plan 12.pdf [unmanaged path] - media type: pdf
14 quotations

Codes (3): Planning, Plans, Strategic analysis

Memos (0):

P22: G1 Stakeholder.pdf

File origin: G1 Stakeholder.pdf [unmanaged path] - media type: pdf
1 quotations

Codes (2): Plans, Strategies

Memos (0):

P23: A1 stratplan.rtf

File origin: A1 stratplan.rtf [unmanaged path] - media type: richtext
44 quotations

Codes (15): Client relationship, Client requirements, Environmental scanning, Implementation tools, Informal discussion, Management activities, Meetings,

Planning, Plans, Process development, Sense-making, Stakeholder engagement, Strategic analysis, Strategic Intent, Training and development

Memos (0):

P24: A1_editedApril2014.rtf

File origin: A1_editedApril2014.rtf [unmanaged path] - media type: richtext 100 quotations

Codes (25): Bureaucracy, Client relationship, Client requirements, Communication, Continuous improvement, Culture, Effectiveness, Implementation tools, Informal discussion, Leadership, Management activities, Management Information Systems, Planning, Process development, Reviews, Sense-giving, Sense-making, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategic Intent, Teams, Training and development, Values

Memos (0):

P25: O1_editedApril2014.rtf

File origin: O1_editedApril2014.rtf [unmanaged path] - media type: richtext 81 quotations

Codes (29): Benchmarking, Bureaucracy, Client relationship, Client requirements, Communication, Continuous improvement, Culture, Effectiveness, Environmental scanning, Implementation tools, Informal discussion, Management activities, Management Information Systems, Meetings, Performance appraisal, Planning, Plans, Process development, Reporting, Sense-giving, Sense-making, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Strategic Intent, Teams, Values

Memos (0):

P26: I1_editedApril2014.rtf

File origin: I1_editedApril2014.rtf [unmanaged path] - media type: richtext 31 quotations

Codes (19): Benchmarking, Client relationship, Client requirements, Communication, Continuous improvement, Effectiveness, Environmental scanning, Funding, Implementation tools, Leadership, Planning, Plans, Process development, Reviews, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategy Tools, Training and development

Memos (0):

P27: I2_edited April2014.rtf

File origin: I2_edited April2014.rtf [unmanaged path] - media type: richtext
53 quotations

Codes (26): Bureaucracy, Client relationship, Client requirements, Communication, Continuous improvement, Culture, Funding, Implementation tools, Leadership, Management activities, Management Information Systems, Meetings, Planning, Plans, Process development, Project Management, Reporting, Reviews, Sense-giving, Sense-making, Stakeholder engagement, Strategic sessions, Strategies, Strategic Intent, Teams, Training and development

Memos (0):

P28: E1_ditedApril2014.rtf

File origin: E1_ditedApril2014.rtf [unmanaged path] - media type: richtext
70 quotations

Codes (28): Benchmarking, Bureaucracy, Client relationship, Client requirements, Continuous improvement, Culture, Effectiveness, Environmental scanning, Funding, Implementation tools, Informal discussion, Leadership, Management activities, Measurement, Meetings, Planning, Plans, Process development, Project Management, Sense-giving, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Teams, Training and development, Values

Memos (0):

P29: G1_editedApril2014.rtf

File origin: G1_editedApril2014.rtf [unmanaged path] - media type: richtext

82 quotations

Codes (30): Benchmarking, Bureaucracy, Client relationship, Client requirements, Communication, Continuous improvement, Culture, Funding, Implementation tools, Informal discussion, Leadership, Management activities, Measurement, Meetings, Performance appraisal, Planning, Plans, Process development, Project Management, Sense-giving, Sense-making, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Strategic Intent, Teams, Training and development, Values

Memos (0):

   P30: D1_editedApril2014.rtf

File origin: D1_editedApril2014.rtf [unmanaged path] - media type: richtext
120 quotations

Codes (30): Bureaucracy, Client relationship, Client requirements, Communication, Continuous improvement, Culture, Environmental scanning, Funding, Implementation tools, Informal discussion, Management activities, Management Information Systems, Measurement, Meetings, Performance appraisal, Planning, Plans, Process development, Project Management, Reporting, Reviews, Sense-making, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Strategic Intent, Teams, Training and development

