

A business process reengineering framework to enhance strategic planning within higher education: The case of the Tshwane University of Technology

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DECLARATION

I, **Avhashoni Michael Mushaathoni**, hereby declare that this study: "A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology" is my own work, that all sources used or quoted have been reported and acknowledged by means of complete references, and that this thesis has not been previously submitted, either in its entirety or partially, by me or any other person for degree purposes at this or any other University.

AM Mushaathoni

October 2015

Date

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ABSTRACT

The strategic alignment and reengineering of business processes is critical for institutions across sectors worldwide to achieve performance improvement and subsequently, competitive advantage. Competition within higher education forces higher education institutions, such as TUT, towards management approaches such as business process reengineering to improve effectiveness and efficiency. This research was triggered by an observation of a lack of a framework, within TUT, to guide the manner in which business processes could be strategically reengineered in a uniform, coordinated, and focused fashion. The main focus of the research was to identify core elements which could be included in a comprehensive framework to assist higher education institutions, specifically TUT, to strategically align and reengineer their core business processes in order to achieve performance improvement, which is a prerequisite for higher education institutions across sectors to achieve competitive advantage.

The findings of the research were based on the triangulation of data from a robust literature survey to uncover the theoretical underpinnings and to pinpoint core elements of business process reengineering and strategic planning, prescripts from legislation and the regulatory framework governing higher education in South Africa, an analysis of relevant strategic documents within TUT, and opinions and perceptions of sampled respondents within TUT to compare and contrast the data gathered.

The findings of the empirical exploration confirmed the problem that triggered the research, namely, that TUT lacks a framework to guide the manner in which it could strategically align and reengineer business processes. An analysis of documents within TUT and consistent with the results of the empirical exploration revealed that although various strategic documents allude to the strategic alignment and reengineering of business processes, lack of a standardised methodology hampers the uniform, coordinated, and focused operationalisation of this noble intent which is critical for the enhancement of strategic planning across sectors worldwide. Consequently, the main contribution of the research was to develop a comprehensive framework to guide the manner in which TUT and other similar higher education institutions could strategically reengineer business processes.

The proposed framework advocates an incremental approach to business process reengineering to allow for the continuous improvement of reengineered business processes. At the core of the proposed business process reengineering framework is strategy alignment and stakeholder focus. The framework suggests that when higher education institutions, such as TUT, embark on business process reengineering, they should realise that they are engaging in a strategic endeavour and that business processes targeted for reengineering should be of critical importance to the enhancement of a strategic orientation. It is imperative that higher education institutions, such as TUT, should prioritise the strategic alignment and reengineering of business processes that provide stakeholder satisfaction to create competitive advantage and survival.

Considering that TUT and other similar higher education institutions operate as an open system, the proposed framework is based on the systems approach to management. Given the dynamic nature of the South African higher education sector, the proposed framework promotes a business process reengineering methodology which, amongst others, involves the reengineering of business processes with due consideration of the national higher education imperatives and legislative requirements. Consideration of the external environment should cover an analysis of critical developments within higher education, including changes to national legislation and other national strategic imperatives. TUT and other similar higher education institutions should continuously monitor changes that might have an impact on their business processes to ensure timeous and strategic alignment and reengineering of core business processes in accordance with the changing environment. Due cognisance of the internal factors and acknowledgement of a need for internal interaction of various departments and operational units within higher education institutions, such as TUT, should also form the basis of all business process reengineering efforts.

Given the theoretical underpinning that business process reengineering is a strategic endeavour and that the strategic alignment of business processes is critical for institutions across sectors to improve institutional performance so as to achieve competitive advantage and survival, proposing a comprehensive business process reengineering framework and advocating the strategic reengineering of business processes within a South African public higher education institution constitute an advancement of knowledge within the Public Administration field of study.

KEY WORDS

- Business process reengineering
- Strategic planning
- Higher education
- Tshwane University of Technology
- Performance improvement
- New Public Management
- Public sector

**A BUSINESS PROCESS REENGINEERING FRAMEWORK TO ENHANCE
STRATEGIC PLANNING WITHIN HIGHER EDUCATION: THE CASE OF THE
TSHWANE UNIVERSITY OF TECHNOLOGY**

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LIST OF ACCRONYMS/ABBREVIATIONS

ANC	African National Congress
BPI	Business Process Improvement
BPR	Business process reengineering
CHE	Council on Higher Education
DoE	Department of Education
DHET	Department of Higher Education and Training

HEQF	Higher Education Qualification Framework
HEQSF	Higher Education Qualification Sub-Framework
HESA	Higher Education South Africa
HR	Human resources
ICT	Information and communication technology
NCHE	National Commission on Higher Education
NECC	National Education Crisis Committee
NEPI	National Education Policy Investigation
NPHE	National Plan for Higher Education
NPM	New Public Management
NPS	New Public Service
NQF	National Qualification Framework
NWG	National Working Group
NWU	North-West University
PESTEL	Political, economic, social, technological, ecological, and legal forces
RO	Research objective
RQ	Research question
SAIRR	South African Institute of Race Relations
SAQA	South Africa Qualification Authority
SARUA	Southern African Regional Universities Association
SMART	Specific, measurable, achievable, realistic, time-bound
SWOT	Strengths, weaknesses, opportunities, and threats
TBVC	Transkei, Bophuthatswana, Venda, and Ciskei
TUT	Tshwane University of Technology
UCT	University of Cape Town
UDUSA	Union of Democratic University Staff Associations
UNISA	University of South Africa

CHAPTER ONE

ORIENTATION AND CONTEXT

1.1 INTRODUCTION

According to McRoy and Gibbs (2009:688), the pressures for change within the higher education sector are evident worldwide and the pace of change is ever increasing. McRoy and Gibbs (2009) contend that doing more with less, improving the quality of learning and learning experience, and improving efficiency and effectiveness are some of the pressures public higher education institutions constantly grapple with across the globe. Similarly, Birnbaum (2000:1) confirms that public higher education institutions are of late under pressure and face many of the challenges that are also faced within the private sector. In response to these pressures for change and in the efforts to become more efficient and effective, public higher education institutions, such as TUT, have adopted management techniques that were originally practiced within the private sector.

Green (2003:196), in support of the above assertion, argues that public higher education institutions across the globe increasingly embark on business process reengineering (BPR) and strategic planning endeavours to align their management practices with private sector best practices. It is also the view of MacIntosh (2003:327) that BPR has become popular worldwide within the public sector in general, and within the public higher education sector in particular. Since democratisation in 1994, the public sector in South Africa has also undergone remarkable changes, including policy renewal and the restructuring of public higher education institutions. The socio-political transition in government brought about significant changes to the legislative, governance, and management frameworks for public higher education (HESA, 2010:2).

Van der Waldt (2004:82) points out that managers within the public sector are faced with the pressure and challenge to improve the performance of their institutions in order to achieve increases in efficiency and the effective attainment of institutional goals and objectives determined through strategic planning endeavours. Furthermore, Van der Waldt (2004) mentions that to achieve improvements in performance, managers of public sector institutions often turn to management approaches such as BPR and strategic planning. BPR and strategic planning are considered some of the management approaches that institutions worldwide and across sectors

apply in an attempt to achieve improvements in performance in order to become more competitive (Hood, 1995:93).

Consistent with the above assertions, Hood (1995:93) remarks that during the 1980s, in response to global changes, a number of countries moved away from traditional public administration practices towards a New Public Management (NPM) paradigm so as to become more competitive. Hood (1995) shows that NPM was generally accepted as the management framework through which governments across the globe attempted to modernise and reengineer the public sector through the adoption of established private sector practices. Hood (1995) adds that most commentators associate NPM with seven elements of change and one of the seven elements involves the application of proven private sector management practices within the public sector. According to Hood (1995), the basis of NPM lies in removing the traditional differences between the public sector and the private sector and placing greater emphasis on accountability in relation to institutional outcomes. Bale and Dale (1998:119) and Denhardt and Denhardt (2000:550) support the remarks made by Hood (1995:23) when they indicate that NPM refers to ideas and practices that are primarily aimed at using private sector approaches in the public sector. Bale and Dale (1998) and Denhardt and Denhardt (2000) further express that NPM centres around the presumption that private sector management practices can be successfully applied within the public sector, with due consideration of its unique and distinctive character.

The NPM paradigm also found its way to South Africa. The White Paper on the Transformation of the Public Service 1995 is regarded as the first document which indicated the South African Government's intention to reform the public sector (Carstens & Thornhill, 2000:183). The White Paper on the Transformation of the Public Service 1995 sets out eight transformation priorities with transforming service delivery as the core focus. Consistent with international experience, the White Paper on the Transformation of the Public Service 1995 reflects that the South African public sector reform interventions are mainly aimed at improving the overall performance of the public sector by emphasising efficiency, effectiveness, economy, and productivity.

The prescriptions of the White Paper on the Transformation of the Public Service 1995 also apply to public higher education institutions, considering that they form part of the broader South African public sector. The White Paper on the Transformation of the Public Service 1995 prescribes, amongst others, that to ensure that service delivery is constantly improved public sector institutions should set strategic goals and are required to report to the Parliament of the Republic of South Africa on progress towards their achievement. In response to this requirement,

public sector institutions, including public higher education institutions, should ensure that their business processes are strategically designed and reengineered so as to guarantee improved service delivery. Cole and Kelly (2011:233) define a business process as a specific ordering of work activities across time and place with a beginning, an end, and clearly defined inputs and output. Cole and Kelly (2011) further remark that well-designed business processes are necessary for the effective and efficient delivery of services. As business processes are the life blood of service delivery across sectors, it is imperative for public higher education institutions in South Africa, specifically the Tshwane University of Technology (TUT), to have a BPR framework that could guide the manner in which business processes should be strategically designed and reengineered.

This chapter provides the orientation and context from which a BPR framework referred to above will be developed. Considering that BPR and strategic planning are the key concepts and primary focus of the research, the chapter starts with a brief conceptualisation of these constructs.

1.2 CLARIFICATION OF KEY CONCEPTS

In this section, the key constructs referred to above are clarified. It is not the purpose of this section to clarify all the key words of the research. The main contribution of this section is to provide a brief clarification of the concepts that are the primary focus of the research, namely, BPR and strategic planning, as already indicated in section 1.1. A detailed exposition and exploration of BPR and strategic planning theories, principles, and approaches will be provided later during the literature review in chapters two and three.

1.2.1 Business process reengineering

BPR is defined by Hammer and Champy (1993:31–33) as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in the critical, contemporary measures of performance, such as cost, quality, service, and speed". Peppard (1996:255–265) and Hunger and Wheelen (2007:134) claim that Hammer and Champy (1993) should be credited for promoting and making BPR popular. Hunger and Wheelen (2007) further show that the principles suggested by Hammer and Champy (1993) became the industry standard for the application of BPR across sectors. As reflected above, Hammer and Champy (1993) contend that BPR should involve the radical redesign of business processes. Peppard (1996:255–

256), Johnston and Clark (2008:425), and Cole and Kelly (2011:233–235) support the radical improvement approach to BPR and indicate that the characteristics of BPR should be radical rather than incremental in its approach to change. JM Associates (2014), however, caution against the radical approach to BPR and advocate an incremental or continuous approach. JM Associates (2014) add that although BPR is aimed at the incremental improvement of business processes, institutions across sectors do not necessarily reengineer all their business processes simultaneously but that institutions rather first identify core business processes that would contribute to the enhancement of their strategic planning processes. It is imperative to reflect that BPR has evolved over the years from a radical approach to a modest approach, as it will be demonstrated in section 2.4.

Daft and Marcic (2011:235) contend that the BPR focus should be on changes to core business processes that cut across the institution embarking on BPR, thereby adding the cross institutional approach to BPR. Smit, Cronje, Brevis, and Vrba (2011:49) concur that BPR should impact the entire institution. Campling, Poole, Wiesner, Ang, Chan, Tan, and Schermerhorn (2008:310–312) emphasise the future orientation of BPR in that it focuses on a future state of an institution embarking on BPR and agree that its primary purpose is to improve strategic core business processes.

Given the above background and to serve as an operational definition for purposes of this research, BPR can be defined as the strategic redesign of core business processes that are critical to the enhancement of an institution's strategic planning process and should be aimed at achieving improvements in institutional performance. This BPR definition covers the application of BPR within both the private sector and the public sector.

1.2.2 Strategic planning

Just like with BPR, all types of planning are future oriented. Lussier (2009:12) and Mondy and Premeaux (1993:136–137) define planning as the process of setting objectives and determining in advance exactly what should be accomplished and how the objectives will be met. Lussier (2009) further shows that planning is the starting point in the management process. The Chartered Institute of Management Accountants (1992:88–89) is also of the opinion that planning precedes all other management functions as an institution must have clear objectives, targets, and operational actions. Kroon (1998:116) mentions that the need for planning exists at all levels of operation and that while planning is the responsibility of all managers regardless of

the level at which they operate, the type of planning is determined by the level at which managers operate. This research aligns itself with the assertion that planning focuses on a future state of an institution and that it occurs at all levels of operation within an institution, as it will be reflected in chapter three.

Kroon (1998:116) further suggests that planning across sectors becomes more strategic at the highest level of management in terms of its impact on institutional successes and failures. Likewise, Smit *et al.* (2011:92) describe strategic planning as a future oriented ongoing activity that is mainly performed at the highest level of management. Smit *et al.* (2011) further reflect that strategic planning focuses on an entire institution and not on a specific department or operational unit. Jones and Hill (2010:26) agree that the responsibility of top-level managers is to strategically plan in the context of the future competitive environment. To this, Smith, Carroll, Kefalas, and Watson (1980:160) add that strategic plans provide the basis for tactical plans and that the tactical plans, in turn, provide the basic framework for operational plans. Rue and Byers (1997:125) and Hellriegel, Jackson, Slocum, Staude, Amos, Kloppe, Louw, and Oosthuizen (2005:73) argue that strategic planning is comparable to long-term planning. Hellriegel *et al.* (2005) further reflect that strategic planning ensures the long-term effectiveness and growth of an institution. However, Smit *et al.* (2011:94), Hellriegel *et al.* (2005:75–77), and Jones and Hill (2010:10) argue that though strategic planning is mainly performed at the highest management level, managers at other levels of management also have strategic planning responsibilities, an assertion this research supports. Clarity regarding the planning types and levels at which strategic planning occurs will be provided in sections 3.3 and 3.4 when the theories relevant to strategic planning are explored in detail. Section 3.7 will provide an exploration of the application of strategic planning within the public sector, after which a comparative analysis of a generic strategic management process and the process that is applied within the public sector from a South African perspective will be provided in section 3.8.

Against the above background and for purposes of this research, strategic planning is defined as a process of setting long-term goals and objectives in relation to a changing environment and determining how these goals and objectives will be operationalised to achieve institutional performance improvements. Within the context of the NPM paradigm, this research seeks to develop a BPR framework to enhance strategic planning within higher education with specific reference to TUT. The proposed BPR framework would guide the reengineering of core business processes critical to the enhancement of a strategic orientation of public higher education institutions, specifically TUT.

1.3 PROBLEM STATEMENT

TUT, as the case study for purposes of this research, was established in terms of section 23 of the Higher Education Act 101 of 1997. According to the TUT Strategic Plan 2008–2012 (2008b:3), the University was established on 1 January 2004 with the merging of the former Technikon Northern Gauteng, Technikon North-West, and Technikon Pretoria. To facilitate the merger, the University embarked on a process through which business processes were radically redesigned. As the three former institutions had different business processes, it was thus imperative for the business processes to be redesigned for the new institution to adopt new business processes for each area of operation.

Tyobeka and Van Staden (2009) state that after the merger, given the size and complexity of the new institution, the immediate challenge was to ensure that the core business of the University was running effectively and efficiently. The planning phase of the redesigning of business processes commenced in 2003 with the establishment of a joint merger team and joint specialised teams. Tyobeka and Van Staden (2009) further show that the joint specialised teams, under the guidance of the joint merger team, were tasked with the responsibility to analyse the core business processes of the three former institutions and to design appropriate business processes for the new institution. The TUT Institutional Operating Plan 2005–2009 indicated that the academic faculties and support, academic support, and technical services departments had to be restructured. Some faculties and departments had to be merged and some separated. The changes also led to staff members being redeployed and retrenched. The institution also adopted a "one–faculty–one–campus" model to avoid the duplication of academic programmes.

A preliminary analysis of the TUT Institutional Operating Plan 2005–2009 revealed that the process the University embarked on to radically redesign business processes reflects some core elements of BPR. The University applied similar steps and appropriate principles of BPR, such as planning for BPR, benchmarking, cross functional approach, senior management commitment, and stakeholder focus. According to the TUT Strategic Plan 2008–2012 (2008b), the University sought to, amongst others, reengineer and position itself as a unified and sustainable multi-campus university of technology. The observation by the researcher that triggered this research however is that the manner in which business processes are of late reengineered lacks uniformity and there is limited central coordination when compared with the way the University approached the reengineering of business processes during the merger discussions.

A preliminary investigation revealed that even though BPR is considered a strategic initiative, the University lacked an institutional document to direct the manner in which the BPR exercises should be strategically approached. The Higher Education Quality Committee Audit Report on TUT 2008 also made a number of recommendations related to the development and implementation of strategies to ensure the alignment of business processes to facilitate the University's strategic direction. Following the receipt of the Higher Education Quality Committee Audit Report on TUT 2008, the University developed a Quality Improvement Plan 2009–2013 and adopted quality management as an integral part of the strategic, business, and operating plans of the institution (Quality Improvement Plan 2009–2013, 2009b). However, the Quality Improvement Plan 2009–2013 also failed to give adequate guidance on the manner in which business processes should be strategically reengineered.

As business processes are critical for the effective and efficient delivery of services and achievement of strategic goals and objectives, as pointed out in section 1.1, it is imperative for TUT to ensure that its business processes are strategically reengineered and always geared towards ensuring the effective and efficient delivery of services and attainment of institutional strategic goals and objectives. The TUT Strategic Plan 2014–2019 (2014c) lists "delivering of the highest quality service and maximizing efficiency in operations, administration, services, and resources" as one of its core strategic objectives. This objective is consistent with the prescriptions of the White Paper on Transforming Public Service Delivery 1997 (1997b), commonly known as the *Batho Pele* White Paper, which, amongst others, indicate that "the South African Public Service will be judged by one criterion above all: its effectiveness in delivering services that meet the basic needs of all South African citizens".

Consistent with the prescripts of the White Paper on Transforming Public Service Delivery 1997, the Regulations for Reporting by Public Higher Education Institutions 2014 prescribes that each public higher education institution should prepare a strategic plan setting out the institution's vision, mission, policy, priorities, and project plans. A strategic plan must also have strategic goals and objectives for the institution, focusing on the different service delivery areas. Furthermore, the above regulations require public higher education institutions to annually submit a report to the Department of Higher Education and Training reporting, amongst others, on the work of the institution and the extent to which the institution believes it has met the goals and objectives of its strategic plan. For public higher education institutions, such as TUT, to achieve the above, it is imperative that their business processes be designed and reengineered to support their strategic endeavours.

The National Plan for Higher Education in South Africa 2001 identified the lack of strategic planning skills in some public higher education institutions as one of the most significant challenges facing higher education (DoE, 2001). Based on a preliminary document analysis of TUT documents relevant to the research, it is evident that the University still lacks sufficient capacity to strategically reengineer its business processes. A comprehensive BPR framework would assist faculties and support, academic support, and technical services departments of TUT to strategically reengineer their business processes in a uniform, coordinated, and focused manner (Cole & Kelly, 2011:17). Following the common BPR approach would also assist the University to ensure that the reengineering of business processes across the University is aligned to its strategic endeavours, which is considered to be one of the main predictors of a successful BPR project (Hunger & Wheelen, 2007:1–4).

Given the above background, it is clear that public higher education institutions, such as TUT, require a BPR framework to guide the manner in which they could strategically reengineer business processes. Central to this research, the problem that arises, and which this research seeks to resolve is how public higher education institutions, such as TUT, could align and reengineer their core business processes such that they could contribute to the enhancement of strategic planning.

1.4 RESEARCH OBJECTIVES

Given the research background provided and the research problem articulated above, the objectives of this research are to:

- **RO1:** Analyse theories, models, principles, and international best practices that underpin BPR.
- **RO2:** Examine theoretical models, and foundational principles of and approaches to strategic planning.
- **RO3:** Probe the commonalities between BPR and strategic planning and integrate their theories, models, and principles for inclusion in a comprehensive framework.
- **RO4:** Explore the dynamics of the public higher education sector in South Africa and assess the statutory and regulatory framework governing this sector.
- **RO5:** Empirically explore the current status within the academic administration environment of TUT with regard to BPR and its contribution to the enhancement of strategic planning.

- **RO6:** Based on triangulation of data from a literature survey, prescripts of legislation and regulatory framework, analysis of TUT documents, and perceptions and opinions of sampled respondents; design a BPR framework to give guidance to the manner in which public higher education institutions, such as TUT, should strategically reengineer their business processes.

1.5 RESEARCH QUESTIONS

The aim of the research is to respond to the following questions to operationalise the research objectives stated above:

- **RQ1:** What are the theories, models, principles, and international best practices that underpin BPR?
- **RQ2:** What are the theoretical models, principles, and approaches that underpin strategic planning?
- **RQ3:** What are the commonalities between BPR and strategic planning and how should these constructs be integrated to include their core elements in a comprehensive framework?
- **RQ4:** What is the nature of the dynamics within the public higher education sector in South Africa and what are the particular statutory and regulatory frameworks governing this sector?
- **RQ5:** What is the current status within the academic administration environment of TUT with regard to BPR and its contribution to the enhancement of strategic planning?
- **RQ6:** Which elements and processes should be included in a BPR framework to assist public higher education institutions, such as TUT, to strategically reengineer their business processes?

1.6 CENTRAL THEORETICAL STATEMENTS

Denton and Vloeberghs (2003:84-86) argue that globalisation and socio-economic changes force public sector institutions to become more competitive. Public Higher education institutions, such as TUT, across the globe are not immune to changes that take place within and across countries. Denton and Vloeberghs (2003) add that competition in the higher education sector forces public higher education institutions towards strategically reengineering business processes to improve their effectiveness and efficiency. Accordingly, the Regulations for Reporting by Public Higher Education Institutions 2014 point out that the conditions confronting the public higher education sector have become more demanding regarding good management practices and that the promotion of economy, efficiency, and effectiveness depends on adequate management

measures (DHET, 2014). NCHE (1996:9) illustrates that the changes in South Africa since 1994 force the public higher education sector to be consistent with the demands of the new dispensation. For the public higher education sector to respond to the pressures of the changing environment there exists a need for a great deal of reorientation and strategic planning. When business processes are strategically reengineered and strategic planning is effective, a solid foundation is created for the successful development and implementation of other institutional strategic imperatives.

In stressing the importance of the link between BPR and strategic planning, Hunger and Wheelen (2007:1–4) contend that institutions that engage in strategic planning perform better than those that do not and that the match between an institution's strategic endeavours and, amongst others, its core business processes contribute to the enhancement of an institution's efficiency and effectiveness. Hunger and Wheelen (2007:106) further remark that one of the core steps in strategic planning involves examining departments and operational units in areas where performance can be improved. Such performance improvement initiatives are the key focus of BPR and strategic planning, as the primary objective of the two concepts is the improvement of institutional performance; hence a need for business processes to be strategically reengineered.

Teng, Grover, and Fiedler (1996:279) concur with Hunger and Wheelen (2007) regarding the strategic nature of BPR. They remark that BPR initiatives that are not critical to the strategic direction of an institution do not enhance its strategic planning process and that before embarking on BPR, it is imperative to pinpoint the critical strategic business processes that should be targeted to improve the overall strategic orientation and direction of the institution. Likewise, Cole and Kelly (2011:17) argue that there should be a strategic need for a business process to be reengineered as justifying the need to reengineer a business process is the beginning of the planning phase of a BPR exercise. Cole and Kelly (2011) further express that the BPR planning phase involves identifying business processes that need to be improved and determining their relevance to the achievement of institutional strategic goals and objectives.

Consistent with the arguments advanced above, this research concurs that alignment of business processes to institutional strategies is the key to the successful application of BPR across sectors. To be consistent with the demands of the current dispensation and in response to the pressure to become more efficient and effective, as required by national legislation, public higher education institutions, such as TUT, should give priority to the reengineering and improvement of business processes that are key to the enhancement of their strategic planning endeavours. Daft and

Marcic (2011:8–9) indicate that it is the responsibility of all managers across sectors to ensure that institutional goals are effectively and efficiently attained through managing institutional resources. Daft and Marcic (2011) further point out that it is the responsibility of managers to identify what business processes need to be reengineered and to ensure that the BPR exercises are closely aligned and integrated with the strategic goals and objectives of an institution. Consequently, managers within the public higher education sector are to ensure that there is a fit between business processes and the strategic orientation of their institutions (Terziovski, Fitzpatrick & O'Neill, 2003:36). The National Plan for Higher Education 2001 requires, amongst others, that the long-term future of individual public higher education institutions and their restructuring must be determined by national policy and needs. For public higher education institutions to effectively and efficiently achieve the desired outcomes or strategic goals, the strategic reengineering of business processes becomes a prerequisite (DoE, 2001).

Given the theoretical statements stated above and consistent with the problem that the researcher sought to address, this research is based on the central theoretical argument that BPR is a strategic endeavour and that the match between a public higher education institution's strategic planning and, amongst others, its core business processes, contributes to the enhancement of a public higher education institution's strategic planning process.

1.7 RESEARCH METHODOLOGY

The researcher utilised the case study method through a qualitative research design. Based on data triangulation, the researcher will later develop a business process reengineering framework that could assist public higher education institutions, specifically TUT, to strategically reengineer their business processes. The findings will be based on the triangulation of data from the following data sets:

- A robust literature survey to uncover the theoretical underpinnings and to pinpoint core elements of BPR and strategic planning
- Prescripts from legislation and the regulatory framework governing higher education in South Africa
- An analysis of TUT as a case study (document analysis)
- Opinions and perceptions of sampled respondents in the case study to compare and contrast the data gathered.

In this section, an explanation of the method, techniques, and procedures used to gather and analyse information about the nature and extent of the research problem is provided.

1.7.1 Literature review

Reviewing relevant literature addresses what others have outlined about the research topic, theories that address the research topic, and whether the existing body of knowledge has flaws that the researcher could close (Babbie, 2011:95). This research aligns itself with the assertion by De Vos, Strydom, Fouche, and Delport (2011:134–137) that the aim of a literature review is to contribute to an understanding of the nature and meaning of the problem the researcher seeks to address. A literature review thus scrutinises all sources of information relevant to the research (Mouton, 2001:87). It is worth mentioning that for purposes of this research, a literature review was used as a data collection method.

Stressing the need for document analysis, O’Leary (2010:223) maintains that the most common texts that researchers are likely to analyse are documents. Furthermore, O’Leary (2010) contends that when reviewing documents, each document is treated as a respondent who can provide the researcher with information relevant to the research. Considering that a variety of documents are of interest to qualitative researchers, a literature review, as a data collection method, involves the reviewing of documents such as scholarly books; articles in professional national and international journals; presentations at conferences and workshops; research reports, dissertations, and theses; case studies; public documents and records of meetings; periodicals; national legislation; and any other documents relevant to the research. TUT documents were also analysed to collect data relevant to the research. TUT documentation such as strategic plans, annual and other reports, and policy and regulatory guidelines were reviewed. Although TUT documents are not created for research purposes and are not peer reviewed, information of interest to the researcher was analysed and incorporated in the research findings which will be presented later in chapter five.

Silverman (2011:80) argues that primary and secondary source documents are not used to support or validate other data but should rather be regarded as data in their own right, which was the case in this research. Maree (2011:82-83) refers to primary documents as unpublished data which the researcher gathered and secondary documents as any published material. For the purpose of this research, both primary and secondary source documents were analysed. Only authentic source documents relevant to the research were used and the researcher guarded

against being selective when choosing the documents to analyse. A preliminary review of the literature revealed that sufficient material was available to conduct this research.

1.7.1.1 Data bases consulted

The following data bases were consulted to ascertain the availability of adequate sources relevant to the research:

- Catalogue of dissertations and theses of South African universities
- Catalogue of books
- National and international journal article data bases
- National legislation and guidelines relevant to the topic of the research
- TUT primary and secondary documents relevant to the research.

1.7.2 Empirical investigation

One of the most critical phases of the research process is the gathering of information about the nature and extent of the research problem as well as the proposed plan of action (Cloete, 2007:512). It is imperative that a researcher determine what method should be followed to gather information that is relevant to the research topic in advance, before the research is conducted. Schurink (2010:420) mentions that when considering the research method, aspects such as the location of the information, the information gathering instrument, the procedure to be followed in gathering information, and the method of data analysis play a critical role in deciding on the appropriate design to be followed to conduct the intended research. This section explains the process that was followed to conduct an empirical investigation.

1.7.2.1 Research design

Brynard and Hanekom (2006:36) maintain that research methods focus on the process of research and the decisions the researcher has to take to execute the research. Mouton (2001:128) explains that the main methods used in scientific research are the quantitative and qualitative methods. The third method is the mixed method which, according to Du Plessis and Majam (2010:456), incorporates techniques from the qualitative and quantitative methods. Welman, Kruger, and Mitchell (2005:9) and Webb and Auriacombe (2006:597) contend that the qualitative research approach does not only focus on observable events or measurable quantities

but also on intangible and subjective interpretations of logic, values, meanings, attitudes, emotional driving forces, relationships, and an understanding of social forces through a wide ranging and open ended set of techniques. Maree (2011:78–79) argues that qualitative research design is based on a naturalistic approach that seeks to understand and interpret a phenomenon in context, hence the choice of the research methodology for purposes of this research.

This research followed the case study method of qualitative research design in a critical relativist paradigm. The case study method of qualitative research design provided an opportunity to obtain the participants' views on the research topic using face-to-face interviews. A critical relativist approach was followed to evaluate qualitative data obtained from the respondents within TUT. Yin (2003:13-14) remarks that a case study research investigates a contemporary phenomenon, relies on triangulation of data from multiple data sets, and benefits from available theoretical propositions to guide empirical exploration and data analysis, which was the case with this research.

1.7.2.2 Sampling

Brynard and Hanekom (2006:54) mention that researchers are normally faced with the dilemma of selecting a sample from the target population for research purposes. Babbie and Mouton (2001:174) describe a target population as the larger group from which the sample is selected and indicate that a sample is a specific subset of a population that is used to make generalisations about the nature of the total target population. As the target population is the population from which researchers generalise their findings, the sample is considered to be representative of the target population (Burger & Silima, 2006:657).

This research involved interviewing 32 sampled participants from a total research population of 44 prospective participants. The sub-target populations were the assistant registrars (11) and senior administrators (25) responsible for academic administration; directors of distant campuses (3); and the managers of the environment responsible for quality, planning, and risk management (5). The research used purposive sampling (a non-probability sampling method) to select participants. Babbie (2007:184) and Maree (2011:172) reflect that purposive sampling involves selecting a sample based on the participants' expert knowledge and access to information relevant to the research.

The research applied purposive sampling to select managers responsible for quality, planning, and risk management; 3 managers volunteered to participate in the research. These participants were purposefully selected because of their expert knowledge on quality, planning, and risk management, which was considered relevant to the research. Academic administration assistant registrars and senior administrators were purposefully selected due to their strategic positions within the academic administration environment. Directors of distant campuses were purposefully selected to obtain a distant campus perspective on the problem the researcher sought to resolve. 16 academic administration senior administrators and two directors of distant campuses were further randomly selected from their respective sub-populations or strata (stratified sampling and a probability sampling method). Maree (2011:172) mentions that in probability sampling each element in the population has a known, non-zero probability of being selected to form part of the research sample.

1.7.2.3 Data collection

The research was triggered by a preliminary investigation and observation that supported a lack of a comprehensive BPR framework for TUT to strategically reengineer its business processes; hence the use of the University as a case. The case study method of qualitative research design was followed against this background, as it provided an opportunity to use multiple techniques for gathering information relevant to the research (Yin, 2003:13-14). Maree (2011:76) found that the case study design is generally criticised for depending on a single case study and is incapable of providing general conclusions. However, in the case of this research, different units of analysis were utilised to obtain a holistic perspective, namely, a literature review, an analysis of TUT documents, and the opinions and perceptions of sampled respondents (Baxter & Jack, 2008:544). The case study method enabled the researcher to empirically explore the data relevant to the research in detail, which facilitated the gaining of knowledge and an understanding of the problem that the researcher sought to address. Consistent with the assertion by Yin (2012:18), the theoretical framework of this research was used to establish a logic that is applicable to all institutions across sectors. Theory thus played a critical role in helping the researcher to generalise the lessons learned from TUT (Yin, 2014).

According to Brynard and Hanekom (2006:38) and Babbie (2007:306), relevant interviews, questionnaires, and observation are the most frequently used techniques used to collect data within the qualitative research design. The researcher chose interviews as the instrument for collecting data from the sampled respondents. Interviews were conducted on the different TUT

campuses with staff members who are responsible for quality, planning, and risk management and with staff members who are key role-players in the reengineering of academic administration business processes across the University, including distant campus senior managers. One interview per participant was conducted and follow-up interviews were conducted only when it was necessary to clarify data collected during the first round of interviews. An interview schedule was formulated in advance and tested (pilot) with a small sample of respondents to establish whether the semi-structured questions were correctly formulated and understood.

1.7.2.4 Data analysis

Schurink (2010:431) indicates that one of the main tasks of a researcher is to provide a detailed explanation of the process that will be followed to analyse the data collected through the research. In the case of this research and consistent with the assertion by Wisker (2008:319) and Babbie (2011:397), the analysis of qualitative data involved carefully reading, categorising or classifying, and coding the collected data. The reading of the collected data included identifying themes in the answers provided by the participants and categorising responses according to the themes identified. Maree (2011:105) maintains that coding the collected data enables the researcher to easily retrieve data with the same theme as the same codes are used for similar segments of data. Babbie (2011:397) also points out that coding is vital when analysing qualitative data that involves categorising pieces of data. De Vos (2000:335) adds that the researcher's responsibility when coding is to recognise persistent words, phrases, and themes within the data for later retrieval.

For purposes of this research, the researcher utilised ATLAS.ti software programme to categorise and code the responses of the sampled participants. The coding assisted the researcher to ascertain core elements that should be included in a BPR framework that will be proposed later in section 6.4.

1.7.2.5 Limitation and delimitation

The following were potential research weaknesses:

- Lack of substantial documented local experiences or case studies on the specific topic, as previous case studies consulted in the literature were of institutions based outside the borders of South Africa.

- As a senior staff member at TUT (the institution where the research was conducted) and one of the staff members directly involved in the BPR exercises of the units relevant to the researcher's area of operation, the researcher had to be sure to maintain objectivity.

As stated in section 1.3, the primary purpose of this research was to propose and develop a BPR framework to enhance strategic planning within higher education. Although the focus of the research was the academic administration environment of TUT, members of the University's executive management and staff members, other than the academic administration assistant registrars, directors of distant campuses, senior administrators responsible for academic administration, and managers responsible for quality, planning, and risk management, did not form part of the research population. Nevertheless, the researcher recognises that the commitment and support of executive management is critical for BPR exercises to be strategically and successfully executed.

1.7.2.6 Ethical considerations

Brynard and Hanekom (2006:84) point out that research ethics relate to what is right or wrong when conducting research. Brynard and Hanekom (2006) further show that conduct regarding research activities should be morally acceptable. Lutabingwa and Nethonzhe (2006:701) mention that research involving human beings raises questions of ethical conduct in terms of fairness, consideration, honesty, openness, the disclosure of methods, a respect for the integrity of the individuals, the obligation of the researcher to guarantee individual privacy, and an informed willingness to voluntarily participate in the research.

Participation in this research was voluntary. The purpose of the research was explained to all the identified participants and only those willing to participate in the research formed part of the research sample. Throughout the research, the right of the individual to participate in the research and to withdraw at any stage was respected. All participants signed an informed consent form (see Annexure B) that was kept as proof that they participated willingly in the research. The information received was treated as private and confidential and the right of the participants to privacy and confidentiality was respected throughout the research and after its conclusion. The research was conducted by the researcher without the involvement of a third party. However, the research assistant of the Faculty of Management Sciences at TUT assisted the researcher with categorisation and coding of opinions and perceptions of sampled respondents.

To further address the research ethics issue, the researcher completed a North-West University (NWU) Declaration Form on Research Ethics 2013. The declaration form deals with research ethics for postgraduate research projects and covers the handling of participants, questions concerning the research process, and the impact on the NWU and the institution where the research was conducted. The Faculty of Arts Ethics Committee also assessed this study and an NWU Ethics Committee ethical clearance certificate was issued. The researcher ensured that the research was conducted according to the NWU's guidelines for ethical research.

The research proposal and interview questionnaire were also submitted to a sub-committee of the TUT Senate Committee for Research Ethics for ethical clearance. According to section 2.1 of the TUT Guidelines on the Evaluation of Research-Related Questionnaires (2008a), the TUT Senate Committee for Research Ethics is responsible for evaluating all research related questionnaires intended for the collection of data from TUT staff members and/or students.

