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**REAL-TIME STRATEGY IMPLEMENTATION IN THE  
ELECTRICITY INDUSTRY**

by

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This thesis is dedicated to my father Mike and mother Lena  
van Buuren†

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## CHAPTER 1

### INTRODUCTION AND SCOPE

#### 1.1 INTRODUCTION

Organisations worldwide must function within increasingly complex and dynamic environments. With regard to global competitive situations especially, the challenge to remain competitive is critical. The strategic planning processes used by organisations that operate within the electricity industry are becoming an important element in meeting these challenges and in ensuring a sustained competitive advantage in the global context.

Electricity utilities traditionally operated as monopolies in markets that were governed by regulating authorities, where the primary role of the regulating authority was to act as a buffer, protecting the electricity industry from competitive forces and new market entrants. Today the primary role of regulating authorities has changed from acting as a buffer against competition to becoming a change agent ensuring the effective introduction of competition in electricity markets (see paragraph 4.3.1). The major reasons for this changing role of the regulating authorities, include the dramatic performance improvement of electricity utilities operating in competitive electricity markets globally, pressure from electricity regulators for utilities to

become internationally competitive and pressures from global investors wanting to enter the electricity markets of certain countries. In its role as a buffer the regulating authority should create and sustain a stable environment for the entire industry. However, as soon as the regulating authority alters its role to that of a change agent, it forces the electricity utility into a market situation characterised by complexity and volatility. In such situations the electricity utility has to concentrate on the complexities facing it from both a regulated and non-regulated environment, paying particular attention to the evolving relationship with external role players and entities, and the influences that these have on the strategic capabilities of the electricity utility. Deregulation of electricity utilities has been, and continues to be the major driver of change in the electricity industry. A survey conducted by The Conference Board in association with Heidrick & Struggles (1999) indicates that 61% of chief executive officers of electricity utilities who were included in their study identified "change in type and level of competition" as the major challenge facing them. To this end the strategic planning and strategy implementation processes applied by the electricity utility, become critical.

## 1.2 SCOPE OF THE PROJECT

The strategy implementation processes used by electricity utilities operating in competitive electricity markets are becoming important elements in meeting the challenges to ensure a sustained competitive advantage for the utility. The electricity industry is highly complex and dynamic and the level of volatility in the industry has substantially shortened the strategic time frame.

An important factor for effective implementation of strategies is the interaction between the processes of developing strategic plans and the implementation of those plans. These two interrelated processes are often separated functionally in some larger electricity utilities, resulting in a gap between developing strategies and implementing strategic plans. Because of this gap, strategic planning is often viewed as ineffective. This gap becomes harder to bridge because of the magnitude of functional and bureaucratic interrelationships that are found within electricity utilities. Once these organisations understand the driving forces and reasons behind the existence of the gap between strategic planning and implementation, more effective implementation will take place. This is especially important under complex and dynamic market conditions. The causes of this gap are often embedded in the traditional approach that electricity utilities apply in their strategic

planning and implementation processes. The concept of using a planning process where the individual steps of the process are neatly divided into a monthly schedule over a one-year period (McDonald, 1995:417) is becoming less effective. Environmental changes occur unscheduled and in real-time, and electricity utilities need to be able to implement strategies in real-time in order to keep up with these environmental changes. The future market environment is no longer an extension of the past and changes in market dynamics do not occur in a linear fashion. Electricity utilities therefore cannot rely only on historic data as a basis for creating future strategic options that will result in sustained competitive advantage in the global market. A much more effective and robust approach to strategy implementation is required.

Perry (1993:21) explains that strategic planning often lacks flexibility and may exclude or postpone a new and better solution to a specific situation. It also often leads to structural solutions that limit innovation. In support of Perry, Aaker (1995:345-348) identifies a number of reasons for the lack of flexibility in strategic planning. This includes the dominance of short-term financial objectives within the firm, a strong bias from management towards developing the following year's strategy on the basis of the previous year's strategy (with the result that it merely becomes an extension of that strategy), the dominant use of an annual strategic planning cycle, plans that



are too rigid and a calculating style of management. To overcome these restrictions a higher degree of flexibility in implementing strategic plans is needed. The focus should be on the implementation of an optimum, real-time, strategic plan within the electricity utility. According to Taylor (1997:334), organisations should move towards a new future based upon strategic vision in order to become real-time organisations. Such organisations not only respond to environmental changes, but are also able to shape the environments in which they operate. They create real-time strategies.

Electricity utilities are facing major structural changes in the industry within which they operate while the main thrust to ensure stability and competitive advantage is increasingly derived from the methods that are used in strategic planning. As long as the electricity industry environment changes in real-time, it becomes an imperative for the electricity utility to ensure that strategy implementation also takes place in real-time.

### **1.3 PURPOSE AND OBJECTIVES**

#### **1.3.1 Purpose of the study**

This study focuses specifically on effective integration between the dynamic electricity industry environment and the strategy implementation

processes of electricity utilities operating in such environments. This integration can be dealt with effectively once the factors that influence strategy in electricity utilities, the gaps between strategic planning and strategy implementation and the factors that give rise to these gaps are understood. Such an understanding will support the overall purpose of this study, namely the development of an effective approach to real-time strategy implementation in the electricity industry.

### **1.3.2 Objectives of the study**

The purpose of the study culminates in the development of a number of objectives that are set to guide the research process. These objectives are:

- (a) the analysis of the macro level environmental factors that influence the strategic context of the electricity industry
- (b) the analysis of the strategic responses of electricity utilities to these factors (this is required to develop a basis for the further analyses required in this study)
- (c) the analysis of the strategic planning processes of electricity utilities (this is required in order to identify any potential gaps that may exist between strategic planning and strategy implementation)

- (d) the formulation of guidelines for real-time strategy implementation in the electricity industry from the results obtained in objectives (a), (b) and (c) above.

#### **1.4 RESEARCH METHODOLOGY**

The research methodology used throughout this study is discussed in detail in chapter 5. This section only provides for a broad overview of this process.

This study requires both a literature and an empirical investigation. The literature study has as its main objective the identification and analysis of strategic planning as a managerial task and organisational function. This includes literature that relates to business planning in general, strategic planning theory, strategic planning techniques, instruments and models, strategy implementation and real-time strategic planning. The literature study also includes an analysis of the management of strategic planning processes and its contextual position within the organisation. It seeks to emphasise the importance of the effective implementation of strategic planning, in real-time, as a prerequisite to the achievement of a sustained competitive advantage for the electricity utility.

The literature study directs the design of the empirical research. The specific concepts that were identified through the literature study were tested in the empirical research, and this led to the ultimate recommendations that are presented towards the end of this study. The research was conducted through a number of phases. These phases are research design, data collection, data ordering, data analysis and literature comparison.

Research design included the definition of the research problem described above and the selection of the sampling methodology. As this study was conducted using a qualitative research approach, purposive sampling was used, and not random sampling. In selecting the sample for this study at the organisational level, it was important to ensure relevance to the theoretical basis of this study. The United States of America is currently viewed as the most progressive in terms of electricity utility industry restructuring. Deregulation resulted in a shift in the method and context of value creation in a newly refashioned electricity industry in the United States of America (Van Buuren, 1996; Heller, Jansen and Silverman, 1996, Silverman, L.P, 1999). The electricity industry in the United States of America has gone through a number of strategic changes over the past number of years (see paragraph 6.3). The entire industry is competition based, and most utilities are investor owned (see paragraph 6.4). For the purposes of the study the population was defined as consisting of electricity utilities in the United States of America (see

paragraph 5.2.2). At organisational level, the sample base consisted of four of the top electricity utility holding companies in the United States of America (see paragraph 5.2.2).

Purposive, non-probability sampling was used, employing the concept of judgement sampling as the specific elements within each of the electricity utilities included in the sampling framework consisted of experts within these utilities, who deal specifically with the concept of strategy. Consequently, the sample included sixteen executive managers within the electricity utilities selected for the purpose of this study (see paragraph 5.2.3).

For the purpose of data collection, a semi-structured interview guide was developed (see appendix A). The research was conducted through personal interviews with the sixteen selected executive managers of the four electricity utility holding companies in the United States of America. The data analysis of the research was conducted using the grounded theory approach (see paragraph 5.5).

## **1.5 SUMMARY**

This study focuses specifically on effectively bridging the gap between the complex and volatile environment, and effective implementation of strategy by electricity utilities operating within such environments. The study starts with a literature analysis of strategic planning and strategy

implementation. This provides a basis for the design of the empirical research conducted through this study. The contextual nature of the electricity industry of the United States of America, the environmental changes that influenced the context of these organisations, their strategic responses, and in particular their strategy development and implementation processes, are analysed in the empirical study. The combination of the results from both the literature and the empirical research converge into the recommendations for a real-time approach to strategy implementation in the electricity industry (see paragraph 8.3).

The study is structured as follows:

- (a) Chapter 1 introduces the study through the formulation of the issue at hand, a description of the problem and objectives of the study.
- (b) Chapter 2 places strategic planning into perspective. It presents a definition of strategic planning, historical perspective, a general overview and emphasises the theoretical basis for the importance of strategic planning as a managerial function. It includes an analysis of literature on the concept of strategic planning processes and models, and outlines its value to the success of the organisation.
- (c) Chapter 3 analyses the context and approach to strategy implementation as developed in the literature.

- (d) Real-time strategy implementation as a concept towards overcoming the potential gap that exist between the complex and dynamic environment and the implementation of strategy, is the topic of chapter 4. This chapter presents an overview of real-time strategic planning implementation from a theoretical viewpoint.
- (e) The research and data analysis methodology used for the purposes of this study is explained in detail in chapter 5.
- (f) Chapter 6 presents an analysis of the findings of the empirical investigation.
- (g) Chapter 7 presents the overall data interpretation and guidelines for real-time strategic planning implementation processes in electricity utilities from the literature and the empirical study.
- (h) Chapter 8 is a summary of the entire study containing specific conclusions and recommendations for real-time strategy implementation in the electricity industry.

## CHAPTER 2

### THE CONTEXTUAL NATURE OF STRATEGIC PLANNING

#### 2.1 INTRODUCTION

Strategic planning has been emphasised as an important element of organisational decision-making through the ever increasing amount of literature on the subject. Conceptual differences in understanding the relationship between strategic planning and the practical implications of strategy implementation have emerged from the literature. A holistic perspective of strategic planning and some of the contemporary issues associated with the concept become relevant to the understanding of these differences. Consequently, the interrelationship between the strategic planning process and the origins, implications and application of strategic planning concepts are analysed.

However, this project is not concerned with strategic planning *per se*, but specifically with implementation of strategy. This chapter therefore only serves as a basis to support the subsequent analysis of strategy implementation.

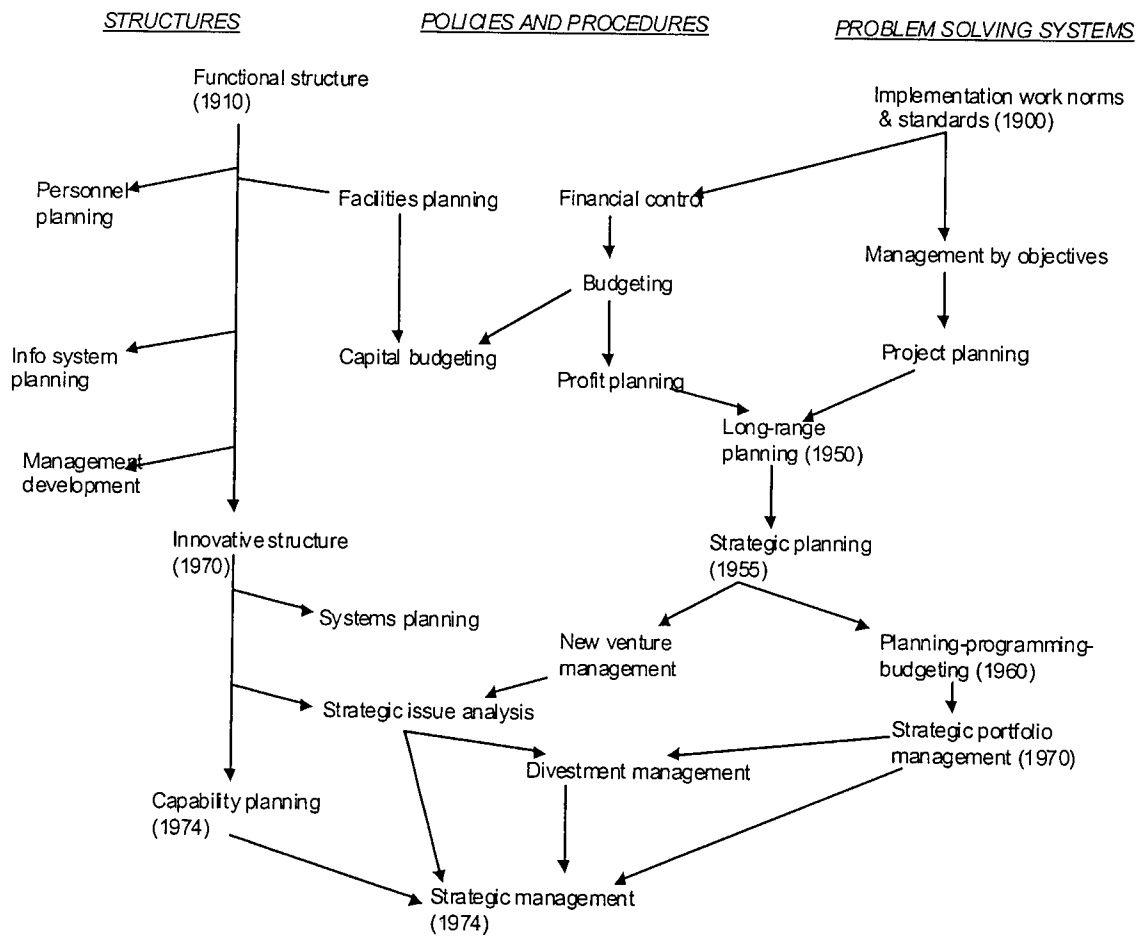


## 2.2 IMPACT OF THE ORIGINS OF STRATEGIC PLANNING ON MODERN ORGANISATIONS

The term "*strategy*" originated from the Greek term "*strategos*." The concept has evolved over time, traditionally used in the military. The term can be identified as far back as 216 B.C. with Hannibal at the Battle of Cannae (Gaddis, 1997:43). In a document entitled "The Art of War" written by SunTzu almost 2400 years ago and translated and reprinted in 1978 by Wu and Griffith (1978:146), reference is made to the existence of a "Director of Strategy." The basic principles of strategic planning as it is used in modern organisations, have evolved over time, converging from at least three interrelated developments (Ansoff, 1984:258). These include the development of organisational policies and procedures, problem solving systems and the concept of organisational structures. Implementation of policies and procedures focused the attention of organisations on "doing things right" rather than "doing the right things." Implementation of problem solving systems was introduced as a method of assisting in managing the content of organisations, focusing on quantitative financial aspects, while structures allowed for the implementation of command and control configurations to ensure proper management of the organisation. Figure 2.1 is a reproduction of the foundation and proliferation of strategic planning as developed by Ansoff

(1984:258). While Ansoff offered a view on the proliferation of strategic planning over time, Taylor (1997:334) took this a step further to include the term *strategic leadership* that according to his views emerged in the early 1990s. Taylor refers to the concept of strategic planning evolving from long range planning to strategic planning in the 1960s, to strategic management in the 1980s, to strategic leadership in the 1990s.

Figure 2.1 Overview of the foundation and proliferation of strategic planning



(Ansoff, 1984:258)

Inherent in these historical developments of strategic planning is the impact of organisational culture on the development of strategic planning concepts (Johnson and Scholes, 1993:43; Gaddis, 1997:39). Organisational culture is shaped by a number of variables. Johnson and Scholes (1993:60) explain the concept of organisational culture through what they term a "cultural web." This concept draws upon a number of aspects that shapes the manner in which a firm responds to the environment in which it operates, including:

- (a) the routines that shape organisational behaviour;
- (b) the various rituals performed in organisations such as training, promotions and assessment: the organisation's value system;
- (c) symbolic aspects of the organisation such as brand names, logos, type of language and terminology used;
- (d) the control systems that focus attention to activities; and
- (e) power structures, managerial groupings and functional structures that shape the core assumptions of what is important in the organisation.

Gaddis (1997:39) explains that the conceptual nature of strategic planning evolved from the persisting effects of cultural and religious traditions inherited by managers around the world. Gaddis holds that "the tradition, held in common in many religions east and west, is that humans must tend to the virtuous present and the sovereign God will take care of the future." He continues to paraphrase the Bible, and in particular Proverbs 27:1, "Boast not of thy tomorrows, for thou knowest not what a day may bring forth". According to this view, managers are captured in the paradigm that the future is a given fact, that they should concentrate on the present, and that they should try to ensure that their strategies would fit in with whatever the future may hold for their organisations.

In contrast, another view postulated by Gaddis (1997) is based on the belief by managers that they have the capacity to "program" the implementation of a designed strategic future. This approach is known as "pro-active purposefulness" (Gaddis, 1997:39), and organisations typically use analytical approaches such as forecasting, to assist in this "programming" approach to strategic planning. The concept of forecasting as an element of strategic planning had already been introduced in organisational thinking by the beginning of the previous century (Fayol, 1957:47).

Many of the concepts of strategic planning that are still used today were developed during the early part of the 20<sup>th</sup> century. These developments still impact on organisations and in this context, the nature and scope of strategic planning need to be analysed in order to understand its future impact in a post-modern business environment.

## **2.3 THE NATURE AND RELEVANCE OF STRATEGIC PLANNING**

### **2.3.1 Definition of strategic planning**

As explained by Hofer and Schendel (1978:4), the fundamental definition of strategy most planners and analysts generally agree on is that the concept of strategy is "the basic characteristics of the match an organisation achieves with its environment." This definition postulates that the prerequisite for effective strategic planning, and eventually effective implementation of strategic plans, is a proper understanding of the environment in which the organisation operates. According to the views of Hofer and Schendel (1978:4), supported by Johnson and Scholes (1993:18), organisations have to ensure positioning within a given external environment. Johnson and Scholes (1993:18) placed more emphasis on the notion that organisations also need to attempt to influence the external environment in order to ensure that specific

environmental aspects fit in with the strategic approach of the organisation.

Mintzberg (1994:23) defines strategy as being both planning and a consistent form of behaviour over time. A strategy can therefore be viewed as a plan for the future including the design of a process of how to get to the defined future state. Implicit in this definition is the concept of decision-making, which is defined by Mintzberg as the process involved in choosing an organisation's strategy. Where the term "planning" refers to the design of a desired future and the actions necessary to bring it about, strategic planning adds the view that the specific environment within which the organisation operates should influence the decision-making process.

With the advent of the scientific management approach, planning was identified as one of the tasks of management (Fayol, 1957:43). According to Ackoff (1970:1) planning is the design of a desired future and of effective ways of bringing it about. This definition adds another perspective to planning. Planning is not only thinking about the future, but should include the design of some process or method on how to plan. Planning therefore also includes some form of integrated decision-making process that is required when the future state that is desired involves a set of interdependent decisions, that is, a system of decisions (Ackoff, 1970:2). These definitions

postulate strategy-making within a stable environment. However, modern thinking about the future points to the fact that organisations should accept that the paradigm has shifted as industry and product life cycles, technology life cycles and organisational life cycles are becoming shorter.

A critical analysis of the efforts to define strategic planning exposes the question of the relevance of strategic planning in modern organisations. In many cases the concept of strategic planning is now being viewed as a necessary evil, the reason cited being the fact that strategic planning does not always lead to implementation of such plans.

### **2.3.2 Relevance of strategic planning**

The business environment has evolved from simple to complex and from stable to volatile over time. The context of the strategic planning processes that organisations used, however, have not evolved in the same manner. This has resulted in a fair amount of scepticism over the ability to generate useful strategies (Hurst, 1986:4-27; Mintzberg and Waters, 1982:465-499; Mintzberg, Brunet and Waters, 1986:3-41; Sarrazin, 1977:37-59), or affecting the performance of organisations in a positive manner (Boyd, 1991:353-374; Frederickson and Mitchell, 1984:399-423, Fulmer and Rue,

1974: 1-7; Grinyer and Norburn, 1975:70-97; Powell, 1992:551-558;). This has resulted in many debates and arguments for the reformation of strategic planning in its current form (Barry and Elmes, 1997: 429-452; Mintzberg, 1994, Hurst, 1986:4-27).

In assessing the nature of strategic planning in modern corporate organisations, the central tendency is to question the relevance and value that the use of the many available strategic planning instruments and models add to the success of organisations. The literature on strategic planning has historically been dominated by postulating an analytical approach to strategic planning. This approach includes the step-by-step process of identifying the organisation's mission, establishing objectives and formulation of strategies (Ansoff, 1965; Ackoff, 1970; Katz, 1970). This is typical of strategic planning concepts that are built on the premise of an annual planning cycle (McDonald, 1995: 425). Some of the works of Ansoff, who developed a number of highly valuable, but also somewhat complex and analytical strategic planning models, may especially be referred to (1965,1984). Works of Mintzberg (1979), Grant *et al* (1979) and Quinn (1977) indicate movements towards integrating analytical and behavioural (cultural) processes in strategic planning. Underlying this latter body of literature is the premise that the analytical process of strategy formulation is not sufficient to describe and explain the process of strategy



implementation. The process of the utilisation of a number of strategic context levers such as organisational culture, power, influence and control must be incorporated into the paradigms of strategic decision-making. This also impacts on the systematic approach used in strategic planning. Strategic planning systems, the use of various models and tools to formulate strategy, the entire strategy formulation process, and the implementation of strategy are shaped by both the culture of the organisation, and its specific external environment.

### **2.3.3 Empirical examples relating to the value of strategic planning**

A number of empirical studies were initiated to test the value of strategic planning in organisations (Mintzberg, 1994:105-115).

#### **(a) The General Electric Company**

During the late 1970s up to the middle of the 1980s, the General Electric Company was one of the most prolific in the literature (Rothschild, 1976). General Electric had always been the model firm to advocates of strategic planning. In an article in Business Week in 1984, (Business Week, September 17, 1984:62-66) entitled "*The New Breed of Strategic Planner*" the concept of strategic

planning was attacked heavily, with the statement that "...the reign of the Strategic Planner may be at an end." In this article the Chief Executive Officer of General Electric (Jack Welch) was quoted as saying that "...we got these great plans together, put them on the shelf, and marched off to do what we would be doing anyway. It took us a little while to realize that wasn't getting us anywhere." As a result, the number of strategic planning employees was reduced, most being transferred to other departments within General Electric. One of the reasons cited in the Business Week article was the heavy reliance on data, and not on market instinct with regard to strategic planning. The failure of strategic planning to prove its added value for General Electric could be attributed to the confusion created by the development of the many bureaucratic strategic planning processes, and the use of a formal strategic planning cycle, which concentrates on form rather than on substance.

**(b) The École Polytechnique Company**

The essence of the General Electric situation was also identified by the École Polytechnique Company (the French equivalent of General Electric). Sarrazin (in Mintzberg, 1994:105-115) found that in his company the planning process failed to integrate the results of specific strategic studies. According to his views, the École Polytechnique Company followed a strict planning cycle that started

in February of each year. However, he found that very few critical decisions were being implemented in the company during the planning cycle. At best, the strategic plan only resulted in an "integration after the fact" or an "official sanction for actions already decided upon and hardly subject to review and revision at the point of the start of the strategic planning cycle." This approach may be less effective, especially in volatile business environments. The ability to effectively implement strategies in such volatile situations is one of the most important factors that will shape modern organisations in future.

These case studies lend support to the perception that the inability of strategic planning to demonstrate the effectiveness of the planning-performance relationships can be ascribed to methodological shortcomings such as inconsistencies in the operationalisation of planning, invalid measurement techniques, inattention to contextual influences, implementation factors and time frames (Wheelright, 1984:19-33; Pearce *et al*, 1987:658-675). The development of a number of strategic planning models further complicated the context of strategic planning rather than mitigated the methodological shortcomings explained above.

## 2.4 OVERVIEW OF SELECTED STRATEGIC PLANNING MODELS

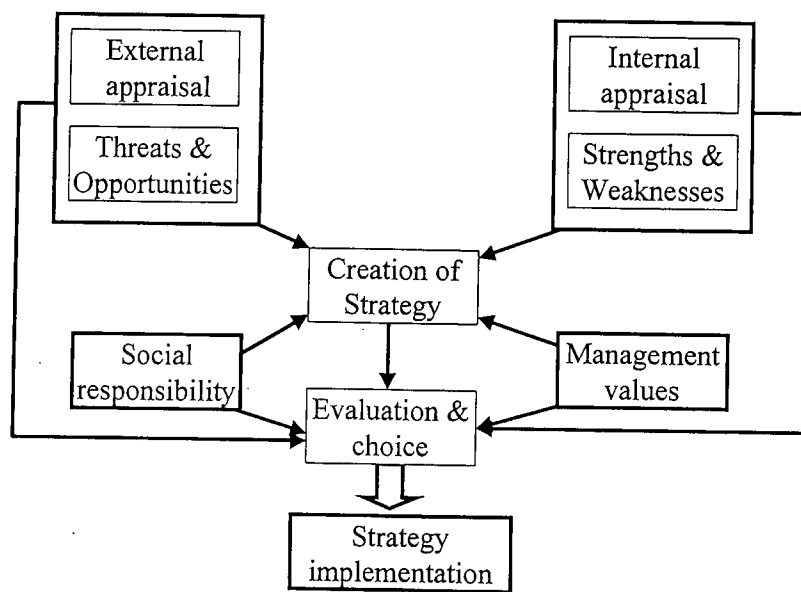
Many different strategic planning models have been developed over time. A few basic models proved to have formed the backbone of developments in strategic planning thinking. Three of these basic models of strategic planning are reviewed. On the one extreme is the basic model cited by Mintzberg (1994:37), on the other, the sophisticated model developed by Ansoff (1965:202-203). A model less sophisticated than that of Ansoff, but more complete than the basic model, is that developed by Steiner (1969:33).

### 2.4.1 The basic model of strategic planning

The basic models of strategic planning evolved over a number of years and form the foundation of strategic planning models used by organisations today. The model includes the basic notion that the internal and external environments of the organisation have a profound impact on the strategies of the organisation. One of these elements of strategic planning is the well known Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis that is deemed a necessary and important prerequisite for effective strategic planning. Research from authors such as Andrews (1971), Learned *et al* (1965) and Christensen *et al* (1982) built on the initial

idea of Selznick (1957) to conceptualise a basic framework of strategic planning that included the SWOT analysis. This framework is based on the idea that the process of strategy is largely one where a few basic ideas are used to generate strategies and to design strategic direction.

Figure 2.2 The basic model of strategic planning



(Mintzberg, 1994:37)

This basic model as depicted in figure 2.2 concludes that the most important element of strategic planning is the need to ensure strategic fit between environmental and organisational factors. Appraisal of the external environment leads to the identification of opportunities and threats, while appraising the internal organisational environment leads to the identification of internal

strengths and weaknesses. The analysis and identification of these concepts, together with an understanding of the influences of management values and the social responsibilities of the organisation, are used to create organisational strategy, and lead to the evaluation and choice of specific strategic directions and implementation of the ultimate strategies of the firm.

#### **2.4.2 The Ansoff model of strategic planning**

Ansoff (1965:202-203) proposed a highly formalised strategic planning procedure that is deconstructed into an elaborate sequence of steps supported by a number of planning techniques. This model over-complicates the strategic planning process to the level where implementation becomes extremely difficult. The model proposes that an integrated analysis of all the variables that influence the organisation should be done in order to develop an effective strategic plan, and that the end result of the process is a strategic budget. It is linear in its approach and requires a substantial amount of time in order to do the analysis.

However, Ansoff did succeed in indicating the many interrelationships that need to be understood by management in developing strategic plans.

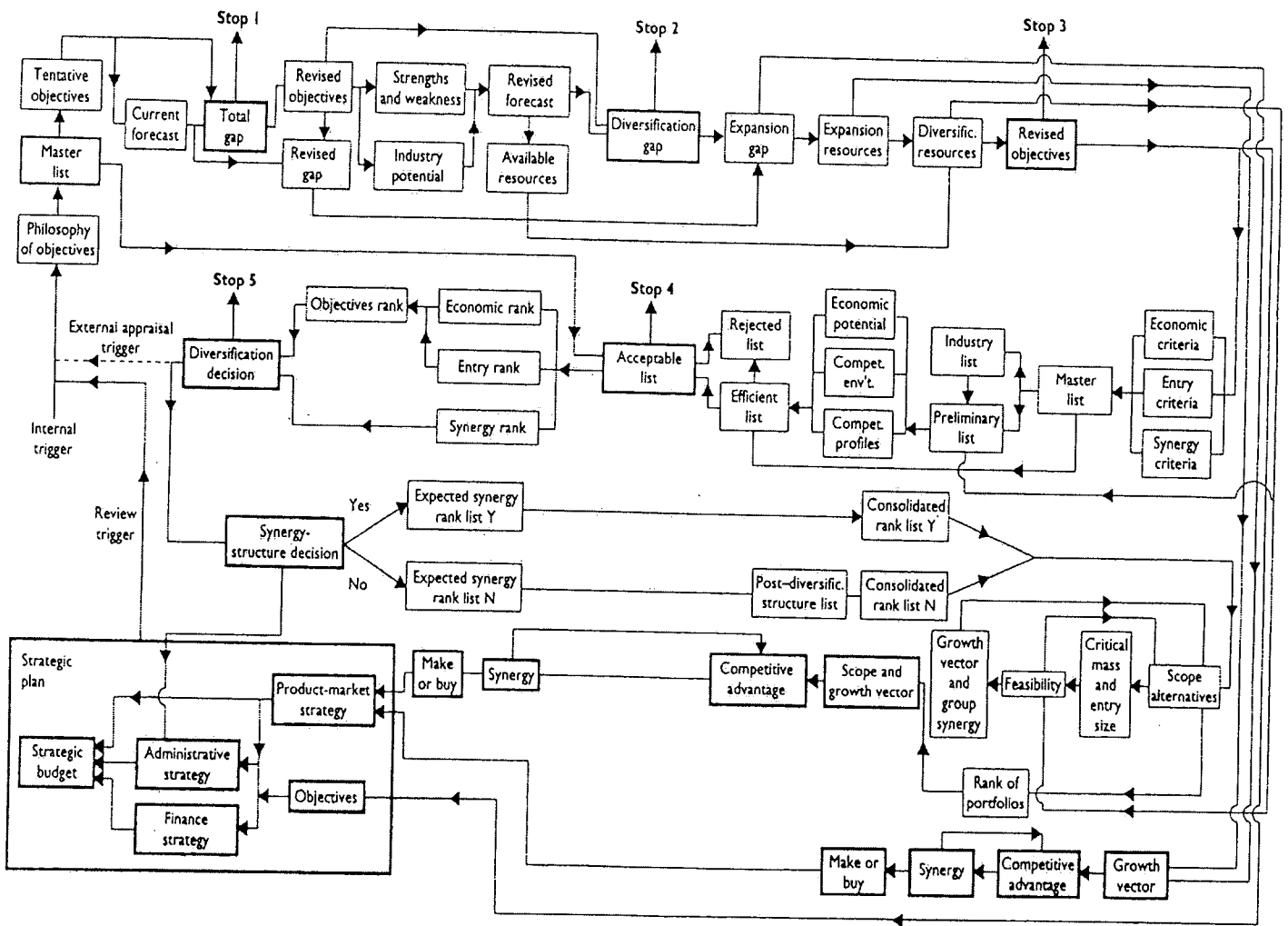


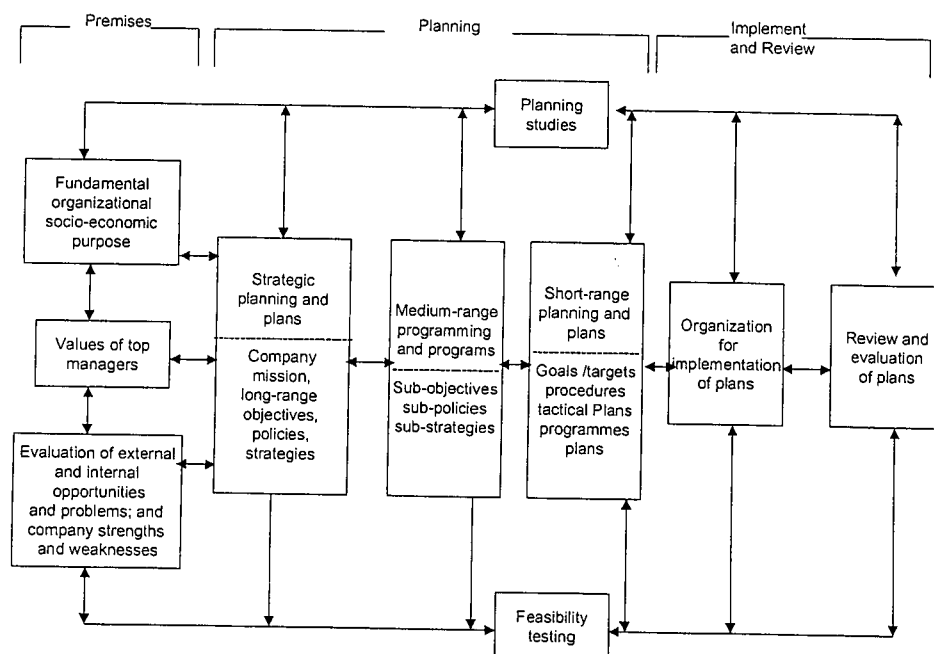
Figure 2.3 The Ansoff model of the strategic planning process

(Ansoff, 1965:202-203)

### 2.4.3 The Steiner model of strategic planning

The model of strategic planning developed by Steiner (1969:33) and depicted in figure 2.4 is less sophisticated than that offered by Ansoff. The most significant differences between the strategic planning models of Ansoff and Steiner are the reduced level of sophistication evidenced in the Steiner model, and the introduction of the notion of including implementation as a step within the strategic planning process.

Figure 2.4 The Steiner model of strategic planning



(Steiner, 1969:33)



## 2.5 SUMMARY

Many of the basic problems that organisations experience with strategic planning appear to derive from how the understanding of the contextual nature of the term "strategic planning" evolved over time. In certain cases strategic planning is viewed as "the planning of strategy" and in other instances it is postulated that planning should modify strategy, suggesting how planning should be done rather than the reverse (Mintzberg, 1994:321). Some approaches invite a contingency approach to strategic planning, referring to the concept that as the environment and the strategic situation changes, so too should strategic planning (Brock, 1995:17-25; Grinyer *et al*, 1986:3-28, Kukalis, 1989:565-579).