Memos (0):

   P31: P1_editedApril2014.rtf

File origin: P1_editedApril2014.rtf [unmanaged path] - media type: richtext
57 quotations
Codes (25): Bureaucracy, Client requirements, Communication, Culture, Environmental scanning, Funding, Implementation tools, Leadership, Management activities, Management Information Systems, Measurement, Meetings, Performance appraisal, Planning, Process development, Reporting, Sense-giving, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Strategic Intent, Teams, Values

Memos (0):

   P32: H1_editedApril2014.rtf

File origin: H1_editedApril2014.rtf [unmanaged path] - media type: richtext
51 quotations

Codes (23): Bureaucracy, Client requirements, Communication, Continuous improvement, Culture, Environmental scanning, Implementation tools, Leadership, Management activities, Management Information Systems, Meetings, Planning, Plans, Process development, Reviews, Sense-giving, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategic Intent, Teams, Values

Memos (0):

   P33: A1B1_editedApril2014.rtf

File origin: B1_editedApril2014.rtf [unmanaged path] - media type: richtext
77 quotations

Codes (28): Benchmarking, Client relationship, Client requirements, Communication, Continuous improvement, Environmental scanning, Funding, Implementation tools, Informal discussion, Leadership, Management activities, Management Information Systems, Measurement, Meetings, Performance appraisal, Planning, Plans, Process development, Reporting, Reviews, Sense-giving, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategic Intent, Teams, Training and development, Values

Memos (0):

   P34: C1 SET.pdf

File origin: C1 SET.pdf [unmanaged path] - media type: pdf
2 quotations

Codes (2): Client requirements, Training and development

Memos (0):

   P35: C1 Unit template.rtf

File origin: C1 Unit template.rtf [unmanaged path] - media type: richtext
14 quotations

Codes (7): Environmental scanning, Funding, Planning, Strategic analysis, Strategies, Strategic Intent, Training and development

Memos (0):

P36: C1 WoG Fact Sheet.pdf

File origin: C1 WoG Fact Sheet.pdf [unmanaged path] - media type: pdf
2 quotations

Codes (1): Client requirements

Memos (0):

P37: C1 2_editedJuly2014.rtf

File origin: C1 2_editedJuly2014.rtf [unmanaged path] - media type: richtext
80 quotations

Codes (26): Bureaucracy, Client relationship, Client requirements, Communication, Culture, Effectiveness, Environmental scanning, Funding, Implementation tools, Informal discussion, Leadership, Measurement, Meetings, Performance appraisal, Planning, Process development, Reporting, Reviews, Sense-giving, Sense-making, Stakeholder engagement, Strategic analysis, Strategic sessions, Strategies, Strategy Tools, Teams

Memos (0):

Codes Summary

(Commented codes are clickable)

All codes used: Benchmarking {13-0}~ , Bureaucracy {25-0}~, Client relationship {37-0}~, Client requirements {90-0}~, Communication {62-0}~, Continuous improvement {36-0}~, Culture {42-0}~, Effectiveness {22-0}~, Environmental scanning {30-0}~, Funding {20-0}~, Implementation tools {107-0}~, Informal discussion {20-0}~, Leadership {31-0}~, Management activities {22-0}~, Management Information Systems {27-0}~, Measurement {31-0}~, Meetings {36-0}~,Performance appraisal {31-0}~, Planning {86-0}~, Plans {60-0}~, Process development {46-0}~, Project Management {15-0}~, Reporting {14-0}~, Reviews {20-0}~, Sense-giving {31-

0}~, Sense-making {24-0}~, Stakeholder engagement {62-0}~, Strategic analysis {101-0}~, Strategic sessions {31-0}~, Strategies {41-0}~, Strategy Tools {20-0}~, *Strategic*, Teams {44-0}~, Training and development {36-0}~, Values {33-0}~

Codes sorted by Alphabet:

Top of Form

```
Plans {60-0}~
Process development {46-0}~
Project Management {15-0}~
Reporting {14-0}~
Review s {20-0}~
Sense-giving {31-0}~
Sense-making {24-0}~
Stakeholder engagement {62-0}~
```

```
Benchmarking {13-0}~
Bureaucracy {25-0}~
Client relationship {37-0}~
Client requirements {90-0}~
Communication {62-0}~
Continuous improvement {36-0}~
Culture {42-0}~
Effectiveness {22-0}~
```