1.8 SIGNIFICANCE OF THE STUDY

This research is not a duplication of any previous research that has been undertaken regarding the application of BPR to enhance strategic planning within public higher education as well as within the broader context of the South African public sector. The research thus assisted in identifying and closing knowledge gaps regarding BPR and its contribution to the enhancement of strategic planning within public higher education. The findings (see section 5.4.2), recommendations, and proposals (see sections 6.4 and 6.5) presented later in the research will assist in finding solutions to challenges faced by public higher education institutions, such as TUT, and other South African public sector institutions in terms of aligning and strategically reengineering their business processes.

Though the research was conducted at TUT, a public higher education institution that forms part of the broader South African public sector, the findings and recommended solutions also apply to the private sector, as BPR and strategic planning principles are the same regardless of where they are applied. However, the application should be done with due cognisance of the unique nature of each environment. The research, like all other studies available on BPR and strategic planning, will contribute to the body of knowledge from which best practice and lessons can be drawn. Other South African public and private sector institutions, including public and private higher education institutions, will therefore be able to apply aspects of the newly designed BPR framework that could assist them in strategically reengineering their business processes.

1.9 CHAPTER LAYOUT

This section of the research identifies the content in all six chapters, each focussing on different aspects of the research. Figure 1.1 below is a graphic presentation of the layout of the different chapters and is followed by a brief explanation of the content of each chapter.

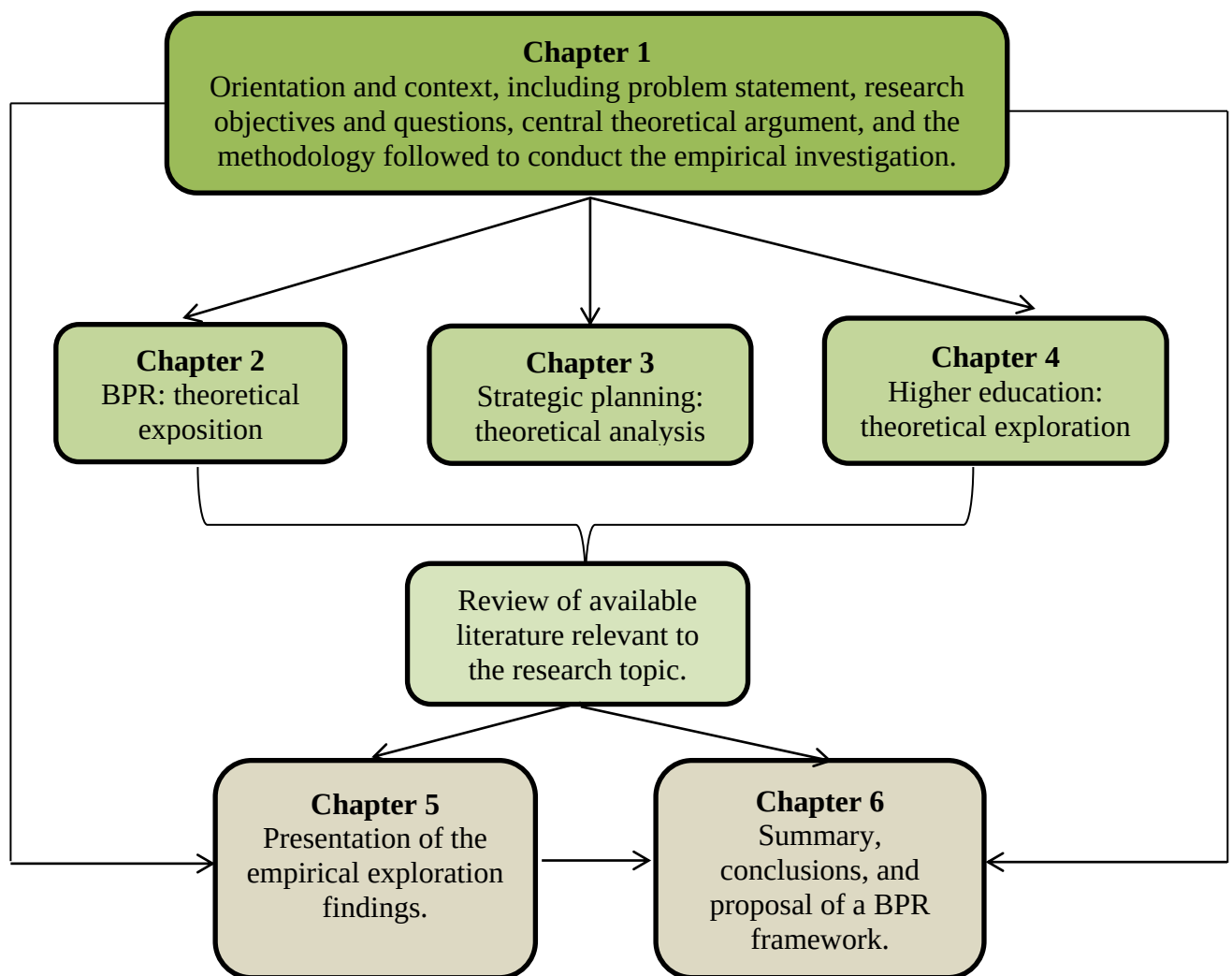


Figure 1.1: Chapter layout

In accordance with the above figure, a brief explanation of the content of each chapter of the research is provided below.

Chapter one: orientation and context

Chapter one is an introductory chapter that provides the orientation, context, research problem, research objectives and questions, central theoretical statement that acts as a foundational

argument for the research, methodology used to gather and analyse information relevant to the research, significance or academic merit of the research, and chapter layout.

Chapter two: Business Process Reengineering: a theoretical exposition

Chapter two describes the generic theories, models, principles, and approaches that underpin BPR and also explains BPR within the broader South African public sector. The exposition includes the reviewing of books, journal articles, case studies, and other documents relevant to the research topic.

Chapter three: strategic planning: analysis of theories, foundational principles, and approaches

This chapter provides an analysis of the theoretical background information that underpins strategic planning. The theoretical analysis of strategic planning followed the same approach as in chapter two above. The chapter concludes with an exploration of commonalities between strategic planning and BPR to determine what elements should be incorporated in a comprehensive BPR framework for public higher education institutions, specifically TUT.

Chapter four: dynamics of higher education and the statutory and regulatory framework governing higher education in South Africa

Chapter four provides an overview of the public higher education landscape of South Africa and includes an assessment of the statutory and regulatory framework governing higher education institutions, specifically public higher education institutions.

Chapter five: towards a Business Process Reengineering framework: empirical findings

In chapter five, the research investigation findings are presented from an empirical exploration of the current status within the academic administration environment of TUT regarding BPR and its contribution to the enhancement of strategic planning. The chapter also explains the methodology followed to empirically gather information relevant to the research. Although the research focused on the academic administration environment of TUT, the empirical investigation also looked at the reengineering of business processes across the University, including their contribution to the enhancement of the strategic planning process of the entire University.

Chapter six: summary and recommendations: a Business Process Reengineering framework

Based on data triangulation, a proposed comprehensive BPR framework for public higher education institutions, specifically TUT, is proposed in this chapter. The proposed framework is designed to enable public higher education institutions, specifically TUT, to strategically reengineer their business processes and is based on relevant information gathered from the literature review, the statutory framework, and TUT case study findings. The findings from chapters two to five are also summarised to establish the extent to which different chapters operationalised the research objectives that the researcher sought to address.

1.10 CONCLUSION

The primary purpose of this chapter was to provide the research orientation and context, and to explain the problem that triggered the research. The objectives that the research sought to address were identified and questions formulated to operationalise the identified research objectives. The chapter also explored the central theoretical statement that acted as the foundational argument for the research.

The methodology followed to empirically gather and analyse the relevant information was explained i.e. the method, techniques, and procedures that the researcher used to gather and analyse information about the nature and extent of the research problem. This included an explanation of how the existing literature was used as a data collection method. The preliminary literature review revealed the availability of sufficient material and literature to successfully conduct research on the topic. The chapter also explained the significance or academic merit of the research and concluded with an illustration of the layout of all the chapters.

The next chapter provides an analysis of theories, models, principles, and international best practices that underpin BPR. The analysis of the theoretical background information relevant to BPR will include the reviewing of books, journal articles, case studies, and any other documents relevant to the research topic. The chapter will also contextualise BPR within the public sector to establish the extent to which the research topic is relevant to the study of Public Administration. It is imperative to mention that within the context of the NPM paradigm, as reflected in section 1.2.2, the research will later in section 6.4 develop a BPR framework aimed at assisting public higher education institutions, specifically TUT, to enhance strategic planning; hence the need to contextualise BPR within the broader South African public sector.

CHAPTER TWO

BUSINESS PROCESS REENGINEERING: A THEORETICAL EXPOSITION

2.1 INTRODUCTION

This chapter provides an analysis of theories, models, principles, approaches, and international best practices that underpin BPR. The analysis of relevant BPR theoretical underpinnings is aimed at contributing to a theoretical understanding of the nature and meaning of the problem that triggered this research. Due to lack of substantial documented South African BPR experiences or case studies, as mentioned in section 1.7.2.5, the analysis will be based on documented worldwide BPR experiences. The chapter begins with an analysis of the origins of BPR, which includes a brief exploration of the evolution of the theories of management from the classical management approaches through the human relations movement to contemporary management approaches. The exploration will further indicate the trajectory of management thought that eventually culminated in the introduction of BPR, a business process improvement management approach that is aimed at improving institutional performance. Thereafter, the texts by the originators or early exponents of BPR will be explored. The exploration of the origins of BPR will be followed by an exposition of the classical and contemporary theoretical characteristics of BPR.

A brief explanation of what led to BPR failures during the early days of its implementation will also be provided. This explanation will be followed by an analysis of how BPR broadened in scope, as well as an assessment of principles and themes that best capture the BPR focus. Different methods as well as phases and steps that underpin BPR will also be analysed. It is imperative to indicate that authors such as Coulson-Thomas (1994) do not necessarily refer to a single BPR method, phase or set of steps, as BPR represents a wide range of activities concerned with the redesign of institutional processes. For this reason a comparative analysis of the respective methods, phases, and steps as suggested by various authors (see Table 2.3) will be conducted. It is imperative for purposes of this research that the BPR common elements are pinpointed since it is the intention of the research to design a comprehensive BPR framework, which should contain international best practice. Considering that BPR was originally practised within the private sector, analysis of theories, models, principles, approaches, and international best practices that underpin BPR will be approached mainly from a private sector perspective.

The chapter will conclude with a contextualisation of BPR within the broader public sector, including the public higher education sector. This contextualisation will be approached from the New Public Management (NPM) vantage point, notably one of the popular paradigms in the study of Public Administration. The contextualisation of BPR within the broader public sector will assist in establishing the extent to which BPR is applied within the public sector, including the South African public sector, and how BPR is relevant to the study of Public Administration, an academic discipline that covers the study of the management activities or practices that take place within the broader public sector.

2.2 ORIGINS OF BUSINESS PROCESS REENGINEERING

To better capture the origins of BPR, this discussion will include a brief explanation of the evolution of management theories, exploration of the introduction of the BPR concept, and an exposition of a commentary that followed after the introduction of the BPR theory. A detailed exploration of the evolution of the management thought will be provided in chapter three.

2.2.1 Evolution of management theories

Gronroos (1994:7) points out that the current management theories are based on a management perspective that can be traced back to the industrial revolution. Smit *et al.* (2011:30) identified classical approaches and contemporary approaches to management as the main schools of thought regarding theories of management. Smit *et al.* (2011) argue that management theories are shaped by environmental influences and that when environmental forces change, the management theory also changes in accordance with the changing circumstances. Freedman (1992:26) reviewed various texts that outlined Fredrick W Taylor's scientific management approach, a management approach that authors such as Smit *et al.* (2011:39) consider as the foundation upon which management approaches such as BPR are based. Eventually, Freedman (1992:27) concluded that the focus of the scientific management approach is the improvement of institutional performance. Freedman (1992:27) further indicates that Taylor believed that managers could identify one best way to perform any task that would improve efficiency. Like other classical approaches, such as the process or administrative approach and bureaucratic approach, the scientific management approach emphasised the technical internal functioning of institutions at the expense of the personal aspects (Smit *et al.*, 2011:30–53).

Regarding the personal aspects of institutions, Franke and Kaul (1978:623–643) acknowledge that the Hawthorne Studies, which according to Smit *et al.* (2011:36), were conducted from 1924 to 1933, provided a basis for the human relations movement and that the findings of Hawthorne Studies revealed that the quality of human relations could be credited for most of the output improvements within institutions. However, after statistically interpreting the data from the Hawthorne Studies and the findings of their quantitative analysis, Franke and Kaul (1978:623–643) did not support the contention that improved human relations lead to the improvement of efficiency. Smit *et al.* (2011:39–53) maintain that the limitations of the human relations approach to management led to the adoption of the management approaches such as BPR. Lockamy III and Smith (1997:141) believe that increases in global competition, customer requirements, and environmental and governmental regulations also necessitated the adoption of management approaches such as BPR in an attempt by institutions across the globe to improve institutional performance. In response to global challenges referred to above, public higher education institutions worldwide have also adopted management approaches such as BPR in order to achieve increases in efficiency and the effective delivery of services (see section 1.1).

Smit *et al.* (2011:53) explain that in accordance with the contemporary approaches to management, institutions across sectors are influenced by, and in turn also influence, the environments within which they operate. Consistent with the focus of the contemporary management approaches, BPR is considered one of the institutional performance improvement drivers that assist institutions to survive in today's competitive environment. As institutions across sectors strive to be competitive, they take radical approaches, such as BPR, to become successful (Ascari, Rock & Dutta, 1995:1; Motwani, Kumar, Jiang & Youssef, 1998:964). Attaran (2000:794) concurs that the motivation for institutions across sectors to embark on BPR is the realisation that there is a need to improve efficiency and effectiveness to improve competitiveness, provided that the efforts aimed at redesigning business processes are tailored to meet the specific needs of the institution undertaking BPR.

2.2.2 Introduction of the BPR concept

This section of the research covers an exploration of the introduction of the BPR concept. The relevance of BPR and its application within the broader public sector, including the South African public sector, will be explored later in section 2.8. A literature review revealed that BPR has been on the management agenda since the early 1990s. According to Grover and Malhotra (1997:196), Al-Mashari and Zairi (2000:14), and Botha and Van Rensburg (2010:48), the

concept of BPR was introduced in two articles that were published simultaneously by Hammer (1990) and Davenport and Short (1990). Zairi and Sinclair (1995:8) and Chen (2001:71) are of the opinion that the articles by Hammer (1990) and Davenport and Short (1990) attracted academic attention and fuelled the popularity of BPR. Botha and Van Rensburg (2010:49) agree that after the introduction of BPR, various authors dedicated their time and effort to conducting research on the concept.

Various authors, including Zairi and Sinclair (1995:8), Larsen and Myers (1997:367), and O'Neill and Sohal (1999:572), point out that the two articles by Hammer (1990) and Davenport and Short (1990) outlined an approach to the management of business processes which, it was claimed at the time, achieved dramatic improvements in institutional performance. Deakins and Makgill (1997:81) argue that the management approach advocated by Hammer (1990) and Davenport and Short (1990) became widely known as BPR and that the two articles laid a theoretical foundation for BPR as an institutional performance improvement initiative. A review of literature revealed that although Hammer (1990) and Davenport and Short (1990) referred to this management approach to the redesign of business processes as "reengineering" and business process "redesign" respectively, the principles and practices referred to in both articles are aimed at the achievement of a common objective, namely, redesigning business processes to achieve institutional performance improvements. Botha and Van Rensburg (2010:48) confirm this realisation when they indicate that the two articles presented a similar idea regarding the redesigning of business processes to improve efficiency and effectiveness in the manner in which institutions across sectors conduct business.

Macdonald (1995:21–25) concurs that business process improvement is a distinct approach that is also used for business process redesign. According to Povey (1998:27), business process improvement covers a continuum from incremental continuous performance improvement to the radical approach to the reengineering of businesses and their processes. Process improvement is a continuous improvement approach whereas business process redesign concentrates on radical redesign of business processes that cut across functional boundaries. Macdonald (1995) adds that business process redesign is what most institutions refer to when they talk of BPR. He supports the description by Hammer (1990) that BPR is radical in nature and that it is aimed at achieving dramatic improvements in institutional performance. Suffice to say that what Hammer (1990) and Davenport and Short (1990) refer to as reengineering and business process redesign respectively, constitute what is now commonly known as BPR. This is consistent with the assertion by Deakins and Makgill (1997) referred to previously in this section.

Patching (1995:9) believes that the article written by Hammer (1990) entitled *Reengineering work: Don't Automate, Obliterate*, brought the BPR concepts and practices to the attention of a worldwide audience. Furthermore, reflecting on what triggered BPR, Patching (1995) indicates that the article outlined the problems faced at that time by many United States business institutions despite heavy investments in technology. The problems convinced Hammer (1990) to argue against the automation of out-dated business processes. Botha and Van Rensburg (2010:48) support the contention by Hammer (1990) when they argue that managers across sectors are faced with the challenge to obliterate business processes that do not add value as opposed to automating them. Like Botha and Van Rensburg (2010), Suhendra and Oswari (2011:118) also agree that BPR is not involved in the automation of business processes or the capturing of data from automated processes.

Hammer (1990) argues that at the heart of BPR is the notion of discontinuous thinking and to achieve this, institutions should challenge old assumptions and shed outdated rules that make them underperform. Instead, Hammer (1990) promotes the use of information technology as a BPR enabler and insists that with the assistance of information technology as an enabler, institutions should follow a "start over" approach to obliterate old business processes by starting from scratch. Hammer (1990) believes that using information technology to just automate existing business processes cannot address their fundamental performance problems. Furthermore, Hammer (1990) contends that the methods of boosting performance through the rationalisation and automation of business processes failed to achieve the desired outcomes and, as a result, institutions should think big and must use the power of information technology to radically redesign business processes to achieve dramatic improvements in institutional performance.

The article by Davenport and Short (1990) also explores the importance of information technology when institutions reengineer business processes. According to Patching (1995:26), although the article was mainly concerned with emphasising the information technology enabled design of business processes, it was based on research conducted in institutions that had successfully achieved dramatic institutional performance improvements. Davenport and Short (1990) wrote an article on research conducted in 1990 at the Massachusetts Institute of Technology (1990) and several consulting companies and, like Hammer's article (1990), also focused on the relationship between information technology and business process redesign. Davenport and Short (1990) contend that to be well equipped to achieve improvements in institutional performance, institutions should master redesigning business processes around

information technology. Davenport and Short (1990) contend that information technology can create business process redesign options, rather than simply supporting them and are convinced that information technology and business process redesign are two powerful tools capable of transforming institutions and, applied together, have the potential to bring about improvements in institutional performance. It can therefore be deduced that both Hammer (1990) and Davenport and Short (1990) believe in the information technology enabled redesign of business processes. Considering that we live in a technology driven world, institutions across sectors, including public higher education institutions, cannot ignore the utilisation of information technology as a tool to facilitate successful application of BPR.

The articles by Hammer (1990) and Davenport and Short (1990) were followed by two books by Hammer and Champy (1993) and Davenport (1993) that further promoted BPR as an institutional performance improvement approach. Larsen and Myers (1997:367) and Chen (2001:69) maintain that the book, *Reengineering the corporation: A manifesto for business revolution*, by Hammer and Champy (1993), is widely referenced and is regarded as one of the starting points of BPR. In their book, Hammer and Champy (1993:2) argue that to reinvent institutions, managers must throw out old ways of conducting business and create entirely new business processes i.e. Hammer and Champy (1993) promoted BPR as the path to change. Furthermore, Hammer and Champy (1993) argue that unless institutions radically change outdated business processes, they are merely "rearranging", which is not enough if the objective is to achieve dramatic improvements in institutional performance.

Patching (1995:10) notes that the definition provided by Hammer and Champy (1993) served as the first formal BPR definition and provides a clear indication of the innovative nature of BPR and its impact on institutional performance. Hammer and Champy (1993:32–36) advocate the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in institutional performance. Like Hammer (1990), Hammer and Champy (1993) also emphasise the crucial role information technology plays in BPR. According Hammer and Champy (1993:101), institutions that cannot change the way they think about information technology cannot reengineer. However, they cautioned institutions to guard against considering information technology as the only essential element in BPR, as other elements such as human resource also play a key role for BPR to be successfully executed.

Hammer and Champy (1993:2) refer to the approach that institutions can use to reinvent themselves as "business reengineering" whereas Davenport (1993:1) refers to the approach to institutional performance improvement as "business process innovation". Despite using different terminologies, the definitions provided by Hammer and Champy (1993) and Davenport (1993) suggest that the focus of BPR should be on business processes.

Similar to Hammer and Champy (1993), Davenport (1993) advocates a radical approach to business process innovation i.e. introducing something new into a business process to bring about radical change in order to achieve dramatic results. Davenport (1993) adds that business process innovation cannot be equated to process improvement. In business process innovation business processes are radically changed, unlike in performance improvement where the efficiency or effectiveness of the same business processes is slightly improved. According to Attaran and Wood (1999:752) and Attaran (2000:794), this is because BPR is aimed at achieving quick and substantial institutional performance gains by starting from scratch when designing new business processes, unlike continuous improvement approaches that are incremental in nature and aimed at minimal institutional performance changes on an ongoing basis. This is consistent with Hammer and Champy (1993), who also cautioned against an incremental approach to the redesign of business processes.

Both Hammer and Champy (1993) and Davenport (1993) consider human resource and information technology as business resources best positioned to bring about radical improvement in business processes. Ascari, Rock, and Dutta (1995:3) and Attaran (2000:799) agree that BPR should, amongst others, take place around people and information technology i.e. that the simultaneous development of business processes, people, and appropriate information technology is crucial for the success of BPR. For BPR to be successfully implemented, people should be well organised, motivated, and empowered and appropriate enabling technology should be applied. Deakins and Makgill (1997:81) and Abdolvand, Albadvi, and Ferdowsi (2008:502) also emphasise the importance of the effective use of information technology and other enablers, such as human resource, if BPR projects are to be successfully executed. It is imperative to recognise that information technology together with effective utilisation of human resources play a crucial role in improving institutional performance across sectors, including institutional performance of public higher education institutions such as TUT, the case study for purposes of this research.

Martinsons (1995:254) maintains that even though Hammer and Champy (1993) and Davenport (1993) advocate a radical approach to the improvement of business processes, it should be noted that Hammer and Champy (1993) recommend a management led revolution to reengineering business processes, starting from a clean slate. Davenport (1993) on the other hand, promotes a process innovation approach through the use of innovative tools and work designs. Although Davenport (1993) refers to the radical process change as business process innovation and not business reengineering, as is the case with Hammer and Champy (1993), the object of both their approaches is the redesign of business processes with the aim of achieving improvements in institutional performance. Teng, Grover, and Fiedler (1996:271) also confirm the similarities between business reengineering and business process redesign and agree that both are aimed at improving institutional performance.

It is evident from the above analysis that the publications by Hammer (1990), Davenport and Short (1990), Davenport (1993), and Hammer and Champy (1993) led to the conception of BPR as a radical business process improvement approach. However, it is imperative to mention that BPR has since changed and is of late applied in a less radical way, as it will be demonstrated later in section 2.4. In the case of this research, an incremental approach to BPR is advocated as it allows for continuous improvement of business processes. A detailed explanation of the proposed BPR approach for TUT will be provided later in chapter six.

2.2.3 Analysis of commentary that followed the introduction of BPR

Tennant and Wu (2005:538) argue that the promotion of BPR through articles and books published by the early advocates of BPR; such as Hammer (1990), Davenport and Short (1990), Hammer and Champy (1993), and Davenport (1993); contributed to the recognition of BPR as one of the main modern management approaches aimed at improving institutional efficiency. Commentary on BPR commenced immediately after the publication of the works by Hammer (1990), Davenport and Sort (1990), Davenport (1993), and Hammer and Champy (1993), and their publications were followed by a number of other texts in which the BPR concept was further explored. Deakins and Makgill (1997:92) concur that once BPR was recognised by researchers and practitioners as a business process improvement approach, an explosive growth took place in the number of articles published. Tennant and Wu (2005) point out that subsequent research led to the emerging of alternative definitions and identification of difficulties associated with the execution and implementation of BPR as well as exploration of its successes and failures. Zairi and Sinclair (1995:8) and O'Neill and Sohal (1999:571) agree that a number of

articles that followed the first BPR publications described the benefits to be gained from BPR as well as its failures.

Zairi and Sinclair (1995:8) and O'Neill and Sohal (1999:571) maintain that even though there has been considerable discussion in the literature on BPR, there remained some confusion regarding what exactly constituted BPR and how the reengineering approach could be integrated within the strategic planning processes of institutions. This assertion by Zairi and Sinclair (1995) and O'Neill and Sohal (1999) is worth noting considering that this research seeks to develop a BPR framework that would assist TUT and other similar institutions to strategically reengineer their business processes. O'Neill and Sohal (1999:573) point out that there was confusion and misunderstanding of what constituted BPR because several authors interpreted it differently. Coulson-Thomas (1994:18) and Grover and Malhotra (1997:193–213) indicate that different management consultants also contributed to the confusion and disagreements, as they used the term "BPR" as a way of promoting their methods of institutional performance improvement and as a result exaggerated its success.

Childe, Maull, and Bennett (1994:27), Zairi and Sinclair (1995:8), Grover and Malhotra (1997:193–213) and Larsen and Myers (1999:396–397) contend that the original use of various terminologies also contributed to the confusion. Business process reengineering, business process redesign, business process improvement, business process transformation, and business process innovation were frequently used interchangeably. Also Patching (1995:23) and Chen (2001:68) confirm that business process initiatives reside under a host of names and that a large amount of material has been produced without any universal agreement on terminology.

Ascari *et al.* (1995:1) and Zairi and Sinclair (1995:8) claim that although different authors used different terms, similarities can be seen in the various definitions. Common aspects can be identified in most BPR definitions. Povey (1998:28) agrees that regardless of the confusion regarding BPR terminology, the objective of all business process improvement approaches is to identify and implement improvement to business processes. Along similar lines, Chen (2001:68) remarks that although BPR is known by many names, all of them focus on radical business process redesign. However, Childe *et al.* (1994:27) support that different approaches to performance improvement have different characteristics regarding the degree of change. Some approaches support radical change while others advocate the incremental improvement of business processes. Although Childe *et al.* (1994) support different approaches to BPR, as

opposed to those who advocate a radical approach, they also agree that all business process improvement initiatives are aimed at achieving performance gains.

Deakins and Makgill (1997) reviewed the related research conducted from BPR's inception in the early 1990s and their findings revealed that the original literature lacked rigorous research to support its contentions. These findings are consistent with those of Patching (1995:24) and Peppard (1996:265) who argue that BPR does not have a firm basis in academic research. While this could also be blamed for early BPR failures, the assertions by Patching (1995), Peppard (1996), and Deakins and Makgill (1997) are contrary to popular belief that theory is concerned with the process of obtaining knowledge through experience and reality and should thus not be separated from experience in the actual field of activity wherein it operates; "theory forms the basis of reasoning, leading to an understanding or explanation of an action" (Hanekom & Thornhill, 1993:48). Coetzee (1991:55–56) contends that "in the formulation of a theory, such an action would depend on the availability of sufficient data on the field of activity".

Hammer and Champy (1993:3–6) mention that the introduction of the concept of BPR was triggered by an observation that institutions in the United States of America had dramatically improved their performance by radically redesigning their business processes. These institutions either significantly redesigned their existing business processes or replaced old business processes entirely. In trying to understand why these institutions chose a radical approach to redesigning business processes over incremental improvements, which most institutions preferred, Hammer and Champy (1993) discovered that most of these institutions unknowingly succeeded in radically redesigning their business processes using a common set of tools and tactics. Examining the experiences of different institutions, Hammer and Champy (1993) were able to discern patterns of activities that led to the successful redesigning of business processes as well as those that did not lead to institutional performance improvements. Eventually, they could see a set of procedures for effecting radical redesign of business processes and they named this set of procedures BPR. Davenport's publication (1993) was triggered by the feedback he received from his studies in the United States of America and the consultation work he undertook in response to the vast interest expressed in process innovation. The first articles on BPR by Davenport and Short (1990) and Hammer (1990) were based on discussions the authors had with the managers of several institutions that embarked on BPR exercises. The above authors' observations and experiences thus informed the BPR theories they advocated in their early publications. This is consistent with assertions made by Coetzee (1991) and Hanekom and

Thornhill (1993) regarding the general formulation of the original theory, as stated in a paragraph above in this section.

Emphasising the continuous importance and relevancy of BPR, Peppard (1996:255) and Mansar and Reijers (2005:457) point out that although overhyped, criticised, and rebranded over the years, BPR has remained on the agenda of many institutions across sectors worldwide. According to Mansar and Reijers (2005), this could be because BPR is a powerful way to boost institutional performance improvement and customer satisfaction. Peppard (1996) adds that the reason BPR continues to receive great attention is an indication that it has perhaps struck a responsive nerve and that there may be some substance behind BPR as an institutional performance improvement management approach. Despite its criticism, institutions across sectors worldwide knowingly or unknowingly continue to embark on BPR and hence the need for it to be further explored.

Consistent with the assertions by Peppard (1996) and Mansar and Reijers (2005), referred to above, this research acknowledges the continuous importance and relevancy of BPR as an institutional performance improvement management approach that can be applied across sectors worldwide, including within the South African public higher education sector. Consistent with the BPR operational definition provided in section 1.2.1, this research will later in chapter six propose a BPR framework that advocates for an incremental approach to BPR and would assist public higher education institutions, specifically TUT, to strategically reengineer core business processes that are critical to the enhancement of their strategic orientation.

The following section provides an exploration of the classical and contemporary theoretical characteristics of BPR.

2.3 CLASSICAL AND CONTEMPORARY THEORETICAL CHARACTERISTICS OF BUSINESS PROCESS REENGINEERING

As reflected in section 2.2.3, despite the earlier confusion and different interpretations of what constitutes BPR, there was general agreement that BPR represents a range of activities concerned with the radical improvement of business processes with the aim of producing equally radical improvements in institutional performance (Zairi & Sinclair, 1995:8). The underlying principles of the first formal definition by Hammer and Champy (1993) are that BPR focuses on business processes, questions fundamentals, and requires radical and dramatic change (see

section 1.2.1). According to Patching (1995:10), the definition by Hammer and Champy (1993) provided an impression of the innovative nature of BPR and the impact it could have on institutions.

In the discussion that follows, the four key words that are central to the definition by Hammer and Champy (1993); namely; **fundamental** rethinking, **radical** redesign, **dramatic** improvements, and **processes**; will be used as the basis for an exploration of the classical and contemporary characteristics of BPR. Davenport (1993), another originator or early exponent of BPR, also makes several references to these key words in his first business process redesign book entitled *Process innovation: Reengineering work through information technology*.

2.3.1 Fundamental rethinking of business processes

BPR is fundamental because it involves asking basic questions about how institutions across sectors operate (Hammer & Champy, 1993:32; Pitman, 1995:6). These questions, according to Hayes (2007:322), challenge many widely accepted assumptions. Hammer and Champy (1993:32–33) point out that the starting point of BPR involves an analysis of what institutions do rather than accepting the status quo. Chan and Choi (1997:213) agree that rethinking the way work gets done and service is delivered fundamentally lies at the heart of BPR and managers need to make a thorough analysis of the business processes, their purposes, and the methods used in business processes. They further indicate that the analysis comprises the what, why, and how aspects of conducting business or delivering a service. Edosomwan (1996:7) adds that asking basic fundamental questions and analysing existing business processes against objectives and expected outcomes helps to identify weaknesses and variations. It is through this analysis that weaknesses and variations that do not contribute to the value and final outcome of a business process are identified as sources of waste. It is imperative for institutions across sectors to clarify fundamental questions during the initial phase of BPR to determine the extent to which the current business processes contribute to the strategic direction of the institution embarking on BPR.

2.3.2 Radical redesign of business processes

Hammer and Champy (1993:33) and Davenport (1993:10) emphasise and promote the radical approach to BPR by pointing out that radical redesign involves "getting to the root of things and not making incremental changes to existing business processes". Hammer and Champy (1993)

and Davenport (1993) add that "radical approach" means disregarding existing business processes and inventing completely new ways of conducting business or delivering service. Pitman (1995:6) and Gunasekaran and Nath (1997:92) also support a radical approach to BPR as opposed to increasing or adjusting what exists as BPR is not about fine tuning existing business processes. Pitman (1995) and Gunasekaran and Nath (1997) also confirm that a radical approach involves getting to the root of what is happening and disregarding what is already in place. Davenport and Stoddard (1994) agree that reengineering is a powerful change approach that can bring about radical improvements in business processes provided it is properly executed.

In their paper, *Impact Assessment of Business Process Reengineering on Organisational Performance*, Sidikat and Ayanda (2008:124) also concluded that a radical redesign of business processes to achieve breakthrough improvements in performance cannot be completely ruled out. Similarly, Edosomwan (1996:26) argues that some business processes are so outdated that they should be radically reengineered. Teng *et al.* (1996:277) concur that BPR often involves substantial change to the existing status and that a radical approach is one of the elements that characterises the application of BPR. Chan and Choi (1997:213) and Al-Mashari and Zairi (2000:32) add that BPR causes institutions to renounce the comfort associated with the current state of affairs, as the radical approach to BPR involves changing business processes without the constraints of the existing business processes.

2.3.3 Dramatic improvements in performance measures

BPR is expected to achieve dramatic gains or improvements in critical measures of performance. It is not about marginal improvement of institutional performance that requires the fine tuning of business processes as opposed to dramatic improvement that demands replacing old business processes with new ones (Hammer & Champy, 1993:33–34; Davenport, 1993:10; Pitman, 1995:6). Carr and Johansson (1995:12) contend that for institutions to achieve dramatic improvements, dramatic "stretch targets" need to be set and then followed by BPR to achieve those targets. According to Chan and Choi (1997:214), reengineering for dramatic improvements is critical for an institution to be successful. Kock, McQueen, and Baker (1996:47) insist that successful BPR initiatives are those where core business processes have not only been radically redesigned, but where BPR leads to dramatic improvements in quality and speed of services as well as productivity.

2.3.4 Processes

Like Hammer and Champy (1993), Davenport (1993) supports the understanding that business processes, and not institutions, are the object of BPR. Similarly, Chan and Choi (1997:214–218) advocate the process orientation of BPR, and Ascari *et al.* (1995:1) confirm that central to BPR is an emphasis on business processes. There is general agreement on what constitutes business processes, despite the different authors' use of several names to refer to radical business process change initiatives (see section 2.2.3). Authors such as Chen (2001:75) and Pitman (1995:6) understand that while institutions across sectors do not reengineer departments or operational units, they reengineer the work that staff members in departments or operational units do. Davenport and Short (1990:3), Carr and Johansson (1995:9), Hammer (2001:1), Campling *et al.* (2008:310), and Cole and Kelly (2011:233); all define a business process as a set or collection of related work tasks or activities that together create customer value. Put simply, Hammer (2001) reveals that the focus of business processes is not on the work of individual units but rather on the activities of an entire group that creates value for customers when brought together.

Lockamy III and Smith, (1997:142–243) include the customer's perspective to the redesign of business processes and argue that BPR involves the redesigning of business processes that deliver value to the customer. Well designed business processes ensure that institutional performance is consistently enhanced and create the desired experience and outcomes for customers. It is imperative for institutions across sectors to ensure that their business processes are always geared towards the achievement of improved institutional performance and customer satisfaction. Carr and Johansson (1995:9) emphasise the need for institutions to prioritise the reengineering of core business processes that create value to customers when they remark that in BPR, the focus should be on core business processes that directly touch customers i.e. core business processes that create value for customers and are critical for institutional success; institutional strategy should be prioritised as BPR targets.

Consistent with the operational definition provided in section 1.2.1 and the research problem articulated in section 1.3, this research aligns itself with the assertion that business processes are the objects of BPR and that the primary purpose of BPR is for institutions across sectors to achieve improvements in institutional performance. As mentioned in section 2.2.2, it is also imperative to indicate that BPR shifted ground from its original radical manifestations. As BPR moved from one phase of development to another, a shift in emphasis took place. The following discussion explains how BPR shifted in focus from a radical approach to a modest approach.

2.4 FROM A RADICAL APPROACH TO A MODEST BPR APPROACH

In the approach to BPR, two contrasting perspectives are dominant; one advocates the radical approach, the other looks at an incremental improvement of business processes (Peppard, 1996:255–270). Although BPR has gained major attention worldwide, it has changed and is now applied in a less radical way than was originally proposed by Hammer (1990) and Davenport and Short (1990). Since its introduction, various realities of achieving radical change have set in and the BPR concept was modified with this reality in mind (Peppard, 1996:255–270; Grover & Malhotra, 1997:209–210). Furthermore, Peppard (1996) insists that although the language used in relation to BPR reflected the radical approach and while most reengineering projects had radical performance as an objective, in reality, the route that had been taken by most institutions was far more incremental.