The basic notion found in most of the strategic planning models researched is an emphasis on the development of strategic plans. Strategy implementation is seldom emphasised as part of the planning process. Consequently, it is not surprising that after a comprehensive strategy has been formulated significant difficulties are often encountered during the strategy implementation process. What is required is the development of an effective methodology to bridge the gap between strategy-making and strategy implementation. When the influence of the modern external environment on organisations is added to the equation, the need for strategic planning and implementation in real-time becomes evident.

Planning comprehensiveness should vary according to industry volatility and organisational size (Frederickson, 1984:445-466; Robinson and Pierce, 1983:197-207) focusing the attention away from traditional approaches that emphasise the strategic planning process, towards more concerted efforts to focus the attention on strategy implementation.

## CHAPTER 3

### THE CONTEXTUAL NATURE OF STRATEGY IMPLEMENTATION

#### 3.1 INTRODUCTION

The ability to implement strategic plans successfully is one of the most crucial of all managerial skills required in today's global environment. During the early 1990s organisations in the United States of America were spending an estimated \$10 billion per year on strategic planning (Judson, A.S., 1991:34-39). Schiemann (1992:53-54) reported that research done amongst USA managers showed that less than 50% of all strategic plans ever get implemented. The context of these shortcomings is explained by Hamel (1996:71) as a failure to distinguish planning from strategising.

A study at the University of California at Berkeley in 1991 (in Aaker 1995: 12) of managers making strategic decisions in a simulated business environment, found that when the environment was made more turbulent, those businesses that were asked to plan formally (using specific strategic planning cycles) reported performances inferior to those that did not use formal planning cycles. This indicates that in order to cope with strategic surprises and fast-

developing threats and opportunities, strategic decisions need to be precipitated and made outside of the planning cycle. Strategic planning is concerned with complex and non-routine decisions, as opposed to the routine decisions implied by a planning cycle. Planning cycles are inadequate to deal with rapid changes in the environment. To refer to a planning approach that emphasises a calendar-driven ritual (as in the use of a planning cycle with the end result of giving input to a budget process) as "strategic planning" is incorrect. Hamel (1996:70) indicated that in many companies "strategic planning isn't strategic" because in many companies strategic planning is not an exploration of the potential for revolution in the market. In such organisations strategic planning becomes a ritualistic, extrapolative process that focuses on strategic programming. A clear distinction is needed between the concepts of programming, and that of strategic planning. Ohmae (1982:37) supports this view by stating "...we must distinguish (strategic) actions from actions aimed at achieving operational improvements...." Organisations should break out of this paradigm, and should move towards a new future, based upon a clear strategic vision and become "real-time" organisations (Taylor, 1997:337). As a result of the apparent confusion between the concept of strategic programming and strategy implementation, many organisations have, over time, side-lined strategic planning as a necessary evil. As the environment changes, and along with the advent of a global

and borderless market, substantial pressure is exerted on the profitability of many organisations. As a result, a global resurrection of the application of strategic planning concepts that emphasise strategy implementation is experienced. An article in Business Week of September 1996 (in Taylor, 1997:334) refers to organisations returning to strategy as their focus in the quest for higher revenues and profits. However modern strategic planning models are based on concepts that were developed at a time when industries experienced relative protection against the severity of global competition. The resurrection of strategic planning, as identified by Taylor (1997:334) is reintroduced into organisations from a top down approach. On this basis strategic planning becomes a bureaucratic and esoteric, calendar-driven decision-making process by the top echelons of the firm. Changing the process from one that is esoteric to one that is open and inclusive not only involves extended interaction within the organisation, but also involves key stakeholders external to the organisation.

### **3.2 THE DEVELOPMENT OF DIFFERENT APPROACHES TO STRATEGY IMPLEMENTATION**

Throughout the literature on the topic of strategic planning a number of contextual approaches to strategy implementation emerge. These approaches can be defined as the content and process

approaches to strategic planning. While the content approach maintains that strategy implementation is a function of the content of various management activities that center around the achievement of some predetermined objective, the process approach maintains that it is a function of internal management processes such as the management of change.

### **3.2.1 The content approach to strategy implementation**

The content approach to strategy implementation is strongly influenced by economic concepts. The management activities that aim to achieve a predetermined set of objectives, with profit maximisation as the most important, is the predominant result required from strategic planning according to the authors that support this approach (Chamberlin, 1933; Bain, 1956; Selznick, 1957; Penrose, 1959; Chandler, 1962; Porter, 1980; Rumelt, 1982 and 1984; Prahalad and Hamel, 1990; Barney, 1991). The prime focus is on the development of core competencies and competitive superiority through the establishment and maintenance of various internal and external networks and linkages where business is in equilibrium with a predominantly stable external environment. Therefore, management control becomes an important element within the strategic planning process. The content approach explains the main actions that flow from the strategic planning

process (Lynch, 2000:22). Within this school of thought, two main directional streams can be identified from the literature.

First is the concept initiated by the works of Chandler (1962) that "structure follows strategy". This approach of firstly formulating strategy followed by a realignment of structure to support the strategy in order to ensure optimum performance is mainly concerned with the scale and scope of the organisation (Rumelt, 1982: 359-369). This is viewed as important in order to achieve specific growth and profitability objectives, and ensures that organisations maintain a balance between the evolving strategy and the scale and scope of the organisation in implementing such strategy. The question is whether Chandler's approach will yield strategic success in today's complex business environment. According to Schendel (1994:1-4), the basic concern with this approach is the difference between the content of the strategic planning process, and how the strategy get to be implemented. According to this view, structure should be considered during the process of strategy development, and not after strategy development has been finalised. More specifically the approach of structure follows strategy will not fit an organisation operating in complex and volatile environments as structures may be too rigid, hierarchical and bureaucratic to cope with complex and volatile environments (Lynch, 2002:727). For many organisations, too much

is happening too fast for a "structure follow strategy" approach. Over the longer-term, the structure may restrict the strategy and make strategic implementation in situations where the organisation is operating in a volatile industry situation extremely difficult. Kaplan and Norton (2001:11-12) support this view, explaining that the traditional approach to organisational structures designed around functional areas create functional silos that become a major barrier to strategy implementation. Norton (2002:26) argued for the design of an organisational structure that will support continuous change, rather than one that support the "steady state."

The second directional stream of literature following the content approach to strategy implementation can be traced to the works of Penrose (1959), Chandler (1962) and Selznick (1957) and has been further developed into what is currently known as the resource-based view in strategy. In this view the core competencies of the organisation become the focal points of strategy formulation and implementation (Rumelt, 1984; Barney, 1991; Prahalad and Hamel, 1990). The result is a focus on the core competencies of the firm, using these as a strategic advantage in order to obtain the future objectives of the organisation. This approach focuses on the analysis of the organisation's resource base in the hope of identifying the unique blend and balance from within the firm that would deliver a competitive advantage. This approach emphasises



the accumulation of scarce resources through skill retention, thus placing the organisation at the center of strategy implementation. Prahalad and Hamel (1990:79-93) explain that strategic advantage is founded on the ability of management to consolidate corporate-wide technologies and production skills into competencies that empower individuals and businesses to adapt to changing opportunities.

### **3.2.2 The process approach to strategy implementation**

Researchers supporting the process approach to strategy implementation argue that economic conditions should not be the prime determinant of strategic behaviour (March and Simon, 1958; Cyert and March, 1963; Cohen, March and Olson, 1972; Pettigrew, 1973; Mintzberg, 1978 and 1994; Quin, 1980; Pfeffer, 1981). The focus here is rather on the extent to which strategy and change are dominated by events and activities that typically emerge from a wide variety of influences including, but not limited to, economics. The process approach defines how the actions that flow from the strategic planning process are linked together to interact with each other as the strategy unfolds within the environment (Lynch, 2000:22).

As in the case of the content approach, one can identify a number of different contextual views that support this approach. On the one

hand are those authors who concentrate on the manner in which strategic decisions are made, focusing on how factors such as politics and change influence the decision-making process (Cyert and March, 1963; Cohen, March and Olson, 1972; Pettigrew, 1973; Mintzberg, 1978 and 1994; Quin, 1980; Pfeffer, 1981, Lynch, 2000). This is a prescriptive approach where the objectives are defined in advance and the main elements of the strategy are developed before the strategy is implemented (Lynch, 2000:23). On the other hand, there is a direction of thought that focuses more deliberately on the specific implementation issues (Peters and Waterman, 1982; Kanter, 1983; Johnson and Scholes, 1993). These works cover aspects such as organisational culture as vital elements of successful strategy implementation. This approach prescribes strategy implementation in a linear relationship to the context of the organisation.

### **3.3 SUMMARY**

Notwithstanding the many arguments to the contrary, strategy implementation still remains a very important organisational process, provided it is used in a manner consistent with the organisation's strategic orientation. Understanding the context of the specific environment within which the organisation operates is an important prerequisite for effective implementation of strategy. In

order for the strategy to be implemented effectively the integration of strategy development and strategy implementation is important, concentrating on implementing strategies that are derived from and support the specific environment within which the organisation is operating. The combination of factors introduced by the various schools of thought on strategic planning, and the understanding of the influence of the level of complexity and volatility of the environment, supports the formulation of real-time strategy implementation processes.

## CHAPTER 4

### REAL-TIME STRATEGY IMPLEMENTATION

#### 4.1 INTRODUCTION

While the previous chapter dealt with strategy implementation in a general sense, this chapter deals with strategy implementation within the context of complexity and volatility. One cannot assume that all organisations experience the same level of complexity in their environments. It is therefore important to view the impact of the level and scope of complexity on the strategic planning system and process, in order to understand the concept of real-time strategy implementation. In addition to the different schools of thought on strategy implementation discussed in chapter 3, a relatively new body of literature, based on theoretical content borrowed from the natural sciences, introduces the complexity approach to strategy implementation (Phelan, 1995:1). Where the challenges for success were traditionally dominated by the content and process approaches to strategy implementation, the key performance driver in a modern sense has become the ability to integrate the volatility of the environment with strategy implementation. In the highly complex markets that organisations face, the traditional views that tend to over-emphasise the ability to predict which strategic positions will be viable, often miss the critical

issues. They tend to under-emphasise the importance of actually implementing and executing the strategy (Kaplan and Norton, 2001:1).

Many electricity utilities are forced to compete on the edge of chaos and complexity that forces a real-time approach to strategy implementation (see paragraph 6.6.1). The complexity approach to strategy implementation concentrates on the views that strategy is temporary, complicated and unpredictable, and that timing (not only speed) is critical (Cutright, 1997:20). According to this author the world is regarded as dynamic and characterised by systems that can exist in states of equilibrium only in a few situations. In the majority of situations, organisational change and transformation is associated with conditions where equilibrium does not exist between the organisation and its environment. In these situations, a different set of rules will govern strategy implementation.

The evolution of non-equilibrium systems is influenced by a combination of both a complex network of non-linear system relationships as well as random developments which combine to form new system configurations in a way that is largely indeterminate. In extreme cases, the system can be so far from equilibrium that the structure breaks down and the system becomes chaotic (MacIntosh and MacLean (1999:304). In such cases, the

operation of simple rules in conjunction with non-linear processes can give rise to the emergence of new and different structures. MacIntosh and MacLean (1999:301) describe systems moving progressively further from equilibrium to a point where a descent into chaos ensues and the systems' structures are broken down. At this point, the system becomes open to its environment, importing energy that results in the exposure of the disorder within the system, and forces the organisations to change.

#### **4.2 THE INFLUENCE OF ENVIRONMENTAL CHANGE ON THE STRATEGY IMPLEMENTATION PROCESS**

The environment can be viewed either as essentially in equilibrium or as dynamic and complex. Change is associated with situations of non-equilibrium and therefore strategy implementation cannot focus on a single, desired future, but should allow for various alternative futures. This will assist in the development of real-time strategy implementation processes, as strategy implementation in real-time is essentially concerned with ensuring strategic success within a complex and volatile environment.

#### 4.2.1 The influence of environmental complexity on strategy implementation systems

In addition to the different schools of thought on strategic planning an additional body of literature based on theoretical content borrowed from the natural sciences introduces the *complexity approach* to strategy implementation (Phelan, 1995:6-9; Courtney *et al*, 1997: 81-89; Gersick, 1991:10-36, McIntosh and McLean, 1999:302; Lynch, 2000:77-78). Where the challenges for success was traditionally dominated by the content and process approaches to strategy implementation, the key performance driver in a modern sense has become the ability to integrate the complexity of the environment with the implementation of strategy (Lynch, 2000: 78). In the highly complex markets that organisations face, the traditional views that tend to over-emphasise the ability to predict what strategic positions will be viable, often miss the critical issues. They tend to under-emphasise the importance of actually implementing and executing the strategy (Hrebiniak and Joyce, 1984:193).

Lynch (2002:24) supports the concept of an emergent view to strategic planning by defining this approach as one that emerges, adapts to human needs and continue to develop over time. According to this author, the emergent approach is evolving, incremental and continuous, and can therefore not easily be

summarised in a plan which then requires to be implemented. Research by Mintzberg (1990:176-194) and Lynch (2000:59-63) indicate that strategic planning is more complex than implied by the prescriptive approach used in many organisations. According to Lynch (2000:60) "...strategy is derived as a result of trial, repeated experimentation and small steps forward...." Lynch further identified that emergent strategy conforms to a specific time frame that is not congruent with the use of a fixed-term strategic planning cycle as in fast-developing markets the strategic planning time-period may be short, while in slow developing markets, it is likely to be longer (Lynch 2000:62).

The use of strategic planning-cycles across the organisation is questioned by this approach, as the context of time as an important element of successful implementation of strategies, are emphasised. It is clear that the time frame for strategic planning should conform to the speed of the market. With the emergent approach to strategic planning, strategy implementation does not follow strategy development, but is an integral part of the development. Lynch (2000:75-80) explains that the emergent approach to strategic planning consist of three related theoretical bases:

- (a) the survival-based approach to emergent strategic processes that conclude that strategic analysis is based on selecting



strategies to optimise the organisation's profitability. This approach is based on Darwin's theory of "survival of the fittest" (Lynch, 2000:75) which implies that strategy is a process that guide the organisation towards competitive advantage within an environment that is changing continuously

(b) the uncertainty-based approach that conclude that the context of the environment is volatile and resources are subject to sudden and unpredictable change. This approach explain that strategic development is complex, unstable and subject to major fluctuations that make it impossible to do any predictions in advance

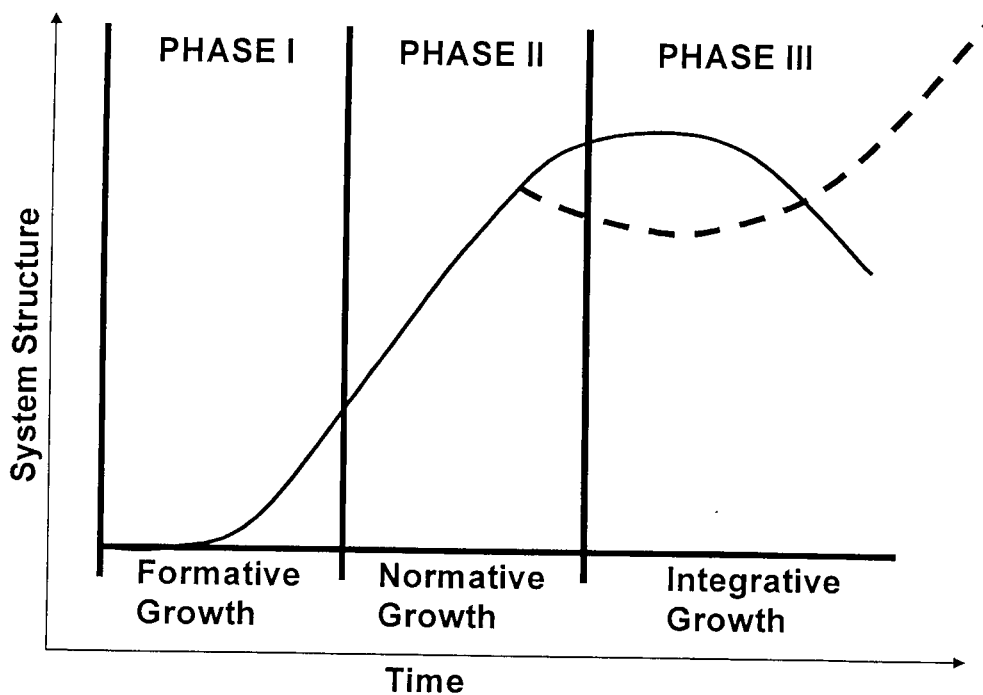
(c) the human resource-based approach to strategy development that conclude that the interaction of people is a vital component of strategy implementation. To this end the impact of management on the strategy development process becomes important. Management is required to generate trust and demonstrate passion and determination within the strategic planning process (Lynch, 2000: 454).

Many electricity utilities are forced to compete on the edge of chaos and complexity that forces a real-time approach to strategy implementation (see paragraph 6.6.1, table 6.4). This approach concentrates on the views that strategy is temporary, complicated

and unpredictable, and that timing (not only speed) is critical in a complex and changing environment (Lynch, 2000:518).

According to the view of Söderling (1998:8-10), change in an organisational context can be described on the basis of the three interrelated phases of organisational growth. These phases are depicted in figure 4.1.

Figure 4.1 Phases of organisational growth



(Adapted from Söderling, 1998)

Organisational growth is normally of short duration and highly conceptual of nature during the formative phase. It is in this phase that the rules are established for growth (Söderling, 1998:9). During

the next phase (normative growth), organisational growth can be sustained over a number of years. The rules established in the previous phase become the norm by which organisations manage and plan. Organisations in this phase tend to think that they are in equilibrium with the environment and focus on incremental approaches to strategy, using calendar-driven planning cycles. Continual refinement and improvement in what one has always done becomes the norm (Söderling, 1998:10).

The cycle is, however, dynamic and increased complexity will be realised as growth approaches the integrative phase. It is rarely the case that an organisation can make a smooth transition from the normative into the integrative phase. More often than not, an organisation's energy will be drawn towards doing more of the same things, better. The old rules will have been superseded without the new rules becoming clear. The transition period from normative to integrative growth will be evident when, no matter how many resources one employs within the old paradigm, one is unable to improve performance. A new paradigm is required to make any significant advancement (Söderling, 1998:10).

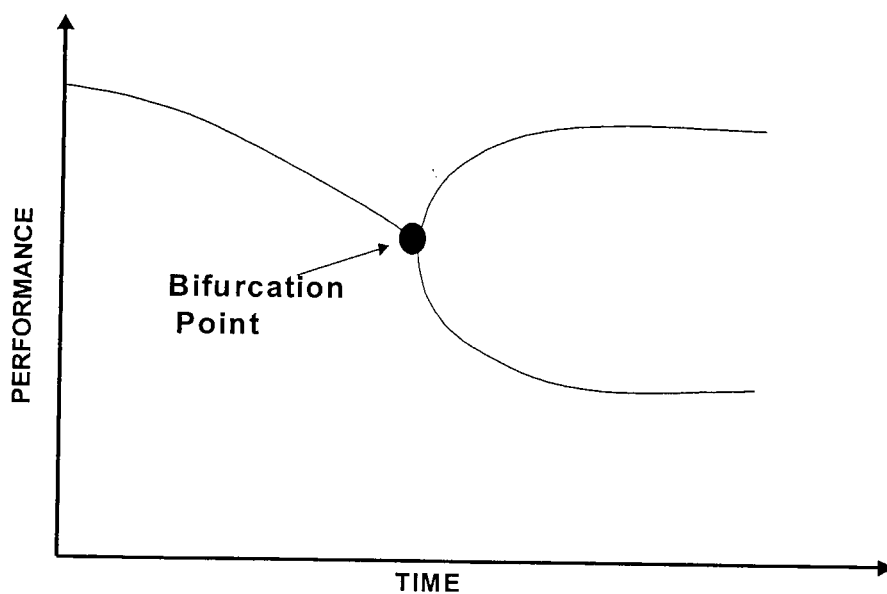
Measured on a scale of stability from static to complex adaptive situations, some organisations might be relatively stable on the one end of the scale while more innovative organisations might operate

further towards the latter extreme. Organisations might move along this scale of complexity where adaptedness gradually displaces adaptiveness and complexity gradually gives way to complication. Organisations can therefore, according to this theory, either be on the edge of chaos, or they could subscribe to the framework of dissipative structures (MacIntosh and MacLean, 1999:302).

Organisations operating towards the end of the normative growth phase experience a specific bifurcation point. This point can be interpreted as a crisis brought about by the failure of the organisation's current systems to cope with an internal or external situation. If the organisation is successful in responding to these conditions, the system becomes open, integrating its boundaries with the environment in a bid to import the energy required to sustain future growth and exporting the chaos created (Greenwood and Hinnings, 1988:293-316). This release of disorder into the environment gives rise to the absorbing of useful energy by the organisation, from the environment. The inefficiencies of this conversion process are associated with the breakdown of old mechanisms and the experimentation with emerging ones seeking to establish dynamic rather than static efficiencies in order to cope with the new and unstable conditions. Before reaching the bifurcation point the organisation is in equilibrium with its environment, having adapted itself to its institutional context (Powell

and DiMaggio, 1991; Zucker, 1977:726-743) with a well-defined archetypal form (Miller and Friesen, 1984; Greenwood and Hinnings, 1993:1022-1054). As it proceeds towards the bifurcation point, de-institutionalisation pressures begin to mount. These pressures increase disorder (Oliver, 1992:563-588) weakening existing structures and promoting instability. Upon reaching the bifurcation point, equilibrium is destroyed, resulting in a period of chaos. A variety of influences such as external pressures and internal politics combine as a new curve attempts to establish itself in the face of resistance from defensive routines within the organisation (Argyris, 1990). Figure 4.2 represents a basic bifurcation diagram (MacIntosh and Maclean (1999:304).

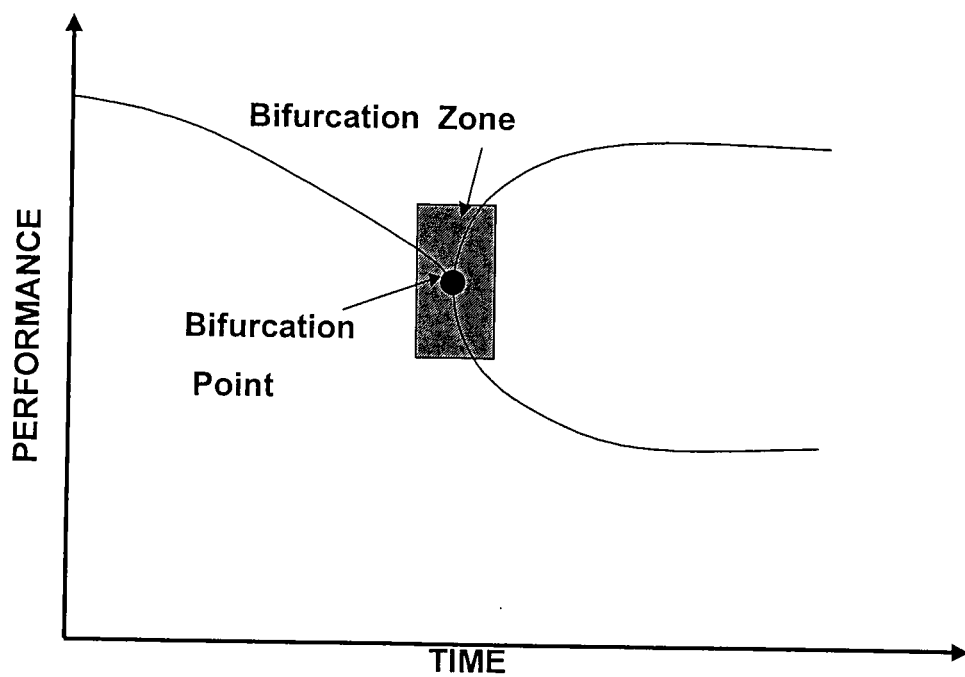
Figure 4.2 Basic bifurcation diagram



(Macintosh and Maclean, 1999:304)

At the bifurcation point feedback mechanisms eventually determine the direction to be followed in the future (MacIntosh and MacLean (1999:304). These authors have introduced an adapted bifurcation diagram (see figure 4.3), indicating that the bifurcation point is in reality a bifurcation zone that consists of a number of complex bifurcation points. During the time that the organisation spends within such a bifurcation zone, a number of different possibilities exist. Organisations can either follow the existing and established direction, or start a totally new direction, striving to reach a new equilibrium point. Eventually organisations adapt to the point where they begin to stagnate again and the cycle repeat itself.

Figure 4.3 Amended bifurcation diagram



(MacIntosh and MacLean, 1999)

Organisations that are stuck within this long-term bifurcation situation are often those that drastically seek equilibrium in an environment that does not permit any such situation. That is, an environment of complexity and chaos. Any strategic changes brought on through either process or content approaches within this situation only lead to short-term solutions and many organisations never reach the point where a newly formed equilibrium is possible. Such organisations tend to base strategic decisions on the paradigms that were created by the two schools of thought in the strategic implementation process discussed earlier. As long as organisations remain within these paradigms, the advent of a new equilibrium is impossible, as they never really come to terms with what is happening within their environments. Organisations need to create the ability to be successful even in extended periods of inequilibrium. The current business environment forces many organisations to remain in this extended bifurcation zone, making the ability to implement strategies in real-time of crucial importance for the long-term survival of the organisation.

#### **4.2.2 The influence of environmental volatility on strategy implementation systems**

While complexity and the scope of strategic planning are interrelated, the length of the planning horizon is influenced by the volatility and turbulence of the environment. Such environments may partly determine an organisation's need for strategic planning (Houlden, 1985:49-54) and may be critical to the extensiveness of the strategic planning process (Kukalis, 1991:143-160). Lindsay and Rue (1980:385-404) find a positive relationship between the planning stages undertaken in strategic planning and the volatility of the business environment. Later studies by Kukalis (1988:393-404) find that shorter plan horizons are related to environments that are more turbulent. Yasai-Ardekani and Haug (1997:729-768) find a similar relationship. In order to demonstrate the effect of chaos on the business systems environment, Levy (1994:167-178) use a non-linear simulation of international supply chains to demonstrate that managers might underestimate the costs of international production, resulting in disruptions and volatility in the production function. Levy also demonstrates that managers should be able to control the process and shift the system back into a stable state.

In addition, Stacey (1991:136) finds empirical evidence that proves the importance of understanding the impact of chaos in the practice



of management. Stacey (1991:136) observed that increased turbulence in the business world and the widely reported accelerating rate of change is sufficient to label any management system today as being in a state of chaos. Vinten (1992:1) labels chaos theory as the next breakthrough in management. Most of the authors on the subject (Cooksey & Gates, 1994; Muller & Watts, 1993; Peters, 1988; Stacey, 1991; Vinten, 1992 and Phelan, 1995), agree that long-term or strategic planning is futile in a chaotic environment. According to Stacey (1991:188), all forms of long-range planning are completely ineffective if one accepts the premise that the dynamics of success are chaotic. In the absence, then, of any ability to plan or control the future, managers are urged to develop an adaptive stance and a preparedness to react to unexpected and unanticipated events.

A process whereby groups or individuals within organisations challenge the existing mental models of behaviour and learn to adapt rapidly and creatively to a changing environment is traditionally termed *organisational learning*. (Muller & Watts, 1993; Senge, 1990; Stacey, 1991; Stacey, 1996). With this in mind, one could argue that strategic planning in its current form is dysfunctional. However, before such a statement can be made one has to prove that the specific organisation is in fact a complex system operating in a state of volatility. Vriend (1994:1) describes

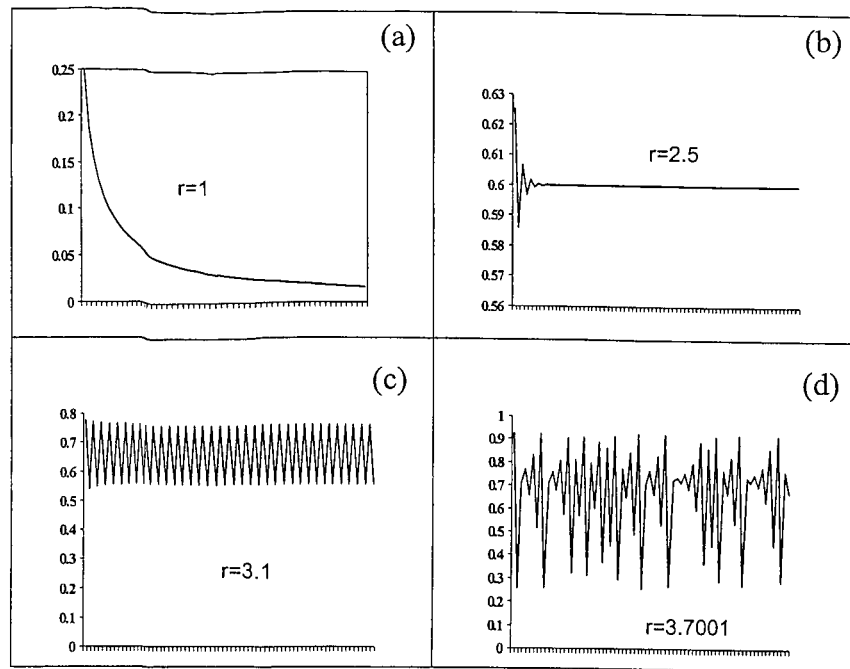
several features of complex adaptive systems. He defines a complex system as "...consisting of a large number of agents that interact with each other in various ways. Such systems are adaptive if these agents change their actions as a result of the events in the process of interaction."

A collection of organisations within an industry all striving to achieve a competitive advantage over one another, and adjusting their strategies accordingly, clearly meets with Vriend's definition. Outcomes are clearly determined by the interactions of these firms and their strategies, while the ability of the firms to change their actions over time is evidence of adaptive behaviour. Phelan (1995:6-9) links the concepts of strategic planning in complex situations to biological research that was done on cellular automata for varying values of specific cellular behaviour. Phelan uses this approach to classify business systems into four classes, and to relate these classes to the contextual basis of strategic planning processes, as is depicted in figure 4.4<sup>1</sup>

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<sup>1</sup> The graphic representation in figure 4.4 is of the output of logistic equation for varying values of  $r$ . At values of  $r < 2$  iterating over the logistic equation will result in the system stabilizing at  $x=0$ . Between  $r=2$  and  $r=3$  the system reaches equilibrium at progressively higher and higher values of  $x$ . At around  $r=3$  the system is seen to bifurcate into two values. The steady state value of  $x$  alternates periodically between two values. As  $r$  continues to increase, it continues also to increase in periodicity, alternating between 2, then 4, 8 and 16 points. When  $r$  is approximately 3.7 another qualitative change occurs - the system becomes chaotic. (Phelan, S.E., 1995, pp. 2-3)

Figure 4.4 Graphical representation of business environments as outputs of the logistic equation



Note : Graphs contain outputs of the logistics equation :  $x_{t+1} = rx_t(1-x_t)$  where  $x_0 = 0.5$

(Phelan, 1995:2)

Class I business systems are related to figure 4.4 (a) above. This is equated to a business environment that reaches equilibrium only at the point where the entire business ceases to operate and exits the market (point zero on the figure 4.4 (a)). Class II business systems are related to figure 4.4 (b) and (c) above. The behaviour of these business systems is both stable and predictable, as was typical of the business environments of the 1950s and 1960s. Class III business systems are the opposite of Class I and II systems and are related to figure 4.4 (d) above. These systems are chaotic where conditions are unpredictable and unstable. Class IV business systems are a combination of Class II and Class III systems and

consist of structures that continuously propagate, split, grow, and recombine in a complex manner (Waldrop, 1992:226).

According to the analysis of Phelan (1995), strategic planning in its traditional form (that is, long-range strategic planning using planning cycles) in a Class I system is a trivial case as the behaviour moves towards a zero point where nothing further occurs in the business system. Strategic planning in this case therefore has no effect. In Class II systems traditional strategic planning is also relatively trivial as traditional approaches to strategic planning are based on identifying repetitive historical patterns and projecting these into the future. Such planning may be complicated by the presence of measurement error or complex business cycles. Class III business systems display a sensitivity dependent on initial conditions that makes accurate predictions of future conditions virtually impossible. Strategic planning in its traditional format is therefore not possible in Class III systems, beyond specifying the broad limits of the behaviour. Strategic planning in its traditional format may be possible in Class IV systems as these systems display regular (i.e. predictable) behaviour for prolonged periods of time. The study by Phelan (1995) shows that a thorough understanding of the specific environmental system of the organisation is imperative before decisions on the use of real-time strategic planning can be made. Traditional approaches to strategic planning focus on long-term

defensible positions or sustainable competitive advantage, that can often be defined in specific terms of generic strategic positions like low cost, differentiation or even a few core competencies (Porter, 1980). In contrast, adopting a real-time strategic planning mode fundamentally caters for a fleeting, complicated and unpredictable business environment, such as the Class III business systems as defined by Phelan (1995). This approach recognises that successful strategy today does not always automatically work equally well in the future. The real-time strategic planning systems and processes therefore need to be balanced with the typical environment facing the organisation. The various schools of thought and approaches to strategy implementation (see paragraphs 3.2.1 and 3.2.2) relate to a broad context of different organisational types. However, this study focuses on the electricity industry that is influenced in a number of ways by a regulatory authority. To this end strategy implementation in industries that are regulated need to be discussed separately.

#### **4.3 STRATEGY IMPLEMENTATION IN REGULATED INDUSTRIES**

The many studies that have previously been noted are dominated by those strategic planning processes and structures used by organisations in predominantly non-regulated industries. The

literature in general has largely ignored the many problems faced by organisations in regulated industries. Generally accepted standard works on strategic planning do not pay much attention to strategic planning in regulated industries (Mahon and Murray, 1981). The result is that managers within these industries have limited resources available to provide insight into strategic planning as it applies to their industries. The one area of importance is the interrelationship of regulated industries with the external environment. Managers in these industries will have to invest more effort in building closer strategic relationships outside of the organisation to develop audiences that are more sympathetic to the industry. Those firms will have to prepare themselves to cope with an active and intrusive environment.