Bottom of Form

Codes sorted by Groundedness:

Top of Form

```
Implementation tools {107-0}~
Strategic analysis {101-0}~
Client requirements {90-0}~
Planning {86-0}~
Stakeholder engagement {62-0}~
Communication {62-0}~
Plans {60-0}~
Process development {46-0}~
```

```
Implementation tools {107-0}~
Strategic analysis {101-0}~
Client requirements {90-0}~
Planning {86-0}~
Stakeholder engagement {62-0}~
Communication {62-0}~
Plans {60-0}~
Process development {46-0}~
```

Bottom of Form

Codes sorted by Density:

Top of Form

```
┌─────────────────────────────────────────┬──┐
│ Informal discussion {20-0}~              │▲ │
│ Benchmarking {13-0}~                     │  │
│ Meetings {36-0}~                         │  │
│ Strategic sessions {31-0}~               │  │
│ Management activities {22-0}~            │  │
│ Sense-making {24-0}~                     │  │
│ Project Management {15-0}~               │  │
│ Leadership {31-0}~                       │▼ │
└─────────────────────────────────────────┴──┘
┌─────────────────────────────────────────┬──┐
│ Informal discussion {20-0}~              │▲ │
│ Benchmarking {13-0}~                     │  │
│ Meetings {36-0}~                         │  │
│ Strategic sessions {31-0}~               │  │
│ Management activities {22-0}~            │  │
│ Sense-making {24-0}~                     │  │
│ Project Management {15-0}~               │  │
│ Leadership {31-0}~                       │▼ │
└─────────────────────────────────────────┴──┘
```

Bottom of Form

Commented Codes only:

Benchmarking {13-0}~
Is a standard against something is being made or compared

Bureaucracy {25-0}~
Administrative procedures that are too complicated

Client relationship {37-0}~
Client relationships is the relationship between clients and the service provider

Client requirements {90-0}~
The process of determination and definition of client requirements

Communication {62-0}~
Communication that is done internally to the employees as well as to external stakeholders

Continuous improvement {36-0}~
Continuous improvement is an ongoing effort to improve products, services, or processes.

Culture {42-0}~
This refers to the customs, ideas, social behaviour, performance and output of people in an organization that is created over time by the group

Effectiveness {22-0}~
  Achievement of the desired result

Environmental scanning {30-0}~
  A process through which an environmental scan is done in strategy analysis internally as well as externally. It can also consist of specific tools i.e. PESTLEM

Funding {20-0}~
  Funding includes the economical sustainability factor as well as resources to ensure execution of mandate

Implementation tools {107-0}~
  Specific tools and methodologies used to implement strategies designed for that specific purpose

Informal discussion {20-0}~
  Discussions that occurs outside of formal and organized forums

Leadership {31-0}~
  The trait that comes from a person that leads

Management activities {22-0}~
  Daily tasks, actions or regular events as run of the mill responsibilities

Management Information Systems {27-0}~
  A system that provides you with information in order to manage, report or make decisions

Measurement {31-0}~
  The action of measuring

Meetings {36-0}~
  An organized gathering of people for discussion or other purposes

Performance appraisal {31-0}~
  An act of assessing individual, project or organizational performance

Planning {86-0}~
  The process of planning specific actions to be performed and then setting goals to achieve that

Plans {60-0}~
  An intention of what one is going to do, aim, idea, goal, objective, target

Process development {46-0}~
   The design and development of a series of actions to standardize and execute work in a specific manner

Project Management {15-0}~
   The actions and interventions executed to manage a project successfully

Reporting {14-0}~
   The action to give a spoken or written account progress and achievements

Reviews {20-0}~
   Formal assessment of something with the intention of making changes if necessary

Sense-giving {31-0}~
   The action of guidance given to others to influence their actions and interpretations

Sense-making {24-0}~
   The viewpoint focusing on the activities in an organization that must determine meaning or make sense of situations within that environment

Stakeholder engagement {62-0}~
   Stakeholder engagement is the process by which an organization involves people who may be affected by the decisions it makes or can influence the implementation of its decisions.

