THE DEVELOPMENT OF A BALANCED SCORECARD FOR STRATEGIC PLANNING IN A FROZEN VEGETABLE PROCESSING PLANT

BY

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Paper submitted in partial fulfilment of the requirements for the Degree of Master of Technology (Business Administration) in the Faculty of Management at the Port Elizabeth Technikon.

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DATE: JANUARY 2001
DECLARATION

“I François du Plessis hereby declare that:

• The work in this dissertation is my own original work;
• All sources used or referred to have been documented and recognised; and
• This dissertation has not been previously submitted in full or partial fulfilment of the requirements for an equivalent or higher qualification at any other recognised education institution”

The financial assistance of the Port Elizabeth Technikon towards this research is hereby acknowledged.

Opinions expressed and conclusions arrived at are those of the researcher.
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This dissertation is dedicated to the loving memory of my late father, A.S. du Plessis. I will always treasure your guidance, compassion, dignity and humility.

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George

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SUMMARY

This research investigated the development of a balanced scorecard for a frozen vegetable processing plant. The balanced scorecard can be utilised as a strategic management and performance measurement system.

First, an overview of the balanced scorecard concept was presented. Its four perspectives, namely financial, customer, internal business process, and learning and growth were explained. Thereafter, the process of developing a balanced scorecard was outlined and the translation of a firm’s vision into measurable objectives and targets was discussed. Finally, the literature study evaluated the development of balanced scorecards by means of selected case studies. This included an analysis of the successes and failures of balanced scorecards in practice.

The research methodology consisted of:

(a) A literature study to determine a framework for developing a balanced scorecard.

(b) Interviews and workshops to gather the primary data required to develop a balanced scorecard.
(c) The development of a balanced scorecard for a frozen vegetable processing plant using the findings from (a) and (b) above.

The following recommendations were made:

- Targets and action plans should be developed for the outstanding strategic objectives of the plant, and all key performance measurements should be formalised on key performance area documents. All role players should be involved in this process.

- All employees must be exposed to, and understand the plant’s vision, mission statement and the purpose of the balanced scorecard.

- All employees need to understand how their actions impact on other employees and the well-being of the plant. They must have set objectives and targets that can be measured.

- To increase the chance of a successful scorecard implementation, regular feedback must be provided to all employees, and managers must hold people accountable for using the system.
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CHAPTER ONE

GENERAL INTRODUCTION AND PLAN OF THE STUDY

1.1 INTRODUCTION

In an increasingly competitive world, managers rely on sound management approaches and systems to make correct short- and long term strategic decisions. Using a balanced scorecard entails down to following a management approach that leads a firm or business unit to focus on achieving both current financial results and on creating future value through strategic activities (Kaplan and Norton, 1996a: 1). A balanced scorecard provides management with the means to identify cause-and-effect relationships across key performance indicators and to manage a business more effectively (Gaiss, 1998: 2).

This chapter will focus on the presentation of the main problem and sub-problems to be addressed in this dissertation. Furthermore, the plan, that is, the delimitation and significance of the study, and the basic methodology used and its structure will be discussed.

1.2 MAIN PROBLEM

In 1990 the Nolan Norton Institute sponsored a study investigating the measurement of performance in the organisation of the future. David Norton, chief
executive officer of Nolan Norton, served as the study leader, and Robert Kaplan, a professor at Harvard Business School, as an academic consultant. The study was motivated by a belief that reliance on financial-performance measures impeded an organisation’s ability to create economic value in the future. In addition, the traditional financial performance-measurement approaches were becoming obsolete (Kaplan and Norton, 1996b: vii). The study resulted in the development of a balanced scorecard, which consists of four interrelated perspectives. The scorecard provides managers with a framework for identifying operational factors that drive future success (McCunn, 1998: 34).

The balanced scorecard is being adopted by an increasing number of organisations, yet they are not all successful. Venkatraman and Gering (2000: 10) reported that there have been as many unsuccessful implementations of the balanced scorecard as successful ones. This leads to the question that also represents the main problem of this study:

**How can a balanced scorecard be developed successfully, in particular, for the strategic management of a frozen vegetable processing plant?**

### 1.3 SUB-PROBLEMS

In order to develop a research strategy to discuss and solve the main problem, the following sub-problems were identified:
(a) How, according to existing literature, can a balanced scorecard be developed?

(b) Which factors do role players in the selected firm, (namely the frozen vegetable processing plant’s management) believe should form part of the balanced scorecard?

(c) How can these factors be integrated and used with a view to developing a balanced scorecard for a selected frozen vegetable processing plant?

1.4 **DELIMITATION OF THE RESEARCH**

In this study the empirical research focused on a frozen vegetable processing plant in George. The exclusion of other manufacturing or processing plants in the Republic of South Africa does not necessarily imply a lack of the need to conduct research to develop balanced scorecards for those organisations.

The studied frozen vegetable processing plant employs over 400 people. The process consists of:

- receiving raw vegetables from contracted farmers,
- trimming the raw vegetables,
- processing and freezing the vegetables in bulk form,
- repacking, storing and shipping the final product.
Chapter 5 provides more detailed information on the selected plant. The empirical study was limited to primarily plant management. The researcher fulfilled two roles in the empirical study. In a first phase he acted as one of the managers while in the employ of the firm. In the second phase he acted as an independent consultant facilitating the development of the balanced scorecard.

1.5 THE SIGNIFICANCE OF THE RESEARCH

During the industrial age, which lasted from 1850 to approximately 1975, these organisations that could convert new technology into assets that offered efficient, mass produced, standardised products, were successful. Financial measures such as return-on-capital-employed could direct an organisation into utilising resources productively, and create value for shareholders (Kaplan and Norton, 1996b: 2).

Since then, industrial age competition has shifted towards information age competition (Kaplan and Norton, 1996b: 2). There came an awareness that organisations needed to react and anticipate change more successfully. Organisations embraced information technology as a means of improving efficiency and operational activities (Automating the balanced scorecard, 1998: 3).
Olve, Roy and Wetter (1999: 13) observed that the existing financial environment places new and different demands on organisations’ management control systems. They further established that traditional (financial) management control:

- supplies misleading information for decision-making, investment control and cost allocation,
- does not consider the requirements of organisational strategy,
- encourages sub-optimisation and short-term thinking, and
- pays little attention to the business environment.

According to Kaplan and Norton (1996a: 1) management’s traditional emphasis on financial measures alone cannot motivate, predict or create future performance. Current financial performance may be distorted by omitting the effects of current actions that have created or destroyed future value. Firms need to balance short-term financial performance with long-term growth opportunities (Kaplan and Norton, 1996a: 2).

The balanced scorecard is a management approach that leads organisations to focus both on achieving current financial results and on creating future value through strategic activities. It measures organisational performance across four balanced perspectives: financial, customers, internal business processes, and learning and growth.

South African organisations, in general, have experienced difficulty in operating competitively since readmission into the international arena. They are attempting to
compete on an equal footing with international competitors since import restrictions and protective tariffs have been lowered, or completely abolished. The balanced scorecard could be a useful management tool that can assist South African firms in becoming more competitive, domestically and globally.

The aim of this study was to develop a balanced scorecard that would assist the frozen vegetable processing plant under review to become more competitive.

1.6 RESEARCH METHODOLOGY

In order to promote the logical solution of the stated sub-problems, the following broad procedure was followed:

1.6.1 Literature survey

Secondary sources in the form of textbooks, articles, research reports and unpublished internal documents were consulted. Based on this,

(a) An overview of the balanced scorecard will be provided. This includes the four perspectives: financial, customer, internal business process and learning and growth.

(b) The balanced scorecard development process will be discussed.

(c) An evaluation of the development of the balanced scorecard for specific organisations will be undertaken.
1.6.2 Empirical study

Primary information was gathered and an analysis made of key performance areas to be incorporated into the balanced scorecard model by means of interviews and workshops that the researcher facilitated for the senior management of the selected firm. A more detailed discussion of the empirical method used is provided in chapter 5.

1.6.3 Development of a balanced scorecard

The results of the literature survey and empirical study were used to develop a balanced scorecard in line with the strategic intent and objectives of the frozen vegetable processing plant.

1.7 STRUCTURE OF THE DISSERTATION

The dissertation is structured as follows:

Chapter 1: General introduction and plan of the study.

Chapter 2: The balanced scorecard: an overview

Chapter 3: The development of balanced scorecards

Chapter 4: Evaluating the development of balanced scorecards
Chapter 5: The firm and the method used in the empirical study

Chapter 6: The results of the empirical study

Chapter 7: Summary, conclusions and recommendations

1.8 SUMMARY

The aim of this chapter was to present the main problem to be addressed in this research, and to outline how the researcher intends to solve the main and sub-problems. A structure of the dissertation was also provided. Chapter Two will present an overview of the balanced scorecard concept.
CHAPTER TWO

THE BALANCED SCORECARD: AN OVERVIEW

2.1 INTRODUCTION

The balanced scorecard provides a balance between short- and long-term objectives, between financial and non-financial measures, between lagging and leading indicators and between internal and external perspectives. It provides a direct link between a set of operational performance indicators (measurement control system) and an organisation’s strategy (strategic management system). It translates vision and strategy into a tool that effectively communicates strategic intent and tracks performance against the established goals (Le Pla, 1999:37).

This chapter provides an overview of the balanced scorecard. Firstly, it focuses on the link between strategy and performance measurement indicators. Secondly, it explains the purpose of the balanced scorecard’s four perspectives. The aim of chapters 2 and 3 is to contribute towards solving the first sub-problem by providing an understanding of the balanced scorecard concept.
2.2 THE BALANCED SCORECARD AS A STRATEGIC MANAGEMENT SYSTEM

Johnson and Scholes (1999:10) define strategy as “…the direction and scope of an organisation over the long term: which achieves advantage for the organisation through its configuration of resources within a changing environment, to meet the needs of markets and to fulfil stakeholder expectations”. Hellriegel, Jackson and Slocum (1999:221) describe strategy as “the major courses of action that an organisation takes to achieve its goals”.

Hacker and Brotherton (1998: 18) place the scorecard in a systems perspective by describing it as a system that integrates processes for planning, deployment and implementation. They see as key outputs of a planning session the firm’s vision, mission, and value statements; and the annual objectives and targets.