#### **4.3.1 The nature of regulated business environments**

The importance of understanding the external environment as a prerequisite for strategic planning is discussed by a number of researchers such as Mahon and Murray (1981) and Johnson and Scholes (1993). According to Mahon and Murray (1981:253), the business environment of regulated industries differs substantially from that of non-regulated industries. In a regulated environment the regulatory authority can fulfill one of two specific roles within the regulated industry. Firstly, it can act as a buffer, protecting the

organisation from competitive forces and new market entries. Secondly, it can act as a change agent for the regulated industry. It is when the regulator changes its role from that of acting as a buffer, to that of a change agent, that the regulated organisation faces its greatest uncertainty. Acting as a buffer, the regulator ensures equilibrium within the environment of the regulated organisation, but as soon as the regulator starts to act as a change agent, it forces the regulated organisation into a bifurcation zone where complexity and volatility emerge.

It is within these situations that the regulated organisation has to concentrate on the complexities from both a regulated as well as a non-regulated environment. This stresses the need to apply the concepts of real-time strategy implementation, as the complexities that prevail within the non-regulated environment have a profound influence on the organisation. Post and Mahon (1980:399-407) found that regulated organisations that are within a situation where the regulator acts as a change agent should focus on fostering relationships with the many stakeholders operating in the environment. These stakeholders attempt to influence both the regulator as well as each other, and are influenced in turn by elements from the non-regulated environment. In a non-regulated environment, the organisations can end unsatisfactory relationships, while in regulated environments, these relationships are fixed and

strategies need to be implemented to manage within these relationships. Emery and Trist (1965:21-32) refer to this as the degree of system connectedness, and conclude that there are four different types of environment. These are placid-randomised, placid-clustered, disturbed-reactive and turbulent environments. They argue that there is no causal connection between the separate parts of the placid-randomised environments and therefore smaller organisations can survive there. In the placid-clustered environments, organisations must have a high degree of specialisation and must adopt strategies to cope with an environment that is causally connected. Hierarchical organisations with centralised control are usually appropriate for this type of environment. In disturbed-reactive environments, there are a number of similar organisations sharing the same market, and according to these authors, each organisation will usually know what the other knows. Consequently, strategies and tactics will not differ significantly between such organisations. In turbulent environments the environment itself is interacting with the organisation to produce change and a high degree of uncertainty emerges.

Mahon and Murray (1981:258-260) identify three distinct strategic views necessary for regulated organisations: economic, political and social. As regulated organisations still need to manage costs, prices and profits, the first strategy that may be applied deals with



traditional economics. Secondly, regulated organisations need a political strategy. This is important as the organisation needs to manage its relationships within the regulated body and other political elements such as legislation. The third strategy necessary for regulated organisations is a social strategy. Usually the regulator becomes a focus point for a large variety of interest groups. The organisation needs to be able to develop long-term relationships with these groups in order to sustain success.

A central feature of a regulated industry is therefore the presence of regulatory authorities that focus on change, to the benefit of all of the competing organisations within that environment. While the non-regulated organisation is faced with complexity and increasing changes within the global environment, the regulated organisation is faced not only with these same external influences, but in addition has to deal with the complexity of management within the regulated environment (see paragraph 6.6.1). Therefore, regulated organisations are faced with a special challenge to strategy implementation.

#### **4.4 REAL-TIME STRATEGY IMPLEMENTATION PROCESSES**

Available literature on the subject of strategy implementation in real-time reveals a number of different approaches to the concept. The first approach relates concepts such as core process re-engineering

(CPR) and total quality management (TQM) to the principle of continuous change as a prerequisite to strategic planning in real-time (Miller, 1998:161). Others define the concept of organisational learning as strategic planning in real-time (Malhotra, 1996:1). Further additions to the concept include discussions of real-time strategic change in large group interventions (Jacobs, 1994, Bunker and Alban, 1997, Dannemiller and Jacobs, 1992, Silverman, 2000). Yet another school of thought relates real-time strategic planning to information systems and some more specifically to computerised management information systems that link managerial information with the organisations in real-time (McKenna, 1997:110). However, these concepts more accurately refer to planning activities rather than to the broader concept of strategy formulation (Mintzberg, 1994:321). Mintzberg argues that planning, as a deconstructed analytical activity, is structurally incompatible with effective strategy formulation. Mintzberg (1994:321) states that "because analysis is not synthesis, strategic planning is not strategy formulation. Analysis may precede and support synthesis, by defining the parts that can be combined into wholes. Analysis may follow and elaborate synthesis, by decomposing and formalizing its consequences. But analysis cannot substitute for synthesis. No amount of elaboration will ever enable formal procedures to forecast discontinuities, to inform managers who are detached from their

operations, to create novel strategies. Ultimately, the term 'strategic planning' has proved to be an oxymoron."

According to this reasoning, planning should be kept conceptually and operationally distinct from strategy formulation. Planning can however support strategising by providing relevant inputs such as market forecasts and competitive analysis and producing strategy-based implementation plans. Following the approach set by Mintzberg, a more literal understanding of strategic planning should be that strategy should modify planning.

As researchers have defined increasingly sophisticated planning models, managers have been exhorted to keep up with state of the art developments. The critical element is to be able to select and use the most suitable planning mode. Using an unsuitable planning mode may result in such undesirable outcomes as unnecessary expenditure in gathering and analysing information, incompatibility of the planning process with other internal processes, poor strategic decision-making because of inappropriate information (or lack thereof). These potential negative aspects suggest that caution should be used when selecting an appropriate approach and the scope of an organisation's strategy implementation process. In moving towards a real-time strategic planning approach, it is

necessary to identify some dimensions of strategy implementation systems with which to work.

#### **4.5 ELEMENTS OF STRATEGY IMPLEMENTATION IN REAL-TIME**

There are seven basic elements required to enable effective implementation of a real-time strategic planning system are information systems, autonomy and choice, timing, action, communication, integration and control.

##### **4.5.1 Information systems as prerequisite for real-time strategy implementation processes**

The principle aim of a real-time strategic planning system is to reduce uncertainty for the organisation, while acknowledging that it is impossible to create complete and universal certainty. In complex business situations, an important source of competitive advantage is the possession of high quality proprietary information (McKenna, 1997:18). The first task of the real-time strategic planning system is to provide the organisation with the best and most relevant information. The system must create a 'picture' of the business world as it is, to reduce the impact of what is unforeseeable. This is created by inputs to the strategy, and not by the strategy itself.

Intelligence systems must have a high enough tolerance for ambiguity to reflect the complex and even chaotic world in which organisations actually operate (Fuller, 1998:2). Information gathering should also adhere to the *rule of best information*: only the best information from the best sources should go into the system (Fuller, 1998:2). In addition to obtaining the best information, a real-time strategic planning system will have to allow for the analysis and utilisation of information by means of a standard operating system that is user-oriented (McKenna, 1997:112). This will ultimately give the users what they actually need, that is, the data with which they are going to make strategic decisions in real-time.

Information systems for real-time strategic planning should therefore be supplying intelligence, rather than just information, which enables a dynamic, interactive relationship between the technology and the user. Utilisation of Intranet processes could be useful, as these serve as interactive information systems in real-time (McKenna, 1997:112). The systems will also have to include historical choices, allowing the results of previous strategies to be assessed in order to ensure that strategies do not function without memory. Real-time strategic planning systems will need metrics that allow the organisation to measure whether it is gaining competitive advantage with the implementation of the real-time strategic planning system or not. An integration of the intelligence

system with the implementation of a well defined and developed balanced scorecard (Kaplan & Norton, 1996) included into the system is therefore critical.

#### **4.5.2 Autonomy and choice in real-time strategy implementation**

In an empirical study by Andersen (2000:185-197) the relationship between organisational performance, the strategic planning process and autonomy in decision-making by middle managers was investigated. The outcome of a statistical analysis performed in this study proved that autonomous actions lead to higher performance in dynamic and complex environments, and that performance can be optimised if the strategic planning system is combined with a specific level of autonomy throughout the organisation. This gives an indication that the traditional strategic planning approach conceives strategic decision-making processes as logically sequenced activities that allow management to analytically determine an appropriate strategic direction for the firm (Andersen, 2000: 185). Reliance only on systems of centralised strategic planning processes in this context becomes less efficient. Strategy development needs to become a social learning process, where relatively autonomous decisions and actions are nurtured and promoted by middle and lower level management until they become

part of and actually shape the organisation's official strategy (Malhotra, 1996:2). When managers make and implement decisions they commit resources that actually shape the strategic direction of the firm. Usually the tangible outcome of a strategic planning exercise is a document of variable length which typically contains information relating to the environment (markets and trends), the five-year rolling forecast, targets on sales and revenue, and market share. What becomes of the document once it is produced is a major issue and the inability to implement what was articulated in the plan often leads to the belief that strategic planning is a fruitless exercise. It is, in fact, the targets and the forecasts that are distilled from the strategic planning document. What often gets lost in this distillation process is the broader strategic perspective. Hence, the issue of practising choice in real-time goes to the heart of the real-time strategic planning system. This involves testing options and designing for contingencies, not just as an intellectual exercise but as a means of increasing the courage to make the choices. It means encouraging non-defensive reasoning, which in turn involves the creation of an environment where it is safe to debate and experiment with strategic choices, empowering managers who must actually implement the strategy (Malhotra, 1996:3).

The critical choices on which the real-time strategic planning systems must focus are about positioning the organisation, differentiating it from competitors and choosing an appropriate competitive advantage. The system must force and assist choices in order to deal with the essential real-time strategic planning issue of uncertainty, and should therefore tolerate ambiguity. Choice is about autonomous actions that reflect the extent to which managers below the top management structure are allowed to make decisions that have strategic implications (Andersen, 2000:189). Autonomous decision-making and forced choices within the real-time strategic planning system builds capabilities which subsequently will determine which strategic options are available to the organisation. In this way, even without the awareness of top management, important strategies can emerge that can provide the organisation with a better understanding of changing conditions and help in identifying new ways to adapt the organisation's business activities.

#### **4.5.3 Time as an element of real-time strategy implementation**

The many versions of different elements inherent in real-time strategic planning may be categorised in countless ways (Ansoff, 1984; Richardson and Richardson, 1989). One version that is related to the problem under investigation here categorises planning modes in the traditional way, namely by time horizon. In this



instance, the emphasis is on either short-term, medium-term or long-term strategic planning (Wu, 1981:133-143). Another method is to categorise planning modes under their specific implementation factors (such as reward systems, communication and information systems) to promote commitment to mutually agreed upon organisational goals. (Hoshin Kanri, or 'Hoshin planning' an outgrowth of the Total Quality Movement (TQM), is an example of such an approach (Akao, 1991)).

In real-time, informed choices and autonomy alone are not optimal, as these have to be made within a specific time frame. This time frame is completely different from that used in traditional strategic planning systems. In real-time, strategic planning becomes continuous, not sequential. It cannot happen over a one year planning cycle, as time is compressed in a real-time strategic planning situation. Very short cycle times such as quarterly, monthly, weekly or even daily strategic reviews should be used. In this nature, strategy is implemented at market speed. The emphasis in real-time strategic planning systems is on planning, and not on plans, for plans take too much time to develop.

Even as organisations conduct strategic planning in real-time, planning systems must be able to reconcile the present with the past and the future. This means identifying the strategy currently in use,

understanding the organisation's historical position and taking advantage of the intelligence of historical choices. Above all, they should set appropriate time frames for the future, recognising potential time lags and building them into the strategic planning process. This integration will allow both informed choices and the timeliness of strategic actions.

#### **4.5.4 Action as element of real-time strategy implementation**

One of the basic issues identified in this study is the relative gap that exists between the development of strategic plans and strategy implementation in traditional strategic planning systems. Real-time strategic planning systems should be designed to bridge this gap. The first step in getting from planning to implementation in real-time is to resolve uncertainty (Courtney, Kirkland and Viguerie, 2000:82). Uncertainty can evolve from both external and internal situations. External uncertainty can be resolved by obtaining and maintaining effective information, while internal uncertainty is eliminated by designing strategic planning systems that acknowledge the fact that certain aspects of the environment, both internal and external, are not known. This should allow for experimenting with choice, paving the way for action. Such a system should minimise the internal checkpoints that are dominant in a hierarchical strategic planning system.

#### **4.5.5 Communication and real-time strategy implementation**

One of the primary issues of strategy implementation is the failure of many in the organisation to understand the strategy and strategic direction of the organisation. Communication can potentially become a major barrier to strategy implementation. Management and employees will have to understand clearly, and will also have to have ownership of the strategy. The strategy will have to be communicated to every level within the organisation so that everybody understands the strategic advantage of the organisation, and is able to influence such strategy through integrated communication links (Kaplan and Norton, 2001:3). Communication does not only build understanding, but also trust, which leads to the commitment needed to implement the strategy in real-time (Fuller, 1998:5). Real-time strategic planning should facilitate communication by establishing a common strategy language that everyone in the organisation can use (Kaplan and Norton, 2001:10). In organisations where strategic planning is elevated to senior management level, or done by strategic planning departments, the much-needed common language that is required to make organisations into real-time planning organisations, is lacking. In order for the transition to a real-time planning organisation, the channels of communication need to be opened, and an organisational culture of real-time planning, needs to be established.

#### 4.5.6 Integration of strategy implementation elements

The elements of intelligence, choice, timing, action and communication are, in practice, not all separable from one another. In order for the real-time strategic planning system to succeed, organisations should align these activities through a process of informed choice leading directly to real-time action. Chakravarthy and Lorange (1984:34-46 and 1991:6-18), propose that a firm's planning system should achieve a balance between adaptation (promoting creativity and the identification of environmental threats and opportunities) and integration (emphasising control and co-ordination of internal resources). Strategic planning can therefore serve a number of important organisational roles: enabling organisation-wide response to the environment, protecting core technologies, helping to address uncertainties, providing an integrative device and acting as a basis for divisional and business control (Grinyer, Al-Bazzaz and Yasai-Ardekani, 1986:3-28). Real-time strategic planning systems are in essence, integrated systems (Malhotra, 1996:3). Such integration will ensure that informed choices and timely actions are achieved. Yet in complex business environments, choice and action are shadowed by uncertainty. Effective integration of the elements of the real-time strategic planning system requires a wider dispersion of power than senior management is used to granting. To achieve this the real-time

strategic planning system should ensure a shift from internal focus to a much more external one that recognises the uncertainty of the environment, and through a shift from controlling to enabling, with a resultant reallocation of power. The shift from controlling to enabling raises specific questions such as who is to be enabled through the real-time strategic planning system and how power will be allocated in these strategic planning systems. The crucial element of real-time strategic planning systems is to empower the competitive line, the people making day-to-day decisions by which the organisation wins or loses. This means delegating power to the individual and not only to the head of the business unit. In this way the doers also becomes the planners, employing integrated systems that are deeply embedded in line.

#### **4.5.7 Control as managerial task in real-time strategy implementation**

Real-time strategic planning should ensure that everyone in the organisation is working together to reach the future position of the firm. In order for this to be successful individuals at all levels within the organisation should become part of the plan-making activities of the firm to achieve the vision of the organisation. During the 1960s, Peter Drucker set a precedent, which revolutionised management discipline, integrating a strategic element into the organisation's

performance with his methodology of *Management by Objectives* (Drucker, 1959). This system resulted in the organisation's vision and mission statements being changed into quantifiable measures. Management by Objectives set a trend that led to the invention of a variety of business performance methodologies, such as Total Quality Management (TQM), activity based costing and performance management. This has also led to the development of the methodology of the *balanced scorecard* (Kaplan and Norton, 1996). The utilisation of a balanced scorecard is highly applicable for control and implementation purposes in real-time strategic planning systems, as the concept forms a crucial link between strategising and implementation. According to Kaplan and Norton (1996:11), the balanced scorecard is most successful when it is used to drive the process of change (as an implementation instrument rather than a control instrument). The applicability of the balanced scorecard to real-time strategic planning lies therein that it provides a comprehensive view of organisational performance with a strong focus on attaining the vision set by the organisation. It also ensures a strong focus, not only on the historical performance of the organisation, but also on the future. The balanced scorecard is founded upon the idea that financial performance measures alone tend to be somewhat retrospective. Financial measures typically tell how the organisation performed in the past, but give little indication of how the organisation will perform in future. Applying the balanced

scorecard in a real-time strategic planning system, will provide both lagging and leading indicators for control. Lagging indicators are measures that present actual results of historical performance, while leading indicators are measures which drive future performance.

According to Kaplan and Norton (2001:11) an important attribute of using balanced scorecards in real-time strategic planning is its ability to align and focus the organisation. It achieves this through the integrated nature of the four perspectives that it measures. These four perspectives are financial, customer, internal, and learning and growth. Consequently, the balanced scorecard forces managers to abandon the belief that traditional financial measures are sufficient for strategic future success. It also advocates the alignment of all functional areas of the organisation. This suggests that an organisation-wide approach to control and measurement of the vision is preferred to isolated control systems in each department. The strategic choice perspective developed by Child (1972:2) refers to the fact that management has discretion and the decisions they make are of vital importance for the success of organisational performance. This leads to the conclusion that performance management should be vertically integrated throughout the organisation, including both the lower levels as well as top management. Performance contracts should be negotiated on a consensus basis, including aspects of performance expectations

from both the subordinate and the manager to ensure effective strategic integration. This approach leads to increased performance (Bourgeois, 1980: 227-248). According to the work of Kaplan and Norton (2001:193) the approach to performance measurement also applies on a horizontal basis. These authors designed a strategic partner model that integrates strategic performance management across business units through "service agreements." The approach to performance measurement in this model is that horizontal performance contracts result in synergies that are required for effective strategy implementation.

#### **4.6 SUMMARY**

Real-time strategic planning embraces a new strategic planning system and process. The organisation's strategic direction becomes integrated into the business and autonomy is allowed in making and implementing strategic plans on every level of the firm. Traditional plans begin with plans and end with actions. In real-time, strategy becomes a successful navigation of the organisation at the edge of chaos. In this sense, there are small numbers of very tight rules, but flexibility otherwise. In summary, implementation of strategy is very closely related to organisational change (Amburgey and Dacin, 1994:1427-1452). The world that professionals and managers live and work in is changing constantly and becoming more complex. The most effective way to cope with change is to



help create it. If one helps to create the change, one is taking a major step towards its management. The only way to help create change is to be able to adopt a real-time method of thinking in strategic planning.

The effective management of change is therefore viewed as of paramount importance in organisations that are successful in strategy implementation. Change can be classified according to either the nature and extent of adjustments to the direction and end-state of the organisation, or contextually, according to the scope of the change ranging from evolutionary to revolutionary (Mintzberg and Westley, 1992:39-59; Greenwood and Hinings, 1996:1022-1050). Each of these views contributes a different perspective on the management of change as catalyst for strategic success and organisational growth. Organisations are families of non-linear response loops linked to other organisations by similar response loops. This means that organisations should be able to operate at far-from-equilibrium conditions at the border between stability and instability. This state is difficult to manage as the need for control and integration pulls organisations towards stability. However, the need for decentralisation and innovation pulls these organisations towards instability and disintegration.

Organisations must develop the ability to manage complexity, conflict and paradox internally if they wish to stand any chance of

coping with external shocks with similar characteristics. Real-time strategy implementation should therefore be implemented at market speed, as the speed at which the industry and market changes dictate the level of volatility that the organisation has to deal with. According to Lynch (2000:766) strategy implementation need to conform to the following perspectives:

- (a) many parts of the organisation should be involved in strategy implementation
- (b) strategy implementation is an ongoing activity rather than one major event with a finite outcome
- (c) strategy implementation need to be flexible and responsive to external and internal pressures
- (d) the active support of the chief executive officer need to be obtained to enable effective strategy implementation (Lynch 2000:977)

## CHAPTER 5

### RESEARCH AND DATA ANALYSIS METHODOLOGY

#### 5.1 INTRODUCTION

The analysis of the research data was performed by combining two approaches, content analysis and grounded theory analysis. Content analysis is a systematic observation of open-ended questions and unstructured interviews used to report on the essence of such interviews both quantitatively and qualitatively. This involves the systematic analysis of the contents to record the relative incidence or frequencies of themes (Welman and Kruger, 1999:201). According to Welman and Kruger (1999:203) the statistical analysis of the data obtained consists of the determination of the frequencies or percentages of occurrence of the chosen content. The results of the content analysis were used in further analysis to outline a theoretical framework as a basis for the final recommendations, using grounded theory. This chapter has as its main objective to introduce the data analysis process used in this research study. Table 5.1 provides an overview of the phases, steps and tests that were used throughout this study.

Table 5.1 Research process and methodology (2002)

PHASES OF THE RESEARCH PROCESS	ACTIVITY	COMMENTS
<b>Research Design Phase</b>		
Literature review.	To define the research question.	Constrains irrelevant variation and enhances external validity.
Selecting sample.	Used theoretical sampling (not random sampling).	Focuses the efforts on theoretically sample elements.
<b>Data collection phase</b>		
Develop data collection protocol.	Used a qualitative research approach, utilising a semi-structured interview guide in personal interviews.	Strengthened grounding of theory.  Synergistic view of results.
Doing the physical research interviews.	Integrated the data collection and data analysis processes.  Used flexible data collection methodology.	Increase the data analysis time and reveals helpful adjustments to data collection. Allows for emergent theories and themes to be integrated with data collection.
<b>Data ordering phase</b>		
Data ordering.	Sorted the data chronologically.	Facilitates easier data analysis.
<b>Data analysis phase</b>		
Analysing data obtained from respondents and research.	Content analysis.  Grounded theory analysis:  - Open indexing.  - Axial indexing.  - Selective indexing.  Calculated Kappa statistic.	To report on a quantitative way in addition to qualitative analysis of the essence of the data, and to form the basis for the grounded theory analysis.  To develop initial concepts, categories and propositions.  To isolate emerging connections between categories and sub categories that emerged from the data.  To integrate the categories, concepts and propositions to build the theoretical framework.  To test inter-rater reliability.
<b>Literature comparison</b>		
Compare emergent theory with existing literature.	Compared with theoretical frameworks	Improve construct definitions, internal and external validity and establishes the domain by which the findings can be generalised.

## 5.2 RESEARCH DESIGN

Research design is defined by Easterby-Smith *et al* (1991:2) as "the overall configuration of a piece of research: what kind of evidence is gathered from where, and how such evidence is interpreted in order to provide good answers to the basic research question." The basic types of research are quantitative and qualitative research (Welman and Kruger, 1999:68). Quantitative research has as its main objective the production of general quantitative descriptions of certain aspects of a sample of a study population that can be applied to the wider population. Qualitative research, on the other hand, seeks to provide a deeper understanding of social phenomena (Silverman, 2001:32). Qualitative research is used successfully in the description of organisations, while quantitative research methods are more useful in hypothesis testing (Welman and Kruger, 1999:186). The kinds of data with which qualitative researchers are concerned are derived from open-ended interviews that facilitate understanding in depth and detail and, in particular, the meanings which human beings attach to what they do. This project studies the nature and methodologies applied to the strategic planning processes of electricity utilities and seeks to form an in-depth understanding of the processes involved in getting to the development and implementation of the strategic plans. It is the social organisational phenomena that guide strategic planning

implementation that become important in this study. For this reason, the study was based on qualitative research.

### **5.2.1 Sampling methodology**

Two basic sampling methodologies are possible (Sekaran, 1992:229; Welman and Kruger, 1999:47-48). These are either probability sampling or non-probability sampling. In probability sampling, the elements in the population have an equal chance of being selected as sample subjects, while in non-probability sampling the elements do not have an equal chance of being selected as subjects. Probability sampling is used when the representativeness of the sample is important for the purposes of wider generalisability while non-probability sampling is used when factors other than generalisability become important (Sekaran, 1992:229). According to Deming (1990:31) and Sekaran (1992:239), non-probability sampling is best used when information is needed that is relevant to and available only within certain groups, and when responses are needed from specific minority groups. Purposive sampling and convenience sampling are two specific sampling methods that apply to non-probability sampling (Deming, 1990:31; Sekaran, 1992:235; Welman and Kruger, 1999:63). Convenience sampling is the collection of information from members of the population who are conveniently available to provide the information. Purposive

sampling refers to the collection of information from specific targets of people who will be able to provide the needed information either because they are the only ones who can give the information or they are the only ones who conform to some criteria that has been established by the researcher (Sekaran, 1992:236). Purposive, non-probability sampling consists of either judgement sampling, where the sample includes subjects who are in the best position to provide the information required based on their experience or position within the firm (these are used when a limited category of people have the information that is sought), or quota sampling which is a form of proportionate stratified sampling in which a predetermined proportion of people are sampled from different groups, but on a convenience basis.

Deming (1990:31) explains the concept of judgement sampling as "one in which an expert in the subject matter makes a selection of 'representative' areas or business establishments." According to Deming (1990:31), in evaluating the reliability of such a sample one must rely on the expert's judgement and that the theory of probability sampling cannot be used in such cases. If a sample "is confined to only 1, 6, or 10 units, a judgement sample would be preferable to a probability sample" (Deming, 1990:31). In such small samples the errors of judgement are usually fewer than the random errors of a probability sample. Bryman argues that

qualitative research follows a purposive rather than a statistical logic (Bryman, 1988:90). Mason (1996:93-94) describes the link between sampling and theory when he explains that “(purposive) sampling means selecting groups or categories to study on the basis of their relevance to your research questions, your theoretical position...and most importantly the explanation or account which you are developing...(it) is concerned with constructing a sample...which is meaningful theoretically, because it builds in certain characteristics or criteria which helps to develop and test your theory and explanation.”

Mason (1996:85) argues for a “wider universe of social explanations in relation to which you have constructed your research questions.” In support, Silverman (2001:252) argues that in qualitative research the relevant or sampleable units are often seen as theoretically defined. For the purposes of this study, sampling was required at both the macro organisational level as well as at the individual respondent level.

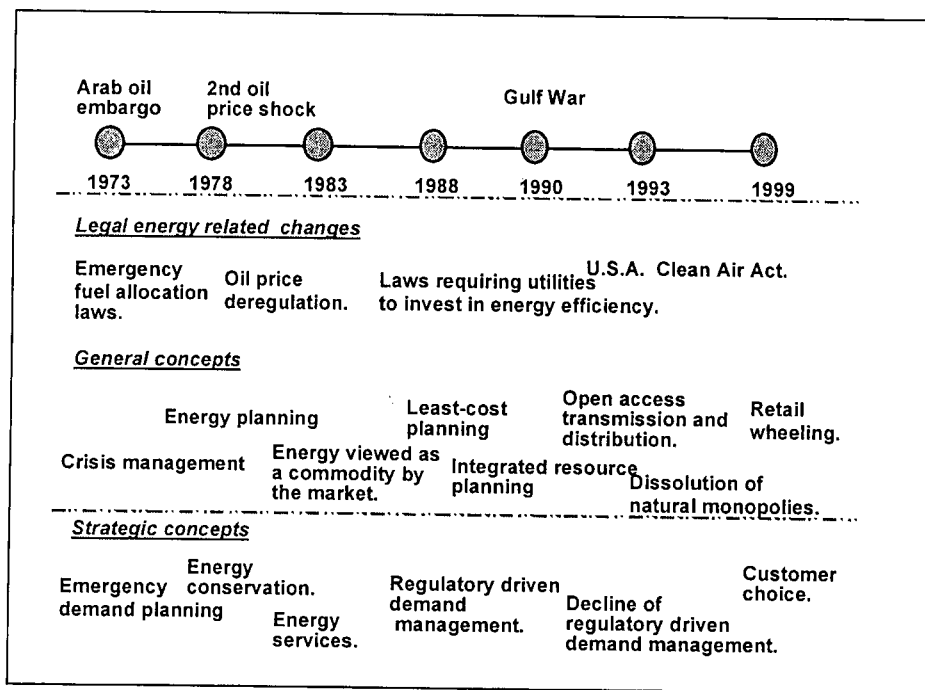
### **5.2.2 Sampling at the organisational level**

In selecting the sample for this study at the “organisational” level, it was important to ensure relevance to the theoretical basis of this study. An analysis done in the United States of America of the



evolution of events that led to electricity utility restructuring, (Van Buuren, 1996) it was found that the United States of America have progressed substantially towards dissolving natural electricity monopolies where customer choice and a competitive electricity market is introduced. This deregulation of the electricity market is a consequence of a number of events that occurred over a period of time. Figure 5.1 depicts a time line that explains the major events over time that led to electricity industry restructuring (van Buuren, 1996).

Figure 5.1 Evolution of events leading to USA electricity utility restructuring



(Van Buuren, 1996)

The early years were dominated by price shocks from OPEC countries. The response was the introduction of emergency energy laws that placed electricity utilities in a crisis situation that was a consequence of the limitation in availability of fuel for generating electricity. Over time, electricity became a regulated commodity, and many laws and regulations were introduced to govern electricity supply. This resulted in electricity utilities becoming "natural" monopolies, governed largely by the state. The United States' government appointed the boards and the electricity councils, and selected chairpersons for the council.

However, as the electricity market became globalised and competitive, electricity markets were created around the world. Pressure mounted in the United States to change the structures of their electricity markets. A number of scenarios were introduced, mostly as a result of regulatory changes. The most important were the formation of open wholesale transmission access, the introduction of wholesale electricity generation, changes to the pricing structures from regulated and monopolistic to competitive based, and the introduction of competitive electricity retailing. In response many electricity utilities in the United States merged to form a few large electricity holding companies that in turn responded by creating separate entities to deal with these scenarios. The most important are wholesale electricity marketing,

retail energy services and independent electricity transmission entities. These changes influenced the contextual nature of strategic planning including the position and context of strategic planning in the organisation, the strategy development process and the strategy implementation processes.

This study investigates the nature of the strategy implementation process of electricity organisations that operate within the context of competitive, deregulated electricity markets. The United States of America has substantial experience in operating under such market conditions, and the selection of a sample of organisations from that country became relevant for the purposes of investigating real-time strategy implementation.

For the purpose of selection of organisations, information about electricity utilities in the United States of America was obtained from The Utility Connection ([www.utilityconnection.com](http://www.utilityconnection.com)) which specialises in electricity utility information. A total of 159 electricity utilities companies were listed and in order to select a number of cases with which to work, specific criteria were needed. The selection of criteria to determine the sample was based on the assumption that the size of the organisation influences the level and scope of strategic planning that the organisation uses. It was also particularly important for the scope of this study to be able to

compare the various respondent organisations and the subsequent results of the research on a level where such comparisons are valid in terms of the organisational context and size. As a result the following criteria were decided upon for the selection of a sample of organisations to work with.

- (a) size of the utility measured in total amount of annual electricity sales in GigaWatt hours
- (b) size of electricity generating capacity measured in Megawatt of electrical generating capacity
- (c) the electricity utility must be rated as amongst the top twenty in the world, based on the criteria set in (a) and (b) above
- (d) the electricity utility must be operating within the geographical boundaries of the United States of America.

The 159 electricity utilities in the population were reduced by clustering these into groups of utilities that are jointly managed from a holding company perspective. This combination is important for the comparison of results from the research on a relatively equal basis, as many strategic decisions are made at holding company level. The holding companies so identified were then subjected to

the above criteria for size of annual sales and generating capacity in order to determine relevance for selection. The selected sample was then compared to the top utilities in the world to determine the relative position of these utilities from a global perspective. It was subsequently decided to select the following electricity holding companies to study for this project:

- Southern Company, Atlanta, Georgia, USA.
- Texas Utilities (TXU), Dallas, Texas, USA.
- American Electric Power (AEP), Columbus, Ohio, USA.
- Entergy Corporation, New Orleans, Louisiana, USA.

### **5.2.3 Individual level sampling**

Strategic planning and implementation is in essence the job of top management, as is explained by McCarthy, *et al* (1983:3) as follows: "The concept...incorporates various activities including the identification of strategy, the determination or formulation of strategy, the implementation of strategy, the evaluation of strategy. Thus these tasks encompass a vital portion of the job of top management...top management personnel are typically most concerned with identifying and formulating strategy and with planning for and initiating its implementation."

As strategic planning activities are therefore part of the top management functions of the firm, it was important to ensure that the sample should include top managers within the electricity holding company.

#### **5.2.4 Summary of research design phase**

In summary, purposive, non-probability sampling is used, utilising the concept of judgement sampling. This is done as the particular elements within each of the electricity utilities included into the sampling framework consist of experts within the utilities who deal specifically with the concept of strategy. Using a random sample in this case will not yield the required results, as such a sample would include members of the organisation who do not have the necessary expert knowledge about the strategic planning aspects of the utility. Consequently 16 senior managers within each of the selected electricity utilities were interviewed, all of them part of the executive management boards of these utilities.

### **5.3 DATA COLLECTION**

The grounded approach advocates the use of multiple data sources converging on the same phenomenon. Glaser and Strauss

(1967:65) term these *slices of data*: "In theoretical sampling, no one kind of data on a category nor technique for data collection is necessarily appropriate. Different kinds of data give the analyst different views or vantage points from which to understand a category and to develop its properties; these different views we have called *slices of data*. While the [researcher] may use one technique of data collection primarily, theoretical sampling for saturation of a category allows a multifaceted investigation, in which there are no limits to the techniques of data collection, the way they are used, or the types of data acquired."

The use of multifaceted data collection ensures synergy through data triangulation. This involves the use of multiple data sources consisting of both the interview data as well as documentary sources. The use of multiple data sources enhances construct validity and reliability (Yin, 1989:98-99). Turner (1983:342) concluded in a research project that was based on grounded theory, that documentary sources were treated like sets of field notes. During this step a rigorous data collection protocol was developed by employing multiple data collection methods, using both qualitative and quantitative data and systematically establishing a database of information from the research study with which to work in the final analysis. The principal data source in this study included personal unstructured interviews and published industry documents.

The basis of this step of the research project was therefore to ensure that data was collected and analysed simultaneously and flexibility was maintained. This overlap allowed adjustments to be made to the data collection process in light of the emerging findings. Although qualitative research is traditionally used by social researchers, an analysis of recent literature indicates that this approach is increasingly used by researchers in the management sciences (see table 5.2).