Strategic analysis {101-0}~
   The process through which a strategy is analysed, defined and implemented. This implies that the division used some strategic analysis as practice

Strategic sessions {31-0}~
   This is a term used for strategic sessions held away from the office by going through a structured process in order to determine direction and implementation actions.

Strategies {41-0}~
   A plan of action to achieve a long term goal or overall aim.

Strategy Tools {20-0}~
   Market analysis

Strategic Intent {17-0}~

Something that is intended, an aim or purpose

Teams {44-0}~
Two or more people working together

Training and development {36-0}~
The social and human sustainability factor in terms of training and development
Training - Teach a person a skill or behaviour through regular practice and instruction
Development - the action of developing make more or advance

Values {33-0}~
A set of good behavioural guidelines that act as guide to people

---

Memos

A1 {0-Co-F} - Hentie
The A division pdf docs were not suitable to code and therefore an older plan was used although it still contained the same type of plans and outcome - therefore can be seen as valid

Atlas Principle {0-Co-F} - Hentie
Visualization

The visualization component of the program means directly supports the way human beings (this includes researchers!) think, plan, and approach solutions in creative, yet systematic ways.

Tools are available to visualize complex properties and relations between the objects accumulated during the process of eliciting meaning and structure from the analysed data.

The object-oriented design of ATLAS.ti seeks to keep the necessary operations close to the data to which they are applied. The visual approach of the interface keeps you focused on the data, and quite often the functions you need are just a few mouse clicks away.

Integration

Another fundamental design aspect of the software is to integrate all pieces that comprise a project, in order not to lose sight of the whole when going

into detail.

Therefore, all relevant entities are stored in a container, the so-called "Hermeneutic Unit (HU)." Like the spider in its web, the HU keeps all data within reach. Loading a project with hundreds of files is merely a matter of opening a single HU.

Serendipity

Webster's Dictionary defines serendipity as "a seeming gift for making fortunate discoveries accidentally." Other meanings are: Fortunate accidents, lucky discoveries. In the context of information systems, one should add: Finding something without having actually searched for it.

The term "serendipity" can be equated with an intuitive approach to data. A typical operation that relies on the serendipity effect is browsing. This information-seeking method is a genuinely human activity: When you spend a day in the local library (or on the World Wide Web), you often start with searching for particular books (or key words). But after a short while, you typically find yourself increasingly engaged in browsing through books that were not exactly what you originally had in mind.

Examples of tools and procedures ATLAS.ti offers for exploiting the concept of serendipity are the Object Managers, the HU Explorer, the interactive margin area, full text search, and the hypertext functionality.

Exploration

Exploration is closely related to the above principles. Through an exploratory, yet systematic approach to your data (as opposed to a mere "bureaucratic" handling), it is assumed that especially constructive activities like theory building will be of great benefit. The entire program's concept, including the process of getting acquainted with its particular idiosyncrasies, is particularly conducive to an exploratory, discovery-oriented approach.

Coding process {0-Co-F} - Hentie

Coding was done inductive through the analysis of the documents and coding as the constructs emerged. It also happened deductively by looking at the SAP areas and assigning codes from the list to the quotations obtained from the document. It is therefore a combination between inductive and deductive coding.

Sustainability here is defined in terms of Human-, Economical-, Environmental- and Social sustainability

Concepts that were included in here:

Training - Teach a person a skill or behaviour through regular practice and instruction

Conclusions {0-Co-F} - Hentie

The document analysis defines and indicates the what that has been done and written down. The how is not always defined that clearly and therefore the importance of analysing it in conjunction with the interviews.

Process followed in terms of document analysis {0-Co-F} - Hentie

Process followed in terms of document analysis

All documents were obtained from the divisions in Word, PDF, hard copy or OCR scanned format.

Although the documents were edited and pseudonyms allocated to the most relevant information, not all tracking and/or tracing possibilities were removed as the document analysis was done on a higher level, indicating only the existing of processes, tools and methodologies in support of the interview analysis.

These were edited according to the Atlas format, spelling, margins, font size and spacing were standardized in order to ease coding and analysis. They were then saved in the .rtf format.

Certain approvals, distribution, abbreviations, names, document numbers, etc. were removed to ensure the privacy and anonymity of these documents.

