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# **AN ENGINEERING APPROACH TO THE DIVERSIFICATION AND REFOCUSING OF ORGANISATIONS**

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A dissertation submitted in partial fulfilment of the requirements for the degree of

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# Dissertation Summary

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## AN ENGINEERING APPROACH TO THE DIVERSIFICATION AND REFOCUSING OF ORGANISATIONS

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**SUPERVISOR:** Prof. Paul S. Kruger  
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**DEGREE:** Master of Engineering (Industrial Engineering)  
**KEYWORDS:** Diversification, Refocusing, Business Engineering, Industrial Engineering, Engineering approach, Corporate Strategy, Strategy, Organisation, Transformation.

Organisations are inevitably bound by the industries that they serve and in turn industries' relationships with their environments are based on a life cycle curve. This makes organisations vulnerable to environmental changes that affects their industries. Organisations that recognise the need to align and continuously realign to the increasing rate of environmental change, seems to live longer. One of the ways of addressing environmental change, in order to align and continuously realign, is by diversifying or refocusing an organisation's portfolio.

Business Engineering is seen as the academic context for this study based on its relationship to organisational transformation. By combining a diversification and refocusing methodology with this engineering approach, engineering skills could be utilised in addressing this business transformational issue. This integrated diversification and refocusing methodology is based on a three phased approach namely; business analysis, business design and business transformation.

The business analysis phase is aimed at defining and understanding the environment of which the organisation is part. Analysis starts by defining the organisation's portfolio based on its range of products or commodities, geographical distribution and extent of vertical integration. The organisational portfolio can now be analysed in order to understand its current reality. These analyses are inline with the Business Engineering approach and focus on the external environment, business environment and internal environment. From these analyses strategic issues can be identified that will be addressed in the design process.

Business design focuses on designing a future portfolio and defining specific strategic initiatives that will enable the organisation to align with the changing environment. A design methodology can be applied to these strategic issues in order to define a future portfolio that is inline with the changed environment. Five broad areas can be defined within this design methodology: Co-operation (agreements, alliances and Joint Ventures); Refocusing; Internal investment (Including vertical integration); "Cash cows" and Diversification. This design methodology should only be used as a guideline, as this can not replace the creative thinking required in the architectural design of the portfolio.

Implementation forms the bases of Business Transformation. This phase is aimed at ensuring the successful transformation from the current reality of an organisation, to the desired future reality that is aligned with the changed environment. In order to achieve this, defining an implementation plan, measuring the performance against this plan and creating a series of strategic supportive "fits" are crucial elements in Business Transformation.

The most significant contributions of this dissertation are the integrated methodology, based on a combination of existing business diversification and refocusing principles and the Business Engineering approach, as well as various adapted, refined and developed processes and methods.

# Samevatting van Verhandeling

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## 'n INGENIEURSBENADERING TOT DIE DIVERSIFISERING EN HERFOKUSSERING VAN ORGANISASIES

PIERRE LEONARD

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- SLEUTELWOORDE:** Diversifisering, Herfokusering, Besigheidsingenieurswese, Bedryfsingenieurswese, Ingenieursbenadering, Strategie, Korporatiewe strategie, Organisasie, Transformasie.

Organisasies is onomwonde verbind aan die industrieë wat hulle bedien en hierdie industrieë se verwantskap met hulle omgewings is gebaseer op 'n lewensikluskurwe. Hierdie verwantskappe stel organisasies bloot aan omgewingsveranderinge wat plaasvind binne hulle industrieë. Dit blyk dat organisasies wat die behoefte herken om deurentyd te belyn en te herbelyn, langer leef. Een van die metodes om omgewingsverandering aan te spreek, met die doel om te herbelyn, is om die organisasie se portefeulje te diversifiseer of te herfokus.

Besigheidsingenieurswese word gesien as die akademiese konteks van hierdie studie as gevolg van die verwantskap met besigheidstransformasie. Deur 'n diversifiserings- en herfokuseringsmetodologie te kombineer met hierdie ingenieursbenadering kan ingenieursvaardighede gebruik word om hierdie besigheidstransformasie probleem aan te spreek. Die geïntegreerde metodologie is gebaseer op drie fases; besigheidsanalise, besigheidsontwerp en besigheidstransformasie.



Die besigheidsanalise fase is gemik op die definiering en verstaan van 'n organisasie se omgewing. Die analise fase begin by die definiering van die organisasie se portefeulje, wat gebaseer is op die reeks produkte of kommoditeite, die geografiese verspreiding en die mate van vertikale integrasie. Die organisasie se portefeulje kan nou geanaliseer word om die huidige realiteite beter te verstaan. Hierdie analise is inlyn met die Besigheidsingenieurswese benadering en fokus op die eksterne-, besigheids- en interne omgewings. Strategiese kwelpunte word deur die analise uitgewys en dien as insette tot die ontwerp fase.

Besigheidsontwerp fokus op die ontwerp van 'n toekomstige portefeulje en die definiering van strategiese inisiatiewe wat die organisasie in staat sal stel om met die veranderde omgewing te bely. Die strategiese kwelpunte word aangespreek deur 'n ontwerp metodologie aan te wend, met die doel om 'n toekomstige portefeulje te definieer wat bely is met die veranderde omgewing. Vyf areas kan breedweg binne hierdie metodologie geïdentifiseer word: Samewerking (ooreenkomste, alliansies en Gesamentlike Ondernemings); Herfokussing; Interne investering (Insluitende vertikale integrasie); "Cash cows" en Diversifisering. Hierdie metodologie behoort slegs as 'n riglyn te dien, aangesien dit nie die kreatiewe denke kan vervang wat nodig word by die argitektoniese ontwerp van die portefeulje nie.

Implimentering vorm die basis van besigheidstransformasie. Hierdie fase is daarop gemik om suksesvolle transformasie van die huidige realiteit van die organisasie na die gewenste toekomstige realiteit, wat inlyn is met die veranderde omgewing, te verseker. Die kritiese aspekte, om suksesvolle transformasie te bewerkstellig, is die opstel van 'n implimenteringsplan, die meting van prestasie teenoor hierdie plan en die skepping van strategiese ondersteuning.

Die mees betekenisvolle bydrae van hierdie verhandeling is die geïntegreerde metodologie, wat gebaseer is op die kombinering van bestaande diversifisering- en herfokussingsbeginsels met die Besigheidsingenieurswese benadering, asook die gewysigde, verfynde en ontwikkelde prosesse en metodes.

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# Part One – Introduction and Overview

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*“...to acquire or not to acquire: that is the question.”*

**Robert J. Terry**

## **1 Objective**

The objective of this dissertation is not to introduce the reader to a new diversification or refocusing theory, but rather to introduce an integrated diversification and refocusing methodology, based on an engineering approach to business transformation.

This dissertation views fundamental business principles relating to the age-old question of “To diversify or not to diversify?” by applying the Business Engineering theory and related processes. It is not the intention of this dissertation to replace current diversification or refocusing methodologies or to prove one better than the other, it however propose an integrated process that can fundamentally guide and evaluate a diversification or refocusing option.

The following objectives are pursued in this dissertation:

- Understanding the fundamentals of the Business Engineering approach and the business principles relating to diversification and refocusing strategies.
- Formulating an integrated methodology by applying the Business Engineering theory to diversification and refocusing principles.



The chronological organisation of this dissertation is based on the generic properties of a process or sub-process [Blanchard: 1]:

- Part One : The objectives. (Why?);
- Part Two : The definitions / fundamentals. (What?);
- Part Three : The methodology. (How?); and
- Part Four : The conclusion.



## 2 Background

*“The goal of an organisation is to make money now and in the future.”*

**Eliyahu M. Goldratt [2]**

Organisations may live for up to fifty or sixty years, with the odd exception that lives for hundreds of years. The average age of organisations is between ten to twenty years. Why is it that certain organisations live longer than others?

The answer to this question might be that an organisation is affected by its relationship with its environment. If the environment becomes increasingly turbulent, the ability of the organisation to adapt to the changing environmental circumstances becomes increasingly crucial. External change is an important factor that influences the destiny of an organisation. [Moll: 5]<sup>1</sup>

An organisation’s external environmental change is directly related to the change in the industry or industries that it serves. In time all the industries will change and will eventually become obsolete. According to Moll [5] the rate of environmental change (or industry change) is increasing and organisations that recognised the need to align and continuously realign seems to live longer. One of the ways of addressing industry change in order to align and continuously realign is by diversifying into related or unrelated industries; another is to focus on specific industries. Over time an organisation might



even evolve (through diversification or refocusing) into something completely new and different.

Moll [5] also argue that current approaches of addressing organisational change and transformation have nothing to do with the engineering discipline although being termed as *engineering*, *reengineering*, *innovation* or *redesign*. “*There is very little engineering as defined in the engineering profession, present in current approaches*”. Industrial Engineering is a discipline that is equipped with all the necessary skills to be a key stakeholder in business transformation issues. Industrial Engineering originated from various transformational issues that resulted from the industrial revolution. In his effort to define the underlying principles of the approach required to transform an organisation, a subject area known as *Business Engineering* emerged. It now serves as a theoretical home for the field that studies business transformation. Due to the relationship between organisational transformation and diversification or refocusing, Business Engineering will be used as an academic context for this study.

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<sup>1</sup> All further references made to Moll will also refer to relevant sources used in his arguments.





### 3 Scope of the dissertation

This dissertation introduces an integrated engineering approach to diversification and refocusing as an organisational tool to address its goal of creating value now and in the future. It is not attempting to be a complete reference to all alternatives and techniques, but merely addresses the fundamentals in defining an engineering approach through which an organisation can be transformed.

The organisational goal of creating value is aimed at the satisfaction of stakeholders' requirements. According to Moll [5] these requirements are:

- Generating maximum return for the owners of the business;
- satisfying customer requirements as a means to the above end; and
- maintaining a balance with the requirements of all the other stakeholders involved.

Taking this into account it should be stated that the scope of this dissertation is limited to generating maximum return for the owners of an organisation. Return, in this dissertation, is defined as financial returns and relates to Share Price (Market valuation of an organisation) and Net Present Value (Physical valuation of an organisation)

The Business Engineering theory was applied to diversification and refocusing fundamentals in order to obtain an engineering perspective. According to this theory, value is created through the analysis, design and transformation of an



organisation, whilst value is added through the continuous improvement of operations. The dissertation only addresses the value creation aspects, thus Business Analysis, Business Design and Business Transformation.

## 4 Approach

The approach to this dissertation was based on the Business Engineering process, as described by Moll [5]. Business Engineering is the result of an engineering approach to business transformation and according to Blanchard [1] an engineering solution has the following distinguishable phases:

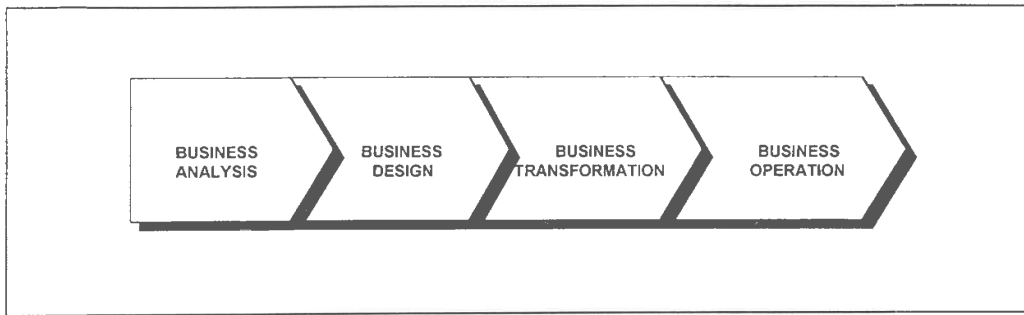
- Needs analysis;
- conceptualisation;
- construction;
- implementation;
- operation; and
- phase out.

Moll [5] distinguishes four generic phases in the life cycle of an engineering solution. These life cycle phases are:

- Analysis;
- design;
- implementation; and
- operation.

This premise led Moll [5] to organise his knowledge according to this phased approach. The process that was derived from this thinking is known as the *Business Engineering Process*. By using Business Engineering as an approach, various new insights can be discovered about business transformation.

The Business Engineering Process is shown in Figure 4-1.



*Figure 4-1: The Business Engineering Process*

Moll [5] describes the value creation phases of the Business Engineering Process as in paragraphs 4.1, 4.2 and 4.3 of this chapter.

#### **4.1 Business analysis**

*“In order to transform an organisation, it is necessary to form a thorough understanding of the various issues that the organisation faces.”*

The process of analysis is concerned with the study of data in order to derive a focused set of conclusions which serve as constraints, opportunities or problems to be addressed in the business design phase. In engineering terms, they are often referred to as design criteria.

An approach, based on the technique of environmental assessment is used in order to understand the interaction between an organisation and its environment. In order to define the role that an organisation plays in its external environment, the dynamics of society is assessed. Similarly, the relationship between the



organisation and its environment is assessed. Lastly, the organisation itself is assessed.

## 4.2 Business design

*“An architectural view is taken towards the design of organisations and strategies.”*

The concept of business architecture was presented by Moll as an approach to design organisations. In the engineering metaphor, the role of an architect is one of unconstrained conceptual design, after which the engineer investigates the practical implications of the design. This then leads to one or more iterations through which the engineer and the architect refine the design in order to optimise its practical and architectural value. A similar process is followed in order to design organisations.

## 4.3 Business transformation

*“Business transformation is viewed as the implementation of the proposed design, having analysed all of the relevant factors. Its aim is to ensure equilibrium with the changing environment.”*

Moll presents a model, which firstly defines transformation and subsequently provides an approach to manage transformation successfully. It is shown how external environmental forces influence transformation, as well as how the



internal desire from individuals can cause transformation. Transformation is like revolution, and the principles upon which successful revolution is based, are used in his approach. In order to manage transformation successfully, the reasons for success and failure of transformation efforts are assessed and were used by Moll to construct the proposed model.



## 5 Research Methodology

This dissertation was based on the Business Engineering theory and related processes as described by Moll [5] in paragraph 4 of this chapter. Incorporating into these processes the fundamentals of diversification, refocusing and experience in order to deduct an integrated methodology to logically evaluate and guide organisational diversification or refocusing actions.

In order to understand the related fundamentals a literary study was conducted on:

- The Business Engineering theory and process;
- corporate and business strategic concepts;
- diversification and refocusing fundamentals; and
- commonly used portfolio evaluation techniques.

Through integrating the knowledge gained from this, a basic evaluation model was deducted. The principles of this model were distilled from various credible and tested sources and are thus worthy as a fundamental evaluation tool. Leibniz [3] argued that knowledge is based on two kinds of truths – Truth that is based on reason and truth that is based on facts. Cooper [4] classify the styles of thinking by using two axis to describe the above mentioned dimensions of research, as illustrated in Figure 5-1.

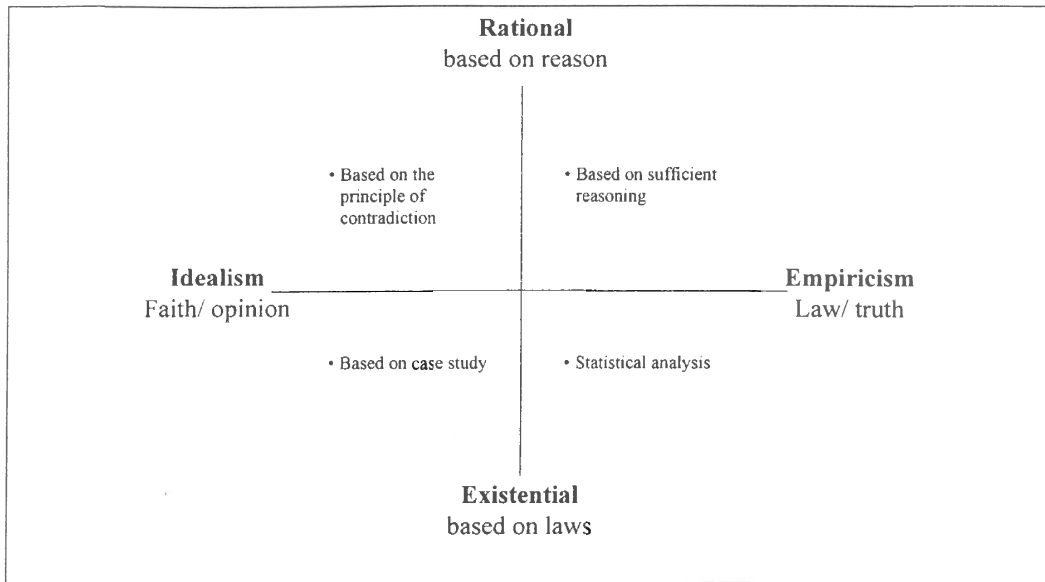


Figure 5-1: Styles of thinking

The horizontal axis ranges from a highly idealistic interpretation on the one end to empiricism on the other. The vertical axis ranges from rationalism on the one end to existentialism on the other.

Truths that are based on reason can be established by analysis, by resolving them into fundamental principles that can not be contradicted, or by sufficient reasoning. This dissertation is based on the principles of reasoning





## 6 Conclusion

Part One indicates that an engineering perspective could be given to diversification and refocusing based on their relationship to organisational transformation and in turn to the Business Engineering theory.

Part Two discloses the fundamentals of the Business Engineering theory, corporate and business strategic concepts, diversification / refocusing fundamentals and commonly used portfolio evaluation techniques. These fundamentals are essential in order to understand the interrelationship and hence to be able to develop an integrated methodology as described in Part Three.



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## Part Two – Fundamentals

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*“Knowledge is the most democratic source of power.”*

**Alvin Toffler**

## **1. Objectives**

Part Two introduces the fundamentals of the Business Engineering theory that are the framework for addressing the business transformational problem of diversification and refocusing from an engineering perspective. It also provides a literary overview of corporate and business strategic concepts, diversification and refocusing fundamentals as well commonly used portfolio evaluation techniques.

Part One introduces the objectives of this dissertation (Why?).

Part Two defines the fundamentals of the dissertation (What?).

The fundamentals of the Business Engineering theory are discussed in terms of:

- The basic principles;
- Business Analysis;
- Business Design; and
- Business Transformation.