Table 5.2 Research published in 2001 using qualitative types of research methodologies

Author	Research topic	Source
Amit and Zott	Value creation in E-Business.	Amit, R. and Zott, C. (2001) (December). Value Creation in E-Business. <i>Strategic Management Journal</i> . 22, (12).
Sarkar, Echambadi and Harrison	Entrepreneurship and Market Performance.	Sarkar, M.B., Echambadi, R.A.J, and Harrison, J.S. (2001) (June-July). Alliance Entrepreneurship and Firm Market Performance. <i>Strategic Management Journal</i> . 22.
King and Zeithaml	Competencies, Causal Ambiguity, and Firm Performance.	King, A.W. and Zeithaml, C.P. (2001) (January). Competencies and Firm performance: Examining the Causal Ambiguity Paradox. <i>Strategic Management Journal</i> . 22, (1)
Markoczy	Consensus Formation During Strategic Change.	Markoczy, L. (2001) (November). Consensus Formation During Strategic Change. <i>Strategic Management Journal</i> . 22, (11).
Subramaniam and Venkatraman	Determinants of Transitional New Product Development Capability:	Subramaniam, M. and Venkatraman, N. (2001). Determinants of Transitional New Product Development Capability: Testing the Influence of Transferring and Deploying Tacit Overseas Knowledge. <i>Strategic Management Journal</i> . 22, (4).
Osborne, Stubbart and Ramaprasad	Strategic Groups and Competitive Enactment	Osborne, J.D., Stubbart, C.I., and Ramaprasad, A. (2001) (May). Strategic Groups and Competitive Enactment: A study of Dynamic Relationships Between Mental Models and Performance. <i>Strategic Management Journal</i> . 22, (5).



## **5.4 DATA ORDERING**

According to Yin (1989:119), data is ordered chronologically, since as the arraying of events into a chronology permits the investigator to determine causal events over time, because the basic sequence of a cause and its effect cannot be temporally inverted. However, unlike the more general time-series approaches, the chronology is likely to cover many different types of variables and not be limited to a single independent or dependent variable.

## **5.5 DATA ANALYSIS**

### **5.5.1 Introduction**

Grounded theory is the name given to a descriptive or explanatory theory that has its basis and foundation in the empirical data that gave rise to it (Amit and Zott, 2001:494-520). It can and has been used to discover theories that explain, describe or predict situations in which contextual factors play a significant role, mainly in the social sciences, although more recently, as explained below, in the fields of strategic management. Grounded theory refers to the attempt to use the interview data inductively, so that production of abstracted analytical categories comes from the respondent's accounts. In inductive studies data analysis is often hard to

distinguish from data collection since building theory that is grounded in the data is an iterative process in which the emergent frame is compared systematically with evidence from each interview (Eisenhardt, 1989:532-550). Data analysis is central to grounded theory research. The process of building grounded theory requires integration of the various phases of a research study. These phases (research design, data collection, data ordering, data analysis and literature comparison) form the foundation for the main findings of the research, but need to be further enhanced by evaluating each against specific research criteria: construct validity, internal validity, external validity and reliability.

**Construct validity** is enhanced by establishing clearly specified operational procedures. **Internal validity** is enhanced by establishing causal relationships where certain conditions are shown to lead to other conditions, as distinguished from spurious relationships. In this sense, internal validity addresses the credibility of the study's findings. **External validity** requires establishing clearly the domain to which the study's findings can be generalised. In this context reference is made to analytic and not statistical generalisation and requires generalising a particular set of findings to some broader theory and not broader population. **Reliability** requires demonstrating that the operations of a study, such as data collection procedures, can be repeated with the same results.

The approach is based on the three elements of concepts, categories and propositions of (Corbin and Strauss, 1990:7). **Concepts** are the basic units of analysis since it is from conceptualisation of data and not the actual data *per se*, that theory is developed. Corbin and Strauss (1990:7) furthermore state that "Theories can't be built with actual incidents or activities as observed or reported; that is, from "raw" data. The incidents, events, happenings are taken as, or analysed as, potential indicators of phenomena, which are thereby given conceptual labels. Only by comparing incidents and naming like phenomena with the same term can the theorist accumulate the basic units for theory."

**Categories** are higher in level and more abstract than the concepts they represent. They are generated through the same analytic process of making comparisons to highlight similarities and differences that are used to produce lower level concepts. Categories are the "cornerstones" of developing theory. They provide the means by which the theory can be integrated (Corbin and Strauss (1990:7).

The third element of grounded theory is **propositions**, which indicate generalised relationships between a category and its concepts and between discrete categories, also termed 'hypotheses'

(Glaser and Strauss, 1967). It is felt that the term 'propositions' is more appropriate since propositions involve conceptual relationships whereas hypotheses require measured relationships. Since the grounded approach produces conceptual and not measured relationships, the former term is preferred.

The generation and development of concepts, categories and propositions is an iterative process. Grounded theory is not generated *a priori* and then subsequently tested. Rather, it is "inductively derived from the study of the phenomenon it represents. That is, discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory should stand in reciprocal relationship with each other. One does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge" (Strauss and Corbin, 1990:23).

### **5.5.2 The process of Grounded Theory**

Within this general framework, data analysis involved generating concepts through the process of coding. According to Strauss and Corbin (1990:57) coding represents the activities of firstly disassembling the data, and later assembling the data again in new

ways. This is a central process by means of which theories are built from data. Coding, in this context, does not involve assigning numerical codes in the quantitative sense (where exclusive variables are defined and given preset values). To avoid confusion in this regard, the term "indexing" is used.

Three generic types of indexing are prescribed by Strauss and Corbin (1990:57). These are open, axial, and selective indexing. These are only analytic types and it does not necessarily follow that the researcher moves from open through axial to selective in a strict, consecutive manner. **Open indexing** refers to the section of the analysis that deals with the labeling and categorising of phenomena as indicated by the data. The result is the formulation of certain concepts, which are the basic building blocks in grounded theory construction. **Open indexing** requires application of comparing through asking questions and making comparisons within the data that are analysed. The data was initially broken down by asking simple questions such as what, where, how, when and how much. Subsequently, the data was compared and similar incidents were grouped together and given the same conceptual label. The data comparisons made were then grouped together at a higher level through categorising the comparisons. **Open indexing** separate the data elements into concepts and categories and **axial indexing** puts those concepts and categories back together in new ways by

making certain connections within the data between a category and its sub-categories. **Selective indexing** involves the integration of the categories that have been developed to form the initial theoretical framework.

## **5.6 LITERATURE COMPARISON**

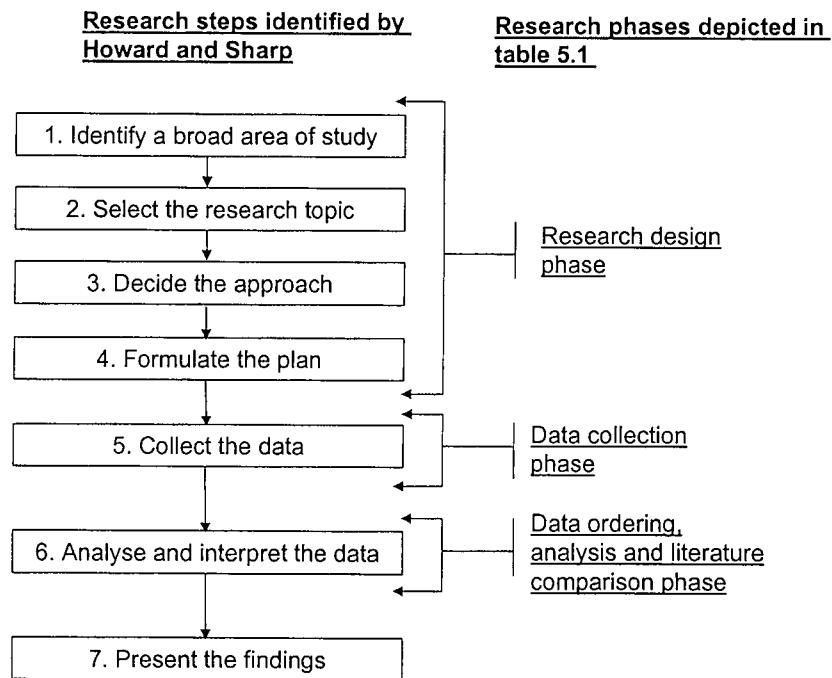
The final step in the process was to compare the emerged theory with the literature and to examine the similarities and differences between the literature and the findings made in the process. Tying the emergent theory to existing literature enhances the internal validity, generalisability and theoretical level of the theory-building process (Eisenhardt, 1989:545). The results are represented in chapters 6 and 7 while the final recommendations are presented in chapter 8.

## **5.7 SUMMARY**

The methodology that is applied in this study follows a systematic approach to the research as discussed in this chapter. The methodology is based on a number of phases, steps and activities and is summarised in table 5.1. Figure 5.1 provides a diagram of the overall research process used in this study, based on the work of Howard and Sharp (1983). The steps depicted in this figure

integrate with the various phases explained in table 5.1 to provide an overall view of the methodologies used for the research study presented in this document.

Figure 5.2 Summary of phases and steps used for the purposes of the research study



(Adapted from Howard and Sharp, 1983)

The project started with the identification of the broad area of the study that included the selection of the research topic, definition of the research questions and objectives of the study. The research design included the definition of the population and sampling at both an organisational and individual level. A data collection protocol was designed followed by the planning of the research and data collection process. This followed the physical collection of the data

through personal interviews in the United States of America. Data analysis was performed by combining content analysis with the grounded theory approach. Data was coded by two independent coders (raters) and a number of categories and concepts emerged. Inter-rater reliability was tested using the Kappa statistic developed by Cohen (1960). The findings were compared throughout with the literature in order to improve construct definitions and validity, and to establish the domain according to which the findings could be generalised.

Throughout this study, compliance with the methodology depicted in table 5.1 and figure 5.2 was carefully adhered to. The compliance with this approach is an important contributing factor to the success of scientific research (Howard and Sharp, 1983: 15). The empirical research results are reported in the next section of this document.



## CHAPTER 6

### EMPIRICAL RESEARCH RESULTS

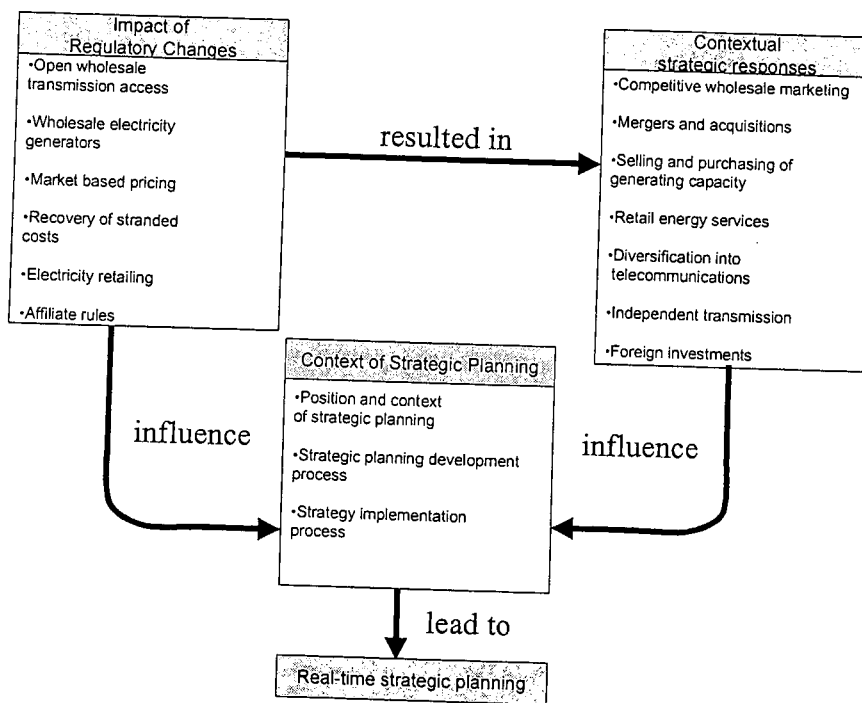
#### 6.1 BACKGROUND

The purpose of this chapter is to present the results of the empirical study that was performed on the basis as explained in chapter 5. The results reported here begins with an analysis of the impact that regulatory changes had on the electricity industry of the United States of America (see paragraph 6.4). These changes resulted in a number of strategic responses by electricity utilities operating in that industry, and are reported in the second portion of the chapter (see paragraph 6.5). The analysis of these environmental forces and the strategic responses to these forces converge into an analysis of the strategic planning, and more specifically, of strategy implementation processes applied by electricity utilities operating in the United States of America (see paragraph 6.6).

The analysis performed here conforms to the research methodology explained in chapter 5 (see table 5.1), and specifically to the results of the data analysis phase, using the grounded theory approach in combination with content analysis (see paragraph 5.5). This integrated approach has resulted in the formulation of

recommendations for real-time strategic planning in the electricity industry, which are presented in chapter 8. The interrelated context of the findings is summarised in figure 6.1 and forms the basis of the discussion of the results.

Figure 6.1 Overview of empirical research results (2002)



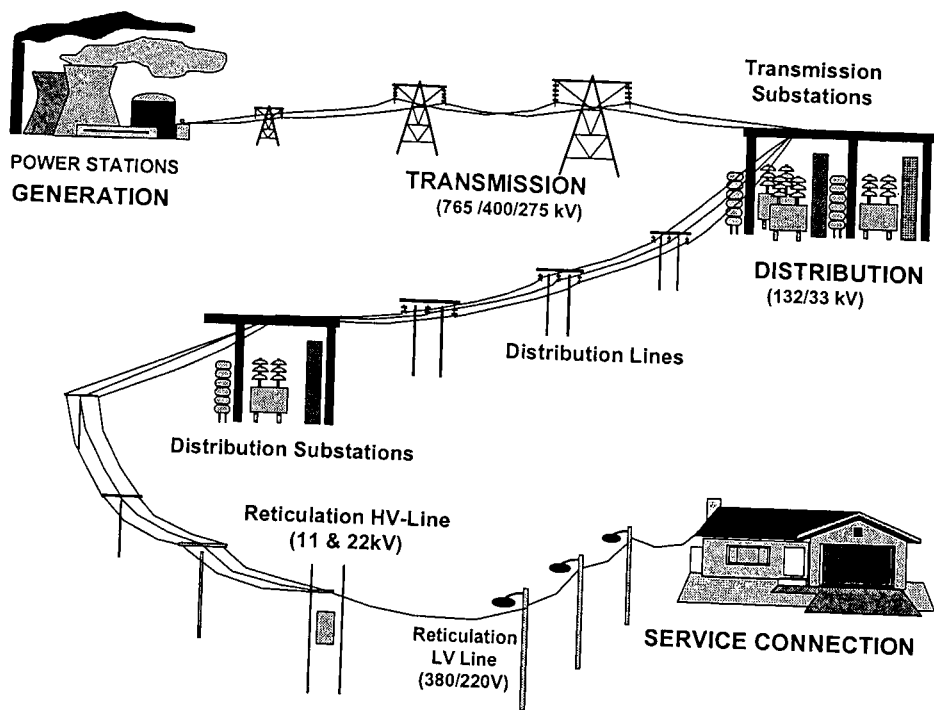
(developed from the results of this study)

## 6.2 INTRODUCTION

The electricity industry is traditionally structured as vertically integrated organisations, consisting of electricity generation, electricity transmission and electricity distribution entities. Electricity

generation has as its main function the production of electricity. Electricity transmission transmits electric power at high voltage levels from power stations to electricity distribution substations. Electricity distribution entities further distribute electricity at lower voltage levels to electricity reticulation substations where the electric power is reticulated up to the final point of consumption. The integrated nature of these entities is depicted in figure 6.2 below.

Figure 6.2 Overview of the technical context of the nature of the electricity industry (2002)



(developed from the results of this study)

Regulatory changes in the electricity utility industry of the United States of America had an impact on the industry structure. These

structural changes resulted in a number of general contextual strategic responses by electricity utilities. Both the regulatory changes and the contextual strategic responses influence the context of strategic planning in electricity utilities. These changes led to the propositions reflected in this document. This chapter commences with a background to the electricity industry in the United States of America, followed by a representation of results in the context of the influences as depicted in figure 6.1, namely a discussion on the impact of regulation on the contextual nature of the electricity industry in the United States. The strategic responses to these regulatory changes are then considered, together with the impact on the strategic planning process as a result.

## **6.3 OVERVIEW OF THE ELECTRICITY INDUSTRY**

### **6.3.1 Introduction**

The electricity industry of the United States of America has been treated as a natural monopoly for a number of years where vertically integrated electricity utilities have operated within designated local geographic retail areas. These local monopolies typically owned some electricity generation capacity to serve the full needs of their customers. Customers had little choice but to purchase their full electricity requirements from the monopoly electricity utility. These structures began to change when the United States Regulator

introduced wholesale electricity generators. Utilities were required to purchase at regulated prices all the electricity these generating wholesalers produced. The regulated pricing regime led many regulatory state commissions to adopt competitive auctions for obtaining new electricity generation capacity. But the local utility was still the sole procurement agent acting on behalf of its retail customers so that individual customers still had no ability to choose their suppliers. Supply-side business interests rapidly became adept at influencing the essential decision of how much new electricity generation capacity should be bought through these competitive auctions. By the early 1990s, the political economy of the electricity industry was becoming increasingly intolerable in several of the states, contributing to the rising of retail electricity prices to above the national average. California became the first state to adopt the concept of direct access – the ability of end-use customers to choose their electricity retail suppliers. Other states quickly followed California's lead. Thus, the United States joined the international trend toward liberalisation of retail electricity markets. This had a profound impact on the strategic planning processes that apply in this industry.

In order to understand the strategic planning processes used in the electricity industry of the United States it is first necessary to understand certain basic features of its industrial structure as well as

the basis of regulation within that industry. In addition to investor-owned utilities and investor-owned independent electricity generators, wholesale brokers, marketers and retailers, there are also a number of publicly owned electricity entities operating in the United States. These include local municipal electricity utilities, rural electric cooperatives, federal electricity marketing authorities, and numerous public power districts and state-owned power projects (Hyman, 1997:3). An important aspect that guided the ultimate strategic planning processes within the electricity utility industry is that holding company structures began to dominate major portions of the industry. This resulted in electricity networks starting to integrate across state boundaries. Because of the United States Constitutional prohibition against Public Utility Commissions regulating interstate commerce, the electricity structures of the holding companies could not be regulated effectively. These events resulted in the passing of both the Federal Power Act (FPA) and the Public Utility Holding Company Act (PUHCA) which resulted in the effective closure of the gap that had developed between different state Public Utilities Commissions due to their inability to regulate interstate commerce. The electricity industry is currently regulated through both the Federal Power Act and the Public Utility Holdings Company Act by the Federal Energy Regulatory Commission (FERC).

### 6.3.2 Overview of electricity generation in the United States of America

Despite a projected decline in the use of coal as a fuel source to generate electricity in the United States of America (from 55.7 percent in 1999 to 50.5 percent in 2010), coal still continue to be the dominant fuel source for electricity generation (Energy Information Administration, 2001) although strict environmental regulations have forced many electricity organisations to rely on natural gas for electricity generation. Coal is more abundant, and therefore, cheaper than natural gas (Silverstein, 2001). Other factors that contribute to the dominance of coal as a fuel source include slow growth in the construction of natural gas and nuclear electricity generators, the investment made by electricity utilities in existing coal-fired plants and increasing utilisation of those plants (Energy Information Administration, 2001). However the demand for natural gas as a source to generate electricity is rising due to more investments in drilling for gas, as well as the construction of more pipelines and gas-fired electricity generating power stations (McCann, 2001). This rise in natural gas for generation of electricity can be attributed to several factors, including the following (Energy Information Administration, 2000):

- (1) the impact of environmental and technological forces such as the demand for cleaner forms of fuel and the desire for equipment with lower capital requirements, such as gas-fired combustion turbines
- (2) increased confidence in the future availability of natural gas supplies
- (3) significant improvements in natural gas turbine technology
- (4) the environmental advantage of natural gas over other fossil fuels for electricity generation, and
- (5) improvements in technologies for the extraction of natural gas.

The use of nuclear electricity is declining from approximately 22 percent in 1999 to only 14.6 percent of the total electricity production in the United States of America in 2000 (Energy Information Administration, 2001).

Safety aspects which have an upward pressure on the organisation's cost, environmental concerns, particularly about nuclear waste, and expensive plant decommissioning costs are the main factors that have been driving the decrease in nuclear



electricity use. However, nuclear plant efficiency has risen sharply over the past 20 years and has thus made nuclear energy a low-cost alternative to fossil fuel plants.

The use of renewable energy technologies for electricity generation (i.e., hydroelectric, geothermal, wood, waste, solar and wind) is slow because of the relatively low costs of fossil-fired electricity generation and because industry restructuring favours less capital-intensive natural gas technologies.

The main source of electricity generation in the United States of America is therefore currently fossil fuels such as coal, with a strong movement towards using natural gas, and in limited quantities also nuclear. Although growth in electricity demand in the United States of America is projected to be slower than in the past, 393 gigawatts of new generating capacity is expected to be needed by 2020 to meet demand and to replace generation units according to the Energy Information Administration (2001). Approximately 1300 new electricity generation plants could be needed by 2020 to meet this need and of this new capacity, 92 percent is projected to be combined-cycle or combustion turbine technology, including distributed generation capacity, fueled by natural gas (Energy Information Administration, 2001).

### **6.3.3 Demand for electricity in the United States of America**

Annual growth in electricity consumption in the United States of America is expected at average about 1.2 percent over the next 20 years (Energy Information Administration, 2001). A number of factors are causing this slow growth, including the continuing market saturation of electricity appliances in the United States of America, the availability and adoption of more efficient office equipment, and the adoption of more stringent equipment efficiency standards.

While electricity demand from residential consumers remain stagnant due to slow population growth and competitive price discounts restrict revenue growth in the industrial sector, increased electricity demand is experienced from the commercial sector. This growth is attributed to a greater number of commercial consumers as well as the increasingly widespread use of computers and the Internet (Energy Information Administration, 2001). Lower electricity prices as a result of deregulation continue to be a major industry trend in the United States of America.

The supply and demand for electricity is further influenced by the interaction between various role players and the changing context of the electricity industry in the United States of America.

## 6.4 THE CHANGING CONTEXT OF THE ELECTRICITY INDUSTRY

Electricity utilities develop business strategies to pursue promising business opportunities within the changing structure of electricity utility regulation. Corporate strategies are heavily influenced by regulatory rules and it is essential to understand these rules in order to understand the strategic planning processes of these electricity organisations. Within the American structure of regulatory federalism, there is a single set of federal rules. The strategies of electricity utilities are influenced by changes in federal regulations. Regulation supported the development of merchant electricity generators and a market-based regulation initiative was launched. Instead of regulating prices based on traditional cost-of-service principles, the regulator began approving wholesale prices as "just and reasonable" based upon a demonstration that they were negotiated at arm's length. These negotiated wholesale prices were approved under condition that they should have evolved within a competitive environment in which the buyer had a reasonable number of alternative suppliers, and the seller had no substantial market power. Despite this successful market-based price regulation initiative, there remained several barriers to the further development of merchant electricity generation and more competitively structured wholesale electricity markets. Firstly, provision of electricity transmission services by an electricity utility

was voluntary. This gave electricity utilities a degree of monopsony power over independent electricity generators as well as the potential to use their electricity transmission strategically to favour their own electricity generation. Secondly, independent electricity generation developers still faced the legal prohibition against owning non-interconnected electricity generation facilities in multiple states. The USA federal government removed both of these competitive obstacles through the introduction of the Energy Policy Act. This act mandated electricity utilities to provide regulated wholesale (not retail) electricity transmission access and created Electricity Wholesale Generators by exempting them from the prohibition against scattered multi-state electricity power stations. These generators were, however, specifically forbidden from selling their power to end-use retail customers. Although these electricity wholesale generators were not exempted from regulation, they still had to ensure that their prices were just and reasonable. Instead of mandating any particular direction for industry reform, the act removed these two very significant obstacles to wholesale competition and substantially changed the discretion of electricity utilities over wholesale electricity transmission access. It also introduced such large new business opportunities for Electricity Wholesale Generators that it suddenly propelled the industry toward a new equilibrium (also see paragraph 4.2).

A new challenge facing the industry was to implement electricity transmission access in such a way as to maximize electricity wholesale competition by removing electricity utility vertical market power over the transmission of electricity. Ultimately the electricity regulator accomplished this by ordering all electricity utilities to internally separate their transmission service from their electricity marketing functions, to implement strict codes of conduct for transmission service personnel, to establish internet data bases with real-time posting of transmission availability and pricing, and to submit highly prescriptive pro-forma open-access electricity transmission tariffs to the regulator.

The most important changes that influence the electricity industry strategies, are the creation of open wholesale transmission access, wholesale electricity generators, a change to market based pricing, the recovery of stranded costs, energy retailing and affiliate rules.

#### **6.4.1 Competitive market access for electricity transmission**

The introduction of mandatory wholesale transmission access, the voluntary formation of Independent Transmission System Operators (ISO's) and the mandatory participation in regional transmission organisations has eliminated the strategic value of utility transmission ownership. At the same time, these initiatives have

tremendously strengthened the structure of wholesale markets by broadening their geographic scope. They have also increased investor confidence by reducing the potential for discriminatory commercial abuses by transmission owners.

#### **6.4.2 Wholesale electricity generation in competitive electricity markets**

By creating electricity wholesale generators electricity generation developers were enabled to own stand-alone generation throughout the United States of America. It also allowed these generators to buy and sell electricity freely at wholesale prices. Together these provisions have facilitated the development of large numbers of new merchant electricity plants, encouraged the growth of independent marketers, and enabled utilities to expand their ownership of generation into other states thereby reducing their resistance to divesting major portions of their traditional vertically integrated electricity generation portfolios as part of comprehensive state-mandated retail access plans.

#### **6.4.3 The impact of changes in fixed electricity pricing regimes to market based pricing structures**

Market-based price regulation was necessary in making wholesale electricity marketing and merchant development of electricity wholesale generators (EWGs) attractive enterprises. This was enhanced by the legal structures that were not prescribing the application of cost-of-service regulation by the regulator, but instead merely directing the regulator to ensure that wholesale prices were "just and reasonable." In particular, this resulted in a substantial reduction in the strategic value of owning electricity transmission, the substantial expansion of the geographic scope of wholesale electricity markets, numerous wholesale electricity marketers entering the market, entrepreneurs developing merchant electricity generators, and electricity utilities undertaking modest electricity generation divestitures to reduce their local generation market shares sufficiently to receive market-based wholesale pricing authority from the regulator.

#### **6.4.4 The strategic impact of the focus on the recovery of stranded electricity generating costs**

For most electricity utilities, the normal dimensions of strategic planning diminish in the light of concentrating strategies to recover stranded generation costs. These stranded electricity generation costs resulted from the capital investments in generating capacity that utilities owned prior to the introduction of electricity wholesale generators (EWGs). While the precise mechanisms for recovery of stranded costs vary considerably from state to state, most of these mechanisms create incentives for utilities to divest major portions of their traditional electricity generation.

#### **6.4.5 The introduction of competitive electricity retail markets**

Most states adopting retail electricity access have required utilities to establish separate retailing subsidiaries if they wish to offer competitive retailing services (for instance commodity energy hedging). Utilities themselves are restricted to offering only regulated services and to confining these services to basic services rather than specialised products designed to compete actively with third-party retailers. In terms of customer allocation within the electricity market, the local electricity utility is designated as the



default provider. That is, if a customer does not make an explicit choice to be served by another retailer, the local utility remains its retail supplier. This gives the incumbent utility the advantage of customer inertia in maintaining market share, but this advantage typically creates no profit opportunity because default service prices are generally set on a cost pass-through basis with no profit margin. This "revenue-neutral" structure serves no one's commercial interest, neither electricity utility, nor independent retailer.

#### **6.4.6 The impact of the introduction of regulated affiliate market rules in the electricity industry**

Affiliate rules are designed to erect firewalls between monopoly functions (transmission, distribution, and default retailing, for example) and new competitive ventures affiliated with the utility. For instance, it was found in this study that respondent electricity utilities are precluded from making referrals of customers to affiliated competitive businesses or from giving affiliates preferential access to competitively sensitive information of any kind. These rules substantially constrain the range of business strategies that electricity utilities might find attractive.

#### **6.4.7 Summary of strategic drivers relative to the United States of America electricity industry**

Deregulation remains the major driver of change in the electricity industry of the United States of America. This has resulted in the transition of the electricity industry from one that is monopoly oriented towards the creation of a competitive electricity market in the United States of America. More specifically the major drivers that resulted in the industry restructuring includes the following:

- (1) Pressure from utility owners and customers for introduction of competition in the market. This is driven by the price/service relationship in the market. In many utilities where privatisation is in place, it was found that electricity markets are largely price driven.
- (2) The dramatic performance improvement of electricity businesses in competing markets.
- (3) Pressures from governments and regulators to become internationally competitive.
- (4) Pressures from global investors, wanting to enter the electricity markets of certain countries.

(5) Advances of power process and communication technologies.

These change drivers can be grouped into three major areas that ultimately converged into the restructuring of the industry; (1) competition, (2) customer choice and (3) convergence.

#### **6.4.7.1 Competition as a key force driving change in the United States of America electricity industry**

In order to improve the overall efficiency of the industry, competition was introduced. However, improved efficiency of the industry and customer choice can be satisfied without necessarily introducing a plethora of competitors. The measure of competition that consumers most care about is the degree of competitiveness exhibited by their suppliers, not the number of competitors in the industry.

#### **6.4.7.2 Customer choice as a key force driving change in the United States of America electricity industry**

Customer choice of products, services, prices, pricing pools, suppliers and degree of price risk which comes from open competition is an increasingly important value for customers which inevitably, become an essential component of the electricity industry.

The need for customer choice is a new phenomenon in the electricity business, but is well known in other industrial sectors where monopolies were once the rule.

#### **6.4.7.3 Convergence as a key force driving change in the United States of America electricity industry**

Technological advances in fuel switching and energy storage, combined with wider markets that deregulation has brought across the United States of America required new and more flexible structures for the electricity industry. This is evident from the increased disaggregation and then re-integration of various components and role-players in the industry. For example, gas pipelines to small jet turbines are used to obviate the impact of power transmission bottlenecks. Electricity industry structures reshaped to allow the convergence of various "wires" businesses (telecom, cable, information service/technologies, to name a few) so that the resources of invested infrastructure, and the needs of electricity customers can be most effectively served.

#### **6.4.8 Summary**

Electricity regulatory changes have substantial impacts on utility business strategies and corporate structures. In general, utilities are

being encouraged or directed to place their competitive activities in separate subsidiaries and to retain only their monopoly utility functions within the regulated utility. Specifically, they are being encouraged to divest some or all of their non-nuclear generation and to place the remainder into unregulated subsidiaries. Likewise, to the extent that they wish to offer competitive retailing services, they are being required to develop these businesses as strictly separate subsidiaries. In summary, the major change drivers discussed in paragraph 6.4.7 has resulted in the industry restructuring to provide for the following:

- (1) establishment of an electricity transmission industry
- (2) establishment of an electricity wholesale market
- (3) changing electricity pricing structures from monopolistic to market based pricing
- (4) establishment of a competitive energy retailing industry, and
- (5) legal regulatory aspects such as the development and implementation of strict affiliate rules

## 6.5 STRATEGIC RESPONSES BY ELECTRICITY ORGANISATIONS TO REGULATORY CHANGES

### 6.5.1 Introduction

Following the new regulatory framework in the United States of America, pressure mounted from large customers who wanted retail electricity access. Soon electricity retail access policies were adopted by many states. This has produced a mixed strategic picture for electricity utilities. Several major national and international players are operating from local bases in which retail access has already been adopted. Some large holding companies are operating in both worlds. Still other companies are operating from local fortresses still structured as vertically integrated monopolies. These differences undoubtedly affect corporate strategies and underline the basic issue about the importance of moving towards real-time strategic planning processes. The main emphasis of this section is to discuss the major strategic considerations of the electricity industry in the United States of America in response to the structural changes. At this point, the broad dimensions of restructuring are reasonably clear. The once vertically integrated structure of the industry is being restructured into three horizontal entities with electricity generation and electricity

retailing being structurally separated from electricity transmission and local electricity distribution.

Prices in the competitive segment are being "deregulated" and open access to monopoly elements is being mandated at regulated prices, terms and conditions. Traditional investor owned electricity utilities are "repositioning" their assets by attempting to transfer their valuable assets from regulated to non-regulated activities, with the consent of regulators and other stakeholders, while also attempting to develop valuable competitive expertise in emerging new service markets.

The strategic trends reviewed below include the explosion of competitive wholesale marketing, the consolidation of investor owned electricity utilities through mergers and acquisitions, the huge divestitures and repurchasing of electricity generation capacity by investor owned electricity utilities, the emergence of retail electricity services, the diversification within investor owned electricity utilities into telecommunications and the evolution of independent transmission companies.

### 6.5.2 Wholesale electricity marketing

Wholesale electricity marketers are entities who own electricity generation capacity and sell this under market-based price regulation. The creation of electricity wholesale generators has resulted in a large number of additional electricity marketers entering the market who were purely middlemen in the electricity supply industry. Since they are not required to apply for status as electricity wholesale generators, these pure middlemen are not governed by the prohibition against retail electricity sales and can make sales in both wholesale and retail markets. The volume of sales by power marketers is probably the best single index of the growth of competitive wholesale electricity markets in the United States. Table 6.1 indicates the market shares of the top ten electricity wholesale marketers in the United States of America in 1998 (Edison Electric Institute, Edison Times, December 1998). It is difficult to associate the phenomenal growth of wholesale power marketing with a particular business strategy. Instead, it is the manifestation of several strategies.



Table 6.1 Market share of electricity wholesale marketers in the United States of America

<b>Company</b>	<b>Market Share (%)</b>
Enron	19.3
Southern Company	7.9
Electric Clearing House	6.2
UtiliCorp	5.2
LG&E Energy Marketing	5.0
Entergy	4.6
Duke	3.8
PG&E	3.7
Statoil	3.5
PacifiCorp	3.3
All others	37.5
<b>Total</b>	<b>100</b>

(Edison Electric Institute, Edison Times, December 1998)

Traditionally, utilities would use wholesale electricity markets on an opportunistic basis to sell electricity from the portion of their facilities not being immediately used to serve their retail franchise customers, or to buy electricity from other utilities when it was cheaper than generating the electricity from their own facilities. Virtually all utilities engaged in these activities, although the efficiency of these markets was inhibited by the uncertain availability of transmission capacity. The urgency of completed transactions was reduced by the fact that most utilities controlled sufficient physical facilities to meet their retail customers' electricity needs and retail customers were "captive" and had to pay the utilities' electricity procurement costs. In the newly restructured industry, new factors are driving the

increased activity in electricity markets. New independent generators rely on electricity marketing expertise to maximise the value of their assets. Likewise, even traditional utilities are under increased pressure to increase the performance and utilization of their generation and transmission assets. Furthermore, as retail electricity competition proceeds, many utilities have come under pressure to divest a portion of their generation assets. This has left them in a situation where they no longer own electricity generation capacity adequate to serve the demands of those retail customers who have not yet chosen alternative suppliers. They now have an urgent need for electricity marketing services to help them handle these suddenly exposed market risks. Likewise, new emerging electricity retailers have similar needs for the risk management services of electricity marketers. Retail electricity access has also exposed the previously unsatisfied demands of customers for customised energy-related services. In general, three different approaches have emerged in the electricity marketing business: electricity generation, electricity retail, and intermediary strategies. The electricity generation approach is the most traditional and focuses on selling generation capacity to the highest value markets. The electricity retail approach focuses on working closely with end-users to identify needs, and then going into the electricity market to satisfy these needs. The intermediary approach obtains electricity from various sources, separates these portfolios into individual risk

components, and then repackages these components into various physical and financial products to meet both individual customer and retailer needs. The new demands for electricity marketing services have resulted in the development of wholesale electricity trading hubs and electricity marketing centres that provide for price recovery of standard products traded at physical transfer points. This fosters the development of market liquidity and has paved the way for futures and options trading in electricity. As the geographic scope of electricity markets expands and electricity trading becomes more regular and liquid, new option and hedging contracts emerged to assist market players in managing risks. Traditional electricity utilities have internal electricity marketing functions and many are expanding these functions as a business strategy.