Transcriptions were corrected according to context but due to the difficulty in keeping context when an interview is transcribed some text in the transcriptions might sound strange or does not make sense.

Coding were created and generated during the coding process which means that an inductive coding process was followed.

As codes were allocated, the codes were also defined by allocating some definition to it to have a clear and the same understanding of the definition as

intended by the coder

Coding then started and as the researcher became more familiar with the coding a few iterations followed to ensure that all constructs were captured.

This continued through all documents until saturation was achieved.

Sample selection {0-Co-F} - Hentie

Due to the continuous acting of the Senior Manager at IMT, it was decided to interview one of the more senior people as well as the current acting manager.

Flamengro is part of DDSI and were therefore not interviewed as well as Armour Development

Alkantpan interview was done with the acting manager

Triangulation {0-Co-F} - Hentie

The two HUs were done separately for the document analysis as well as the semi-structured interviews. These HUs were then combined in order to get an integrated result in terms of the triangulated approach and data sampling design. Give a summary of the amount of documents, words, pages hours and all documents that was used as data

Code Families

Materiality and Tools

Strategy tools are used to guide cognition in a specific way for analysis for what it is designed for. 5 Forces, SWOT, KSF, Drawings, objects, graphs, etc.
Ideas - A thought or suggestion about a possible course of action
Models - A simplified mathematical description of a system or process used to assist in calculations or predictions
Methodology - System of methods used to study something
Materiality - something material or of material nature or quality, physical or consisting of matter

Codes(7): Benchmarking, Environmental scanning, Implementation tools, Management Information Systems, Measurement, Project Management, Strategy Tools

Organizational Culture

How do we do things around here, what is the right way of doing things. Preparation, timeliness, correctness, culture, etc.
Beliefs - To hold certain opinions and confidence in something
Norms - a rule or standard of behaviour expected
Trust and support - A firm belief that someone or something is reliable and true and through that support each other
Shares mental assumptions that guide interpretation and assumption

Codes(11): Bureaucracy, Client relationship, Communication, Continuous improvement, Culture, Effectiveness, Informal discussion, Leadership, Teams, Training and development, Values

Strategic Output (Talk and Text)

Strategic output indicates the quantity of materiality, something or what, that was produced during a strategic management process. It is what was produced or created from the process. This is the process of producing something following the strategic analysis that was done

Codes(3): Plans, Strategies, Strategic Intent

Strategy Practices

Strategy practice as routine action is about who talks to whom, what format the interaction takes place, how often and when it all happen. (Training, Project meetings, Reporting, Planning and goal setting, BSC, Networking, e-mail, Informal discussion, Performance appraisal, Meetings) Strategy practices as routine actions. It can be explicit or implicit. It can also be loose or fixed in terms of time space.
Project meetings - A forum where progress and issues are discussed with the project team for action
Routines - A sequence of actions regularly followed
This is the flow of activity to realize strategy. This is how the real work of strategy implementation is done. How important decisions should be made. Strategic planning, budgeting, decision making, etc.
Experience - Knowledge or skills gained over time
Everyday actions - This refers to the day to day actions of people to execute their task
Manipulating - The actions made to control or influence someone or something
Stream of activity, real work, systematic series of actions directed to some end
Praxis

Codes(23): Benchmarking, Client relationship, Client requirements, Communication, Environmental scanning, Funding, Implementation tools, Informal discussion, Leadership, Management activities, Measurement, Meetings, Performance appraisal, Planning, Process development, Project Management, Reporting, Reviews, Sense-giving, Sense-making, Stakeholder engagement, Strategic analysis, Strategic sessions

Network Views

Nodes are prefixed with a single letter denoting its type: C= Code, M = Memo, Q = Quotation, P = Primary Document

Code relations

Nodes (0):

Network final

Nodes (38): CO:Sense-giving {31-0}~, CO:Reviews {20-0}~, CO:Stakeholder engagement {62-0}~, CO:Measurement {31-0}~, CO:Reporting {14-0}~, CO:Planning {86-0}~, CO:Performance appraisal {31-0}~, CO:Process development {46-0}~,