Based on the conversations they had with the managers of different institutions as well as their own observations, Davenport and Stoddard (1994) also came to an agreement that a radical approach is rarely found and that few institutions are able to follow the approach. Davenport and Stoddard (1994) further argue that while institutions may adopt a radical approach to redesigning business processes, more often than not the implementation needs to be incremental. Grover and Malhotra (1997:208) point out that many institutions are unwilling to invest money and time to implement radical changes as they have found that continuous improvements may be more beneficial in the long run. Grover and Malhotra (1997) add that even Michael Hammer, in his book, *Beyond reengineering*, admits that he made a mistake in his assertion that BPR should be radical. Ozcelik (2010:8) agrees that recent literature indicates that the first generation of BPR is evolving to a modest approach to business process improvement and claims that the radical approach is softened by the lessons learned from past experiences across sectors worldwide.

Campbell and Kleiner (2001:5–6) joined the likes of Peppard (1996:257) and Altinkemer, Chaturvedi, and Kondareddy (1998:381–382), who cautioned against a radical approach to BPR, and argued that the differences between the radical and incremental approaches to BPR are clear in theory but not in practice. Campbell and Kleiner (2001:5–6) add that although Hammer and Champy (1993) suggested a radical change to business processes, research has revealed that people react more positively to incremental change, as this helps reduce stress during BPR. As incremental change helps to ensure continuous institutional performance, it is imperative for managers within institutions to ensure that incremental changes within their institutions are carefully designed and implemented consistently.

Charting the future of BPR, Grover and Malhotra (1997:209–210) contend that the BPR radical approach is giving way to the reality that there is more than one way of reengineering business processes. Business processes could be radically or incrementally reengineered depending on institutional circumstances. Institutions should apply different methods to gather information, then redesign and assess their business processes to determine which approach to follow. Coulson-Thomas (1997:282–283) is also of the view that BPR can be applied to either improve or radically change current business processes. He argues that BPR that is radical in nature, as advocated by Davenport (1993) and Hammer and Champy (1993), assumes that what exists is unlikely to change even if attempts are made to improve it, which is not necessarily always the case. Smit *et al.* (2011:42) confirm that successful BPR is ongoing, as this approach allows institutions to learn and continually generate new business processes.

Supporting the application of both radical and incremental approaches to BPR, Hayes (2007:59) argues that successful managers are those who can visualise where they want an institution to be but deliberately decide which change approach to take when leading an institution. Deciding whether to follow a radical or incremental approach is one of the principles institutions across sectors should apply for the effective deployment of BPR. Ozcelik (2010:8) also insists that a more acceptable approach to BPR includes both radical and incremental business process improvements. Lockamy III and Smith (1997:149) and Ozcelic (2010) claim that selecting the most suitable BPR approach ensures the success of the institutional performance improvement problem at hand and facilitates strategic benefits and customer satisfaction. It can be deduced that choosing between a radical and incremental approach to BPR is dependent upon institutional circumstances as well as contextual issues relevant to business processes due for reengineering (Grover & Malhotra, 1997). As indicated in section 2.2.2, the empirical exploration of this research was approached from an incremental approach to BPR. This approach was informed by the provisions of the TUT Risk Management Framework 2014 and the TUT Strategic Plan 2014 – 2019 which, amongst others, advocates for continuous improvement of business processes in order to deliver services efficiently and effectively.

Having explained the origins of BPR, analysed the classical characteristics of BPR, and discussed the shift of BPR from a radical approach to a modest approach, it is now necessary to explore the failures that characterised the early days of BPR. Suhendra and Oswari (2011:118) argue that the initial expectations of BPR exceeded what BPR in reality delivered; hence a need for the approach to evolve further. Various authors, including Attaran and Wood (1999:752),

believe that if implemented properly, BPR can do wonders to institutions and can lead to breakthrough improvements in institutional performance.

2.5 BPR: EARLIER FAILURES

As argued by Zairi and Sinclair (1995) and O'Neil and Sohal (1999) a number of articles that followed the first BPR publications investigated the successes and failures of BPR (see section 2.2.3). The investigation was triggered by claims made by early exponents of BPR that BPR could lead to positive radical and dramatic change in business processes and institutional performance. Although there is evidence of successful BPR initiatives, the literature reviewed shows that various BPR projects failed to achieve the expected results. Hall, Rosenthal, and Wade (1994:107) and Seidmann and Sundararajan (1997:117) confirm that since the introduction of BPR a number of successful implementations have been recorded as well as a number of BPR failures. Lockamy III and Smith (1997:141) and Shin and Jemella (2002:352) indicate that between 60% and 80% of BPR initiatives failed to achieve the desired results. This is consistent with Hammer and Champy (1993) and Chan and Choi (1997) who estimate a 70% failure rate of BPR. However, the study conducted by Al-Mashari, Irani, and Zairi (2001:451) revealed that contrary to the BPR failure rate claimed by Hammer and Champy (1993) and others, the success rate is 55.46%. Al-Mashari *et al.* (2001:451) further indicate that the above variations with regard to the BPR success and failure rates are due to subjectivity in measuring the impact of BPR and a lack of a common understanding of BPR measures and their application levels.

Zairi and Sinclair (1995:8–10) blame the confusion and misunderstanding regarding BPR application that existed after the inception of BPR as one of the factors that contributed to the early failures of BPR. Martinsons (1995:254) adds that although early BPR texts by Hammer (1990), Davenport (1993), Hammer and Champy (1993), and Davenport and Short (1990) were followed by a number of articles describing BPR, confusion remained as to what exactly constituted BPR. Hall *et al.* (1994) reveal that after careful redesign, institutions achieve dramatic improvements in individual business processes only to watch overall results decline. This is supported by Larsen and Myers (1997:367), Al-Mashari and Zairi (1999:87) and Attaran (2004:593) who claim that during its early stages, not all BPR projects achieved their intended results. Larsen and Myers (1997), Al-Mashari and Zairi (1999) and Attaran (2004) argue that despite the significant growth and substantial investments to make BPR successful, BPR remained an unfulfilled promise. Larsen and Myers (1997) expand this argument by stating that the success stories stand in contrast to the high failure rates that are associated with BPR.

Likewise, Tennant and Wu (2005:538) conclude that many institutions that embarked on BPR suffered implementation challenges that caused them to abandon their BPR efforts with little or no positive results. Various reasons are attributed to the earlier failure of BPR projects. According to Seidmann and Sundararajan (1997), the earlier BPR failures were primarily as a result of the incorrect implementation of BPR ideas. Chan and Choi (1997:211) and Attaran (2004) also found that the earlier failure of BPR projects was caused by a lack of understanding of BPR principles and the inability to perform BPR.

Chan and Choi (1997) Attaran (2004), and Suhendra and Oswari (2011) list the following reasons for BPR failures during the early stages after the concept was introduced:

Table 2.1 Causes of BPR failures

Chan and Choi (1997)	Attaran (2004)	Suhendra and Oswari (2011)
• Misunderstanding of BPR • Unrealistic expectations • Lack of an effective methodology • Inability to reconceptualise process • Wrong process and objectives • Lack of recognition of benefits • Overreliance on information technology • Lack of top management commitment.	• Misunderstanding of the concept • Misapplication of the term • Lack of proper strategy • Unrealistic objectives • Management failure to change • Failing to recognise the importance of people • Information system failure to change.	• Unclear concepts • Pursuing a wrong strategy • Lack of well-established methodology • Unrealistic expectations • Misinterpretation of BPR • Skills and resource shortages • Resistance and lack of top management commitment • Fear of downward decision making authority • The best people not seconded on BPR teams • Lack of corporate of information systems.

Source: Adapted from Chan and Choi (1997); Attaran (2004); Suhendra and Oswari (2011)

It should be noted that reasons attributed to the failures of BPR were more prevalent when BPR was still quite "new"; since then there has been considerable work done to refine and further develop BPR theories, models, principles, and approaches that define various aspects and elements of BPR. Caron, Jarvenpaa, and Stoddard (1994:248), Peppard (1996:256–257), and Ranganathan and Dhaliwal (2001:126) confirm that practice and greater understanding advanced the boundaries of BPR application and research results agree that through the redesign of business processes, significant institutional performance improvements can be achieved. The empirical investigation conducted by Ozcelik (2010:7–13) revealed that while overall institutional performance remains unaffected during the BPR implementation stage, it improves significantly after the implementation period. BPR can thus be a powerful initiator of radical change. Al-Mashari *et al.* (2001:451–452) are of the opinion that despite the earlier high failure

rate, BPR remains a subject of great interest. Furthermore, Al-Mashari *et al.* (2001) show that although the term BPR might have lost favour, institutions, knowingly or not, are involved in BPR. Zairi and Sinclair (1995:15) also confirm that there is general agreement that BPR, when done properly, can produce significant improvements in institutional performance.

As stated in section 1.3, the process TUT embarked on to radically redesign business processes prior and after the merger reflects some core elements of BPR. However, the observation that triggered this research and consistent with some of the BPR earlier failures listed in Table 2.1 is that misunderstanding of BPR principles and lack of an effective common BPR framework to guide the strategic reengineering of business processes contribute to some BPR projects within the University failing to achieve the intended results.

Consistent with the view expressed by Zairi and Sinclair (1995) in a paragraph above, this research acknowledges that despite its earlier failures, BPR can significantly improve institutional performance if well executed. For BPR to achieve improvements in institutional performance, it becomes necessary for public higher education institutions, such as TUT, to identify BPR principles that seem to best capture the BPR focus. The principles for successful BPR identified through the review of literature are discussed below. As these BPR principles are considered the best predictors for successful BPR, they will be incorporated into the BPR framework that the researcher seeks to develop. The principles will be tailored to suit the uniqueness of South African public higher education institutions, specifically TUT.

2.6 PRINCIPLES FOR THE SUCCESSFUL APPLICATION OF BPR

Although the means of achieving improvements in institutional performance differ regarding the approaches followed and frameworks utilised by different institutions across sectors, they share a commonality. Improvement in institutional performance is mainly achieved through the adoption of a comprehensive approach that focuses on a framework for successful BPR principles (Love & Gunasekaran, 1997:185; Terziovski, Fitzpatrick, & O'Neill, 2003:36). It is imperative for institutions to identify a framework that consists of elements that are best predictors of BPR in order to achieve improvements in institutional performance. Lockamy III and Smith (1997:149) also view the effective deployment of BPR predictors or themes as vital for the successful execution of BPR and refer to these predictors or themes as a framework for successful BPR or principles for the effective deployment of BPR. This assertion is supported by Larsen and Myers

(1997:369), who claim that these predictors or themes are factors that increase the likelihood of BPR success.

Shin and Jemella (2002:351) claim that BPR commentators such as Hammer (1990), Hammer and Champy (1993), Davenport (1993), Kettinger and Grover (1995), and Stoddard and Jarvenpaa (1995) suggested BPR principles that make no distinction among BPR initiatives in different institutional contexts. Shin and Jemella (2002) add that BPR principles should rather be categorised according to the environment in which they would be applied as environments are distinct i.e. the public sector and the private sector. Although there are general similarities regarding how the public sector and the private sector institutions approach BPR, institutions should nevertheless tailor their BPR initiatives to satisfy their uniqueness. Peppard (1996:265) contends that the original BPR literature is generally descriptive, focusing only on what BPR is all about and why it is necessary but failing to expressly consider the broader institutional implications.

In broadening the scope of BPR, researchers such as Hayes (2007) and Ozcelik (2010) started to include factors that were not expressly considered by the initial literature, such as broader BPR implications, a modest BPR approach, and the distinctness of the environment within which BPR would be applied. Teng *et al.* (1996:273) and O'Neill and Sohal (1999:572) show that over the years, many BPR frameworks have been developed and various authors, such as Ascari, Rock, and Dutta (1995); Love and Gunasekaran (1997); Terziovski, Fitzpatrick, and O'Neill (2003), have suggested different BPR principles that will enable institutions to reinvent their competitive advantage. Table 2.2 hereunder reflects themes that seem to best capture the BPR focus.

Table 2.2 Principles for the successful application of BPR

Ascari, Rock, and Dutta(1995)	Love and Gunasekaran (1997)	Terziovski, Fitzpatrick, and O'Neill (2003)
• Strategy: Establish a customer-focused strategic vision that will optimize long-term success. • People: Organise, motivate, and empower people to succeed. • Business processes: Redefine and streamline business processes to implement strategic vision and to achieve maximum effectiveness and efficiency of all resources. • Technology: Apply	• Leadership and guidance from top management • Becoming customer focused • Identifying appropriate tools and techniques for BPR to meet strategic performance goals • Implementing information technology to enable improved performance • Applying effective change management to adjust the organisation's people and culture to the new ways of working	• Alignment to strategy • Top management commitment • Information technology as an enabler • Customer focus • BPR as part of continuous improvement culture • Performance outcomes.

Ascari, Rock, and Dutta(1995)	Love and Gunasekaran (1997)	Terziovski, Fitzpatrick, and O'Neill (2003)
appropriate technology to support a streamlined process, to provide information and tools to support the entire work force and to enhance customer/supplier relationships.	Implementing continuous improvement methods to sustain the organisation's improved performance.	

Sources: Adapted from Ascari, Rock, and Dutta (1995); Love and Gunasekaran (1997); Terziovski, Fitzpatrick, and O'Neill (2003)

Considering the principles listed above and consistent with some of the principles for the successful application of BPR identified in section 2.2.2, it is clear that the following are considered the best BPR predictors:

- Strategy alignment of BPR projects;
- Commitment of senior management;
- Information technology and human resource;
- Voice of customers; and
- Implementation of continuous improvement methods.

The importance of the abovementioned principles in relation to improvements in institutional performance through BPR will be explored later in section 3.9 and will also be incorporated as part of the framework the researcher seeks to develop. The exploration will also cover BPR principles that are not necessarily listed above, but that are also of critical importance to the success of BPR. The core BPR principles that would assist public higher education institutions, specifically TUT, to strategically reengineer their business processes will further be explored in chapters five and six.

It is important to note that as much as the scope of BPR has broadened some of the principles that were advocated by the original exponents of BPR are still considered the best predictors of the success of BPR. Considering the uniqueness of the public sector, all the principles that will increase the likelihood of public higher education institutions, specifically TUT, improve their performances through BPR will also be compared and contrasted with the findings of the empirical investigation and will also be considered for inclusion as part of the BPR framework

that the researcher will eventually propose, regardless of whether those principles are listed as part of Table 2.2 or not.

The linking of principles for the successful application of BPR to the methodology, phases, and steps that best capture the BPR process is the key to the success of BPR. The section that follows identifies the methods, phases, and steps that best capture the BPR sequence from its planning stage until implementation. The BPR methods, phases, and steps will also be compared to identify their common features.

2.7 METHODOLOGIES AND PHASES FOR BPR

MacIntosh (2003:327) asserts that academic interest in BPR reached fever pitch during the mid-1990s as during this period, the academic community developed a range of methodologies for conducting BPR across sectors. Because the application of BPR concepts can take different forms various methodologies can be followed when undertaking BPR depending on the focus and emphasis of different projects (Al-Mashari & Zairi, 2000:25). For Motwani *et al.* (1998:968), a lack of a standard integrated methodology for BPR is a major challenge regarding the execution of BPR projects even though several BPR models, phases, and steps have been proposed. This research discovered that TUT lacks sufficient capacity to strategically reengineer its business processes due to a lack of a standard BPR framework.

Kettinger, Teng, and Guha (1997:56) agree that BPR experienced an initial period of chaotic trial and error, with a lack of standard or accepted methodologies. Although various BPR commentators suggested different methodologies, no common framework has been adopted as the standard framework to be followed by all institutions embarking on business process improvement initiatives. Likewise, Childe *et al.* (1994:23) contend that despite the existence of a growing body of knowledge in the field of BPR, little guidance is available on how to undertake BPR projects in a uniform way due to lack of standard BPR methodology, phases, and steps.

The exposition of methodologies, phases, and steps involved in BPR is provided below. Based on published literature, the exposition will establish what BPR methodologies already exist. It should be noted that there is no right or wrong sequence of phases and steps involved in BPR as mentioned in Coulson-Thomas (1994:90) and, as a result, several phases and steps that are more suitable for BPR across sectors will be exposed. In this context, the exposition will start with a

comparison of existing methodologies, phases, and steps after which an explanation of a BPR methodology and phases that best capture the BPR sequence across sectors will be provided.

Table 2.3 below presents a comparison of BPR methodologies, phases and steps suggested by various authors. Common phases of the various methodologies will also be identified and will be used collectively as the basis from which the new BPR framework for TUT will be developed.

Table 2.3 BPR methodologies compared

Author	BPR phases/methodologies	Common elements
Davenport and Short (1990)	• Develop the business vision and process objective. • Identify the processes to be redesigned. • Understand and measure existing processes. • Identify information technology levers. • Design and build a prototype of the new process.	Planning for BPR (including defining of the enablers), analysis of current business process, and designing of the future business process.
Patching (1995)	• Strategic phase • Preparatory phase • Technical phase • Implementation phase • Consolidation phase	Planning for BPR, analysis of current business process, designing of the future business process, and implementation
Grover and Malhotra (1997)	• Preparation • Process–think • Process creation • Technical design and social design • Implementation	Planning for BPR, analysis of current business process, designing of the future business process, and implementation.
Lockamy III and Smith (1997)	• Project planning stage • Baseline study stage • Visualisation stage • Process design stage • Implementation stage	Planning for BPR, analysis of current business process, designing of the future business process, and implementation.
Kettinger and Teng (1998)	• The link with strategy • Planning the change • Analysing problems in the process • The social and technical design • Process re–generation • Continuous improvement	Planning for BPR (including alignment to institutional strategy), analysis of current business process, designing of the future business process, and implementation.
Love and Gunasekaran (1997)	• State a case for process reengineering • Establish process objectives • Identify the process for reengineering • Understand and measure the current process • Identify and evaluate the enablers • Design and create a new process • Test the new process • Implement the reengineered process	Planning for BPR (including identification of business process for reengineering), analysis of current business process, designing of the future business process, and implementation.
Harrington (1998)	• Select the process to be reengineered • Define the improvement objective • Develop the vision statement	Planning for BPR (including identification of business process for reengineering and defining the enablers), analysis of current business

	• Define the enablers • Design the to be business process • Pilot the new business process • Conduct a cost/benefits analysis • Implement the new business process • Measure the results	process, designing of the future business process, and implementation.
Hayes (2007)	• Process mapping • Identifying processes for reengineering • Understanding the selected processes • Defining key performance objectives • Designing new processes • Testing • Implementation	Planning for BPR (including identification of business process for reengineering), analysis of current business process, designing of the future business process, and implementation.

Sources: Adapted from Davenport and Short (1990); Patching (1995); Grover and Malhotra (1997); Lockamy III and Smith (1997); Love and Gunasekaran (1997); Harrington (1998); Kettinger and Teng (1998); Hayes (2007)

A methodology and associated phases that seem to best explain the sequence of BPR from its initial stage until implementation, including the monitoring and evaluation of the reengineered business processes, are presented below. Under this section, common elements identified above by various authors will be summarised into phases that best capture the BPR methodology across sectors. Just like with principles for successful BPR identified in section 2.6, the phases identified for purposes of this research were originally practised within the private sector (see section 1.1). Consequently, the phases that will be identified for inclusion in the BPR framework that will be proposed in chapter six will be selected with due consideration of the unique nature of the South African public higher education institutions, specifically TUT.

2.7.1 Planning for business process reengineering

This planning phase is a combination of a number of phases and steps suggested by various authors, as can be established from Table 2.3 above. Martinsons (1995:259), Pitman (1995:15), and Cole and Kelly (2011:17) recognise the importance of planning for any activity or event to be successful and BPR is no exception. Martinsons (1995), Pitman (1995), and Cole and Kelly (2011) insist that before attempting reengineering, the question as to whether business process reengineering is necessary should be asked and the rationale for business process redesign should be well understood. There should be a critical need for a business process to be reengineered as the justification of the need to reengineer a business process is the beginning of the BPR planning phase. According to Davenport (1990), the most likely BPR objectives are cost reduction, time reduction, output quality, and quality of work life. These objectives are consistent with the critical performance measures that Hammer and Champy (1993) refer to as the main objectives that BPR seeks to achieve. To this effect, Cole and Kelly (2011:17) remark that decisions about ends, means, conduct and results, and the formalisation of what is intended

to happen at some time in the future forms part of the planning phase of BPR. The objective or objectives of BPR should thus be clearly stated during the planning phase.

Based on the first phase suggested by Davenport and Short (1990), Pitman (1995:15) and Attaran (2004:587) recommend developing a strategic vision, identifying the customer's objectives, establishing BPR targets, assessing the potential for reengineering, defining the BPR scope, and securing senior management commitment as activities that may be included in the BPR planning phase. Kettinger and Teng (1998:95) refer to this phase as the strategy linking stage, as it involves a rethinking of the strategic direction of the institution and its output leads to the selection of the processes to be reengineered, including stating the objective of the BPR effort and defining the project scope. Davenport (1993) asserts that as BPR is about redesigning business processes, it is imperative for the surveying of the process landscape and identification of target processes to form part of the activities that must be included in the planning phase.

Davenport and Short (1990) and Coulson-Thomas (1997:280) indicate that there should be a criteria for determining which business processes are most critical for BPR purposes as the means by which business processes to be reengineered are identified is a key issue. The identification of candidate BPR processes is a critical activity as it is impossible to reengineer all institutional business processes simultaneously (Hammer & Champy, 1993:122; Hayes, 2007:324). The most obvious approach to identifying the target business processes is to select processes that are central to the achievement of an institution's strategic direction. As the focus of many institutions is to improve relationships with their customers, another approach is to place customers at the centre of BPR and focus on business processes that are important to customers. One aspect of customer strategy is the provision of services that can provide customer satisfaction (Davenport, 1993:32).

Consistent with the aforementioned assertions, Lockamy III and Smith (1997:153) argue that business processes are reengineered to provide an alignment between an institution's strategy, process, and customer satisfaction. As a result, the BPR planning phase must include the identification of a performance measurement instrument to assess the effectiveness of the institution's strategy relevant to customer satisfaction, the effectiveness of business processes important to the institution's strategic direction, and the effectiveness of reengineered business process in relation to customer satisfaction, while linking BPR phases with some of the critical and core BPR success factors or predictors. Coulson-Thomas (1994:85–86) point out that the BPR planning phase also includes considering what approaches, methods, principles, and

techniques to adopt. As there are several BPR approaches and methods available, the choice should be made with great care. For Grover and Malhotra (1997:201) and Cole and Kelly (2011:126), the planning phase begins with securing senior management commitment and support. As the BPR planning phase also involves taking steps to agree and mobilise resources, leadership and championship must come from the top of the institution.

Regarding the human side of resources, Hammer and Champy (1990:102) explain that as people reengineer business processes, the identification of people who will actually do the reengineering work is the key to the success of the BPR endeavours. This activity involves selecting a team leader, process owner and sponsor, reengineering team, and BPR steering committee. In support of Hammer and Champy (1990), Johnston and Clark (2008:425) indicate that the team leader is normally tasked with the responsibility of managing the reengineering project and coordinating its activities. The steering committee is responsible for driving the overall BPR strategy and monitoring progress. The size and members of the different BPR teams depend on the complexity and perceived importance of the process. The training of members of different teams also forms part of the BPR planning phase. This is a crucial BPR phase considering that the success or lack thereof of any BPR initiative is dependent upon the effort that goes into the planning of such an initiative (Johnston & Clark, 2008).

2.7.2 Analysing the current business process

Hammer and Champy (1993:129) cautioned against analysing and documenting the target business process and exposing all its details. They argue that BPR team members require only the level of understanding that is necessary to create a new business process. The argument was informed by their push for a radical or "clean slate" approach to BPR. However, Hayes (2007:324–425) observes that for those who prefer starting with a "dirty slate" and who are looking for the incremental improvement of business processes, a detailed analysis of current business processes becomes crucial. Johnston and Clark (2008:425) agree that the documenting of current business processes is imperative if all involved in BPR are to have a clear understanding of what the current business process intends to achieve and its weaknesses. Chen (2001:92) also agrees that an examination of the current business process is critical in order to redefine and redesign their nature. In this research, it is argued that existing business processes have to be understood to enable the BPR teams to better redesign new business processes.

Also, in supporting the detailed analysis of the current business process, Edosomwan (1996:34) shows that analysing current business process assists the BPR teams to become familiar with the existing business process and its key purpose and to identify opportunities for improvements and strengths. Davenport and Short (1990) identified the following two primary reasons for understanding the existing business processes before reengineering them:

- Problems must be understood to avoid repeating them; and
- Accurate analysis can serve as a baseline for future improvements.

Like, Hammer and Champy (1993), Davenport and Short (1990) point out that those responsible for reengineering business processes should be informed by past business process problems and errors. It is imperative that the reengineering team analyse and understand the current business processes, to avoid designing the new business process with similar weaknesses and performance challenges.

2.7.3 Design the future business process

Having identified the shortcomings of and the potential improvements to the existing business process, the next logical step is to design the future business process. According to Grover and Malhotra (1997:201), the main focus of the business process design phase is to identify elements of current process and the objective or objectives of the new business process to determine what needs to be amended to achieve the desired changes in institutional performance. The future business process should be designed so as to help improve the institutional performance objective or objectives identified during the planning phase. Davenport (1993:154) and Edosomwan (1996:35) reveal that this phase requires that the BPR team have a brainstorming session to identify new business process. Davenport (1993) and Edosomwan (1996) emphasise the need to establish a team (during the planning phase) that represents all environments that depend on the process being reengineered as this ensures a cross functional perspective during the designing phase. Davenport (1993) and Grover and Malhotra (1997) encourage the need for brainstorming and show that this should be about creativity, idea generation, and non-judgemental reasoning.

Grover and Malhotra (1997:201) suggest that benchmarking with major competitors by comparing both the performance of the institution's business processes and the way those processes are executed, is another approach that can be used to identify the institution's strengths

and weaknesses. Patching (1995:39) describes benchmarking as looking for institutions that are doing something well, learning from their efforts and emulating them, as this reflects a willingness to look beyond the subject institution and seek good ideas elsewhere. Al-Mashari and Zairi (2000:20) and Smit *et al.* (2011:105) consider benchmarking as "the search of best practices among competitors and non-competitors that leads to superior institutional performance". Similarly, Johnston and Clark (2008:374) add that because the purpose of benchmarking is to search for the best practices that will lead to the superior performance of an institution, it usually implies seeking out the best possible practices whether they are in or outside the industry. They explain that benchmarking assists in designing the new business processes to match the best available possible practices and in identifying gaps in institutional performance, which consequently results in appropriate actions to maximise the level of institutional performance.

Brainstorming and benchmarking precedes the designing of a new business process, which Pitman (1995:62) suggests should be broken down into creating a –

- high level process design or conceptual design i.e. an overall design describing how the new business process will work and the expected benefits; and
- detail process design that explains in detail how the process and its sub-processes will work, including specifics about what resources will be required.

Pitman (1995) also explains the importance of indicating the objective and procedure to be followed for each sub-process. The implementation phase follows the identification of best practices and their incorporation into the newly designed business process.

2.7.4 Implementation of the reengineered business process

The actual implementation and monitoring of the new business process is the final BPR phase. Daft (2011:366) argues that the implementation phase is the most crucial and most difficult phase of any system and Grover and Malholtra (1997:204) confirm that it is easier to reengineer a business process than to implement it. Attaran (2004:590) considers the BPR implementation phase the phase where the bulk of the BPR work is done. Attaran (2004:590) maintains that pilot testing the reengineered business process, monitoring the results, and providing extensive training to the staff are the main objectives of the BPR implementation phase. Kettinger and Teng (1998:105) argue that the monitoring step of the BPR implementation phase involves

determining whether performance goals have been met and Davenport and Short (1990) add that this requires someone to be responsible for managing and monitoring the implementation process. The manager carries the responsibility of carefully and consistently managing and monitoring the implementation process, which includes assessing whether the new business process is enhancing the institution's strategic direction or not. The implementation phase also provides a link between the radical and incremental approaches, as it may be necessary to fine-tune certain aspects of the reengineered business process to gain an acceptable performance.

The successful implementation of reengineered business processes requires that the staff be equipped with the necessary skills as some changes fail to achieve the intended results because of improper implementation. As it is crucial for all staff to understand the changed business processes, training should be provided where necessary (Edosomwan, 1996:15). In stressing the need for staff to have proper training, Davenport and Short (1990) and Davenport (1993:107) maintain that reengineered business processes may require new skills and therefore business process skill requirements should be assessed after the redesigning of a new business processes. The assessment assists in identifying any gaps in the skills required for staff to successfully implement the reengineered business processes. As jobs often change after BPR, certain staff members may need to be reskilled (Davenport and Short, 1990; Davenport, 1993).

Lockamy III and Smith (1997:151–152) and Hayes (2007:85) suggest that during the planning phase decisions should also be taken about which approach to adopt regarding the changes to business processes and whether to fully implement or start with a pilot implementation. Lockamy III and Smith (1997) and Hayes (2007) suggest adopting a pilot implementation approach to minimise risk. The suggestion is informed by an understanding that earlier BPR projects failed more often than they succeeded, specifically where a radical approach to BPR was followed. Lockamy III and Smith (1997) point out that adopting the pilot implementation approach minimises the risk of BPR failure by facilitating, amongst others, the discovery of additional process reengineering opportunities and validation of BPR in relation to customer requirements and effectiveness of process measures in support of strategy, as these are considered the best success predictors of BPR.

In summary, the above discussion provided an explanation of BPR methodologies, phases, and steps. Different phases and steps identified by various authors were consolidated into what are considered the critical phases of a BPR methodology across sectors. It is imperative to reiterate that the research was triggered by an observation of a lack of an effective common BPR methodology within TUT. Proposing a common BPR methodology could bring a standardised

way of reengineering business processes University-wide. The consolidated phases explored in this section as well as the BPR success factors identified in section 2.6 will serve as the foundation of a BPR framework for TUT that will be proposed later in chapter six.

Cloete (2010:88) points out that in every country, including South Africa, there are two main categories of institutions, namely, private and public institutions. As mentioned in section 1.3, TUT, an institution where the empirical investigation of this research was conducted, is a public sector institution. As the BPR framework that the researcher seeks to develop is meant for TUT, a higher education institution that forms part of the South African public sector, the next section explores the relevance of BPR and its application within the broader public sector.

2.8 BPR WITHIN THE PUBLIC SECTOR

Chan and Choi (1997:213) view BPR as an idea that aggressively revolutionises business processes across sectors. Chan and Choi (1997) further state that BPR covers change in systems, policies, structures, staff responsibilities, and the manner in which the changed business process is executed. Denton and Vloeberghs (2003:85) argue that international competition forced many institutions across sectors to reengineer their business processes to improve the way they conduct business or deliver services. BPR also found its way into the public sector and became a fairly accepted approach in the reform efforts across the globe in an attempt to improve public service delivery. According to Reyes (1998:42), the BPR principles and techniques influenced policymakers, public administration scholars, and governments to redefine administrative values and principles, including systems of government that are deemed obsolete and not in line with developments within the socio-economic and political environments. Furthermore, Reyes (1998) states that BPR and other management principles, philosophies, and prescriptions offered alternatives for the public sector to cope with challenges posed by the global demands, as is still the case today.

The South African public sector was no exception. Denton and Vloeberghs (2003:85) reflect that with globalisation, South African managerial practices had to become aligned with the best practices globally post 1994. To enhance public service delivery, new legislation and management practices, such as BPR, were introduced within the South African public sector. Denton and Vloeberghs (2003:87–91) list BPR, restructuring, downsizing, outsourcing of functions, empowerment of employees, systems thinking, affirmative action, and democracy in the workplace as the management methods and concepts that became relevant to South African

institutions post 1994. According to Denton and Vloeberghs (2003), these methods and concepts were applied in both the South African private and public sectors.

The transformation to democracy opened gates to new opportunities and threats, as public and private sector institutions across South Africa had to become more competitive to retain and protect local markets against international competition and maintain a better position to compete within the international arena (Denton & Vloeberghs, 2003:87). Carstens and Thornhill (2000:188–189) concur that the global demand for the effective and efficient delivery of public services contributed to the need for the re-examination of the role of the public sector. Denhardt and Denhardt (2000:549) observe that due to the revolution experienced by the public sector worldwide, rather than focusing on just delivering public services, public sector institutions have since been forced to respond to an increasingly privatised government. Consequently, public managers are urged and challenged to find innovative ways to achieve results. Denton and Vloeberghs (2003) are of the opinion that although South African public and private sector institutions drew their inspiration from international prevailing management practices, their application was done within the context of the country's situation.

The discussion that follows covers the contextualisation of BPR within the broader South African public sector starting with an explanation of the role of the public sector. This is followed by an exploration of the introduction of NPM and how the South African public sector adopted the principles associated with it, including the application of business process reengineering. The exploration will assist in contextualising the extent to which BPR forms part of the activity or practice of public administration and, consequently, its theory.

2.8.1 Role of the South African public sector

Davids, Theron, and Maphunye (2009:53) point out that the public sector includes all public institutions that operate within the three branches of government, are engaged in the implementation of policies within the three spheres of government, and are accountable and responsible to a political authority. The public sector thus includes all national state departments, provincial administrations, municipalities, public enterprises, research agencies, public higher education institutions, and regulatory institutions that fall within the various branches and spheres of government. Schacter (2000:4) indicates that the public sector is mainly responsible for designing and enforcing policies that cover everything that the government does. Policies, in turn, are realised through the delivery of public services aimed at fulfilling the government's

developmental objectives. According to Davids *et al.* (2009:53), these developmental objectives are usually determined by the government of the day through the implementation of the political mandate granted by the electorate. Emphasising the role of the public sector of loyally executing the lawful policies of government, as prescribed by section 197 of the Constitution of the Republic of South Africa, 1996, Crous (2004:575) mentions that as it is the responsibility of government to make laws, ensuring that there are public institutions to implement them, and rendering the public services that its laws prescribe, its programmes should be geared towards the enhancement of the quality of life of all citizens.

Thornhill (2006:793–806) refers to the administrative activities required to govern and gives effect to governmental policies as the traditional role of the public sector. With the advent of democracy, the South African public sector, including the public higher education sector, was faced with the task of introducing a transformation process (Denton & Vloeberghs, 2003:86; Thornhill, 2005:575). Due to the complex nature of the new state, the South African government had to reconsider its new purpose and role in society. There existed a need for the new government to reform the public sector in an effort to provide effective and efficient public service to the general society. As a result, a number of major managerial methods and concepts have been implemented and public sector institutions across the country, including public higher education institutions, of late apply international strategies that have proved to be successful worldwide.

Furthermore, Thornhill (2005) argues that considering its transition from an apartheid state to a democratic state, the South African system of public administration and management was indeed required to transform. As mentioned in section 1.1, the transformation included policy renewal and the restructuring of public higher education institutions, as it will be demonstrated in chapter four. The newly established public sector had to adopt a new form of delivering public services based on equality and accountability. Davids *et al.* (2009:62) state that the introduction of the *Batho Pele* principles (i.e. White Paper for Transforming Public Service Delivery 1997) was a start to enhancing public sector service delivery. Denhardt and Denhardt (2000) indicate that officials within the public sector institutions now focus on their responsibility to serve and empower citizens as they manage public sector institutions and implement laws. The role of the South African state is thus currently geared towards promoting the development of all South Africans (Davids *et al.*, 2009:52).

2.8.2 Introduction of New Public Management

The global re-examination and reorganisation of governments during the 1980s became known as the New Public Management (NPM). This style of management was used to effect government reforms. As indicated in section 1.1, Hood (1995) shows that central to the NPM is that public sector institutions should introduce managerial practices from the private sector. Cloete (2010:88) indicate that the differences between public and private institutions are usually found in the nature of their functional activities. Though Coetzee (1991:24) agrees that the dividing line between the public and private sectors has been an issue since the early stages in the development of the Science of Public Administration, he also insists that there are many similarities between the public and private administrations because administration, as a process, is not limited to the public sector.

According to Boyne (2002:97), the critics of NPM argue that private sector management practices should not be transferred to the public sector because the differences between the two sectors are too great. However, Boyne (2002) revealed that there is no available evidence that clearly supports that public and private sector management practices are fundamentally dissimilar; nevertheless it cannot be argued that there are no differences between the two sectors. Boyne (2002) further remark that despite the differences, there is a lack of solid empirical evidence for rejecting the application of successful private sector management practices within the public sector. Boyne (2002) concluded that if public sector institutions, including public higher education institutions, are to learn from the private sector, there exists a need for them to establish the determinants of performance in private sector institutions. This will assist public sector institutions to better understand private sector managerial practices as well as determine whether those practices can be successfully applied within the public sector or not. This research recognises that private sector managerial practices can be successfully applied within the public sector and hence the research on the application of BPR within a public higher education institution.

It should be noted that many governments, including the South African Government, accepted NPM as the framework through which governments are modernised and the public sector reengineered (Armcost, 2000, as cited by Hope, 2001:119). Pollitt (1995:133) points out that a set of elements, known collectively as NPM, were proclaimed and practised by various countries across the world. Kaboolian (1998:190) mentions that while public sector reforms vary in depth, scope, and success, they have similar goals and technologies. Each reform movement is driven

by a desire to maximise efficiency and effectiveness in the manner in which different countries deliver services to the public. Aucoin (2012:178) argues that NPM sought to empower public sector managers to improve their performance. However, according to Aucoin (2012), some of the reforms that NPM sought to achieve also challenged the independence of the public sector from government and hence his push for a public sector that is able to act impartially i.e. without being used as a tool by the government.