A critical component of the strategic planning process is to put an organisation’s vision into operation. This is also the starting point for an effective measurement system. The vision needs to be translated into specific, measurable objectives. A measurement system enables an organisation’s management to ascertain whether activities are supporting the achievement of objectives, and if objectives are moving the organisation closer to its vision (The Balanced Scorecard – An Overview. 1998).
Most organisations’ operational and management control systems revolve around financial measures and targets, which have little effect in tracking the achievement of long-term strategic objectives. The balanced scorecard, on the other hand, retains the financial measures of past performance and introduces the drivers of future financial performance. The drivers, consisting of customer, internal business process and learning and growth perspectives, are derived from the conversion of organisational strategy into tangible objectives and measures. The balanced scorecard is not only a measurement system; it is designed to be a powerful management system (Kaplan and Norton, 1996b: 18-19). It provides management with “the ability to identify cause-and-effect relationships across key performance indicators and to manage the business more effectively” (Gaius, 1998: 1).

Organisations can utilise the measurement focus of the balanced scorecard to accomplish critical management processes (Kaplan and Norton, 1996b: 10). The scorecard introduces four new management processes that either separately, or in conjunction link long-term strategic objectives with short-term actions (Kaplan and Norton, 1996c: 75). These four processes are depicted in figure 2.1 and consist of: translating the vision; communicating and linking; business planning; and feedback and learning.
Figure 2.1. Managing strategy: four processes

2.2.1 Translating the vision

The balanced scorecard process starts with senior managers translating their organisational strategies into specific strategic objectives. It thus allows managers within the organisation to build consensus around its vision and strategy. The vision is made explicit and is shared by all employees. It is communicated in terms of goals and incentives (Olve et al, 1999: 17).
2.2.2 Communicating and linking

The scorecard allows managers to communicate the organisation’s strategy up and down the hierarchy, linking it to departmental and individual objectives. Kaplan and Norton (1996c: 80) identify three activities, which can assist in aligning employees’ individual performances with the overall organisational strategy. They are: communicating and educating; setting goals; and linking rewards to performance measures.

- **Communicating and educating**
  
  Strategy implementation starts with educating those responsible for executing it. Communicating the balanced scorecard in all directions promotes commitment and accountability to an organisation’s long-term strategy.

- **Setting goals**
  
  An organisation’s strategic objectives need to be transformed into measurable objectives for departments and individuals.

- **Linking rewards to performance measures**
  
  Kaplan and Norton (1996c: 82) contend that the balanced scorecard has a role to play in the determination of incentive compensation. It
carries a risk, however, as valid and reliable data of relevant measures need to be determined in order to achieve fair compensation.

2.2.3 Business planning

In this study it is argued that most organisations have separate procedures for strategic planning and for budgeting and resource allocation. Kaplan and Norton (1996c: 82) maintain that the balanced scorecard forces organisations to integrate their strategic planning and budgeting processes, ensuring that budgets support organisational strategies. This planning process enables organisations to:

- Quantify long-term objectives
- Identify mechanisms and allocate resources for achieving those objectives
- Establish short-term targets for the measures on the balanced scorecard

(Kaplan and Norton, 1996b: 15).

2.2.4 Feedback and learning

Review and feedback processes enable organisations to determine whether their goals are achieved. The balanced scorecard allows organisations to monitor short-term results and evaluate strategy based on these performances. It thus enables organisations to modify strategies to reflect real-time learning (Kaplan and Norton, 1996c: 77).
2.3 THE BALANCED SCORECARD’S FOUR PERSPECTIVES

Developing balanced scorecards should encourage business units to link their financial objectives to corporate strategy. The financial objectives serve as the focus for the objectives and measures in all the other scorecard perspectives. (Kaplan and Norton, 1996b: 47) state that the scorecard should reflect strategy by identifying long-term financial objectives and then linking them to the actions taken with regard to financial processes, customers, internal processes, employees and systems to deliver the desired economic performance (see figure 2.2). The following questions form the basis of the scorecard model:

- To succeed financially, how should we appear to our shareholders?
- To achieve our vision, how should we appear to our customers?
- To satisfy our customers and shareholders, what internal business processes must we excel at?
- To achieve our vision, how will we sustain out ability to change and improve?

The essence of the balanced scorecard approach is that the drivers of financial performance dictate the relationships firms develop with their customers, and that internal business processes shape those relationships (Atkinson, Waterhouse and Wells, 1997: 26). These authors feel that the scorecard approach fails to highlight the contributions that employees and suppliers make to help firms

**Figure 2.2** The balanced scorecard framework

Source: Adapted from Kaplan & Norton, 1996b: 76.

According to Olve et al (1999: 17), a comprehensive vision and strategy underlie all four perspectives. Strategic aims, measures, specific goals and action plans are formulated for each perspective. Every measure selected for a balanced scorecard can describe either what is achieved (outcomes), or what affects outcomes (performance drivers). Each perspective will be discussed below.
2.3.1 Financial perspective

Kaplan and Norton (1996b: 48) state that financial objectives and measures perform a dual role: they define the financial performance expected from the strategy, and they serve as the ultimate target for the objectives and measures of the remaining scorecard perspectives.

Financial objectives can differ at each stage of a business’s life cycle (see figure 2.3). Kaplan and Norton (1996b: 48) have simplified this life cycle into three broad stages:

- Growth
- Sustain
- Harvest

Growth organisations are at the early stages of their life cycle and have products or services with significant growth potential. They may initially operate with negative cash flows and low returns on investments. The overall financial objective will be percentage growth rates in revenue, and sales growth rates in targeted markets (Kaplan and Norton, 1996b: 48).
**Figure 2.3** Measuring strategic financial themes

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<th>Strategic Themes</th>
<th>Revenue</th>
<th>Cost</th>
<th>Asset</th>
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| **Growth and Mix** | Sales growth rate by segment  
Percentage revenue from new product, services and customers | Revenue per employee | Investment (percentage of sales)  
R&D (percentage of sales) |
| **Sustain** | Share of targeted customers and accounts  
Cross-selling  
Percentage revenues from new applications  
Customer and product line profitability | Cost versus competitors’  
Cost reduction rates  
Indirect expenses (percentage of sales) | Working capital ratios  
(cash-to-cash cycle)  
ROCE by key asset categories  
Asset utilisation rates |
| **Harvest** | Customer and product line profitability  
Percentage unprofitable | Unit costs (per unit of output, per transaction) | Payback  
Throughput |

Source: Adapted from Kaplan and Norton, 1996b: 52

Organisations in the sustain stage are well established and are expected to maintain and grow market share. Capital investments are aimed at continuous improvement of business processes. The main financial objective will relate to profitability, and can be measured by traditional means such as return on capital employed, operating income and gross margin (Kaplan and Norton, 1996b: 49).

Organisations in the mature phase of their life cycle want to reap the benefits from investments made during the two earlier stages. The main financial objectives for organisations are to generate maximum positive cash flows and reduce working capital requirements.
The financial perspective portrays many of the traditional instruments of management control in the form of key ratios and financial measures. It refers to three strategic themes that drive the business strategy:

- The rate of growth and the product mix,
- Cost reduction and improved productivity, and
- The basic rules for capacity utilisation and investment strategy (Olve et al, 1999: 60).

The rate of growth and product mix refers to re-pricing, changing the mix, increasing products and services on offer, and targeting new customers and markets.

Cost reduction and productivity focus on the reduction of direct and indirect costs and the sharing of resources between departments and/or business units. Capacity utilisation and investment refer to the efficient use of scarce resources and the disposal of unproductive assets.

2.3.2 **Customer perspective**

The customer perspective focuses on ways in which customer value can be created and how demand for those values is satisfied. If organisations neglect
customer needs by not delivering the right products and services, revenue will be adversely affected (Olve et al, 1999: 61).

The cost of customer dissatisfaction is substantial. It includes the cost of replacing lost customers, recovery costs involved in satisfying displeased customers, the impact of negative word-of-mouth, poor employee morale due to working with disgruntled customers, and the cost of ‘opening doors’ for competitors (Massnick, 1998: 14). For this reason major effort is directed at determining how to ensure and increase customer loyalty. Olve et al (1999: 61) suggest that organisations become familiar with customers’ purchasing processes. According to Kaplan and Norton (1992: 73) this process encompasses customers’ concerns and can be divided into four categories:

- **Time**
  
  This can range from the time an order is received till the product/service is delivered or, in the case of new products, the time it takes to market the product.

- **Quality**
  
  This includes a broad range of activities, such as product quality as perceived by customers, quality of on-time deliveries and accuracy of invoicing.
• **Performance and service**
  These relate to how an organisation’s products and services create value for its customers.

• **Cost**
  It compares the importance of product and service price in relation to the other categories.

Olve et al (1999: 61) suggest that strategies for the customer perspective should be based on analyses of customers and markets in terms of time, quality, performance and service, and cost. Goals must be set for these four categories and then translated into specific measures. Kaplan and Norton (1996b: 67) identify a core measurement group of customer outcomes for all organisations which includes:

• **Market share**
  This represents the proportion of business that an organisation sells in a given market.

• **Customer acquisition**
  This measures the rate at which an organisation recruits new customers or business.
• **Customer retention**
  This measures the rate at which an organisation retains ongoing relationships with existing customers.

• **Customer satisfaction**
  This measures the level of customer satisfaction along specific value performance criteria.

• **Customer profitability**
  This measures the net profit of a customer after subtracting expenses required to support that customer.

The above customer core measures can be arranged in a causal chain of relationships (see figure 2.4). However, they tend to be lagging measures in that organisations will not be able to determine their performance in terms of customer satisfaction and retention until it is too late. Organisations must rather identify what customers in targeted segments value. Kaplan and Norton (1996b: 85) identify three classes of attributes from which objectives and measures can be selected. These attributes are:

• Product and service attributes: functionality, price and quality.
• Customer relationship: personal relationships and the quality of purchasing experience.
• Image and reputation amongst customers.
The above attributes will enable organisations to retain and increase customers in targeted segments by delivering superior value.

*Figure 2.4* The customer perspective – core measures

![Diagram showing the customer perspective with core measures: Market Share, Customer Acquisition, Customer Profitability, Customer Retention, and Customer Satisfaction.]

**Source:** Adapted Kaplan and Norton, 1996b: 52

### 2.3.3 Internal business perspective

In this perspective, organisations identify internal processes that contribute towards meeting the objectives of shareholders and targeted customer segments. Kaplan and Norton (1992: 74) suggest that internal measures should be based on business processes that provide the biggest impact on customer satisfaction; more specifically on factors affecting cycle time, quality, employees’ skills, and productivity. Thus, the objectives of the internal business perspective
are formulated after determining the objectives and measures for the financial and customer perspectives (Kaplan and Norton, 1996b: 92).