CO:Plans {60-0}~, CO:Meetings {36-0}~, CO:Strategy Tools {20-0}~, CO:Teams {44-0}~, CO:Strrategic Intent {17-0}~, CO:Training and development {36-0}~, CO:Strategic analysis {101-0}~, CO:Sense-making {24-0}~, CO:Project Management {15-0}~, CO:Strategies {41-0}~, CO:Strategic sessions {31-0}~, CO:Client requirements {90-0}~, CO:Bureaucracy {25-0}~, CO:Benchmarking {13-0}~, CO:Client relationship {37-0}~, CO:Communication {62-0}~, CO:Continuous improvement {36-0}~, CO:Culture {42-0}~, CO:Effectiveness {22-0}~, CO:Leadership {31-0}~, CO:Management activities {22-0}~, CO:Management Information Systems {27-0}~, CO:Informal discussion {20-0}~, CO:Implementation tools {107-0}~, CO:Environmental scanning {30-0}~, CO:Funding {20-0}~, CF:Strategic Output (3)~, CF:Strategy Practices (23)~, CF:Materiality and Tools (7)~, CF:Organisational Culture (11)~

APPENDIX K: CODE DEFINITIONS

Code neighbors list

Code-Filter: All

_____

HU: Document analysis

File: [C:\Users\Hentie\Documents\DBL\DBL 2014\AtlasTi\HUs\Doc Analysis\Document analysis.hpr7]

Edited by: Hentie

Date/Time: 2014-09-02 04:03:46

_____

Code: Benchmarking {13-0}~

Comment:

   Is a standard against something is being made or compared

_____

Code: Bureaucracy {25-0}~

Comment:

   Administrative procedures that are too complicated

_____

Code: Client relationship {37-0}~

Comment:

   Client relationships is the relationship between clients and the service provider

_____

Code: Client requirements {90-0}~

Comment:

   The process of determination and definition of client requirements

_____

Code: Communication {62-0}~

Comment:

   Communication that is done internally to the employees as well as to external stakeholders

_____

Code: Continuous improvement {36-0}~

Comment:

> *Continuous improvement is an ongoing effort to improve products, services, or processes.*

_____

Code: Culture {42-0}~

Comment:

> *This refers to the customs, ideas, social behaviour, performance and output of people in an organization that is created over time by the group*

_____

Code: Effectiveness {22-0}~

Comment:

> *Achievement of the desired result*

_____

Code: Environmental scanning {30-0}~

Comment:

> *A process through which an environmental scan is done in strategy analysis internally as well as externally. It can also consist of specific tools i.e. PESTLEM*

_____

Code: Funding {20-0}~

Comment:

> *Funding includes the economical sustainability factor as well as resources to ensure execution of mandate*

_____

Code: Implementation tools {107-0}~

Comment:

> *Specific tools and methodologies used to implement strategies designed for that specific purpose*

_____

Code: Informal discussion {20-0}~

Comment:

Discussions that occurs outside of formal and organized forums

_____

Code: Leadership {31-0}~

Comment:

The trait that comes from a person that leads

_____

Code: Management activities {22-0}~

Comment:

Daily tasks, actions or regular events as run of the mill responsibilities

_____

Code: Management Information Systems {27-0}~

Comment:

A system that provides you with information in order to manage, report or make decisions

_____

Code: Measurement {31-0}~

Comment:

The action of measuring

_____

Code: Meetings {36-0}~

Comment:

An organized gathering of people for discussion or other purposes

_____

Code: Performance appraisal {31-0}~

Comment:

An act of assessing individual, project or organizational performance

_____

Code: Planning {86-0}~

Comment:

The process of planning specific actions to be performed and then setting goals to achieve that

_____

Code: Plans {60-0}~

Comment:

  An intention of what one is going to do, aim, idea, goal, objective, target

_____

Code: Process development {46-0}~

Comment:

  The design and development of a series of actions to standardize and execute work in a specific manner

_____

Code: Project Management {15-0}~

Comment:

  The actions and interventions executed to manage a project successfully

_____

Code: Reporting {14-0}~

Comment:

  The action to give a spoken or written account progress and achievements

_____

Code: Reviews {20-0}~

Comment:

  Formal assessment of something with the intention of making changes if necessary

_____

Code: Sense-giving {31-0}~

Comment:

  The action of guidance given to others to influence their actions and interpretations