### **6.5.3 Electricity utility mergers and acquisitions**

One of the most visible manifestations of corporate strategies in response to electricity market restructuring is the large number of utility mergers. Although merger activity has increased from historical levels, it has also accelerated enormously in recent years. The potential explanations for utility mergers are diverse. Two general reasons are the achievement of efficiency savings through combined operations, and the creation of a larger and more diverse organisation, better able to survive competitively.

In addition to horizontal mergers, many mergers are based on achieving increased economies of scope such as the so-called "convergence" mergers between electricity and gas companies. One rationale for these mergers is to form a full-service energy company capable of supplying integrated energy solutions to medium and large customers. Combining gas and electricity businesses provides electricity utilities with a strategic hedge against the unknown impact of the economic viability of the electricity networks.

#### **6.5.4 Commercial trading of electricity generation capacity**

Electricity utilities in the United States are divesting substantial portions of their traditional electricity generation portfolios. This is being done in order to attempt the recovery of their stranded costs. Table 6.2 show the amounts of electricity generation capacity being offered and sold in these restructuring-related divestitures while table 6.3 show the top twelve purchasers of this divested generation (Edison Electric Institute, 1999).

Table 6.2 Electricity generation capacity sold by 1999 in the United States of America

<b>Organisation</b>	<b>Electricity Capacity Sold (Megawatt)</b>
UniCorn	11,570
PG&E	10,924
Edison International	9,562
Con Ed	6,293
PEPCO	6,120
NEES	3,960
Niagara Mohawk	3,917
Northeast Utilities	3,772
DOE	3,311
Portland General	2,485
Energy East	2,366
Unisource	1,992
BEC Energy	1,983
Sempra Energy	1,976
Navada Power	1,964
Montana Power	1,556
CMP Group	1,233
United	1,133
Sierra Pacific	1,085
PacifiCorp	1,042
Commonwealth Energy	984
Central Hudson	972
Orange and Rockland	962
Puget	735
Central and South West	550
EUA	543
GPU	536
PP&L	425
Bangor Hydro	166
Green Mountain Power	118
Maine Public Service	92
UGI	70
Unitil	24
<b>Total</b>	<b>84,421</b>

(Edison Electric Institute, Divestiture Action and Analysis, April 1999)

Table 6.3 Leading purchasers of divested electricity utility generation capacity by 1999

<b>Company</b>	<b>Electricity Capacity Purchased (Megawatt)</b>
Edison	11,656
Southern Company	6,595
Sithe	6,100
AES	5,380
NRG	4,938
U.S. Generating	3,960
Reliant	3,776
Duke	2,745
PPL Global	2,710
Orion Holdings	2,516
FPL Group	2,425
KeySpan Energy	2,168
All Others	4,698
<b>Total</b>	<b>59,667</b>

(Edison Electric Institute, Divestiture Action and Analysis, April 1999)

As is indicated in these tables, almost 85,000 MW of electricity capacity has been offered for sale, with about 60,000 MW already sold by April 1999. Some electricity utilities clearly have business strategies to remain players in the United States of American electricity generation market. Although their holding companies are divesting generation capacity, their generation affiliates are buying large amounts of electricity generation capacity elsewhere. Some electricity utilities may be exiting electricity generation altogether with no intention of returning.

The business of generating electricity has changed since industry restructuring started in the United States of America. There are no "captive" electricity retail customers who can absorb the risk of inefficient electricity generation operations. The strategic focus of the electricity generation component of the industry is on efficiently managing an asset in a competitive wholesale market that includes not only traditional physical operational competencies but also new electricity marketing expertise or alliances.

#### **6.5.5 Retail electricity marketing**

Traditional electricity industry structures were based on a pure captive marketing approach where electricity utilities marketed electricity to mass captive customers under monopolistic conditions. After the changes to the context of the electricity industry, and with the introduction of competition based electricity retailing, electricity utilities wish to retain as many of their current electricity retail customers as possible. This is achieved through pursuing a regional or national electricity retailing business. However, a large part of the electricity retailing business is a pure commodity business with the primary services being the provision of various risk hedges especially to large customers. All of the states that adopted electricity retail access have also adopted very strict retailing affiliate rules designed to neutralise the incumbent

advantages of the electricity utility and its affiliates in electricity retailing (refer section 6.4.6). In general, electricity utilities are prohibited from offering anything but the simplest of tariffs to customers. More attractive "competitive" products can be offered only through a retailing affiliate and the electricity utility is prohibited from preferentially referring its customers to its affiliate or giving its affiliate preferential access to any customer information. As a result electricity retail strategies generally involve one or more of either a pure market branding strategy, financial hedging, introduction of diversified energy services and/or specific electricity metering and billing services.

#### **6.5.6 Diversification of electricity utilities into telecommunication**

Electricity utilities have ample legal authority to build telecommunication facilities to operate their electricity utilities and most utilities have extensive telecommunication facilities that are utilised to manage their electricity systems. Deregulation in both the telecommunications and electricity industries is causing numerous strategies to be launched that seem likely to produce greater convergence in these two mega-industries. This strategy is at least superficially plausible, but the new business is complex and the risks associated with certain business strategies are quite high.



Even before the advent of retail electricity access, electricity utilities began recognising that they could use broadband, switched telecommunications to retail customers to enable substantial efficiency gains in their utility systems. With the spread of retail electricity access, more intensive flows of real-time information will be valuable to driving end-use electricity load management software and smart meters. Some electricity utilities are operating as telecommunication service providers through partnerships, acquisitions, or unregulated subsidiaries. The expansion of electricity utilities into telecommunications is driven by their efforts to compete in changing electricity markets, consumer demand for bundled services, and simple attractiveness of growth opportunities in telecommunications.

#### **6.5.7 The formation of independent electricity transmission companies**

The transmission of electricity is regulated. High-voltage transmission continues to be owned by the same incumbent electricity utilities owning the local distribution facilities. This produces a patchwork of transmission ownership broadly corresponding to current electricity utilities' local retail franchise areas. Electricity utilities in states undergoing electricity retail restructuring are embracing Independent Transmission System

Operators (ISOs) as a means for shedding their vertical market power so that they can receive market-based pricing approval while also retaining a large portion of their own generation capacity.

#### **6.5.8 Summary of strategic responses of electricity utilities in the United States of America to industry changes**

In summary the strategic responses of electricity utilities to deregulation and other major change drivers can be grouped into the following three broad categories. Firstly, a shift towards single-market activity, secondly the bundling of value added services and thirdly the expansion of traditional electricity utility operations into diversified markets such as telecommunications.

##### **6.5.8.1 Shift to single market activity**

A number of electricity utilities have un-bundled their generation, transmission and distribution entities. These changes have resulted in utilities becoming either strictly wires companies (focusing only on transmission or distribution of electricity) or strictly generation companies (focussing on the wholesale electricity market).

#### **6.5.8.2 Bundling of value added services**

Electricity utilities started to offer additional services including energy services such as operations and maintenance, monitoring energy consumption on behalf of customers, and energy management systems, on-line billing and remote appliance scheduling and control. Benefits achieved through bundling value-added services with core commodity products include greater production and marketing efficiencies, enhanced customer goodwill and strategic positioning.

#### **6.5.8.3 Diversification**

One of the popular responses to deregulation is cross-commodity linkage. Deregulation has forced some electricity utilities to develop additional revenue streams by diversifying into the telecommunications market, pursuing a "wires and pipes" strategy of bundling traditional energy products and telecommunications services. Some electricity utilities are also leveraging their existing infrastructure and engineering expertise to capture a share of the growing data transmission market.

### **6.5.9 Summary**

The strategic responses of the electricity utility industry to industry regulation have a profound effect on the strategic context of the organisation. The manner in which the electricity business is operating has changed, and related to this, the methods and processes used with strategic planning have also changed.

## **6.6 STRATEGIC PLANNING IN THE ELECTRICITY INDUSTRY**

The electricity industry is highly dynamic and complex. The elements of the strategic planning process differ, depending on the specific area of focus within the industry. Three broad areas within the context of strategic planning are the position and context of strategic planning in the electricity utility, the strategic planning process, and the strategic planning implementation process.

### **6.6.1 The position and context of strategic planning in electricity utilities**

One area of importance in this study was to analyse the emphasis that respondents place on strategic planning and the contextual

position of strategic planning in this new industry configuration. What has emerged from the research is a mixed focus on the strategic planning time frame depending on the level of complexity and dynamism as influenced by the specific market in which the electricity utility operates and the level of regulation that governs such a market.

In order to understand the strategic planning process that electricity utilities use today, some analyses were made on the changes that had occurred in the strategic planning process over the past five years. It was also important to understand what impact the change in complexity and dynamism of the industry had on the strategic planning process used by electricity organisations in the United States.

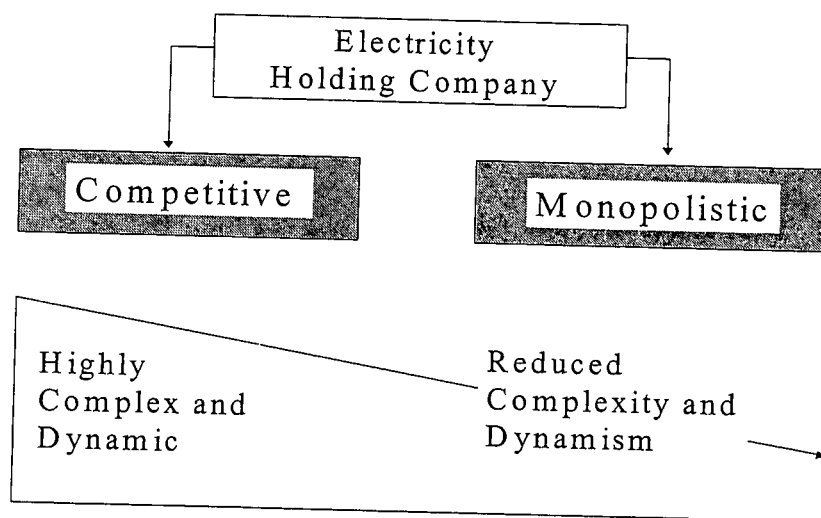
There was clear indication in the data that the respondents view the industry currently as highly complex as is indicated in table 6.4. Respondents were required to rate the complexity and dynamism of the industry using a 5-point Likert scale, where 1 denoted not complex or dynamic at all, and 5 highly complex or dynamic. The scores of all respondents were totaled and the arithmetic mean and standard deviation were calculated.

Table 6. 4 Perception about the level of complexity and dynamism in the electricity industry of the United States of America (2002)

	Mean rating (n=16)	Standard Deviation
Complexity	4.50	0.73
Dynamism	4.13	0.96

It is clear that respondents currently view the electricity industry as highly dynamic and complex. In addition to this view, the changing industry structures have an effect on how electricity utilities have to deal with the complexity within their strategic planning. The level of complexity differs depending on the specific area of business as is indicated in figure 6.3. The complexity and dynamism change as the specific market context within which electricity utilities operate move from monopolistic to competitive.

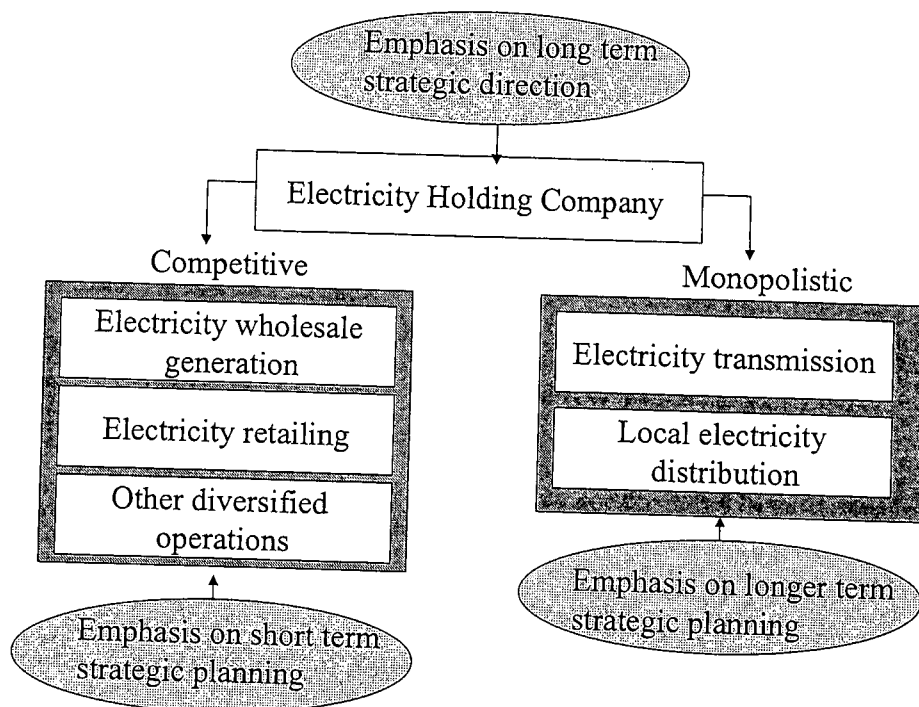
Figure 6.3 Differentiation between complexity and dynamism comparing the competitive and monopolistic portions of the electricity industry (2002)



(developed from the results of this study)

As the focus shifts from the unregulated competitive markets to the regulated monopolistic markets, the level of complexity and dynamism decreases. Similarly, the focus and emphasis of the strategic time frame varies between competitive and regulated monopolistic market contexts. A combination of these results provides an overview of the balance between the short-term strategic planning window and the longer term as depicted in Figure 6.4.

Figure 6.4 A holistic view of the contextual nature of the different emphases on strategic planning time frames in electricity organisations (2002)



(developed from the results of this study)

Within the competitive market, a shorter term perspective is emphasised. This is because of the increased level of dynamism and complexity that prevails in this end of the market as is depicted in figure 6.3. As the business perspective moves towards monopolistic markets, a longer term strategic planning window is found. The implication is that top management at the electricity holding company level concentrates on both the short-term as well as longer term views in strategic planning. This potentially results in conflicting strategic viewpoints from an electricity holding company perspective. All of the respondents (100%) indicated that they use both short and longer-term strategic plans. In determining the definition of "short-term", all respondents indicated a one-year strategic time frame. The longer term strategic planning covers a three to five year strategic planning window. Table 6.5 provides an overview of the results regarding the purpose of both short and long-term strategic planning.



Table 6.5 Purpose of strategic plans in electricity utilities (2002)

<b>Purpose of short-term strategic plans</b>	<b>n</b>	<b>%</b>
To cater for immediate strategic requirements	14	87.50
To implement the long-term strategic direction	2	12.50
<b>Purpose of long-term strategic plans</b>		
To guide the long-term strategic direction	12	75.00
Provide stability for investors	3	18.75
To provide stability for employees	1	6.25

This table indicates that 87.5% of respondents use short-term strategic planning as a method of catering for the immediate strategic requirements of the electricity utility. 12.5% of respondents indicated that the short-term strategic plans are used to implement the long-term strategic direction. Long-term strategic planning guides the utility in reaching its long-term strategic direction (75%), in providing stability for investors (18.75%) and providing stability for employees (6.25%). Electricity utilities are currently focusing their efforts on short-term positioning in a highly dynamic and complex competitive industry. Consequently, strategic planning is used as a catalyst for such positioning. This supports the findings of both Lindsay and Rue (1980:385-404) and Kukalis (1989:393-404) who found positive relationships between an emphasis on short-term strategic planning and the more turbulent business environments.

A clear distinction between the responsibility for long-term strategic direction, and shorter-term strategic plans was found as indicated in table 6.6.

Table 6.6 Overall responsibility for the development of strategic plans in electricity utilities (2002)

<b>Responsibility for development of strategic plans</b>	<b>n</b>	<b>%</b>
Long-term strategic direction is developed by top management while short-term strategic plans are developed by business unit managers	13	81.25
Central strategic planning division is overall responsible for the development of strategic plans	3	18.75

The long-term strategic direction of the electricity organisation is developed by the top management at the holding company level, while short-term strategic planning is the responsibility of the subsidiary business unit management (81.25%). Only 18.75% of respondents indicate that a central strategic planning division is in place with the responsibility for the strategic direction and strategic planning of the entire organisation. This indicates that the responsibility of top management with regards to strategic planning is to establish the strategic direction, that is, to develop a mission and vision for the organisation and to determine high level strategic goals. This supports the findings of McCarthy *et al* (1983:3) who indicated that strategic planning and implementation is in essence the job of top management.

### 6.6.2 Elements of the strategic planning development process

In the context of this study, the elements of the strategic planning development process refer to those activities that form the basis for developing strategic plans in support of real-time implementation. Table 6.7 depicts the core elements that influence the effectiveness of the strategic planning process in electricity utilities in support of real-time strategy implementation.

Table 6.7 Important elements that influence the effectiveness of the strategic planning process in electricity utilities (2002)

Elements	n	%
Develop a strategic guideline for the organisation at the completion of the process	16	100.00
Involve many levels in the organisation	13	81.25
Continuous information gathering and analysis	8	50.00
Develop a set of future scenarios	6	37.50
Risk analysis	6	37.50

The most important elements of the strategic planning process indicated are a wide involvement in the strategic planning process throughout the organisation (81.25%), continuous gathering of information to support strategic planning (50%), using risk analysis (37.5%) and using scenario analysis (37.5%). All respondents (100%) indicated that a strategic guideline is used as a method to

communicate and integrate the strategic planning process throughout the organisation. However, 87.5% of respondents indicated that the strategic planning process that they use today, has changed over the past 5 years. Table 6.8 shows the main reasons for these changes.

Table 6.8 Main reasons for changing the strategic planning process of electricity utilities over the past 5 years (2002)

<b>Reasons for changing the strategic planning process</b>	<b>n</b>	<b>%</b>
Strategic analysis was done on an <i>ad hoc</i> basis that resulted in loss of continuity of strategic planning	10	62.50
Continuity was lacking due to the lack of organisation-wide commitment to the strategic plan	10	62.50
Strategic planning process was a paper exercise with academic value only	9	56.25

*Ad hoc* strategic analysis (62.5%) and lack of organisation-wide commitment to strategic planning (62.5%) was identified as the main reasons for changing the strategic planning process. Related to this is the view that the previous strategic planning process was viewed as a paper exercise with academic value only (56.25%). In order to determine the effect of these changes on the perception of the effectiveness of the current strategic planning process, respondents were required to rate the effectiveness of the strategic planning process on a 5-point Likert scale, where 1 was not effective at all and 5 was very effective. The arithmetic mean and standard

deviations for these scores were calculated, and the results are depicted in table 6.9.

Table 6.9 Evaluation of the effectiveness of strategy development in electricity utilities over the past 5 years (2002)

	<b>Mean rating (n=16)</b>	<b>Standard Deviation</b>
Effectiveness of strategic planning process currently	4.00	0.37
Effectiveness of strategic planning in the past	3.06	0.77

The results indicate an effectiveness of only 3.06 of the strategic planning process in the past. This improved to 4 with regard to current strategic planning process.

### **6.6.3 Implementation of strategy in electricity utilities**

The various methods that electricity utilities use to implement their strategic plans are depicted in table 6.10.

Table 6.10 Initiatives implemented in the electricity industry to ensure effective implementation of strategies (2002)

<b>Initiatives</b>	<b>n</b>	<b>%</b>
Communication by business unit managers	16	100.00
Link to incentive schemes	13	81.25
Use information systems	8	50.00
Monthly control of strategy implementation	6	37.50
Direct communication by Chief Executive Officer	5	31.25
Quarterly control of strategy implementation	2	12.50
Daily control of strategy implementation	1	6.25

Communication of the strategic plan by the business unit managers was indicated as an important element (100%), while direct communication about the strategic plans by the Chief Executive Officer was indicated in 31.25% of the cases. Linking strategic plans to the remuneration system (incentive schemes) of the organisation is used by 81.25% of respondents as an effective strategic planning implementation instrument. Other elements of implementation included information systems (50%) and strategic planning implementation control (37.5% monthly control, 12.5% quarterly and 6.25% daily control).

Along with the elements of strategic planning implementation, table 6.11 represents the findings on how frequently electricity utilities changes their strategic plans.

Table 6.11 Frequency of changing strategic plans in electricity utilities (2002)

<b>Frequency of changes</b>	<b>N</b>	<b>%</b>
Long-term strategic plan is reviewed annually and changes only if new information forces critical changes to the long-term strategic direction	14	87.5
Short-term strategic plan changes annually	13	81.25
Strategic plan remains intact, and objectives and strategies are tweaked in relation to new information that may influence the organisation over the short-term	3	18.75
Long-term strategic plans are always kept constant	2	12.5

These results indicate that short-term strategic plans are changed on an annual basis (81.25%) while long-term strategic plans are reviewed annually, but are changed only if new information forces critical changes to the long-term strategic direction of the organisation (87.5%). In 18.75% of the responses references were made to specific elements of the strategic plan such as objectives, strategies and actions being changed as and when the environment dictates such changes.

All respondents (100%) indicated that it is possible to change the strategic plans more frequently, but related that only to the short-term strategic planning situation. Table 6.12 represents the elements of a strategic planning process that will further mitigate the issues that respondents experience with the strategic planning

process used in their organisations. This supports a more robust strategic implementation process.

Table 6.12 Elements required for a robust strategy implementation process (2002)

<b>Elements of real-time strategic planning</b>	<b>n</b>	<b>%</b>
Improvement of effective integrated information systems	12	75.00
Involving many levels of employees in the organisation	11	68.75
Improved strategic planning communication	6	37.50
Frequent strategic planning reviews	6	37.50
Effective risk analysis	4	25.00
Separate the strategic planning process elements and ignore low value added activities	2	12.50

Effective information systems that integrate the strategic information throughout the organisation were identified by 75% of respondents while 68.75% indicated that more levels within the organisation need to be involved in strategic planning. Improving strategic communication and frequent strategic planning reviews were identified by 37.5% of respondents while 25% indicated that effective risk analysis linked to the strategic plan will result in effective strategy implementation. Only 12.5% of respondents mentioned the separation of elements within the strategic plan to enable a more robust strategic planning process.



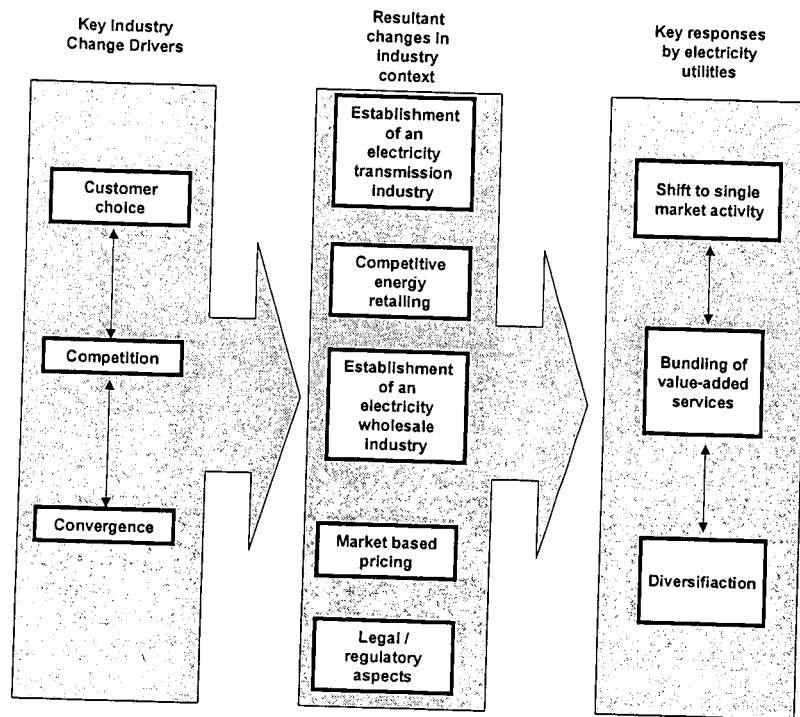
## 6.7 SUMMARY

This chapter has addressed the rapidly evolving business strategies of electricity utilities in the United States of America in response to the introduction of wholesale and retail electricity market competition and the specific strategic planning processes used within this context. The changes in the electricity industry that have occurred in the United States have had a profound impact on the methods and processes applied in strategic planning. Strategic planning and strategy implementation takes place within the context of the electricity industry structure. This structure consists of electricity holding companies operating in both a regulated, monopolistic market, as well as within semi-regulated competitive electricity retail access markets. The focus on strategic planning within this divided context places increased challenges on the electricity utility to focus its strategic planning efforts effectively. While long-term strategic planning in the traditional sense still applies from a holding company perspective, real-time strategic planning that is based on shorter time frames applies to the areas where the electricity utility is competing in a competitive market. This is evident from the rapidly evolving business strategies that electricity utilities in the United States pursue in response to both the opening of wholesale and retail competition at home as well as the privatisation of electricity enterprises and liberalisation of electricity markets globally.

The strategic planning emphasis is now changing to incorporate a number of initiatives designed to improve the effectiveness of the strategic planning and implementation processes. This includes a move towards improving the effectiveness of integrated strategic planning information systems, the involvement of more levels within the organisation in strategic planning (especially with regard to the subsidiaries operating in non-regulated markets such as electricity retail and wholesale), a move towards improvement of strategic planning communication in the quest to inculcate a strategic culture within the electricity organisation, improving the level and frequency of strategic planning reviews and a concerted effort to include risk appraisal activities within the strategic planning processes.

In summary figure 6.5 explain the interrelationship between the key drivers for change in the electricity industry of the United States of America, mapped against the resultant changes in the industry, and the major strategic responses of electricity utilities to these change drivers.

Figure 6. 5 Integration of industry change drivers, contextual responses in industry structures and resultant strategic responses by electricity utilities (2002)



(developed from the results of this study)

The results of the findings as explained above were used as a basis for the development of recommendations for real-time strategic planning in the electricity industry. Based on the process of grounded theory, the interpretation of the data and subsequent theoretical framework for real-time strategic planning is discussed in the next chapter.

## CHAPTER 7

### DATA INTERPRETATION

#### 7.1 INTRODUCTION

Combining the results of the content and grounded theory analyses a number of theoretical categories and concepts emerged which eventually grounded into the formulation of four specific propositions. These propositions formed the cornerstones for the development of the recommendations of this study. The results of the research led to the formulation of the following four propositions as discussed in detail in this chapter:

- (a) top management should lay the foundation as a prerequisite for effective strategic planning in real-time;
- (b) this foundation should be supported by the implementation of a robust strategic planning process;
- (c) real-time strategic planning requires effective strategy support systems; and
- (d) robust and effective strategic programming should align the organisation strategically.

The relationship between the various categories and concepts that ultimately formed the four propositions culminated in the recommended guidelines for real-time strategy implementation.

Two computer programs (Atlas.ti and EazyText ver. 3.1) were used to analyse the data. The data was indexed using both open and axial indexing as prescribed for the grounded theory process by Strauss and Corbin (1990:57). In order to eliminate bias from the data analysis process, two independent coders were used. Consequently it was important to ensure coder reliability and that any level of agreement between the coders that may be a result of chance, are eliminated. This was achieved by using Cohen's kappa statistic (Cohen, 1960:37-46). One of the most important features of the kappa statistic is that it is a measure of agreement between coders, which naturally controls for chance (Fleiss, 1971:378-382). In order to interpret the kappa statistic results it was important to obtain a general benchmark of acceptable levels of the kappa statistic. According to Hartmann (1977:103-116), kappa levels of agreement should exceed 0.6. Landis and Koch (1977:159-174) however provided a more detailed benchmark for interpreting kappa values as follows; <0.00, poor agreement; 0.00 to 0.20, slight agreement; 0.21 to 0.4, fair agreement; 0.41 to 0.60, moderate agreement; 0.61 to 0.8, substantial agreement and 0.81 to 1.00, almost perfect agreement. In the same manner, Fleiss (1981)

provides a benchmark for interpreting kappa values as follows; 0.4, poor agreement; 0.4 to 0.75, intermediate to good agreement and >0.75, excellent agreement. Since both Hartmann, Landis & Koch and Fleiss all indicate that kappa levels exceeding 0.6 are above average, this level of inter-rater agreement was used as an acceptable level of agreement between coders. Once these levels of coder agreement are achieved it can be accepted that the resultant concepts and categories identified in the data are reliable and can be used in the development of the theoretical framework.

## **7.2 PROPOSITIONS FOR REAL-TIME STRATEGY IMPLEMENTATION IN ELECTRICITY UTILITIES**

### **7.2.1 Proposition 1: Management lays the foundation for strategy implementation in real-time.**

Analysis of the concepts and categories resulted in the formulation of the first proposition, that is, that management should lay the foundation for the organisation to commit to strategic planning. From the data analyses process three categories were identified:

- (a) commitment from top management is an important element of a strong foundation for strategic planning;
- (b) building the strategic capabilities of the electricity utility; and

(c) inculcating strategic autonomy is a prerequisite for real-time strategic planning.

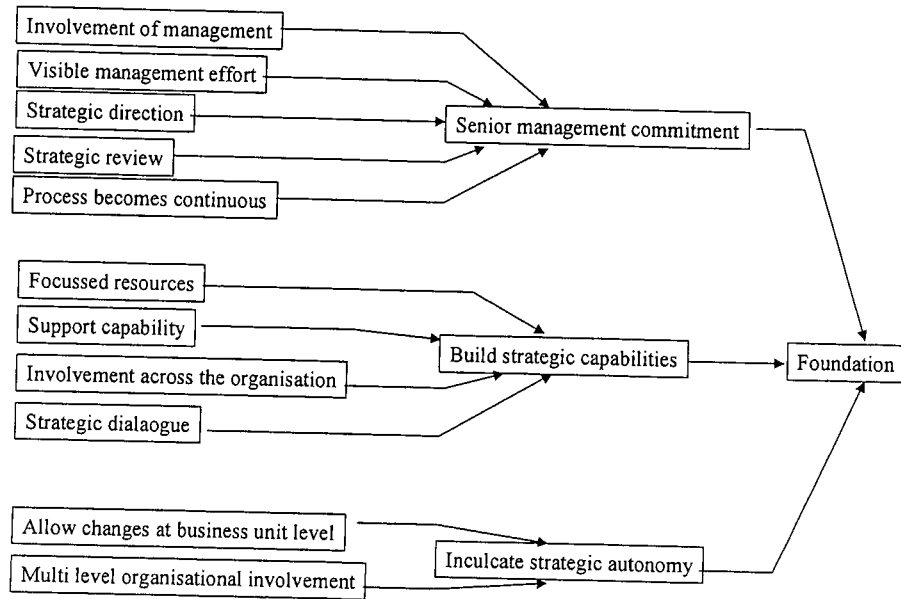
Table 7.1 shows the results of the axial indexing for this proposition. The kappa statistic shows a high level of coder agreement. The relationship between concepts and categories are depicted in figure 7.1.

Table 7.1 Concepts and categories supporting proposition 1: management lays the foundation for strategy implementation in real-time (2002)

CONCEPT	CATEGORY	KAPPA (k)
Voluntary involvement of senior management in strategic planning.  Management's efforts are visible.  Strategic direction is set by senior management.  Frequent strategic reviews at senior management level.  The strategic planning process becomes continuous, not episodic.	Commitment from senior management	0.872
Focusing resources on strategic aspects.  Strengthening strategy support capability.  Involving many levels of the organisation in strategic planning.  Establishing processes that will enhance organisation-wide strategic dialogue.	Build the strategic capabilities of the organisation	0.798
Allowing changes at business unit level.  Multi-level organisational involvement.	Implant strategic autonomy	0.784

(developed from the results of this study)

Figure 7.1 Relationship between concepts and categories in proposition 1: management lays the foundation for strategy implementation in real-time (2002)



(developed from the results of this study)

### 7.2.1.1 Commitment from senior management

Management's involvement in strategic planning contributes to the effectiveness of strategic planning (see paragraphs 2.3.1, 5.2.3, 6.6.1, 6.6.2 and 6.6.3). While the electricity industry consisted of monopolistic, vertically integrated entities (see paragraph 6.3), top management was involved in managing the organisation on a quantitative manner, focusing on financial indicators. While this is still the case, top management is now in addition focusing their efforts on strategic planning. Table 6.6 indicates that only 18.75% of the respondents use a central strategic planning division with the



overall responsibility of developing strategic plans. Even in these cases, top management is still responsible for the development of the strategic direction of the organisation (see paragraph 4.6 (d), 5.2.3 and table 6.6), becoming a link in the process of strategic planning. However, the strategic planning process employed is often too time intensive for top management to participate in and the process sometimes cannot provide the leverage required to get maximum value from the time that top managers are able to invest in the process (see paragraphs 2.3.1, 2.3.2, 2.3.3 and 4.5). As a result a large portion of respondents (87.5%) indicated that the strategic planning process has changed over the past five years (see paragraph 6.6.2), as the current process is viewed as inefficient (see table 6.8).

In laying the foundation for effective strategic planning, top management should view their task as that of aligning the organisation strategically (see paragraph 4.5.6). An important element that has emerged from the analysis was that top management not only develops the strategic direction and is involved in the strategic planning of the organisation, but their commitment to strategic planning has become much more visible to the organisation (see paragraphs 4.5.5, 4.5.6 and table 6.10). In 100% of the responses, communication by business unit managers, was identified as an initiative to ensure effective implementation of

strategic plans, while 31.25 % of respondents indicate that the chief executive officers of their electricity utilities communicate the strategic plan of the organisation personally to the employees (see table 6.10). Such visibility indicates the commitment of senior management to the strategy that is to be implemented at lower levels.