The fundamentals regarding the context of the proposed methodology are discussed in terms of the following:

- Strategic concepts;
- diversification fundamentals;
- refocusing fundamentals; and
- commonly used portfolio evaluation techniques.



## 2. The Business Engineering theory

An overview of the Business Engineering theory, as defined by Moll [11], is presented in paragraphs 2.1, 2.2, 2.3, 2.4 and 2.5.

### 2.1. Basic principles

*Moll [11] has defined the subject area of Business Engineering in an effort to describe and position the full set of approaches required to optimise or improve the performance of organisations. This effort defined a theoretical home for the various business transformation related approaches.*

Moll defines Business Engineering as the subject area that aims to develop or redevelop an organisation based on the application of an engineering thought process and sound business principles. *Business, in this context, is defined as all efforts aimed at the sustained creation of wealth for all the stakeholders of an organisation.*

Systems Engineering, the engineering inter-discipline associated with the systems age, defined as the subject area that aims at transforming operational needs to defined systems configurations, is viewed as the parent subject area of Business Engineering, the latter being concerned with the transformation of business requirements into the desired architecture. The primary focus of Systems Engineering in the military environment is viewed as coincidental, as this was a growth area at the time of the inception of Systems Engineering.

Business Engineering should not be viewed as something completely new or revolutionary. It is a subject area composed of relevant extracts from various other subject areas, and it positions the relevant tools and techniques in terms of the general approach required to optimise an organisation. It is a logical extension of Industrial Engineering into the field of business.

## 2.2. Business Engineering Process

As required by an engineering approach, a systemic view of the development or redevelopment of an organisation is required. The Business Engineering Process provides such a perspective.

An engineering approach to business transformation is based upon the following phases:

- Business analysis;
- business design;
- business transformation; and
- business operation.

All of these are founded on a set of fundamental skills as described in paragraph 2.2.2 of this chapter.

A fifth phase in the Business Engineering Process, termed the initiation phase, is required in order to initiate the process. After the scope has been

determined, a selection can be made of the objects required for the transformation process.

The Business Engineering Process, including the initiation phase, is shown in Figure 2-1.

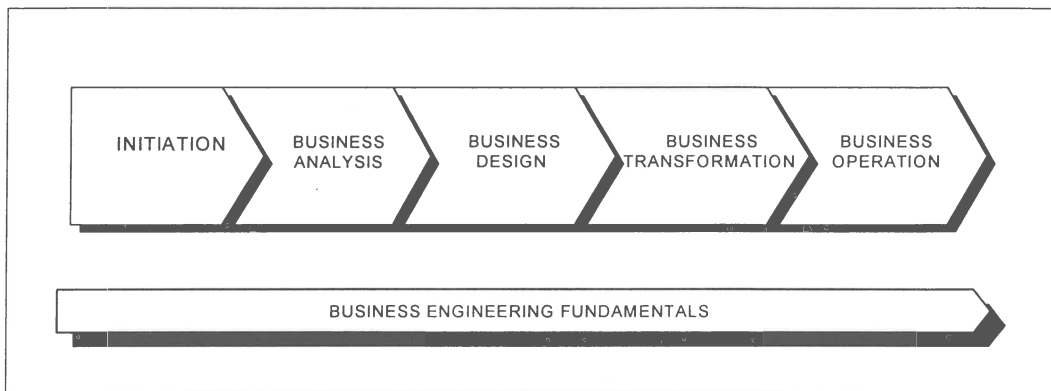


Figure 2-1: The Business Engineering Process

### 2.2.1. Application

It is proposed that there are three approaches in the application of the Business Engineering Process. They are based on how and where the emphasis is placed within the process.

#### The analytical approach

*"If I had a problem on which my life depended and I had an hour to solve it, I would spend 40 minutes examining it, 15 minutes reviewing it and 5 minutes*

*solving it."*

*Albert Einstein*

The analytical approach to Business Engineering focuses as much attention as possible onto the analysis phase of the Business Engineering Process. In doing so, a thorough understanding is formed of the most significant issues at hand.

### **The visionary approach**

*"Some people see things as they are and ask why?"*

*I see things as they could have been and ask why not?"*

***George Bernard Shaw***

The visionary approach in contrast, focuses on the design phase of the Business Engineering Process, the rationale being to rather spend as much effort on the future than pondering on things that are bound to change in any event.

### **The organic approach**

*"Once the rules of the game are clear, the window of opportunity will have closed."*

***Santhakam K Shekar***

The basic premise of the organic approach to Business Engineering is that both analysis and design do not add any value when viewed independently. In contrast, it is the implementation or transformation phase that delivers the real

value. It is thus proposed that an organisation should focus the minimum amount of attention on analysis and design and focus on organic growth.

### Comparison between the various application approaches

A comparison between these three approaches is shown in Table 2-1.

<b>ELEMENT</b>	<b>ANALYTICAL APPROACH</b>	<b>VISIONARY APPROACH</b>	<b>ORGANIC APPROACH</b>
<b>ADVANTAGES</b>	Thorough understanding	Forces discontinuous thinking	Speed
<b>DISADVANTAGES</b>	Can not accommodate discontinuities	Neglect of important facts	lack of direction
<b>APPLICABILITY</b>	Good information available	no information available	speed is the most important factor
<b>EXAMPLE OF SUCCESS</b>	Royal Dutch Shell	NASA	Virgin corporation
<b>EXAMPLE OF FAILURE</b>	Swiss watch industry	Challenger disaster	various small business enterprises

Table 2-1: Comparison between the various approaches to Business Engineering application

### 2.2.2. Business Engineering skills and methods

In order to facilitate the Business Engineering Process, specific skills and methods are required. The various disciplines upon which Business Engineering are based [Moll: 12], are shown in Table 2-2.



<b>DISCIPLINE</b>	<b>SKILLS AND METHODS</b>
Business Innovation	Lateral Thinking Parallel Thinking Creative Problem Solving
Business Management	Strategic Business Management Business Process Reengineering Business Performance Measurement Total Quality Management Theory of Constraints
Management Science	Operations Research Systems Engineering System Dynamics Modelling Decision Theory
Technology Management	Information Technology Process Technology Information Engineering Knowledge Management
Business Economics	Economic Analyses Industry Analyses Valuation Methods Economic Value Added Activity Based Costing
Transformation Management	Programme Management Value Management Risk Management Organisational Learning Cultural Assessment Methods

Table 2-2: Business Engineering skills and methods

### 2.3. Business Analysis

Analysis is viewed as the process through which a thorough understanding is formed of the current reality of an organisation. It applies the structured and systemic skills of engineering. It is done to determine the state of health of the organisation in the short-term and long-term. It is a collection of the facts – a process of converting data into information and information into wisdom. Analysis tools are the diagnostic tools with which a practitioner can determine

the *current reality* of a business system. Business analysis is in many respects a learning process based on understanding trends within the external environment as well as within the organisation. A systems approach should be followed - analysing the external, business and internal environments of the business system respectively. This process is shown in Figure 2-2.

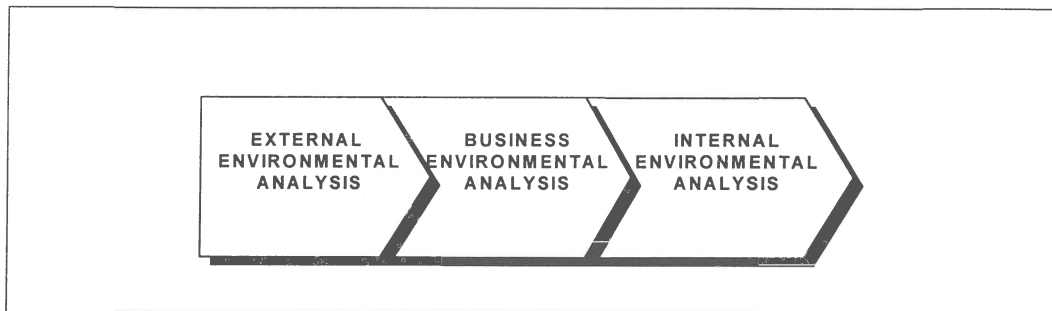


Figure 2-2: Business analysis process

These basic relationships between an organisation and its environment are shown in Figure 2-3.

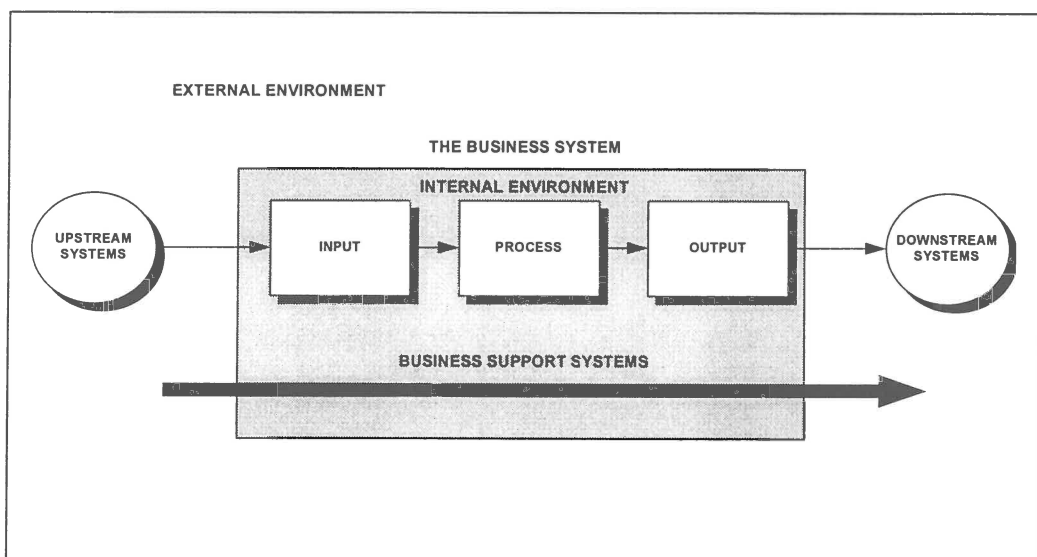


Figure 2-3: Systemic relationships between an organisation and its environment

## 2.4. Business Design

Business design is concerned with the definition of the *future intent* of an organisation. This must be viewed in contrast to analysis, which is concerned with the definition of the *current reality* of the organisation. In defining the design process, the concept of architecture becomes relevant. Design is the process, architecture is the output. The input for this process is some form of requirement or specification that was compiled through the analysis of a system. This approach is shown in Figure 2-4.

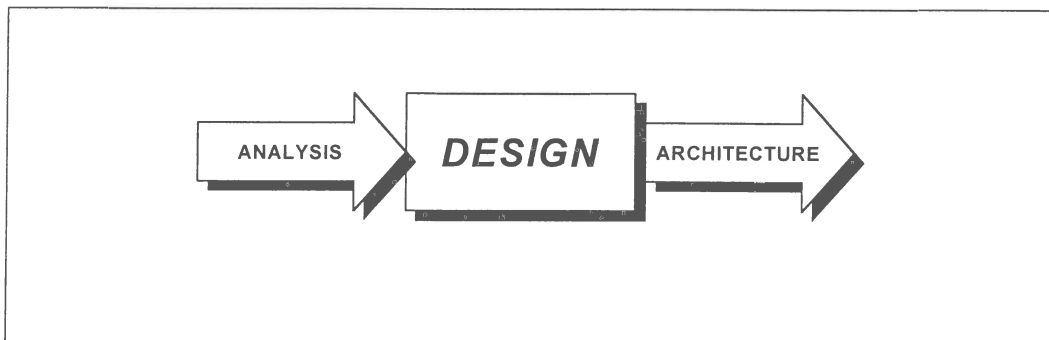


Figure 2-4: The design process

This design process, when viewed independently, consists of two conflicting but necessary sub-processes namely architectural design, concerned with the development of an innovative and visually appealing design, and engineering design, concerned with the development of a cost effective balance between the architectural design and the realities of the real world.

Whilst systems thinking and structured analysis are the core engineering skills required in the analysis phase, innovative thinking and creativity are the core skills required in design. Because architects are extremely reliant on their



innovative thinking skills, a study was conducted by Moll of the basic principles applied in the architectural design process in addition to those applied in the engineering design process. Architects are, by nature, dreamers, whilst engineers are realists. It is this combination that makes the design process successful.

In the design of organisations, this process of architectural and engineering design can be applied in a similar way. The output of the business analysis phase, being some form of specification, can thus be used as a starting point for business design. A business design process can subsequently be followed, which leads to a business architecture or blueprint being compiled. A master plan of the required or envisioned business and a plan as to how this can be achieved. This can also be termed strategy.

## 2.5. Business Transformation

From a Business Engineering perspective, transformation is concerned with the implementation of the proposed architecture. Transformation and change have also become phenomena of our time. Answers about the nature of transformation should thus be sought far wider than the business environment.

The first and important perspective lies in the definitions of the words *change* and *transformation*. In the field of Applied Mathematics, the words *speed* and *velocity* have been assigned different meanings although linguistically, they have the same meaning. In Management Theory, the words *goal* and *objective*

have been assigned different meanings whilst linguistically also having the same meaning.

Similarly, in Business Engineering, it is suggested that, by assigning different definitions to the words *change* and *transformation*, knowledge is expanded.

*The term transformation literally means modification, alteration or metamorphosis. Formally transformation is defined as the process of deliberate interventions that alter an entity from one state to another as a result of a change in its environment.*

*Change is defined as a state of different but unavoidable environmental circumstances. Change is an environmental force; transformation is the way in which an entity reacts to it.*

Transformation is the result of environmental change. Any entity reacts to the changes around it. These changes could be external forces (change in the external environment) or internally (realignment of the members of this entity).

*More formally, it can be stated that:*

Entity state = f (external environmental parameters, internal environmental parameters); and

Transformation = f (change in environmental parameters).

These relationships are shown in Figure 2-5:

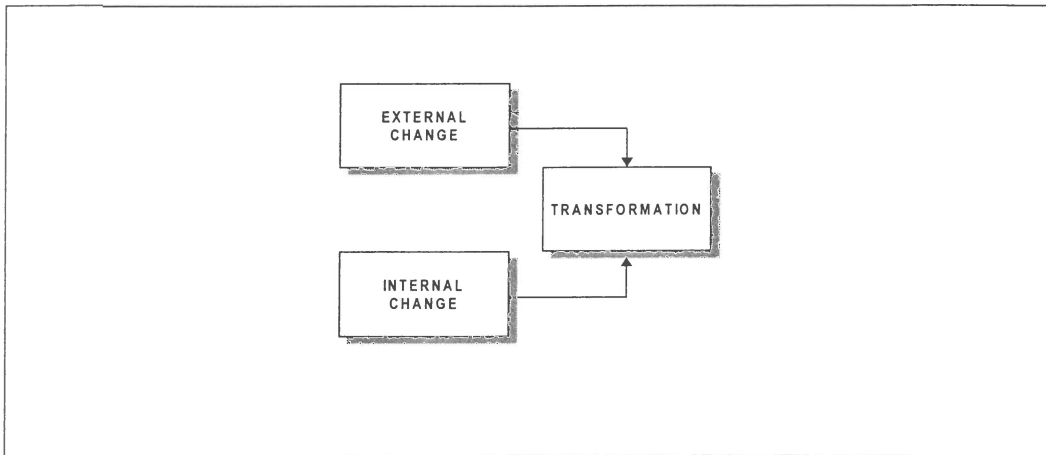


Figure 2-5: Relationships between change and transformation

A comparison between change and transformation are shown in Table 2-3.

<i>DIMENSION</i>	<i>CHANGE</i>	<i>TRANSFORMATION</i>
Level of impact	<i>Society</i>	<i>entity (organisation or individual)</i>
Level of control	<i>Low</i>	<i>High</i>
Source of energy	<i>Force majeure</i>	<i>intervention as a result of change</i>
Causal relationship	<i>Change drives transformation</i>	<i>driven by transformation</i>

Table 2-3: A comparison between change and transformation

Up to this point it was reasoned that change is the driving factor of transformation, but an entity's transformational actions could be so intense that it becomes the driver of change.

Transformation could be a continuation of an existing trend, referred to as first-order transformation or evolution. Conversely, transformation could be a discontinuity between the past and the future trends referred to as second-order

transformation or revolution. Second-order transformation is never achieved without renewal or the mastery of new skills [Ferreira: 3, Nadler: 13].

There is a relationship between the basic needs of the entity and the transformation it experiences. So for instance, mankind has evolved from a lower order Maslow level to a higher one through an evolutionary transformation process. These are the reasons for natural progression in nature and, indeed, for mankind's progress. It is subject to adversity that we excel. The skills that carry us through are our ability to adapt, to learn, as well as our capacity to be dissatisfied with the present state. These skills combined with a vision of a better future, lead to survival. The relationships in this learning cycle are shown in Figure 2-6.

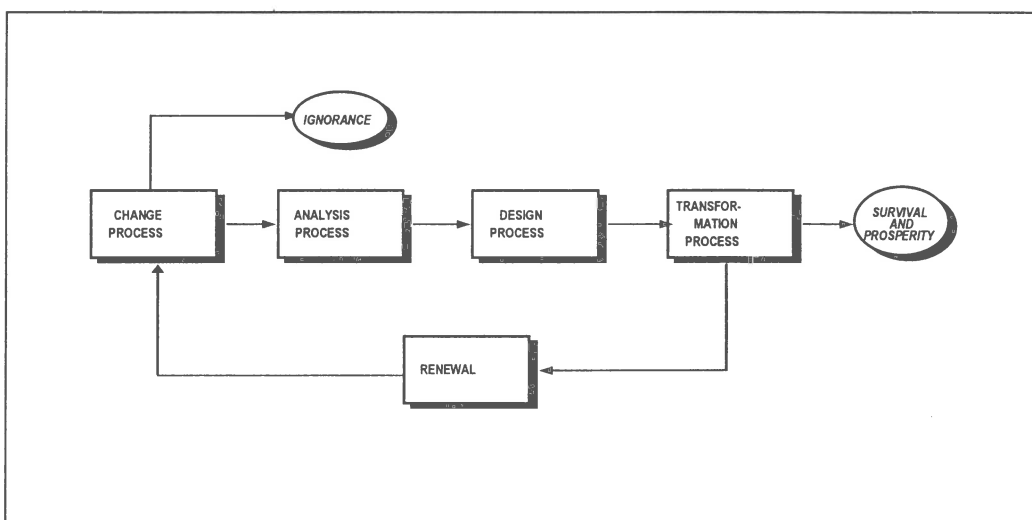


Figure 2-6: Transformation as a learning cycle

The term transformation is a collective noun. Transformation is seldom a one-dimensional activity. Transformational actions can occur in all the dimensions of an entity. These transformational actions are known as *interventions*. Thus,

transformation is a set of interrelated interventions that all support a common goal. To understand transformation further, the concept of a *state* must be defined.