Osborne (1993:356) maintains that the challenge for government leaders in the 1990s was how to restructure public systems that were not working properly and make them effective again. Osborne (1993) further indicates that to be effective and efficient, public sector institutions must continually improve their performance and be responsive to their customers. Osborne (1993:351) argues that six principles can be used to address challenges that public sector institutions and society face as compared to the ten suggested by Osborne and Gaebler (1993). Osborne refers to these principles as "common sense principles" and lists them as catalytic government, competitive government, mission-driven government, results-oriented government, customer-driven government, and enterprising government. These principles are consistent with the so called elements of the NPM that were suggested by NPM commentators such as Hood (1991), Pollitt (1995), and Gruening (2001).

According to Pollitt (1995), there are eight NPM elements that comprise a "shopping basket" for countries worldwide that wish to modernise their governments. Not every element is present in every case and characteristics of mixtures vary from country to country. Pollitt (1995:134) identified the following as the elements of NPM that apply to public sector institutions, including public higher education institutions.

- Cost cutting, capping, and seeking greater transparency in resource allocation
- Disaggregating traditional bureaucratic organisations into separate agencies
- Decentralisation of management authority within public agencies
- Separating the function of providing public service from that of purchasing them, introducing market and quasi market-type mechanisms
- Requiring staff to work to performance targets, indicators, and output
- Shifting the basis of public employment from permanency and standard national pay and conditions towards term contracts and performance-related pay
- Increasing emphasis on service quality, standard setting, and customer responsiveness.

Gruening (2001:4) refers to the above elements as the "characteristics" of the NPM, whereas Hood (1991:4) and Hood (1995:95) refer to them as the "dimensions of change or doctrinal components" of the NPM.

In accordance with Hood (1991:4–5), the seven elements that are familiar with most NPM commentators are listed below.

Table 2.4 NPM elements

Doctrine	Meaning	Typical justification
Hands-on professional management in the public sector	Active, visible, discretionary control of organisations from named persons at the top, who are "free to manage"	Accountability requires clear assignment of responsibility for action, not diffusion of power
Explicit standards and measures of performance	Definition of goals, targets, indicators of stress, preferably expressed in quantitative terms, especially for professional services	Accountability requires clear statement of goals, efficiency requires "hard look" at objectives
Greater emphasis on output controls	Resource allocation and rewards linked to measured performance, breakup of centralised bureaucracy-wide personnel management	Need to stress results rather than procedures
Shift to disaggregation of units in the public sector	Break up of formerly "monolithic" units, unbundling of U-form management systems into corporatized units around products, operating on decentralised "one-line" budgets, and dealing with one another on an "arm's length" basis	Need to create "manageable" units, separate provision and production interests, gain efficiency advantages of use of contract or franchise arrangements inside as well as outside the public sector
Shift to greater competition in public sector	Move to term contracts and public tendering procedures	Rivalry as the key to lower costs and better standards
Stress on private sector styles of management practice	Move away from military style "public service ethic", greater flexibility in hiring and rewards, greater use of PR techniques	Need to use "proven" private sector management tools in the public sector
Stress on greater discipline and parsimony in resource use.	Cutting direct costs, raising labour discipline, resisting union demands, limiting "compliance costs" to business.	Need to check resource demands of public sector and "do more with less".

Source: Hood (1991:4–5)

Although Hood (1991) only identified seven elements as compared to eight identified by Pollitt (1995), there is an overlap amongst the elements and all are aimed at the achievement of a common objective i.e. the effective and efficient delivery of public services.

Daft and Marcic (2011:9) define effectiveness as the degree to which an institution achieves its strategic goals, or succeeds in attaining what it tries to do. "Effectiveness" thus implies providing or delivering a service that service recipients value. Daft and Marcic (2011:9) define efficiency as the amount of resources used in service delivery. Efficiency can therefore be calculated as the amount of resources used to deliver a service. Van der Waldt (2004:71–72) mentions that

efficiency and effectiveness in the public sector depend, amongst others, on how well public sector institutions utilise the limited resources at their disposal in working towards the achievement of predetermined strategic goals and objectives. As improving service delivery is the objective of the NPM, it is thus imperative for public sector managers to ensure that they manage their respective institutions or departments in such a way as to accomplish the governmental goals with the limited resources available. TUT and other public higher education institutions should thus direct their BPR endeavours towards achieving efficiency and effectiveness in the manner in which they deliver services.

Noordhoek and Saner (2005:35–53) argue that although many countries implemented NPM principles, NPM, as a way of thinking about the government, has been largely discredited and this has led to other theories being suggested as alternatives to NPM. Denhardt and Denhardt (2000:550) mention that while there have been challenges to the NPM and many alternative ideas advanced, there have been few attempts to organise these efforts. Instead, Denhardt and Denhardt (2000) promoted the New Public Service (NPS) as an alternative to NPM. For Denhardt and Denhardt (2000), NPS provides a rallying point around which the public sector might be envisioned, based on, and fully integrated with citizen discourse and the public interest. However, Hope (2001:121) shows that practical justifications for the NPM evolved along the lines of the NPS being a mutually reinforcing model for achieving effective and efficient delivery of services within the public sector. Hope (2001) further argues that the application of NPM type reforms in Africa has been mostly successful despite their mixed results. Thornhill and Van Dijk (2010:104) argue that although NPM is a luxury that public sector institutions cannot afford, its underlying reasons should not be discarded. Furthermore, they point out that public sector institutions should ensure responsiveness to the society through the use of effective management tools and techniques. The use of BPR is thus critical for public sector institutions, including public higher education institutions, to achieve improvements in institutional performance.

In the context of South Africa, Cameron (2009:915) indicates that post 1994, the South African government introduced NPM reforms in an attempt to modernise the public sector. Carstens and Thornhill (2000:188–189) argue that the changes suggested by the Department of Public Service and Administration (2000) to enhance the efficiency and effectiveness of the South African public sector were premised on a number of themes. According to Carstens and Thornhill (2000), most of those themes would qualify as NPM interventions. Likewise, Cameron (2009) asserts that the reforms introduced in South Africa forced the government to adopt key

performance areas that are consistent with international trends regarding how the public sector should be reformed. Cameron (2009:910) lists the following as the key areas of the NPM:

- Decentralisation of authority and responsibility to managers;
- Rightsizing;
- Corporatisation;
- Creation of the senior management system;
- Use of the contract system for heads of departments;
- Creation of a flexible human resource system; and
- Introduction of performance management.

Cameron (2009) adds that these key areas are aimed at improving public service delivery, which is the primary objective of NPM. According to Denton and Vloeberghs (2003:85), post 1994, South African public sector institutions were forced to learn how to handle situations differently and hence the introduction of internationally recognised management practices. Denton and Vloeberghs (2003) also suggest the application of eight important managerial methods and concepts that according to them could assist South African public sector institutions to provide more effective and efficient public service delivery. The managerial methods and concepts they suggested are also consistent with the identified elements of NPM as well as the key areas suggested by Cameron (2009).

According to the White Paper on Transforming Public Service Delivery 1997, "A guiding principle of the public service in South Africa will be that of service to the people". Davids *et al.* (2009:62) mention that the idea of enhancing public service delivery feeds into the global attempts at improving the efficiency and effectiveness as well as overall performance of the public sector. The White Paper on the Transformation of the Public Service 1995 recognises the importance of ensuring that the transformation of the South African public sector is informed by lessons from other countries in Africa and countries beyond the borders of the continent. The White Paper on the Transformation of the Public Service 1995, further states that the themes that emerged in response to challenges that led to the governments' re-evaluation of the role of state and the public sector in their societies have relevance for the situation in South Africa. The themes identified are similar to the key areas that according to Cameron (2009), form part of NPM. Cameron (2009:914) agrees that while the South African government never lost sight of its constitutional and development role, it is generally accepted that NPM reforms were

influential and that the South African reform initiatives were similar to those which were implemented in other countries worldwide.

To summarise whether NPM, in developing countries, was a success or not, Manning (2001:298) contends that although its application has been limited and has achieved little, the reaction to claims associated with it has altered the public management debate. According to Manning (2001), NPM has broadened the menu of managerial choice within the public sector and generates motive and capabilities for more reform initiatives in government. The management techniques, including BPR, introduced after the adoption of NPM by various countries globally are still relevant despite reservations around its success. Noordhoek and Saner (2005:50) also posited that the best of NPM should be preserved and continued and work should be done to connect these benefits with the realities of the public sector. Suffice to indicate that despite reservation around the success of NPM, the use of effective management tools and techniques, such as BPR, within the broader public sector should be preserved.

The discussion that follows provides contextualisation of BPR within the public sector, the environment within which the public administration practices take place worldwide. TUT, the institution where the research was conducted, is a South African public higher education institution and hence the need to contextualise BPR within the public sector.

Public Administration is a dynamic field that is identified as a potential source of innovation. It is essential for public administration academics and practitioners worldwide to become more relevant and address the immediate issues of public concern and interest (Kuye, Thornhill, Fourie, Brynard, Crous, Mafunisa, Roux, Van Dijk & Van Rooyen, 2002:25). Likewise, Bayat and Meyer (1994:11) assert that Public Administration as a social science is always changing as society makes new demands on it. Bayat and Meyer (1994) further contend that the discipline should always be in search of the truth, develop theories, explain and predict future public administrative events, critically analyse history, and search for new answers to old problems as the body of knowledge can never be complete or sufficient. Thornhill (2006:793) states that traditionally, the study of Public Administration worldwide, including South Africa, concerned the administrative activities to give effect to government policies.

Thornhill and Van Dijk (2010:97) mention that the discipline of any applied science has to relate the theory to the practical situation within which it is practiced. Consistently, Du Toit, Knipe, Van Niekerk, Van der Waladt, and Doyle (2001:17) show that the science of Public

Administration concerns the public sector and the operations or activities that take place within it. The administrative and managerial practices that are found in the public sector thus form the basis for the theoretical framework for the study of Public Administration. Du Toit *et al.* (2001:17) further maintain that Public Administration, as a discipline, is the result of the observations that academics make in the field of public administration. Based on the academics' observations, it becomes possible to classify and categorise particular facts, values, and phenomena in order to give course content (theory) to the discipline of Public Administration.

Thornhill and Van Dijk (2010:96) argue that in an attempt to be relevant, the study of Public Administration has experienced various stages. During the 1980s, debate started in South Africa whether management should be included in the study of Public Administration (Thornhill, 2006: 799–800). Thornhill (2006) believes that the debate enriched the discipline of Public Administration and also opened new avenues for the study in Public Administration with the acknowledgement of managerial concepts. Consequently, public sector employees worldwide were exposed to new theories and practices that were traditionally considered to be relevant to only the private sector. As an example, the introduction of the NPM, with its emphasis on the adoption of private sector management practices within the public sector (Hood, 1991), led to the introduction of techniques such as BPR within the public sector worldwide. Noordhoek and Saner (2005:35) argue that NPM held the promise of changing public sector institutions into results oriented and transparent institutions, directed and supported by efficient and effective public managers. It is important to note that BPR and other business process improvement initiatives form part of the private sector management practices that are currently also applied by public sector institutions, including public higher education institutions.

In an attempt to develop a public administration theory, Smit *et al.* (2007:39–49) posited various classical and contemporary approaches to the theory of management, of which BPR is one. Thornhill and Van Dijk (2010:102–103) argue that the positing of the contemporary and other approaches to the theory of management was an attempt to develop a theory of public administration. According to Thornhill and Van Dijk (2010), each approach consists of some characteristics that could be related to the discipline of Public Administration, although they also recognise that no single theory is perfect. Thornhill (2006:805) argues that in developing a public administration theory, of critical importance is to recognise that the public administrative and managerial issues that form the study of Public Administration are dominated by public policy and that the political environment within which it operates puts it into a category of exclusivity.

MacIntosh (2003) revealed that despite the differences and similarities between the private and public sector usage of BPR, the techniques of BPR are highly applicable within the public sector. Similarly, McAdam and Donaghy (1999) found that most of the key critical success factors for BPR in the private sector are equally relevant to the success of BPR in the public sector. Likewise, Gullledge and Sommer (2002:364–376) support the application of BPR within the public sector, as the primary benefit of BPR is the increased effectiveness and efficiency in service delivery. Hope (2001:121) adds that the NPM is related to the notion of reengineering the public sector and accordingly, public sector institutions, including public higher education institutions, use BPR as the management philosophy to revamp business processes to increase efficiency, effectiveness, and competitive ability.

The deduction that can be made from the above discussion is that BPR is alive within the public sector in South Africa and globally and its application is as relevant within the public sector as it is within the private sector. The application of BPR within the public higher education sector is of the same critical importance as in all other public sector institutions and hence its relevance to the study of Public Administration. Proposing a BPR framework that will assist public higher education institutions, such as TUT, to enhance its strategic orientation thus constitute an advancement of knowledge within the Public Administration field of study.

2.9 CONCLUSION

This chapter provided an analysis of theories, models, principles, and approaches that underpin BPR. The analysis started with an exploration of the origin of BPR as a concept and revealed that the theory of BPR was introduced with the simultaneous publication of articles by Hammer (1990) and Davenport and Short (1990) during mid-1990. Both articles promoted BPR as a radical approach to institutional performance improvements. The book Hammer and Champy published during 1993 entitled *Reengineering the corporation: A manifesto for business revolution*, introduced what is considered the first formal definition of the BPR concept. The definition by Hammer and Champy (1993), as articulated in section 1.2.1, is one of the most cited BPR definitions and was used in this research as the basis for an explanation of the classical and contemporary theoretical characteristics of BPR. The explanation was based on the four key words that provided the working definition of Hammer and Champy (1993). Davenport followed the article he and Short wrote in 1990 with a book entitled *Process innovation: reengineering work through information technology*, which was also published during 1993. The book was an extension of the 1990 article and it, among others and consistent with Hammer and

Champy (1993), advocates the use of information technology and human resource as BPR enablers. A literature review in this chapter revealed that the publications referred to above made BPR popular.

Furthermore, an analysis of existing BPR theories revealed that the above publications were followed by a number of articles describing BPR. Once BPR was recognised as a business process improvement approach, an explosive growth took place in the number of articles published. Most of the articles published after the introduction of the BPR concept concentrated on describing the failures and successes of BPR and analysed the writings of the early exponents or originators of the BPR concept. Despite considerable discussions in the literature on BPR, confusion remained regarding what exactly constituted BPR and this led to the failure of various BPR projects (see section 2.2.3). As a result, section 2.5 of this chapter also provided an analysis of various reasons that according to different authors were the causes of early BPR failures. This was followed by an explanation of the principles that best capture the BPR focus. As explained in section 2.6, authors such as Lockamy III and Smith (1997) refer to these themes as the "BPR success factors". Strategic alignment and customer focus are some of the major factors that are attributed to the success of BPR. Best practices in the form of methodologies or phases of BPR were also analysed. The analysis included comparing methodologies or phases that were suggested by various authors. The BPR methodologies and phases identified in section 2.7 and BPR predictors identified in section 2.6 will be used as the departure point when the BPR framework this research seeks to propose for TUT is developed in chapter six.

This chapter also provided an exploration of BPR within the public sector, including the South African public sector. It was discovered that with the introduction of the NPM, management approaches such as BPR were also introduced within the public sector, including the South African public higher education sector, as it also forms part of the broader South African public sector. A literature review in this chapter revealed that BPR is alive and well within the public sector worldwide. Despite reservations about the success of NPM as well as the differences between the private and the public sector, the application of BPR within the public sector is as relevant as it is within the private sector.

An analysis of the evolution of BPR in section 2.4 revealed that BPR has evolved over the years, and as it moved from one phase of development to the next, a shift in emphasis took place. BPR has changed in emphasis and is now applied in a less radical way than it was originally proposed. It is now generally accepted that BPR worldwide can follow either a radical or incremental

approach depending on the nature of the performance problem an institution seeks to address. Institutions across sectors must have a view of where they want to be, and then choose the most suitable change approach to address their performance improvement problem. Of critical importance, is for institutions across sectors to prioritise the reengineering of business processes that contribute to the enhancement of their strategic orientation, specifically customer satisfaction. The reengineering of business processes that are not of strategic importance was identified as one of the early BPR failures and this is the problem this research sought to address through the development of a BPR framework that would be used to enhance strategic planning within TUT and other similar institutions.

In the next chapter, the theoretical models, and foundational principles of and approaches to strategic planning will be examined. The examination is crucial, as the objective of the research is to develop a BPR framework that will give guidance to the manner in which public higher education institutions, specifically TUT, should strategically reengineer their business processes. The chapter will also explore commonalities that exist between BPR and strategic planning.

CHAPTER THREE

STRATEGIC PLANNING: ANALYSIS OF THEORIES, FOUNDATIONAL PRINCIPLES, AND APPROACHES

3.1 INTRODUCTION

The previous chapter provided an analysis of theories, models, principles, approaches, and international best practices that underpin BPR, including the application of BPR within the public sector. This chapter examines theoretical models and foundational principles of and approaches to strategic planning so as to operationalise the second objective of the research as outlined in section 1.4. It was mentioned in section 1.6 that this research is based on the central theoretical argument that BPR is a strategic initiative and that the match between an institution's strategic planning and, amongst others, its core business processes contributes to the enhancement of an institution's strategic planning process; hence the need for an analysis of generic theories, foundational principles, and approaches relevant and applicable to strategic planning. Within the context of NPM paradigm, with its emphasis on the application of private sector management practices within the public sector, section 3.7 will be dedicated to the exploration of the application of strategic planning within the public sector.

This chapter first expands on the brief explanation given in section 2.2.1 of the evolution of management, a process through which managers plan, organise, lead, and control so as to enable their institutions to work towards the achievement of institutional goals and objectives as efficiently and effectively as possible. A detailed exploration of the evolution of management theories is informed by an observation and understanding that planning, of which strategic planning forms part, is regarded as one of the four fundamental management functions, as stated above. Furthermore, this chapter will explore the concept "planning" and analyse the different types of planning i.e. strategic planning, tactical planning, and operational planning, and their focus. The analysis of theories underpinning planning is imperative as the main contribution of the research is to develop a framework to guide the manner in which business processes could be strategically reengineered, as reflected in section 1.2.2. For managers to strategically reengineer business processes requires an understanding of the dynamics relevant to strategic planning.

This research aligns itself with the assertion that strategic planning occurs at all levels of operation within an institution and that it can be successfully applied within the public sector as it is applied within the private sector. Given this understanding, different levels of strategic planning will also be analysed i.e. corporate, business, and functional levels of strategic planning. An analysis of strategic planning levels will be followed by an exposition of the key success factors or common causes of success that are considered the best predictors of a successful strategic planning process across sectors. This chapter will also examine the generic strategic management process from the strategy planning phase through the implementation phase to the evaluation and control phase and explain the core strategic planning steps. The application of strategic planning within the public sector will also be explored, as it is once again important to note that the institution within which this research was conducted is a public sector institution. The exploration of the application of strategic planning within the public sector will be followed by a comparative analysis of a generic strategic management process and the process that is applied within the public sector from a South African perspective.

Finally, in accordance with the third objective of the research formulated in section 1.4, the commonalities between strategic planning and BPR will also be probed in section 3.9 to determine similar elements that exist between these constructs. The probing of the similarities between strategic planning and BPR will help identify and determine the core elements that will be incorporated in a comprehensive BPR framework as the main contribution of this research.

3.2 EVOLUTION OF MANAGEMENT

Given the background that strategic reengineering of business processes is critical for institutions across sectors to enhance their strategic planning endeavours, this section of the research explains the evolution of the theories of management from the classical management approaches through the human relations and behavioural management approaches and quantitative management approach to the modern or contemporary management approaches. This explanation is an extension of the brief exposition of the evolution of management thought that was provided in section 2.2.1.

As there is no single best way to manage, there exists a need to look at different management theories to establish how those who advocated them thought they had answers to the management issues of their times (Smit *et al.*, 2011:6). Stressing the importance of knowing and understanding the historical foundations of management, Daft, Kendrick, and Vershinina

(2010:41) and Schermerhorn, Davidson, Poole, Simon, Woods, and Chau (2011:87) point out that although the challenges and opportunities facing institutions today are complex and changing, knowledge gained through past experiences can and should be used as a foundation for future success. Schermerhorn (2011:30) also acknowledges that it is wise to remember the roots of modern or contemporary management approaches and accept that there exists a need for them still to be perfected. Daft *et al.* (2010:41) notice that while management theories change with times to meet new needs, some management ideas and practices from the past are still relevant and applicable today and, as a consequence, there remains a need to understand the historical perspective of modern or contemporary approaches to management.

Management is not a new phenomenon; it has existed since human beings started to perform tasks in groups (Smith, 2007:33). Schermerhorn (2011:30) and Smit *et al.* (2011:28) agree that ancient civilisations developed and practised many of the basic principles and approaches to management. According to Smit *et al.* (2011), management, as a science with its own body of knowledge, is mainly a product of the twentieth century. A literature review revealed that though authors such as Gronroos (1994) concur that the practice of management can be traced back to centuries ago, it is acknowledged that the oldest and widely accepted theories of management emerged in the late nineteenth century through to the early twentieth century when, according to Hellriegel, Jackson, Slocum, Staude, Amos, Klopfer, Louw, and Oosthuizen (2005:48), managers were trying to make their institutions run like machines and according to set rules and detailed procedures. Since then, the science and practices of management have been on a continuing path of development. The historical evolution of management thought can be understood in the following framework (Schermerhorn *et al.*, 2011:87; Smit *et al.*, 2011:31–53):

- Classical management approaches – focusing on developing universal principles of the functioning of institutions
- Behavioural management approaches – focusing on people in an institution
- Quantitative management approaches – focusing on the application of mathematical techniques regarding the management of problem-solving
- Modern or contemporary management approaches – focusing on an institution as an open system, and that any change in the system influences the other parts of the system.

The following analysis provides an explanation of the aforementioned approaches to management. This analysis is crucial in an attempt to understand how management thinking evolved and to determine the most appropriate management approach within which strategic

planning could be located. The main contribution of this section is to analyse the evolution of the management thought in general without limiting the analysis to the development of the management thought from a public sector perspective.

3.2.1 Classical management approaches

Daft *et al.* (2010:43) deem the development of management as a field of study that started with what is now referred to as the classical management approaches. Smit *et al.* (2011:32) reveal that the classical management approaches developed simultaneously and that some were introduced as a direct reaction to the perceived failures or limitations of the approaches that preceded them. Schermerhorn *et al.* (2011:87) recognise three main branches within the classical approach to management, namely, scientific management, administrative management, and bureaucratic management. Schermerhorn *et al.* (2011:87) indicate that these management approaches share a common assumption as they all place emphasis on the belief that workers act in a rational manner that is driven mainly by economic concerns i.e. money as the motivator for workers (Smit *et al.*, 2011:34). The discussion that follows is an analysis of the three classical management approaches referred to above.

3.2.1.1 Scientific management approach

A literature review revealed that various authors, including Hartley (2006:285), Van Buuren (2008:634), Bosman (2009:2), and Smith (2007:35), consider Frederick W. Taylor as the most famous exponent and father of the scientific management approach. According to Daft *et al.* (2010:44), Taylor believed that institutions of his time were failing to achieve efficiency and effectiveness due to poor management and as a result management itself had to change. Hartley (2006) and Daft *et al.* (2010) add that Taylor was of the opinion that the manner of change to improve efficiency and effectiveness could be determined by scientific study and applying scientific methods to jobs; hence the "scientific management" label to this theory of management. This is supported by Hellriegel *et al.* (2005:51) who submit that Taylor accepted that efficiency and effectiveness within institutions depend on finding ways to make workers more productive by using scientific techniques. Hellriegel *et al.* (2005) concur with the view expressed in section 2.2.1 that Taylor thought that there was only one best way to perform any task and was convinced that institutions operated best with definite, predictable, logical, determined methods set down as rules, and ways in which workers could perform different tasks.

According to Bosman (2009:2), Taylor strongly believed that it was the responsibility of those occupying management positions to design jobs properly and to provide incentives to motivate workers to work towards the efficient and effective achievement of institutional goals and objectives. Van Buuren (2008:634) agrees that the scientific management approach places a heavy responsibility on managers to structure work properly and to develop a set of incentives to reward workers in an attempt to motivate them to work harder. He further shows that the selection of right people for different jobs was also considered to be of benefit to institutions as well as their workers. For Daft *et al.* (2010:46), and in line with the views reflected in this and previous paragraphs under this section, Frederick Taylor's management philosophy rested on the following basic principles:

- Development of a standard best method for performing each task
- Selection of workers with appropriate abilities, so that each worker could be given responsibility for the task for which he or she was best suited
- Training and development of all workers in identified standard methods
- Support workers by planning their work such that interruptions are limited
- Provide wage incentives for increased output.

Bosman (2009:2) believes that Frederick Taylor revolutionised management thought and laid the foundation for the formation of other management theories. Authors such as Smit *et al.* (2011) and Hellriegel *et al.* (2005) indicate that Henry Gantt and Frank and Lillian Gilbreth are also credited for making significant contributions to the scientific management thought during the late nineteenth century to the early twentieth century. It is worth mentioning that the scientific management exponents are criticised for misreading the human side of work and failing to recognise that workers also have social needs (Hellriegel *et al.*, 2005:52). This led to the introduction of other management thoughts in reaction to the limitations of the management thoughts advocated by Taylor and other exponents of the scientific management school.

3.2.1.2 Administrative management approach

Wren and Bedeian (2009:211) believe that Henri Fayol is hailed as the originator of the administrative management thought because he was the first to advance a formal statement of management elements and principles. According to Hellriegel *et al.* (2005:52), the administrative management thought evolved early in the twentieth century. Wren and Bedeian (2009) further

remark that although Fayol was trained as an engineer, he realised that managing large institutions requires skills other than those he had; he viewed management as more than devising systems and methods to increase throughput, something that the classical management theorists failed to recognise. According to Smith (2007:38), Fayol was concerned with the organisation as a whole and identified the key processes which all those operating at management level needed to achieve. Fayol believed that if managers performed these processes properly, they would be effective. Wren and Bedeian (2009:221) and Schermerhorn *et al.* (2011:90) noticed that the managerial duties that Fayol identified, namely, planning, organising, commanding, coordination, and controlling, closely resemble the management functions that present-day authors, such as Smit *et al.* (2011), and management practitioners across sectors still consider the fundamental functions of all managers. Furthermore, Wren and Bedeian (2009:221) and Schermerhorn *et al.* (2011:90) reflect that Fayol formulated his principles as guides to theory and practice and saw them as a set of general management principles.

Van Buuren (2008:635) observed that the identification of the functions of management moved the science of production into the management function and, according to Schermerhorn *et al.* (2011:90), Fayol insisted that management is a skill that could be taught. Smith (2007:38–39) lists fourteen principles of management which, according to Schermerhorn *et al.* (2011), were identified in an attempt to improve the quality of management. Wren and Bedeian (2009:215) comment that unlike Taylor, who approached the theories of management from a technical vantage point, Fayol approached them from the perspective of upper-level administration or administrative management. Wren and Bedeian (2009) further remark that the emphasis on administrative management reflected Fayol's vast experience as an industrial mining executive. Wren and Bedeian (2009) claim that although early interpretations contrasted the work by Fayol and Taylor, Fayol insisted that his work complemented Taylor's way of thinking and that they both sought to improve managerial practices in order to improve efficiency and effectiveness.

3.2.1.3 Bureaucratic management approach

For Wren and Bedeian (2009:228), the life and work of Max Weber, the originator of the bureaucratic management approach, ran parallel to those of Henri Fayol and Frederick W. Taylor i.e. late nineteenth century to the early twentieth century. Weber is credited for originating a management approach that focused on dividing an institution into hierarchies with clear lines of authority and control (Hartley, 2006:284; Bosman, 2009:2; Smit *et al.*, 2011:36). Daft *et al.* (2010:45) mention that during the late nineteenth century, workers were loyal to an individual

rather than the institution or what it sought to achieve. Consequently, resources were utilised to satisfy individual desires instead of institutional goals and objectives. According to Daft *et al.* (2010), this led to Weber envisioning institutions that would be managed on a rational basis. Daft *et al.* (2010) further contend that Weber recognised that an institution based on rational authority would be more efficient and effective. Smit *et al.* (2011:36) concur that Weber's ideal bureaucracy was based on a legal authority that stems from rules and other forms of control that regulate an institution and its pursuit of predetermined goals and objectives.

The limitation of Weber's classical management approach was that bureaucratic institutions, which in modern day interpretation are equated with the public sector institutions, were inflexible (Smith, 2007:40). Hartley (2006:284) and Bosman (2009:2–3) agree that though the classical bureaucratic management approach assisted institutions to function in a more stable, organised, and systematic manner, doing away with personality based leadership, individuality and creativity was often sacrificed. Hartley (2006) and Bosman (2009) argue that as bureaucratic managers were required to perform their functions in accordance to set rules, managers found it difficult to adapt to changing environments and new challenges. Schermerhorn (2011:33) adds that rigid rules are likely to create problems for institutions that must be flexible and quick to adapt to changing conditions. Hellriegel *et al.* (2005:51) and Wren and Bedeian (2009:233) contend that despite its criticism, the bureaucratic management approach remains a central feature in modern society and, as envisioned by Weber, it involves moving managerial practices and institutional design towards a more logical way of management. Wren and Bedeian (2009) further comment that gaining the benefit of the bureaucratic approach to management requires learning and understanding its characteristics so as to avoid being controlled by them. As stated in section 2.2.1, the early management approaches placed emphasis on the technical aspects of work and neglected the personal aspects. Consequently, behavioural approaches to management emerged.

3.2.2 Behavioural management approaches

Hellriegel *et al.* (2005:54) states that changes in the external environment during the 1920s and 1930s forced managers to challenge the more traditional approaches to management and their relevance in the business environment. Owing to environmental changes, people issues became the major challenge that managers were faced with, and management became more oriented to human relations and behavioural aspects of work. The behavioural management approaches were thus necessitated by a need for managers to deal with the people side of institutions, including

their behaviour, commitment, motivation, and performance (Smit *et al.*, 2011:36). Schermerhorn (2011:34) concurs that an emphasis on the personal aspects of workers influenced management thinking and the shift from classical management approaches to the human relations and behavioural management approaches. Bosman (2009:3) and Schermerhorn (2011:35) elucidate that the shift from the technical aspects of work, as advocated by the classical management theorists, towards human relations and behavioural thinking in management was given a boost when, in 1924, the Western Electrical Company at the Hawthorne Works commissioned a research to investigate how economic incentives and physical conditions of the workplace affected efficiency and effectiveness. They also indicate that the findings of the Hawthorne Studies directed research attention towards understanding the interactions of people in the workplace better.

Hellriegel *et al.* (2005:57) believe that mystified by the initial findings of the Hawthorne Studies, the Western Electrical Company called in Elton Mayo and his associates to investigate the confusing results. According to Smit *et al.* (2011:37), the further research that was conducted by Mayo and his associates revealed that employees were more motivated by social needs than economic needs. Schermerhorn *et al.* (2011:94) illustrate that the Hawthorne Studies contributed to the emergence of the human relations movement that eventually evolved as the field of organisational behaviour. Researchers such as Maslow and McGregor are considered the greatest contributors to behavioural approaches to management. Smit *et al.* (2011:37–38) consider the main contribution made by the human relations and behavioural theories of management was that they viewed employees as human beings and not as machines, unlike the classical theories of management. However, Smit *et al.* (2011) acknowledge that the belief of the behavioural management theorists that a happy employee is a productive worker is too simplistic, as other factors also play an important role in the productivity of employees. Similarly, Hellriegel *et al.* (2005:57) recognise that the assumptions of the human relations and behavioural management theorists do not hold in practice as improving the social conditions of employees and the human relations skills of managers do not always increase productivity in the workplace.

3.2.3 Quantitative management approach

Unlike the classical management and human relations and behavioural approaches to management, the quantitative approach focuses on the use of mathematical models, statistics, and other models to assist managers in decision making (Smit *et al.*, 2011:38). It advocates the utilisation of quantifiable information to assist those operating at different levels of management

to resolve problems and take decisions. Smith (2007:36) confirms that the quantitative management approach was largely concerned with managerial decisions and used mathematical and statistical methods of analysis. Both Smith (2007) and Smit *et al.* (2011) point out that the quantitative approach to management comprises the management science and operations research perspectives. Smith (2007) and Smit *et al.* (2011) add that the management science perspective develops models and methods to enhance the decision making process whereas operations research focuses on the applied aspects of management that develops techniques to produce goods and services more efficiently and effectively.

In support of the above assertions, Hellriegel *et al.* (2005:59) submit that quantitative management theorists advocate a management approach that has the following basic characteristics:

- Decision making as the primary focus
- Presentation of alternative actions regarding measurable criteria
- Utilisation of mathematical and statistical models to analyse situations
- Use of information technology to automate solving of complex mathematical and statistical models.

The above characteristics sum up what the quantitative approach to management entails and Schermerhorn *et al.* (2011:96) recognise that the application of these characteristics are still in force today. Consistent with the view that information technology is crucial for the success of BPR (see section 2.2.2), Schermerhorn *et al.* (2011) confirm the importance of the use of information technology as a decision making enabler in the quantitative approach to management.

In addition to acknowledging the critical role that other characteristics referred to above play in helping managers solve problems and arrive at decisions that are crucial for the survival of their institutions, Schermerhorn (2011:40) postulates that in today's world there is a renewed emphasis on how to rely on information technology to arrive at better management decisions. According to Smit *et al.* (2011:39), the limitation of the quantitative approach to management is that it is mainly used as an aid in decision making, as many management decisions including the human element of management, cannot be quantified. The quantitative approach to management thus places more emphasis on the internal institutional aspects that could be quantified at the expense of people and their relationships within the workplace. Although the quantitative management

approach and other management theories which preceded it, had limitations, it is generally recognised that the mainstream management principles of today are based on a perspective that emerged during the time of the exponents of the early management thoughts (Gronroos, 1994:7).

3.2.4 Modern or contemporary management approaches

Carroll and Gillen (1987:38–51) evaluated the usefulness of the classical management perspective for describing managerial work and noted that the classical functions are still the most useful way of conceptualising a manager's work. Smit *et al.* (2011:39) argue that what is considered the fundamental management functions of today resemble what Fayol indicated as the duties of managers many years ago. This, according to Smit *et al.* (2011), is a confirmation that the classical and other management theories discussed above laid a foundation upon which the management approaches of today are based. Furthermore, Smit *et al.* (2011) submit that the early management approaches responded to pressing issues of their times i.e. mainly the need to achieve internal efficiency and effectiveness. Consequently, they took simplistic approaches in an attempt to improve efficiency and effectiveness and ignored some of the aspects that are also critical for the successful functioning of institutions. The modern or contemporary approaches to management were thus introduced as an attempt to address the failures and limitations of the early approaches to management elucidated above.

Smith (2007:42) notes that one of the main limitations of the early theories of management is that they explained only a part of the management task, generally ignoring the broader role of institutions and the environment within which they operate. The systems approach to management aims to correct this limited perspective by focusing on an institution as an open system and recognising that any change in the system influences all parts of the system. Furthermore, Smith (2007) is of the opinion that modern or contemporary management theorists acknowledge that each department and operational unit of an institution has an impact on the other units and an institution can only function efficiently and effectively if the individual departments and operational units function efficiently and effectively and there is cross functional cooperation. This argument is supported by Schermerhorn (2011:41) who describes institutions as cooperative systems that can achieve great success provided they integrate the contributions of individual departments and operational units to achieve a common purpose.

For institutions across sectors to function as an open system, they must also interact with the environment within which they operate in order to survive. In classical and other early approaches to management, institutions were considered to be a closed system (Hellriegel *et al.*, 2005:58; Daft *et al.*, 2010:97). Smit *et al.* (2011:40) contend that another approach to management that is based on the systems approach is the contingency approach. According to Hellriegel *et al.* (2005:60), the proponents of the contingency approach to management believe that different situations require the application of different principles of management. It then becomes the responsibility of managers to determine which principles are more likely to be more effective than others in a given situation.

It is imperative to note that a literature review discovered that strategic planning and BPR, the two approaches to management that are the primary focus of this research, are based on the systems management approach. The commonalities between strategic planning and BPR will be probed later in section 3.9. Smit *et al.* (2011:53) remark that the dynamic nature of the environment within which modern institutions across sectors operate requires new approaches to management, such as BPR. For an institution to strategically plan and reengineer its core business processes successfully there exists a need for cross functional cooperation between different individual departments and operational units as well as a great deal of interaction with the external environment within which the institution concerned operates. The interaction between the external environment and the institutions is considered the focus of the systems theories of management. Reflecting on current and future management realities, Smit *et al.* (2011:53) encourage institutions to follow a flexible approach to management and to take from different management approaches what is still relevant so as to find unique ways of managing.

Having analysed the evolution of management thought and located strategic planning within modern or contemporary management perspectives, it now becomes imperative to provide an exposition of the concept "planning" i.e. the fundamental management function of which strategic planning is part. The analysis of planning is of critical importance, as strategic planning is one of the focus areas of this research. The section will include an analysis of different types of planning to, amongst others, determine where strategic planning fits within the planning framework. As indicated in section 3.1, the following section will provide an analysis of the generic theories related to planning, including strategic planning. The application of strategic planning within the public sector will be explored later in section 3.7.