Epstein and Manzoni (1998: 194) indicate that “a firm can delight customers all the way into bankruptcy, so it needs to make sure that it performs well on key internal dimensions”. For example, customer service can be improved by employing large numbers of employees servicing customers, or by having fewer employees whose time is utilised more efficiently with the support of good information technology. Creating customer value only translates into shareholder value if organisations employ efficient and effective key internal processes.

Kaplan and Norton (1996b: 96) observe that although organisations possess individual processes for creating customer value, similarities exist in the processes. They developed a generic value-chain model which organisations can adapt to suit their internal-business process perspective (see figure 2.5).

Figure 2.5. The generic value-chain model

Source: Adapted from Kaplan and Norton, 1996b: 96
This model consists of three business processes:

- Innovation,
- Operations, and
- Post-sale service.

The innovation process enables organisations to identify market segments it wishes to satisfy with future products and services. It also allows for the design and development of those future products and services. This process emphasises the importance of research, design and development in providing new products, services and markets.

The operations process is where existing products and services are produced and provided to customers. This process has traditionally been the centre of organisations' performance measurement systems, measuring elements such as machine and labour efficiency and price and yield variances. Efficient operations and cost reductions are important goals in this process. In modern day business practice operations is regarded as one of three components - innovation, operations and post-sale service - in the internal value chain (Kaplan and Norton, 1996b: 97).

The post-sale service process enables organisations to focus on relevant aspects of service that occur after customers have purchased a product or
service. This includes warranty and repair services, payment processing and the handling of defects and returns (Kaplan and Norton, 1996b: 105).

2.3.4 Learning and growth perspective

The learning and growth perspective of the balanced scorecard identifies the framework that organisations require to create long-term growth and improvement. The main element of this perspective is whether organisations can continue to improve and create future value for its stakeholders. Amaratunga, Baldry and Sarshar (2000: 7) state “… this perspective looks at the ability of employees, the quality of information systems, and the effects of organisational alignment in supporting accomplishment of organisational goals.” The financial, customer and internal process objectives of the balanced scorecard often reveal the shortcomings of existing resources and what is required to achieve them. Organisations need to invest in reskilling employees, improving information technology systems, and aligning routines and procedures.

Kaplan and Norton (1996b: 126) believe that if organisations want to achieve challenging long-term financial growth objectives, they should invest in their infrastructures, namely, people, systems and procedures. Three main enablers, for this perspective have been identified:

- Employee capabilities,
- Information systems capabilities, and
- Motivation, empowerment, and alignment (Kaplan and Norton, 1996b: 127).

Organisations are increasingly relying on employees closest to customers and internal business processes to generate value added ideas. This requires retraining of employees' capabilities so that they can contribute towards achieving organisational objectives. Kaplan and Norton (1996b: 129) have identified a core group of three employee-based measures that provide outcome measures from investments in employees, systems and alignment (see figure 2.6).

*Figure 2.6.* The learning and growth measurement framework

Source: Adapted from Kaplan and Norton, 1996b: 129
They are:

- employee satisfaction,
- employee retention, and
- employee productivity.

Employees need relevant, correct and quick information on customers, the financial implications of decisions, and internal business processes if they are to be competitive. Capable employees who have access to excellent information systems do not contribute towards organisational success if they are not motivated. It is important that organisations “focus on the organisational climate for employee motivation and initiative” (Kaplan and Norton, 1996b: 136).

2.4 SUMMARY

This chapter gave a brief overview of the balanced scorecard concept. Firstly, the scorecard can be utilised as a strategic management system. It consists of four processes, namely, translating the vision, communicating and linking, business planning and feedback and learning. These processes link long-term strategic objectives with short-term actions, either separately or in conjunction with each other.

Secondly, four perspectives that formulate the balanced scorecard framework were identified. The purpose of each perspective – financial, customer, internal-
business process and learning and growth were discussed. A comprehensive vision and strategy underlie all four perspectives, which are broken down into strategic aims, measures, specific goals and action plans.

In conclusion, the balanced scorecard can be utilised as a strategic management and performance measurement system. In the next chapter the focus will on be the development and evaluation of balanced scorecards.
CHAPTER THREE

THE DEVELOPMENT OF BALANCED SCORECARDS

3.1 INTRODUCTION

Every organisation has unique characteristics and needs, and may follow its own route in developing a balanced scorecard. Kaplan and Norton (1996b: 300) describe a “typical and systematic development plan that [they] have used to create scorecards in dozens of organisations”.

The aim of this chapter is to discuss how balanced scorecards can be developed. Firstly, a systematic approach to building scorecards will be presented. One model was selected for this purpose. Next will follow a brief overview of the role of information technology in the development of a balanced scorecard. Thereafter, the process of translating an organisation’s vision into performance measures will be discussed.

3.2 THE PROCESS OF DEVELOPING A BALANCED SCORECARD

Olve et al (1999: 37) suggest that developing a balanced scorecard should be regarded as a framework for the development process, rather than as a fixed set
of instructions. The balanced scorecard's flexibility allows it to be adapted to any organisation's situation. The development process involves the following areas:

- **Strategy development**

  The formulation of an organisation’s vision and strategy will translate into utilising the balanced scorecard as a method of control.

- **Management control systems**

  The process focuses on how strategies are converted into specific objectives and measures. It links the four perspectives’ measures into an integrated scorecard.

- **Systems and IT development**

  Effective measurement depends on recording and supplying reliable information to employees. This process focuses on existing systems and the practicalities of data collection.

- **The learning organisation**

  The balanced scorecard can foster learning as it allows employees to develop a better understanding of an organisation’s objectives and strategies (Olve et al, 1999: 37).
According to Arveson (1999: 1) Kaplan and Norton describe in general terms the basic ideas of the balanced scorecard concept. They include its advantages over past approaches to strategic management, and a general outline of how to develop and deploy such a system. However, there are many issues involved in making a good fit to a specific organisation, and in estimating and minimising the cost and time of deployment (Arveson, 1999: 1).

On the other hand, Arveson states that the development process of a balanced scorecard presented by Kaplan and Norton (1996) is better than most of its subsequent imitators (www.balancedscorecard.org). For purposes of this study, a number of balanced scorecard models have been researched, among them Abernathy’s (1997: 59), Alliott’s (1999: 4), Amaratunga et al’s (2000), Ford’s (2000: 33), Olve et al’s (1999: 49-83) and Wallace’s (1998: 45). Since Kaplan and Norton’s model encapsulates the main content of the other models, it was selected for discussion.

3.2.1 Kaplan and Norton’s Model

According to Kaplan and Norton (1996b: 294) “the project [of creating the first balanced scorecard for an organisation] requires an architect [developer] who can frame and facilitate the process, and collect relevant background information for constructing the scorecard. But the scorecard should represent the collective wisdom and energies of the senior executive team of the business unit”. The
developer is usually a senior manager from the organisation, or an outside consultant.

Kaplan and Norton (1996b: 310) indicate that any organisation’s first balanced scorecard could be created over a 16-week period (see figure 3.1). Wickham reinforces this point of view (Wallace, 1998: 44).

*Figure 3.1* Kaplan and Norton’s Development Model

<table>
<thead>
<tr>
<th>Activities</th>
<th>Actions</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement Program</strong></td>
<td>Project Plan</td>
<td>Weeks 1-3</td>
</tr>
<tr>
<td>Architecture</td>
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<td></td>
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<tr>
<td><strong>Define Strategic Objectives</strong></td>
<td>Interviews</td>
<td>Weeks 4-7</td>
</tr>
<tr>
<td>• First round interviews</td>
<td>Workshop 1</td>
<td></td>
</tr>
<tr>
<td>• Synthesis session</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Select Strategic Measures</strong></td>
<td>Subgroups Workshop 2</td>
<td>Weeks 8-13</td>
</tr>
<tr>
<td>• Subgroup meetings</td>
<td></td>
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<td></td>
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<tr>
<td><strong>Build Implementation Plan</strong></td>
<td>Rollout Plan Workshop 3</td>
<td>Weeks 14-16</td>
</tr>
<tr>
<td>• Develop implementation plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Executive workshop: Third round</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Kaplan and Norton, 1996b: 309
The development process consists of ten steps:

- **Step 1: Select the appropriate organisational unit**
  The scorecard development for the top structure of an organisation might prove a difficult first task. To reduce cost and risk, the initial scorecard process is most effective for the strategic business unit (SBU) of an organisation. A core team, represented by top management at headquarters level, is formed to initiate, develop and deploy the plan (Arveson, 1999: 1).

- **Step 2: Identify SBU/corporate linkages**
  The developer of the scorecard needs to understand the relationship of the selected business unit to other SBUs and divisional and corporate head office. This is to prevent the development of objectives and goals for the selected SBU that are in contrast to organisational goals.

- **Step 3: Conduct first round of interviews**
  The SBU management team is given material about the balanced scorecard and SBU’s vision, mission and strategy. The developer conducts interviews with each manager about the SBU’s strategic objectives and receives tentative proposals for measures across the four perspectives. The main objective of this task is getting management to
think about translating strategy and objectives into measures (Kaplan and Norton, 1996b: 303).

- **Step 4: Synthesis session**

  The developer and balanced scorecard design team discuss the output from the interviews and list and rank the objectives identified across the four perspectives.

- **Step 5: Executive workshop: First round**

  The developer conducts a workshop with the management team where consensus is reached regarding the SBU’s mission and strategy. Lee and On Ko (2000) indicate that a strengths, weaknesses, opportunities and threats (SWOT) analysis will help with the formulation of strategies. After the above 5 steps are completed, the main objectives for each perspective are selected. The management team is divided into four subgroups, one for each perspective. Each subgroup consists of at least one senior manager as well as members of the next level of management. Their task is to draw a detailed, descriptive statement and select measures for each objective of the perspective they represent. Venkatraman and Gering (2000) argue that selecting relevant key performance measures is difficult, and should therefore be the task of a core team.
• **Step 6: Subgroup meetings**

The aim of subgroup meetings is to:

- Identify the measure that best represents each objective’s intention.
- Identify the actions and sources needed to release the information needed for each measurement.
- Identify how each measure impacts on the others (Kaplan and Norton, 1996b: 305).

Gentia Software (1998: 15) added that the balanced scorecard must provide linkage between the organisational vision and objectives and key performance measures.

• **Step 7: Executive workshop: Second round**

A workshop consisting of the management team and their managers and/or supervisors is held and the SBU’s vision, strategy and proposed objectives and measures are discussed. Each subgroup presents its own proposal for discussion. The main aim of this workshop is to foster ownership and to identify stretch targets for each stated objective and measure.