*A state is defined as a set of parameters that describe the dimensions of a situation.*

It is useful to draw an analogy between the state, transformation and transformation level of a system; and the position, displacement and velocity of a particle. In other words:

- A state implies a position which can be expressed in terms of a set of coordinates;
- transformation describes translation of the position as the first derivative of the state with respect of time; and
- transformation rate measures the velocity of transformation as the second derivative of the state with respect to time.

### 3. Strategic Concepts

*“A strategy is the pattern or plan that integrates an organisation’s major goals, policies and actions sequences into a cohesive whole. A well-formulated strategy helps to marshal and allocate an organisation’s resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated change in the environment and contingent moves by intelligent opponents.”*

*James Brian Quinn [10]*

#### 3.1. The definition of strategy

The Oxford Dictionary defines the term *strategy* as:

*“STRATEGY - ...the art of formulating a series of manoeuvres to obtain a specific goal.”*

According to Quinn [10] there is no precise definition for strategy, and most authors will use the term differently. For example some authors include goals and objectives as part of the strategy while other make firm distinctions between them. The oldest literature regarding strategy must surely be that of military aspects.

The term *strategy* or its adjective *strategic*, was derived from the Greek word *stratos*, meaning *army* or *war*. The origins of the word “*strategy*” can also be traced to “*strategos*” referred to a role (a general in command of an army). Later it came to mean “the art of the general”, which is to say the psychological and behavioural skills with which he occupied the role. By the time of Pericles (450 B.C.) it came to mean managerial skill (administration, leadership, oration, power). And by Alexander’s time it referred to the skill of employing forces to overcome opposition and to create a unified system of global governance. [Quinn: 10].

As much as society claims to be civilised, people will always engage in warfare. The reason for warfare is simple - a common goal that is pursued by two or more opposing parties. Although the basis for warfare in the business environment is economic interaction between the organisation and its stakeholders, the philosophies around strategy remains the same as those proposed for warfare by the Chinese 2000 BC [Sun Tzu: 15].

*“Warfare is the greatest affair of state, the basis of life and death, the way to survival and extinction. It must be thoroughly pondered and analysed.”*

*Sun Tzu [15]*

A strategy specifies the thinking of the general, describes the proposed course of action of the different campaigns that compose the war and regulates the battles to be fought in each.

Although authors may differ on the precise definition of strategy this dissertation will distinguish between the two related aspects as follows:

- The goal of an organisation; and
- strategy - the road leading to this goal.

### 3.2. The Goal

Goldratt [5] describes the goal of an organisation as “*The goal of any organisation is to make money now and in the future*”. Only by defining this goal can the road leading to the goal be defined. Making money or rather creating value is aimed at the satisfaction of stakeholders’ requirements.

According to Moll [11] these requirements are:

- Generating maximum return for the owners of the business;
- satisfying customer requirements as a means to the above end; and
- maintaining a balance with the requirements of all the other stakeholders involved.

### 3.3. Corporate strategy vs. Business strategy

According to Porter [16] a diversified company has two levels of strategy: *business unit strategy* (or competitive strategy) and *corporate strategy* (or company-wide strategy). Competitive strategy concerns how to create competitive advantage in each of the businesses in which a company competes. Corporate strategy concerns two different questions: What business



the corporation should be in and how the corporate office should manage the array of business units. Corporate strategy is what makes the corporate whole add up to more than the sum of its business unit parts. Grant [6] summarises the distinction as follows: Corporate strategy is concerned with *where* a firm competes; business strategy is concerned with *how* a firm competes.

### 3.4. Fundamentals of Corporate strategy

Andrews [16] describes corporate strategy as the pattern of decisions in a company that determines and reveals its objectives, purpose, or goals. These decisions produce the principal policies and plans for achieving those goals and define the range of business the company is to pursue. This will also define the kind of economic and human organisation it is or intends to be, and the nature of the economic and non-economic contribution it intends to make to its shareholders, employees, customers and communities. Grant [6] describes corporate strategy as decisions over the scope of a firm's activities. He defines this *scope* as:

- Product scope – How specialised should the firm be in terms of the range of products it supplies?
- Geographical scope – What is the optimal geographical spread of activities for the firm?
- Vertical scope – What range of vertically linked activities should the firm encompass?

Because a diversified company is a collection of individual businesses, corporate strategy making is a bigger picture exercise than crafting strategy for a single-business company. In a diversified company, corporate managers have to craft a multi-business, multi-industry strategic action plan for a number of different business divisions competing in diverse industry environments. Managing a group of diverse businesses is usually so time consuming and complex that corporate level managers delegate lead responsibility for business level strategy making to the head of each business unit.

A corporate strategy in a diversified company concentrates on [Thompson: 16]:

- Making moves to position the company in the industries chosen for diversification. The basic strategy options here are:
  - Acquire a company in the target industry;
  - form a joint venture with another company to enter the target industry; or
  - start a new company internally and try to grow it from the ground.
- Taking action to improve the long-term performance of the corporation's portfolio of businesses once diversification has been achieved.
  - Helping to strengthen the competitive position of existing businesses;
  - divesting businesses that no longer fit into management's long-range plans; and
  - adding new businesses to the portfolio.



- Trying to capture whatever strategic fit benefits exist within the portfolio of businesses and turn them into competitive advantage.
- Evaluating the profit prospects of each business unit and steering corporate resources into the most attractive strategic opportunities.

## 4. Diversification fundamentals

### 4.1. Building shareholder value: The ultimate justification for diversification

The underlying purpose of corporate diversification is to build shareholder value. For diversification to enhance shareholder value, corporate strategy must do more than simply diversify the company's business risk by investing in more than one industry. Shareholders can achieve the same risk diversification on their own by purchasing stock in companies in different industries. Strictly speaking, diversification does not create shareholder value unless a group of businesses perform better under a single corporate umbrella than they would perform operating as independent, stand alone businesses. For example, if company A diversifies by purchasing company B and if A and B's consolidated profit in the years to come prove no greater than what each would have earned on its own, then A's diversification into business B has failed to provide shareholders with added value. Company A's shareholders could have achieved the same  $2+2=4$  result on their own by purchasing stock in company B. Shareholder value is not created by diversification unless it produces a  $2+2=5$  effect where sister businesses perform better together as part of the same firm than they could perform as independent companies. [Thompson: 16]

### 4.2. Three tests for judging a diversification move

The problem with such a strict benchmark of whether diversification has enhanced shareholder value is that it requires speculative judgement about

how well a diversified company's business would have performed on its own. Comparisons of actual performance against the hypothetical of what performance might have been under single business circumstances are never very satisfactory and besides, they represent after-the-fact assessments. Strategists have to base diversification decisions on future expectations. However, attempts to gauge the impact of particular diversification moves on shareholder value do not have to be abandoned. Corporate strategists can make before-the-fact assessments of whether a particular diversification move is capable of increasing shareholder value by using three tests [Porter: 14]:

- ***The attractiveness test:*** The industry chosen for diversification must be attractive enough to produce consistently good returns on investment. True industry attractiveness is defined by the presence of favourable competitive conditions and a market environment conducive to long-term profitability. Such simple indicators as rapid growth or a sexy product are unreliable proxies of attractiveness.
- ***The cost of entry test:*** The cost to enter the target industry must not be so high as to erode the potential for good profitability. However a catch-22 situation can prevail here. The more attractive the industry, the more expensive it is to get into. Entry-barriers for new start-up companies are nearly always high – where barriers are low, a rush of new entrants would soon erode the potential for high profitability. Buying a company already in the business typically entails a high acquisition cost because of the industry's strong appeal. Costly entry undermines the potential for enhancing shareholder value.

- *Better of test*: The diversifying company must bring some potential for competitive advantage to the new business it enters or the new business must offer some potential for added competitive advantage to the companies other businesses. The opportunity to create sustainable competitive advantage where none existed before means there is also opportunity for adding profitability and shareholder value.

Diversification moves that satisfy all three tests have the greatest potential to build shareholder value over the long-term. Diversification moves that can pass only one or two tests are highly suspect.

#### 4.3. Diversification strategies

Once a decision is made to pursue diversification, any of several different paths can be taken. There is plenty of room for varied strategic approaches. A better understanding can be made of the strategic issues corporate managers face in creating and managing a diversified group of businesses by looking at six types of diversification strategies [Thompson: 16]:

- Strategies for entering new industries – acquisition, start-up and joint ventures.
- Related diversification strategies.
- Unrelated diversification strategies.
- Divestiture and liquidation strategies.
- Corporate turnaround, retrenchment and restructuring strategies.
- Multinational strategies.

The first three involves ways to diversify, the last three involves strategies to strengthen the position and performance of companies that have already diversified.

#### 4.4. Vertical integration

Vertical integration relates to an organisation's ownership of vertically related activities. The greater the organisation's ownership and control over successive stages of the value chain for its product, the greater its degree of vertical integration. The extent of vertical integration is indicated by the ratio of an organisation's value added to its sales revenue. Highly integrated companies tend to have low expenditure on bought-in goods and services relative to their sales. Vertical integration can occur in two directions [Grant: 6]:

- Backward integration – where the firm takes ownership and control of producing its own inputs.
- Forward integration – where the organisation takes ownership and control of its own customers.

Vertical integration may also be full integration and partial integration:

- Full integration exists between two stages of production A and B when all stage A's production is sold internally and all stage B's requirements are obtained internally. Thus, at most integrated steel plants, all pig iron production goes into steel making and none is purchased from outside.

- Partial integration exists when stage A and B are not internally self-sufficient. Thus car manufacturing have traditionally been partially backward – integrated into components.

According to Grant [6] decisions over the vertical range of activities within the organisation raise critical issues concerning the basis of an organisation's competitive advantage both now and in the future as well as linkages between vertical activities. In determining whether an organisation should undertake a particular activity or rely on an outside supplier, the most common question is whether the firm possesses a competitive advantage in that activity. However, a key aspect of any vertical chain is the nature of the linkage between activities that cannot be appraised individually. In determining whether to undertake any activity the firm must compare the transactions costs of buying from or supplying to another firm, as compared with the administrative costs of managing the internal relationship. Vertical linkages are not just about the cost of managing the transaction; there are also implications for competitive advantages. To what extent is the organisation's competitive advantage at each stage enhanced by its involvement in adjacent stages? This is especially relevant with regard to the ability to extend and upgrade competitive advantage in the future and respond to external change. The danger is that decisions made with respect of today's market and technological circumstances may be suboptimal with regard to tomorrow's competitive circumstances. Thus vertical integration decisions involve two sets of questions:



- First, which activities to be conducted internally and which to be outsourced.
- Secondly, the choice of vertical arrangements with external suppliers and buyers – whether spot contracts, long-term contracts or some form of strategic alliance.

#### 4.5. Organisational diversification strategies

The possible corporate diversification approaches, including vertical integration, as described above are not mutually exclusive. They can be pursued in combination and in varying sequences, allowing companies to customise their diversification strategies to fit their own circumstances. According to Thompson [16], the most common business portfolios created by corporate diversification strategies are:

- A “dominant business” enterprise with sales concentrated in one major core business but with a modestly diversified portfolio of either related or unrelated businesses (amounting to one third or less of total corporate-wide sales).
- A narrowly diversified enterprise having a few (two to five) related core business units.
- A broadly diversified enterprise made up of many mostly related business units.
- A narrowly diversified enterprise comprising of a few (two to five) core business units in unrelated industries.

- A broadly diversified enterprise having many business units in mostly unrelated industries.
- A multibusiness enterprise diversified into unrelated areas but with a portfolio of related businesses within each area – thus giving it several unrelated groups of related businesses.

In each case the geographic markets of individual businesses within the portfolio can be local, regional, national or global. Thus a company can be competing locally in some businesses, nationally in others and globally in others.

Diversification becomes an attractive strategy when a company runs out of profitable growth opportunities in its present business. There are two fundamental approaches to diversification – into related businesses and into unrelated businesses. The rationale for related diversification is strategic: diversify into businesses with strategic fit, capitalise on strategic fit relationships to gain competitive advantage, then use competitive advantage to achieve the desired  $2+2=5$  impact on shareholder value. The reason for diversifying into unrelated businesses hinge almost exclusively on opportunities for attractive financial gain – there is nothing strategic about unrelated diversification.

Most companies have their strategic roots in single-business concentration. Vertical integration strategies may or may not be involved depending on the extent to which forward or backward integration strengthens a firm's



competitive position or helps it secure a competitive advantage. When diversification becomes a serious strategic option, a company must choose to pursue related diversification, unrelated diversification or some mix of both. There are advantages and disadvantages to all three options. Once diversification has been accomplished, management's task is to figure out how to manage the existing business portfolio. The six primary post-diversification alternatives are [Thompson: 16]:

- Make new acquisitions;
- divest weak performing business units or those that no longer fit;
- restructure the makeup of the portfolio if the overall performance is poor;
- retrench to a narrower diversification base;
- pursue multinational diversification; and
- close down / liquidate money-losing business units that cannot be sold.

## 5. Refocusing fundamentals

### 5.1. Corporate Refocusing

While corporate restructuring can be defined as portfolio restructuring aimed at increasing or decreasing the firm's scope, refocusing is taken to be a special case of restructuring with the specific purpose of scope reduction. That is, a reduction in the number of distinct businesses in which a firm is simultaneously active. However, as with corporate restructuring, no generic accepted definition of downscaling or refocusing as yet exists. [Ferreira: 3]

Refocusing can be brought about by means other than divestitures, such as the simple closure of a line of business and the redeployment of assets to existing lines of business. [Markides: 9] While the literature often treats corporate divestiture and refocusing as synonymous, the former is a collection of mechanisms such as sell-offs, spin-offs and leverage buyouts. It is defined as the disposal of one or more of a corporation's strategic business units to existing shareholders, a third party, existing management or a combination of existing management and third parties, either by means of proportional share distribution, an outright sale, or substitution of debt for equity.

According to Grant [6] increased industrial specialisation by companies is the result of three principle factors:

- Management's emphasis on shareholder value rather than growth;
- increased turbulence in the business environment; and
- new ideas about corporate strategy and the nature of the firm.

Reasons often given by corporate managers for initiating voluntary restructuring include [Ferriera: 3]:

- The need to strengthen the balance sheet by liquidating unattractive assets;
- to separate very different operations and thus to improve focus; and
- to uncover the hidden value of a subsidiary.

Economists argue that divestitures, either through sell-offs or spin-offs, will increase *shareholder* wealth by, for example [Ferriera: 3]:

- Transferring wealth from bondholders to stockholders;
- enabling closer monitoring by reducing the number and diversity of transactions under one manager;
- increasing future contracting flexibility;
- eliminating diseconomies of scale;
- providing more flexibility of choice to investors; and
- shedding poorly performing business units to improve overall profitability and to generate cash for more promising acquisitions.

Lubatkin and Chatterjee [8] examined the stability of the relationship between diversification and shareholder value across continuous time periods. Contrary to the prescriptions of portfolio theory, they found that related diversification can earn significant higher risk-adjusted returns during periods of market decline than unrelated diversification. No differential was observed during stable or bull markets. This led them to conclude that the best way to protect shareholder value against economic downswing is to diversify in a manner such that “all of one’s eggs are in similar baskets”

From a refocusing perspective, the critical issue is whether a business unit is worth more inside the corporate fold than on its own, which is virtually impossible to determine *ex ante* and just as impossible to prove *ex post* [Ferreira: 3].

## 5.2. Advantages of a focused strategy

Companies that concentrate on a single business can achieve enviable success over many decades without relying on diversification to sustain their growth. McDonald’s, Coca-Cola, Apple computers, Federal Express, Xerox and Polaroid all won their reputation in a single business. Concentrating on a single line of business, totally or with a small amount of diversification, has some useful organisational and managerial advantages [Thompson: 16].

- Single business concentration entails less ambiguity about “who we are and what we do”. The energies of the total organisation are directed down one business path. There is less chance that senior management’s time or

organisational resources will be stretched thinly over too many activities. Entrepreneurial efforts can focus exclusively on keeping the firm's business strategy and competitive approach responsive to industry change and fine-tuned to customer needs.

- All the firm's managers, especially top executives, can have hands-on contact with the core business and in-depth knowledge of operations.
- Concentrating on a single business carries a heftier built-in incentive for managers to come up with ways to strengthen the firm's long-term competitive position in the industry rather than pursuing the fleeting benefits of higher short-term profits. The company can use all its organisational resources to become better at what it does. Important competencies and competitive skills are more likely to emerge. With management's attention focused exclusively on just one business, the probability is higher that ideas will emerge on how to improve production technology or enhance efficiencies anywhere in the activity cost chain. The more successful a single-business enterprise is, the more able it is to transfer its accumulated experience and distinctive expertise into a sustainable competitive advantage and a prominent leadership position in its industry.

### **5.3. Disadvantages of a focused strategy**

Controversially the big risk of single-business concentration is putting all a firm's eggs in one industry basket. If the industry stagnates, declines or otherwise becomes unattractive, a company's future outlook dims, its growth



rate becomes tougher to sustain and superior profit performance is much harder to achieve. At times, changing customer needs, technology innovation or new substitute products can undermine or wipe out a single-business firm. Consider, for example, what word processing has done to the electric typewriter business and what compact disc players are doing to the market of cassette tapes and records. For this reason most single-business companies turn their strategic attention to diversification when their business starts to show signs of peaking [Thompson: 16].



## 6. Commonly used Portfolio evaluation techniques

The most commonly used technique to evaluate the different strategic businesses units within a diversified company is the portfolio matrix analysis. According to Thompson [16] there are three most commonly used business portfolio matrixes:

- The growth-share matrix developed by the Boston Consulting Group;
- the industry attractiveness-business strength matrix pioneered at General Electric; and
- Hofer-A.D. Little industry life-cycle matrix.