3.3 PLANNING

As stated in section 1.2.2, just like with BPR, planning is future oriented. Weinrich and Koontz (1993:118) regard planning as bridging the gap from where an institution is to where it wants to go, and making it possible for things to occur that would not happen normally. Weinrich and Koontz (1993) further indicate that although institutions do not often predict the exact future and although factors beyond their control may prevent the best plans from being carried out properly, unless institutions plan, they are leaving their competitive advantage to chance. Since the future is uncertain, plans are also uncertain. Consequently, Holt (1987:119) advocates a flexible planning process that can be adapted as circumstances change, and contends that "flexibility in planning allows reasonable deviations in performance and minor changes to circumstances". The contention by Holt (1987:119) is consistent with the observation made in section 2.4 that BPR shifted ground and is of late applied in a less radical way. Just like with planning, the modest BPR approach allows for flexibility in BPR, including continuous improvement of reengineered business processes.

Schermerhorn (2011:187) stresses that planning should focus on objectives and goals that identify the desired outcomes that one intends to accomplish and that the planning process should always create a concrete plan. This view is supported by Smith (2007:56), who sees planning as a scheme that specifies resources and actions that an institution requires to achieve its goals and objectives in an efficient and orderly manner. Smith (2007) adds that planning involves anticipating future challenges and sequencing future resources and actions. Daft *et al.* (2010:7) identify future institutional performance as the objective of planning and contend that a lack of planning or poor planning damages an institution's overall performance. Daft *et al.* (2010:10) add that to achieve and sustain improvements in performance, managers should define where they want to be in the future and how to get there, as it is their ultimate responsibility to achieve high performance. It is imperative to mention that Hammer (1990) and Davenport and Short (1990) also introduced BPR as a management approach that is aimed at improving institutional performance (see section 2.2.2).

Lussier (2009:12) views planning as the first of the four fundamental functions of all those who occupy management positions and that it sets the stage for the other management functions. Lussier (2009) considers it as the responsibility of managers at different levels of operation to plan, lead, organise, and control resources to achieve institutional goals and objectives. Similarly, Smith *et al.* (1980:149) state that planning cuts across all management functions and

applies to all levels of management. Smith *et al.* (1980) echo the assertion by Lussier (2009) that the success of other key management functions, namely, organising, organising, and controlling, depends on the manner in which planning is done, as it is a platform or foundation of other management functions. Hellriegel *et al.* (2005:71) also agree that planning is the most basic function and that it sets the direction for the leading, organising, and controlling functions of management when done properly. This is supported by Schermerhorn *et al.* (2011:166) who indicate that when planning is done well, it lays a foundation from which other management actions can emanate. It is imperative to mention that planning is critical for BPR to be successfully applied. Authors, including Cole and Kelly (2011), also recognise the importance of planning for BPR to be successfully applied (see section 2.7.1).

Consistent with the views expressed by Smith *et al.* (1980) and Lussier (2009) in a paragraph above, Hitt, Middlemest, and Mathis (1979:124) assert that planning applies to all levels of management and that managers at different levels of operation have different roles to play in an institutional planning process. Kroon (1998:116) contends that though planning is the responsibility of all managers, the type of planning is determined by the level at which different managers operate. Kroon (1998) also believes that although the planning process that institutions follow in the development of plans at different levels of operation may be the same, the extent and planning efforts vary. Hitt *et al.* (1979) contend that it is imperative for institutions to develop planning systems that allow for the integration and coordination of planning efforts across departments and operational units as well as levels of operation.

The above discussion confirms the existence of different types of planning. The discussion below reflects an analysis of different types of planning. The analysis of planning types will cover strategic planning, tactical planning, and operational planning, which Smith (2007:58) considers the main types of planning. It is essential to analyse all types of planning to establish the link between strategic planning and other types of planning that are not necessarily strategic in nature.

3.3.1 Types of planning

Plans range from having a broad, long-run scope to short-run plans oriented towards the day-to-day conducting of business (McFarland, 1974:324). Schermerhorn *et al.* (2011:173) maintain that institutions require plans that cover different time horizons and scope. They stipulate that normally short-term planning covers twelve months or less, medium-term planning covers one to

two years, and long-term planning look three or more years into the future. The planning timeframe and scope can thus be used as some of the determining factors for making a distinction between strategic planning and other types of planning that take place at different levels of operation in an institution, namely, tactical planning and operational planning. Echoing the sentiments of Schermerhorn *et al.* (2011), Smit *et al.* (2011:134) acknowledge that the types of plans differ in many respects. Smit *et al.* (2011) also identify strategic planning, tactical planning, and operational planning as the types of planning that are found in most institutions. The discussion that follows outlines an analysis of different types of planning identified by various authors, including Smit *et al.* (2011).

3.3.1.1 Strategic planning

Andersen (2000:185) considers strategic planning as the logical sequence of activities that allows managers to determine an appropriate strategic path for the institution as a whole. As already stated above, strategic planning covers a long period, occurs at all levels of operation, applies to the entire institution and all its departments and operational units. This assertion is supported by Kroon (1998:118) and Schermerhorn (2011:191) who confirm that the type of planning that makes provision for long-term planning is regarded as strategic planning. Furthermore, Schermerhorn (2011) indicates that long-term planning involves setting broad directions for an institution, departments, and operational units and is aimed at improving institutional performance. Russell and Russell (2005:9) refer to strategic planning as the process of creating a strategic plan for achieving an institution's goals and devising a method of accomplishing them. Russell and Russell (2005) concur that strategic planning provides focus to other types of planning and assists in producing a plan that states the direction an institution has chosen and is future oriented.

In line with the above assertion, Rugman and Collinson (2012:364) define strategic planning as the process of analysing an institution's external and internal environments, determining a long-term vision and mission, formulating overall goals and objectives, and identifying general strategies to be pursued for an institution to achieve its goals and objectives. Accordingly, Rugman and Collinson (2012) identify the development of a mission, vision, values, goals and objectives, and an analysis of an institution's environments as the main aspects of strategic planning. Barksdale and Lund (2006:5) agree that strategic planning serves as a vehicle for an institution's mission, vision, values, and goals and objectives. Furthermore, Barksdale and Lund (2006) reflect that strategic planning inspires and excites all stakeholders about an institution's

existing operations and where it is headed in the future, emphasising the future orientation of strategic planning. Rossouw, Le Roux, and Groenewald (2003:2) believe that strategic planning is a gap which an institution seeks to bridge and this gap is generally located between the current and desired future state of an institution. According to Rossouw *et al.* (2003), the bridging of the gap involves adjusting an institution from the current to the envisaged future state.

Consistent with Rossouw *et al.* (2003), David (2003:5) maintains that the purpose of strategic planning is to make good use of and create new and different opportunities for the future. He emphasises that strategic planning allows an institution to be proactive rather than reactive in determining and controlling its own destiny. Hellriegel *et al.* (2005:71) add that when developing strategic plans, those responsible take an institutional or departmental wide approach depending on the level of operation at which strategic planning is being undertaken. David (2003:5) adds that as strategic planning is approached from an institutional perspective, the process must be cross-functional. Pitts and Lei (2006:8) claim that the ultimate objective of strategic planning is to assist institutions to achieve competitive advantage by gaining an edge over competitors. Similarly, Kenny (2005:191) explains that strategic planning contributes positively to the extent to which an entire institution create value superior to that of its competitors and also advocates the achievement of competitive advantage as one of the main objectives for institutions to embark on strategic planning. As discovered in section 1.6 and consistent with the above strategic planning theoretical underpinnings, BPR is also aimed at the achievement of improvements in performance in order for institutions to achieve competitive advantage; hence the need for public higher education institutions, such as TUT, to enhance strategic planning through strategic reengineering of business processes.

Also Andersen (2000:187) asserts that strategic planning is necessitated by a need for institutions to improve performance. According to Andersen (2000), this view is supported by research that reveals a positive link between strategic planning and improvements in performance, which is the main objective that those who embark on BPR also seek to achieve. Andersen (2000) and Tapinos, Dyson, and Meadows (2005) affirm that strategic planning is associated with higher institutional performance and concluded that strategic planning is an important performance driver. This led to Tapinos *et al.* (2005:379) considering performance measurement as one of the key factors of strategic planning. Similarly, Hax and Majluf (1984:54) believe that strategic planning objectives are indicators for the overall performance of an institution. Wheelwright (1984:20) also states that many managers and most consultants claimed that strategic planning had substantial positive impact on institutional performance, acknowledging the link between

strategic planning and institutional performance improvement as early as the 1980s. As pointed out in a paragraph above, performance improvement is the main common element that reflects the interface between BPR and strategic planning. Hunger and Wheelen (2007:4) concur that a match between strategic planning and BPR has positive effects on an institution's performance; hence a need for the strategic reengineering of business processes (see section 1.6). BPR projects should thus be strategically executed to enhance strategic planning for institutions, including public higher education institutions, to perform better.

The above discussion reveals that strategic planning is future-oriented and, like BPR, its primary objective is improving performance for institutions to achieve a competitive advantage. Barksdale and Lund (2006:5) contend that in addition to strategic planning helping to improve institutional performance, it is also central to the ability of an institution to make crucial decisions and is also the springboard for other types of planning. A brief explanation of other two types of planning is provided below to reflect how strategic planning differs from other types of planning before generic strategic planning theories, principles, and approaches are further examined.

3.3.1.2 Tactical planning

The type of planning that is undertaken at the functional area within an institution is referred to as the process of deciding about what to do, who will do it, and how to do it, with a time horizon of one year or less (Hellriegel *et al.*, 2005:73; Smith, 2007:63), whereas strategic planning occurs at different levels within an institution. Tactical planning only deals with the approaches that are applied to implement strategic plans and its focus is on departments within an institution, such as the academic administration environment of TUT, which is the department within which the empirical investigation of this research was conducted. Schermerhorn (2011:191) considers the outcome of tactical planning as a type of plan that reflects how departments of an institution will help achieve an overall strategic plan. Smith (2007:63) refers to tactical plans as intermediate plans. Of importance when plans for different departments are developed is cross functional cooperation and coordination (Smit *et al.*, 2011:135–136). This assertion is supported by Smith (2007:63) who accepts that tactical planning needs to be coordinated across an institution.

According to Hellriegel *et al.* (2005:73), tactical planning is medium-term and is carried by managers of various departments in an institution. It should also be noted that in addition to developing tactical plans, managers of various departments are also responsible for developing strategic plans relevant to this level of operation. Tactical plans are components of strategic plans that are developed at the same level of operation and focus on the contribution that different departments must make to help institutions implement their strategic plans, as stated in the previous paragraph. Daft *et al.* (2010:252) mention that middle managers take the broad strategic plans and identify plans that are specific to the tactical area of operation in an institution. Consequently, Hellriegel *et al.* (2005) refer to tactical planning as a means of implementing a broad strategic plan and departmental strategic plan, which is an outcome of a long-term planning process that occurs at the same level of operation where tactical planning is undertaken. The extent to which strategic planning undertaken by the academic administration environment of TUT contributes to the enhancement of institutional strategic planning will be revealed in section 5.4.2 when the empirical investigation findings of this research are presented.

3.3.1.3 Operational planning

Daft *et al.* (2010:253) refer to operational planning as the type of planning that occurs at the lowest level of management i.e. planning that is undertaken within operational areas that collectively form part of the academic administration environment of TUT. Daft *et al.* (2010:253) reflect that operational planning deals with the approaches that are applied to carry out institutional strategic plans so as to achieve operational goals and objectives. Operational plans focus on operational areas and have a short life span unlike strategic and tactical plans. Smith (2007:63) calls operational plans action plans and thinks that they constitute the most detailed type of planning. Schermerhorn (2011:192) remarks that operational plans give guidance and describe what needs to be done in the short-term and they support strategic and tactical plans. Kenny (2005:214) concurs that an operational plan represents a set of decisions that are made at the operational level of an institution. He adds that this plan should be undertaken by all the operational units within departments in an institution. It should be noted that operational planning is undertaken in addition to the strategic planning that occurs at the lowest level of operation. The difference between these two types of planning is that operational planning is short-term and strategic planning that takes place at the lowest level of operation is long-term.

Just as tactical planning transforms institutional and departmental strategies into more specific objectives for departments, operational planning provides specific guidelines for activities within each area of operation (Hitt *et al.*, 1979:124). Similarly, Kroon (1998:118) expresses that tactical plans provide the basic framework for operational plans. It is the responsibility of lower level or first line managers to develop operational plans and to ensure that they are developed so that there is a link between them and institutional strategic plans, which are long-term plans developed at the highest level of management within an institution. The issue of cross operational cooperation and coordination is also of critical importance when the operational areas, such as various sections that form part of the academic administration environment of TUT, develop operational plans.

3.3.2 Focus of different types of planning

Table 3.1 below expresses the focus of different types of planning that were analysed above, namely, strategic planning, tactical planning, and operational planning.

Table 3.1 Focus of different types of planning

Dimension	Strategic planning	Tactical planning	Operational planning
Purpose	Ensures long-term efficiency and effectiveness	Means of carrying out corporate and business strategic plans	Means of implementing business and functional strategic plans
Nature of issues addressed	How to survive and compete by creating vision of the future and choosing strategies to attain the vision or what is done	How to achieve specific goals at functional level or how things are done	Achievement of operational goals and objectives
Focus	Entire institution, including business and functional units (comprehensive)	Functional areas (specific)	Operational areas (more specific)
Time horizon	Long-term (between two and five years)	Medium-term (between six and twelve months)	Short-term
Management level where plans are primarily developed	Top or senior management	Middle management	Lower level or first level management
Level of detail	Low	Moderate	High
Conditions under which planning occurs.	Uncertainty and high risk	Moderate risk	Low risk

Source: Adapted from Hellriegel *et al.* (2005:73)

The above table suggests that different types of planning differ from each other mainly in terms of purpose, focus, time horizon, nature of issues addressed, management level where planning is undertaken, conditions under which planning occurs, and level of detail. Despite these differences, operational planning, tactical planning, and strategic planning are closely linked in a well-designed planning system, in accordance with the views expressed by Hellriegel *et al.* (2005:73). Consistent with the central theoretical statements reflected in section 1.6, there exists a need for public higher education institutions, such as TUT, to ensure that there is a link between their planning efforts and BPR endeavours in order for them to perform better.

Though this section identified three types of planning, the sections that follow concentrate on a detailed analysis of the theories, principles, and approaches related only to strategic planning. This is informed by an acknowledgement that strategic planning is one of the key concepts and focus areas of this research. Further analysis of strategic planning theories, principles, and approaches begins with an explanation of different strategic planning levels. It is imperative to note that the sections that follow will provide an analysis of the generic theories of strategic planning and will not be limited to the application of strategic planning within the public sector. An analysis of the application of strategic planning within the public sector will be provided in section 3.7, as already indicated previously in this chapter.

3.4 STRATEGIC PLANNING LEVELS

Pearce II and Robinson (2000:5) and Lazenby (2014:5) confirm that strategic planning occurs at different levels in an institution and that the strategic planning hierarchy contains three levels. This is supported by Beard and Dess (1981), Hax and Majluf (1984), Wheelright (1984), Mondy and Premeaux (1993), and Witcher and Chau (2010) who explain that three levels of strategic planning are generally recognised, namely, corporate, business, and functional levels. Various authors, including Louw and Venter (2010:291–292), indicate that each strategic planning level has a different focus and managers at different levels of operation within an institution are involved in the development of strategic plans relevant to their respective levels of operation. Likewise, Mellahi, Fraynas, and Finlay (2005:231) and Pitt and Koufopoloulos (2012:12) articulate that strategic planning at all levels of operation is important, as each strategic plan contributes to the success of the others. Mellahi, Fraynas, and Finlay (2005) and Pitt and Koufopoloulos (2012) continue by illustrating that each strategic planning level has a distinct and critical role to play in the achievement and sustainment of the competitive advantage and continued survival of an institution. Consistent with the assertion by Hitt *et al.* (1979) that

institutions should develop planning systems that allow for the coordination of planning efforts across levels of operation, strategic coordination of BPR endeavours across different levels of operation is a prerequisite for institutions across sectors to achieve improvements in institutional performance (see section 3.3).

For Mondy and Premeaux (1993:164) and Hellriegel *et al.* (2005:73), the scope and complexity of strategic planning vary between levels within institutions. Mondy and Premeaux (1993) and Hellriegel *et al.* (2005) show that the scope and complexity depend mainly on the amount of diversification and the levels within the institution undertaking strategic planning. Likewise, Mellahi *et al.* (2005:230) and Pitt and Koufopoloulos (2012:12) are of the view that the strategic planning level is considered in accordance to the institutional level at which it occurs. Also recognising the different strategic planning levels, Wheelwright (1984:20) shows that academics and practitioners characterise strategic planning according to its institutional level. Considering the size and complexity of TUT, the University has a challenge to ensure that its strategic planning efforts across different levels of operation are well integrated and that business processes are strategically reengineered in order for the University to perform better.

The deduction that can be made from the above discussion is that there is sufficient consensus that strategic planning is a management function that is applicable to all levels of management. This is necessitated by the realisation that for managers to be in a position where they can achieve the goals and objectives of their institutions as efficiently and effectively as possible, a variety of plans are necessary (Kroon, 1998:116). While strategic planning has been reflected in large parts of literature reviewed as a centralised process and as the type of planning primarily applied at the highest level of an institution (McFarland, 1974:324; Rue & Byers, 1997:125), a comprehensive review of literature revealed that it occurs at other levels of management as well. A literature review also discovered that corporate or institutional strategic planning is what some authors, such as McFarland (1974) and Rue and Byers (1997), refer to when they talk of strategic planning. The assumption is made that long-term planning does not exist at levels of management other than at the top or senior management level, which is not necessarily the case as long-term planning also occurs at other levels of operation within an institution.

Smith *et al.* (1980:160) support the above argument when they state that two dimensions of planning stand out as primary sources of distinction regarding different types of planning, namely, timespan over which planning is done and the comprehensiveness of the planning effort. Smith *et al.* (1980) indicate that the timespan refers to whether planning is long-term or short-

term and the comprehensiveness of the planning effort refers to how encompassing the planning task is. What distinguishes corporate strategic planning from strategic planning that is undertaken at other levels of operation is that corporate strategic planning is more comprehensive in nature and applies to the entire institution whereas business strategic planning and functional strategic planning apply only to specific departments and operational units respectively. Consistent with the manner in which TUT is structured, the discussion that follows examines the three levels of strategic planning referred to above. Using the three levels of management within institutions across sectors as a departure point, in line with Rossouw *et al.* (2003:2), the strategic planning responsibilities of each level of management will be examined.

3.4.1 Corporate strategic planning

According to Hitt and Ireland (1985:275) and Louw and Venter (2010:354), corporate strategies are also referred to as grand or master strategies. Hitt and Ireland (1985) and Louw and Venter (2010) argue that these strategies provide a direction that an institution can use to outperform its competitors and are consequently also referred to as institutional strategies. Hitt and Ireland (1985) further remark that corporate strategies indicate the general options available to managers and indicate what means could be used to influence the environment within which institutions operate. To manage an institution, such as TUT, with different departments and operational units requires an appropriate institutional level strategy, including integrating mechanisms to ensure that the institutional strategy adds value to the competitive advantage of the institution concerned. An institution's performance suffers if there are no mechanisms in place to guarantee that managers at the corporate level of operation carefully consider their role in managing relationships with and among other levels of strategic planning (Mellahi *et al.*, 2005:249). Hax and Majluf (1984:52) list the objectives of corporate strategic planning across sectors as the

- description of the relationship between an institution and its key stakeholders
- definition of broad corporate objectives
- formulation of corporate policies
- articulation of the corporate culture reflected in its attitudes and values, management style, and the problem solving behaviour of its people.

Pitts and Lei (2006:233) argue that corporate strategic planning requires managers to leverage an institution's distinctive competences from one business to new areas of activities. To sum up, Mellahi *et al.* (2005:250) remark that it is the role of the corporate planning process to develop a

well-defined and consistent strategy that guides decisions on the scope and types of business or services an institution engages in.

Pitts and Lei (2006:233) and Hunger and Wheelen (2007:94) show that corporate strategy deals with three key issues, namely, overall institutional direction, the industry or sector in which the institution operates, and the manner in which management coordinates activities and transfers resources and cultivates capabilities among departments and operational units. Hunger and Wheelen (2007:94) further reflect that corporate strategic planning is the planning process that is concerned with the overall direction of an institution and with the management of its departments and operational units. The key corporate strategic planning issues that Hunger and Wheelen (2007) identified are consistent with those posited by Wheelwright (1984:20), which he claims characterise the common definition of corporate strategic planning.

Louw and Venter (2010:354) also equate corporate strategic planning as the planning that covers the entire institution and provides direction that can be used when strategic plans at other management levels are developed. This view is supported by Hax and Majluf (1984:53) and Kroon (1998:117–118) who assert that corporate strategic planning provides the basic information for strategic planning processes that take place at other levels of operation. Furthermore, they observe that corporate strategies provide the basic framework for other types of planning such as tactical and operational planning. Kroon (1998) adds that corporate strategies develop a set of requirements to guide the manner in which business and functional strategies should be formulated, including the identification of strategic planning challenges.

Jones and Hill (2010:285) concur that a corporate level strategy drives an institution's business model and determines the types of strategies managers at departmental and lower levels of operation will choose to achieve efficiency and effectiveness through improved institutional performance. Pitt and Koufopoloulos (2012:262–263) acknowledge that corporate and departmental strategies are different, but interdependent. They expatiate by remarking that while the successful implementation of corporate strategies requires each department and operational unit to perform efficiently and effectively, corporate strategies often require answers to questions that cannot be addressed at other levels of operation. It should also be noted that some of the questions can also not be addressed at corporate level and hence a need for institutions to embark on strategic planning at other levels of operation as well.

Pitts and Lei (2006:229) and Rothaermel (2013:202) refer to corporate strategic planning as the type of long-term planning that involves the decisions that senior managers make as well as the actions they take in the quest for competitive advantage. Consistently, Rothaermel (2013:202) believes that considering that corporate strategic planning deals with the overall strategic direction of an institution, it should be undertaken at the highest level of an institution and its development is the responsibility of senior or executive managers within the institution concerned. Hax and Majluf (1984:49) are of the view that although corporate strategic planning is the primary responsibility of senior managers, it also requires strong participation by managers at other management levels. While various managers make contributions when corporate strategies are developed, the institution's Chief Executive Officer or accounting officer is responsible for overseeing the process from beginning to end. Watson and Wooldridge (2005:155) suggest that the influence managers at middle management level have on corporate strategic planning depends on the size of the department relative to the institution. Subsequently, Watson and Wooldridge (2005) maintain that middle managers may have more to do with the formulation of corporate strategic plans than conventional wisdom suggests. Watson and Wooldridge (2005) confirm that although upward influence on corporate strategic planning is apparent, the chief executive officers drive strategic planning at the corporate level of an institution.

Just like with the practice within the private sector, public higher education institutions, such as TUT, also formulate institutional strategies that cover the entire institution and provide the overall strategic direction of the institution concerned, including the basic information for types of strategic planning that take place at other levels of operation.

3.4.2 Business strategic planning

Business strategic planning is the primary responsibility of managers who operate at the middle level of management. According to Lazenby (2014:5), business strategic planning is concerned with determining strategies for different departments within an institution. Consistent with the assertions that corporate strategies (see section 3.4.1) drives and determines the types of strategies at other levels of operation, Lazenby (2014) adds that while different departments have their own strategies, the formulation of business strategies does not take place in isolation as their focus should be according to the prescriptions or within the broad framework of the corporate strategy. The cascading of corporate strategies to lower levels of operation is thus imperative for institutions across sectors to allow integration of planning efforts at all levels of

operation (see section 3.3). Emphasising the importance of aligning different strategies, Lazenby (2014:5) points out that to ensure consistency, business strategies must be aligned with the corporate strategies. Barksdale and Lund (2006:6) also stress that an institution's business strategies take the initiatives and tactics borne of the corporate strategy and drill them down to business details to identify how the institutional goals and objectives will be achieved. As the corporate strategy drives the strategies of different departments, the primary aim of the business strategy is to help achieve the corporate strategic goals and objectives.

It also is important to indicate that institutions are faced with several challenges, specifically in the competitive or market environment. Accordingly, business strategies are also referred to as competitive strategies as they relate to an institution's decision on how to satisfy its customers' needs, how to counter competitors, how to deal with market challenges, and how to build and sustain a competitive advantage. Strategic planning at the departmental level of institutions thus involves dealing with an institution's plans to compete successfully (Hunger & Wheelen, 2007:82; Louw & Venter, 2010:290). This perspective is supported by commentators such as Wheelwright (1984:20), who states that a business strategy clarifies the boundaries of the business to be served and selects the desired competitive advantage to be pursued. Hunger and Wheelen (2007:82) also refer to business strategic planning as cooperative strategic planning, as planning at this level of operation also involves asking how departments should cooperate in a particular market. They add that there is a need for institutions not only to compete against each other but to also gain competitive advantage within the market by working in cooperation with other institutions.

Just like with tactical planning (see section 3.4.1), business strategic planning at TUT is the responsibility of departments such as academic administration, the environment within which the empirical exploration of this research was conducted. This research identified customer focus (see section 2.6) as one of the principles for the successful application of BPR. For the academic administration environment of TUT to enhance its strategic planning endeavours and subsequently achieve competitive advantage, as reflected in a paragraph above, there exists a need for the environment to prioritise the strategic reengineering of business processes that would contribute to the satisfaction of the needs of TUT customers, specifically students.

3.4.3 Functional strategic planning

Hunger and Wheelen (2007:110) and Rothaermel (2013:11) mention that just as institutions have departments, each with its own business strategy, departments also have sets of functional areas, each with its own functional strategy. A strategy at the functional level of operation is an outcome of a functional strategic planning process. Hunger and Wheelen (2007:110) refer to functional strategic planning as "an approach an institution's functional areas take to work towards the achievement of corporate and departmental strategies". Likewise, Smit *et al.* (2011:95) show that functional strategies are derived from departmental strategies and as a result, each functional strategy states the goals that managers at the lowest level of operation propose to pursue in order to assist the functional area, departments, and eventually the institution to attain their strategic goals and objectives.

The development of functional level strategies is the responsibility of managers in charge of functional areas, in consultation and with the approval of managers in charge of the relevant departments (Louw & Venter, 2010:19; Rothaermel, 2013:11). Furthermore, Louw and Venter (2010) and Rothaermel (2013) acknowledge that if there is no clear direction at institutional and departmental strategy levels, functional strategies are unlikely to be supportive or consistent with the high level strategies. According to Jones and Hill (2010:11) and Rothaermel (2013), it is imperative that functional strategies be developed to enable departmental managers to pursue their respective strategies, which in turn need to be in accordance with the corporate strategies. Louw and Venter (2010) also emphasise the importance of cross functional cooperation at the functional strategic planning level for an institution to achieve a competitive advantage. Wheelwright (1984:20) concurs that to support the desired competitive advantage, the integration and coordination of strategic planning responsibilities at different levels of operation within a department and across the institution, is crucial.

Jones and Hill (2010:107) explain that strategic planning at the functional level of operation is a process that is aimed at improving the efficiency and effectiveness of an institution's operations and its ability to attain customer responsiveness, thus emphasising the customer dimension to the functional strategic planning level as well. As is the case with strategic planning at corporate and departmental strategic planning levels, customer satisfaction is the foundation of successful functional strategic planning. Achieving, sustaining, and enhancing customer satisfaction is considered one of the critical elements at the functional level of strategic planning, as it is the key to achieving improvements in performance and the continued existence of institutions (Pitts

& Lei, 2006:8). It is imperative for the functional areas that form part of the academic administration environment of TUT to develop functional strategic plans aimed at the achievement and sustenance of customer satisfaction, specifically students, for the University to achieve competitive advantage.

In summary, this section of the research analysed different levels of strategic planning. According to the three basic levels of management, namely, lower or first line, middle, and senior or top management, the analysis revealed that there are also three levels of strategic planning. This categorisation of management levels and strategic planning levels also apply to public higher education institutions such as TUT. While a literature review discovered (see section 3.4) that strategic planning is the responsibility of all managers regardless of the level of operation, the level and complexity of strategic planning are dissimilar. Of vital importance is that managers at each level of management across sectors must integrate and coordinate their planning efforts with managers at other levels to ensure consistency in the overall strategic planning process of an institution. The section below explains the key factors that increase the likelihood of strategic planning improving the performance and overall competitive advantage of an institution undertaking strategic planning.

3.5 STRATEGIC PLANNING SUCCESS FACTORS

Just like with BPR, it is necessary for institutions across sectors to identify and adopt a framework that could assist managers at all levels of operation to increase the chance of a successful strategic planning effort. The discussion below describes the elements that various authors identified as key success factors and most common causes of strategic planning successes. Witcher and Chau (2010:65) define strategic planning critical success factors as factors that primarily account for an institution's success in achieving a strategic purpose. As the enhancement and successful execution of strategic planning is the focus of this research, the strategic planning key success factors will be incorporated in a BPR framework that will be proposed in chapter six. Consistent with Yin (2003:13-14), the purpose of this section is for the researcher to benefit from available theoretical propositions (see section 1.7.2.1) which will subsequently guide empirical exploration and the development of a BPR framework that will be proposed later as indicated above.

3.5.1 Strategic leadership and commitment

According to Louw and Venter (2010:79), strategic planning and translating strategies into practices is the domain of effective leadership. Kaplan and Norton (2001:8) identify lack of senior management commitment to strategic planning as one of the common causes of strategic planning failures and add that senior managers, as strategic leaders, should articulate an institution's strategy and be emotionally committed to the strategic planning process and eventual strategy. This view is supported by Jones and Hill (2010:31) who emphasise that strong leaders demonstrate their commitment to the strategic planning process through words and actions, and they always lead by example. Furthermore, Jones and Hill (2010:31) believe that good leaders of the strategic planning process have key attributes of which commitment is one. To this, Kaplan and Norton (2001) add that to see the strategy through, senior managers must invest time and resources throughout the whole strategic planning process.

In addition to just being committed to the strategic planning process, Louw and Venter (2010:442) and Schermerhorn *et al.* (2011:402) insist that for institutions to be successful, strategic leadership is required during strategic planning. Louw and Venter (2010) refer to strategic leadership as the type of leadership that is provided by senior managers compared to the type of leadership that is provided by managers at all levels of operation. According to Louw and Venter (2010), strategic leadership is about understating the entire institution and the external environment within which it operates and then using this understanding to lead the process to a strategic change. Scermerhorn *et al.* (2011) states that strategic leadership encourages people to continuously refine and improve strategic plans and their implementation. Consistent with Louw and Venter (2010) and Schermerhorn *et al.* (2011), Jones and Hill (2010:3) are of the view that strategic leadership is needed for managers to succeed in strategic planning and state that strategic planning is about how to most effectively manage the strategic planning process to create improved institutional performance and provide an institution with a competitive edge. Strategic leadership and leadership commitment is thus a key factor for the successful formulation and implementation of strategies within institutions across sectors; public higher education institutions, such as TUT, are no exceptions.

3.5.2 Cross functional approach to strategic planning

Synergy and cooperation between departments as well as between operational units in an institution is of critical importance in strategic planning. It is imperative for institutions to take a

cross functional approach to solving complex problems facing institutions and strategic planning is no exception. This is supported by Rothaermel (2013:312–313) when he argues that lack of linkage between departments and operational areas is the reason for lack of synergy and cooperation in strategic planning. Rothaermel (2013) insists that to overcome the lack of cross departmental collaboration, institutions could set up cross functional teams from different departments and operational areas to work together on a strategic planning project from start to completion. Similarly, Smith (2007:88) illustrates that cross functional teams are usually multi-disciplinary in order to have depth and breadth of understanding and experience. Furthermore, Smith (2007) indicates that following a cross functional approach maximises the available strategic planning skills and knowledge.

Daft *et al.* (2010:363) believe that cross functional teams provide needed horizontal coordination to complement the departments and operational units embarking on strategic planning. Along similar lines, Smit *et al.* (2011:375) assert that cross functional teams comprise employees on the same hierarchical level and are suitable in situations where the team must solve strategic planning challenges that require the expert knowledge of people with diverse backgrounds. Daft *et al.* (2010:366) refer to cross functional teams as intelligent teams that should consist of managers and employees who work together to gain an understanding of specific competitive issues and offer recommendations for strategic planning purposes. The cross functional approach encourages teams to work on common competitive and performance issues and promotes tighter strategic planning integration across departments and operational units in an institution. Schermerhorn (2011:392) considers the use of cross functional teams as a trend that is used as an empowerment initiative in institutions. He adds that the trend helps eliminate the "walls" that separate departments and operational units in institutions. Considering that business processes at public higher education institutions, such as TUT, cut across departments and operational units, interdepartmental cooperation should be promoted for TUT and other similar institutions to strategically reengineer business processes in order to enhance strategic planning.

3.5.3 Aligning strategic planning efforts at different levels of management

An important issue arises regarding the different levels at which strategic planning should be undertaken, as it occurs at different levels of management (Pitt & Koufopoloulos, 2012:11). Like Lazenby (2014:5), McFarland (1974:324) argues that plans exist in a hierarchy that corresponds with the level of management and timespan being considered in the strategic planning process (also see section 3.4). This perspective is confirmed by Hax and Majluf (1984:51), who explain

that the most essential task is to determine issues that are to be faced by each management level and the roles they have to play in shaping corporate, business, and functional strategies.

Consequently, Hax and Majluf (1984:47) illustrate that strategic planning requires a clearly defined hierarchy of responsibilities and authorities that allows little or no reporting of uncertainties. The strategic planning structure should have a reporting system according to the hierarchical strategic levels. As strategic planning occurs at all levels of management, Hax and Majluf (1984:51) stress the importance of identifying issues to be addressed at different management levels where strategic planning is undertaken. They also insist that responsibilities for developing, implementing, and controlling strategic tasks should be assigned at all levels in an institution. Louw and Venter (2010:462) support the importance of aligning and integrating strategic planning efforts at different levels of management for institutions to achieve success in strategic planning. They believe that successful and sustainable strategy implementation is dependent upon departments and operational areas being aligned to a common institutional strategy and working together to support the implementation of the strategy. Managers within public higher education institutions, such as TUT, need to identify various strategic planning elements and their interrelationships to create the required strategic planning alignment and consequently improvements in institutional performance.

3.5.4 Considering the needs of customers

Kenny (2005:13) and Pitts and Lei (2006:21) contend that an institution creates competitive advantage if goods and services are efficiently and effectively produced and delivered, including creating value to its customers, thus emphasising the customer satisfaction dimension to strategic planning. In emphasising the importance of customers and other stakeholders, Kenny (2005) expresses that the starting point for embarking on a successful strategic planning process involves knowing who the key stakeholders are. Kenny (2005) adds that many institutions continuously embark on strategic planning and always attempt to improve business processes, but still wonder why success eludes them.

Hellriegel *et al.* (2005:76) stress that planning at departmental level interconnects commitments and actions intended to provide customer satisfaction in addition to gaining competitive advantage and agree that focus on customer satisfaction is the foundation of successful business strategic planning processes. This is achieved by addressing basic questions such as who will be served, what customer needs will be satisfied, and how will customers' needs be satisfied? To

succeed in strategic planning, these questions should be addressed during the business strategic planning formulation phase. As the formulation of business strategies is the responsibility of managers in charge of different departments, one of their primary tasks is to ensure that strategic planning is done so that the basic questions referred to above are properly addressed to avoid developing strategies that fail to contribute towards the realisation of customer satisfaction and the achievement of an institution's competitive advantage (Rothaermel, 2013:10). Consistent with the remarks by Kenny (2005), key stakeholders, such as students, are important as they provide resources to public higher education institutions and should be the basis upon which public higher education institutions, such as TUT, built their BPR and strategic planning projects.

Having exposed the strategic planning success factors it is now beneficial to examine the strategic management process. Although the primary objective of the research is to propose a BPR framework that will contribute to the enhancement of strategic planning within higher education, specifically TUT, the examination of the strategic management process is necessary to determine where strategic planning fits within the strategic management framework. David (2003:236) explains that the strategic management process does not end with the crafting of a strategic plan as there must be a translation of a strategic thought into strategic action, hence the need for the conceptualisation of the whole or complete strategic management process. The discussion below examines the core steps and phases that seem to best capture the strategic management process. The phases are a combination of strategic management steps and phases suggested by various strategic management commentators.

3.6 STRATEGIC MANAGEMENT PROCESS

In this section of the research, an examination of the strategic management process is provided, starting from the strategy planning phase through the implementation phase to the evaluation and control phase. For the purpose of this research, strategic planning is considered as the first phase in strategic management. Although the strategic management phases are explained separately, it should be noted that the phases are interdependent. According to Rothaermel (2013:32), the strategic management process describes the method by which managers conceive and implement what can achieve a sustainable competitive advantage. As it will be indicated later in this section, a review of the literature exposed that as with the application of BPR, strategic management can take different forms and various methodologies can be followed. Different authors, such as Feurer, Chaharbaghi, and Wargin (1995:4) and Dye and Sibony (2007:41), affirm that there are

many ways to conduct strategic management and that a large number of strategic management methodologies have been developed over the years. Hax and Majluf (1984:59–60) contend that as there is no one way to strategically manage, and there is more than one way to manage effectively, institutions should tailor their strategic management processes to fit their institutional structure and business processes.