• **Step 8: Develop the implementation plan**

A newly formed team develops an implementation plan and formalises the stretch targets.
• **Step 9: Executive workshop: Third round**

  The management team reaches consensus on the vision, proposed objectives, measurements, and the implementation plan. Kaplan and Norton (1996b: 308) suggest that the development of an information system and ways to communicate the balanced scorecard to all employees are the main factors that need to be addressed in this plan.

• **Step 10: Finalise the implementation plan**

  The balanced scorecard should be integrated into the organisation’s management system.

3.2.2 **Evaluation of the development models**

Although most models are based on Kaplan and Norton’s model, there are differences that need to be clarified:

• Kaplan and Norton suggest that a first balanced scorecard should be developed for a business unit within an organisation. There is a risk that the business unit might develop a scorecard that is not aligned with the organisation’s overall vision. Olve et al (1999) prefer a top-level approach that filters down to business units. The risk here is that the business unit,
in pursuing the organisation’s top-level scorecard, might develop a scorecard that is not suited to its needs.

- Kaplan and Norton prefer that the design of strategic objectives should be limited to between six and twelve senior managers. Olve et al (1999) do not propose how many people should be involved at this stage, although they suggest that top management and as many opinion leaders as possible are involved.

- Olve et al (1999: 80) state that for the balanced scorecard to function properly, it should be used throughout an organisation on a daily basis. The implementation plan must therefore include ways in which the scorecard can become part of an organisation's daily management. However, Abernathy (1997: 58) argues that the metrics on an organisation’s balanced scorecard should be reviewed on a monthly basis in conjunction with the financial results. This will ensure that finance does not inadvertently dominate the other perspectives.

- Kaplan and Norton suggest that subgroups consisting of at least one senior manager and members of the next level of management develop measures for objectives.
Kaplan and Norton propose a 16-week schedule for developing a balanced scorecard. Olve et al suggest that the first 8 steps should be completed within 14 weeks. However, they do not provide a time estimation for the last 3 steps.

3.3 INFORMATION TECHNOLOGY AND THE DEVELOPMENT PROCESS

Ford (2000: 30) reasoned that when using the balanced scorecard there is an opportunity to apply knowledge within a particular business context to create a customised solution tailored to organisational needs. Various software businesses have developed programs that assist organisations in developing and implementing the balanced scorecard.

Since Kaplan and Norton developed the balanced scorecard concept in the early 1990s, a large number of consultancy firms have employed it as a measurement-based, strategic management system. The Balanced Scorecard Institute lists over 50 suppliers that provide products that at least partially support a balanced scorecard management system (Commercial Products and Services, www.balancedscorecard.org/consult/vendors.html).

In July 1998 a website that focuses on best practices for automating the balanced scorecard was hosted on the Internet. The Balanced Scorecard
Technology Council, a virtual users group hosting a website, (www.balancedscorecard.com) provides information related to research, product information and an idea forum on successful implementation. It has attracted more than 8000 members since its inception. The latest trend is for organisations to automate the balanced scorecard as the required information is centralised in data warehouses (Madden, 1998). The data warehouse infrastructure is ideal for the balanced scorecard approach (Parkes, 1998).

According to an anonymous source (Automating the balanced scorecard, 1998: 25) the leader in the field of automating the balanced scorecard is Renaissance Worldwide Inc. In 1998, Renaissance collaborated with Gentia Software Inc., a major supplier of enterprise-wide business intelligence software, to create a packaged solution for automating the balanced scorecard. Gentia has developed a balanced scorecard application that allows managers in organisations to source and access data in a user-friendly format.

Since 1998 a number of established organisations have joined business intelligence specialists such as CorVu, Pilot Software Inc. and Gentia Software Inc. in offering balanced scorecard strategies to customers (Swoyer, 1999: 41).

Authors such as Madden (1998), Parkes (1998), Parrish (1998) and Swoyer (1999) reinforce Ford’s reasoning that a basic framework is used to develop
balanced scorecards for organisations. However, they do not specify if consultant and software firms use their own, or a particular framework.

3.4 TRANSLATING VISION INTO ACTION

As stated in chapter 2, the balanced scorecard translates vision and strategy into a tool that tracks performance against established goals. It acts as a medium to translate the vision into a clear set of objectives. Of particular importance for the discussion in this section is the requirement that these objectives are then further translated into performance measurement systems that communicate a forward-looking strategic focus to an entire organisation (The Balanced Scorecard – An Overview. 1998). Ian Alliott (1999: 4) provides a concise overview of this process (see figure 3.2):

3.4.1 The vision and mission

The organisation’s vision, or desired future situation, is depicted at the top of the model. Amaratunga et al (2000) reiterated the importance of gaining clarification and consensus about the vision. Its purpose is to guide and control an entire organisation towards attaining a shared conception in the future.
3.4.2 **Balanced scorecard perspectives**

The overall vision must be reformulated in terms of a number of perspectives. Olve et al (1999: 58) note that apart from the four perspectives identified by Kaplan and Norton – financial, customer, internal business process and learning and growth - other perspectives might be added to the balanced scorecard. For example, some organisations have added an employee, or human perspective. However, an employee perspective is rarely required since employees are already considered as resources in the internal business and learning and growth perspectives. It all depends on what is strategically important for an organisation.
3.4.3 **Critical success factors (CSFs)**

This step identifies the CSFs for the attainment of an organisation’s overall mission. Johnson and Scholes (1999: 959) define CSFs as those components of strategy where the firm must excel to outperform competition. CSFs are determined for each perspective. They are aligned vertically – each perspective’s factors are ranked in order of priority – as well as horizontally – to determine whether the factors are compatible across perspectives.

3.4.4 **Strategic objectives**

The purpose of this step is to translate the vision into perceptible terms (strategic goals or objectives) for each perspective. It makes the vision easier to understand in terms of what it will mean in practice, and how it will influence daily operations (Olve et al, 1999: 60). For the purpose of this study it is argued that defining objectives also creates an opportunity for individuals in operational units to become involved in the setting of their own objectives and thereby obtaining co-ownership of the scorecard system.
3.4.5 **Key performance indicators**

Key performance measures focus on an organisation’s strategic objectives. Managers are expected to define goals and select a limited number of key indicators within each of the perspectives (Manoochehri, 1999). According to Amaratunga et al (2000), a measure is “a performance metric that will reflect progress against an objective. A measure must be quantifiable”.

Renaissance Worldwide Inc., a consulting firm headed by David Norton, co-founder of the balanced scorecard, identified three criteria that help determine if an organisation’s performance measures are aligned with strategy. They are: cause and effects relationships; performance drivers; and financial links.

- **Cause and effect relationships.** Every measure selected should form part of a chain of cause and effect relationship that communicates the meaning of the organisation’s strategy (Kaplan and Norton, 1996b: 149). These relationships will prevent one measure from being developed at the expense of another, thus helping to create a balance among the different perspectives.

Figure 3.3 shows the importance of linking a set of objectives and measures. In this example, the overall objective is to improve revenue growth. It can be backtracked to increasing the market share objective.
To achieve this, higher customer retention is required, which in turn depends on good customer satisfaction. To improve customer satisfaction, time needs to be spent with customers.

Figure 3.3 Linked objectives delivering a financial result

- **Performance drivers.** A scorecard should have a balanced mix of outcomes and performance driver measures. Whereas outcome measures are lagging indicators that display whether efforts have led to acceptable outcomes, performance driver measures are leading indicators. They display what should be done to create future value for an organisation.
Outcome measures without performance drivers do not always inform how outcomes are to be achieved. Performance drivers without outcome measures may deliver no short- or long-term value (Kaplan and Norton, 1996b: 150).

It is often difficult to distinguish between outcome measures and performance drivers. For example, delivery time may be an outcome indicator for a logistical department, but it may be a performance driver for customer relations as it can improve customer loyalty (Olve et al, 1999: 9-10).

- **Financial links.** Objectives concerning quality, innovation, or customer satisfaction can be of strategic importance to an organisation. However, they must be translated into measures that are ultimately linked to financial indicators (The Balanced Scorecard – An Overview. 1998).

### 3.4.6 Targets

Targets are quantifiable goals for each measure. They create opportunities to succeed, communicate expectations, and monitor progress in achieving strategic goals (Amaratunga et al, 2000). Performance driver measures enable managers to identify operational factors that must be created to meet stretch targets. For the purpose of this study it is argued that this step can also be a major
contributor towards motivating operational managers and employees and orientating them towards achievement.

3.5 SUMMARY

This chapter has provided a brief overview of the development process of a balanced scorecard. Firstly, Kaplan and Norton’s development process model was presented. Although there are many variations of the development model, they all follow a basic framework.

Next followed a brief overview of the role of IT in the balanced scorecard was presented. Finally, translating an organisation’s vision into performance measures was briefly discussed.
CHAPTER FOUR

EVALUATING THE DEVELOPMENT OF BALANCED SCORECARDS

4.1 INTRODUCTION

Although the balanced scorecard's initial focus was the profit sector, it also provides great opportunities for the improvement of non-profit organisations as it can be developed for both private and public manufacturing and service organisations (The balanced scorecard: Translating strategy into action.1998).

The aim of this chapter is to evaluate the balanced scorecard development process in practice. Firstly, an evaluation of certain case studies will be presented. The case studies refer primarily to private profit sector organisations. Different approaches to developing the scorecard will be discussed. A brief overview of the reasons for the successes and failures in developing the scorecard will conclude this chapter.

4.2 EVALUATING CASE STUDIES

There are numerous case studies illustrating the development and implementation of the balanced scorecard in organisations. Olve et al alone

4.2.1 Reasons for selecting the balanced scorecard

Organisations have various reasons for introducing the balanced scorecard to their organisations. For example, Rockwater, a global leader in underwater engineering and construction, faced a strategic shift in the industry. Competition became fierce as new firms entered the industry, and leading oil producers wanted to develop long-term relationships rather than selecting suppliers based on lowest price.

KappAhl is one of the largest, specialised retail-trade chains in the Nordic countries. Despite a succession of management changes, it suffered financial losses during the early nineties. In 1995 new management reorganised the organisation in an effort to stem the heavy losses. They also initiated a process to develop balanced scorecards for the organisation (Olve et al, 1999: 56-57).

Bell Emergis is a Canadian telecommunications company that broke away from its parent company, Bell Canada, in 1998. As a new organisation, Bell Emergis needed to establish its own identity (Vaughan, 1998).
The above-mentioned examples illustrate that organisations have different reasons for employing the balanced scorecard. Rockwater needed to adapt to a changing industry, Kapp-Ahl had to become profitable again, and Bell Emergis, as a new company, had to create its own identity.