A business portfolio displays a two-dimensional comparison of the strategic position of every business / business unit that a diversified company is in. Matrixes can be constructed using any pair of strategic positioning indicators. The most revealing indicators are industry growth rate, market share, long-term industry attractiveness, competitive strength and stage of production / market evolution. Usually one dimension of the matrix relates to the attractiveness of the industry environment and the other to the strength of a strategic business unit within the industry.

### 6.1. The BCG growth-Share matrix

The Boston Consulting Group (BCG) portfolio matrix compares a diversified company's businesses / strategic business units on the basis of industry growth rate and relative market share. This business portfolio matrix was the first to

be widely used. Each business unit appears as a “bubble” on the four-cell matrix, with the size of each bubble or circle scaled to the percentage of revenues it represented in the overall corporate portfolio. An example is illustrated in Figure 6-1. [Hax: 7]

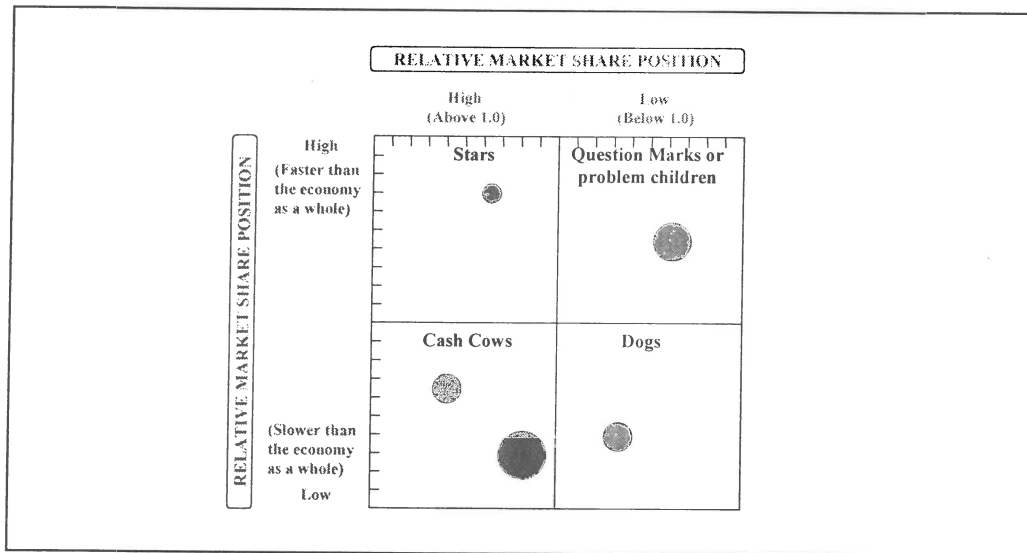


Figure 6-1: BCG portfolio matrix example

At first the line between “high” and “low” industry growth rates was arbitrarily defined at around twice the real GNP growth rate plus inflation, but boundary percentages can be raised or lowered to suit individual preferences. It is also being argued that a business unit growing faster than the economy as a whole end up in the “high-growth” cells and those in industries growing slower end up in “low-growth” cells (“Low-growth” industries are those that can typically be described as mature, ageing, stagnant or declining).

The Relative market share of a business or business unit can be defined as the ratio of the business’s market share to the market share of the largest rival firm in the industry. Market share in this equation is measured in terms of unit

volume and not in currency. This can easily be described in the form of an example:

*Business A has a 15 Percent share of the industry's total volume and A's largest rival has a 30 percent share. A's relative market share is 0.5 (15 divided by 30). If business B has a market-leading share of 40 percent and its largest rival has a market share of 30 percent, then B's relative market share is 1.33.*

According to this definition only businesses that are market-share leaders in their respective industries will have relative market share values greater than 1. All businesses that are not market share leaders will thus have a relative market share of below 1. The original standard of the BCG matrix was that 1 indicated the border between “high” and “low” relative market share.

This had the effect that only business leaders could be “**Stars**” or “**Cash Cows**” and all other runner-up businesses / business units could only be “**Question Marks**” or “**Dogs**”. Many portfolio analysts think that the boundary of 1 is unreasonably stringent. They advocate putting the boundaries at 0.75 or 0.8 so that businesses having above average market could be “**Stars**” or “**Cash Cows**”. Businesses below 0.75 or 0.8 are clearly in below average positions.

The use of relative market strength in the BCG growth-share matrix is analytically superior than using actual markets share. This can be explained as follows:



*Business A has a market share of 12 percent that may be a very weak position if the industry leader has a market share of 60 percent, but if the leader has a market share of only 15 percent, then business A is actually in a very strong position. In the first scenario the relative market share was 0.2 and in the second scenario it was 0.8. The difference in relative market share would not have been misleading.*

From this example it can also be seen that by setting the boundary between “high” and “low” on the relative market share at 0.8 instead of on 1 would have been more representative of the true market position.

BCG also addressed a second equally important point by using relative market share. Relative market share is likely to reflect relative cost based on experience and economies of large-scale production. Large businesses may be able to operate at lower unit cost than smaller ones because of technology and efficiency gains that are attached to large size. They found that, as cumulative volume of production increases, the knowledge gained from the firm’s growing production experience often led to the discovery of additional efficiencies and ways to reduce cost even further. BCG labelled the relationship between cumulative production volume and lower unit costs the experience curve effect.

## 6.2. Question marks and Problem children

Strategic business units falling into this quarter of the BCG growth-share matrix are labelled “*Question mark*” or “*Problem children*”. Due to the low relative market share businesses in this quarter are questioned about their ability to successfully compete against larger, more cost-effective competition. But the rapid market growth makes such a business attractive from an industry standpoint. This gives this quarter the label of “*Question mark*” or “*Problem children*”. “*Question mark*” businesses are also typically “*cash hogs*”. This is due to their high cash flow needs (due to the investment requirements of rapid growth and product development) and their low internal cash generation (due to their low market share, less access to experience curve effects and scale economies and consequently thinner profit margins).

A business unit in this quarter requires large volumes of cash from its parent company just to keep in pace with the fast growing market. The potential exists for this business unit to become an industry leader, which will require even larger support from the parent company. The corporate parent of a “*cash hog*” business has to decide if it is worthwhile to fund the perhaps considerable investment requirements of a “*question mark*” division.

BCG argued that the two best strategic options for a question mark business are [Thompson: 16]:

- An aggressive invest- and expand strategy to capitalise on the industries rapid growth opportunities; or
- divestiture if the costs of expanding capacity and building market share outweighs the potential payoff and financial risk.

### 6.3. Stars

Due to high relative market share and high growth rate in this quadrant businesses are labelled as “*Stars*”. The excellent profit and growth opportunities of these businesses make them a parent-corporation’s performance boosters. Given their dominant market share position and rapid growth environment, stars typically require large cash investments to expand production facilities and meet working capital needs. But they also tend to generate their own large internal cash flow due to the low-cost advantage of scale economies and cumulative production experience.

“*Stars*” typically fall into two categories [Thompson: 16]:

- Businesses that can sustain their own investment needs with their own cash flow. These businesses are usually strong-positioned in industries where growth is beginning to slow and makes little use of the parent companies finance.
- Businesses that needs substantial investment capital beyond what they can generate on their own and thus “*cash hogs*”.

#### 6.4. Cash cows

Businesses with a relative high market share in a low growth market are described as “*Cash cows*”. Businesses in this quadrant usually generate substantial cash surplus over what is needed for self-reinvestment and growth. Due to their leading market position these businesses has large sales volumes and a reputation to earn large profits. Because of the slow growing industry these businesses typically generate more cash from current operations than what it needs to sustain its market position.

“*Cash cows*” were once “*Stars*” but their market matured and the market growth declined. These businesses are valuable due to their constant profits. Their cash flow can be used to cover dividend payments, finance acquisitions and provide funds for investing in emerging “*stars*” and “*problem children*” being groomed as future “*stars*”. BCG suggests a fortify and defend strategy for “*cash cows*”, while effectively generating cash flow to reallocate to other business investments. Weakening “*cash cows*”, however, may become candidates for harvesting and eventually divestiture if industry maturity results in unattractive competitive conditions and dries up the cash flow surpluses.

[Thompson: 16]

#### 6.5. Dogs

The quadrant relating to low relative market share in a slow growth industry are labelled as “*Dogs*” because of their dim growth prospects, their trailing

market position and the squeeze that being behind the leaders on the experience curve puts on their profit margins. Usually these businesses cannot produce self-sustaining cash flows due to small profit margins and brutal competition. Consequently, except in unusual cases, BCG prescribes that weaker-performing “*dog*” businesses be harvested, divested or liquidated, depending on which alternative yields the most cash. [Thompson: 16]

#### 6.6. BCG growth-share matrix implications on corporate strategy

The main contribution of the BCG growth – share matrix is the attention it draws to the cash flow and investment characteristics of various types of businesses and how corporate financial resources can be shifted between businesses to optimise the performance of the whole corporate portfolio. BCG suggests the following sound, long-term corporate strategy:

- Utilise the excess cash generated by “*cash cow*” business units to finance market-share increases for “*cash hog*” businesses;
- the young “*stars*” unable to finance their own growth and “*problem children*” with the best potential to grow into “*stars*”; and
- when “*stars*” markets begin to mature and their growth slows, they become “*cash cows*”.

The *success sequence* is thus “*problem child / question mark*” to young “*star*” (but perhaps still a “*cash hog*”) to self-supporting “*star*” to “*cash cow*”. [Thompson: 16]



Weaker, less-attractive “*question mark*” businesses unworthy of a long-term invest and expand strategy are often a liability to be a diversified company because of the high cost economics associated with their low relative market share and because they do not generate enough cash to keep pace with market growth. According to BCG’s prescriptions, these “*question marks*” should be prime divestiture candidates unless they can be kept profitable and viable with their own internally generated funds. “*Question mark*” businesses in industries with small capital requirements, few scale economies and few experience curve effects can often compete satisfactorily against larger industry leaders and contribute enough to corporate earnings to justify retention. Weaker “*question marks*” still have a low-priority claim on corporate resources and a dim future in the portfolio. “*Question mark*” businesses unable to become “*stars*” are destined to drift vertically downward in the matrix, becoming “*dogs*”, as their industry growth slows and market demand matures.

“*Dogs*” should be retained only as long as they contribute adequately to overall company performance. Strong “*dogs*” may produce a positive cash flow and show average profitability. The further down a “*dog*” business is positioned in the matrix, the more likely it is tying up assets that could be re-deployed more profitably in other business units. The first alternative to a weakening, or an already weakened “*dog*” business should be a harvesting strategy. If a harvesting strategy is no longer attractive, a weak “*dog*” should be eliminated from the business portfolio.

The BCG defines four disaster sequences:

- The first is when a “*star*” business erodes to that of a “*problem child*” over a period of time and then being dragged down by declining industry growth to a “*dog*” position.
- The second is when a “*cash cow*” loses market leadership to the extent that it becomes a “*dog*” on the decline.
- Thirdly, strategic mistakes can also be made by over-investing in a safe “*cash cow*” and under-investing in a “*question mark*”, to the extent that instead of becoming a “*star*”, it tumbles into the “*dog*” category.
- The fourth can be described as “*shotgunning*” resources over many “*question marks*” rather than concentrating on the best ones to boost their chances of becoming “*stars*”.

### 6.7. Strengths and weaknesses of the Growth-Share matrix approach

The matrix contribute to the strategist’s tool kit when it comes to evaluation of the portfolio’s overall attractiveness and reaching broad prescriptions concerning the strategy and direction for each business unit. By viewing a diversified company as a collection of cash flows and cash requirements (present and future) is a major step forward understanding the financial aspects of corporate strategy. The BCG matrix highlight the financial ‘interactions’ within a corporate portfolio, show the kinds of financial considerations that must be dealt with and explain why priorities for corporate resource allocation can differ from business to business. It also provides good rationalisations for both invest-and-expand strategies and divestitures. Yet it has several legitimate shortcomings [Thompson: 16].

- A four-cell matrix based on high-low classifications hides the fact that many businesses (the majority?) are in markets with an “average” growth rate and have relative market shares that are neither high nor low but in-between or intermediate. In which cells do these average businesses belong?
- While labelling businesses as stars, cash cows, dogs or question marks does have communication appeal, it is a misleading simplification.

This matrix is also not a suitable measure for smaller businesses in a large industry where the total market share is low in comparison with the largest rival.

### **6.8. The industry Attractiveness / Business strength matrix**

An alternative approach pioneered by General Electric attempts to avoid some of the shortcomings of the BCG matrix. This nine-cell matrix is based on the two dimensions of long-term industry attractiveness and business strength / competitive position as illustrated in Figure 6-2. The dimensions are a composite of several considerations as opposed to a single factor [Hax: 7].

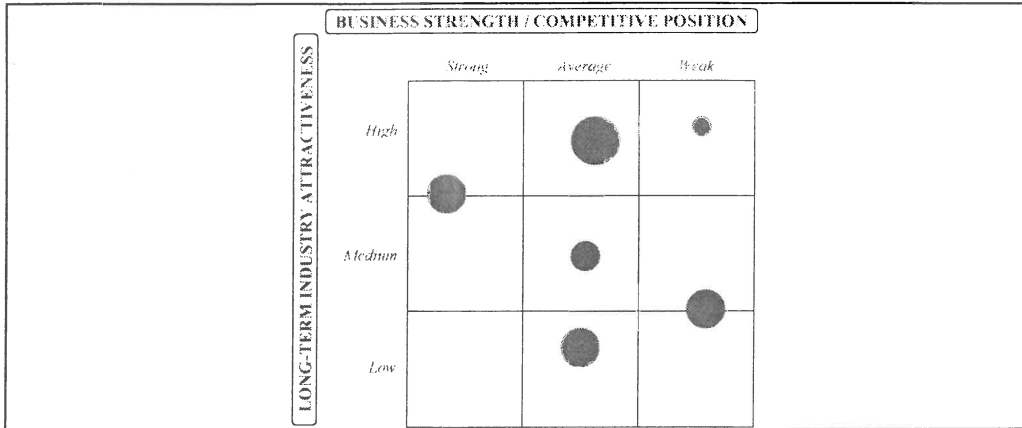


Figure 6-2: Industry Attractiveness / Business strength matrix

### 6.9. The life cycle matrix

In the life cycle matrix, businesses are plotted in terms of the stage of industry evolution and competitive position, as illustrated in Figure 6-3. The circles represent the size of the industry involved and pie wedges denote the business's market share. A could be labelled a developing winner and B a loser or “dog” [Hax: 7].

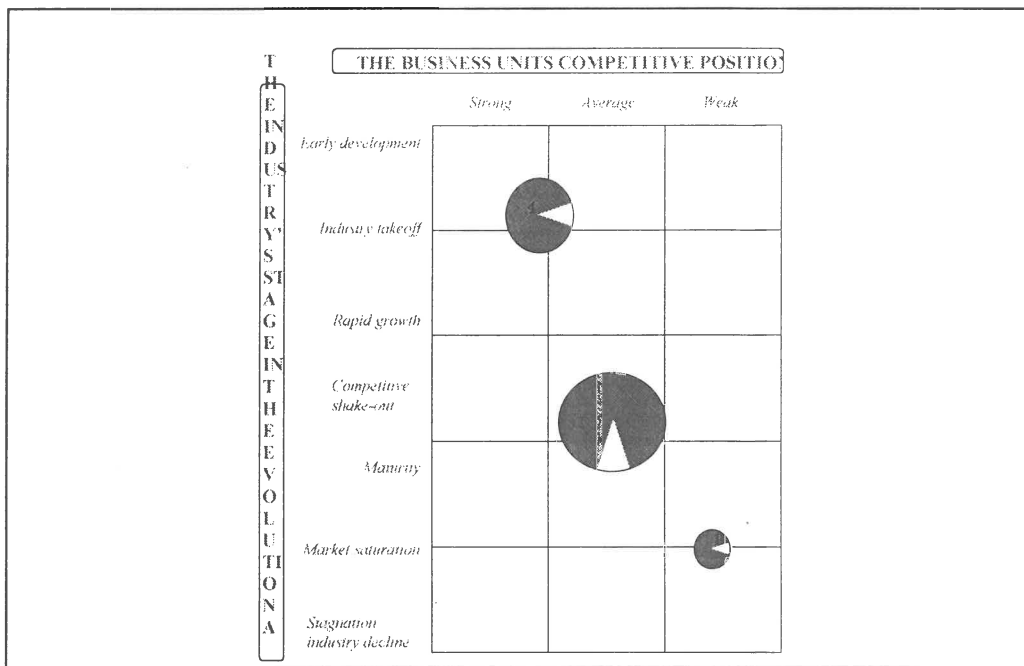


Figure 6-3: Life cycle matrix

## 7. Continuous evaluation of diversified companies

According to Coperland et al. [2] each business unit in a large diversified company should continuously be evaluated against the following measurements:

- A business or business unit that would be more valuable if operated by someone else should be divested.
- Businesses/units that are earning less than their cost of capital and cannot be sold should be liquidated.
- Viable core businesses should be improved and growth should be enhanced either through internal investment or via mergers and acquisitions.

Once a company has diversified, three strategic issues continuously challenge corporate strategy-makers [Thompson: 16]:

- How attractive is the group of businesses the company is in?
- Assuming the company sticks with its present line up of businesses, how good is its performance outlook in the years ahead?
- If the previous two answers are not satisfactory, what should the company do by way of getting out of some existing businesses, strengthen the position of remaining businesses and getting into new businesses to boost the performance prospects of its business portfolio?

## 8. The organisational Life cycle

One of the best known and most enduring marketing concepts is the product life cycle [Grant: 6]. Products are born, their sales grow, they reach maturity, they go into decline, and they ultimately die. If products have life cycles, so too do the industries / organisations that produce them. The industry and related organisations life cycles are the supply side equivalent of the product life cycle. Thus, to the extent that an industry or organisation produces a range and sequence of products, the industry life cycle is likely to be of longer duration than that of a single product. This can thus also be argued for diversification of organisations over time vs. single non-diversified businesses.