In building a strong foundation for strategic planning, top management should set the strategic direction of the organisation in such a manner that it emphasises the commitment from top management to the overall strategic success of the organisation over both the long-term and short-term strategic planning window. Table 6.6 shows that 81.25% of respondents indicated that the long-term strategic direction is the overall responsibility of top management. However, the long-term strategic direction is not a rigid road to the future, but should rather provide the strategic intent of the organisation in its pursuit of a future strategic direction. The ability to integrate the volatility of the environment with strategy implementation is the key element of management's ability to lay the foundation for strategy implementation in real-time (see paragraph 4.5.6). This integrates both long and short-term strategic contexts from a top management perspective.

Management frequently has strategic reviews to monitor performance of the strategic plan (see table 6.12). Respondents indicated that both quarterly, monthly and in a few instances, even daily control of strategy implementation is taking place (see table 6.10). At these review meetings, both lagging and leading strategic indicators should be reviewed (see paragraph 4.5.7). Lagging indicators refer to the performance of the organisation in line with the predetermined strategic direction, while leading indicators are used to determine whether the current strategic direction is still appropriate in the light of any new information that may have emerged during the review period. The commitment from top management to review strategies frequently contributes to the foundation of strategic planning in the organisation.

Through voluntary involvement, visible efforts, clear direction and continuous strategic reviews, strategic planning becomes a continuous process and not one that is triggered by episodic events. However, the commitment from top management alone does not ensure a strong strategic foundation if it is not enhanced by their commitment to building the strategic capabilities of the organisation.

### **7.2.1.2 Building the strategic capabilities of the electricity utility**

Building the strategic capabilities of the organisation includes the focusing of resources on strategic aspects, the strengthening of the strategy support capability of the organisation, the involving of many levels in the organisation in strategic planning, and enhancing organisation-wide strategic dialogue. Focusing of resources on the strategic aspects of the organisation is required to enhance the foundation for strategic planning. This is obtained through integrating the strategic activities of the entire organisation with effective integrated information systems (indicated by 75% of respondents - see table 6.12) and involving many levels of the organisation in strategic planning (indicated by 81.25% of respondents - see table 6.7; see also paragraph 2.3.2). The involvement of the entire organisation in strategic planning is achieved through effective communication (see table 6.10), linking strategies to the incentive schemes that will result in an organisation-wide focus on strategy implementation (see table 6.10), consistent monitoring of activities to ensure strategic alignment (see paragraphs 4.5.1, 4.5.5, 4.5.7 and tables 6.10 and 6.12), and effective information sharing (see paragraphs 4.5.1, 4.5.5, 4.5.7 and table 6.10).

Management should invest in the strategic capabilities of their organisations through investment in information systems, competitive analysis processes, environmental analysis instruments and strategic sustainability indices (see paragraph 4.5.1). The use of strategic instruments is found to be critical in the development of effective strategy (see tables 6.10 and 6.12). This is integrated to formulate the overall establishment of the strategic support capability of the organisation. The entire organisation should be involved in strategic planning through continuous two-way strategic communication. All the respondents (100%) indicated that communication is an element for effective strategy implementation (see table 6.10), and that the inputs of lower levels in the organisation are used in the development of strategic plans (indicated by 81.25% of respondents - see table 6.7). Respondents indicated that regular feedback is provided about strategic aspects through frequent strategic reviews (indicated by 37.5% of respondents - see table 6.12; also see paragraphs 4.5.2 and 4.5.5). This will not only support strategy implementation, but will also build the longer-term strategic capabilities of the organisation. Frequent strategic reviews across all levels of the organisation enhance organisation-wide strategic dialogue (see paragraph 4.5.7). Management should create the opportunities to discuss strategic issues on a frequent basis with employees (see paragraphs 4.5.4

and 4.5.5). Strategic review meetings at lower levels in the organisation are used for this purpose.

### **7.2.1.3 Inculcating strategic autonomy throughout the organisation**

Management's commitment to strategic planning is also grounded in the level in which they implant a culture of strategic autonomy within the organisation. This involves the implementation of a robust strategy that allows strategic changes to be made over the short-term (see table 6.12), and also allows business unit managers autonomy in strategic planning and implementation at business unit level (see paragraph 4.5.2). Management should realise that real-time strategic changes over the short-term have an effect on the long-term strategic direction. Robust strategies operate on a short cycle time basis that encourage strategy implementation to take place at market speed, that is, strategies are implemented exactly as and when required by both internal and external conditions (see paragraphs 4.2 and 4.3). Allowing for a wider organisational input to strategic planning forms the cornerstone of the foundation for strategic planning (81.25% of respondents indicated that this wider involvement is required for effective strategic planning - see table 6.7). The commitment to allow certain autonomous strategic decisions to be made must be visible from top management in order to create and sustain such a foundation (see paragraph 4.5.2). In

the complex and dynamic areas of the competitive electricity industry, strategic planning becomes an organisation-wide activity, and not merely a top management, or central strategic planning departmental activity. However, top management has the overall responsibility of leading the organisation towards the required future through the development of the strategic direction.

Support for this proposition was found from both the empirical research and the literature. In addition to the areas already mentioned, this proposition is supported by Fuller (1985:5), who indicates that communication from top management does not only build understanding, but also trust, which in turn, leads to the commitment needed to implement the strategy. Strickland (1999:5) finds that lower levels within the organisation should also be able to influence the organisation's vision, as is traditionally established by top management. In this manner, strategic planning becomes the responsibility of the entire organisation, and not only a few top managers, or a specific strategic planning department. In addition, Andersen (2000:185-197) finds that the relationship between organisational performance, the strategic planning process and autonomy in strategic decision-making by middle managers, leads to higher performance in dynamic and complex environments. Some researchers have found that autonomous decision-making and forced choices within the strategic planning system build

capabilities which subsequently will determine which strategic option are available to the organisation (Bower, 1982; Normann, 1985, Burgelman, 1983, Mintzberg, 1987; Noda, 1996, Anderson, 2000). In this way, important strategies can emerge even without the awareness of top management.

Table 7.2 provides a summarised view of the areas of reference where both the empirical research and the literature research supported this proposition.

Table 7.2 References of support for categories in proposition 1: management lays the foundation for strategy implementation in real-time (2002)

<b>CATEGORY</b>	<b>SUPPORTED BY THE EMPIRICAL RESEARCH</b>	<b>SUPPORTED IN THE LITERATURE</b>
Commitment from senior management	Paragraph 6.6.2 Tables 6.6; 6.8; 6.10 and 6.12	Paragraphs 2.3.1; 2.3.3; 4.2; 4.4; 4.5.5 and 4.5.7
Build the strategic capabilities of the organisation	Paragraph 6.6.2 Tables 6.7; 6,10 and 6.12	Paragraphs 2.3.1; 4.5.1; 4.5.2; 4.5.4; 4.5.5; and 4.5.7
Implant strategic autonomy	Paragraph 6.6.2 Tables 6.7 and 6.12	Paragraphs 4.4 and 4.5.2



**7.2.2 Proposition 2: A robust strategic planning process is required to implement strategy in real-time**

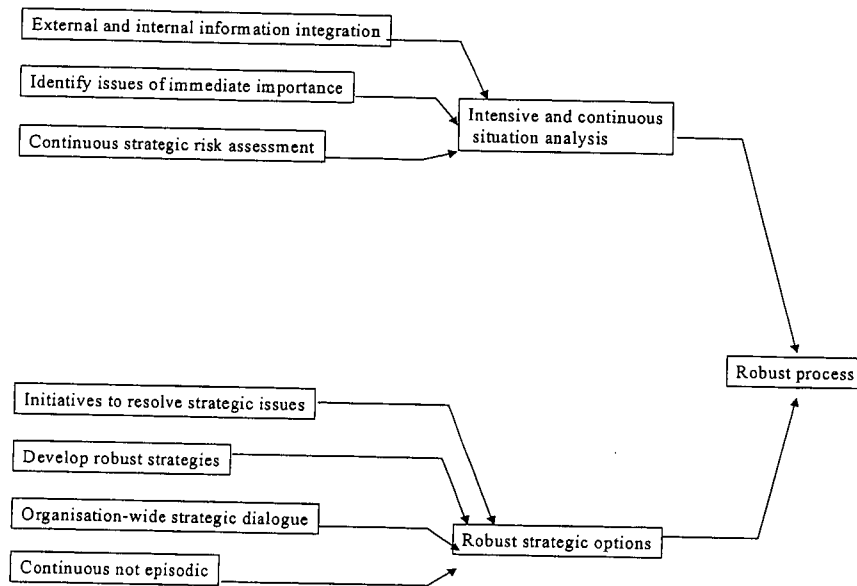
Beyond building a solid foundation for strategic planning, an innovative strategic planning process is required. As is indicated in table 7.3 and figure 7.2, this includes an intensive and ongoing analysis of the situation that faces the organisation from external as well as internal perspectives, as well as the use of robust strategic options.

Table 7.3 Concepts and categories supporting proposition 2: a robust strategic planning process is required to implement strategy in real-time

CONCEPTS	CATEGORIES	KAPPA (k)
Integration of external and internal information.  Identification of strategic issues of immediate importance.  Continuous strategic risk assessment.	Intensive and ongoing situation analysis.	0.716
Implement initiatives to resolve strategic issues.  Involve many levels in the organisation.  Organisation-wide strategic dialogue.  Continuous process, not episodic.	Robust strategic options.	0.798

(developed from the results of this study, 2002)

Figure 7.2 Relationship between concepts and categories supporting proposition 2: a robust strategic planning process is required to implement strategy in real-time (2002)



(developed from the results of this study, 2002)

The primary goal is to be able to identify and address particular issues that carry major implications for the organisation and to develop and initiate strategic planning initiatives to resolve them. This should ensure that the strategic planning process maintains an emphasis on external information by integrating internal and external information, quantifying strategic options, ongoing strategic communication within the organisation and continuous risk assessment of the strategic options of the organisation.

High reliability between coders was achieved as is indicated by the kappa statistics figures in table 7.3.

#### **7.2.2.1 Intensive and continuous situation analysis**

Both the quantity and quality of external information and the assessment of its potential and risks are important to create viable strategic options (see paragraph 4.5.1). To implant a robust strategic planning process within the organisation, this integration of external and internal data becomes an ongoing process (see paragraph 4.5.6). Continuous information gathering and analysis was indicated by 50% of respondents as elements of effective strategic planning (see table 6.7), while 62.5% of respondents indicated that the *ad hoc* nature of the strategic planning process resulted in loss of continuity (see table 6.8). Integration of external and internal information is achieved through effective information systems that link external data with internal data (see paragraphs 4.2.1, 4.2.2 and 4.5.6), to form the basis of strategic control in the organisation (see paragraph 4.5.7 and tables 6.7, 6.10 and 6.12). The electricity utility should be able to identify issues of immediate strategic importance and to the organisation, and deal with such issues on a real-time basis, regardless of the impact that these mitigating activities may have on the longer term strategic direction of the utility.

The lack of continuity in strategic planning as a result of an *ad hoc* approach to the process was indicated by 62.5 % of respondents as reasons for changing their strategic planning processes (see table 6.8). Only when the business situation is analysed on a real-time basis is it possible for the utility to compete effectively in the competitive electricity retail and wholesale markets (see paragraphs 4.2, 4.3, 4.4, 4.5.1, 4.5.3, 4.5.4 and 6.6.1).

#### **7.2.2.2 Robust strategic options**

A robust strategic planning process requires that the organisation implement initiatives to resolve strategic issues on a continuous basis (see paragraph 4.5.3). Lack of continuity in the strategic planning process was indicated by 62.5% of respondents as an important reason for changing their strategic planning process (see table 6.8). In order to effectively implement this, the process should cater for innovative and autonomous strategic choices to be made in real-time by involving many levels within the organisation in the strategic planning process and in continuous information gathering and analysis (see paragraphs 4.5.2 and 4.5.3 and tables 6.7 and 6.12).

In addition to the literature that supports this proposition as cited above, the following are areas of specific support found in the literature. This proposition conforms to the works of Vriend (1994:1), who describes strategic planning in complex adaptive systems, and Chakravarthy and Lorange (1984:34-46; 1991:6-18) who propose that a firm's planning system should achieve a balance between adaptation (promoting creativity and the identification of environmental threats and opportunities) and integration (emphasising control and co-ordination of internal resources). The research of Malhotra (1996:3) who proposes that real-time strategic planning systems are in essence integrated systems, Houlden (1985:49-54) who suggests that complexity determines the need for strategic planning, and Lindsay and Rue (1980:385-404) who find a positive relationship between the planning stages undertaken in strategic planning and the complexity and instability of the business environment also supported this proposition. In addition, support for the proposition has been found in the research of Kukalis (1988:393-404) and Yasai-Ardekani and Haug (1997:729-768), who find that shorter plan horizons are related to environments that are more turbulent.

This proposition is supported by the empirical research and the literature as indicated in table 7.4.

Table 7.4 References of support for categories in proposition 2: a robust strategic planning process is required to implement strategy in real-time (2002)

CATEGORY	SUPPORTED REFERENCE TO EMPIRICAL RESEARCH RESULTS	REFERENCE TO LITERATURE RESEARCH
Intensive and ongoing situation analysis.	Paragraph 6.6.1 Tables 6.7; 6.8; 6.10 and 6.12	Paragraphs 4.2; 4.3; 4.4; 4.5.1; 4.5.3; 4.5.4; 4.5.6 and 4.5.7
Robust strategic options.	Tables 6.7; 6.8 and 6.12	Paragraphs 4.2.2; 4.3; 4.4 and 4.5

### 7.2.3 Proposition 3: Real-time strategy implementation require effective strategic support

The best strategic support system does not simply enable the strategic planning process to take place; it increases both the efficiency and quality of strategic planning, ensures current situations are addressed in the strategic planning process, and links common solutions and risk reduction measures across business units (see paragraph 4.5). The strategic support systems should utilise strategic planning instruments and information systems optimally.

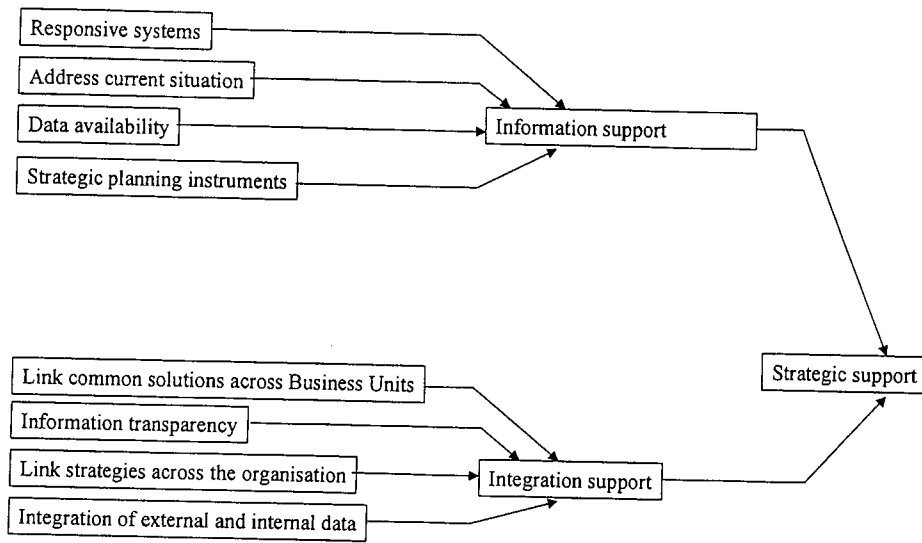
Effective strategic support involves two integrating levels, information support and integration support, as is indicated in table 7.5 and figure 7.3.

Table 7.5 Concepts and categories supporting proposition 3: real-time strategy implementation requires effective strategic support (2002)

CONCEPTS	CATEGORIES	KAPPA ( <i>k</i> )
Responsive systems. Address the current situation in systems. Data availability. Strategic planning instruments.	Information support.	0.921
Data transparency. Information sharing. Link common solutions across business units. Link strategies across the organisation. Integration of external and internal data.	Integration support.	0.716

(developed from the results of this study, 2002)

Figure 7.3 Relationship between concepts and categories supporting proposition 3: real-time strategy implementation requires effective strategic support (2002)



(developed from the results of this study, 2002)

### 7.2.3.1 Information support

Information support refers to responsive information systems that address the current situation and ensure data availability, as well as effectively using strategic planning instruments such as competitive analysis, competitive benchmarking, stakeholder research and scenario and risk management analysis (see paragraph 4.5.1). Information systems should provide for a wider organisational integration of strategic information that is responsive to the strategic planning needs of the entire organisation. The use of integrated information systems as a requirement for a robust strategy



implementation process was cited by 75% of respondents (see table 6.12), while continuous information gathering (50% of respondents - see table 6.7) was cited as an important element of effective strategic planning processes. The lack of continuity is a result of poor organisation-wide commitment to the strategic plan was one of the main reasons for changing the strategic planning process over the past five years (62.5 % of respondents - see table 6.8). This can be resolved by maintaining effective information support that will resolve uncertainty that relates to external conditions within the organisation (see paragraph 4.5.4). However, strategic planning support systems should not be used as extrapolative planning systems, as this leads to the petrification of the system into simplistic, linear checklists and lock step approaches (see paragraph 4.5.1).

#### **7.2.3.2 Integration support**

Integration support refers to the process of integrating the strategic plan throughout the entire organisation, and specifically to information transparency, information sharing and linking strategic solutions that are common to multiple business units across the organisation (see paragraphs 3.2.1 and 4.5). Continuous communication of strategic information is an important element required for effective strategy implementation and organisation-wide

commitment to the strategic plan (see tables 6.7, 6.8 and 6.12). Information transparency and information sharing ensure that the entire organisation has the opportunity to access information that could guide the implementation of the strategic plan (see paragraph 4.5.1, 4.5.4 and 4.5.5).

The literature supported this proposal in a number of empirical studies performed. Kaplan and Norton (1996) have developed a strategy implementation instrument that they refer to as the balanced scorecard. This provides both a lagging and leading perspective on strategy implementation. Levy (1994:167-178) demonstrates that managers should be able to control the strategic planning process in such a manner as to exert direct control over the environment in which they are operating. Kaplan and Norton (2001: 7) refer to the importance of strategic alignment and focus as two elements of effective strategy implementation systems.

In summary, this proposition is supported by the empirical research and the literature as indicated in table 7.6.

Table 7.6 References of support for categories in proposition 3: real-time strategy implementation requires effective strategic support (2002)

CATEGORY	SUPPORTED REFERENCE TO EMPIRICAL RESEARCH RESULTS	REFERENCE TO LITERATURE RESEARCH
Information support.	Tables 6.7; 6.8 and 6.12	Paragraphs 4.5.1 and 4.5.4
Integration support.	Tables 6.7; 6.8; and 6.12	Paragraphs 4.3; 4.5.1; 4.5.4; 4.5.5 and 4.5.6

#### **7.2.4 Proposition 4: Align the organisation through effective strategic programming**

Organisational alignment is a powerful instrument for changing behaviour and achieving strategic success in real-time (see paragraph 4.5.6 and 4.5.7). The electricity utility needs to align resources and systems with the execution of strategy. To achieve this the utility should invest in well-designed communication systems that communicate about strategy almost continuously. This emphasises the necessity for the development and implementation of robust action steps that are needed to achieve strategic success, the implementation of performance contracts for the implementation of the strategic plan and the establishment of a link between strategic plans and the organisation's incentive schemes.

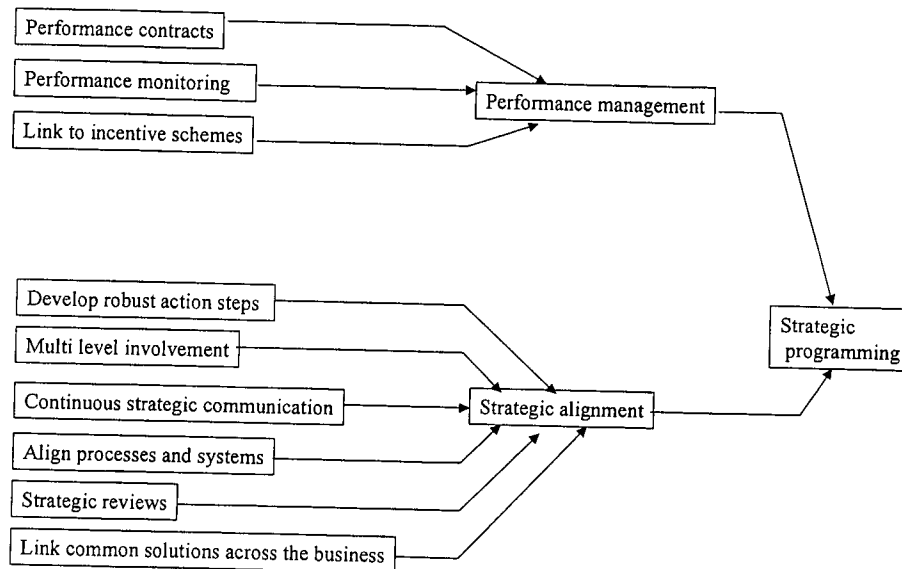
Organisational synergy is the overarching objective of real-time strategy implementation systems. This is achieved through effective strategic programming (see paragraph 4.5.6). Two interrelated categories that have emerged from the data analysis are effective performance management and strategic alignment across the organisation (see table 7.7 and figure 7.4).

Table 7.7 Concepts and categories supporting proposition 4: align the organisation through effective strategic programming

CONCEPTS	CATEGORIES	KAPPA ( <i>k</i> )
Performance contracts. Performance monitoring. Link strategic planning to incentive schemes.	Performance management	0.784
Develop robust action steps. Multi level involvement in strategic planning. Continuous strategic communication. Align processes and systems Strategic reviews. Link common solutions across the business.	Strategic alignment	0.914

(developed from the results of this study, 2002)

Figure 7.4 Relationship between concepts and categories supporting proposition 4: align the organisation through effective strategic programming (2002)



(developed from the results of this study)

#### 7.2.4.1 Performance management

Performance management in the context of the results of this study includes management's ability to manage the implementation of strategic planning on a performance basis. This includes the establishment of performance contracts between management and employees for continuous performance monitoring (see paragraph 4.5.7) and linking strategy to the incentive schemes in the organisation (see table 6.10).

Performance contracts imply that both the employee and the manager have certain responsibilities towards implementing the strategies developed in the strategic plan, and as such an organisation-wide commitment to strategic performance is required (see table 6.8). Integration is required with real-time strategic planning processes, emphasising a consensus approach to performance management (see paragraph 4.5.7). Senior management has the responsibility to support the investment in strategic capabilities and to allow certain levels of strategic autonomy within pre-negotiated parameters. The essence of the real-time strategic planning performance management principles includes a dual commitment for strategic success from management and employees (see paragraph 4.5.7). In essence, as it is possible for management to expect employees to maintain a certain level of strategic performance, it should also be possible for employees to expect a certain level of commitment from management to ensure sustained strategic performance. With such an approach the strategy is effectively inculcated across the organisation and the entire organisation takes ownership of the implementation of the strategy.

#### **7.2.4.2 Strategic alignment**

Strategic alignment ensures that the electricity utility combines its strategic effort across the entire organisation. Although the business units competing in an open market (such as the electricity retail market), and those operating in the traditionally monopolistic market (electricity transmission and local distribution) do not experience the same level of complexity and dynamism (see paragraph 6.6.1 and figure 6.3), and the strategic time frame of these is different (see paragraph 6.6.1 and figure 6.4), the strategic approach of these entities has an effect on the electricity holding company's overall success. The development of the strategic actions should all relate to the overall strategic direction set for the organisation. Strategic involvement should therefore take place not only in a vertical manner within each business unit and the electricity holding company, but also horizontally between business units. The concept of consensus performance contracts explained above also applies in a horizontal context (see paragraph 4.4.7). The implementation of strategy in one area of the organisation influences the effectiveness of strategy implementation in another. Horizontal strategic performance contracts, such as internal service agreements, need to link to the overall strategic plans of each business unit, and ultimately to those of the entire organisation.

In addition to the literature referred to, this proposition is supported by the work of Prahalad and Hamel (1990:79-93), who view strategic advantage as being founded on the ability of management to consolidate corporate-wide skills into competencies that empower individuals and businesses to adapt quickly to changing opportunities. Researchers such as Johnson and Scholes (1993:75-76) discuss the significance of understanding the influence of the external environment in formulating and implementing strategies. Chakravarthy and Lorange, (1984:34-46; 1991:6-18) propose that a firm's planning system should achieve a balance between adaptation (promoting creativity and the identification of environmental threats and opportunities) and integration (emphasising control and co-ordination of internal resources). This proposition is also supported by the work of Emery and Trist (1965:21-32) who coined the term "degree of system connectedness" to explain the requirements of synergy for strategic success in organisations.

In summary, this proposition is supported by the empirical research and the literature as is indicated in table 7.8.



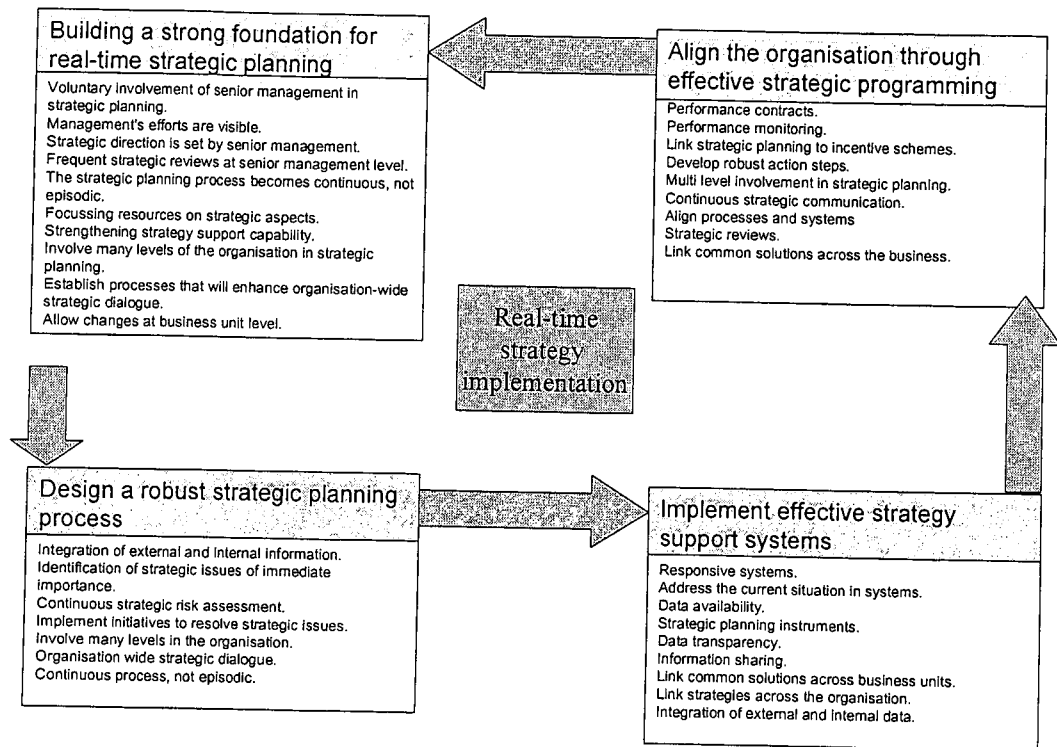
Table 7.8 References of support for categories in proposition 4:  
align the organisation through effective strategic  
programming (2002)

CATEGORY	SUPPORTED REFERENCE TO EMPIRICAL RESEARCH RESULTS	REFERENCE TO LITERATURE RESEARCH
Performance management	Tables 6.8 and 6.10	Paragraph 4.5.7
Strategic alignment	Paragraph 6.6.1 Figures 6.3 and 6.4	Paragraphs 3.2.2 and 4.5.6

### 7.3 INTEGRATION OF PROPOSITIONS OF REAL-TIME STRATEGY IMPLEMENTATION APPROACH

In order to implement strategy in real-time, the four propositions discussed should not be viewed in isolation, but rather as an integration of elements that determine the effectiveness of strategy implementation in real-time. In essence, the process becomes an iteration that needs to be re-evaluated frequently. Figure 7.5 provides an overview of the integrative nature of these propositions.

Figure 7.5 Real-time strategy implementation process



(developed from the results of this study, 2002)

In essence the process has to start with the foundation for strategy implementation by management. This foundation underpins the entire process, and will lead into the development of robust strategic planning processes, implementation of strategy support systems and the strategic alignment of the organisation.

## 7.4 SUMMARY

The combination of the two methods of data analysis used (content analysis and grounded theory) resulted in the formulation of a number of theoretical frameworks for real-time strategic planning in the electricity industry.

To sum up, the electricity industry has increased in complexity and volatility, and with the introduction of a competitive electricity market, electricity utilities need to be able to align themselves effectively with the complex environment in which they operate. Effective implementation of strategy becomes critical and in order to respond strategically to any environmental aspect that may have an effect on the competitive situation of the organisation, electricity utilities need to be able to implement strategy at market speed. This can be achieved once the concept of strategy implementation and the importance of successfully responding to industry volatility have been inculcated across the entire organisation.

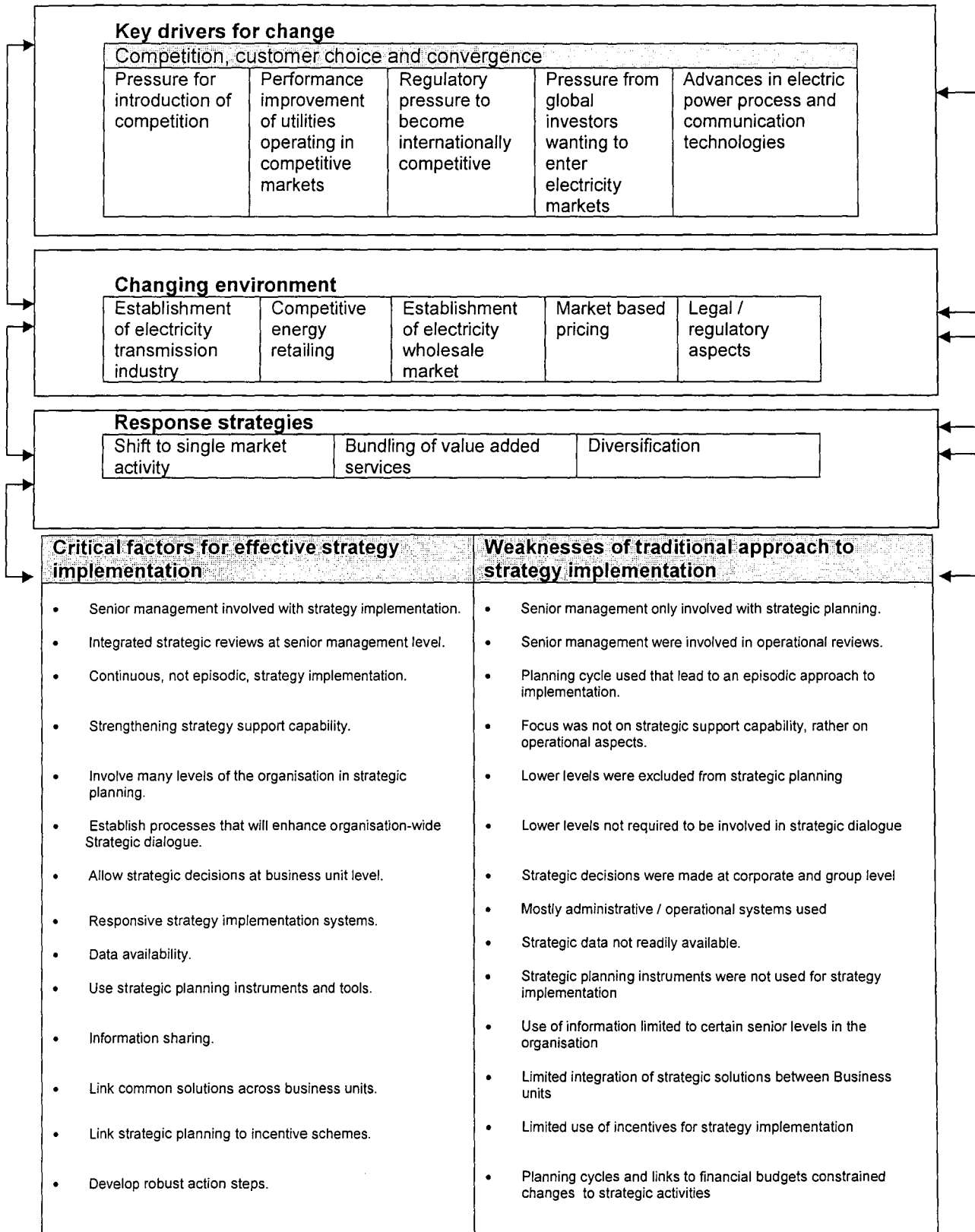
The integration of the concepts and categories analysed within the four propositions may provide the needed impetus for effective strategy implementation in real-time.

A model of the interrelationship between the major change drivers within the electricity industry in the United States of America

(paragraph 6.4.7), the strategic responses of utilities to these change drivers (paragraph 6.5.8) and the interaction of these with strategy implementation is depicted in figure 7.6. This model serves as an introduction to the recommendations offered in chapter 8, and depict in more detail the critical factors required for strategy implementation in real-time against some of the weaknesses identified with traditional strategy implementation processes.

The specific conclusions made through this study, and the recommendations that have emerged from the analysis, are discussed in the final chapter.

Figure 7. 6 Interrelationship between change drivers, strategic responses and elements of strategy implementation (2002)



## CHAPTER 8

### CONCLUSIONS AND RECOMMENDATIONS

#### 8.1 INTRODUCTION

The central theme of this study is the establishment of an effective approach to strategy implementation in the electricity industry. At the start of the study it was indicated that increased volatility and complexity have substantially shortened the strategic planning time frame of organisations (see paragraphs 1.1,1.2 and 6.6.1). The United States of America was used as the basis for the research as the electricity industry in that country has had experience of operating in a deregulated, competitive market for a number of years.

Deregulation introduced competition, and resulted in a comprehensive change to the context of the electricity industry (see paragraphs 6.3, 6.4 and 4.3.1). This, as well as changes in the market conditions, affected the overall strategic responses of electricity utilities to the changing industry. By implication, the consequences of these determinants require electricity utilities to re-align their strategy implementation processes in order to hedge themselves against the volatility inherent in competitive electricity markets. In such conditions the traditional approach of using a fixed

strategic planning cycle over prolonged periods, while simultaneously having to cope with the volatility of a competitive environment, were identified as important contributors to the perception that the role of strategic planning is diminishing (see paragraphs 2.3.2, 3.1, 3.2, 4.2.1, 4.2.2, and 4.6).