4.2.2 Developing visions and missions

For the purpose of this discussion organisations can be classified in three categories in terms of vision and mission statements. They are those that:

- Do not have a vision and mission,
- Have a vision and mission, but they need to be revised, and
- Have a vision and mission that are relevant to the current and expected future status of the organisation.

FMC Corporation, a large diversified American company, had a vision, mission and strategic goals for the organisation. In 1992 it decided to undertake a complete strategic review of future business in order to maximise shareholders wealth. As a result, the organisation adopted a growth strategy to support its strong operating performance (Kaplan and Norton, 1993: 143).

A changing industry prompted Rockwater to develop a new vision, which read: “As our customers’ preferred provider, we shall be the industry leader in providing
the highest standards of safety and quality to our clients” (Kaplan and Norton, 1993: 135).

Organisations follow different routes and time frames in developing visions and missions. Rockwater’s senior management team, under the leadership of its chief executive officer, created its vision. At Bell Emergis two consultants interviewed the organisation’s business unit leaders. This information was collectively discussed and developed into a vision and mission within six weeks. At Kapp-Ahl two consultants conducted a survey among 25 top managers to ascertain their thoughts on the business. The results were presented and discussed by the group at several seminars. The outcome was a definition of the organisation’s vision, mission statement and main strategies. This process took half a year to complete which was almost three times longer than the norm. The fact that such a large group had to reach consensus was the probable cause of the time delay.

Many organisations use the balanced scorecard to help achieve a greater alignment of their employees to its existing vision and mission. Managers at United Way of Southeastern New England were challenged to translate their vision and mission into meaningful, measurable objectives (The balanced scorecard: Translating vision into action.1998). The internal auditing department of Old Dominion University, Virginia translated its vision and mission from “lofty general language to an integrated set of objectives and measures” (Ziegenfuss, 2000).
4.2.3 **Translating the vision into strategic goals and measures**

Organisations generally follow a similar procedure in translating their visions into measurable objectives. Once the vision is determined, relevant business perspectives and critical success factors are identified. From there, strategic objectives, related measures and action plans are developed. However, there are different approaches within this general framework. The overall strategies dictate the setting of strategic objectives and the cause and effect relationships between those objectives. It also determine which perspectives are important to organisations.

At Kapp-Ahl, a project group of five senior managers was appointed to develop and drive the balanced scorecard process. They identified strategic goals across five perspectives:

- **Finance:** high and even earnings
- **Customer:** increased market share and delighted customers
- **Employees:** satisfied employees
- **Internal business process:** on time; short process times
- **Learning and growth:** innovation force; learning organisation (Olve et al, 1999: 69).
Each of Kapp Ahl’s perspective’s strategies related back to the vision, namely, to be the industry’s leading service company. The financial perspective focused on making the organisation profitable again. To achieve this, turnover had to be increased by retaining customers and attracting new ones. To satisfy customers, products that responded to the latest fashion trends were to be delivered in the shortest possible time (see figure 4.1).

*Figure 4.1* Kapp-Ahl: cause-and-effect relationships among strategies

![Diagram of cause-and-effect relationships among strategies](image-url)
Rockwater’s strategies were directed at responding to a changing industry.

Unlike Kapp-Ahl, it identified four perspectives from which strategies were developed (Kaplan and Norton, 1993: 135):

- Finance: shareholder’s expectations
- Customer: customer satisfaction
- Internal business process: continuous improvement; services which surpass needs
- Learning and growth: quality of employees

*Figure 4.2* Rockwater: cause-and-effect relationships among strategies
The link between perspectives and objectives is depicted in figure 4.2. Rockwater followed a similar approach to Kapp-Ahl by working towards the creation of shareholder value. However, the objectives of the two organisations are different. For instance, Rockwater attached very high importance to the internal business perspective. Objectives such as shaping customers’ requirements and providing quality and safety were important drivers in achieving the stated vision. In Kapp-Ahl’s case, delighting customers (customer perspective) was the driving force behind attaining the vision.

The two case studies illustrate that the numbers of strategic objectives for organisations differ. Kapp-Ahl identified nine objectives, whereas Rockwater selected 15. Kaplan and Norton (1996a, 3) suggested that the number of objectives should be kept manageable, usually between 16 and 20, since organisations tend to select too many objectives.

4.2.4 Evaluating the development process

Kapp-Ahl began its development process by identifying its vision, mission and main strategic objectives. This step included a series of surveys and interviews involving an enlarged top management team. Thereafter, a project team consisting of five senior managers worked in developing the different steps of a top-level scorecard. It was presented for approval to the enlarged top
management team. It was not clear to what extent other employees were involved in this process.

Rockwater used Kaplan and Norton’s balanced scorecard development process. It was decided to develop a scorecard for the underwater division of Rockwater. Firstly, they defined the size of the organisation to be developed. This is in contrast to Kapp-Ahl, who first used a top-level approach. Then senior management identified the vision, mission and relevant perspectives and strategic objectives. A core team then selected measures and developed action plans that matched the objectives. Most organisations believe that the people who will be working to meet the objectives, should set the targets and action plans.

4.3 SUCCESSES OF THE BALANCED SCORECARD

The *Harvard Business Review* selected Kaplan and Norton’s balanced scorecard concept as one of the most important management practices of the last 75 years of the twentieth century. Since the scorecard’s introduction in 1992, more than 100 articles have appeared in business publications. A Bain & Co. survey discovered that nearly 50 percent of North American companies have introduced the balanced scorecard system (Turner, 2000: 18). Research conducted by the Gartner Group indicated that 60 percent of Fortune 1000 companies would have
incorporated balanced scorecard principles into their management philosophies by the year 2000 (Mattson, 1999).

Hepworth (1998) states that the balanced scorecard has been successfully applied across many diverse industries. No failures of the concept were identified by this author.

Renaissance, a software company, identified two key factors for success:

- Using a developer (architect) who has a framework and methodology for designing and developing a new system.
- Having a client who assumes ownership of the project. A scorecard will fail without active participation, commitment and leadership from the top

(The Balanced Scorecard – An Overview. 1998).

Mobil, CIGNA and Brown & Root Engineering were one of the first companies to adopt the balanced scorecard in 1993. Each organisation’s success depended on uncovering and exploiting assets by focusing on:

- Aligning the organisation from top to bottom by translating strategy into relevant levels of detail.
- Creating and leveraging knowledge in decision-making.
- Linking the organisation together. It promotes teamwork and individuals can communicate and share information.
• Providing feedback at all levels. This creates a mechanism for knowledge sharing, problem solving and mentoring (Strategy and Implementation. Date unknown).

4.4 FAILURES OF THE BALANCED SCORECARD

The balanced scorecard has been interpreted in many different ways since its initial publication in the *Harvard Business Review* in 1992. Some organisations view the balanced scorecard simply as a focused set of financial and non-financial measures. The danger is, that in practice, the measurement system may not reflect the strategy of the organisation. This can cause an organisation to be guided in directions that are not aligned with the overall strategy (www.rens.com/push/viewpoint/papers).

According to Venkatraman and Gering (2000: 10), failures included cases “where a particular measure produces pathological activity, where the measures cover everything and nothing, and where the measures were accepted but never implemented or simply never caught on”.

David Linstrom, head of an Auckland-based strategy and technology consulting specialist firm, STC, argues that it is hard to implement a balanced scorecard consisting of a broad range of strategies. He identifies the following failings:
• No linkage diagram connecting objectives to key strategies
• Only 5% of measures are leading measures
• Many scorecards were not accepted, or signed off by the chief executive officer
• There was no feedback mechanism to communicate or learn from key measures (Le Pla, 1999).

It is argued in this study that the balanced scorecard can be utilised as a management and measurement system. Hacker and Brotherton (1998) identify four barriers to installing measurement systems:

• There is resistance when measurement systems are first installed in organisations that have not been tracking individual performance.
• Managers must hold people accountable for using the system, otherwise it will fail.
• There are bound to be problems with initial data integrity or availability, which can result in people abandoning the implementation phase.
• Reporting and presentation should be standardised. Varying formats result in time wasted trying to understand the reporting.

Schneidermann (1999:7), an independent consultant on the management of processes, believes that the balanced scorecard could be “the single most important management tool in Western organisations”. He argued that most balanced scorecards fail because:
• The non-financial indicators on the scorecard are incorrectly identified as the primary drivers of future success.

• Measurements are poorly defined.

• There is not a quantitative link between non-financial and expected financial results (Schneiderman, 1999, 7).

• The connection between strategy and performance measurement is poor in practice, mainly as a result of the forced classification into the four perspectives (Schneiderman, 2000).

4.5 SUMMARY

This chapter gave a brief evaluation of the balanced scorecard development process in certain organisations. Firstly, a comparison of different approaches between certain case studies was made. This showed that the process could be adapted to different organisations’ requirements.

Thereafter, successes and failures of the development process were discussed. Factors that were not directly related to the balanced scorecard development framework, such as a lack of top management commitment, were the main causes of failure.
CHAPTER FIVE

THE FIRM AND THE METHOD USED IN THE EMPIRICAL STUDY

5.1 INTRODUCTION

The starting point of any balanced scorecard development process is to determine the vision of an organisation. The establishment of strategic objectives, measures and targets follows. By determining the needs of shareholders and customers, a balanced scorecard can be constructed. This chapter describes the survey methodology that was used by the researcher. The chapter is concluded with a background description of the selected firm.

5.2 RESEARCH METHODOLOGY

In order to promote the logical solution of the stated sub-problems, the following broad procedure was followed:

(a) Relevant secondary sources were identified, studied and discussed to determine a framework for developing a balanced scorecard for a frozen vegetable processing plant.
(b) Interviews and workshops were conducted to determine and gather the primary data required to develop a balanced scorecard.

(c) The findings from (a) and (b) were used to develop a balanced scorecard for a frozen vegetable processing plant.

5.3 **SURVEY METHOD**

Leedy (1997: 199) identifies two types of interviews. Structured interviews consist of closed-form questions. Semi- or non-structured interviews also include probes designed to obtain additional information. De Vos (1998: 299) notes that interviews range from fairly structured to totally unstructured. Interviews can therefore be divided into three types:

- **Open-ended interviews.** Pre-formulated questions are arranged in a set sequence and put to all interviewees.

- **Unstructured interviews with a schedule.** A schedule with relevant questions and themes serves as a guideline when interviewing. Questions are not asked in a fixed sequence, but all relevant issues are covered at some stage of the interview.

- **In-depth interviews.** No questions are preformulated, and the interview develops spontaneously.
Interviews can also range from one-on-one interviewing to focus group interviewing. De Vos (1998: 314) defines focus group interviewing as “a purposive discussion of a specific topic or related topics taking place between eight to ten individuals with a similar background and common interests”. Focus group interviewing has a distinctive set of characteristics.