As this dissertation sees an organisation as a system and having understood the properties and functioning of systems generically, an understanding is required of the basic structure that the systems approach enables. Blanchard [1] suggests the application of a life-cycle approach.

A system interacts with its environment (larger whole) from which the purpose is derived based on the requirements set by the environment. It subsequently processes these requirements and the resources given by the environment into something that satisfies the requirements.

Blanchard's life cycle concept is derived from the point of view that life in general is cyclical and can be modelled as a system as shown in Figure 8-1.

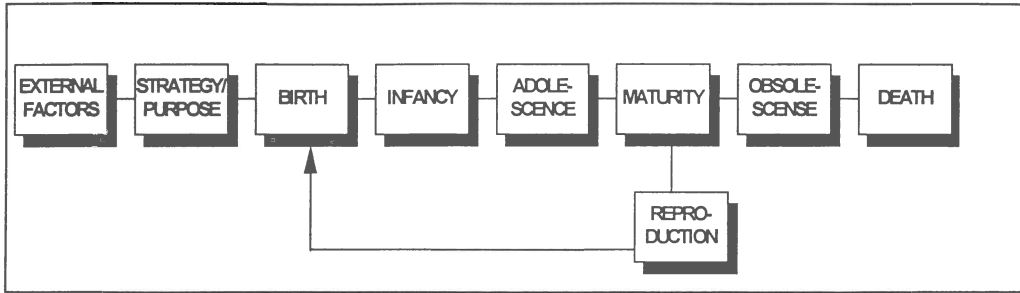


Figure 8-1: The life cycle of a system

Similar to the BCG matrix it is often advantageous for an organisation to understand the relative life cycle. An adapted version of the BGC matrix is suggested by Moll [11] for these purposes, illustrated in Figure 8-2.

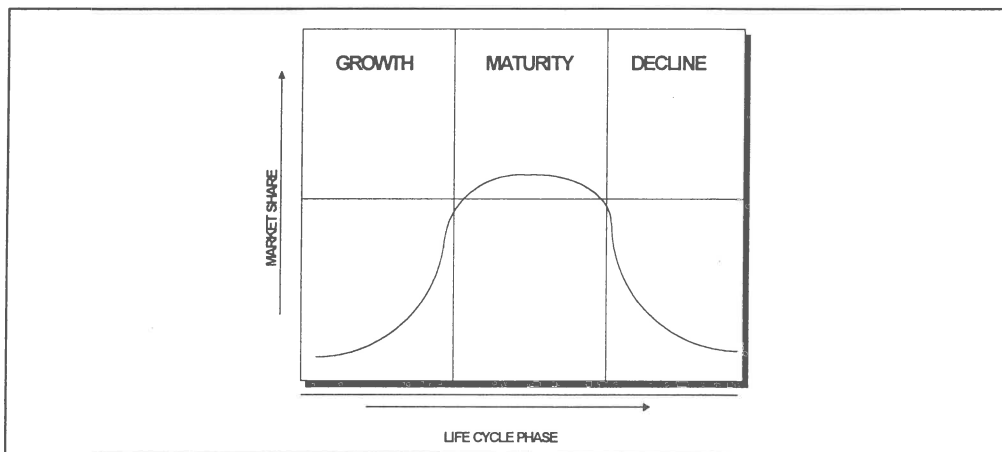


Figure 8-2: Life cycle grid

## 9. Conclusion

Part One indicates that an engineering perspective could be given to diversification and refocusing based on their relationship to organisational transformation and in turn to the Business Engineering theory.

In Part Two the fundamentals of the Business Engineering theory, diversification, refocusing, as well as commonly used portfolio evaluation techniques are discussed. These fundamentals are essential in order to understand the interrelationship and hence to be able to develop an engineering orientated methodology to address the question of diversification and refocusing.

Part Three describes the methodology to guide and evaluate a diversification or refocusing strategic decision.



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## Part Three – Methodology

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*“If we can know where we are and something about how we got there, we might see where we are trending – and if the outcomes which lie naturally in our course are unacceptable, to make timely change.”*

**Abraham Lincoln**

## **1. Objectives**

Part Two introduces the fundamentals of the Business Engineering theory that will be the framework for addressing the business transformational problem of diversification and refocusing from an engineering perspective. It also provides a literary overview of strategic concepts, diversification and refocusing fundamentals as well as commonly used portfolio evaluation techniques.

Part One introduces the objectives of this dissertation (Why?).

Part Two defines the fundamentals of the dissertation (What?).

Part Three describes the methodology of the dissertation (How?).

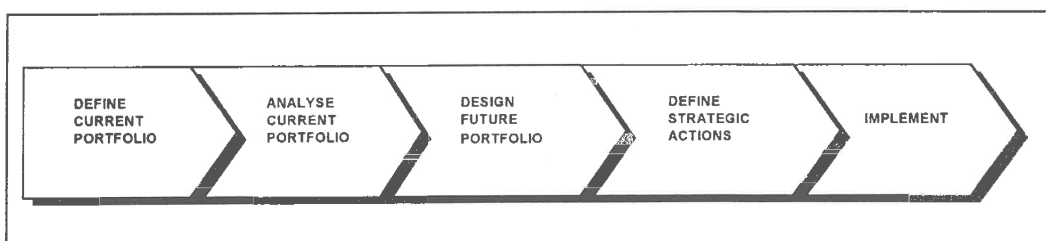


Part Three introduces the methodology for addressing the business transformation problem of diversification and refocusing from an engineering perspective. This methodology is deduced from fundamental principles and finally the Business Engineering theory is applied. The methodology is described in the context of:

- Business Analysis
- Business Design
- Business Transformation

## 2. Methodology

A diversification and refocusing methodology is proposed, based on a process of chronological steps that starts by defining an organisation's current portfolio and then analysing its business units so as to determine their contribution towards long-term performance of the organisation and also their influence on the stakeholders requirements. After completion of these analyses a thorough understanding of the organisation's current reality can be made. A desired future portfolio is designed, with the aim of ensuring maximum stakeholder value, by applying the design methodology as guideline. Correlating strategic actions are defined that will enable the organisation to achieve the desired portfolio and to steer corporate resources into the most attractive strategic opportunities. The final step of the methodology aims at successfully implementing the new portfolio. The proposed methodology can be illustrated as in Figure 2-1.



*Figure 2-1: Methodology*



### 3. The Business Engineering approach

When the methodology, as described in paragraph 2 of this chapter, is combined with the Business Engineering process, as described in the previous chapter, an integrated process can be proposed, as illustrated in Figure 3-1.

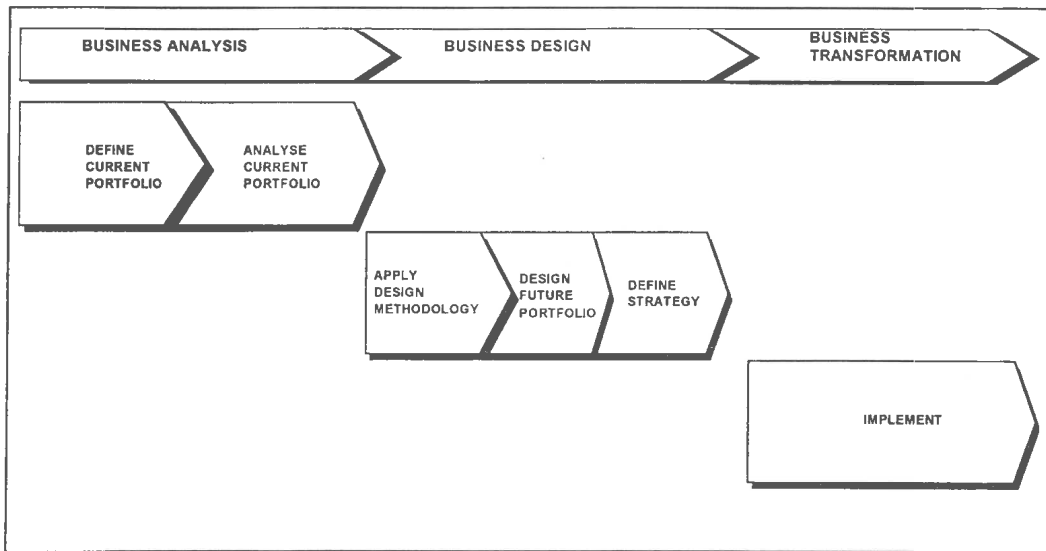


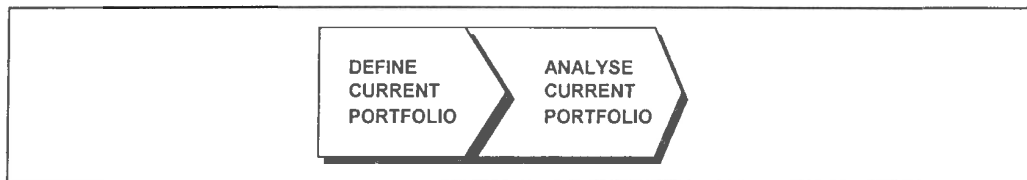
Figure 3-1: Integrated Diversification and Refocusing Methodology

## 4. Business Analysis

*“I keep six honest men (They taught me all I know); Their names are What  
and Why and When; And How and Where and Who.”*

**Rudyard Kipling**

The proposed analysis phase of the Diversification and Refocusing Methodology is based on two steps as illustrated in Figure 4-1.



*Figure 4-1: Business analysis phase*

The first step of the Business Analysis phase is aimed at defining the current *scope* of an organisation’s portfolio and the second step is concerned with analysing this portfolio and its environment, so as to develop an understanding of the *current reality* of the portfolio.

#### 4.1. Define current portfolio

The scope of an organisation's portfolio can be defined, based on [Grant: 3]:

- The range of products or commodities that the organisation's Strategic Business Units produce.
- The geographical distribution of the organisation's Strategic Business Units (local, regional, national or global).
- As well as the extent to which the Strategic Business Units are forward or backward integrated.

To visually illustrate the *scope* of an organisation's Business Units three axes, as indicated in Figure 4-2, are recommended.

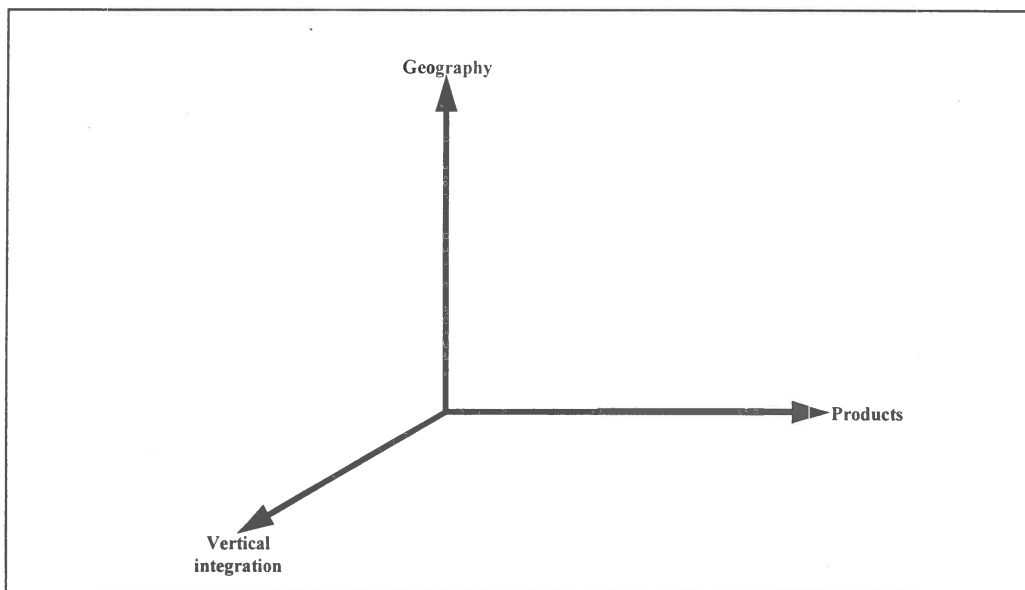


Figure 4-2: Scope Axes

As example, an imaginary organisation's scope will be defined according to the three scope axes. The imaginary organisation's portfolio is illustrated on the scope axes in Figure 4-3.

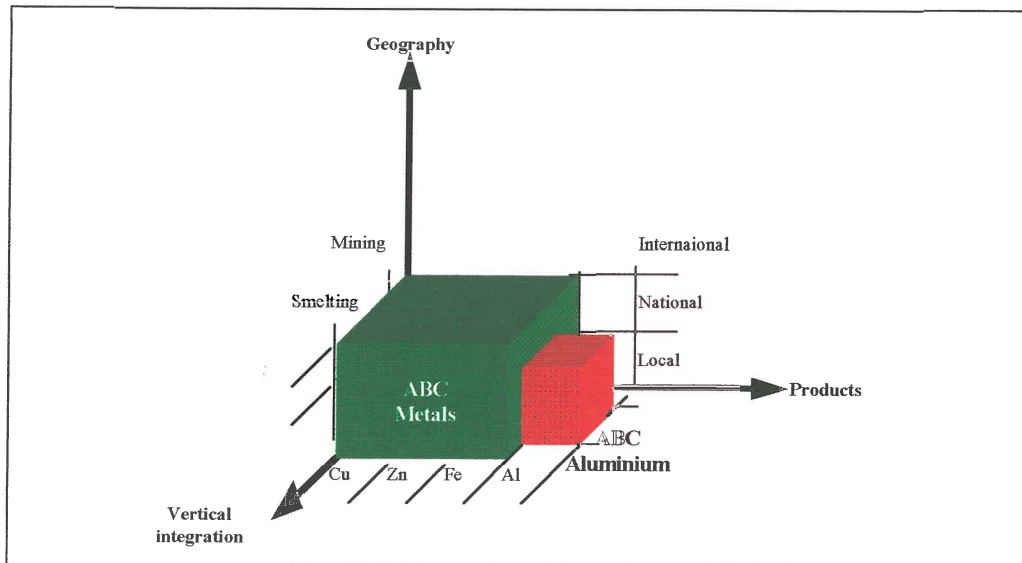


Figure 4-3: ABC (Pty) portfolio scope

An imaginary organisation, *ABC (Pty)*, has two Strategic Business Units, *ABC Metals*, that is a national, integrated mining and smelting company, and *ABC Aluminium*, that is a local aluminium smelting company.

*ABC Metals* is vertically integrated from mining to smelting in three products / commodities; namely Copper, Zinc and Iron Ore. *ABC Metals'* products are geographically distributed locally and nationally, but not internationally.

*ABC Aluminium* is not vertically integrated and is only in the smelting industry. It also has only one product / commodity and that is Aluminium.

*ABC Aluminium* is located locally and produces only for the local market.

The two Strategic Business Units are related based on their geographical location (locally), their smelting capabilities and also due to the fact that they are commodity based.

#### 4.2. Analysing Current Business Portfolio

The business analysis approach of the Business Engineering process will be adopted to analyse the current business portfolio. This approach is viewed as the process through which a thorough understanding is formed of the current reality of an organisation and is thus relevant. This process, as proposed by Moll [6], is shown in Figure 4-4.

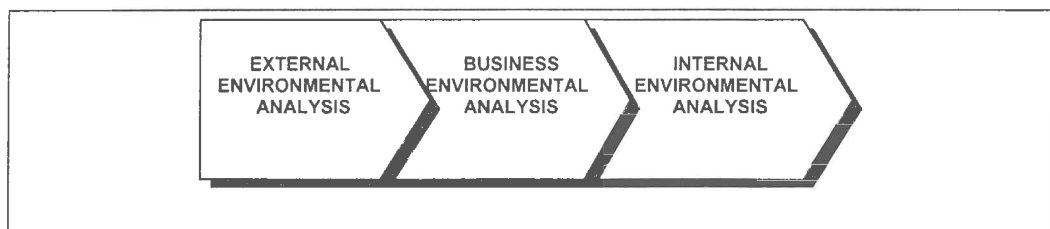


Figure 4-4: Business analysis process

Moll [6] elaborately defined the Business Analyses approach. Only specific elements, which may be defined in more detail or are necessary to ensure a line of thought, will be discussed in this dissertation. These elements, that will be discussed, are:

##### External Environmental Analysis

- Strategic importance, other than core business based on Institutional Context.



### **Business Environmental Analysis**

- Profitable growth potential in current business (industry):
  - Industry analysis;
  - Industry attractiveness; and
  - Competitive position.
- Potential for vertical integration or Co-operation potential:
  - Value chain analysis; and
  - Transactional and administrative costs.
- Competitive conditions:
  - The Five forces model.

### **Internal Environmental Analysis**

- Stakeholders requirements.
- Value creation of Strategic Business Units related to cost of capital.
- Fit with core business:
  - Resources and capability analysis.
- Restructuring potential.

### 4.3. External environmental analysis

*The external environment is defined as the macro system of which an organisation is a part. It is either an integral part of the macro system, or it plays a supportive role in the macro system [Thompson: 14].*

In analysing the external environment, a number of generic elements should be investigated; namely political environment, economic environment, social environment, technological environment and the global environment [Moll:6].

In this dissertation specific focus will be on the Institutional context so as to understand a Business Unit's strategic importance, other than core business. It is also important to analyse and understand the other elements as indicated above, these elements will not be discussed in this dissertation.

#### 4.3.1. Institutional context

Part of a major project that Khanna and Paleo [4] conducted to investigate corporate strategy in emerging markets indicated the following. By analysing the institutional context of a country it would be possible to determine strategically important business units, to be included into the organisations portfolio, essential for conducting business, but that does not comply to the core business definition.

Core competencies and focus are now the mantas of corporate strategists in the Western economies. But while managers in the West have dismantled many conglomerates assembled in the 1960's and 1970's, the large, diversified business group remain the dominant form of enterprise throughout most emerging markets.

Without effective securities regulation and venture capital firms, focused companies may be unable to raise adequate financing, and without strong educational institutions they will struggle to hire skilled employees.

Although a focused strategy may enable a company to perform a few activities well, companies in emerging markets must take responsibility for a wide range of functions in order to do business effectively. As a result companies must adapt their strategies to fit their institutional context – a country's:

- Product market;
- capital market;
- labour markets;
- its regulatory system; and
- its mechanics to enforce contracts.