In particular, this study has exposed the changes that have occurred in the electricity industry, the strategic responses to these changes by competing electricity utilities and the gaps that resulted between the strategic planning and strategy implementation processes as a consequence. What emerged strongly throughout this study was that an understanding of the gaps between strategic planning and strategy implementation (and in particular the underlying factors that give rise to these gaps), is a prerequisite for developing a practical solution to the strategy implementation problem facing organisations operating in volatile markets (see paragraphs 3.2.1, 3.2.2, 4.2.1 and 4.2.2). In the light of this, a proposed approach to strategy implementation has emerged from the results of this study. This approach has been supported in both the literature and in the empirical research that formed the basis of this study. For the purposes of this study, this approach to strategy implementation is referred to as "real-time" strategy implementation (see chapter 4). The integration of the literature and the data provided a well-balanced view that lead to the conclusion that the strategy

implementation processes that are applied in the competitive area of the electricity industry (such as electricity retail) need to be adapted from one that is prescriptive, to emergent and real-time strategy implementation processes (see paragraphs 4.2.1, 4.2.2, 4.3, 4.4, 4.5, 6.4, 6.6.2, 6.6.3 and 7.2).

Real-time strategy implementation views the electricity utility as an organism in a competitive environment. Those electricity utilities that exhibit the flexibility to adapt in a competitive atmosphere survive. Both the internal and external environments are seen as complex systems, necessitating that rigid strategic behaviour and assumptions be replaced with adaptive, flexible strategic responses. As the electricity utilities attempt to adapt, they should guard against relying on complex strategic planning processes that are predominantly dependent on historical data and predictions. The complexity of the environment actually makes these predictions and data largely irrelevant.

In summary, this study focuses specifically on the importance of effectively bridging the gap between the dynamic nature of a competitive electricity industry environment and the strategy implementation processes of electricity utilities operating in such environments. The objectives of this study were firstly to analyse the macro level environmental factors that influence the strategic



context of the electricity industry; secondly to analyse the strategic responses of electricity utilities to these factors; thirdly to analyse the strategic planning processes that electricity utilities use; and finally to develop guidelines for real-time strategy implementation in the electricity industry (see paragraph 1.3).

The conclusions and recommendations drawn from the research will be discussed in the next section and reference will be made specifically to how this research contributed to the existing body of knowledge. This chapter concludes with the identification of possible areas of future research identified through this study.

## **8.2 CONCLUSIONS**

Taking the objectives of this study into consideration, the starting point is to understand the strategy implementation process and the elements that influence this process in the electricity industry. In order to determine the relevance of these determining factors it was necessary to form a broad understanding of the various elements of both the strategy development and strategy implementation processes used in the electricity industry. From the results of the empirical study, a number of conclusions emerged regarding the specific determining factors that influence the strategy implementation processes used in electricity utilities. These

conclusions supported both the initial objectives of this study and provided support for the propositions that were postulated as a result of the research (see chapter 7).

### **8.2.1 Contextual factors affecting strategy implementation in the electricity industry**

The first objective of this study was to analyse the major contextual factors that influence the strategy implementation processes in the electricity industry, and the strategic responses of electricity utilities to these factors. As a starting point, this provided an understanding of the level of fit between the external and internal contexts of the organisation in matching the characteristics of the proposed real-time strategy implementation process, and provided a basis for the development of the recommendations of this study. This study identified a range of external and internal contextual factors that affect the strategy implementation processes of electricity organisations.

The most important external factors that contributes to the changes in strategic context of the electricity industry are brought about primarily through regulatory changes (see paragraph 6.3). The result is the formation of wholesale electricity transmission entities, wholesale electricity generators, the introduction of market-based

pricing and the introduction of competitive electricity retailing in the electricity industry. These regulatory changes resulted in the formation of electricity holding companies that consist of subsidiaries operating in both a competitive market (such as competitive electricity retail and wholesale), and in a monopolistic regulated market (such as electricity transmission and local electricity distribution) (see figure 6.4). The complexity and volatility of these two market situations differs (see figure 6.3). As a result the strategy implementation processes between these two areas should differ. The time frame requirements of strategy implementation under these different market conditions should be guided by market speed (see paragraphs 4.2.1 and 4.5.3).

The nature of the electricity organisation's external environment therefore has relevance to the characteristics of the strategy implementation process. Using longer-term strategic planning cycles are more prominent in monopolistic markets, but strategy implementation over the shorter-term is emphasised in competitive markets (see paragraph 6.6, figures 6.4 and 6.5). Organisations operating in complex and volatile market environments need to achieve a balance between adapting to the complexities and volatility of the environment and internal integration (see paragraph 4.2.1). A real-time strategy implementation process requires integration throughout the organisation, and the significance of this

is embedded in the requirement of a continuing commitment to strategic planning throughout the organisation. In relation to this, both the analytical and the behavioural components of strategic planning should be integrated (see paragraph 4.5.6). Analytical components refer to the use of strategic planning models and instruments such as competitive analysis to assist the development of strategies, while behavioural components refers to the integration of internal business processes in order to develop and implement strategic plans. The integration of these two components as a prerequisite for strategic success becomes evident from the results of the research (see paragraph 4.2.1). Used in isolation, analytical models cannot provide effective strategy implementation and the complexity brought about by the environmental changes forces electricity utilities to rethink their approach to strategic planning and more specifically to strategy implementation.

Electricity holding companies cannot rely on a single approach to strategy implementation as the contextual diversity of the industry within which they operate dictates a dualistic approach. Planning comprehensiveness should vary according to industry volatility (see paragraphs 4.2 and 4.3), and if this comprehensiveness is not reflected in the particular context of the strategic planning approach, strategy implementation can be expected to result in a system that

is ineffective with the strategic planning process assuming the role of an organisational ritual.

### **8.2.2 Gaps between strategic planning and strategy implementation**

The second objective of this study was to analyse the potential existence of any gaps between the strategic planning process and the strategy implementation process that are used in electricity organisations. Throughout this study, it has become evident that a number of gaps exist between strategic planning and strategy implementation in the electricity industry. The results of the research concluded that the following are the most prominent of these gaps:

#### **(a) Isolation of unpredictable issues from episodic ones**

Effective response is required to isolated and unpredictable issues that arise in a volatile and complex industry situation and that have the potential to erode the current competitive position of the electricity utility. These unpredictable issues often arise in the electricity utility industry, but the organisation is often not able to isolate these from regular episodic ones as a result of an ad hoc approach and lack of continuity in strategic planning (see table 6.8).

Such unpredictable issues are not well suited to resolution through a standard annual planning cycle (see paragraphs 4.5.3 and 4.6; tables 6.8 and 6.9; and paragraphs 7.2.1.3, 7.2.2.1, 7.2.2.2 and 7.2.4.2), and therefore the utilisation of fixed-term strategic planning cycles across the entire organisation need to be re-evaluated.

**(b) Conflict between business units and corporate strategy issues**

Electricity utilities use both short- and long-term strategic plans, but many use the short-term strategic plans to cater for immediate strategic requirements of the organisation, and not to implement the long-term strategic direction (see table 6.5). The long-term strategic direction is developed predominantly by top management while the short-term strategic plans are developed by the business units (see table 6.6). It can be therefore be concluded that a gap exist between the specific intent of the long-term strategic plan and those strategies that actually gets implemented. This give rise to conflict between corporate strategic issues and the implementation of strategies at business unit level. As a result, the planning/performance relationship tend to increase over the short-term, which in turn increases the level of scepticism over the ability of strategic planning to generate useful strategies. This also affects the strategic performance of the organisation. In turn, this situation tends to reduce strategy implementation to the level of a business

review process that often pits the corporate strategic planning function against line management. This has the potential to diminish the effectiveness of strategic planning activities and reduce strategy implementation to a level of strategic auditing.

**(c) Complex strategic planning process**

The research indicated that the strategic planning process employed is often too time intensive for senior management to participate in (see paragraphs 2.3.2, 2.3.3, 4.4 and 7.2.1.1 and table 6.8). In many instances the strategic planning process cannot provide the leverage required to get maximum value from the time that senior managers are able to invest in the process (see paragraph 7.2.1.1). This is as a result of the ad hoc nature of the strategic planning process employed by electricity organisations (see tables 6.8 and 6.11, and paragraph 7.2.1.1), and the consistent approach to use one-year strategic planning cycles (see table 6.11). This often leads to the strategic planning process being viewed as inefficient (see paragraph 2.3.2). As a result strategies are often being implemented independently of the overall strategic direction set by top management.

#### **(d) Introspective nature of strategic planning systems**

Despite the existence of strategic instruments like industry analysis and competitor analysis that can assist strategy analysis from an external perspective, most of the strategic planning processes in electricity utilities remain highly introspective of nature (see paragraph 7.2.1.2). Uncertainties ranging from competitive moves to important electricity regulatory issues are seldom addressed in an integrative and continuous fashion (see table 6.8). They are rather discussed in an ad hoc fashion using information systems to extrapolate historical performance that result in the petrification of the system into simplistic linear checklists and lock step approaches (see paragraph 7.2.3.1).

#### **(e) Strategic measures of control**

This study identified a generic issue that often arises in the electricity industry to link the resulting strategy to explicit measures of success through strategic control mechanisms. Only a limited number of respondents indicated that frequent strategic reviews are used (see table 6.12 and paragraph 7.2.1.1). One of the common difficulties that arises as a consequence is that managers seldom know whether they are staying on track with strategy implementation, or not. The strategic planning process becomes an



isolated event with no early warning systems in place to flag major departures from expected outcomes. In many electricity utilities, the linkages to such systems are tenuous at best and strategic planning reverts to a strategic budgeting exercise (see paragraph 6.6.2 and tables 6.7 and 6.10).

### **8.2.3 Determinants of contextual differences in real-time strategy implementation**

The following differences between strategy implementation in real-time and the traditional approach to strategic planning were identified in this study:

#### **(a) Time frame**

In the traditional sense, strategic planning is viewed as an annual event. The findings of this study concluded that this approach is not well suited for electricity industries operating in competitive markets. Real-time strategy implementation becomes an ongoing event that successfully navigates the organisation to a future competitive position. The definition of "long-term" in the traditional sense includes time frames of up to 20 years ahead. Real-time strategists view "long-term" as "today" and uses market speed as the basis for defining the strategic time frame (see paragraph 4.5.3). Market

speed is defined by the specific conditions that prevail in the industry in which the electricity utility is operating. In the monopolistic, regulated areas operating in more stable market conditions, market speed is defined in a much more stable manner than in the competitive areas of the industry. In turn, the length of the strategy implementation cycle should be defined by market speed.

### **(b) Methodology**

Traditional approaches to strategic planning focus on structure to create the strategic planning process through the establishment of formal planning functions (see paragraph 3.2.1). The rapid environmental and organisational changes that have occurred in the electricity industry pose a challenge to the practice of formal strategic planning in these industries. The centralised approach to strategic planning has become increasingly less relevant in competitive electricity markets, as these market conditions require strong strategic flexibility (see paragraph 4.2.1). With real-time strategy implementation, the process creates self-organising patterns and structures for strategy implementation, focussing the attention of the organisation on emerging events and conditions.

### **(c) Flexibility in strategy implementation**

The research indicated that flexibility is a prerequisite for strategy implementation in complex and volatile markets (see paragraphs 3.2.2, 4.2.1 and 4.5.6). It was indicated throughout this study that the impact of the environment is becoming an increasingly important element of strategic success in competitive markets. The conclusion is made that the strategic planning system that electricity utilities use should be able to act as a buffer against environmental volatility, and should lead directly to action. This can only be done if the strategy implementation system in use is robust enough to cater for any environmental eventuality (see paragraph 4.5 and 7.2.2.2).

### **(d) Effectiveness of information systems**

Information systems form an integral part of the strategic planning process and it is concluded that the strategic planning process is, in essence, an effective information system (see paragraphs 4.5.1 and 7.2.3.1). This also relates to the integration of analytical and behavioural processes in electricity utilities referred to in paragraph 8.2.1. Traditional strategic planning processes were largely designed as administrative systems. It is concluded that strategic planning as an administrative system, conforms to a stable environment, while real-time strategy implementation requires

flexibility and should therefore be designed effectively as information systems, generating asymmetric strategic information that allows the electricity utility to act in real-time on any environmental condition that influences its strategic position (see paragraph 7.2.3 and table 7.5). Some of the most important data sources reside outside of the organisation and as a result the systems should create and maintain external networks for intelligence gathering and ensure access to relevant expertise in a timely fashion.

**(e) Focused resources**

Traditional strategic planning systems have increasingly focused on the entire strategy of every unit in the entire organisation (see paragraphs 3.2.1 and 3.2.2). The conclusion from the research indicates that this approach does not focus the time of managers on the important strategic issues, of indisputable importance to their organisations, that arise from the volatile environment within which the organisation is operating (see paragraph 7.2.2). What are needed are systems that will assist to understand the implications of and resolve strategic issues definitively, rather than raising them as a function of a broad survey of the electricity utility's position on an annual basis. Through an integration of resources around the strategic activities of the organisation, continuous commitment to the

implementation of the strategy is achieved (see paragraph 7.2.3.2 and 7.2.4.2).

#### **8.2.4 Summary**

In summary, this study concluded that the electricity industry is operating in both a monopolistic, regulated and a competitive electricity market. To this end, a number of determining factors shaping the strategy implementation processes in the electricity industry were identified. The differences in strategic approach and the context of strategy implementation between monopolistic and competitive electricity markets were determined, and the gaps that exist between strategy development and strategy implementation were exposed. Subsequently, the recommendations that resulted from the study are discussed.

### **8.3 RECOMMENDATIONS**

#### **8.3.1 Introduction**

The discussion of the recommendations that were generated through this study begins with a broad perspective of the four most important areas that are required as building blocks to implement real-time strategy implementation processes in electricity utilities. These building blocks were identified from the integration of the literature and empirical research that converged into support for the

four propositions that were postulated within this study (refer to chapter 7):

- (a) A strong foundation for real-time strategy implementation is required. This includes the commitment from senior management to the strategy implementation process, continuously developing the strategic capabilities of the organisation and ensuring that strategic autonomy is inculcated throughout the organisation.
- (b) The development and implementation of a robust strategic planning process is required to implement strategy in real-time. This recommendation includes intensive and ongoing analysis of the environment and the strategic situation facing the organisation and the development of robust strategic options.
- (c) The implementation of robust strategic support systems, including both information support and support for the integration of strategies across the entire organisation is recommended.
- (d) Effective strategic alignment of the entire organisation in order to ensure effective implementation of a real-time strategy process is required. This will include effective performance

management and overall strategic alignment of the organisation through aspects such as multi-level involvement in strategic planning across the organisation.

### **8.3.2 Specific recommendations**

In particular, the following specific recommendations are made:

#### **(a) Involve top management in strategy implementation**

Top management should voluntarily become involved in strategy implementation and not only in setting the strategic direction for the organisation. To this end it is recommended that strategy implementation becomes a fixed agenda point in executive management meetings where not only the results are debated, but also the implementation of strategic initiatives developed by business unit managers and top management alike. During these strategic meetings top management should identify the levels of authority required to action the identified strategies, ensure effective allocation of the resources required to implement the strategies, and identify the level of co-ordination required between business units in order to effectively implement strategies.

## **(b) Autonomy in strategic decision-making**

It is recommended that the high-level strategies are cascaded down to lower levels in the organisation, allowing individuals and departments to formulate their own objectives and strategies in the light of the broader priorities and strategic direction that are established at corporate level. Monthly strategic review meetings are proposed at all levels in the organisation and discussions about strategy implementation at the executive management meetings should be communicated at these strategic review meetings. This will ensure that lower levels of the organisation have the opportunity to influence strategy implementation, and this in turn will change the culture of strategic planning in the organisation to encourage the development of strategic initiatives by a wider group in the organisation. It will also improve the focus of business unit managers on the particular strategic issues and circumstances associated with their businesses. The existence of a magnitude of bureaucratic policies and procedures that restrict real-time strategy implementation should be reviewed, and annual budgeting processes should not take priority over implementation of strategies in real-time. This requires changing the management practices from being prescriptive to becoming participative and collaborative, empowering those closest to the environment in order for them to respond in real-time to environmental pressures of strategic



importance to the organisation. The reliance on centralised strategic planning processes alone is insufficient. Strategy development needs to become a process that nurtures relatively autonomous decisions and actions until they become part of and actually shape the organisation's official strategy.

**(c) Strategic information systems**

It is recommended that a proper analysis be done of the current and required strategic information and strategy decision systems. It is recommended that management invest in strategy support systems, focusing specifically on strategic decision systems. However, these systems should be available for use throughout the organisation, and not only to strategic planning departments and management. The effective integration of these strategy systems throughout the organisation will enhance two-way communication, which is required for effective real-time strategy implementation.

**(d) Strategic planning cycles**

It is recommended that the use of strategic planning cycles be limited to the operational planning areas of the organisation, and to those areas that require long-term operational decisions such as the building of new electricity power stations or related long-term fixed

asset planning. For the purpose of developing and implementing strategic plans in real-time, strategic planning cycles should be discarded, especially with regard to the competitive areas of the electricity markets (such as competitive electricity retailing).

**(e) Flexibility of performance management**

Performance management is an integral part of strategy implementation. It is recommended that performance contracts should exist between management and employees, and also between the employee and management. In this sense, it is ensured that both management and lower levels are committed to the implementation of strategic plans. It is recommended that performance contracts should be linked to incentive schemes, and that they should reflect the strategic requirements of immediate importance to the organisation, and not to the specifics around the job descriptions of the employees. As such, performance contracts should not be fixed documents that only change on an annual basis, but should be flexible enough to reflect the volatility of the environment within which the electricity organisation operates, and negotiated changes should take place on a real-time basis.

**(f) Discard the use of written planning documents**

This study indicated that respondents use only a strategic guideline for this purpose and that documented strategic plans seldom get implemented in the manner in which they are written (see tables 6.8 and 6.9). As such, documented strategic plans do not add much value to the strategy implementation process. Real-time strategic plans are predominantly implemented through electronic systems. In the light of this, it is recommended that the use of elaborative written strategic planning documents be discarded, and replaced by summarised strategic guidelines that only depict the strategic direction set by top management.

**(g) Strategic control**

Control of strategy implementation becomes a critical element in real-time strategy implementation. Control mechanisms should create early warning systems to flag major departures from expected outcomes. The implementation of a balanced scorecard for the electricity utility is recommended. However, the common approach with balanced scorecards is to link ultimate key performance indicators to the notion of a strategy map. Strategy maps are integrated and linear configurations of the business and link the four perspectives of financial, customer, internal and

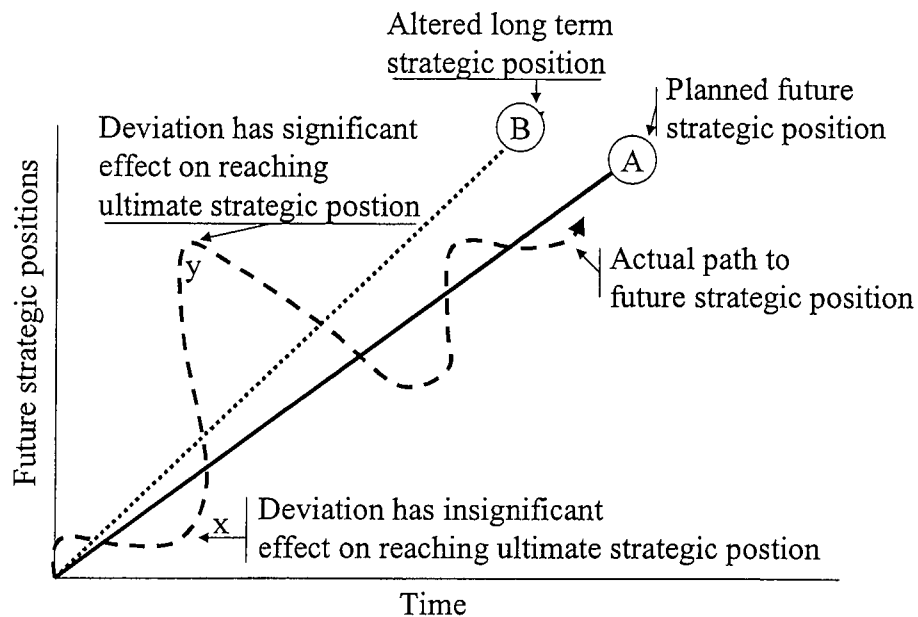
learning and growth to ultimate key performance indicators. These four perspectives include specific activities that are linked within the organisation and ultimately to the external environment. With the application of the balanced scorecard to real-time strategy implementation, it is recommended that the concept of the four perspectives be extended to include a configuration of value added strategic themes that could guide the organisation in real-time towards its selected strategic direction. In this nature the balanced scorecard could become an effective tool for translating the vision of the organisation into strategy, communicating and linking strategies across the organisation, aligning resources for effective real-time strategy implementation and create effective feedback mechanisms. Over-emphasising the key performance indicators, as well as the development of a large number of key performance indicators from the balanced scorecard is not recommended, as this may potentially result in these indicators becoming the drivers in the organisation, rather than the organisation's strategy. In such instances, the strategy starts to control the organisation, and not vice versa. This potentially results in organisations losing sight of the required focus on real-time volatile industry conditions.

#### **(h) Real-time strategic changes**

It is recommended that objectives and strategies be reviewed on a continuous basis. While traditionally the objectives and strategies changed on an annual basis, this study concluded that objectives and strategies should be flexible enough to enable real-time changes. The grounded theory approach used in this study resulted in the grounding of a theoretical model that could be applied to cater for the implementation of this recommendation (see figure 8.1).

The model is based on the results from the empirical and literature research (see paragraphs 3.2.1, 3.2.2, 4.2, 4.3, 4.4, 4.5, 6.6.1, 6.6.2 and 7.2). This model explains the interrelationship between long-term and short-term strategic planning and the effect of a robust strategic planning process on these.

Figure 8.1 Model for the implementation of real-time strategy (2002)



(developed from the results of this study)

The long-term strategic direction is depicted as line "A." Point "A" is the proposed future strategic position of the electricity utility. The strategic direction is depicted as a straight line as the electricity utility has a specific strategic "path" in mind at the time that the strategic direction is developed. However, as a result of many environmental forces that influence the electricity utility, such as regulatory changes and electricity retail competition (see chapter 6), the actual trajectory towards the strategic direction is seldom on a straight line and is depicted as the broken arrow in figure 8.1. Points "x" and "y" represent two examples of specific points in time

where the actual situation has deviated from the set strategic direction. In the case of point "x" the analysis shows, for example, that the deviation at that point in time from the strategic direction has no significant effect on the electricity utility reaching its set long-term strategic direction. In that case, the long-term strategic direction is kept as originally planned, and the short-term strategic plan is tweaked in order to ensure that the utility is brought back in line with the overall strategic direction. This is done in a number of ways as is explained later. However, if point "y" is reached in the actual trajectory of the strategic path of the utility, and the analysis at the time indicates that the result of the deviation from the original strategic path has a significant effect on the utility reaching its original set strategic direction, then both the short and long-term strategic direction is altered to provide for the more permanent changes in the environment. The new strategic direction then becomes dotted line "B" in figure 8.1.

A number of methods emerged from the analysis which indicated how respondents tweak the short-term strategic plan of the electricity utility in the event of point "x" being reached in the model depicted in figure 8.1. These methods that emerged from the data analysis include one or more of the following:

- (i) replacing all or some of the original strategic objectives and strategies entirely with a new, more appropriate set;
- (ii) changing all or some of the content of existing objectives and strategies to align the electricity utility with the original strategic direction (such as altering the content and meaning of objectives and changing the key performance indicators that are linked to strategic objectives and strategies);
- (iii) adding new objectives and strategies to the original set to ensure that the utility is brought back in line to reach the original strategic direction.

In order to successfully implement this model the organisation needs to ensure ongoing strategic dialogue throughout the organisation and to focus on integration of efforts at a strategic level.

### **8.3.3 Summary**

In summary, this research study recommends that electricity utilities use real-time strategy implementation as a basis to compete in complex and volatile electricity markets. A strong foundation by top management, robust strategic planning processes, flexible strategy support systems



and effective strategic alignment throughout the organisation was recommended as a prerequisite for strategy implementation in real-time.

#### **8.4 CONTRIBUTIONS OF THE STUDY**

The electricity industry in South Africa is currently in transition. Substantial contextual changes are expected to occur that will see the local industry propelling towards the levels of their global counterparts. Although the introduction of a competitive market is expected over the longer term in South Africa, some changes are expected soon. This could include the introduction of the concept of existing electricity organisations being required to contest for large electricity consumers. Throughout this study, it has been emphasised that electricity organisations that operate in competitive situations cannot rely on traditional strategic planning processes to guide them through the complexity and volatility inherent in competitive markets. This study has contributed by offering the alternative approach of real-time strategy implementation as the vehicle towards competitive advantage in a future competitive electricity market.

The most important contribution that this study has made is embedded in the concept of strategy implementation. In particular, the study offers a contribution towards solving the uncertainty of what the optimal strategic planning time frame should be. This was

done by relating the strategic time frame to market speed. This will ensure that as long as the speed at which the market changes can be predicted relatively accurately through the implementation of the guidelines offered for real-time strategy implementation, the required strategic planning time frame can be determined. In this nature, the study has contributed further by offering a model (see paragraph 8.3.2 (h)) that can be used as a guideline for strategy implementation in real-time. A further contribution of this study has been the formulation of the concept that within the same electricity organisation, both monopolistic and competitive markets may be served and that strategic planning time frames could vary amongst business units, depending on the specific market.

Regarding the contribution to the body of existing scientific literature, an important contribution that has been made through this study is the exposure of a new school of thought in the strategic planning literature. Traditionally two schools of thought are referred to in the literature. These are the content, and the process approaches to strategic planning (see paragraph 3.2). While the one school maintains that strategy implementation is a function of the content of various management activities that center around the achievement of some predetermined objective, the other maintains that strategy formulation and implementation is a function of the management processes applied to implement the strategy. However, the new

school of thought that has emerged from this study defines strategic planning from the complexity perspective. In this study this is referred to as the complexity approach to strategic planning (see paragraph 4.2.1). The major differences identified in this research are that the complexity approach has moved beyond the content and process approaches, by relating the interrelationship of strategy implementation with complex environments. While the content and process approaches are oriented towards the internal processes of the organisation, the complexity approach provides a bridge between the two thought processes, linking these to the specific environment within which the organisation is operating.

#### **8.5 FURTHER RESEARCH**

This study has attempted to isolate the many issues of strategy implementation that are evident in a transformed electricity industry. Against the background of the objectives of this study, attention has been given to strategy implementation as a process from a micro (organisational) perspective. Two areas that may need further attention are the development of strategic planning models for real-time strategy implementation, and skill optimisation models for the implementation of real-time strategy implementation. In this regard it is recommended that research is conducted:

- (a) to develop analytical models that can be used for the implementation of real-time strategy implementation processes.
  
- (b) to determine the specific changes required in the skill base of organisations moving from regulated environments to competitive situations, and to develop a model for the enhancement of skills to enable an entrepreneurial approach to real-time strategy implementation.

## **8.6 CONCLUDING REMARKS**

The purpose of this research was to determine methods of overcoming the gaps between strategic planning and strategy implementation in the electricity industry. It was determined that in order to bridge this gap effectively, a new approach to strategy implementation is required. This was termed "real-time strategy implementation" and forms part of an evolving body of literature that the researcher has identified as the complexity approach to strategy implementation.

It was clearly identified through this research that traditional approaches to strategy implementation are less effective once a complex and volatile situation is faced by organisations. Organisations in a transformed electricity industry are especially faced with this paradigm.

Through the conclusions drawn and recommendations made in this study, a contribution has been made to enhance strategic effectiveness in such organisations through the introduction of real-time strategy implementation processes.

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**ANNEXURE 1 - SEMI-STRUCTURED INTERVIEW GUIDE**

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Questionnaire designed by / Date	R.B. van Buuren	14 September 2001
Questionnaire Design test 1.	Person Prof. Galpin (WITS)	4 October 2001
Questionnaire Design test.	Person Prof. M.J. Crous	October 2001
Questionnaire Design test.	Person Prof. Nortje	October 2001
Questionnaire Pre-test 1.	Company EDF	October 2001
Final Questionnaire		Date: 24 October 2001

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## SEMI-STRUCTURED INTERVIEW GUIDE

### GENERAL NOTES TO RESPONDENT:

ALL INFORMATION WILL BE HANDLED STRICTLY AS CONFIDENTIAL AND THE INFORMATION WILL ONLY BE DEALT WITH AS INTENDED FOR THE PURPOSES OF THE EMPIRICAL RESEARCH OF A Ph.D. DEGREE.

THANK YOU FOR YOUR TIME.

**A.      DEMOGRAPHIC INFORMATION**

Name of respondent : \_\_\_\_\_

Company name: \_\_\_\_\_

State: \_\_\_\_\_

City: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Date of interview:                    /                    /



**STRATEGIC PLANNING PROCESS**

**QUESTION 1**

**What are the time frames that are covered by your strategic plans?**

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**QUESTION 2**

**What is the purpose of each mentioned above?**

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**QUESTION 3**

How important does your organisation view strategic planning as an instrument to obtain future success (5 point rating scale : 1 = not important, 5 = very important)

1	2	3	4	5
<b>Qualification of Evaluation</b>				

**QUESTION 4**

Have the strategic planning process used by the organisation changed over the last 5 years?

<b>YES</b>	<b>NO</b>
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**QUESTION 5**

If the strategic planning process have changed over the last 5 years (refer question 3) what are the major differences between the previous process and the current

PREVIOUS PROCESS	CURRENT PROCESS

**QUESTION 6**

Please rate the effectiveness of the strategic planning process of your organisation in terms of its ability to ensure a sustained competitive advantage for the firm within the industry. (1=poor, 5=excellent)

5 YEARS AGO					PRESENTLY				
Qualification of Evaluation					Qualification of Evaluation				

**QUESTION 7**

Who are responsible for developing strategic plans within your organisation?

**QUESTION 8**

What are the steps that you usually follow in the DEVELOPMENT of strategic plans for your organisation? Who are responsible for each of these steps?

STEPS	RESPONSIBLE

**QUESTION 9**

Do you think that the number of steps in the Strategic Planning Process as discussed earlier **COULD** be reduced?

<b>YES</b>	<b>NO</b>
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**QUESTION 10**

If **YES** in question 8, which of the steps would you eliminate or combine and why?

<b>STEPS</b>	<b>REASON</b>

**QUESTION 11**

How long does the process of **DEVELOPING** the strategic plan (discussed under Question 7 above) usually take to complete?

<b>&lt; 1 month</b>	<b>6 months</b>	<b>1 year</b>	<b>other</b>
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**QUESTION 12**

Do you think that strategic planning cycles of very short time frames (monthly, weekly, etc) is feasible or not feasible in your organisation, and why?

FEASIBLE (REASONS)	NOT FEASIBLE (REASONS)

**STRATEGIC PLANNING IMPLEMENTATION**

**QUESTION 13**

What process do you use to communicate the strategic plan throughout the organisation?

Document		Electronic		Other	
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**QUESTION 14**

After Development of the strategic plan, what are the steps that are taken to implement the plan and who are responsible for each of these steps?

<b>STEP</b>	<b>RESPONSIBILITY</b>



**QUESTION 15**

How effective do you evaluate the CURRENT strategic planning IMPLEMENTATION process in terms of its ability to ensure that the required results are obtained as planned. (1=poor, 5=excellent)

**EFFECTIVENESS OF IMPLEMENTATION PROCESS**

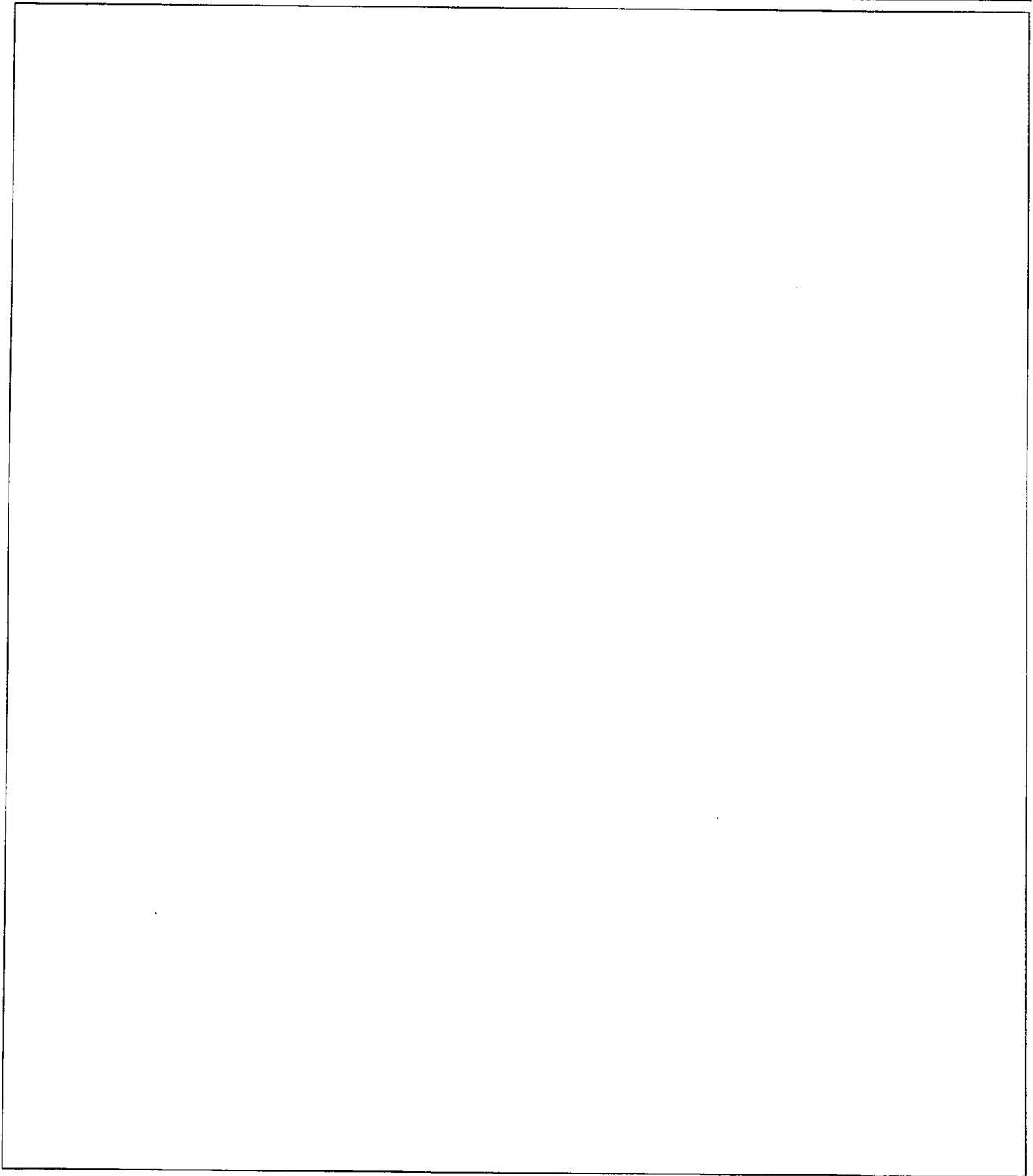
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**QUESTION 16**

Main reasons for evaluation in question 15.