- It involves a small group of people who are homogenous, but not too familiar with each other.
- Interviews are conducted in a series using a data-gathering method.
- Interviews produce qualitative data and are characterised by focused discussions of specific topics (de Vos, 1998: 314-315).

**5.4 THE COLLECTION OF DATA**

The researcher collected data by means of individual and group interviewing (workshops). The interviewing format consisted of a combination of unstructured interviews with a schedule, and in-depth interviewing. This survey method was used because qualitative data was required to develop a balanced scorecard for the frozen vegetable processing plant.

The process of establishing a vision and strategies was started in May 1998. The purpose was to provide direction to the organisation. The process was developed by the plant’s management team under the guidance of the general
manager developed it. The researcher took part in the process as a member of this management team. The researcher’s impression was that the vision and strategies were developed in a very efficient and meticulous manner. This prompted the researcher to accept the existing vision and strategies as given when embarking on the process of developing a balanced scorecard. No related survey was conducted. The management team then developed strategic objectives for the plant. The researcher took part in the first two of four workshops concerning the formulation of objectives, but missed the final stages of developing the objectives due to having resigned from the organisation.

The researcher then received permission to develop a balanced scorecard for the plant from the general manager. The management team had been exposed to the balanced scorecard concept before. They decided to support its development and implementation in the plant, and the list of objectives was supplied to the researcher.

The researcher conducted one personal interview with each manager, and two focus group interviews:

- An in-depth interview was conducted with the general manager. The main theme was the current and future expected status of the industry and of the organisation.
• The first focus group was attended by the management team and facilitated by the researcher. The interview concentrated on two issues:
  • Establishing relevant balanced scorecard perspectives for the plant.
  • Discussing the existing format of the objectives.

• An interview was conducted with every manager. The purpose was to receive feedback on the relevance and importance of each objective.

• All members of the first focus group attended the second focused group. This interview concentrated on:
  • Debating the researcher’s proposal of a new set of objectives.
  • Debating the link between strategies and objectives.
  • Discussing measurements and action plans for each objective.
  • Discussing the reporting format of the balanced scorecard measures.

5.5 BACKGROUND TO THE SELECTED FIRM

The frozen vegetable processing plant had been operating since 1960 and produced frozen vegetables such as broccoli, sweet corn, cauliflower, beans, baby and large carrots, marrows, peas and a wide range of mixed vegetables and stir fries. The manufacturing process is depicted in figure 5.1.
Figure 5.1. Flowchart of the frozen vegetable processing plant

Agriculture

Raw material intake

Preparation area

Processing area (5 x lines)

4 x Freezers

6 x Cold Stores

Premixing

Final Packing

Distribution Store

Processing

Engineering

Quality

Admin.

H.R.

Warehouse & Packing

Distribution

The plant had changed ownership no less than four times since 1994. This frequent change in ownership was due to continued poor financial results. By 2000 the market was depressed due to:

- increased sales of raw vegetables;
- a market share loss to a competitor that imports and sells frozen vegetables locally at a cheaper rate.

Source: Constructed by the researcher
The George plant is one of three operational units reporting to a divisional head office situated in Johannesburg. The head office heads five departments: sales, marketing, logistics, administration, and agriculture.

The researcher was employed at the George plant for three years until February 2000. For the last 18 months the researcher had served in a management capacity as administrative manager.

5.6 SUMMARY

The proposed research methodology and relevant survey method has been explained. Personal and focused group interviews were used to collect data. The sequence of data collection was also noted. A background description of the selected firm concluded this chapter. In Chapter Six, the results of the empirical study will be presented and discussed.
CHAPTER SIX

THE RESULTS OF THE EMPIRICAL STUDY

6.1 INTRODUCTION

The results of the empirical study, the method for which was discussed in chapter 5, are presented and analysed in this chapter. The actual development process and its results will be discussed in sequential order.

6.2 DEVELOPING A VISION AND MISSION

In an interview with the general manager of the George plant, it was revealed that the main strategy of the group to which the plant belongs is geared towards improving financial results. This could be achieved by regaining and growing the market share. An important aim was thus to reduce the consumer price of products. Therefore it was important that the operating units produced products at the lowest possible price. In terms of Johnson and Scholes’s (1999: 271) strategy clock, this entailed a low-price strategy, which seeks to achieve a competitive price while maintaining a similar value to the product offered by competitors.
The management structure of the George plant is depicted in figure 6.1. There were seven managers reporting to the general manager. At the time the agricultural manager who reported to divisional head office was part of the team that developed the vision and mission.

*Figure 6.1. Organigram of the frozen vegetable processing plant*

Three one-day workshops were held off-site. The main purpose of this meeting was to recognise the importance of a vision and mission, and to get managers to think strategically about the future.

- **First meeting**
  - The purpose, differences and relevance of a vision and mission were explained and debated.
• Every manager sketched his or her perception of the future state of the plant and the industry.
• Every manager sketched his or her intended ‘nice to have’ future state of the plant.

• Second meeting
  • The vision was developed by means of a group discussion. The general manager served as the architect (developer).
  • The mission was discussed by means of a brainstorming session. A long list of possibilities that could be linked back to the vision was identified.

• Third meeting
  • The mission was developed by reducing the list of possibilities to a core.
  • The vision and mission were refined in terms of language. It was important that all the plant’s employees could understand and relate to the vision and mission.

The development of the vision and mission was achieved through consensus. It is important to note that the mission statement represented the core strategies of the frozen vegetable processing plant.
The vision of the George plant read as follows:

“The procurement, processing, freezing and storage of vegetables and the supply of frozen vegetables to marketing in predetermined quantities, cost, quality and time”.

This vision could be criticised as not being imaginative enough, but that is not within the scope of this study.

The mission statement that was developed from the vision contained seven strategic elements. For purposes of this study, it is seen as the plant’s strategic intent and reads:

“To be a world class frozen vegetable plant by:

- Responsible utilisation of natural resources
- Active involvement in our community
- People performing to their maximum potential
- Optimum utilisation and continuous innovative improvement of our facilities, systems and procedures
- The lowest achievable unit cost
- Continuously supplying products of the highest quality
- Delivering impressive client focused service”
6.3 DEVELOPING STRATEGIC OBJECTIVES

Once the vision and mission statement was determined, it was decided to develop objectives. The initial role players were once again the management team. A series of workshops were held under the tutelage of the general manager. Every manager provided a list of objectives for the plant which were grouped together per department. For instance, all objectives concerning raw materials were grouped under agriculture. Every group’s objectives were ranked in order of importance. From there, the three top objectives of each group were universally ranked in order of importance. Finally, a list of 16 objectives was generated by means of debate and consensus. Each objective was linked to a focus area:

- **Focus area: Agriculture**
  
  Objective: To improve and review raw material estimates, intakes and yields.

- **Focus area: Preparation**

  Objective: To improve product flow, space-, labour- and forklift utilisation, supervision, yield, casual usage, piecework output, reporting and food safety standards.
• Focus area: Processing
  Objective: To improve product flow, line layout, over/underfill, labour and forklift utilisation, supervision, yield, casual usage, reporting as well as micro, blanching, freezing and other food safety standards.

• Focus area: Cold storage
  Objective: To improve product flow, store layout, labour and forklift utilisation, supervision, yield, casual usage, reporting, stock integrity, first-in-first-out stock, and the elimination of thermal abuse.

• Focus area: Final Packing
  Objective: To improve product and packing material yield, over/underfill, labour utilisation, supervision, casual usage, reporting, micro, product temperature, mixing ratio and food safety standards.

• Focus area: Engineering
  Objective: To improve line and forklift availability, planned maintenance and artisan efficiency.

• Focus area: Cost
  Objective: Beat budget expenses and working capital targets by 5%

• Focus area: Supply of chilled vegetables
  Objective: Complete the chilled vegetable feasibility study.
• **Focus area: Supervisor development**

  Objective: Complete the supervisor development program

• **Focus area: Software changeover**

  Objective: To successfully implement a software change.

• **Focus area: Raw material intake volumes**

  Objective: Reduce raw material intake seasons in line with maximum plant loading.

• **Focus area: Forklift fleet**

  Objective: Determine actual forklift requirement and review/revise/monitor scheduling, maintenance, service and cost.

• **Focus area: Food safety**

  Objective: Achieve world class food safety standards.

• **Focus area: Utilities**

  Objective: Surpass budgeted targets on utility expenses.

• **Focus area: Communication**

  Develop and co-ordinate a communication strategy and plans for the plant.
Focus area: Occupational health and safety

Achieve a 5 star National Occupational Safety Act safety grading.

6.4 DEVELOPING BALANCED SCORECARD PERSPECTIVES

The researcher used the first focused group interview to determine relevant perspectives for the frozen vegetable processing plant. The core strategies flowing from the mission statement were divided into the balanced scorecard perspectives (see figure 6.2).

The researcher identified an additional perspective to the four traditional perspectives – financial, customer, internal business process and learning and growth – namely suppliers. It was selected for the following reasons:

- Raw material (raw vegetable) supply is seasonal. A certain crop may be harvested for only two months a year, but its intake has to supply the market until the next season.
- Raw materials are not produced in a controlled environment. Natural elements such as unseasonally hot or cold temperatures can postpone or
accelerate harvesting. Drought, early season frost or severe rain can affect the planned intake and quality of raw materials.

*Figure 6.2.* Dividing the mission into the perspectives

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible utilisation of natural resources</td>
<td>Internal business process Suppliers</td>
</tr>
<tr>
<td>Active involvement in our community</td>
<td>Learning and growth</td>
</tr>
<tr>
<td>People performing to maximum potential</td>
<td>Learning and growth</td>
</tr>
<tr>
<td>Optimum utilisation and continuous innovative improvement of our facilities, systems and procedures</td>
<td>Internal business process</td>
</tr>
<tr>
<td>The lowest achievable cost</td>
<td>Financial Internal business process</td>
</tr>
<tr>
<td>Continuously supplying products of the highest quality</td>
<td>Internal business process</td>
</tr>
<tr>
<td>Delivering impressive client focussed service</td>
<td>Customer</td>
</tr>
</tbody>
</table>

These seasonal, uncontrollable conditions have a major impact on the operations of the frozen vegetable processing plant. The flowchart (refer to figure 5.1) indicates that the supply of raw materials is the first step in the plant’s business process. Thus, it affects the remainder of the business process.
The researcher allocated two scorecard perspectives to the first strategic element of the selected plant’s mission, that is “the responsible utilisation of natural resources”. Natural resources implies raw materials (supplier perspective) and water and energy consumption (internal business process perspective).