How institutional context drives strategy is illustrated in Table 4-1.



<b>How Institutional Context Drives Strategy</b>			
<b>Institutional Dimensions</b>	<b>United States</b>	<b>Japan</b>	<b>India</b>
<b>Capital Markets</b>	Equity-focused; monitoring by disclosure rules and the market for corporate control	Bank-focused; monitoring by interlocking investments and directors	Underdeveloped, illiquid equity markets and nationalised banks; weak monitoring by bureaucrats
<b>Labour Markets</b>	Many business schools and consulting firms offering talent; certified skills enhance mobility	Few business schools; training internal to companies; company-specific development of talents	Few business schools and little training; management talent scarce
<b>Product Markets</b>	Reliable enforcement of liability laws; efficient dissemination of information; many activist consumers	Reliable enforcement of liability laws; efficient dissemination of information; some activist consumers	Limited enforcement of liability laws; little dissemination of information; few activist customers
<b>Government regulations</b>	Low; relatively free of corruption	Moderate; relatively free of corruption	High; corruption common
<b>Contract enforcement</b>	Predictable	Predictable	Unpredictable
<b>Result</b>	Diversified groups have many disadvantages	Diversified groups have some advantages	Diversified groups have many advantages

*Table 4-1: How institutional context drives strategy.*

It is this difference in institutional context that explains the success of large, diversified corporations in developing economies such as Indonesia and India and their failure in advanced economies such as the United States and the United Kingdom. In their [Khanna and Paleo: 4] research they found that highly diversified business groups can be particularly well suited to the institutional context of most developing countries. These conglomerates can add value by imitating the functions of several institutions that are present only in advance economies. Successful groups effectively mediate between their member companies and the rest of the economy.

Most analysts define an emerging market according to such characteristics as size, growth rate or how recently it has opened up to the global economy. In their view the most important criterion is how well an economy helps buyers and sellers come together. Ideally every economy would provide a range of institutions in order to facilitate the functioning of markets, but developing countries fall short in a number of ways.

They defined three main sources of market failure [Khanna and Paleo: 4]:

- ***Information problems*** – Buyers, broadly defined not only as consumers in product markets but also as employers in labour markets and investors in financial markets, need reliable information to assess the goods and services that they purchase and the investments that they make. Without adequate information they are reluctant to do business.
- ***Misguided regulations*** – When regulators place political goals over economic efficiency, they can distort the functioning of markets. Many emerging markets, for example, restrict the ability of companies to lay off workers. These rules do add some stability in society and in some cases they may even be intended to overcome market failure from other sources. However, the result of this is that companies are less able to take advantage of opportunities than they are in advanced economies.
- ***Inefficient Judicial System*** – Companies are reluctant to do business without ways of ensuring that their partners will hold up to their end of the bargain. Contracts can facilitate co-operation by aligning the incentives of the different parties. Markets therefore depend on judicial systems that are strong enough to enforce contracts in a reliable and predicted way.



In advance economies companies can rely on a variety of outside institutions that minimise these sources of market failure. In such a context, companies create value primary by focussing on a narrow set of activities. At the opposite extreme, stagnant or declining economies usually suffer from near-complete market failure because of the utter absence of basic institutions.

Emerging markets in the middle of the continuum offer the prospect of substantial growth because they have developed at least some of the institutions necessary to encourage commerce. But institutional voids are still common enough to cause market failure. As a result companies in emerging markets often have to perform these basic functions themselves. In their [Khanna and Paleo: 4] view that is the crucial distinction between doing business in an emerging market and operating in an advanced economy.

#### 4.4. Business environmental analysis

*The business or task environment is defined as the level of operation at which a specific organisation interacts with its environment, consisting of a description of the input, processes and output of the system, and the inherent attributes that influence this operation [Thompson: 14].*

In viewing an organisation as a system, the analysis process is focused on the stakeholders requirements, value creation, value chain, industry, markets and competitive forces that affect the organisation [Moll: 6]. This dissertation will specifically focus on analysing the following elements:

- Profitable growth potential in current business (industry):
  - Industry analysis;
  - Industry economic factors;
  - Industry attractiveness; and
  - Competitive position.
- Potential for vertical integration or Co-operation potential:
  - Value chain analysis; and
  - Transactional and administrative costs.
- Competitive conditions:
  - The Five forces model.

#### 4.4.1. Industry analysis

*An industry is a collection of organisations that propose to satisfy similar client/customer requirements [Porter: 7].*

When analysing an industry, the following factors are evaluated:

- The boundaries of the industry;
- the structure of the industry;
- the nature of competition; and
- trends within the industry.

#### 4.4.2. Industrial economic factors

Globally and nationally, factors often exist that influence the state of a whole industry. General trends in these factors are often cyclical and an understanding is required of the cyclical nature of demand patterns and those factors influencing demand and supply in the industry. It is of value to model these cycles and forecast their future patterns [Moll: 6].

By analysing the industrial economic factors an overall understanding of the current or potential industry can be gained. This includes current industry profitability and growth potential as well as determining if a potential industry would be conducive to long-term profitability.

#### 4.4.3. Industry attractiveness

According to Grant [3] industry attractiveness is computed on the basis of the following factors:

- Market size;
- Market growth (real growth rate over 10 years);
- Industry profitability (3-year average return on sales of the business and its competitors);
- Cyclicalness (average annual percent trend deviation of sales);
- Inflation recovery (ability to cover cost increases by higher productivity and increased prices); and
- Importance of overseas markets (ratio of international to national markets).

#### 4.4.4. Competitive position

Strategic Business Unit's competitive position is computed on the basis of the following variables [Grant 3]:

- Market position (as indicated by share of the national / international market and market share relative to that of leading competitors);
- Competitive position (superior, equal or inferior to competitors) with regard to quality, technology, manufacturing, distribution, marketing and cost; and
- Return on sales relative to that of leading competitors.

#### 4.4.5. Value chain analysis

*The value chain of an organisation is a means of understanding the processes required for creating value and satisfying stakeholder requirements [Porter:7]*

Porter [7,8,9] proposes the concept of a *value chain* as a way of understanding the value creation within an organisation. A generic value chain underlies any organisation, this value chain does not necessarily start and end within the boundaries of an organisation because an organisation can outsource elements of the value chain or might merely be a player in a larger *value stream*. Modelling the value chain of an organisation also contributes by indicating a clear distinction between activities that directly contribute towards business output, and those that indirectly contribute. The collection of activities that directly contribute to business output is called the primary business process while the collection of activities that indirectly contribute is called the secondary business processes.

The generic *Porter value chain* is shown in Figure 4-5.

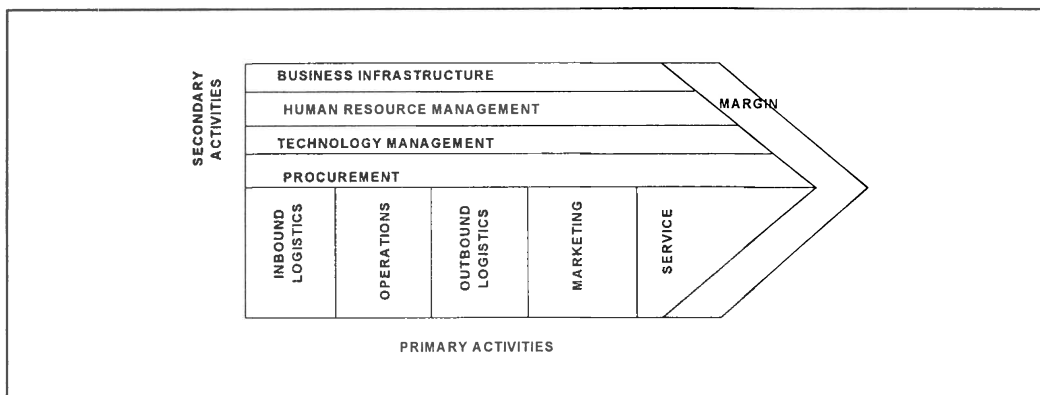


Figure 4-5 - Porter's value chain

The importance of this value chain does not merely lie in its content, but rather in the thought process that is demonstrated by it. The following basic definitions are applied in the value chain:

- A primary business process (core process) is directly committed to the creation of business output for the primary stakeholders (owners and customers) – its focus is effectiveness;
- a secondary business process (support process) is indirectly involved and act as the custodians of the various business resources (production factors) – its focus is efficiency;
- a primary business process generates direct cost and corresponding value; and
- a secondary business process generates indirect cost and value.

In order to model the primary process of the value chain, the view of the primary stakeholders is taken and the process is defined by which their requirements are met. In order to model the secondary processes, the corresponding views of all the other stakeholders are taken into account and the processes are modelled through which the requirements of these stakeholders are satisfied.

A simplified version of Porter's model is shown in Figure 4-6 [Moll: 6].



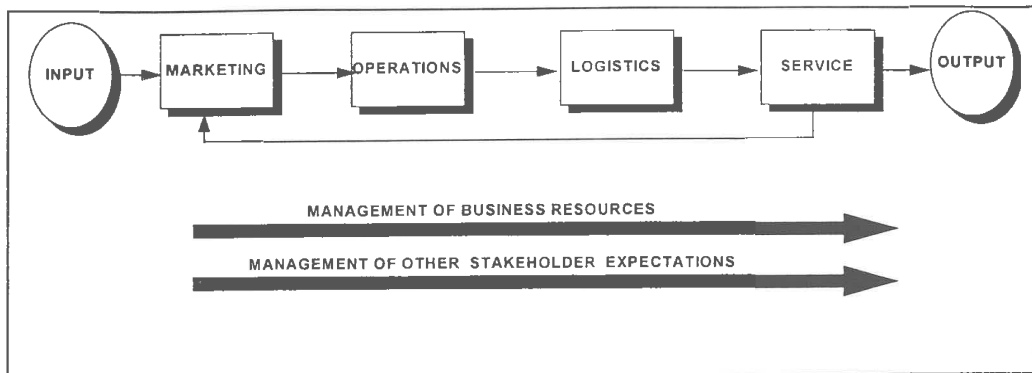


Figure 4-6 - Adapted value chain model

#### 4.4.6. Transactional and administrative costs

According to Coarse [1] relative cost is what determines which activities in a value stream / chain are undertaken within the firm, between individuals or between firms. If the *transactional costs* associated with organising across markets are greater than the *administrative costs* of organising within a firm, it can be expected that the co-ordination of a productive activity be internalised within the firm.

*Transactional costs* relate to the market mechanism where individuals and firms make independent decisions that are guided and co-ordinated by market price. *Administrative costs* relate to the administrative mechanics of firms where managers make decisions over production, supply and purchasing of inputs.

#### 4.4.7. Competitive conditions

Competitive forces shape the playing field within an industry. Porter [7] suggests the *Five Forces model* as a means of understanding competitiveness.

The Five Forces model is shown in Figure 4-7.

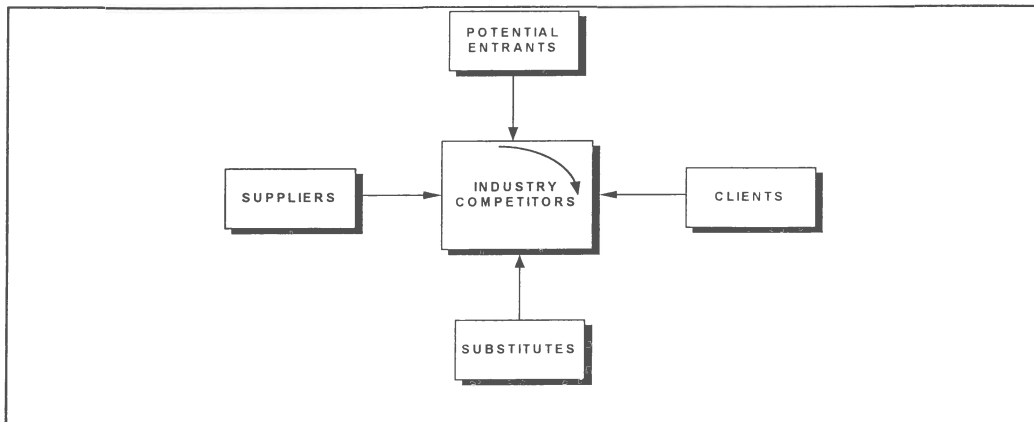


Figure 4-7 - Five forces model

In short, the model requires an understanding of the following factors:

- The market needs that are being satisfied by a particular organisation and the products on offer;
- existing competitors and the rivalry between them;
- potential competitive threats to the industry as a whole;
- potential substitutes to the industry as a whole;
- the nature of the customers (downstream system) of the industry with an emphasis on the collective power of the all the businesses in the industry to influence or expand the market;
- the nature of the supplier base (upstream system) of the industry; and
- barriers to entry into the existing business system set for/by an organisation.

Sassenberg [12] describes analysing the competitiveness within the industry specifically to understand the levels of competitiveness of an organisation as a hierarchy.

- Capital – competitiveness that is based upon having more capital than the competitors;
- skill – competitiveness that is based upon being on equal terms with the competition with capital but having better skills and competencies than the competition;
- speed – competitiveness that is based upon being on equal terms with the competition with skill but having a better responsive ability than the competition; and
- psychological robustness – competitiveness that is based upon being on equal terms with the competition with responsiveness but having a bigger desire to achieve the proposed results.

## 4.5. Internal environmental analysis

*The internal environment is defined as the set of subsystems that collectively serve as a system [Thompson: 14].*

An organisation consists of various elements or subsystems that can influence its course significantly. These are the determinants of the internal environment of an organisation [Moll: 6]. Elements that will be analysed in this dissertation are:

- Stakeholders requirements.
- Value creation of Strategic Business Units related to cost of capital.
- Fit with core business:
  - Resources and capability analysis.

### 4.5.1. Stakeholder Requirements

Through close collaboration with colleagues three requirements set by stakeholders were identified that affects organisational diversification and refocusing. These requirements relate to:

- Shareholders ownership;
- operational influence; and
- stakeholder value.

## The Corporate model

The corporate model of an organisation relates to the stakeholders' requirements regarding ownership and operational influence and the fit between these requirements and specific skills that the organisation has. This can be illustrated as in Figure 4-8.

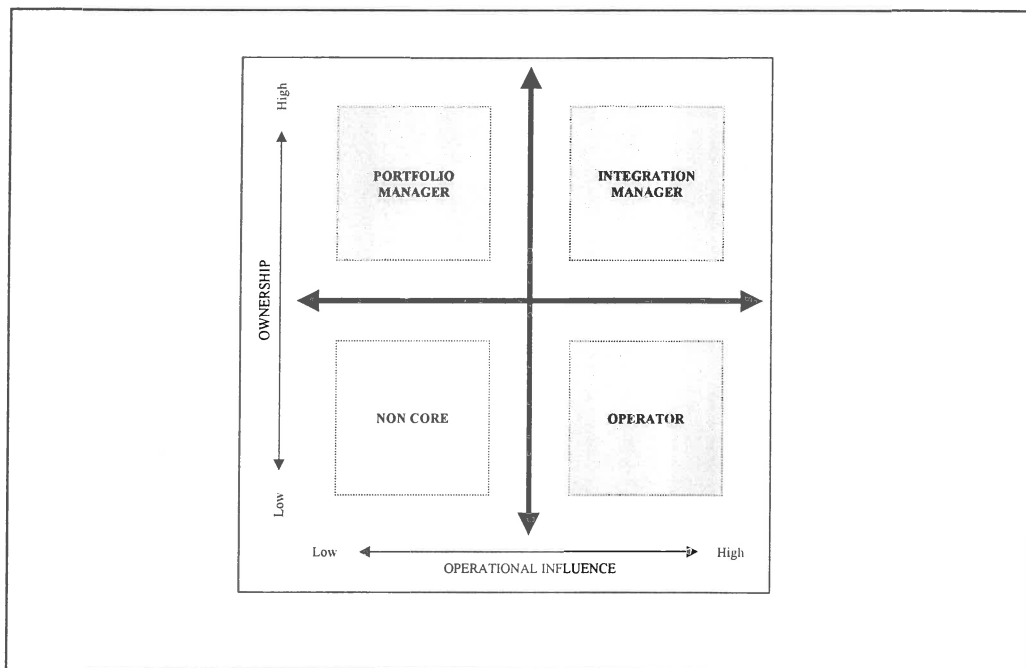


Figure 4-8: The Corporate Model

In respect of these two dimensions, ownership and operational influence, three alternatives exist:

- A **portfolio manager** approach with primary focus on ownership of investments. Its core skills and processes are portfolio management related.
- An **operator** approach with primary focus on operations, which on a secondary level might imply ownership of certain facilities. Its core skills and processes are operational.

- An **integration manager** approach focussing on the synergies between individual assets. Its core skills and processes are the integration of these assets.

High level skills required, by the three corporate model alternatives, are as illustrated in Figure 4-9.

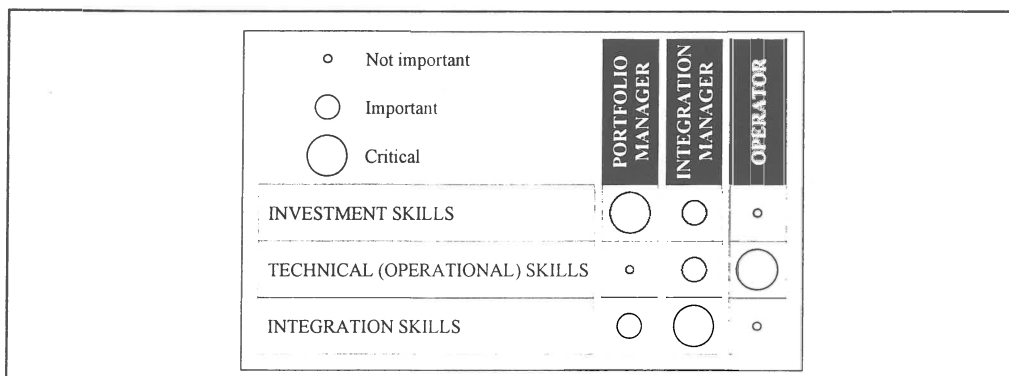


Figure 4-9: Corporate Model skills

The dynamics of the corporate model are:

- In order to move from an **operator to an integration manager** approach, a company has to increase its shareholding, focus more on synergies than operations and develop its integration skills.
- In order to move from an **integration manager to a portfolio manager** approach, a company has to focus more on investing than integration and develop its portfolio management skills.