Based on existing literature, this section of the research will provide an examination of the methodology, phases, and steps that best capture the strategic management sequence. Daft *et al.* (2010:285–286) and Schermerhorn (2011:211) explain that the strategic management process involves an evaluation of the current position regarding the

- mission, goals, and strategies, or strategic analysis, to assess the institution
- scanning the institution's internal and external environments, including an analysis of current strategic plans and identification of strategic factors that might change
- formulation of a new strategic plan
- implementation of the new strategic plan.

In their book *10 steps to successful strategic planning*, Barksdale and Lund (2006) provide a framework that they claim could be used by institutions to develop strategic plans quickly and efficiently. They argue that the book outlines a process and offers methods and tools that can be used to develop strategic plans in a short timeframe. An analysis of the steps outlined by Barksdale and Lund (2006) showed that the steps could be combined into phases that reflect a strategic management sequence like the sequence provided by Daft *et al.* (2010) and Schermerhorn (2011) above. Based on the strategic management phases and steps outlined by, amongst others, Daft *et al.* (2010) and Schermerhorn (2011), as well as the consolidated strategic planning steps provided by Barksdale and Lund (2006), the sections hereunder will determine what are considered the critical generic steps and phases of a strategic management process. The comparative analysis of a generic strategic management process and the process applied in the public sector from a South African perspective will be provided later in section 3.8.

3.6.1 Strategic planning

Pitts and Lei (2006:233) believe that strategic planning involves "establishing a coherent, strategic direction that gives guidance to the allocation of resources into new areas of activity". If properly executed, strategic planning lays a foundation for the successful execution of other

strategic management phases. Strategic planning thus sets the direction for the implementation and evaluation and control phases of the strategic management process. The discussion below explores generic core steps of strategic planning, the first phase in the strategic management process. The application of strategic planning within the public sector will be provided in section 3.7.

3.6.1.1 Analysis to assess the organisation's vision, mission, values, goals, and objectives

Academics and practitioners generally accept that the strategic planning process starts with the development of a vision, mission, values, goals, and objectives (Conway, Mackay, & Yorke, 1994:29). Pitts and Lei (2006:19) posit that institutions need an underlying purpose from which to chart their future and that a strategy is unlikely to be effective without a sense of direction. Louw and Venter (2010:108) maintain that the first step in strategic planning is determining the strategic direction. In line with the above contentions, Poister and Streib (1999:312) explain that the core of a strategic planning model must be the underlying values that are most important to an institution, its mission, and a vision of what the institution should look like in the future. Poister and Streib (1999) add that an important part of the strategic planning process involves the evaluation of an institution's current position in respect to the existing mission, vision, values, goals, and objectives. Hunger and Wheelen (2007:80) supports that an institution must re-examine its current mission, vision, values, goals, and objectives before it can formulate and implement alternative strategic plans.

"Vision" is defined by David (2003:9), Jones and Hill (2010:14), and Witcher and Chau (2010:31) as a future that an institution hopes to achieve to improve on the present state of affairs and that it precedes the development of an institution's mission. Jones and Hill (2010:15) point out that the development of a vision involves the crafting of the desired future state of an institution and articulates what the institution would like to achieve. Smith (2007:57) also refers to a vision as an idealised picture of an institution and further contends that this is why strategic planning should always begin with an institutional vision. In addition, Hax and Majluf (1984:49) assert that an institutional vision is "a rather permanent statement that is articulated by senior managers". The mission, values, goals, and objective are derived from and should be developed towards an institutional vision.

After having developed a vision, what follows is the formulation of a mission statement which Pitts and Lei (2006:20) refer to as a description of an institution in terms of its business, customers, and the skills it intends to develop to achieve its desired future state. According to Conway *et al.* (1994:29), "mission" describes an institution's purpose that distinguishes it from other institutions of its kind and identifies an institution's scope of operation. Similarly, Rossouw *et al.* (2003:17), Jones and Hill (2010:14), and Witcher and Chau (2010:32) mention that a mission is the reason an institution exists. For Jones and Hill (2010), values, which also contribute to an institution's sense of direction, are considered as the ethical standards and norms that govern the behaviour of employees. Values are the foundation on which an institution can build its mission and long-term success (Rothaermel, 2013:38). Pitts and Lei (2006:20–21) indicate that in addition to the mission, values, goals, and objectives, there is also a need to provide measurable tasks that contribute to the achievement of an institution's mission. The sequential analysis and development of an institutional vision, mission, values, goals, and objectives can be referred to as activities in the first step of the first phase of a strategic management process.

Flowing from the discussion above and according to Schermerhorn (2011:214), it is imperative to mention that the strategic analysis of mission, vision, values, goals, and objectives sets the stage for an analysis of the internal resources and external environment within which an institution operates. Rossouw *et al.* (2003:31) and Hellriegel *et al.* (2005:78) agree that vision, mission, values, goals, and objectives are not developed in isolation, as they are also influenced by an analysis of an institution's external opportunities, threats, and internal strengths and weaknesses.

3.6.1.2 Analysis of an institution's internal and external environments

Analysing the existing strategic plans of an institution and the environment in which it operates is critical in the development of new strategic plans capable of delivering the future competitive advantage of the institution embarking on strategic planning (Schermerhorn *et al.*, 2011:217). Barksdale and Lund (2006:37) argue that the second step in the strategic planning process is about researching issues an institution faces and those that it will face in the future. To achieve this, managers must establish an institution's history, current status, and development and growth opportunities. Barksdale and Lund (2006) add that examining the past and present state of an institution assists in noticing gaps that were missed previously.

Consistent with Schermerhorn *et al.* (2011), Daft *et al.* (2010:286) believe that examining the present state of affairs should also include an analysis of the existing strategic plans. As with BPR, examination of current strategic plans is of critical importance, as existing plans have to be understood to enable managers to better design a desired future state. As strategic planning involves improving the current or present state of affairs, as submitted above, it becomes imperative for managers to identify gaps and challenges in the existing strategic plans before crafting a desired future state or formulating a new strategic plan. As part of the internal assessment of an institution and external assessment of the environment, it is essential to also examine the current strategy to identify factors that prevent the strategy from enhancing an institution's chances of gaining and sustaining competitive advantage (Rothaermel, 2013:86).

Analysing internal and external environments also assists in gaining an understanding of an institution's strengths, weaknesses, opportunities, and threats, normally referred to as SWOT analysis (Barksdale & Lund, 2006:37; Lazenby, 2014:8). Jones and Hill (2010:19) remark that the primary purpose of a SWOT analysis is to exploit opportunities, counter threats, build on strengths, and remove weaknesses. They further show that SWOT analysis creates, confirms or adjusts an institution's resources and capabilities to the demands imposed by the environment within which the institution embarking on strategic planning operates. A literature review exposed that threats and opportunities are usually associated with the external environment and strengths and weaknesses with the internal environment. Conducting a SWOT analysis helps to identify the impact that the potential opportunities, threats, strengths, and weaknesses may have on achieving an institution's envisaged vision, mission, goals, and objectives (Louw & Venter, 2010:419).

To ensure that the envisaged vision, mission, goals, and objectives are realistic, managers should, amongst others, analyse an institution's resources and capabilities i.e. the internal features of an institution. An analysis of an institution's internal resources and capabilities provides managers with a picture of the strengths an institution can use to outperform its competitors or simply achieve a competitive advantage (Smit *et al.*, 2011:99). According to Louw and Venter (2010:259), the above suggests that an institution must have a clear understanding of its current resources and capabilities, including those that they will need in future. Louw and Venter (2010) further show that understanding the gap between the current situation and future requirements is of critical importance in the strategic planning process. To Lazenby (2014:8), an analysis of internal capabilities assists institutions to identify their strengths and weaknesses and determine which core competences need to be improved.

Cohen and Cyert (1973:352) contend that an institution and the environment in which it operates are parts of a complex interactive system and that the outcomes of the actions of the institution are partially determined by developments that occur in the external environment. Analysing an institution's external environment requires managers to be aware of the many variables within an institution's societal and task environments (Hunger & Wheelen, 2007:33). Witcher and Chau (2010:91) and Lazenby (2014:118) identify the forces found within the societal environments as political, economic, social, technological, ecological, and legal forces, commonly known as PESTEL. Witcher and Chau (2010) and Lazenby (2014) refer to the task environment as the industry within which an institution operates and also indicate that the external environment must be analysed to detect strategic factors that are more likely to impact on an institution's success or failure. Witcher and Chau (2010:91) show that the PESTEL framework is used to group the external environment variables to help those involved in strategic planning to identify sources of general opportunities and threats.

Supporting the application of the PESTEL framework in strategic planning, Smith (2007:59) argues that trends and developments or features in the external environment within which an institution operates can present threats and opportunities. It is of critical importance for managers to identify threats and opportunities and take them into account during the strategic planning process. For Hellriegel *et al.* (2005:80), it is the responsibility of managers at all levels of operation to develop statements of threats and opportunities for their areas of responsibility. Senior managers develop such statements for the institution as a whole during corporate strategic planning. Managers at other levels of management are also responsible for analysing issues facing their respective levels of operation and according to Lazenby (2014:8), the strategic plan of an institution must allow a fit with its environment, hence the importance of environmental analysis. Louw and Venter (2010:198) illustrate that due to the increased pace of change in the environments within which institutions across sectors operate, scenario analysis and planning has also emerged as a useful approach to strategic planning. They describe scenario planning as the type of strategic planning that involves the use of managerial judgement to develop and capture possible alternative features of an institution. SWOT analysis, PESTEL, and scenario planning are thus some of the approaches available to institutions to analyse the external environment for strategic planning purposes.

3.6.1.3 Formulation of a new strategic plan

Rossouw *et al.* (2003:269) indicate that strategic plans must be formulated to close the planning gap and achieve an institution's goals and objectives identified during the early phases of the strategic planning process. A literature review (see sections 3.6.1.1 and 3.6.1.2) exposed that there is general consensus that the assessment of an institution's vision, mission, values, goals, and objectives and an analysis of an institution's internal and external environments are linked to the formulation of an institution's strategic plan. Along similar lines, Hellriegel *et al.* (2005:80–83) and Lazenby (2014:8) reflect that potential strategic plans must be evaluated and selected in terms of external forces, an institution's strength and weaknesses, and the likelihood that they will assist an institution achieve its mission and goals and objectives. Also Smith (2007:60) and Louw and Venter (2010:30) point out that the strategic plan formulation phase follows the analysis of an institution's internal and external environments. Once an institution has analysed its position and competitive advantages, it must decide upon the best way of working towards the achievement of its long-term strategic goals and objectives.

In support of the above assertions, Pitts and Lei (2006:13) mention that the information gathered from the SWOT analysis, scenario planning, PESTEL analysis, and other approaches to the institution's internal and external environment analysis are used to craft a new strategic plan that will assist an institution to use its competences to achieve a competitive advantage. It is imperative that a strategic plan match the opportunities discovered through the analysis of an institution's internal and external environments. Smit *et al.* (2011:111–112) add that the choice of a strategic plan is also guided by an institution's vision, mission, values, and long-term goals and objectives. When choosing a strategy, those responsible for formulating strategic plans base their decisions on a core idea about how an institution can best compete in the industry within which it operates.

Barksdale and Lund (2006) concur that the work done to scan the internal and external environments identify business drivers and articulate that vision, mission, values, goals, and objectives assist institutions embarking on strategic planning to set criteria for prioritising institutional needs, ranking institution's priorities, identifying and managing institutional risks, and creating a strategic planning decision matrix. Barksdale and Lund (2006) further show that these criteria help institutions to decide which opportunities should be pursued and which gaps should be filled first. Lazenby (2014:8) emphasises that the choice of a strategic plan requires a clear decision that allows an institution to achieve its goals and objectives as identified during

the first step of the strategic planning process. Strategic plans must be formulated in line with what was identified in the environmental analysis phase. Cohen and Cyert (1973:360) argue that when enough actions are adopted to close the gaps identified during the institution analysis phase of the strategic planning process, strategic search is terminated and a new strategic plan has been formulated.

According to Schermerhorn *et al.* (2011:229), different approaches, such as top down or bottom up, are available to help managers in the strategic plan formulation phase. Schermerhorn *et al.* (2011) add that different approaches are followed in the formulation of corporate strategic plans compared to the approaches used in the formulation of strategic plans at other levels of operation or management. As already stated, the main objective in embarking on strategic planning is for institutions to achieve a competitive advantage. Regardless of the approach an institution chooses to adopt, an institution must always ensure that a strategic plan is formulated to help the institution concerned achieve its mission and long-term goals and objectives, improvement of institutional performance, and achievement and sustenance of competitive advantage.

3.6.2 Strategy implementation

Jones and Hill (2010:20) point out that having chosen a set of strategies to achieve a competitive advantage and increase institutional performance, managers at different levels of operation must put those strategies into action. Cohen and Cyert (1973:362) and Hunger and Wheelen (2007:123) remark that once a strategic plan has been formulated, the next phase in the strategic management process is strategy implementation. Strategy implementation involves the activities and choices made for the execution of a strategic plan. In this phase of the strategic management process, strategic plans are put into action through the development of implementation programs, budgets, and procedures. Cohen and Cyert (1973) add that to develop an operational procedure for implementing an agreed upon strategic plan, it is of critical importance to break down the broad strategic plan into a time-phased sequence of plans and various activities that are necessary to implement a strategic plan should be identified and defined in terms of resources required.

David (2003:236) contends that successful strategy formulation does not guarantee successful strategy implementation. According to David (2003), it is more difficult to say an institution is going to do something than to actually do it. This line of argument is supported by Daft *et al.* (2010:299) and Louw and Venter (2010:537), who agree that strategy implementation is the

most important, yet the most difficult. They also indicate that for many institutions, regardless of the industry within which they operate, strategic implementation remains a significant challenge. For Daft *et al.* (2010:299), the key to achieving success during the strategy implementation phase of the strategic management process is leadership. Also Schermerhorn *et al.* (2011:236) contend that the effective implementation of strategic plans depends on the full commitment of all managers to supporting and leading the execution of strategies within their areas of management responsibility. If leaders are able to influence people to adopt the new behaviours needed for putting the strategic plan into action, the strategic plan could be successfully executed. To successfully implement strategic plans, the entire institution and all its resources must be mobilised in support of the agreed upon strategies. To this, Jones and Hill (2010:20) add that management need to put a governance system in place to ensure that all within the institution act in a manner that will contribute towards the successful implementation of the agreed upon strategies.

3.6.3 Strategy evaluation and control

During the implementation phase, there exists a need for institutions to track strategic plans to detect problems in its underlying premise and make necessary adjustments. Continuous improvement provides a form of strategic control that allows institutions to respond in time to developments in areas that influence the success of an institution (Pearce II & Robinson, 2000:15). The continuous improvement in strategic planning is supported by Schermerhorn *et al.* (2011:234), who believe that strategic planning must be incremental as strategies tend to “take shape, change, and develop over time”. Likewise, Barksdale and Lund (2006:229) believe that strategic planning is ongoing and a strategic plan must be a living document, as it needs to change and respond to the changes that occur within and outside an institution. They are of the view that the final phase of the strategic management process does not come to an end as long as a strategic plan is still effective, as it has to be maintained and updated.

To facilitate the maintenance of a strategic plan, Lazenby (2014:10) emphasises a need for controls to ensure the successful control of strategic plans and the evaluation of the results. He adds that there should be a continuous process of control and evaluation of the suitability and implementation of the strategic plans. If the strategic plan is failing to achieve the desired results, managers may need to adjust certain aspects of the strategic plan or repeat the strategic management process, hence the advocating of an incremental approach and the referral to strategic management as an ongoing process. Goals and objectives are used to determine the

extent to which strategic plans are achieving the intended results. For this purpose, Pitts and Lei (2006:21) indicate the need for goals and objectives to be determined during the first phase of the strategic management process, as they reflect the results to be achieved within a specific timeframe. Accordingly, the set goals and objectives must designate the timeframe during which strategic actions and results are to be achieved.

The above discussion addressed the cohesive steps and phases of a generic strategic management process. Considering that there is no right or wrong process, the discussion provided an explanation of core steps and phases that are, for the purpose of this research, considered to best capture the strategic management sequence. The discussion revealed that strategic planning is the first phase in the strategic management process and that it sets the direction for other strategic management phases.

Considering that TUT, an institution where the empirical investigation was conducted, is a public higher education institution, the following discussion explores the application of strategic planning within the broader public sector.

3.7 STRATEGIC PLANNING WITHIN THE PUBLIC SECTOR

This section provides a brief exploration of the application of public sector strategic planning. According to Poister and Streib (1999:309), due to ongoing rush of activities, competing demands for attention, and the pressure of day-to-day decisions; setting a responsive strategic agenda as the central source of future direction and actions to be taken is fundamentally imperative across sectors. From the public sector perspective, Poister and Streib (1999) state that dealing with challenges caused by changes in the needs of society, political trends, intergovernmental relations, economic conditions, and expectations of citizens, requires the type of forward looking that public sector strategic planning can contribute. Bryson and Roering (1987:9) stress that public sector strategic planning should aim at helping to improve the performance of public sector institutions. This sentiment is echoed by Poister (2010:5246), who articulates that public sector strategic planning should be directed at largely defining institutional performance that should also be monitored, as this helps to inform strategy along the way. Although Poister (2010) acknowledges that public sector strategic planning is not always aimed at improving institutional performance on an ongoing basis, he advocates an approach that should focus on identification of results to be achieved and a plan to strategically achieve them.

Like BPR, strategic planning approaches developed in the private sector can assist public sector institutions, including public higher education institutions, to become more efficient and effective in the manner in which they deliver public services. Public sector strategic planning can provide a set of concepts, procedures, and tools that can also help the public sector to deal with changes in the environments within which it operates. Public sector managers must be careful how they engage in public sector strategic planning since not all approaches are equally successful and since a number of conditions govern the successful application of each approach. The uniqueness of the public sector must also be taken into account when public sector managers embark on public sector strategic planning (Bryson & Roering, 1987:9–11). Bryson and Roering (1987) add that considering the uniqueness of the public sector and as strategic planning embraces a wide range of approaches, strategic planning in the public sector should be tailored to fit the specific situations of the institutions undertaking public strategic planning. Eadie (1983:448) concurs that understanding and interpreting a public sector institution's environment is a basic characteristic of public sector strategic planning.

Lazenby (2014:255) also mentions that strategic planning remains an important activity in the public sector and that the strategic planning process followed in the private sector can also be applied in the public sector; since the focus of the public sector is public service delivery, public sector strategic planning assists public sector institutions to achieve improved institutional performance and service quality. Also emphasising the need for strategic planning within the public sector, Poister and Streib (1999:308) remark that its application within the public sector is imperative, as efficient and effective public administration requires public sector institutions to develop a capacity to integrate and coordinate all their activities and functions and direct them towards advancing the government's strategic agenda.

Poister (2010:247) refers to public sector strategic planning as "an approach that incorporates futuristic thinking, analysis, and evaluation of values, goals, and priorities so as to chart the future direction and course of action to ensure a public sector institution's efficiency, effectiveness, and ability to add public value", qualifying the public nature of the public sector practices. Poister (2010) is also convinced that public sector strategic planning can and does strengthen public sector institutions, improves efficient and effective delivery of public services, and creates public value in different ways. Furthermore, Poister (2010) mentions that for public sector institutions to anticipate problems and challenges, respond to them efficiently and effectively, and chart their own course into the future, public sector strategic planning becomes a prerequisite.

The deduction that can be made from the above discussion is that, like with BPR, generic strategic planning approaches are also applicable within the public sector. For public sector institutions to respond to challenges posed by globalisation and socio-economic changes and to compete internationally, they need to plan strategically. Public sector strategic planning helps public sector institutions, including public higher education institutions, to achieve improvements in institutional performance so as to become more efficient and effective, as is the case with BPR.

3.8 COMPARATIVE ANALYSIS OF GENERIC AND PUBLIC STRATEGIC MANAGEMENT PROCESSES

Table 3.2 below gives a comparative analysis of a generic strategic management process in the private sector and the process that is applied in the public sector from a South African perspective. The Framework for Strategic Plans and Annual Performance Plans published by the National Treasury (2010) was used as a guiding document regarding the application of strategic management within the South African public sector. The generic strategic management process is informed by what were identified in section 3.6 as critical steps and phases of a strategic management process.

Table 3.2 Comparative analysis – private and public sector strategic management processes

Generic steps and phases based on commonalities identified by various authors	Strategic management process within the public sector
Development of vision, mission, values, goals, and objectives	Development of a vision that is an inspiring picture of a preferred future is also considered as a first step in the public sector strategic management process. Though the vision should be specific to the public sector institution, it should be linked to the overall vision of a cluster within which the institution concerned operates. A mission statement is developed to set out the reasons for the existence of the institution concerned based on its legislative mandates, functions, and responsibilities. Values should define a " <i>citizen-oriented approach</i> " regarding public service delivery in accordance with the <i>Batho Pele</i> principles. Goals and objectives are needed to identify areas of institutional performance.
Analysis of internal and external environments	The second step involves situational analysis. During this stage of the public sector strategic management process, global and institutional environments are analysed. The focus is thus on contextual environment and institutional capacity.
Strategy formulation	Public sector strategic plans have a life span of five years. The public sector strategic management process takes into account electoral, budgetary, and annual reporting and planning deadlines. Public sector institutions are allowed to formulate a new strategic plan or revise an existing strategic plan any time provided it is tabled within the timelines set up in the Treasury Regulations.

Generic steps and phases based on commonalities identified by various authors	Strategic management process within the public sector
Implementation, evaluation, and control	Public sector institutions are required to develop a budget programme and sub-programme structure that is aligned to the main areas of service-delivery responsibility within the institution's mandate. Once an institution has an appropriate budget programme structure in place, it should only change in response to a specific expansion or contraction in the institution's mandate. Accordingly, performance is tracked to detect problems and making necessary adjustments in line with Annual Performance Plan. The public sector thus follows an incremental approach to strategic management that provides for performance monitoring and evaluation as well as continuous improvement in accordance with the stipulated timeframes.

Source: National Treasury (2010)

Table 3.2 confirms that similar private sector strategic management steps and phases, as suggested by various authors in section 3.6 of this research, are also followed within public sector institutions, but with due consideration of the unique and distinctive nature of the South African public sector. Considering that the comparative analysis of generic and public sector strategic management processes confirmed similarities regarding the application of strategic management within the private sector and the public sector, the generic strategic planning theoretical propositions exposed in this chapter will guide the empirical exploration in section 5.4.2 and the development of a BPR framework that will be proposed in section 6.4.

The section below explores the similarities that exist between BPR and strategic planning across sectors. The perspective that both strategic planning and BPR are critical for institutions, such as TUT, to become efficient and effective in the manner in which they conduct business is the basis upon which the similarities will be explored.

3.9 COMMONALITIES BETWEEN BUSINESS PROCESS REENGINEERING AND STRATEGIC PLANNING

The discussion that follows involves the probing of the commonalities that exist between BPR and strategic planning. The probing of similarities between these constructs will ensure the identification and determination of the core elements that will be integrated and incorporated in a comprehensive BPR framework that will be proposed later in chapter six. What is central to all commonalities is that BPR and strategic planning across sectors are based on a systems approach to management, and a review of the literature in section 3.2.4 located both constructs within the modern or contemporary management approaches.

3.9.1 Performance improvement

A review of the literature (see sections 2.2.2 and 3.4) exposed that BPR and strategic planning is aimed at the achievement of improvements in institutional performance. To achieve and sustain improvements in institutional performance, institutions across sectors adopt the incremental approach to BPR and strategic planning. Although early exponents of BPR advocated for dramatic and not marginal improvements in performance, a review of the available recent texts (see section 2.4) exposed that institutions are finding that incremental or continuous improvements in institutional performance may be more beneficial. It should be noted that the radical approach to reengineering business processes to achieve improvements in institutional performance is still regarded relevant and applicable depending on the nature of the performance challenge an institution seeks to resolve. Regardless of the approach that is followed, what is common is that the objective of both BPR and strategic planning is the achievement of improvements in institutional performance in order for institutions across sectors to become more competitive. Just as BPR is aimed at the redesign of business processes in order to achieve improvements in performance, likewise, strategic planning across sectors involves setting a long-term direction for an institution to achieve the same objective in order to achieve and sustain competitive advantage. Consistent with Amason (2011:9), public higher education institutions, such as TUT, need to strategically reengineer their business processes in order to maximise their chances of performing better than other similar institutions.

3.9.2 Customer focus

A review of the literature (see sections 2.6 and 3.5.4) revealed that institutions across sectors reengineer business processes and embark on strategic planning to achieve improvements in institutional performance to satisfy the needs of their customers. The importance of customer satisfaction is considered as one of the critical elements of BPR and strategic planning. Institutions place their commitment to customer satisfaction into action by placing customers at the centre of their BPR and strategic planning projects. Stressing the importance of customer satisfaction, Lockamy III and Smith (1997:143) articulate that giving priority to the reengineering of business processes that provide customer satisfaction creates a strategic advantage in the industry within which an institution operates. A review of available texts (see sections 2.6 and 3.5.4) further revealed that customer satisfaction is the anchor point, foundation, and focus of successful BPR and strategic planning processes. For public higher education institutions to create a competitive advantage, it is imperative that they should commit to

customer satisfaction by giving priority to the strategic reengineering of business processes that provide customer satisfaction.

3.9.3 Future orientation

As stated in section 1.2.2, both BPR and strategic planning are future oriented. Strategic planning across sectors assists institutions in producing long-term plans that indicate the future direction institutions have chosen. Similarly, BPR involves, amongst others, the analysis of existing or current business processes to understand what they intend to achieve and expose their weaknesses in order to identify opportunities for improvements and strengths which in turn assist when future business processes are designed. Accurate analysis of current business processes and strategic plans serves as a foundation for future improvements. Both BPR and strategic planning are not about the past or the present but about the future survival of institutions in the competitive environments within which they operate.

3.9.4 Senior management leadership and commitment

Effective senior management leadership and commitment are considered prerequisites for successful BPR and strategic planning across sectors (see sections 2.6 and 3.5.1). For BPR and strategic planning to be successful, the active direction of senior managers, including their involvement on the planning and implementation phases of both management approaches is critical. Lack of senior management commitment and effective leadership is considered one of the common reasons why some BPR and strategic planning projects fail to achieve success. For BPR and strategic planning projects to be successfully carried out, there must be commitment from senior management and strong leadership must also be provided. Strategic leadership and commitment within both the public sector and the private sector is thus considered as one of the common causes of success in BPR as is also the case in strategic planning.

3.9.5 Cross functional approach

The cross functional approach is considered of paramount importance in BPR projects as well as in relation to private sector strategic planning and public sector strategic planning. A review of literature (see sections 1.2.1 and 3.5.2) exposed that institutions need to take a cross functional approach to BPR and strategic planning since improvement of business processes and formulation of strategic plans cut across traditional functional boundaries. Synergy and

cooperation between departments and operational units is of critical importance in strategic planning as well as in BPR projects. The cross functional approach encourages both private sector and public sector institutions to work on common performance imperatives and promotes strategic planning and BPR integration across institutions.

3.9.6 Effective communication

Effective communication is a key to the successful execution of any project, and BPR and strategic planning are no exceptions. Effective communication is thus considered an important element in the facilitation of BPR and strategic planning across sectors. It is imperative for management to effectively communicate BPR and strategic planning initiatives to staff members across the institution. A literature review (see section 2.5) revealed that effective communication of BPR activities from start to end makes staff members feel that they are part of the BPR efforts and assists in dispelling confusion, misunderstanding, and resistance by staff members; the same applies to strategic planning. It is imperative for institutions to have a proper communication plan that will provide staff members with relevant information in advance and throughout the BPR and strategic planning processes. The importance of effective communication is equally essential for the successful execution of BPR just as it is with the development and implementation of strategic plans within the private sector as well as the public sector.

3.9.7 Information technology as an enabler

A review of the literature discovered that although the application of information technology is not a prerequisite, it remains a useful enabler for institutions to strategically reengineer business processes (Ascari, Rock & Dutta, 1995; Love & Gunasekaran, 1997; Terziovski, Fitzpatrick & O'Neill, 2003; Hellriegel *et al.*, 2005). As information technology is regarded as one of several enablers that must be considered to achieve improvements in performance, whether through BPR or strategic planning, it is imperative for institutions to identify its enabling opportunities. Information technology is thus considered as one of the common elements that are considered essential for the successful facilitation of BPR and strategic planning processes across sectors.

The commonalities or similarities between BPR and strategic planning as applied across sectors are not limited to the elements explored above. However, for the purpose of this chapter of the research, the elements explored above are considered the core elements that are of critical importance for the successful execution of BPR and development and implementation of

strategic planning projects. As a consequence, these core elements will be the foundation upon which a BPR framework that will be proposed in section 6.4 will be based.

3.10 CONCLUSION

The chapter examined the theories and principles of and approaches to strategic planning to operationalise the second objective of the research as stated in chapter one. As strategic planning across sectors is one type of planning, and planning is one of the fundamental management functions, the chapter started with an explanation of the evolution of the management thought, following up on the brief explanation provided in chapter two of the research. A literature review exposed that although management theories change with times to meet new demands, some management ideas and practices from the past are still relevant and applicable today (see section 3.2). Consequently, institutions across sectors are encouraged to follow a flexible approach to management and to apply what it is still relevant from different management approaches.

The explanation of the evolution of management was followed by an exploration of planning to locate strategic planning within the planning framework. The exploration revealed that strategic planning, tactical planning, and operational planning are the types of planning that are found in most institutions across sectors and across the globe. Furthermore, it was discovered that long-term planning is comparable to strategic planning and is the planning that covers a long period of time. The planning timeframe and scope are the key determining factors for distinguishing between strategic planning and other types of planning referred to above. The chapter also provided an analysis of different levels of strategic planning. It was discovered that strategic planning occurs at all levels of operation within an institution and is a fundamental function of all those who operate at different levels of management. The scope and complexity of strategic planning vary between institutions and depend mainly on the amount of diversification and levels of operation within the institution undertaking strategic planning. Even though strategic planning occurs at all levels of management, it is of critical importance that managers at each level of management must integrate and coordinate their strategic planning efforts with managers at other levels to ensure consistency in the overall strategic planning process of an institution.

An exposition of the generic key success factors that could assist managers at all levels of operation to increase their chances of succeeding in their strategic planning efforts was also provided. These success factors are considered common causes of success in the strategic planning process. As with BPR success factors identified in section 2.6, the strategic planning

key success factors identified in section 3.5 will be integrated in the framework that will be proposed in section 6.4.

A review of the literature (see section 3.6) revealed that strategic planning is the first phase in strategic management. The other phases of the generic strategic management process involve the utilisation of resources to implement the strategic plan developed during the strategic planning phase. A review of the literature (see section 3.6) also revealed that the generic strategic management process can take different forms and various methodologies can be followed. As there is no right or wrong methodology to follow in the application of strategic management, section 3.6 provided an examination of the generic methodology, phases, and steps that seem to best capture the strategic management sequence (Pitts & Lei, 2006; Feurer, Chaharbaghi & Wargin, 1995; Dye & Sibony, 2007; Hax & Majluf, 1984).

The chapter also explored the application of strategic planning within the public sector and discovered that, like with BPR, the private strategic planning approaches are also applicable within the public sector but with due consideration of the unique nature of public sector institutions. Section 3.8 provided a comparative analysis of a generic strategic management process in the private sector and the strategic management process that is applied in the public sector from a South African perspective. The comparative analysis confirmed that similar private sector strategic management steps and phases are also followed within public sector institutions, but with due consideration of the unique and distinctive nature of the South African public sector. Finally, the chapter covered the probing of the commonalities between BPR and strategic planning in order to identify and determine the similarities that exist between the two key constructs and primary focus of the research. As indicated in section 3.9, the identified core elements will be the foundation upon which a BPR framework that will be proposed in section 6.4 will be based.

Considering that TUT, the institution where the empirical exploration of this research was conducted, is a higher education institution, chapter four of this research will provide an overview of the higher education landscape of South Africa, specifically public higher education, and will include an assessment of the statutory and regulatory framework governing higher education institutions.

CHAPTER FOUR

DYNAMICS OF HIGHER EDUCATION AND THE STATUTORY AND REGULATORY FRAMEWORK GOVERNING HIGHER EDUCATION IN SOUTH AFRICA

4.1 INTRODUCTION

In the two preceding chapters, the available literature relevant to the two main constructs of the research, namely, BPR and strategic planning, was exposed and analysed. The exposition and analysis revealed that BPR and strategic planning are related and as a consequence share a number of similarities or commonalities. Furthermore, an analysis of the evolution of the management thought located both BPR and strategic planning within the contemporary or modern management perspectives, focusing on institutions across sectors functioning as an open system. It is evident from the findings of the exposition and analysis provided in the two preceding chapters that the application of BPR and strategic planning within the public sector in general and the public higher education sector in particular is of the same critical importance as it is within the private sector. The exposition and analysis of the literature relevant to BPR and strategic planning respectively and their application within the public sector was necessary, as the primary purpose of this research is to develop a BPR framework that would contribute to the enhancement of strategic planning within a public higher education institution.

It is imperative to state that though the South African higher education system consists of public and private higher education institutions, the main contribution of this research is to develop a BPR framework to enhance strategic planning within TUT, a public higher education institution. Considering that TUT, the institution where the empirical investigation of this research was conducted, is a public higher education institution, it now becomes imperative to operationalise the fourth research question outlined in section 1.5 of this research, namely, "what is the nature of the dynamics within the public higher education sector in South Africa and what are the particular statutory and regulatory frameworks governing this sector?" The chapter is organised around the following two themes:

- To explore the evolution of public university and technical education in South Africa. Considering that according to Behr (1984:128-129), historically public technical education did not necessarily form part of public higher education (until the adoption of the Higher

Education Act 30 of 1923), the evolution of what originally was considered public "university education" and "technical education" will be explored separately. This theme will cover distinct periods in the history of public higher education in South Africa until 1994 when South Africa attained democracy.

- To examine the public higher education landscape in the country post 1994 and after the adoption of a single higher education system. This section of the research will examine the main and critical changes that were introduced after the attainment of democracy, including the adoption of key higher education policies and legislation.

The statutory and regulatory framework governing higher education provided by higher education institutions, specifically public higher education institutions, will also be examined.

The two themes will thus also assess the prescripts of the national legislation that regulated public university and technical education through different timeframes in the history of public higher education in South Africa in order to address the second part of the fourth research question formulated in section 1.5 and repeated in a paragraph above. The assessment of the current prescripts of the statutory and regulatory framework that govern public higher education will cover the Higher Education Act 101 of 1997 i.e. the main Act of Parliament that applies to higher education in general and determines higher education policy in South Africa. Other relevant statutory and regulatory framework will also be assessed as part of the examination of the public higher education landscape in South Africa post 1994. The statutory and regulatory framework promulgated pre-1994 that is worth drawing attention to will also be referred to as part of the exploration of the evolution of public high education in South Africa.

Before providing a review of the evolution of public higher education, it is imperative to clarify what higher education in general entails from a South African perspective. Clarification will also be provided as to what constitutes a higher education institution within the South African context. These clarifications are necessary, as the purpose of this chapter is to examine the distinctive features of the type of education that is offered by higher education institutions, specifically public higher education institutions.

4.2 HIGHER EDUCATION FROM A SOUTH AFRICAN PERSPECTIVE

This chapter clarifies what higher education in general entails from a South African perspective. Bunting (1994:1) refers to higher education as a post-secondary education system. Likewise, Raju (2006:1) considers higher education as the area of education following secondary education

and that it covers the type of education provided by different types of private and public post-secondary institutions such as public and private universities and various types of colleges. Raju (2006) adds that higher education refers to the teaching and research functions that are undertaken by public and private higher education institutions to equip individuals with skills necessary for them to take up various roles in society. The above description is consistent with the prescription of higher education provided by the Higher Education White Paper 3: A Programme for the Transformation of Higher Education 1997, namely, that higher education comprises all learning programmes leading to a qualification higher than the Further Education and Training Certificate or National Senior Certificate.

The White Paper for Post-School Education and Training 2013 conceptualises post-school education as the type of education for which the Department of Higher Education and Training (DHET) is responsible and thus locating higher education within the post-school education system. According to the White Paper for Post-School Education and Training 2013, the post-school education system includes public universities, public technical and vocational education and training colleges, public adult learning centres, private post-school institutions, the Sector Education and Training Authorities, the National Skills Fund, and regulatory bodies, such as the South African Qualification Authority (SAQA) and Council on Higher Education (CHE), which are responsible for registration of qualifications and quality assurance in the post-school system. Consistent with the White Paper for Post-School Education and Training 2013, Wilson-Strydom and Fongwa (2012:78) show that the current South African higher education system consists of public universities, private universities, technical and vocational education and training colleges, and colleges for professional training. Although Wilson-Strydom and Fongwa (2012) also recognise the role statutory institutions such as SAQA and CHE play in higher education, they do not refer specifically to the Sector Education and Training Authorities and the National Skills Fund as being part of the higher education system.