6.5 LINKING OBJECTIVES TO THE MISSION

Once the perspectives were identified, the researcher used the second part of the first focused group interview to discuss the existing format of the objectives. They were generally departmental specific. For example, the objectives of preparation, processing, cold storage and final packing were very similar. The researcher suggested that the duplication of objectives should be avoided by shifting the focus from departmental objectives to key focus areas. For example, the four objectives relating to preparation, processing, cold storage and final packing could be changed into ones focusing on plant, labour and product utilisation. It was also noted that the formulation of objectives needed revision. This was due to:

- Some objectives containing too much information.
- Some objectives being similar to action plans.
• One objective focusing on the achievement of a set target instead of being more descriptive. Targets should be set when formulating performance measures.

The researcher proposed a new set of 13 objectives. It included all aspects of the existing objectives:

• Improve raw material planning
• Improve plant utilisation
• Improve labour utilisation
• Improve product utilisation
• Improve working capital
• Employee competencies
• Systems and procedures
• Planning and logistics
• Research and development
• Attain world-class food safety standards
• Control overhead expenditure
• Communication
• Product availability

Of the 13, the “product availability” objective was a newly identified objective, which provided substance to the customer perspective.

The relationship between the two sets of objectives is depicted in figure 6.3.
## Realigning existing objectives

<table>
<thead>
<tr>
<th>Existing Objectives</th>
<th>Proposed Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus area: Agriculture</strong></td>
<td>Raw material planning</td>
</tr>
<tr>
<td>Raw material estimates, intakes and yields.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus areas: Preparation, Processing, Cold Stores and Final Packing</strong></td>
<td>Plant utilisation</td>
</tr>
<tr>
<td>Throughput, product flow, space-, forklift utilisation, supervision, yield, FIFO, casual usage, piecework output, labour, reporting, and food safety standards.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Engineering</strong></td>
<td>Labour utilisation</td>
</tr>
<tr>
<td>Line and forklift availability, planned maintenance and artisan efficiency.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Cost</strong></td>
<td>Product utilisation</td>
</tr>
<tr>
<td>Reduce budget expenses and working capital targets by 5%</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Supply of chilled vegetables</strong></td>
<td>Improve working capital</td>
</tr>
<tr>
<td>Complete the chilled vegetable feasibility study.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Supervisor development</strong></td>
<td>Employee competencies</td>
</tr>
<tr>
<td>Complete the supervisor development program</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Software changeover</strong></td>
<td>Systems and procedures</td>
</tr>
<tr>
<td>To successfully implement a software change.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Forklift fleet</strong></td>
<td>Planning/Logistics</td>
</tr>
<tr>
<td>Forklift requirement, scheduling, maintenance, service and cost.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Food safety</strong></td>
<td>Food safety standards</td>
</tr>
<tr>
<td>To achieve world class food safety standards.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Utilities</strong></td>
<td>Overhead expenditure</td>
</tr>
<tr>
<td>Surpass budgeted targets on utility expenses.</td>
<td></td>
</tr>
<tr>
<td><strong>Focus area: Communication</strong></td>
<td>Communication</td>
</tr>
<tr>
<td>Develop and co-ordinate a communication strategy and plans for the plant.</td>
<td></td>
</tr>
</tbody>
</table>
The colours and matching arrows indicate the realignment of existing objectives. For example:

- The focus area ‘engineering’ is split into two objectives. The first part, ‘line fork availability and planned maintenance’ is redirected to plant utilisation (blue colour). The second part, ‘artisan efficiency’ is allocated to employee competencies (dark yellow colour).

- The focus areas ‘preparation, processing, cold stores, final packing and food safety’ include a part referring to ‘food safety’, which is allocated to one objective called ‘food safety standards’ (dark blue colour).

The researcher has linked the proposed set of objectives to the mission statement of the frozen vegetable processing plant. The cause and effect relationships of the objectives and strategy across the different perspectives are illustrated in figure 6.4. The scorecard perspectives start with the financial perspective at the top and end with the learning and growth perspective at the bottom. The various components of the strategy, with their matching objectives, are allocated across the perspectives. For example, the strategy relating to ‘client focussed service’ appears in bold under the customer perspective. Its matching objective, ‘product availability’, is depicted in the oval-shaped object beneath the strategy.
The order of the perspectives is important. The plant’s ultimate generic strategy was to focus on being a low cost producer (part of the financial perspective). In
an interview the general manager indicated that this strategy was formulated for the plant by corporate head office. Low cost products will hopefully result in sales growth and in turn, increase the shareholders’ wealth.

The next question was what must be done from the customers’ perspective to satisfy shareholders’ expectations? The mission statement identified client-focused service, yet there was no objective supporting this particular part of the mission, which resulted in customer focus appearing as unimportant. The plant’s customers were the division’s marketing and sales departments, which created an ‘internal’ customer focus. This resulted in the customer focus not appearing to be regarded that important. The researcher consulted the plant’s management team who agreed that product availability addressed this strategy.

To satisfy shareholders and customers, what internal processes should the plant concentrate on? The main goal was to be an efficient producer. This applied to all manufacturing and supporting processes, systems and procedures.

What value did the supplier perspective add to improve internal business processes? The effective management of raw materials would support a more efficient manufacturing process, including quality.
Finally, what objectives in innovation and learning would sustain shareholder, customer, internal processes and supplier advances? The development of employee skills, knowledge and competencies would do so.

Figure 6.5 illustrates the frozen vegetable processing plant’s balanced scorecard in a formalised format.

*Figure 6.5. A balanced scorecard overview: vision, mission and objectives*

<table>
<thead>
<tr>
<th>Vision</th>
<th>Efficient low cost producer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mission</strong></td>
<td></td>
</tr>
<tr>
<td><strong>(Strategy)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>Customer</td>
</tr>
<tr>
<td>Lowest achievable</td>
<td>Client focussed service</td>
</tr>
<tr>
<td>Working capital</td>
<td>Product availability</td>
</tr>
<tr>
<td>Overheads</td>
<td>Food safety</td>
</tr>
<tr>
<td></td>
<td>Planning, logistics</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Business Process</td>
<td>Quality</td>
</tr>
<tr>
<td></td>
<td>Optimum</td>
</tr>
<tr>
<td>Supplier</td>
<td>Utilising resources</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning &amp; Growth</td>
<td>Maximum potential</td>
</tr>
<tr>
<td></td>
<td>Community involvement</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
6.6 DEVELOPING MEASURES FROM OBJECTIVES

Once the objectives were finalised, the management team proceeded to develop measurements for them. This process involved three workshop sessions:

- The management team discussed what should be measured for each objective. A list of possibilities was formulated for future discussion.
- The management team and their senior supervisors discussed the list of possibilities.
- The management team finalised what needed to be measured.

Measurements were ranked in order of importance. (See annexure A for a ranking list of all possibilities).

The researcher took part in the workshop sessions, and conducted personal interviews with every manager. The outcome was a combination of key performance measurements determined by the management team and the researcher (see figure 6.6). In total, 23 measurements appeared on the balanced scorecard, 15 were in use at the time. Those that were measured appeared on 10 different reporting documents (see annexures B –K). [The aim of the annexures is to portray the format of the reporting documents. The values that appear on these documents are fictitious. Targets have been set for each of the 15 measurements being measured. The researcher has developed a document that summarises the key information of the 12 reporting documents onto one page (see figure 6.7).]
**Figure 6.6.** Key performance measurements

<table>
<thead>
<tr>
<th>Objective</th>
<th>Measurements</th>
<th>Annexure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw material planning</td>
<td>• Daily &amp; weekly raw material intakes (%)</td>
<td>B C D</td>
</tr>
<tr>
<td></td>
<td>• Monthly &amp; seasonal raw material intakes(%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Yield (%)</td>
<td></td>
</tr>
<tr>
<td>Plant utilisation</td>
<td>• Throughputs (kg / hr)</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>• Line efficiency (%)</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>• Plant availability (%)</td>
<td>E</td>
</tr>
<tr>
<td>Labour utilisation</td>
<td>• Labour (people / line)</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>• Absenteeism (%)</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td>• Throughput (kg/shift : Preparation)</td>
<td>E</td>
</tr>
<tr>
<td>Product utilisation</td>
<td>• Yield (%)</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>• Quality – product grading (%)</td>
<td>G</td>
</tr>
<tr>
<td></td>
<td>• Processing time (Hrs)</td>
<td></td>
</tr>
<tr>
<td>Working capital</td>
<td>• Stocks ( R )</td>
<td>H</td>
</tr>
<tr>
<td>Employee competencies</td>
<td>• Development program (Date)</td>
<td></td>
</tr>
<tr>
<td>Systems and procedures</td>
<td>• Available reports ( Time)</td>
<td></td>
</tr>
<tr>
<td>Planning and logistics</td>
<td>• Bulk stock levels (kg)</td>
<td>I</td>
</tr>
<tr>
<td>Research &amp; development</td>
<td>• Suggested improvements / employee (No.)</td>
<td></td>
</tr>
<tr>
<td>Food safety standards</td>
<td>• Thermal abuse (Kg)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Non-compliance (No.)</td>
<td></td>
</tr>
<tr>
<td>Overhead expenditure</td>
<td>• Weekly, monthly expenses ( R )</td>
<td>J</td>
</tr>
<tr>
<td>Communication</td>
<td>• Employee survey (%)</td>
<td></td>
</tr>
<tr>
<td>Product availability</td>
<td>• Service levels (%)</td>
<td>K</td>
</tr>
<tr>
<td></td>
<td>• Customer complaints (No. / kg)</td>
<td></td>
</tr>
</tbody>
</table>
Figure 6.7. A balanced scorecard management report

<table>
<thead>
<tr>
<th>Strategic Theme</th>
<th>Strategic Objective</th>
<th>Strategic</th>
<th>Base</th>
<th>Target</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest achievable</td>
<td>Finance</td>
<td>F1 – Overheads</td>
<td>Rand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client focussed</td>
<td>Customer</td>
<td>C1 – Product</td>
<td>% service levels</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>availability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>Internal Process</td>
<td>I1 – Food Safety</td>
<td>No. of non compliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I2 – Planning,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilise resources</td>
<td>Supplier</td>
<td>S1 – Planned</td>
<td>% raw material</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>intakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum potential</td>
<td>L &amp; G</td>
<td>L1 – Employee</td>
<td>Employee attitude</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The researcher has also developed action plans in conjunction with the management team for some objectives. See annexure L for an example of action plans for a specific objective. A key performance area document was designed that would contain information pertaining to strategy, perspectives, objectives, units of measure, targets, action plans, responsible persons, and due dates (see annexure M).
6.7 **SUMMARY**

The results of the empirical study were presented and analysed in this chapter. The researcher served on the plant’s management team when the vision and mission were formulated, and reorganised the objectives to link to the plant’s strategy across the different perspectives. Thereafter, measurements were developed for some objectives.