Involvement of the corporate head office with the business units can be illustrated in Figure 4-10. This figure also indicates examples within South Africa.

	INVOLVEMENT OF CORPORATE (HQ)	EXAMPLES
PORTFOLIO MANAGER	No direct involvement	BARLOWS LTD ANGLOVAAL
INTEGRATION MANAGER	Direct involvement only in special situations	SASOL
OPERATOR	Intimate involvement	AMPLATS

Figure 4-10: Corporate Head office involvement

### Stakeholder value

Stakeholders' requirements regarding value creation may be illustrated as in Figure 4-11.

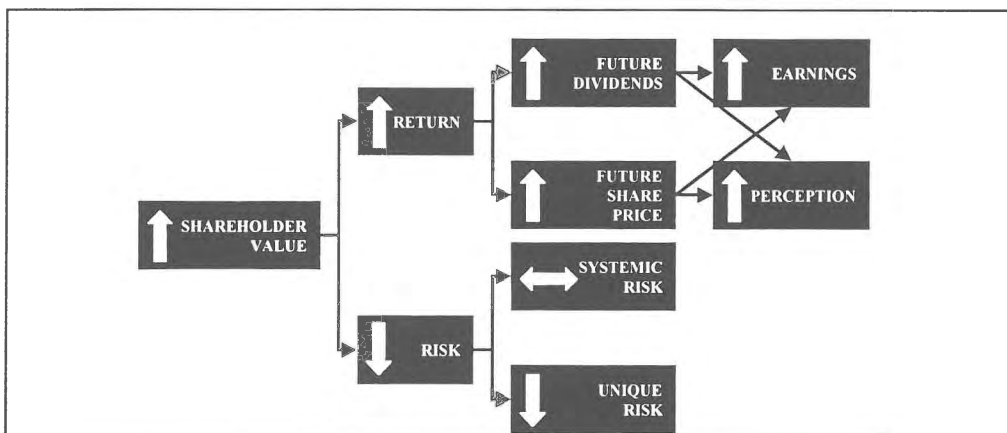


Figure 4-11: Stakeholder value

Stakeholders' value may be defined in relation to the specific stakeholder. There can broadly be distinguished between two stakeholders and related values:

- Shareholders value - Share price
- Primary stakeholders - Financial value of the organisation  
(Example – Net present value – NPV)

#### 4.5.2. Value creation

The ultimate aim of an organisation is to create value. In analysing the success of any business system, the first and foremost element to be addressed is therefore the amount of value it creates.

According to Moll [6], value creation has four generic components namely:

- Financial value created in the long-term;
- financial value created in the short-term;
- non-financial value created in the long-term; and
- non-financial value created in the short-term.

The main drive why shareholders or creditors would invest in a business or venture is based on their expected compensation for the opportunity cost of their invested funds. This investment in a specific business is based on the expected compensation as well as the associated risk of this particular investment. The weighted average cost of capital is the discounted rate, or time value of money, used to convert expected future cash flows into present



value for all the investors. In developing an average cost of capital it is important to be consistent with the overall valuation approach and with the definition of the cash flow to be discounted. To be consistent the estimate of the cost of capital must [Copeland: 1]:

- Comprise a weighted average of the marginal cost of all sources of capital (debt, equity and so on) since the free cash flow represents cash available to all providers of capital.
- Be computed after corporate taxes, since the free cash flow is stated after taxes.
- Use nominal rates of return built up from real rates and expected inflation, because the expected free cash flow is expressed in nominal terms.
- Adjust for the systematic risk borne by each provider of capital, since each exerts a return that compensates for the risk taken.
- Employ market value weights for each financial element, because market value reflect the true economic claim of each type of financing outstanding, whereas book values usually do not.
- Is subject to change across the cash flow forecast period, because of expected changes in inflation, systematic risk or capital structure.

The result of such a financial measure is an indication of whether funds should be invested in other businesses, business units or ventures with a higher expected compensation.

### 4.5.3. The organisation's core processes and competencies

*Core competencies are those fundamental skills that an organisation possesses that are world class [Prahalad and Hamel: 10,11, Stalk, Evans and Schulman: 13].*

*Martin [5] defines core competencies as exceptional skill with a critical resource or technology that can be applied to a multiple of products.*

A more complete definition would be [Moll: 6]:

- The mastery of a specific skill or resource;
- which can be applied to a number of products or services; and
- can not be imitated.

Moll [6] classifies competencies in four levels, namely:

- Unconscious incompetence;
- conscious incompetence;
- conconscious competence; and
- unconscious competence.

These competency levels are shown in Figure 4-12.

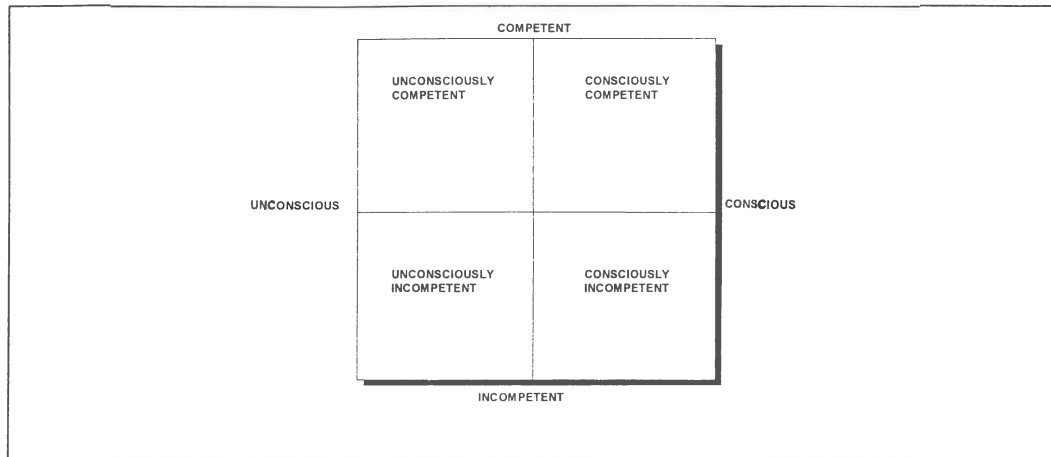


Figure 4-12 - Competency levels

The latter of these (unconscious competence) should be examined for possible current core competencies, whilst the others may lead to possible areas where competencies have to be formed.

The identification of core competencies leads to their exploitation and elimination of areas where core competencies do not exist. An organisation must evaluate its process in order to determine its core competencies and should determine the resources available for these competencies in order to determine the capability that corresponds with these competencies.

#### 4.5.4. The organisation's resources

An active organisation is a system that receives input and transforms this input into output. This implies that this input, or resources that the organisation requires, are also determinants of the internal environment [Moll: 6].

These resources are:

- Natural resources based on raw material, land and energy sources;
- capital resources based on financial resources and capital equipment; and
- knowledge resources based on information, technology and intellectual capital.

The availability of these resources has a significant impact on the performance of an organisation. They are analysed by an assessment of the organisation's requirements for each compared to the actual situation

#### **4.6. Analysis techniques**

This dissertation will not elaborate on the different techniques required to analyse the above mentioned elements. Various techniques exist and should be used appropriately. Special reference can be made to Moll [6] and Porter [7] that describe relevant techniques.

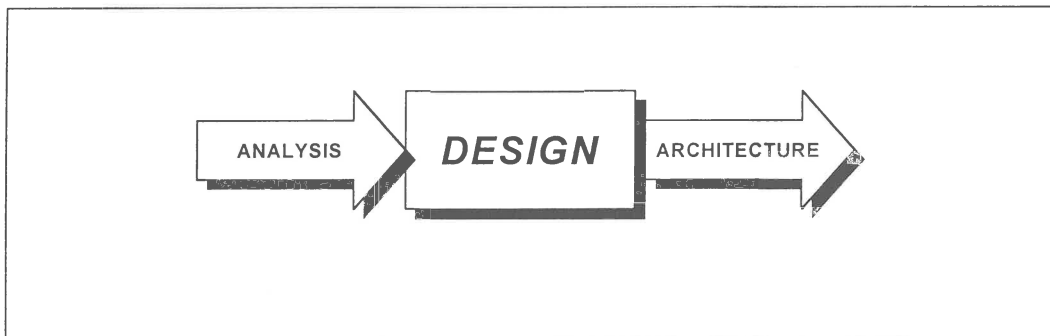
## 5. Business Design

*“Cheshire Puss” she [Alice] began... “would you please tell me which way I ought to go from here?”*

*“That depends on where you want to get to”, said the cat.*

**Lewis Carroll**

Moll [6] defines Business Design as being concerned with the definition of the *future intent* of an organisation. Design is the process and architecture is the output. The input for this process is some form of requirement or specification that was compiled through the analysis of a system. This approach is shown in Figure 5-1.



*Figure 5-1 - The design process*

The business design phase of this methodology obtains inputs from the analysis phase and by applying the design methodology (as guideline) to these inputs a future portfolio can be defined. Correlating strategic actions are also defined. The process can be illustrated as in Figure 5-2.

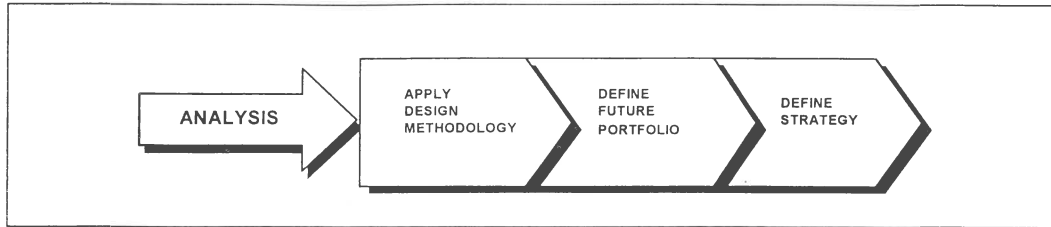


Figure 5-2: Design phase of methodology

### 5.1. Apply Design Methodology

A design methodology, as illustrated in Figure 5-3, is proposed that can be used as a *guideline* in designing and defining a future portfolio. This methodology should only be used as a guideline as this can not replace creativity that is required in the architectural design of the portfolio.

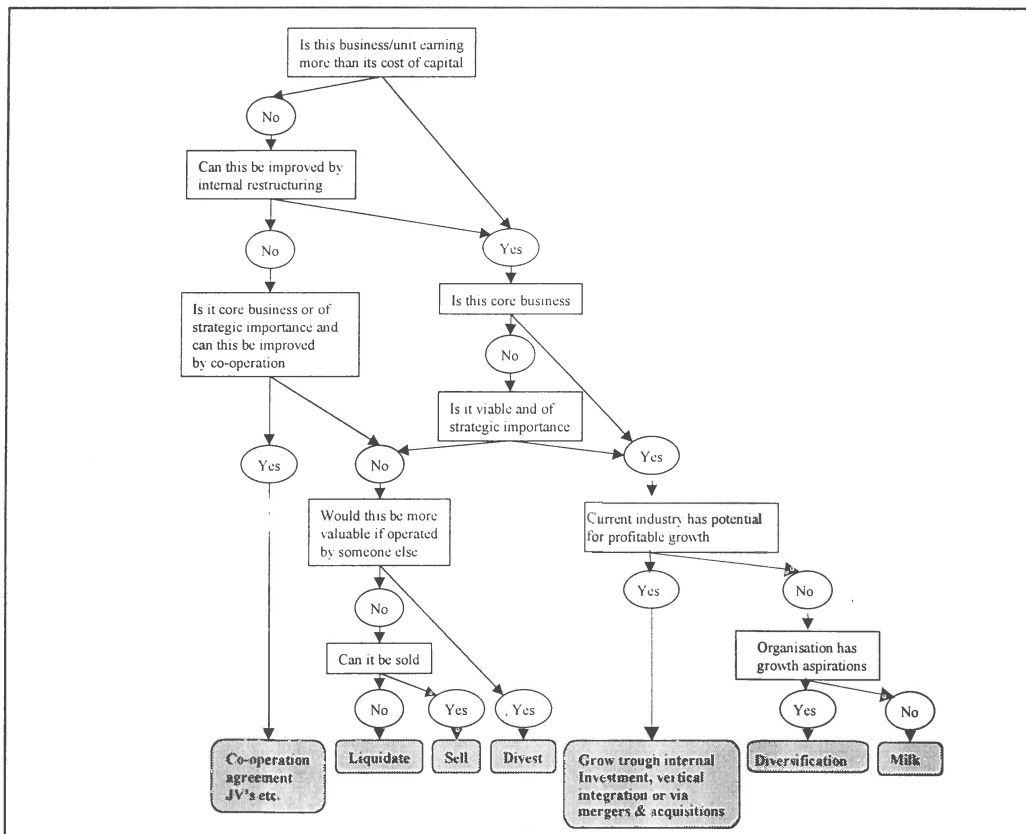


Figure 5-3: Design Methodology

Five broad areas are defined within the methodology.

### **Co-operation agreements, Alliances and Joint Ventures**

An organisation should establish a co-operation agreement with a relevant establishment in order to obtain the specific resources / capabilities or elements required to become profitable, without losing the specific unit. This should be done if Strategic Business Units or parts of their value chains / streams are:

- Of strategic importance or part of the organisation's core business; and
- not earning more than their cost of capital; and
- that can not be improved internally.

### **Refocusing**

The second area intends to reduce the scope of the organisation, through refocusing (liquidation, divesting, selling, downscaling, etc.) the business units that are:

- Not earning more than its cost of capital; and
- may or may not be of strategic importance or core business; and
- can not be improved in any way (Internally or through co-operation).

### **Internal investment and Vertical integration**

Internal investments and vertical integration (via mergers, acquisitions and Joint Ventures) should be evaluated as a growth option when the Strategic Business Units are:

- Earning more than their cost of capital; and
- fits with the organisation's core business or of strategic importance; and
- growth opportunities exist within their industries.

### **"Cash cow"**

A typical *cash cow* approach, as described by the Boston Consulting Group, should be adopted by Strategic Business Units when they are:

- Earning more than their cost of capital; and
- are core business or of strategic importance; and
- further growth is not possible or desirable.

### **Diversification**

Diversification becomes a strategic necessity when Strategic Business Units are:

- Earning more than their cost of capital;
- core business or of strategic importance;
- further growth in current industry is not possible; but
- further growth is desirable.



## 5.2. Define future portfolio

By applying the design methodology as guideline and by using creative thinking, a more appropriate future portfolio can be designed. The future portfolio should be designed, based on the three scope axes as defined in Figure 4-2. These axes are geography, vertical integration and product / commodity.

As example the same imaginary portfolio as illustrated in Figure 4-3 will be discussed. The future portfolio differs from the old portfolio in the following ways.

ABC (Pty)'s future portfolio will include an *ABC Metals* Strategic Business Unit, that has grown to include international markets and a new Strategic Business Unit named *ABC Coal*, that will be focused on the national coal transport industry. *ABC Aluminium* will not be included into the future portfolio, due to consistent weak financial performance. The future portfolio is illustrated in Figure 5-4.

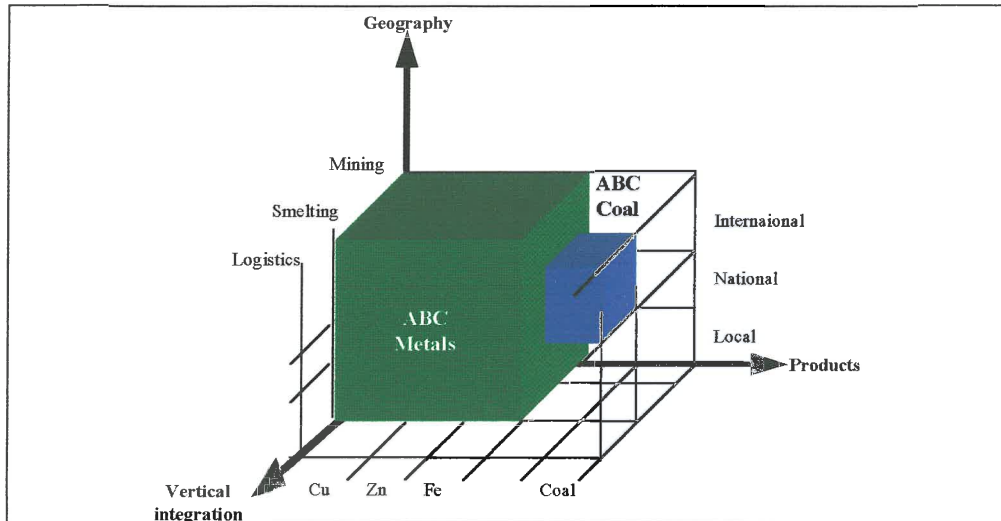


Figure 5-4: Future ABC (Pty) Portfolio

### ABC Aluminium

Due to consistent weak financial performance and various failed attempts to improve the Strategic Business Unit through internal restructuring and co-operation attempts, it was decided to remove *ABC Aluminium* from ABC (Pty)'s portfolio.

### ABC Metals

Excellent financial returns and an international industry conducive to profitable growth ensured *ABC Metals* a position in the future portfolio of ABC (Pty).

### ABC Coal

A pure financial opportunity emerged in the international coal logistics industry, this opportunity will be utilised by ABC (Pty) through including a Strategic Business Unit (*ABC Coal*) into its future portfolio.

### 5.3. Define strategy

Defining strategic actions includes:

- Strategic actions; and
- resources allocation.

#### 5.3.1. Strategic actions

Strategic actions can broadly be defined in five areas, namely vertical integration, diversification, internal growth, restructuring and refocusing. An adapted version of Thompson's [14] potential strategic actions are illustrated in Figure 5-5 to indicate the most commonly used strategic alternatives in these areas.