The above conceptualisation encompasses private and all state owned post-school institutions and is not only limited to higher education institutions. The White Paper for Post-School Education and Training 2013 also recognises the existence of state owned post-school institutions under the authority of other national government departments, provincial governments, and municipalities. Though these public institutions exist under the authority of other public sector institutions, the DHET is, through the regulatory bodies such as SAQA and CHE, responsible for assuring the quality provision of education and ensuring that the qualifications these institutions offer are formally registered (DHET, 2013). However, it is worth

noting that not all post-school education institutions offer higher education as contemplated in the Higher Education Qualification Sub-Framework (HEQSF), as it will be explained in the paragraphs below.

This research aligns itself with the description of higher education and higher education institution as provided in the Higher Education Act 101 of 1997. According to section 1 of the Higher Education Act 101 of 1997, higher education means all learning programmes leading to a qualification that meets the requirements of the HEQSF. Consequently, section 1 of the Higher Education Act 101 of 1997 refers to a higher education institution as any institution that provides public or private higher education which is in accordance to the HEQSF. It is worth noting that post-school education not leading to a qualification that meets the requirements of the HEQSF is excluded from the above description of higher education. Consequently, the sections related to an exploration of the public higher education landscape post 1994 will provide an overview of the distinctive features of a public higher education system composed of public higher education institutions that offer learning programmes that are in accordance with the HEQSF requirements.

Authors, such as Raju (2006), also believe that higher education in South Africa is the context in which research universities, comprehensive universities, and universities of technology are allocated. This research also aligns itself with the above categorisation of institutions as the main types of institutions that lately offer higher education in South Africa. TUT, the public higher education institution where this research was conducted, forms part of the above categorisation of higher education institutions considering that it is a public university of technology. The section that follows explores the evolution of higher education, specifically public higher education, to indicate how public higher education originated and developed through the historical development of South Africa.

4.3 EVOLUTION OF HIGHER EDUCATION IN SOUTH AFRICA

It is generally accepted that education systems are informed by the political system adopted by the government of the country concerned. The general consensus regarding the South African public higher education system is that it was a direct product of the political systems of different times throughout its historical development (Allen, Bonous-Hammarth & Teranishi, 2006:311). Supporting this assertion, CHE (2004a:9) shows that the distinct feature of public higher education in South Africa is that between 1948 and 1994 it evolved along racial and ethnic lines due to the deliberate policies of the country. Similarly, Cloete, Pillay, Badat, and Moja (2004:1)

submit that in South Africa, social inequalities were reflected in all spheres of life and the public higher education system was no exception. They argue that the inequalities created during the apartheid period shaped the South African public higher education system of that time. In sum, Allen *et al.* (2006:313) reflect that the public education system in South Africa was a direct product of the political systems and ideologies of the different times in the historical development of the country. The classification of Pretoria Technikon as a historically advantaged institution and Technikon Northern Gauteng and Technikon North-West as historically disadvantaged institutions before the former institutions merged to form TUT is a reflection of the inequalities of the institutions that merged to form TUT (see Table 4.1). Consistent with the reflections made in a paragraph above, the inequalities were informed by the political system of the South African government pre 1994.

In line with the above assertions, Wilson-Strydom and Fongwa (2012:76) express the opinion that South Africa has a diverse public higher education landscape and its higher education history is one of the longest in Africa, partially due to the socio-political and historical path of the country. Wilson-Strydom and Fongwa (2012) further indicate that a striking aspect of early public higher education in South Africa was the link it has with the socio-political landscape of the country and that it was used as a tool to enforce political ideologies. However, Allen *et al.* (2006:311) contend that education systems are also subject to reviews that may be due to a process of quality enhancement or reengineering. According to Wilson-Strydom and Fongwa (2012), to keep abreast of societal changes and to ensure their survival, it becomes necessary that the education systems of countries are transformed and strategically reengineered in order to respond to and reflect the aspiration of the changing society. This view reflects that in addition to changes that are due to changes within the political environment, education systems are also transformed to respond to societal needs that are not necessarily manifestations of the political ideologies of the country concerned.

Within the context of the evolution of public higher education in South Africa, Kruss (2002:15–28) confirms that throughout the nineteenth century, post-secondary education institutions emerged in response to economic and social demands to train teachers, government officials, and other professionals that were needed at the time. At the turn of the twentieth century, the introduction of post-secondary institutions was shaped by the mineral revolution in South Africa. Consequently, new sets of post-secondary education institutions were introduced to meet new demands that emerged with the growth in mining and manufacturing industries. Although these post-secondary education institutions were introduced through private initiatives, eventually they

became legislatively incorporated as public higher education institutions (Kruss, 2005:263). Consistent with the remarks by Wilson-Strydom and Fongwa (2012) referred to in a paragraph above, Kruss (2002) and Kruss (2005) confirm that although it is generally accepted that the educational system is informed by the political system adopted by the government of the country concerned, it is imperative to note that the economic and social demands also contribute to the shaping of educational systems.

The sections of the research that follow explore the origins and historical development of public university and technical education prior to 1994 by highlighting the distinctive features of these types of education before the attainment of democracy. The exploration will indicate what informed the South African public higher education system throughout its historical development. The historical development of "traditional" public university education and technical education will be explored separately due to their distinct features that existed before the establishment of a single and national coordinated higher education system.

4.3.1 Origins of university education in South Africa

This section provides an explanation of the origins and historical development of university education in South Africa. Considering the dynamic nature of its evolution and long history, the section does not claim to present a complete history of the development of university education in the country; its main contribution is to provide a brief reflection of how university education, specifically public university education, originated and evolved over the years until 1994. Behr (1984:3) holds the view that the South African educational system was shaped mainly by the first whites who settled in the country from Europe, and their history. This view is supported by Sehoole (2006:5), who contends that the origins and development of public university education in South Africa were influenced by the colonial history of the country. As a consequence, the South African public higher education institutions were modelled after European institutions. Behr (1984) argues that the Dutch, the early settlers who arrived in South Africa in 1652, brought with them a tradition of religious education. The use of Afrikaans as a medium of instruction at Technikon Pretoria, one of the public higher education institutions that merged to form TUT, reflects the influence the Dutch had on some of the South Africa public higher education institutions.

Acknowledging the influence of colonial history in the historical development of public university education, Ade Ajayi, Goma, and Johnson (1996:28) reflect that during the colonial time, the provision of Western education became the critical factor for social change within colonised countries and South Africa is no exception. Consequently, the colonial powers used education policies to control the pace and direction of social change within colonised countries. Also Cloete and Muller (1998:2) points out that it is generally acknowledged that universities in the African continent were set up and they continue to operate on the model of the colonial metropolitan university, including South African public higher education institutions. Summing up the early historical development of public university education in South Africa and supporting colonial influence on university education in the country, Sehoole (2006:7) contends that the perspective that university education in the country came to be characterised in terms of English and Afrikaans as media of instruction is a reflection of the influence the Dutch and the British had on the origins and historical development of university education in the country. In the case of TUT, the University continues to use English as the primary language of teaching, instruction, communication, and documentation (TUT Language Policy, 2005).

Mabizela (2002:42) articulates that the first stage in the historical development of university education in South Africa was characterised by the rapid development of private university colleges. Similarly, Ade Ajayi *et al.* (1996:32) show that during the second and third quarter of the nineteenth century, higher education in South Africa was largely left to private initiative supplemented by government grants through which the government tried to influence policy direction. For Kruss (2005:262), the private initiative in the origins of university education is evident when examining its historical developments in the nineteenth century when the first university colleges emerged. Kruss (2005:265) further stipulates that the analysis of the historical development of university education reflects shifts and systematic changes over the years. This is confirmed by Mabizela (2002:42) who points out that the first stage in the historical development of university education saw a shift from private institutions to semi-state institutions and then to public higher education institutions and, as a consequence, university colleges established through private initiatives during the period 1829 to 1917 transformed from being private institutions to semi-private and eventually public higher education institutions. According to Metrowich (1929:6), the first university college to be established in South Africa first received financial assistance from the government in 1834, lost its semi-private character and became a fully-fledged public institution in 1878. This also confirms the shifts and system changes in university education during its early historical development.

Behr (1984:140) and Sehoole (2006:6) confirm that the origins of university education in South Africa were laid during the second and third quarters of the nineteenth century when colleges in the western and eastern districts of the Cape Colony started offering post-secondary education in addition to secondary education. Ajayi *et al.* (1996:32) revealed that it is generally accepted that the first institution to offer university education in South Africa was the South African College. This is supported by Metrowich (1929:6), who explains that the foundations of university education in South Africa can be traced as far back as 1829 when the South African College was founded in the Cape Colony. Sehoole (2006:6) notes that the South African College was incorporated as a public higher education institution in 1837 when it was allowed to prepare students for matriculation as well as post-secondary education examinations. The candidates were required to pass the University of London examinations which prepared students for admission to European universities, thus incorporating elements of international education into public higher education institutions (Sehoole, 2006:7).

According to Walker (1929:2), the South African College was initially obliged by the economic and educational realities of the time to offer elementary and secondary education with a small university component. The University of Cape Town (UCT) (2014) explains that the initial small university education facility grew extensively after 1880 to become a fully-fledged public higher education institution between 1880 and 1900. Walker (1929:2) and Metrowich (1929:6) also note that the South African College confined itself solely to the provision of university education only around 1900. The UCT (2014) reveals that the transformation of the South African College into a fully-fledged public higher education institution was necessitated by increased funding from the government.

Ritchie (1918:673) indicates that various institutions that were established after the South African College was founded adopted many of the ways in which the college was run and administered. Furthermore, Ritchie (1918) mentions that the South African College, being the first college to provide university education, was the centre from which university education developed in South Africa. Also Mabizela (2002:42) concurs that the college served as a prototype for other university colleges.

The Victoria College was established in 1866 under the name "Gymnasium". It was renamed the Stellenbosch College in 1870 and in 1887 became the Victoria College. As the second oldest university college, the Victoria College also played a significant part in the historical development of higher education in South Africa. The college differed from the South African

College in that it had a Dutch influence and was intended primarily for educating Dutch speaking South Africans as opposed to the South African College that was established for the English speaking community, confirming the influence the Dutch and the British had on the development of higher education in South Africa, as mentioned previously in this section (Metrowich, 1929:6–7; Ade Ajayi *et al.*, 1996:33). Behr (1984:140) purports that after the South African College and the Victoria College started offering higher education, several other secondary schools followed suit and also provided post-secondary education that allowed students to write the higher examinations of the University of London. Likewise, Sehoole (2006:7) points out that the early public higher education institutions largely prepared candidates for European higher education institutions and that these South African public higher education institutions thus had elements of international higher education in relation to the cross border provision of candidates to international higher education institutions in Europe.

It is important to highlight that the university colleges that took the lead in providing university education in South Africa were all based in the Cape Colony. Metrowitch (1929:5) confirms that first university colleges can best be classified by dividing them into those that operated in the Western Province, i.e. the South Africa College, the Victoria College, the Diocesan College, the Huguenot Seminary, and the Theological Seminary, and those of the Eastern Province, i.e. the Grey Institute, the Gill College, St. Andrew's, and the Graaff-Reinet College. However, it is also worth mentioning that some of these university colleges never developed into fully fledged universities; although they attempted to offer post-secondary education, they essentially remained secondary schools (Metrowich, 1929:8).

Behr (1984:140) mentions that during 1910, the time of the Union of South Africa, eight colleges were affiliated to the University of the Cape of Good Hope, a higher education examining body. These were the South African College, Victoria College, Rhodes University College, Huguenot University College, Grey University College, Natal University College, South African School of Mines and Technology, and Transvaal University College (Behr, 1984:141). According to Metrowich (1929:4), the financial position of various university colleges was not sound. The government rectified the situation by passing the Higher Education Act of 1874 thereby altering the conditions under which colleges were funded. Before the passing of the Higher Education Act of 1874, the policy of the government was to assign the same amount to all university colleges for general purposes irrespective of the size of the university college (Metrowich, 1929:4).

Because of the British influence, before 1916, the examining of post-secondary candidates was coordinated according to the then University of London examinations, as indicated in a paragraph above. The first public examining body to be established in South Africa was the Board of Public Examinations in Literature and Science in 1858, which Behr (1984:140) and Ade Ajayi *et al.* (1996:32) consider as the first major government initiative in public higher education in South Africa. The Board of Public Examinations was tasked with the responsibility of examining students from the various university colleges of the time. Metrowich (1929:1) reflects that although the Board of Public Examinations was not a degree awarding institution, it issued certificates to candidates who reached the standards of its examinations and served a useful purpose as a coordinating body in public higher education in South Africa.

As the Cape Colony grew in population, resources, and culture, the need arose to establish a more formal and authoritative institution to replace the Board of Public Examinations. The government reacted by appointing a University Commission with a strong hint that it should recommend an examining university (Walker, 1929:37). Although there were different opinions on the form that the new institution should take, the University Commission reported in favour of the establishment of an examining university on the grounds that the system had justified its use in Great Britain (Metrowich, 1929:2). Behr (1984) and Ade Ajayi *et al.* (1996) point out that the Board of Public Examinations was subsequently replaced by the University of the Cape of Good Hope that was founded in 1873. Because it was believed that the examining system adopted by Great Britain gave better results than any known system, the University of the Cape of Good Hope was modelled after the University of London at the time and, like its predecessor, was merely an examining body with no teaching facilities (Metrowich, 1929:3; Behr, 1984:10). Walker (1929:37) maintains that the University of the Cape of Good Hope set a higher standard of education than that of the Board of Public Examinations and that the university colleges at the time prepared candidates for the examinations of the University of the Cape of Good Hope and conformed to its syllabuses and standards. Modelling examination bodies after the University of London further confirms the colonial influence of public higher education in South Africa.

Consistent with the views expressed above, Metrowich (1929:3) and Sehoole (2006:7) show that although the University of the Cape of Good Hope did not teach, it set the standard for higher education for all university colleges in South Africa, prescribed courses of study, tested the examination admission requirements, laid down the syllabuses, conducted examinations, and awarded degrees for qualifications taught at the university colleges that were affiliated to it, in line with the practice at the then University of London. Metrowich (1929:4) adds that under the

control of the University of the Cape of Good Hope the real "torchbearers" of higher education in South Africa were the individual university colleges, as they were responsible for all the teaching.

Mabizela (2002:42) states that the first phase in the historical development of university education that started in 1829, ended in 1917, a year preceding the establishment of the first group of public higher education institutions in accordance with the University of South Africa Act 12 of 1916. He further stipulates that the second phase begins with the transformation of some university colleges into fully-fledged public higher education institutions. Along similar lines, Sehoole (2006:7) believes that university education in South Africa was legislatively put on a "proper footing" during this phase i.e. with the adoption of the University of South Africa Act 12 of 1916. The section hereunder explores the development of university education, specifically public university education, after the passing of the University of South Africa Act 12 of 1916.

4.3.2 Development of university education after the adoption of the University of South Africa Act 12 of 1916

The year 1916 brought the history of the South African College, the Victoria College, and other university colleges at the time to an end. 1916 is considered as the introductory year of the Universities of Cape Town and Stellenbosch (Ritchie, 1918:644; Mabizela, 2002:44). Behr (1984:141) indicates that the first legislation after 1910 was the passing of the University of South Africa Act 12 of 1916. According to Sehoole (2006:7), the adoption of the University of South Africa Act 12 of 1916 and other related Acts of that year put public university education in South Africa on a proper footing, as stated in section 4.3.1. Metrowich (1929:71) and Behr (1984:141) concur that the enactment of the University of South Africa Act 12 of 1916 formalised public university education in South Africa and Ade Ajayi *et al.* (1996:70) considers the passing of the University of South Africa Act 12 of 1916 as the beginning of decolonisation of public higher education in the country.

Wilson-Strydom and Fongwe (2012:76) remark that in addition to the transformation of the South African College and Victoria College, the University of South Africa Act 12 of 1916 also provided for the establishment of the University of South Africa (UNISA). Ade Ajayi *et al.* (1996:33) and SARUA (2014) maintain that UNISA was established through the reorganisation of the University of the Cape of Good Hope. According to CHE (2004a:10) and in line with the

views stated by Ade Ajayi *et al.* (1996:33), federally organised UNISA served the various university colleges as their examination board, just like the University of the Cape of Good Hope. UNISA continued to be an examination body and it incorporated various university colleges in their formative years before they became independent public universities, except for the Universities of Cape Town and Stellenbosch. During the consultative process prior to the introduction of the University of South Africa Act 12 of 1916, the proposal that public universities should continue being administered by a joint board was strongly opposed by the South African College based on the grounds that the arrangement would be to the detriment of the independence of public universities. Owing to this and objections to other suggested changes, a compromise had to be reached, which resulted in some proposals not being included in the University of South Africa Act 12 of 1916. The exemption of the Universities of Cape Town and Stellenbosch from the central examination arrangement is one of the compromises that had to be made (Ritchie, 1918:645).

It is imperative to mention that although the University of South Africa Act 12 of 1916 was adopted in 1916, it only became effective in 1918. The first formal and legislated public higher education institutions in the country thus came into being in 1918 (Wilson-Strydom & Fongwe, 2012:76). Confirming the above statement, CHE (2004a:9) shows that the South African College founded in 1829 evolved by 1918 into a fully recognised public higher education institution and that the Victoria College that was opened in 1865 was renamed the Stellenbosch University, also in 1918. Metrowich (1929:71) indicates that although the University of South Africa Act 12 of 1916 was passed in 1916, the University of Cape Town, Stellenbosch University, and UNISA only started operating after an "appointed day" that was preceded by necessary organisational arrangements. According to Metrowich (1929), this was because the introduction of the University of South Africa Act 12 of 1916 necessitated the readjustment of the public university education system. Furthermore, Metrowich (1929) points out that the readjustments of the public university education system included the organisation of various academic departments into faculties. This model of organising academic departments is still applicable at most if not all universities in the country, including TUT, the public higher education institution where the empirical exploration of this research was conducted.

The University College of Fort Hare, formerly known as the South African Native College, was also established, exclusively for the South African black community, in 1916 after the passing of the University of South Africa Act 12 of 1916, nearly a hundred years after the South African College and the Victoria College were established. At first, the college offered courses at

secondary level preparing candidates for a university matriculation, like other university colleges that preceded it (Ade Ajayi *et al.*, 1996:34). Ade Ajayi *et al.* (1996:35) and CHE (2004a:10) indicate that in 1923, Fort Hare was formally incorporated into UNISA as an institution of higher education thus allowing its students to sit for the UNISA examinations. Behr (1984:143) concurs that the University College of Fort Hare was established to prepare candidates for the examinations of UNISA, a federal public university consisting of a number of public university colleges across South Africa. Initially, students at the University College of Fort Hare were registered as external students of UNISA. However, UNISA eventually accorded the University College of Fort Hare some of the privileges granted to the other public university colleges that were its affiliates (Matthews, 1957:6). Therefore, until 1951, the University College of Fort Hare enjoyed the same privileges as those granted to other public university colleges regarding consultation in relation to syllabuses, compilation of examination question papers, and marking of examination scripts in association with external examiners (Behr, 1984:143–144).

To conclude this section, it is worth mentioning that the period between the passing of the University of South Africa Act 12 of 1916 and 1948, the year the National Party came to power, was characterised by the transformation of university colleges into fully-fledged public universities and the formalisation of university education through the passing of various policies which were aimed at decolonising and regulating public university education in South Africa. An analysis of the university education landscape in South Africa post 1948 and after the passing of the Bantu Education Act 47 of 1953, an Act that according to Sehoole (2005) marked the beginning of the period of a racial and ethnic based public university education system, is provided below. As mentioned in section 4.3, the main contribution of the exploration of the evolution of public higher education and analysis of the public higher education landscape in South Africa is to indicate what informed the South African public higher education system throughout its historical development until it reached its current form i.e. a public higher education system of which TUT forms part.

4.3.3 University education landscape from 1948

This section of the research analyses the university education landscape, specifically public university education, in South Africa as it was shaped from 1948. A major characteristic of public university education in South Africa is the apartheid legacy that provided the framework for structuring the public university education system in the country between 1948 and 1994. Apart from the apartheid legacy, the transformation of university colleges into fully-fledged

public universities, which started before 1948, continued. During this period, the early university colleges continued to inspire the establishment of universities and most of the university colleges eventually became independent public universities (CHE, 2004a:9; Behr, 1984:141). The University of South Africa (UNISA) indicates that affiliated university colleges broke away from UNISA between 1921 and 1952 to become the independent Universities of Natal, Pretoria, Potchefstroom, Witwatersrand, Rhodes, and the Free State. The creation of the University of Port Elizabeth and the Rand Afrikaans University followed in 1964 and 1967 respectively. After UNISA's affiliates colleges became independent public universities, the University developed a new direction and a legislation passed in 1951 made UNISA a fully-fledged correspondence public university (Behr, 1984:141) and thereafter, UNISA concentrated on offering distance education by correspondence (Ade Ajayi *et al.*, 1996:71).

Regarding the only university which was established to cater for the black community, the change of name from the South African Native College to the University College of Fort Hare became effective in 1951, when the institution became affiliated to Rhodes University (Behr, 1984:143). According to Matthews (1957:7–8), the relationship between the University College of Fort Hare and Rhodes University was mainly to maintain similar academic standards and consequently, students of the University College of Fort Hare wrote the same examinations as the students of Rhodes University, barring exceptional cases. Matthews (1957:9) articulates that in 1953, after the National Party came into power and the subsequent adoption of the recommendations of the commission chaired by Dr J E Holloway, the University College of Fort Hare and other public universities of the time entered a new era.

Cloete, Fehnel, Maassen, Moja, Perold, and Gibbon (2002:59) observed that the changes to the public university education landscape after 1948 was a result of the then government's conception of race and the politics of race. Sehoole (2005:1) also notes that the history of apartheid public university education can be traced back to the victory of the National Party in 1948 and argues that although segregation in public university education existed prior to 1948, policies that were introduced post 1948 formalised and promoted segregation in public university education. Kruss (2005:264) concurs that the racialized public university education system was deepened after the National Party came into power after its victory in 1948. Subsequent to its victory, the National Party government established new public higher education institutions along racial and ethnic lines. Five years after coming to power, the National Party government passed the Bantu Education Act 47 of 1953 which formalised the laying of public university education along racial lines. The adoption of the Bantu Education Act 47 of 1953 was preceded

by a Report of the Commission on Native Education and it is due to the recommendation made by the Commission that the Bantu Education Act 47 of 1953 was passed (Sehoole, 2005:13).

Sehoole (2005:13) submits that although the Bantu Education Act 47 of 1953 was intended to apply to all levels of education for the South African black community, it only had an impact after the adoption of the Extension of University Act 45 of 1959 that reaffirmed the position of the government of the time regarding legislating public university education along racial lines and facilitated the establishment of racially based public higher education institutions (NCHE, 1996:29; Cloete *et al.*, 2002:346–347). Prior to the passing of the Extension of University Act 45 of 1959, public universities catered mainly for whites. The University of South Africa Act 12 of 1916 provided for the establishment of only one university that was created specifically for educating the black community, as indicated in section 4.3.2; all other universities at the time were created specifically for the white community. Although there was no legislation stopping blacks from attending any of the public universities at the time public universities were still differentiated by race. The Extension of the University Act 45 of 1959 formalised the restricted entry to public universities along racial lines (NCHE, 1996:29).

It was only after the adoption of the Extension of University Education Act 45 of 1959 that provision was made for the establishment of public more public universities for Africans as well as public universities for coloureds and Indians (Behr, 1984:144). The Extension of University Education Act 45 of 1959 provided for the establishment of more separate public universities for blacks and public universities for Indians and coloureds; for the admission of students to public university colleges; and for the limitation of the admission of blacks, Indians, and coloureds to public universities that were reserved for whites. Consequently, the adoption of the Extension of University Education Act 45 of 1959 led to the establishment of the University College of Zululand for Zulu speaking blacks; University College of the North for the Sotho, Venda, and Tsonga speaking black community; University of the Western Cape for coloureds; and the University of Durban-Westville for the Indian community (NCHE, 1996:29).

Furthermore, the Extension of University Education Act 45 of 1959 prohibited whites from attending public universities established specifically for blacks and also made it an offence for black students to register and attend white public universities unless special permission was granted by the government. As the separation of public universities was also along ethnic lines, the Extension of University Education Act 45 of 1959 provided for the transfer of the control of the University College of Fort Hare to the then Department of Bantu Education (Behr,

1984:217–218). The University College of Fort Hare, which had offered higher education to blacks (see section 4.3.2) from all parts of South Africa and the rest of the African continent for many years, was subsequently restricted to Xhosa speaking South Africans (NCHE, 1996:29). According to Sehoole (2005:15), the establishment of additional public universities between 1976 and 1983 led to the expansion of public university education for the black community in South Africa. The Medical University of South Africa was established in 1976 to provide medical training for blacks and the Vista University was established in 1982 with teaching campuses across the country and its administrative offices in Pretoria.

By the beginning of the 1980s, the South African government had divided South Africa into five geo-political entities, namely, the Transkei, Bophuthatswana, Venda, Ciskei, and South Africa. The first four entities became commonly known as the TBVC countries and the fifth the Republic of South Africa. The TBVC countries were considered independent countries by the South African government although they never received international recognition (Cloete *et al.*, 2002:65). During the 1980s, public universities were established in the Transkei, Bophuthatswana, and Venda that were expected to legitimate and constitute identities and social relations along ethnic lines (CHE, 2004a:10). Cloete *et al.* (2002:76) mention that public universities that were linked to the TBVC countries enrolled mostly black students. The governments of the TBVC countries treated these public universities as an extension of the civil service and thus held them under tight control. Cloete *et al.* (2002:73) add that TBVC public universities were mainly responsible for training public officials and teachers and consequently likened them to the historically black public universities of the time.

From the above discussion and consistent with the manner in which the three technikons that merged to form TUT were structured, it can be deduced that public higher education in general was fragmented and structured along racial and ethnic lines between 1948 and 1994, according to the policies aimed at promoting separate development, which was the main policy direction of the National Party government. As the preceding sections of the research offered only an overview of the origins and historical development of public university education, the section that follows is dedicated to an analysis of the historical development of technical education in South Africa. The analysis will include an exploration of how some technical colleges were transformed to colleges of advanced technical education and eventually became technikons.

4.3.4 Development of technical education up to 1994

A literature review revealed that university colleges were also initially responsible for offering technical education before dedicated technical institutes were established. However, due to the growing need of skilled personnel to meet the technical aspects of work, dedicated technical institutes were established and the government also started financing the provision of technical education (Behr, 1984:129). Towards the end of the 19th century, the development of railways as well as the discovery of diamonds and gold created a demand for artisans and skilled personnel to service these industries. Consequently, technical and vocational schools and colleges were established to provide technical education to meet this demand (CHE, 2010:2). Cooper (1994:70–71) mentions that technical colleges and eventually technikons provided outcome based programmes and were required to prepare graduates for specific jobs.

Confirming the role played by university colleges before dedicated public technical institutes were introduced, Behr (1984:128–129) claims that technical training started in 1894 with the training of mining engineers at the South African College. The training involved a two year theoretical training, which had to be followed by another two year practical training at the South African School of Mining in Kimberly. In 1903, the institution was transferred to Johannesburg and renamed the Transvaal Technical Institute. The institute later became the University of Witwatersrand in 1910. A further development in technical training was the establishment of the Cape Technical Institute that offered evening classes in commercial subjects. This was followed by a technical institute in Natal, which became the Durban Technical College in 1915. The establishment of these dedicated public institutes, which later became technical colleges, laid the foundations of public tertiary technical education in South Africa (Behr, 1984:128–129).

Consistent with the above reflections, Raju (2006:4) concurs that technikons in South Africa have their roots in technical colleges that were established to deal with the theoretical aspects of apprentice education. As with public university education, the introduction of public technical education was a private initiative. At the turn of the twentieth century, technical education was limited to trade training and classes were mainly offered on a part time basis. During the 20th century, technical education in South Africa started playing an important role in higher education (Pittendrigh, 1988:1). Developments in technical education took a new turn after the passing of the Higher Education Act 30 of 1923 when the government took over technical education and began establishing, amongst others, public technical colleges. Some public technical colleges were later transformed and eventually renamed technikons (Behr, 1984:129).

Behr (1984:129) states that public technical education was boosted by the introduction of the Higher Education Act 30 of 1923, and Raju (2006:5) concurs that in 1923, the Higher Education Act 30 of 1923 provided for certain technical colleges to offer higher education. Pittendrigh (1988:3) also reflects that in the first 25 years of the twentieth century, technical institutes converted to technical colleges after the publication of the Higher Education Act 30 of 1923, that these institutes became colleges of advanced technical education in 1968, and that these colleges eventually became technikons. The Higher Education Act 30 of 1923 paved the way for the Cape Technical Institute and the Durban Technical College to be incorporated as fully-fledged public colleges. This was followed by the incorporation of the Port Elizabeth Institute (1925), followed by the Technical Institutes of East London, Pietermaritzburg, Pretoria, and the Witwatersrand (1926), and the Orange Free State (1931). Each college offered courses in response to the needs of the area where they operated (Behr, 1984:129).

CHE (2010:2) asserts that in 1967, the government recognised the need for high level skilled personnel. Consequently, colleges of advanced technical education were introduced out of the then technical colleges to provide high level technical training. Pittendrigh (1988:1) concurs that the development of public tertiary technical education was further boosted in 1967 by the passing of the Advanced Technical Education Act 40 of 1967. Though the Advanced Technical Education Act 40 of 1967 was promulgated in 1967, it only became effective in 1968. Behr (1984:130) submits that the Advanced Technical Education Act 40 of 1967 was intended to create a new type of higher education institution i.e. colleges of advanced technical education. Behr (1984:130) and Pittendrigh (1988:3-4) reveal that the Advanced Technical Education Act 40 of 1967 provided for the Cape Technical College, Natal Technical College, Pretoria Technical College, Port Elizabeth Technical College, Witwatersrand Technical College, and Vaal Triangle Technical College to be declared colleges of advanced technical education. Initially, colleges for advanced technical education were established as intermediate institutions between technical colleges and universities, and the six colleges of advanced technical education offered programmes that were at a higher level than those offered by technical colleges (CHE, 2010:5). Pretoria Technical College eventually became Technikon Pretoria, one of the former technikons that merged to form TUT.

The 1974 Van Wyk de Vries Commission Report clarified the position of the colleges of advanced technical education within the higher education framework and paved the way for the removal of the "ceiling" that existed regarding the courses that the colleges of advanced technical education offered (Behr, 1984:130). Pittendrigh (1988:192) writes that the removal of the ceiling

created a new relationship between universities and colleges of advanced technical education. The recommendation that universities and colleges of advanced technical education should enjoy free vertical development but with different focus, represented an important historical development of what was to become known as technikons (Raju, 2006:4). While both technikons and universities were located within the higher education sector, their focuses were different. The distinction, according to Raju (2006:6), had implications regarding the relevance of the types of academic programmes for the world of work. The functional differences between universities and technikons led to different qualifications that these two types of higher education institutions had to offer (NCHE, 1996:30). However, NCHE (1996:28) argues that despite these differences, the qualifications that universities and technikons offered have created and sustained South Africa's economy.

Over the years the concept of colleges of advanced technical education was not understood by the public. As a result, several debates and consultative meetings took place where suggestions were made for the name to be changed (Pittendrigh, 1988:192). Further steps towards enhancing advanced technical education were taken when the Advanced Technical Education Amendment Act 43 of 1979 was promulgated. The primary purpose of the Advanced Technical Education Amendment Act 43 of 1979 was to change the name "colleges of advanced technical education" to "technikons" and, as a consequence, the colleges of advanced technical education of that time were renamed "technikons" (Behr, 1984:130). The renaming was facilitated by a need to keep up with international trends and in response to national needs. The first technikons were established in 1979 (NCHE, 1996:28). As with universities (see section 4.3.3), technikons were also established along racial lines and the boundaries between universities and technikons were defined according to their differing functions (NCHE, 1996:28). Confirming racial division in technikons, Raju (2006:5) remarks that political ideologies had been firmly established in the public tertiary technical education system. It is the view of Pittendrigh (1988:5) that changing the name of the colleges of advanced technical education in 1979 to technikons achieved immediate acceptance and as a result, the status of technical education was enhanced. Pittendrigh (1988) adds that additional steps towards enhancing technikons were taken with the publication of the Advanced Technical Education Amendment Act 84 of 1983 and the Universities, National Education Policy, and Technikons Amendment Act 75 of 1984, which provided technikons, including the three former technikons that merged to form TUT, the full autonomy.

Raju (2006:4) points out that the name "technikon" was derived from the Greek word "tehnike" that refers to technique or technology, and that the reference to technique or technology serves as an important distinction between the type of education universities and technikons offer. However, Raju (2006:6) considers a lack of guidelines in relation to articulation between technikons and universities as one of the challenges that faced public higher education at that time. As indicated previously in this section, the articulation challenges between technikons and universities were a consequence of the "ceiling" that existed regarding the courses that technikons offered as well as the focus of technikon courses. Technikons initially offered three year, post school national diplomas, which were followed by a one year national higher diploma. Although the national diploma and national higher diploma offered by technikons were equivalent to the first three year bachelor's and honours degrees respectively, lack of articulation guidelines remained a challenge in relation to free vertical progression (CHE, 2010:3).

In an attempt to ensure closer cooperation between technikons and universities, the government introduced the Universities and Technikons Advisory Council Act 99 of 1983. The Universities and Technikons Advisory Council Act 99 of 1983 provided for the creation of a committee under the chairpersonship appointed by the Minister of National Education. The Universities and Technikons Advisory Council Act 99 of 1983 tasked the Advisory Council with the responsibility to advise the Minister of National Education on laws related to technikons and universities; establishment, development, and extension of technikons and universities; fields of study in which each institution should be active; provision of financial assistance; general requirements for admission to higher education; and any other matters that may be referred to it. To support the growing demand for advanced technical education, the Committee of Technikon Principals was established in 1983 as a statutory body to provide guidance and support and to advise the Minister of Education on all aspects related to technikon education. The Certification Council for Technikons was also established in 1986 as a quality assurance body for technikon education, an aspect that lacked within university education (CHE, 2010:6).

The growing demand for highly skilled technical personnel led to the establishment of more technikons. According to Cooper (1994:70–71) and CHE (2010:6), by the early 1990s a total of fifteen public technikons had been established across South Africa; including Technikon Northern Gauteng, Technikon North-West, and Technikon Pretoria, the three former technikons that merged in 2004 to form TUT, as previously indicated in this chapter. Available literature on the historical development of higher education during the early stages of its development reveal that higher education was considered as the type of education that is currently offered by the

comprehensive and traditional universities and technical education was not necessarily classified as higher education until the Higher Education Act 30 of 1923 was passed. Allen *et al.* (2006:3) argue that only in more recent times did demands for and the application of knowledge suggest a need for more inclusive higher education system. Furthermore, Allen *et al.* (2006) contend that universities, as providers of higher education, form part of a global set of higher education institutions that require interconnection to cultivate and exchange knowledge.

It was not until 1993 that the government granted technikons degree awarding status, in line with international trends. From 1994, technikons, including the three former technikons that merged to form TUT, were allowed to offer a Bachelor of Technology degree equivalent to the traditional university honours degree, replacing the national higher diploma (CHE, 2010:3). This development marked the beginning of a new era in public higher education and recognition of the capabilities of technikons to offer the type of education that traditional universities offered over the years. Raju (2006:5) indicates that the provision for all fifteen technikons in South Africa to award degrees was facilitated by the passing of the Technikons Act 125 of 1993 in recognition of the contribution the technikon sector was making regarding the training and development of graduates educated for the world of work. The granting of degrees status allowed technikons to prepare post diploma graduates to be managers and leaders in the field of technology. This also allowed technikon graduates to engage in postgraduate research in the fields relevant to technical education, as they now had an opportunity to register and complete masters and doctoral degrees (CHE, 2010:7). According to Raju (2006:5), although the Technikons Act 125 of 1993 provided for the technikons to award degrees, the Act remained silent regarding the articulation possibilities between technikons and universities.

This section explored the origins and historical development of university education and technical education, specifically public university education and public technical education, in South Africa from 1829, when the first higher education institution was established, to 1994. It was discovered that public university and public technical education developed separately due to their distinct nature. An important development took place in 1923 when an Act of Parliament, which made provision for some technical colleges to offer higher education, was promulgated. The exploration exposed how public higher education evolved over the years, including an indication of the statutory and legislative framework which governed public higher education throughout its historical development. The period between 1829 and 1916 was characterised by the colonial influence and, as a consequence, the South African public higher education system was initially modelled around the education systems of the countries that influenced the

historical development of the country during that time (see section 4.3.1). 1916 marked the beginning of the process through which the South African government endeavoured to decolonise and formalise public higher education. As stated in section 4.3.3, the period after 1948 witnessed the introduction and adoption of a public higher education system based on racial and ethnic lines in keeping with the separate development policy of the National Party after it came into power. It is evident that up to 1994, the South African public higher education system was fragmented and lacked national coordination.