**QUESTION 17**

How do you ensure that the implementation of the strategic plan stay on track as originally planned?



**QUESTION 18**

How flexible do you rate your current strategic plan to respond to sudden perturbations? (1= not flexible at all; 5 = very flexible)

**FLEXIBILITY OF STRATEGIC PLAN**

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**QUESTION 19**

Main reasons for evaluation in question 18.


**QUESTION 20**

What does the organisation do if some of the main assumptions made within the plan changes outside of the normal planning time frame?

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**QUESTION 21**

Are alterations to the strategic plan allowed at lower levels after the strategic plan has been finalised?

YES	NO
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**QUESTION 22**

Are lower levels within the organisation allowed to influence the strategic direction of the organisation?

YES	NO
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**QUESTION 23**

Do you think that the responsibility for strategic planning can be delegated to lower levels within the organisation?

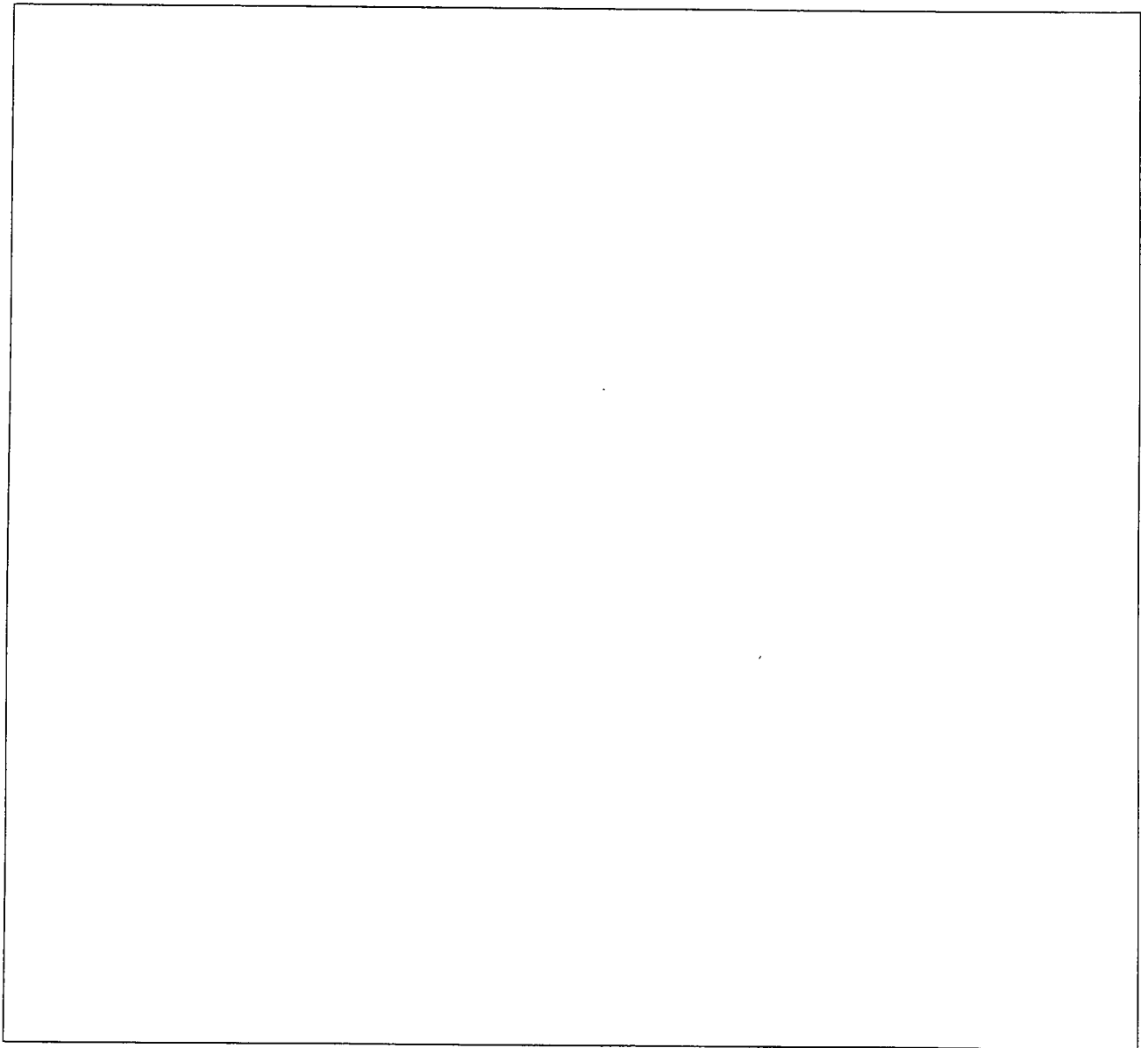
YES	NO
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**QUESTION 24**

If NO in question 23, what are the reasons?

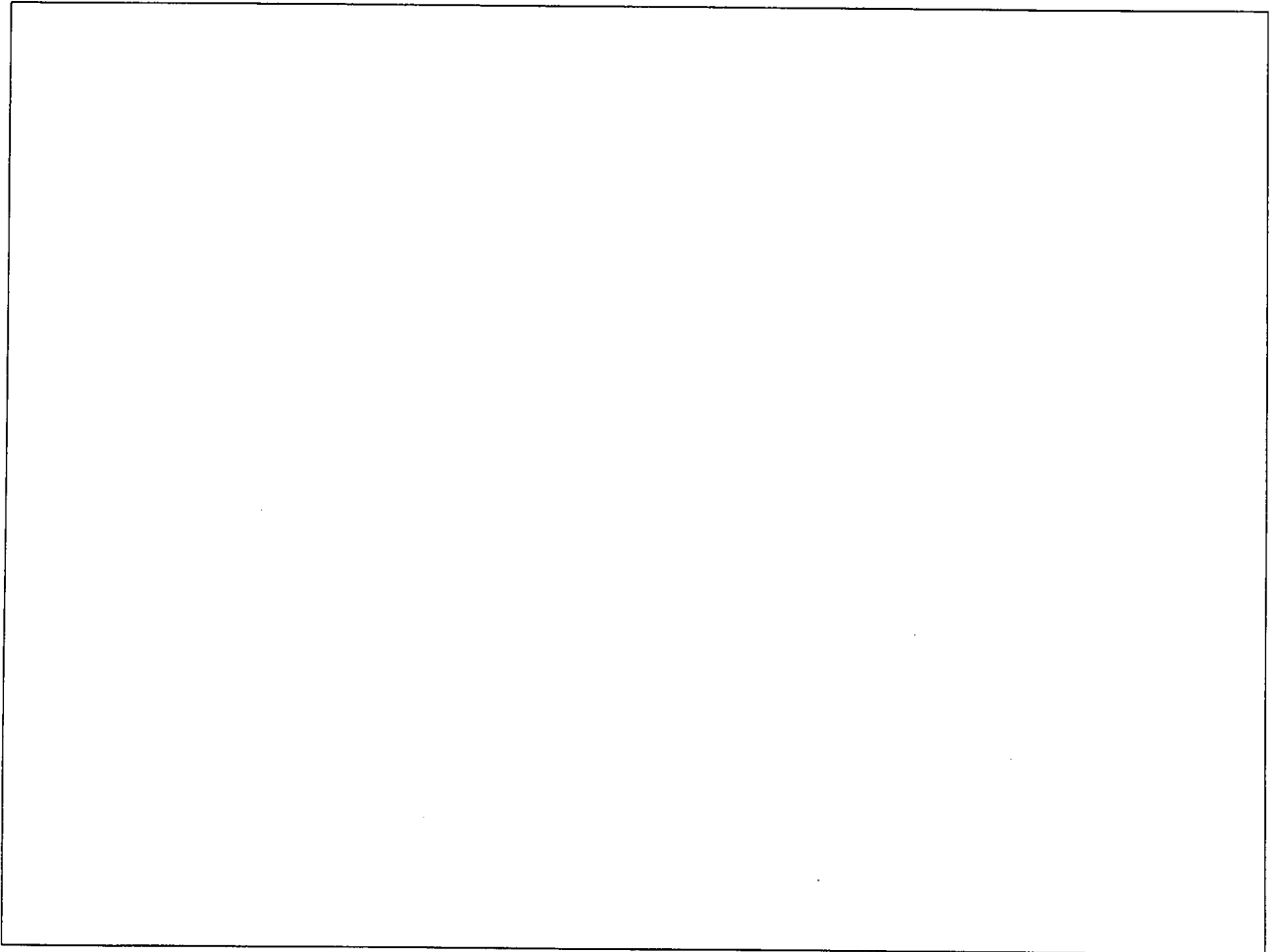
**QUESTION 25**

If YES in question 23, how will such a process operate in your view?



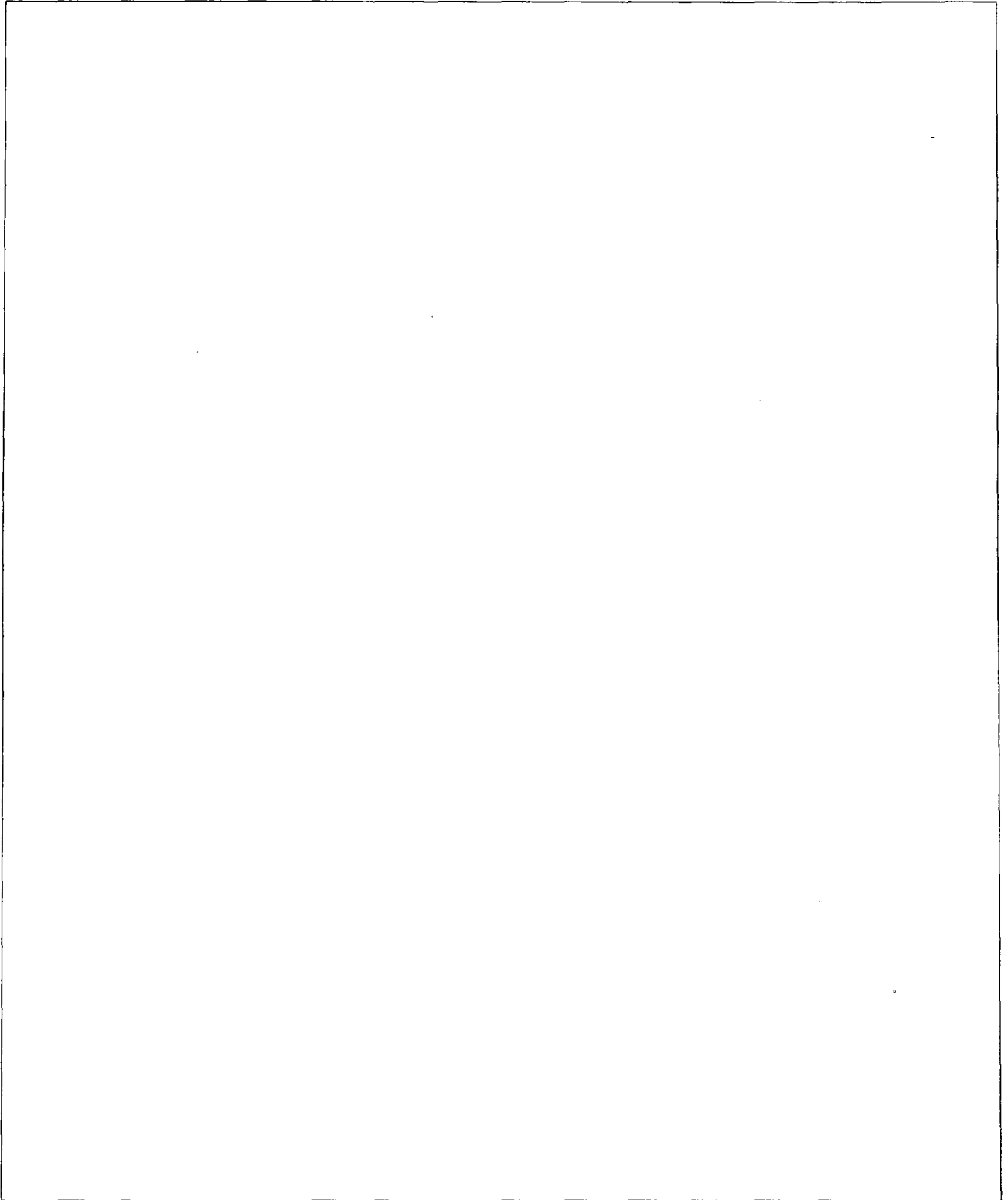
**QUESTION 26**

What, in your view, will be the elements of a strategic planning process that is robust enough to cater for any level of complexity and dynamism in the environment?



**QUESTION 27**

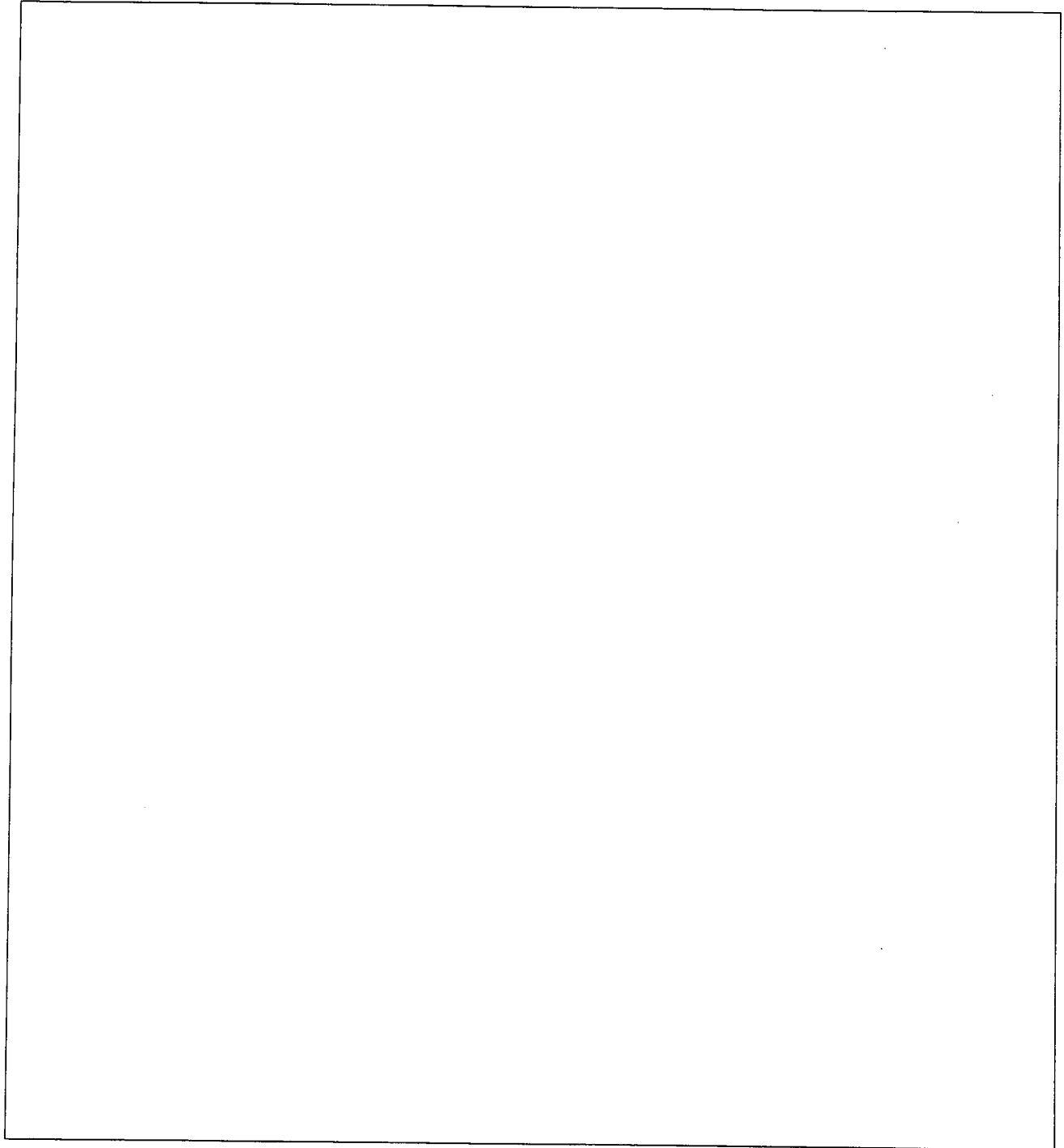
How does integration take place between the elements of the strategic plan and the functional areas responsible for implementation?





**QUESTION 28**

What, in your view, are the major gaps that your organisation experience between the strategy formulation and strategy implementation processes?



**QUESTION 29**

If you could make changes to the process, what changes would you suggest to bridge these gaps?

**QUESTION 30**

Using a 5 point scale how DYNAMIC will you rate the current environment of the electricity utility industry (1 = not dynamic at all; 5 = very dynamic)

**DYNAMISM OF ELECTRICITY INDUSTRY**

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**QUESTION 31**

Using a 5-point scale how complex will you rate the current electricity industry within which you operate? (1 = no complexity at all; 5 = very complex)

**COMPLEXITY OF THE ELECTRICITY INDUSTRY**

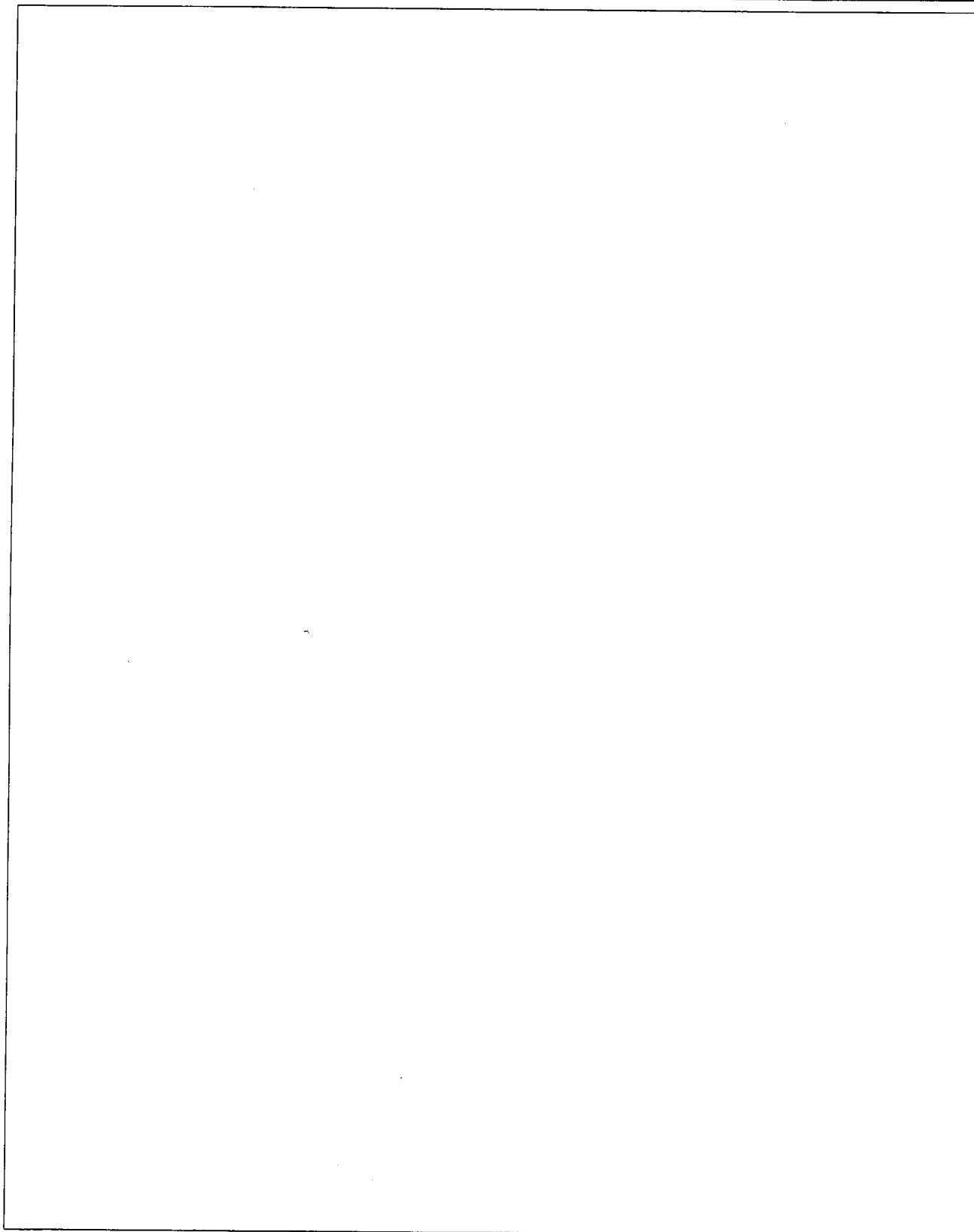
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**QUESTION 32**

What are the most important changes that occurred in your electricity utility industry over the past 10 years?

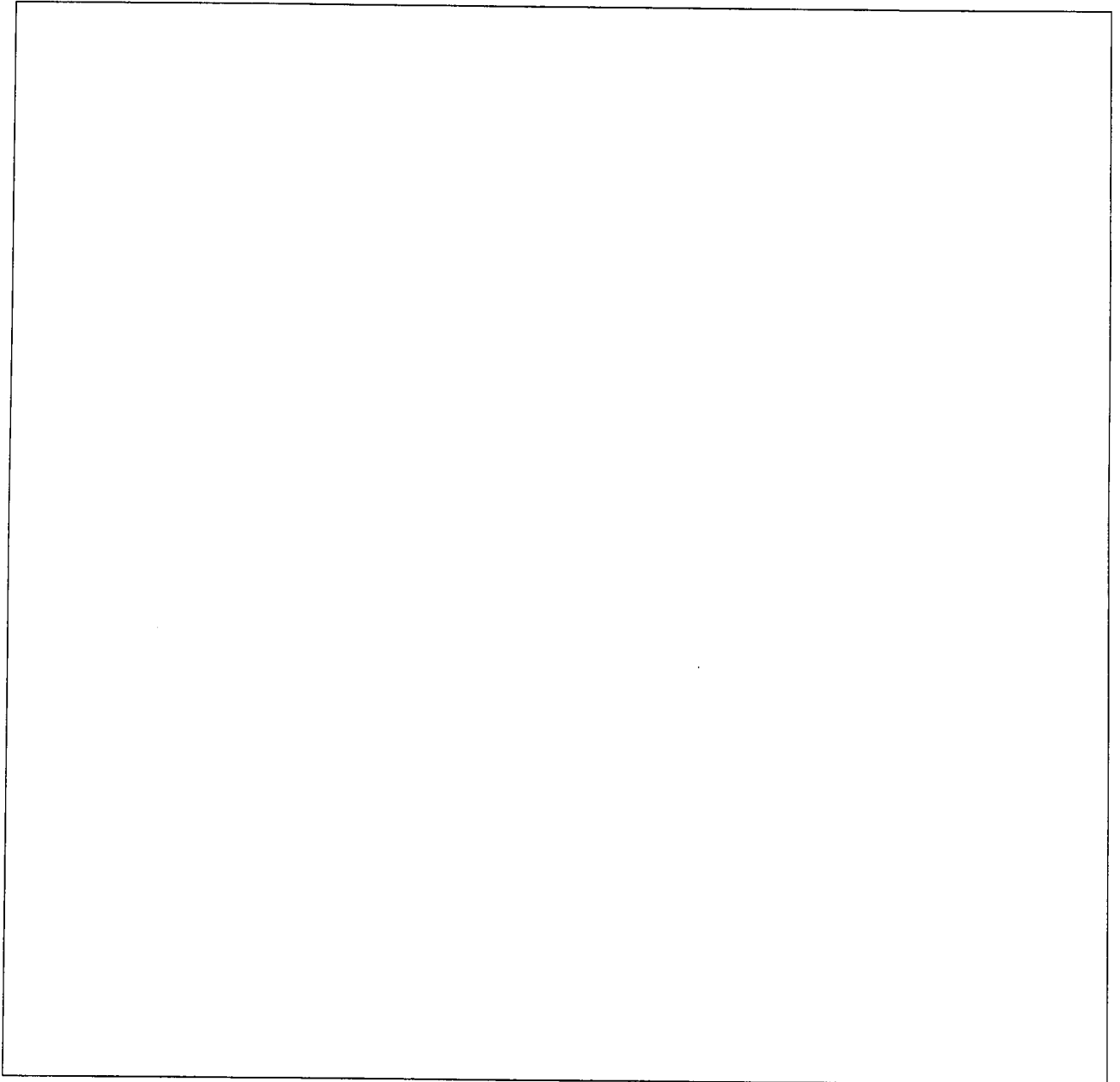
**QUESTION 33**

How did your Organisation respond to these environmental changes?



**QUESTION 34**

What implications did these changes had for strategic planning specifically in your organisation?



**THANK YOU VERY MUCH FOR YOUR VALUABLE INSIGHTS AND TIME**

**Rudolph B. van Buuren**

## SUMMARY

This study focuses on the electricity industry with specific reference to the manner in which organisations in the industry implement strategic plans. The electricity industry was chosen in particular as it operates in an increasingly complex and volatile environment. Restructuring and deregulation are phenomena that occur currently in electricity markets across the world. Organisations that once functioned in a protected, monopolistic environment are now entering the era of full competition. In their traditional approach to strategic planning, electricity organisations generally utilise one-year planning cycles. This study focuses particularly on testing the concept of real-time strategy implementation in electricity organisations as an alternative to using planning cycles.

The empirical research for the study was conducted in the United States of America. Included in the sample were four of the largest electricity holding companies in that country. The United States of America was specifically chosen because the electricity industry in that country was one of the first in the world to introduce a competitive market for electricity.

Through this study a number of gaps were identified between strategic planning and strategy implementation in the electricity

industry. These gaps led increasingly to the general perception that strategic planning is ineffective in the industry. In summary these gaps are:

- (a) The problem of responding to isolated and unpredictable issues that arise in a volatile and complex industry situation and that have the potential to erode the current competitive position of the electricity utility.
- (b) The restructuring of the industry and the subsequent unbundling of the vertically integrated nature of many electricity utilities, giving rise to conflict between business units and corporate strategy issues. This tends to reduce strategic planning to the level of a business review process.
- (c) The associated issue where the strategic planning process employed is often too time-intensive for senior management to participate in, or it cannot provide the leverage required to get maximum value from the time that senior personnel are able to invest in the process.
- (d) Despite the existence of strategic instruments like industry analysis and competitor analysis, most of the strategic planning

processes in electricity utilities remain highly introspective of nature.

- (e) A general problem of linking the resulting strategy with explicit measures of success and associated tracking systems.

The following are the most important recommendations based on the results of this study:

- (a) Top management should build a solid foundation for the implementation of strategy in real-time. This should be done through their visible commitment and voluntary involvement in strategic planning and strategy implementation, building the strategic capabilities of the organisation and implanting strategic autonomy throughout the organisation.
- (b) Real-time strategic planning processes need to be initiated, including intensive and ongoing situation analysis and implementing initiatives to resolve strategic issues at market speed.
- (c) Effective strategy support systems and processes need to be implemented. This includes information support as well as



ensuring effective integration of strategy throughout the entire organisation.

- (d) Effective strategic alignment of the entire organisation is required. This includes the linking of effective performance management processes to the strategy of the organisation and multi-level involvement of as many employees as possible in strategic planning and strategy implementation.

Further recommendations for the implementation of real-time strategic planning systems include the following guidelines:

- (a) Involvement of top management in strategic planning and strategy implementation is a prerequisite for strategic success.
- (b) Organisations should allow for autonomy in strategic decisions by lower levels of employees and departments.
- (c) Real-time strategy systems should be designed as effective information systems.
- (d) Strategic objectives and strategies should be reviewed on a real-time basis.

- (e) Strategic planning cycles should be discarded to allow for real-time strategy implementation
- (f) Performance contracts should be negotiated on a consensus basis, including aspects of performance expectations from both the subordinate and the manager, and between different departments.
- (g) The use of comprehensive and complex written strategic planning documents should be discarded.
- (h) Strategic control should be implemented through the use of a balanced scorecard.

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Key words: Strategic planning; Real-time strategy implementation; Strategy implementation; Electricity industry; Electricity industry regulation; Strategic flexibility; Complexity; Robust strategies; Volatility; Grounded theory.

## OPSOMMING

Hierdie studie fokus op die elektrisiteitsindustrie, met spesifieke verwysing na die wyse waarop organisasies in die industrie hul strategiese beplanning implementeer. Die elektrisiteitsindustrie is spesifiek geselekteer aangesien dit in 'n toenemende komplekse en snelveranderende omgewing opereer. Herstrukturering en deregulering is verskynsels wat tans regoor die wêreld in die elektrisiteitsindustrie plaasvind. Van 'n eens beskermden monopolistiese organisasie tot een waar mededinging tussen konkurrente toegelaat word. Tradisioneel het elektrisiteitsorganisasies gebruik gemaak van beplanningsiklusse wat wissel vanaf een jaar en langer. Hierdie studie fokus spesifiek daarop om die beginsel van intydse strategiese implementering as 'n alternatief vir beplanningsiklusse in die elektrisiteitsindustrie te ondersoek, aangesien die industrie tans in 'n komplekse en snelveranderende omgewing opereer, wat nie gunstig vir die gebruik van beplanningsiklusse is nie.

Die empiriese navorsing vir hierdie studie is onder vier van die grootste elektrisiteitsmaatskappye in die Verenigde State van Amerika gedoen. Die Verenigde State van Amerika is spesifiek gekies omdat die elektrisiteitsindustrie in hierdie land van die eerstes was om 'n mededingende mark vir elektrisiteit bekend te stel.

Aan die hand van hierdie studie is 'n aantal gapings tussen strategiese beplanning en strategiese implementering blootgelê. Hierdie gapings het toenemend bygedra tot die algemene opvatting dat strategiese beplanning nie as effektief in die industrie gereken word nie en dat dit bloot 'n vermorsing van tyd is. Hierdie gapings kan soos volg saamgevat word:

- (a) Probleme word ondervind om te reageer op geïsoleerde en onvoorspelbare gebeure in die industrie en wat die potensiaal het om die huidige mededingende posisie van die elektrisiteitsindustrie te vernietig.
- (b) Die herstrukturering van die industrie en die gevolglike ontbondeling van die eens vertikaal geïntegreerde aard van die elektrisiteitsindustrie het gelei tot die ontstaan van konflik wat betref strategiese doelstellings tussen die korporatiewe vlak in die organisasie en die besigheidseenhede van die organisasie.
- (c) Dit het verder tot gevolg gehad dat die strategiese beplanningsprosesse wat in hierdie organisasies gebruik word, lomp en tydsintensief geraak het, met die gevolg dat senior bestuur nie effektief aan die proses wou deelneem nie.

- (d) Ten spyte van die beskikbaarheid van 'n verskeidenheid van strategiese beplanningsinstrumente, soos industrie- en mededingerontledings, is gevind dat die meeste van die strategiese beplanningsprosesse in die elektrisiteitsindustrie intern gesentreer is.
  
- (e) 'n Algemene probleem om die ontwikkelde strategie te koppel aan effektiewe metingsnorme en verwante metingstelsels, is ondervind.

Gevolglik word die belangrikste aanbevelings, gebaseer op die resultate van hierdie studie, gegee:

- (a) Top bestuur behoort 'n goeie basis te lê vir die implementering van 'n strategie. Dit moet gedoen word deur 'n openlike verbintenis en vrywillige betrokkeheid by die strategiese beplanning en implementering, ten einde die strategiese vaardighede van die organisasie uit te bou en strategiese outonomie regdeur die organisasie te bewerkstellig.
  
- (b) Intydse (*real-time*) strategiese beplanningsprosesse behoort geïnisieer te word, insluitende intensiewe en volgehoue situasie-analise en implementeringsinisiatiewe om strategiese kwessies teen markspoed op te los.

- (c) Effektiewe strategiese ondersteuningstelsels en -prosesse behoort geïmplementeer te word. Dit sluit inligtingsondersteuning in en verseker effektiewe integrasie van die strategie regdeur die organisasie.
  
- (d) Effektiewe strategiese gerigtheid regdeur die organisasie is noodsaaklik. Dit sluit die koppeling van effektiewe prestasiebestuursprosesse aan die strategie van die organisasie in, asook om die betrokkenheid van soveel werknemers as moontlik, op verkeie vlakke met betrekking tot strategiese beplanning en implementering te bewerkstellig.

Verdere, meer spesifieke aanbevelings vir die implementering van intydse strategiese beplanningsisteme sluit die volgende riglyne is:

- (a) Topbestuur behoort betrokke te raak by die strategiese beplanning en implementeringsprosesse van die organisasie, as voorvereiste vir strategiese sukses.
  
- (b) Alle vlakke binne die organisasie behoort aangemoedig te word om op 'n outonome manier betrokke te raak by strategiese beplanning en implementering.

- (c) Intydse strategiese beplanningsprosesse behoort as effektiewe inligtingstelsels ontwikkel te word.
  - (d) Strategiese doelwitte en strategieë behoort op 'n deurlopende basis hersien te word.
  - (e) Die gebruik van strategiese beplanningsiklusse behoort gestaak te word in die lig van 'n intydse strategiese implementeringsproses.
  - (f) Werkprestasie ooreenkomste behoort by wyse van konsensus tussen werknemers en bestuurders onderhandel te word, asook horisontaal tussen verskillende departemente.
  - (g) Die gebruik van omslagtige strategiese beplanningsdokumente behoort gestaak te word.
  - (h) Strategiese beheer behoort aan die hand van 'n gebalanseerde meetkaart (*balanced scorecard*) gedoen te word.
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