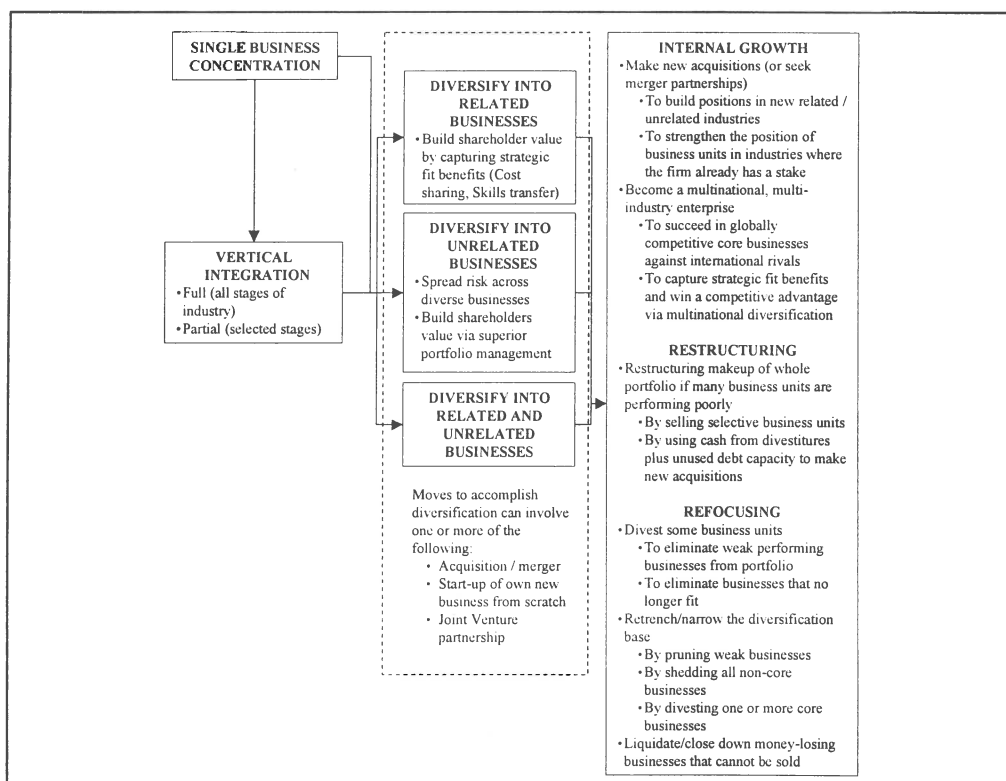


Figure 5-5: Alternative Strategies

Figure 5-5 also indicates the typical transition from a single business concentration to the organisational state. A great deal of creativity is required in order to define the most appropriate combination of strategic actions in order to move from the current portfolio towards the future portfolio.

### **Vertical integration**

Vertical integration is aimed at increasing the organisational scope through increasing the organisation's ownership and control over vertically related activities in successive stages of the value chain. Typical vertical integration strategies relate to:

- Acquisitions of upstream or downstream companies;
- Joint Ventures with upstream or downstream companies; and
- Starting a company in-house and growing it from within.

Grant [3] identifies other possible vertical relationships as:

- Long-term contracts;
- Franchises;
- Agency agreements;
- Spot contracts;
- Supplier / buyer partnerships; and
- Informal supplier / customer relationships.

## **Internal growth, restructuring and refocusing**

Internal growth, restructuring and refocusing are concerned with increasing or reducing the current portfolio scope. This can be achieved through the following strategic actions:

Internal growth to increase the current portfolio scope, can be achieved through:

- Acquisitions;
- Mergers; and
- Joint Ventures.

Typical refocusing strategies, to reduce the current portfolio scope, are:

- Divestiture;
- Liquidation;
- Downsizing;
- Retrenchment;
- Delayering;
- Sell-offs
- Spin-offs; and
- Leverage buy-outs.

## Diversification

Diversification is concerned with increasing the portfolio scope through external growth. The three alternative strategic possibilities are:

- Related diversification;
- Unrelated diversification; and
- A combination of the above.

Related diversification does not add value, just through diversifying the company's, risk by investing in more than one industry, unless a group of businesses perform better under a single corporate umbrella than they would perform operating as independent, stand alone businesses. The rationale is to diversify into businesses with strategic fit, capitalise on strategic fit relationship to gain competitive advantage, then use competitive advantage to achieve the desired  $2+2=5$  impact on stakeholder value. Typical related diversification strategies relate to:

- Acquisitions of related companies;
- Joint Ventures with related companies; and
- Starting a company in-house and growing it from within.

The reason for diversification into unrelated businesses hinge almost exclusively on opportunities for attractive financial gain – there is nothing strategic about unrelated diversification. Typical unrelated diversification strategies relate to:

- Acquisitions of unrelated companies;
- Joint Ventures with unrelated companies; and
- Starting a company in-house and growing it from within.

### 5.3.2. Resource allocation

*“No company can afford everything it would like to do. Resources have to be allocated. The essence of strategic planning is to allocate resources to those areas that have the greatest future potential.”*

**Reginald Jones**

Corporate strategy has the objective of steering corporate resources into the most attractive strategic opportunity. Resources requirements from the Strategic Business Units should be addressed by allocating resources according to financial and strategic considerations. A multidivisional organisation can achieve this through operating a competitive internal capital market where budgets are linked to past and projected divisional profitability. Individual projects are subject to a standardised appraisal and approval process. The extent and quality of information that is available within the organisation enhance the efficiency of this process.

## 6. Business Transformation

*“Weak leadership can wreck the soundest strategy; forceful execution of even a poor plan can often bring victory.”*

**Sun Zi**

Moll [6] defines business transformation as being concerned with the implementation of the proposed architecture. Putting the strategy into effect and getting the organisation moving in the chosen direction call for a different set of managerial tasks and skills. Whereas crafting strategy is largely an entrepreneurial activity, implementing strategy is largely an internal administrative activity. Whereas successful strategy formulation depends on business vision, market analysis and entrepreneurial judgement, successful implementation depends on working through others, organising, motivating, culture building and creating strong fit between strategy and how the organisation does things. Ingrained behaviour does not change just because a new strategy has been announced. Successful implementation of the desired strategy requires addressing the following main aspects:

- Defining an implementation plan;
- measuring performance against the plan; and
- creating a series of strategic supportive “fits”.



Although strategy implementation is a critical part of organisational transformation, this dissertation will not elaborate on the specific administrative actions required for successful implementation. However, it will broadly discuss guidelines to creating strategic supportive “fits”.

The motivational and inspirational challenge is to build such determined commitment up and down the ranks that an enthusiastic organisation-wide crusade emerges to carry out the strategy and meet performance targets. Along with enthusiasm and strategic commitment, must come an unified managerial effort to create a series of strategic supportive “fits”. These supportive “fits” can be summarised as [Thompson: 14]:

- The internal organisational structure must be matched to the strategy.
- The necessary organisational skills and capabilities must be developed.
- Resource and budget allocation must support the strategy.
- The organisation’s reward structures, policies, information systems and operating practices all need to reinforce the push for effective strategy execution, as opposed to having a passive role or even acting as obstacles.
- Managers must do things in a manner and style that creates and nurtures a strategic supportive work environment and corporate culture.

The stronger the strategic supportive “fits” created internally, the greater the chances of successful implementation.

## **7. Conclusion**

Part Two discusses the fundamentals of the Business Engineering theory, diversification, refocusing, strategic concepts as well as commonly used portfolio evaluation techniques. These fundamentals are essential in order to understand the interrelationship and hence be able to develop an engineering orientated methodology to address the question of diversification and refocusing.

Part Three describes the methodology to guide and evaluate a diversification or refocusing strategic decision. This methodology is incorporated into the Business Engineering process.

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## Part Four – Conclusion

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## 1. Objectives

The last chapter of this dissertation provides a summary of the most significant conclusions. These conclusions are discussed in terms of:

- An overview of the methodology; and
- the contribution of the dissertation.

## 2. Overview

### 2.1. Background and Methodology

It is becoming increasingly important for senior managers and corporate strategists to understand and act on the factors that influence, not only short-term profitability, but also long-term sustainability of their organisations. In the search to understand these factors and their influences, it became evident that organisations are inevitable bound to the industries that they serve. One of the best known and most established marketing concepts is the product life cycle. If products have life cycles, so too do the industries and organisations that produce them. It can thus be reasoned that the industry life cycle, of an industry that produces a range or sequence of products, will most likely be of longer duration than that of a single product.

It was further indicated that an organisation's external environmental change is directly related to the change in the industry or industries that it serves. The

rate of environmental change (or industry change) is increasing and organisations that recognised the need to align and continuously realign seem to live longer. External change is an important factor that influences the destiny of an organisation. One of the ways of addressing industry change in order to align and continuously realign is by diversifying or refocusing the organisation's portfolio.

It was also indicated that current approaches of addressing organisational change and transformation have nothing to do with the engineering discipline although being termed as *engineering*, *re-engineering*, *innovation* or *redesign*. Industrial Engineering is a discipline that is equipped with all the necessary skills to be a key stakeholder in business transformation issues. A subject area known as *Business Engineering* emerged and now serves as a theoretical home for the field that studies business transformation.

Various leading authors, top business professionals and consulting groups have different opinions regarding the use of diversification or refocusing. This leads to misconceptions and incorrect usage of these strategic tools. The dissertation presented an integrated diversification and refocusing approach that has been intended to serve as a guideline to senior management and corporate strategists. Figure 2-1 illustrates this integrated approach. The process consists off three main phases, Business Analysis, Business Design and Business Transformation.



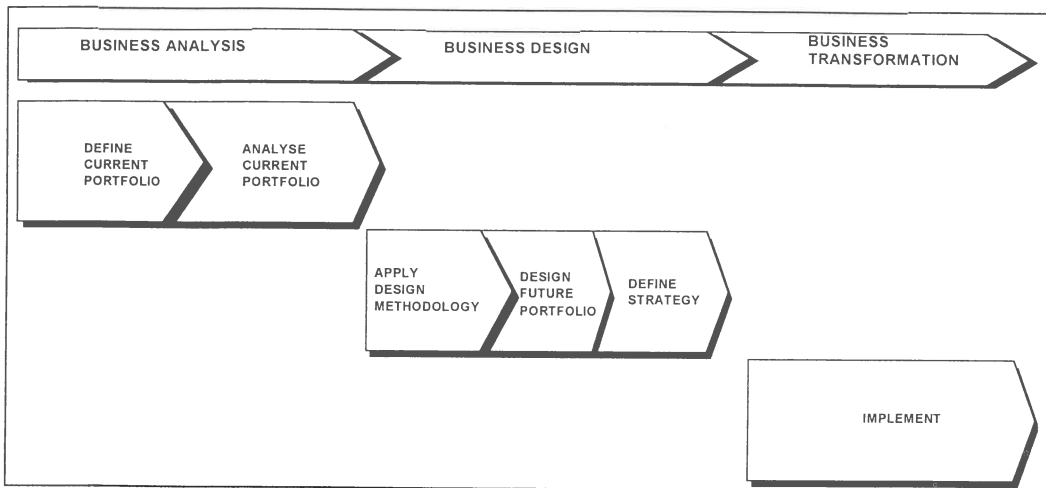


Figure 2-1: Diversification and Refocusing Methodology

## 2.2. Business Analysis

The Business Analysis phase starts by defining the scope of the organisation's current portfolio. To visually illustrate the *scope* of an organisation's portfolio three axes are recommended as illustrated in Figure 2-2.

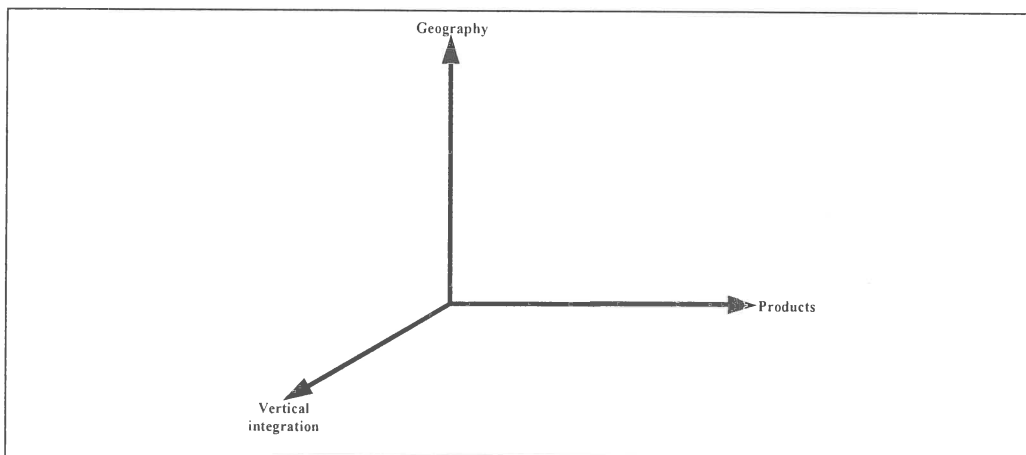


Figure 2-2: Scope Axes

Once the portfolio scope has been defined, a thorough analysis of the environment should be made, in order to understand the current reality of the organisation's portfolio. This will also lead to the identification of strategic issues that need to be addressed in the design phase of the methodology. A sub-process of the Business Engineering approach was adopted and is illustrated in Figure 2-3.

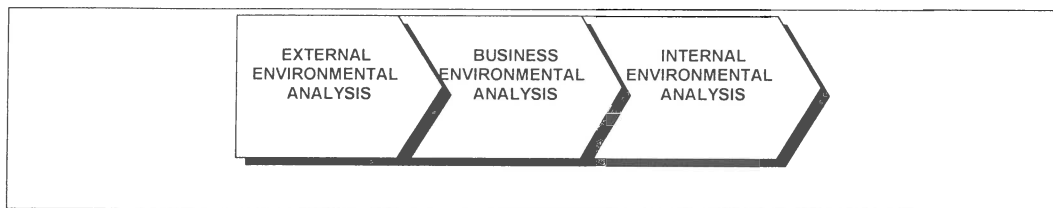


Figure 2-3: Business Analysis process

### 2.3. Business Design

A design process, presented in this dissertation (Figure 2-4), is used as a *guideline* in portfolio design, as this can not replace the creativity required in the architectural design of an organisation's portfolio. The strategic issues or design criteria are channelled through the model in order to define the most suited future portfolio.

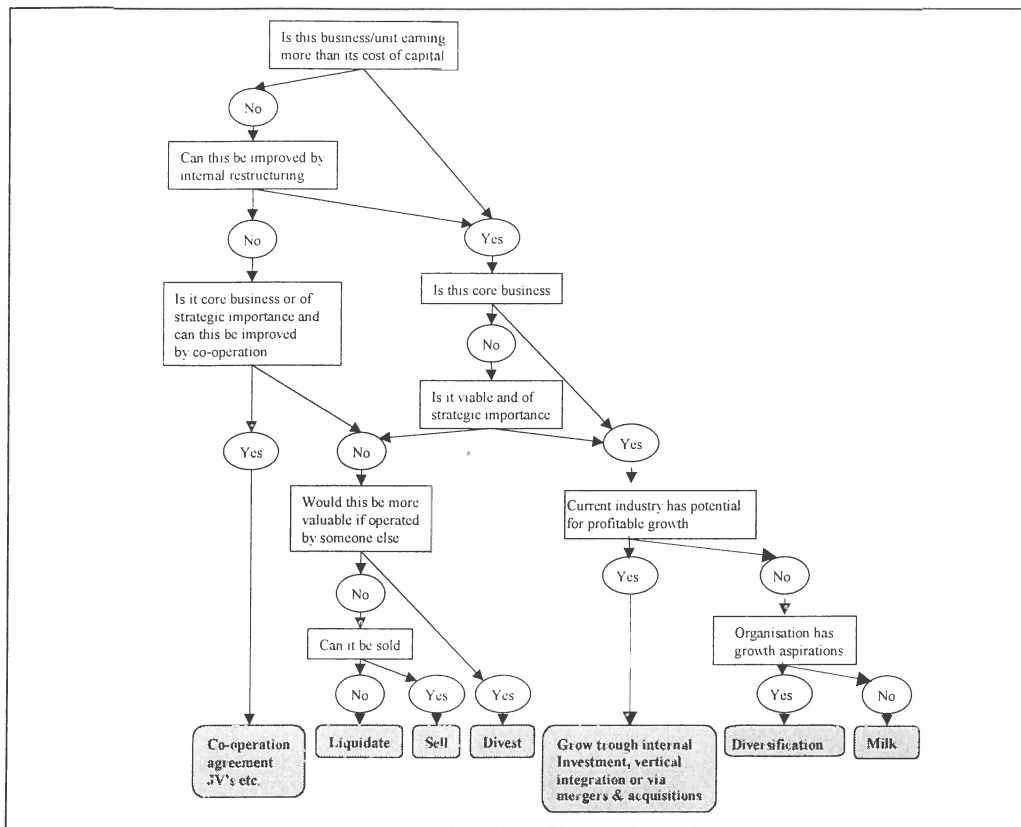


Figure 2-4: Design Methodology

## 2.4. Business Transformation

Business transformation has been defined as being concerned with the implementation of the proposed architecture (in this case, of the proposed future portfolio). An organisation's inherent behaviour does not change just because a new strategy has been announced. This dissertation proposed the following aspects in order to ensure successful implementation of the desired strategies.

- Defining an implementation plan;
- measuring performance against this plan; and
- creating strategic supportive “fits”.



## 2.5. Conclusion

By applying the proposed methodology to an organisation's portfolio, in order to align with the changing environment, senior management and corporate strategist can be assisted in understanding and acting on the factors that influence their industries. By incorporating these results with creative thinking a new portfolio can be defined that is inline with the changing environment.

### 3. Contribution

This dissertation introduced an alternative perspective on diversification and refocusing, as a business transformational problem, based on systematic engineering principles. By combining existing business diversification and refocusing principles with the Business Engineering approach a methodology was deduced that can evaluate diversification and refocusing based on an engineering approach. This is the most significant contribution. The dissertation also contributed in the following ways:

- It shows that the Business Engineering approach can be used to develop a systematic approach to diversification and refocusing.
- It supported the Business Engineering theory in showing how fundamental engineering skills can be applied to business problems.
- ⊙ This dissertation adapted, refined and developed various processes and methods. (Figures 2.1, 3.1, 5.2, 5.3 and 5.5 of Part Three)
- An integrated diversification and refocusing methodology was presented.