_____

Code: Sense-making {24-0}~

Comment:

  The viewpoint focussing on the activities in an organization that must determine meaning or make sense of situations within that environment

---

Code: Stakeholder engagement {62-0}~

Comment:

> *Stakeholder engagement is the process by which an organization involves people who may be affected by the decisions it makes or can influence the implementation of its decisions.*

Code: Strategic analysis {101-0}~

Comment:

> *The process through which a strategy is analysed, defined and implemented. This implies that the division used some strategic analysis as practice*

Code: Strategic sessions {31-0}~

Comment:

> *This is a term used for strategic sessions held away from the office by going through a structured process in order to determine direction and implementation actions.*

Code: Strategies {41-0}~

Comment:

> *A plan of action to achieve a long term goal or overall aim.*

Code: Strategy Tools {20-0}~

Comment:

> *Market analysis*

Code: Strategic Intent {17-0}~

Comment:

> *Something that is intended, an aim or purpose*

Code: Teams {44-0}~

Comment:

Two or more people working together

_____

Code: Training and development {36-0}~

Comment:

The social and human sustainability factor in terms of training and development

Training - Teach a person a skill or behaviour through regular practice and instruction

Development - the action of developing make more or advance

_____

Code: Values {33-0}~

Comment:

A set of good behavioural guidelines that act as guide to people

_____

APPENDIX L: CODE GROUNDING

Name	Grounded	Density	Author	Created	Modified	Families
❘ Implementation tools~	107	0	Hentie	2014/03/05 04:32:01 AM	2015/02/01 05:18:12 AM	Materiality and Tools, Strategy Practices
❘ Strategic analysis~	101	0	Hentie	2014/03/05 04:14:41 AM	2015/01/27 04:22:24 AM	Strategy Practices
❘ Client requirements~	90	0	Hentie	2014/03/05 04:21:46 AM	2015/01/27 03:57:35 AM	Strategy Practices
❘ Planning~	86	0	Hentie	2014/03/10 04:07:37 AM	2015/02/01 05:20:58 AM	Strategy Practices
❘ Communication~	62	0	Hentie	2014/03/06 04:24:17 AM	2015/02/01 05:20:12 AM	Organisational Culture, Strategy Practices
❘ Stakeholder engagement~	62	0	Hentie	2014/03/14 03:43:36 AM	2015/01/27 03:55:32 AM	Strategy Practices
❘ Plans~	60	0	Hentie	2014/05/22 12:17:59 PM	2015/01/27 04:21:51 AM	Strategic Output
❘ Process development~	46	0	Hentie	2014/03/05 04:26:14 AM	2015/01/27 04:09:46 AM	Strategy Practices
❘ Teams~	44	0	Hentie	2014/03/10 04:05:38 AM	2015/01/27 04:03:55 AM	Organisational Culture
❘ Culture~	42	0	Hentie	2014/03/10 04:06:14 AM	2015/01/27 04:05:21 AM	Organisational Culture
❘ Strategies~	41	0	Hentie	2014/05/22 12:12:02 PM	2015/01/26 04:59:07 AM	Strategic Output
❘ Client relationship~	37	0	Hentie	2014/03/13 03:53:00 AM	2015/01/27 03:42:39 AM	Organisational Culture, Strategy Practices

Meetings~	36	0	Hentie	2014/03/05 05:13:54 AM	2015/01/27 03:44:02 AM	Strategy Practices
Continuous improvement~	36	0	Hentie	2014/03/13 04:43:27 AM	2015/01/27 04:21:15 AM	Organisational Culture
Training and development~	36	0	Hentie	2014/05/01 09:24:28 AM	2014/08/11 09:55:36 AM	Organisational Culture
Values~	33	0	Hentie	2014/03/10 04:06:38 AM	2015/01/27 04:02:37 AM	Organisational Culture
Measurement~	31	0	Hentie	2014/04/29 10:16:17 AM	2015/01/26 05:45:16 AM	Materiality and Tools, Strategy Practices
Leadership~	31	0	Hentie	2014/03/06 04:23:54 AM	2015/01/26 05:42:52 AM	Organisational Culture, Strategy Practices
Sense-giving~	31	0	Hentie	2014/03/05 04:31:42 AM	2015/01/27 03:45:04 AM	Strategy Practices
Strategic sessions~	31	0	Hentie	2014/03/05 05:13:54 AM	2015/01/27 03:43:07 AM	Strategy Practices
Performance appraisal~	31	0	Hentie	2014/03/10 04:08:40 AM	2015/01/27 03:53:48 AM	Strategy Practices
Environmental scanning~	30	0	Hentie	2014/03/05 04:23:05 AM	2015/01/27 04:01:35 AM	Materiality and Tools, Strategy Practices
Management Information Systems~	27	0	Hentie	2014/03/05 04:27:44 AM	2015/01/27 03:58:03 AM	Materiality and Tools
Bureaucracy~	25	0	Hentie	2014/03/06 04:23:11 AM	2015/01/27 04:13:43 AM	Organisational Culture
Sense-making~	24	0	Hentie	2014/03/05 04:28:21 AM	2015/02/01 05:19:09 AM	Strategy Practices