The next chapter contains a summary of the findings of the study followed by some concluding remarks and recommendations.
CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

“The development of a balanced scorecard for strategic planning in a frozen vegetable processing plant”, is the subject researched in this dissertation.

This chapter contains a summary of the preceding chapters, including an overview of the empirical findings.

7.2 SUMMARY OF CHAPTERS

- **Chapter One** (Problem statement and definition of concepts)

  This chapter presented the main and sub-problems to be addressed. It also outlined the researcher’s method for solving the stated problems.

- **Chapter Two** (The balanced scorecard: An overview)

  In the second chapter an overview of the balanced scorecard was provided.
Firstly, the use of the balanced scorecard as a strategic management system was described. This system’s four processes – translating the vision, communicating and linking, business planning, and feedback and learning – were discussed.

Thereafter, the four perspectives that formulate the balanced scorecard framework were identified. The purpose of each scorecard perspective – financial, customer, internal-business process and learning and growth – was discussed.

- **Chapter Three (The development of balanced scorecards)**

This chapter and the next addressed the first sub-problem: “How can a balanced scorecard be developed?” Kaplan and Norton’s 10-step model was selected to illustrate a systematic approach in developing a balanced scorecard. Although most models are based on Kaplan and Norton’s model, some differences between them were pointed out.

Thereafter, a brief overview of the role of information technology in the development of balanced scorecards was provided. The chapter was concluded with a discussion on the process of translating a firm’s vision into performance measures.
• **Chapter Four (Evaluating the development of balanced scorecards)**

The main purpose of this chapter was to evaluate the development process of the balanced scorecard by means of practical examples. A comparison of different scorecard approaches in certain case studies was made. This highlighted: reasons for selecting the balanced scorecard; process of developing visions and missions; process of translating visions into strategic goals and measures. Thereafter, factors which contributed to the success or failure of the scorecard in practice were discussed.

• **Chapter Five (The empirical study)**

The empirical study was described in this chapter. The research methodology followed was:

(a) Relevant secondary sources were studied to determine a framework for developing a balanced scorecard for a frozen vegetable processing plant.

(b) Interviews and workshops were conducted to determine and gather the primary data required to develop a balanced scorecard.

(c) The findings from (a) and (b) were used to develop a balanced scorecard for a frozen vegetable processing plant.
The chapter was concluded with a description of the collection of data and the background of the frozen vegetable processing plant.

- **Chapter Six (The results of the empirical study)**

The results of the empirical study were presented and analysed in this chapter. It addressed the two remaining sub-problems: “Which factors do role players, namely, the frozen vegetable processing plant’s management team, believe should form part of the balanced scorecard?” and “How can the results be used with a view to developing a balanced scorecard for this plant?” The researcher conducted one personal interview with each manager, and two focused group interviews. The information from these interviews was used to link the selected firm’s strategic objectives to its vision and mission within the framework of a balanced scorecard.

- **Chapter Seven (Summary, conclusions and recommendations)**

The purpose of this chapter is to summarise the empirical findings and to provide concluding remarks and recommendations.
7.3 SUMMARY OF THE EMPIRICAL FINDINGS

The empirical study can be divided into two phases. The first phase, during which the researcher participated as a member of the management team, was developed before the research study commenced and involved the development of a vision, mission and strategic objectives for the frozen vegetable processing plant. The second phase, during which the researcher acted as a consultant, formed part of the research study and its main aim was to link the stated vision and mission to strategic objectives and performance measures within the balanced scorecard framework.

For the purpose of this study, the management team was most involved in the development of a balanced scorecard. The researcher divided the mission statement into five scorecard perspectives. A supplier perspective was added to the traditional four scorecard perspectives. One component of the mission statement, namely ‘active involvement in our community’, was allocated to the learning and growth perspective because it is a ‘soft’ issue (refer to figure 6.2). No strategic objective was linked to this element since it did not contribute to the plant becoming a low cost producer. It was argued that the achievement of the other components of the mission statement could ensure the plant’s future existence, which in itself would benefit the community as it is one of the largest employers in George.
The researcher facilitated the realignment of strategic objectives from being department specific into key focus areas. The rationale was that the integration of departmental objectives would assist the plant to operate as a cohesive unit. For instance, the strategic objective ‘product utilisation’ would force the preparation function to consider processing and final packing requirements when trimming material. Similarly, the final packing function must be flexible and pack products produced by processing that vary in size and specification. The original objectives, in accordance with Kaplan and Norton’s guidelines, were reduced from 16 to 13.

It can be argued that the main generic objective of the plant, that is to be the “lowest achievable cost producer”, should reside under the internal business perspective, rather than the financial perspective. This is because the internal business perspective’s strategic objectives – plant-, labour- and product utilisation; and systems and procedures – have the greatest influence on the plant becoming a low cost producer. However, the ultimate vision of the broader organisation is to create shareholder wealth, which forms part of the financial perspective. It is in this context that the selected firm’s main generic objective should remain under the financial perspective. This would align the firm’s main generic objective with the broader vision.

The management team identified 23 key performance measurements, which relate back to the strategic objectives. It can be argued that the number of key
performance measurements is too large. However, of these, 9 are measured either monthly or quarterly. This leaves only 14 to be measured on a daily basis.

The measurements are a combination of leading and lagging indicators. Some measurements are lagging indicators for some objectives, but leading indicators for others. For instance, ‘daily and weekly raw material intakes (%)’ is a lagging indicator for the raw material planning objective (supplier perspective) since it measures an outcome. However, it is a leading indicator for the plant utilisation and product availability objectives (internal business perspective) since it affects their outcomes.

Key performance measures can be subjective and difficult to measure. The researcher and the management team used two criteria in the selection of measures. Firstly, every key performance measure, if possible, had to be quantified. Only one measurement, namely, the development program (date) is not quantified. Secondly, reliable and accessible information had to be available for every key performance measure.

Annexures B-K contain reporting documents that are being used by the plant to measure key performance measurements. The researcher developed a document, which summarises information from these diverse documents onto one page. These documents represent the performance measurement aspect of the balanced scorecard.
Annexures L and M divide the frozen vegetable processing plant’s mission and strategy into action plans, targets, responsible persons and due dates. These documents represent the strategic management aspect of the balanced scorecard.

7.4 RECOMMENDATIONS

The following recommendations are intended to complete the development process of the balanced scorecard for the frozen vegetable processing plant.

- Targets should be set for the remaining seven key performance measurements.

- Action plans should be developed for the outstanding strategic objectives (see annexure L). It is considered important to involve all the role players when formulating action plans.

- All key performance measurements should be formalised on key performance area documents (see annexure M). Once again, all role players should be involved in this process.

The following recommendations will assist the frozen vegetable processing plant in implementing the balanced scorecard successfully.
• All employees must be exposed to the plant’s vision, mission statement and the purpose of the balanced scorecard. This can be done through an address by the general manager, departmental green areas meetings, or by involvement in setting up action plans.

• All employees must have their roles in the cause-and-effects relationships of the plant explained (figure 6.4). They need to understand how their actions impact on other employees and the well-being of the plant.

• All employees must have set objectives and targets that can be measured. These can be achieved through the Management By Objectives (MBO) approach.

• Regular feedback must be provided to all employees. For example, key performance measurement results could be posted on bulletin boards.

• Managers must hold people accountable for using use the system. This could be achieved by managing employees by means of the key performance areas document. This document is essentially an agreement between an employee and his/her superior as to the responsibilities and, where applicable, due date when certain actions must be completed.
7.5 CONCLUSION

This chapter viewed the research study as a completed project and reviewed the main aspects covered in the preceding chapters. A number of recommendations for the development and implementation of the balanced scorecard for the frozen vegetable processing plant were provided.

The literature study revealed that the balanced scorecard could be adapted to a particular situation in a firm. The researcher used this philosophy in developing a balanced scorecard for the frozen vegetable processing plant.

Questions could be asked as to whether the balanced scorecard concept can be successfully implemented in South African firms, particularly in the labour intensive manufacturing industry which relies heavily on unskilled labour. This could offer an opportunity for further research on the successes and failures of the balanced scorecard approach in South Africa.

Finally, it is concluded that a balanced scorecard has been developed for strategic planning in a frozen vegetable processing plant.


Commercial Products and Services. Date unknown. www.balancedscorecard.org/consult/vendors.html


*Strategy and Implementation. Date unknown. www.balancedscorecard.com/ userforum/research/rapid_strategy_implement.asp*


ANNEXURE A

RANKING LIST OF ALL MEASUREMENT POSSIBILITIES

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1</td>
<td>Line efficiency</td>
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<tr>
<td>2</td>
<td>Throughputs</td>
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<tr>
<td>3</td>
<td>Plant availability</td>
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<td>4</td>
<td>Daily and weekly raw material intakes</td>
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<td>5</td>
<td>Processing and packing yields</td>
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<td>6</td>
<td>Labour</td>
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<td>7</td>
<td>Employee survey</td>
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<td>8</td>
<td>Absenteeism</td>
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<td>9</td>
<td>Quality</td>
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<td>10</td>
<td>Monthly and seasonal intakes</td>
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<td>11</td>
<td>Processing time</td>
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<td>12</td>
<td>Weekly, monthly expenses</td>
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<td>13</td>
<td>Working capital</td>
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<td>14</td>
<td>Thermal abuse</td>
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<td>Service levels</td>
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<td>16</td>
<td>Development program</td>
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<td>Bulk stock levels</td>
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<td>Customer complaints</td>
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<td>Non-compliance</td>
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<td>Available reports</td>
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<td>21</td>
<td>Raw material yield</td>
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<td>22</td>
<td>Preparation throughput</td>
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<td>Suggested improvements per employee</td>
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<td>Computer downtime</td>
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<td>Forklift utilization</td>
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<td>Utilities consumption</td>
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<td>27</td>
<td>Capital expenditure payback</td>
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<td>28</td>
<td>Injury free working hours</td>
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<td>Price variances</td>
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<td>30</td>
<td>Maintenance cost per line</td>
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<td>31</td>
<td>Stationery and protective clothing expenses</td>
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<td></td>
<td>Week on day accuracy</td>
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