Effectiveness~	22	0	Hentie	2014/03/10 04:06:27 AM	2015/01/27 04:17:39 AM	Organisational Culture
Management activities~	22	0	Hentie	2014/05/22 01:05:51 PM	2015/02/01 05:20:12 AM	Strategy Practices
Reviews~	20	0	Hentie	2014/03/05 05:13:29 AM	2014/08/11 09:03:49 AM	Strategy Practices
Strategy Tools~	20	0	Hentie	2014/02/28 05:29:31 AM	2015/01/27 04:07:22 AM	Materiality and Tools
Funding~	20	0	Hentie	2014/05/01 09:22:52 AM	2014/08/11 01:48:57 PM	Strategy Practices
Informal discussion~	20	0	Hentie	2014/03/10 04:09:02 AM	2015/01/27 04:22:24 AM	Organisational Culture, Strategy Practices
Strategic Intent~	17	0	Hentie	2014/05/22 01:09:10 PM	2014/09/02 03:44:16 AM	Strategic Output
Project Management~	15	0	Hentie	2014/03/05 05:22:08 AM	2014/05/02 12:40:45 PM	Materiality and Tools, Strategy Practices
Reporting~	14	0	Hentie	2014/03/10 04:07:21 AM	2015/01/27 03:51:30 AM	Strategy Practices
Benchmarking~	13	0	Hentie	2014/03/05 04:21:01 AM	2015/01/27 04:20:08 AM	Materiality and Tools, Strategy Practices

APPENDIX M: FAMILIES FREQUENCY REPORT

CODES-PRIMARY-DOCUMENTS-TABLE										
Report created by Hentie - 2014/09/02 05:40:00 AM										
HU: [C:\Users\Hentie\Documents\DBL\DBL 2014\AtlasTi\HUs\Doc Analysis\Document analysis.hpr7]										
Code-Filter: All [35]										
PD-Filter: All [37]										
Quotation-Filter: All [1210]										
Column1	Institute 1	Institute 2	Institute 3	Institute 4	Institute 5	Institute 6	Institute 7	Institute 8	Institute 9	TOTALS:
TOTALS:	277	150	276	145	154	115	111	330	123	1681
Strategy Practices	138	82	153	80	96	64	63	177	77	930
Strategic Output	11	6	21	16	10	7	10	20	7	108
Organisational Culture	83	37	67	28	31	31	24	81	20	402
Materiality and Tools	45	25	35	21	17	13	14	52	19	241

APPENDIX N: CODE FAMILIES

Code Family	Codes
Materiality and Tools	· Benchmarking · Environmental scanning · Implementation tools · Management Information Systems · Measurement · Project Management · Strategy Tools
Organizational Culture	· Bureaucracy · Client relationship · Communication · Continuous improvement · Culture · Effectiveness · Informal discussion · Leadership · Teams · Training and development · Values
Strategic Output	· Plans · Strategies · Strategic Intent
Strategy Practices	· Benchmarking · Client relationship · Client requirements · Communication · Environmental scanning · Funding · Implementation tools · Informal discussion · Leadership · Management activities · Measurement · Meetings · Performance appraisal · Planning · Process development · Project Management · Reporting · Reviews · Sense-giving · Sense-making · Stakeholder engagement · Strategic analysis · Strategic sessions