The section that follows gives an overview of the public higher education landscape during 1994 and provides an explanation of how the new government that came into power in 1994 transformed public higher education into a single national coordinated system.

4.4 OVERVIEW OF THE HIGHER EDUCATION LANDSCAPE BY 1994

This section provides an overview of the public higher education landscape by 1994, the year South Africa attained democracy. Cloete *et al.* (2002:59) show that by 1994, the public higher education system in South Africa was fragmented, primarily due to the then government's conception of the politics of race and ethnicity. As a result of the fragmentation of the provision of services based on race, the public higher education system was similarly stratified. Allen *et al.* (2006:313) indicate that the division of South Africa into five "independent" geo-political entities during the early 1980s resulted in a fragmented public higher education system that was uncoordinated and administered by eight different authorities and departments. Although the other four entities were not recognised outside South Africa, the then government set up structures to separate their citizens from those of South Africa and separate public higher education institutions had to be created in addition to those that already existed, to cater for the educational needs of the citizens of the so called TBVC states, as stated in section 4.3.3 (Cloete *et al.*, 2002:59; Allen *et al.*, 2006:313). The public higher education institutions that existed before South Africa was divided into five geo-political entities remained part of the "South African" geographical area (Allen *et al.*, 2006:313–314). Table 4.1 below reflects the classification of public higher education institutions by racial origin and historical disadvantage/advantage by 1994. The table also shows the geographic area where individual public higher education institutions were based in line with the division of the country into the five geo-political entities referred to in section 4.3.3.

Table 4.1 Public higher education institutional landscape by 1994

Institution	Geographic area	Historically advantaged/disadvantaged	Racial origin
University of Durban-Westville	South Africa	Historically disadvantaged	Indian
Medical University of South Africa	South Africa	Historically disadvantaged	Black
University of the North	South Africa	Historically disadvantaged	Black
Vista University	South Africa	Historically disadvantaged	Black
University of the Western Cape	South Africa	Historically disadvantaged	Coloured
University of Zululand	South Africa	Historically disadvantaged	Black
University of Fort Hare	Ciskei	Historically disadvantaged	Black
University of North-West	Bophuthatswana	Historically disadvantaged	Black
University of Transkei	Transkei	Historically disadvantaged	Black
University of Venda	Venda	Historically disadvantaged	Black
ML Sultan Technikon	South Africa	Historically disadvantaged	Indian
Mangosuthu Technikon	South Africa	Historically disadvantaged	Black
Technikon Northern Transvaal	South Africa	Historically disadvantaged	Black
Peninsula Technikon	South Africa	Historically disadvantaged	Coloured
Border Technikon	Ciskei	Historically disadvantaged	Black
Eastern Cape Technikon	Transkei	Historically disadvantaged	Black
Technikon North-West	Bophuthatswana	Historically disadvantaged	Black
University of the Orange Free State	South Africa	Historically advantaged	White
University of Port Elizabeth	South Africa	Historically advantaged	White
University of Pretoria	South Africa	Historically advantaged	White
Potchefstroom University	South Africa	Historically advantaged	White
Rand Afrikaans University	South Africa	Historically advantaged	White
University of Stellenbosch	South Africa	Historically advantaged	White
University of South Africa	South Africa	Historically advantaged	All races (distance education)
University of Cape Town	South Africa	Historically advantaged	White
University of Natal	South Africa	Historically advantaged	White
Rhodes University	South Africa	Historically advantaged	White
University of the Witwatersrand	South Africa	Historically advantaged	White
Cape Technikon	South Africa	Historically advantaged	White
Free State Technikon	South Africa	Historically advantaged	White
Natal Technikon	South Africa	Historically advantaged	White
Port Elizabeth Technikon	South Africa	Historically advantaged	White
Pretoria Technikon	South Africa	Historically advantaged	White
Vaal Triangle Technikon	South Africa	Historically advantaged	White
Witwatersrand Technikon	South Africa	Historically advantaged	White
Technikon South Africa	South Africa	Historically advantaged	All races (distance education)

Source: Adapted from Cloete *et al.* (2002)

It can be seen from the above table that public higher education institutions that were historically established for the black, coloured, and Indian population groups were inadequate. While these population groups constituted the majority of the country's population, their share of public higher education institutions was only 47% (Allen *et al.*, 2006). All public higher education institutions categorised as historically advantaged, such as Technikon Pretoria, were historically established to provide higher education to the white population group. The black, coloured, and Indian population groups were historically only allowed to enrol at public higher education institutions such as Technikon Northern Gauteng and Technikon North-West, categorised as

historically disadvantaged institutions, except in cases where they were allowed to enrol at white institutions through the permit system (Allen *et al.*, 2006:315). The above table confirms that prior to the attainment of democracy in 1994 the skewed public higher education system in South Africa was designed to entrench the power and privilege of the minority in accordance with the political situation at the time. Public higher education institutions, such as University of Fort Hare, established before the adoption of separate development practices and those established after 1948, the year that marked the introduction of formalised racial and ethnic based education, were thus incorporated into a public higher education system which was shaped to serve the goals and strategies of separate development adopted by successive apartheid governments (Cloete *et al.*, 2002:84).

By 1994, the year South Africa attained democracy, the public higher education landscape of 36 institutions consisted of 10 historically disadvantaged universities, seven historically disadvantaged technikons, 10 historically advantaged universities, seven historically advantaged technikons, and two historically advantaged distance education institutions. The two dedicated distance higher education institutions, namely, the University of South Africa and Technikon South Africa, catered for all races (Cloete *et al.*, (2002:85). Vista University also had a distance education wing in addition to the contact education branches it had at three of the current nine South African provinces (Cloete *et al.*, 2004:94). After the attainment of democracy, it became imperative for the new government to transform the higher education system according to the goals and strategies of the new dispensation. The transformation led to the establishment of TUT after the merging of the former Technikon Northern Gauteng, Technikon North-West, and Technikon Pretoria, as reflected previously in this research, including in section 1.3.

The section that follows lays out in detail the post 1994 South African public higher education landscape, including the policy and legislative changes that led to the establishment of a single national coordinated higher education system.

4.5 HIGHER EDUCATION LANDSCAPE IN POST 1994 SOUTH AFRICA

As indicated in section 4.4, inequalities in South Africa pre 1994 were reflected in all spheres of life and the public higher education system was no exception. Inequalities that were generated during the National Party rule shaped the South African public higher education system. Attempts at transforming the public higher education system after the attainment of democracy were thus aimed at going beyond the inherited pre 1994 social structure that was characterised by

deep inequalities (DoE, 2002; Cloete *et al.*, 2004:1). In line with the generally accepted view that education systems are informed by the political system adopted by the government of the country concerned, the Education White Paper 3: A Programme for Higher Education Transformation 1997 expresses that the transformation of higher education in South Africa post 1994 was part of the broader process of transition, restructuring, and transformation. To this effect and in line with the remarks reflected in section 1.6, the DoE (2002) also shows that the transformation of higher education was informed by the need to meet the demands of social justice, address the challenges related to globalisation, and ensure the effective and efficient utilisation of public resources.

Consistent with the above expressions, the White Paper for Post School Education and Training 2013 reflects that since the advent of democracy in 1994, the South African government has been building a new education and training system. From the start, the goal of the new system has been to meet the needs of a democratic society. Furthermore, the White Paper for Post School Education and Training 2013 shows that policy developments post 1994 have been aimed at democratising the education and training system; redressing inequalities; expanding access; and improving the quality of education, training, and research. Also the National Plan for Higher Education 2001 identified five policy goals and strategic objectives, which are central to achieving the goal of the transformation of the public higher education system (DoE, 2001). The policy documents, such as the Green Paper on Higher Education 1996, the Draft White Paper on Higher Education 1997, the White Paper on Higher Education 1997, and the Higher Education Act 101 of 1997, compiled and published since 1994 have been consistent with the basic principles of democracy, equity, quality, expansion of education and training opportunities, and the integration of the education and training system (DHET, 2013:1).

Following the first democratic elections, the African National Congress (ANC) led government came to the fore and developed various policy documents to change the inequitable and racially skewed public higher education system that it inherited. Starting with the National Commission on Higher Education (NCHE) 1996, through to the Education White Paper 3 1997, to the Higher Education Act 101 of 1997, the main objective was to elaborate a framework for transforming the public higher education system (Sehoole, 2005:120; Badat, 2009:459). According to NCHE (1996:1), the need for transforming public higher education was inevitable, as the deficiencies of the system that the ANC-led government inherited, hindered its ability to meet the moral, social, and economic demands of a democratic South Africa. It is argued further that due to known

national and global opportunities and challenges, the reengineering and innovation of the public higher education system was critically necessary (also see section 1.6).

Three initiatives that developed the base for and were crucial in informing a post 1994 public higher education policy framework were the National Education Policy Investigation (NEPI), the Union of Democratic University Staff Association (UDUSA), and the Centre for Education Policy Development, linked to the ANC (CHE, 2004b:24; Odhav, 2009:33). Cloete *et al.* (2004:51) submit that from the first policy initiatives such as the NEPI, addressing equity and development were central for reform within the public higher education sector. The argument advanced was that a democratic and more equitable public higher education system could be established that would increase effectiveness and directly contribute to development. CHE (2004b:24) shows that the ANC pledged to appoint a national commission to formulate recommendations for transforming public higher education and, as a result of this pledge, the first democratic government established the NCHE. This research aims at developing a BPR framework that would assist TUT to improve performance, increase efficiency and effectiveness, and eventually contribute to the achievement of the developmental goals of the South African state.

The work of NCHE informed the systemic programme for the transformation of public higher education, including the higher education policy and legislation post 1994 (CHE, 2007:1). CHE (2004b:25) holds that the establishment of NCHE was the first formal initiative in the process of higher education policy formulation. Similarly, Cloete and Muller (1998:8) and CHE (2004b:25) indicate that the report that was compiled and submitted by the NCHE formed the basis for the development of the higher education policy framework in South Africa. Against the above background, the sections hereunder explore the public higher education transformation process from 1994 until its current form.

4.5.1 Highlights of higher education transformation post 1994

This section highlights the critical initiatives undertaken to transform public higher education post 1994. It is important to indicate that higher education policy in South Africa was conceived as part of a large vision by the government to introduce a single national coordinated higher education system. The aim was to establish a certification framework regulated by the state by organising higher education qualifications into a single system of certification (SAIRR, 1996/97, as cited by CHE, 2004a:34). The single national higher education system enables students to

transfer between academic programmes and higher education institutions i.e. transferring from a University of Technology, such as TUT, to a comprehensive or traditional university. As already reflected in a paragraph above, this objective can be traced to the publication of the NCHE report in 1996. NCHE's main recommendations informed the Green Paper on Higher Education 1996, the Draft White Paper on Higher Education 1997, the White Paper on Higher Education 1997, the Higher Education Act 101 of 1997, and eventually the National Plan for Higher Education 2001. Suffice to say that there is general consensus that the NCHE report influenced the policy framework that currently regulates public higher education in South Africa (CHE, 2004a:34).

The NCHE (1996) report highlighted three central features that shaped and informed the proposals the National Commission on Higher Education made. Cloete *et al.* (2004:20) refer to these features as "critical issues and key challenges" for a transformed public higher education system. The NCHE (1996) report contained the following recommendations:

- To address the principles of equity, the redress and development of a policy of increased participation. According to NCHE (1996), this should be achieved through the expansion of the public higher education system, including, amongst others, changing the composition of the student body and the diversification of academic programmes, qualifications, and curriculums. CHE (2004b:25) acknowledged that because increased participation would mean new administrative arrangements and significant expenditure, it was necessary to propose a single coordinated public higher education system to address the inequalities, ineffectiveness, and inefficiency of the then system.
- To highlight a need for greater responsiveness within public higher education to societal interests and needs i.e. that the public higher education system should engage with the challenges of its social context. Furthermore, NCHE (1996) showed that aspects of the social context would have to be reflected in the content, focus, and delivery modes of public higher education academic programmes, and the missions and policies of individual public higher education institutions. To achieve this, the NCHE suggested that governance structures would have to provide for the stakeholders consultation and participation in decision making so that urgent needs could be identified and realised. It was the view of the NCHE that greater responsiveness would lead to a more dynamic interaction between public higher education institutions and the societies within which they operate in order to promote development, equity, quality, accountability, effectiveness, and efficiency (NCHE, 1996).

- To emphasise increased cooperation and partnerships in the governance structures and operations of higher education. According to Cloete and Muller (1998:9), a need for cooperative relationships led to the recommendation of a new model called "cooperative governance", which has implications for and relations between the state and public higher education institutions, relations between public higher education institutions and the societies within which they operate, and relations between and within public higher education institutions.

The establishment of TUT was, amongst others, aimed at redressing the inequalities that existed pre 1994. To address the second recommendation reflected above, public higher education institutions, such as TUT, are expected to be involved in community projects through interaction with societies within which they operate. The increased cooperation and partnership in the governance structures is achieved through a cooperative governance system that involves inclusion of ministerial appointees and community representatives in public higher education institutions' governing structures (Higher Education Act 101 of 1997).

Cloete and Muller (1998:8) remarked that the investigation and consultation process that was initiated with the establishment of the NCHE, followed by the publication of the Green Paper on Higher Education 1996 and the draft White paper on Higher Education 1997, culminated in the promulgation of the Education White Paper 3 1997. The Green Paper on Higher Education 1996 endorsed most of the recommendations published in the NCHE report, except the issue of governance. Instead of two statutory bodies, the Green Paper on Higher Education 1996 suggested a single body, the Council on Higher Education (CHE), which would be responsible for, amongst others, advising the Minister of Education on any aspect of higher education, including policy and quality assurance matters (CHE, 2004a:37).

The Education White Paper 3: A Programme for Higher Education Transformation 1997 was also influenced by the NCHE report (CHE, 2004a:37). As with the Green Paper on Higher Education 1996, the Education White Paper 3: A Programme for Higher Education Transformation 1997 also accepted the framework of the NCHE, with a strong emphasis on equity, promotion of increased effectiveness and efficiency, improving research output, introduction of performance related funding and planning system, a new qualification framework, and a new quality assurance system. The new quality assurance system advocates for TUT and other similar institutions to adopt a continuous improvement approach to BPR in order to achieve increases in efficiency and effectiveness. However, the proposal regarding the

"massification" of public higher education was not accepted by the democratic government. Instead, the government opted for expanded access with a focus on equity and redress (Cloete *et al.*, 2004:52-53). CHE (2004b:26) echoes that the Education White Paper 3: A Programme for Higher Education Transformation 1997 accepted the three NCHE "pillars" discussed in one of the paragraphs above in this section and subsequently set out a policy supporting the intention to transform public higher education through the development of a programme based on a public higher education system that is planned, funded, and governed as a single national coordinated system.

According to CHE (2000:4), the Education White Paper 3: A Programme for Higher Education Transformation 1997 proposed the development of a national higher education plan to establish indicative targets for the size and shape of the public higher education system, overall growth and participation rates, and institutional and programme mixes, which advance the vision, principles, and policy goals for the system. CHE (2000) further states that the Department of Education was identified as the relevant public sector institution to drive the process of developing the national plan in consultation and on the advice of the CHE. Subsequently, the Minister of Education requested the CHE to provide him with a set of proposals on the shape and size of the public higher education system. The CHE established a Size and Shape Task Team consisting of members in their individual capacities, drawn from labour, business, universities, and technikons. The size and Shape Task Team based its exercise on the goals and principles advanced in the Education White Paper 3: A Programme for Higher Education Transformation 1997 and eventually submitted a report to the CHE and the Minister of Education (CHE, 2000:4). The CHE (2000) further remarked that the Size and Shape Task Team considered its report as a contribution to national planning with regard to public higher education in the country. The Size and Shape Task Team recommended that the public higher education system should be reconfigured as this should lead to a more rational public higher education landscape for the investment of public resources and emphasised that the reconfiguration should include a clearly specified range of institutional mandates that encourage public higher education institutions to have a coherent and more defined purpose in their production of knowledge and eventual graduates (CHE, 2000:22). The recommendation of the Size and Shape Task Team eventually led to the reengineering of the South African public higher education sector, including the establishment of TUT and other public higher education institutions through mergers and incorporations.

The National Plan for Higher Education 2001 proposed by the Education White Paper 3: A Programme for Higher Education Transformation 1997 was published and released only in 2001. Badat (2009:459) refers to the period preceding the publication of the National Plan for Higher Education 2001 as "the period of policy vacuum". However, he acknowledged that the period was characterised by the development of and adoption of substantive higher education policies and that the government confronted a changing public higher education landscape that had emerged as a consequence of a policy vacuum. The National Plan for Higher education 2001, according to CHE (2004a:38), outlined the practical steps that the government would take to reengineer the public higher education system in line with the aims set out in the Education White Paper 3: A Programme for Higher Education Transformation 1997. The National Plan for Higher Education 2001 embodied the decisive choices and decisions the government had to make regarding crucial higher education policy goals and issues (Badat, 2009:460). The National Plan for Higher education 2001 thus articulated the framework for the restructuring of the public higher education system to achieve the transformational goals of the public higher education system outlined in the Education White Paper 3: A Programme for Higher Education Transformation 1997 and consequently provided the strategic framework for reengineering the public higher education system in South Africa (DoE, 2001).

As the National Plan for Higher Education 2001 was developed after the publication of the report compiled by the Size and Shape Task Team in 2000, it also responded to the issues raised in the report (DoE, 2001; CHE, 2004b:28–29). DoE (2001) and CHE, (2004b) further reflect that the National Plan for Higher Education 2001 rejected the proposed differentiation of public higher education institutions through distinct institutional types and instead opted for a differentiation based on a mission and programme mix. The National Plan for Higher Education 2001 stated that the restructuring of the public higher education landscape would occur through reduction in the number of public higher education institutions and recommended that a National Working Group be convened to recommend mergers and regional cooperation. The National Plan for Higher Education 2001 also recommended that National Institutes for Higher Education would be established in Mpumalanga and the Northern Cape, the only provinces that had no public higher education institutions (DoE, 2001; CHE, 2004b:28–29).

CHE (2004b:43–44) mentions that the National Working Group (NWG) was established in March 2001 and delivered its report to the Minister of Education in January 2002. The NWG proposed a reduction of public higher education institutions and provided reasons for the reduction based on a regional analysis of public higher education provision in terms of equity,

sustainability, and quality in line with the principles advanced in the Education White Paper 3: A Programme for Higher Education Transformation 1997. Although concerns and criticisms were raised regarding some of the proposals made by the NWG, recommendations which were accepted by the Department of Education were subsequently set out in a Government Gazette. After considering submissions received and having sought advice from CHE and Cabinet approval, the then Minister of Education, Professor Kader Asmal, announced his decision on the restructuring of the public higher education system on 9 December 2002. The announcement marked the beginning of a process that led to the merging and incorporation of various public higher education institutions in South Africa, as already indicated in a paragraph above. The merger would occur in two phases; the first with effect from January 2004 and the second with effect from January 2005 (CHE, 2004b:43–44). The establishment of TUT in 2004, after the merging of Technikon Northern Gauteng, Technikon North-West, and Technikon Pretoria, as indicated in section 1.3, was thus an outcome of the NWG proposal referred to above regarding the reduction of public higher education institutions.

The table below indicates how public higher education institutions were reconfigured and merged and incorporated according to the decision announced in December 2002 on the restructuring of the public higher education system.

Table 4.2 Public higher education institutional landscape after mergers and incorporations

Institution	Institutions merged
Cape Peninsula University of Technology	Cape Technikon and Peninsula Technikon
Central University of Technology	Technikon Free State and Vista University (Welkom Campus)
Durban University of Technology	M L Sulton Technikon and Technikon Natal
Mangosuthu University of Technology	No merger
Nelson Mandela Metropolitan University	University of Port Elizabeth, Port Elizabeth Technikon, and Vista University (Port Elizabeth)
North-West University	Potchefstroom University for Christian Education, University of North-West, and Vista University (Sebokeng Campus)
Rhodes University	No merger
Tshwane University of Technology	Technikon Pretoria, Technikon North-West, and Technikon Northern Transvaal
University of Cape Town	No merger
University of Fort Hare	Incorporated Rhodes University (East London Campus)
University of the Free State	Incorporated Vista University (Bloemfontein Campus) and University of the North (QwaQwa Campus)
University of Johannesburg	Rand Afrikaans University, Technikon Witwatersrand, and Vista University (Soweto Campus)
University of Kwazulu-Natal	University of Durban Westville and University of Natal
University of Limpopo	University of the North and Medical University of South Africa
University of Pretoria	Incorporated Vista University (Mamelodi Campus)
University of Stellenbosch	No merger
University of South Africa	University of South Africa, Technikon South Africa, and Vista

Institution	Institutions merged
	University (Distance Education Centre)
University of Venda	No merger
University of the Western Cape	Incorporated the Dental School of the University of Stellenbosch
University of the Witwatersrand	No merger
University of Zululand	No merger
Vaal University of Technology	No merger but changed the name from Vaal Triangle Technikon
Walter Sisulu University	University of Transkei, Boarder Technikon, and Eastern Cape Technikon

Source: Adapted from CHE (2004b)

Table 4.2 reflects that the public higher education landscape, after mergers and incorporations, consisted of 23 public higher education institutions; including 11 traditional universities, 6 comprehensive universities, and 6 universities of technology. In addition, two national institutes for higher education in Mpumalanga and the Northern Cape were also proposed, as already indicated in a paragraph above. The establishment of the University of Mpumalanga and Sol Plaatje University in 2014, the development that will be reflected later in section 4.5.3, was an outcome of the above proposal. The landscape, after mergers and incorporations, included new institutional types, namely, university of technology and comprehensive university. Public universities of Technology are public higher education institutions formerly known as technikons. Comprehensive public universities combine university type and technikon type academic programmes and were mainly a result of mergers between a public university and public technikon, except for the Universities of Venda and Zululand, which are separate comprehensive public universities (Jansen, 2004:295–296; CHE, 2004b:49). The merger of the former Technikon Northern Gauteng, Technikon North-West, and Technikon Pretoria in 2004 led to the establishment of a public university of technology, an institutional type that never existed in South Africa before mergers and incorporations.

It is worth mentioning that the Table 4.2 only reflects mergers and incorporations involving public universities and public technikons. Another development in public higher education, which according to Jansen (2002:7) paralleled the policy thinking on mergers, does not form part of the above reflections. The development in question concerns colleges of education, some of which were eventually incorporated into some of the public higher education institutions reflected in Table 4.2. This research concurs with the above observation which is also confirmed by Jansen (2004:295) who notes that at the beginning of 2003, colleges of education had disappeared from the higher education landscape due to either being closed down or incorporated into some of the universities reflected in Table 4.2.

It is also worth indicating that only after the attainment of democracy were subsequent changes in public higher education involved bringing a more integrated public higher education system which begun to address issues that legislation was silent about pre 1994. To this effect, the Education White Paper 3: A Programme for Higher Education Transformation 1997 is the first national policy document to express the need for the establishment of a single national coordinated higher education system. This policy expression was in response to a proposal by the NCHE regarding the development of a single national coordinated higher education system encompassing traditional universities, technikons, and colleges. Furthermore, the NCHE proposed the incorporation of colleges of education, nursing colleges, and agricultural colleges into public universities (NCHE, 1996).

In advocating the adoption of a single system, the NCHE (1996) argued that if the legacy of apartheid is to be reversed, public higher education must be planned, governed, and funded as a single coordinated system. The National Qualification Framework Act 67 of 2008 was adopted to create a single integrated national framework to facilitate access to and mobility and progression within education, training, and career paths. This and other policy developments facilitated opportunities for articulation possibilities between technikons and universities, something that policies pre 1994 were silent about. The Higher Education Qualification Sub-Framework 2013 reflects that the enabling of the articulation possibilities between academic programmes and transfer of students between academic programmes and higher education institutions was critical, as is the key objective of the Higher Education White Paper 3: A Programme for Higher Education Transformation 1997 and eventually the Higher Education Act 101 of 1997.

Having exposed the post 1994 South African higher education landscape, including the policy and legislation changes that led to the establishment of a single national coordinated higher education system, it becomes relevant to also analyse the process leading to the passing of the Higher Education Act 101 of 1997.

4.5.2 Process leading to the Higher Education Act 101 of 1997

The Higher Education Act 101 of 1997 is an outcome of various processes, some of which have already been discussed in previous sections. The purpose of the Higher Education Act 101 of 1997 is to regulate higher education in the country and provide for the establishment, composition, and functions of a Council on Higher Education. The Higher Education Act 101 of

1997 also provides for various activities which are relevant and applicable to public higher education in South Africa.

CHE (2007:1) and Odhav (2009:33) show that post 1994, the South African public higher education system saw massive changes including the development of a different and complex policy environment. CHE (2007) stresses that prior and after the passing of the Higher Education Act 101 of 1997, changes in public higher education manifested in different forms. The changes introduced were aimed at unifying and streamlining the public higher education system to make it more efficient and effective. Furthermore, public higher education needed to be relevant and responsive to the needs of the country.

Bundy (2005:90) confirms the general observation that the NCHE report and the Education White Paper 3: A Programme for Higher Education Transformation 1997 marked the beginning of policy developments post 1994. However, he acknowledges that the NCHE report, the Education White Paper 3: A Programme for Higher Education Transformation 1997 and other higher education policy documents developed and published after the attainment of democracy were not written on a clean slate. Acknowledging that the establishment of the NCHE and publication of its report was a milestone, Bundy (2005) also asserts that the research conducted before 1994 and the pre-election framework statement by the ANC, laid the foundation on which post 1994 higher education policy framework was built; an assertion that this research aligns itself with.

Odhav (2009:39) suggests that the process of debating and conducting research on the national education policy commenced with the establishment of the National Education Crisis Committee (NECC), a civic body formed in 1985 to negotiate and contest for policy against the apartheid regime. Although the process was slow due to political resistance at the time, after two years of research and dialogue, a number of working papers were produced. This progress was achieved after the implementation of the National Education Policy Initiative (NEPI) that was charged by the NECC to research national education policy. Furthermore, Odhav (2009) relates that the NEPI report submitted to the NECC (1992) suggested basic principles that were based on a non-racist, non-sexist democracy, a unitary system, and redress. UDUSA also gave strong indications of transformational aims and challenges in relation to higher education policy making and implementation in the new dispensation. As with the basic principles suggested in the NEPI report, UDUSA also espoused non-racialism, non-sexism, and redress. The suggestions made in the NEPI report and UDUSA were significant in developing policy and research in higher

education. The Higher Education Act 101 of 1997 was built on these contributions although it also addressed the shortcomings of these contributions (Odhav, 2009). Furthermore, Odhav (2009:41) contends that the Higher Education Act 101 of 1997 reflects a shift from the apartheid conceived racially divided higher education legislation and opened the pathway for a post-apartheid development. Odhav (2009) also argues that the Higher Education Act 101 of 1997 generally aimed at reengineering higher education and gave legal form to the values, principles, and core concepts of higher education policy. This research considers the Higher Education Act 101 of 1997 as the main statutory framework upon which all higher education policy documents were built, post 1997. In the case of TUT, the reconfiguration of public higher education institutions post 1994 facilitated the merging of three former institutions that were originally established to provide higher education to different population groups; the transformation that was aimed at addressing the inequalities that existed pre 1994.

According to CHE (2004b:30-31), since its passing, the Higher Education Act 101 of 1997 has been frequently amended in accordance to particular developments in higher education. As the Higher Education Act 101 of 1997 regulates higher education in general, it also provides for the establishment of new institutions. Section 20 of the Higher Education Act 101 of 1997 empowers the Minister of Higher Education and Training to establish public higher education institutions. Based on this empowerment, the Minister of Higher Education and Training announced a decision to establish new public higher education institutions.

The section that follows provides an overview of the process that led to the unbundling of some public higher education institutions and establishment of new public higher education institutions introduced after the mergers and incorporations which took place between 2004 and 2005. The section will cover a brief overview of the establishment of the University of Mpumalanga and Sol Plaatje University as well as the unbundling of the Medunsa Campus from the University of Limpopo and its incorporation into Sefako Makgatho Health Sciences University. The establishment of new public higher education institutions was aimed at the expansion of the public higher education system in line with the recommendations of the National Plan for Higher Education 2001.

4.5.3 Higher education institutions established after mergers and incorporations

Since 2005, there have been changes to the South African public higher education landscape. To expand the public higher education sector and increase public higher education opportunities

across all provinces, in accordance with the recommendation of the National Plan for Higher Education 2001, as indicated in section 4.5.2, two new universities were established at the beginning of the 2014 academic year. In accordance with section 20(1) of the Higher Education Act 101 of 1997, the Minister of Higher Education and Training published a document entitled *Development Framework for New Universities in the Northern Cape and Mpumalanga* 2012. The document sets out government's intention to develop two new public universities in the Mpumalanga and Northern Cape provinces and provided a framework within which activities required for establishing the two new public universities may be strategically planned and coordinated.

Within the context of expanding the country's public higher education system and increasing public higher education opportunities to qualifying school leavers, as referred to in section 4.5.2, the government decided to develop two new public universities in the only two provinces that did not have public universities. The decision to develop the two public universities was informed by recommendations made by the two task teams appointed in 2010 by the Minister of Higher Education and Training to investigate the feasibility of establishing public universities in the Northern Cape and Mpumalanga. After extensive consultations, the two task teams submitted their respective reports to the Minister of Higher Education and Training as well as to the Council on Higher Education, as required by section 5(1) of the Higher Education Act 101 of 1997 (DHET, 2012:2–3). During 2013, the Minister of Higher Education and Training published Government Gazettes 36771 and 36772 to formally establish public universities in the Northern Cape and Mpumalanga provinces. The Minister of Higher Education and Training proclaimed the new public universities to establish their governance and management structures and to enable the start of academic programmes in 2014 (Government Gazette 36771, 2013; Government Gazette 36772, 2013). The University of Mpumalanga and Sol Plaatje University are thus the first two public higher education institutions established after mergers and incorporations and this development reconfigured and changed the public higher education landscape.

The above development was followed by the establishment of the Sefako Makgatho Health Sciences University that was formed after the unbundling of the Medunsa Campus of the University of Limpopo. According to Government Gazette 37658 (2014), on 16 May 2014, the Minister of Higher Education and Training proclaimed the establishment of the new comprehensive public university in Gauteng. The Minister appointed a Joint Technical Task Team to investigate the possibility of unbundling the Medunsa Campus. Eventually the Joint

Technical Task Team advised the Minister to separate and unbundle the Medunsa Campus from the University of Limpopo and incorporate the campus into the new public university of health and allied sciences. This development in the history of higher education in South Africa brought to an end the association between the Medunsa Campus and the University of Limpopo that started at the beginning of the 2005 academic year after the merging of the former Medical University of South Africa and the University of the North, a merger that never made any sense. The new university was named Sefako Makgatho Health Sciences University and its purpose is to teach, conduct research, and engage in community services related to health and allied sciences (Government Gazette 37658, 2014). This development and the establishment of two public universities in Mpumalanga and the Northern Cape changed the public higher education landscape and brought the number of public higher education institutions in South Africa to 26 universities, completing the current public higher education landscape in the country. The section below covers an overview of the current public higher education landscape in South Africa after further reconfiguration of the public higher education sector through the establishment of the latest three public institutions referred to in this section.

4.5.4 Overview of the current higher education landscape

Table 4.3 below provides an overview of the current public higher education institutional landscape and reflects institutional types and main language/s of instruction for each individual higher education institution.

Table 4.3 Current public higher education institutional landscape

Institution	Institutional type	Language of instruction
Cape Peninsula University of Technology	University of Technology	English
Central University of Technology	University of Technology	English
Durban University of Technology	University of Technology	English
Mangosuthu University of Technology	University of Technology	English
Nelson Mandela Metropolitan University	Comprehensive University	English
North-West University	Traditional University	Afrikaans and English
Rhodes University	Traditional University	English
Sefako Makgatho Health Sciences University	Comprehensive University	English
Sol Plaatje University	Comprehensive University	English
Tshwane University of Technology	University of Technology	English
University of Cape Town	Traditional University	English
University of Fort Hare	Traditional University	English
University of the Free State	Traditional University	Afrikaans and English
University of Johannesburg	Comprehensive University	Afrikaans and English
University of Kwazulu-Natal	Traditional University	English
University of Limpopo	Traditional University	English
University of Mpumalanga	Comprehensive University	English

Institution	Institutional type	Language of instruction
University of Pretoria	Traditional University	Afrikaans and English
University of Stellenbosch	Traditional University	Afrikaans and English
University of South Africa	Comprehensive Distance Education University	English
University of Venda	Comprehensive University	English
University of the Western Cape	Traditional University	English
University of the Witwatersrand	Traditional University	English
University of Zululand	Comprehensive University	English
Vaal University of Technology	University of Technology	English
Walter Sisulu University	Comprehensive University	English

Source: Websites of South African public higher education institutions reflected above

The above table reflects the current South African landscape of 26 public universities; including 6 Universities of technology, 11 traditional universities, and 9 comprehensive universities. Of the 26 public universities, 21 use English as the language of teaching and learning and the remaining 5 use both Afrikaans and English. In the case of TUT, the use of English as a primary language is one of the changes introduced after the University was established in 2004 as one of the former institutions that merged to form TUT used both Afrikaans and English. It is worth mentioning that the Higher Education Qualification Sub-Framework (HEQSF) 2013 provides the basis for integrating all higher education qualifications into the National Qualifications Framework (NQF) 2008. The Framework further provides mechanisms for improving the coherence of the higher education system and enables students to move more efficiently from one programme to another and from one institution to another; something that was not properly regulated pre 1994, before the introduction of the Higher Education Qualification Framework (HEQF) 2007 and the promulgation of the National Qualification Framework Act 67 of 2008. The HEQSF, in line with the HEQF and being an integral part of the NQF, is designed, amongst others, to facilitate qualification articulation across the higher education system regardless of the type of institution from and to the student concerned is transferring.

The policy documents referred to above facilitate the key objective of the White Paper 3: A Programme for Higher Education Transformation 1997 and are milestone achievements regarding the vision of the current government to introduce a single national coordinated higher education system. To further address the articulation challenges, the White Paper for Post School Education and Training 2013 calls for the building of an expanded, effective, and integrated post school system comprising of all education and training institutions which fall under the control of the Department of Higher Education and Training (DHET, 2013).

It should be noted that some of the challenges that existed when the current government started transforming the public higher education system are still as relevant as they were when the process commenced after the attainment of democracy. To address these and new challenges, and consistent with the central theoretical argument stated in section 1.6, setting a strategic agenda that could lead to further reengineering of the public higher education system remains critical. While the fundamental principles of the vision of a reengineered public higher education system outlined in the White Paper 3: A Programme for Higher Education Transformation 1997 remain relevant, the public higher sector has since changed. Owing to the changing context, it is necessary for the government to further transform the sector to address current challenges. The setting of new strategies and the embarking on reengineering initiatives to facilitate continuous improvement within public higher education to further transform and improve the capacity of the sector to meet South Africa's current needs remains imperative (DHET, 2013). As indicated in section 1.1, "doing more with less, improving the quality of learning and learning experiences, and improving efficiency and effectiveness" forces public higher education institutions, such as TUT, to adopt management practices, such as BPR and strategic planning, which are critical for the achievement of competitive advantage and consequently survival. Considering the dynamic nature of the South African public higher education sector and that higher education institutions across sectors function as an open system, public higher education institutions should strategically reengineer core business processes with due consideration of the national higher education imperatives and legislative requirements. Public higher education institutions, such as TUT, should thus always ensure the timeous and strategic reengineering of business processes in line with the ever changing higher education sector.

4.6 CONCLUSION

The purpose of this chapter was to operationalise the fourth research question posed in section 1.5 of this research by exploring the nature of the dynamics of public higher education in South Africa and assessing the statutory and regulatory framework governing the sector. The chapter started with the clarification of the term "higher education" to contextualise higher education from a South African perspective. Although a literature review revealed that there are various descriptions of what constitutes "higher education", this research aligns itself with the description of higher education as provided in the Higher Education Act 101 of 1997, namely, that higher education refers to all learning programmes leading to a qualification that meets the requirements of the HEQSF.

The clarification of the term "higher education" was followed by an exploration of the origins and historical development of public higher education in the country. The main contribution of this exploration was to reflect on how public higher education originated and developed over the years until it reached its current form. It was discovered that the historical development of public higher education in South Africa can be divided into four phases. As indicated in section 4.3.1, the first phase commenced in 1829, when the first higher education institution was established, and ended in 1916. The phase was characterised by the establishment of private institutions and the colonisation of higher education, hence the modelling of the country's higher education system along the education systems of the countries which influenced the historical development of South Africa.

A literature review (see section 4.3.4) revealed that technical education was originally not regarded as part of higher education and consequently its historical development was explored separately from the evolution of public university education. In accordance with the general acknowledgement that education systems are informed by the political system, it is generally accepted that the South African educational system was and continues to be a direct product of the political systems of different times throughout its historical development.

The exploration of the evolution of public higher education in section 4.3.2 further revealed that the adoption of the University of South Africa Act 12 of 1916 is considered the beginning of the reengineering process through which public higher education in South Africa was decolonised; marking the beginning of the second phase in the evolution of public higher education in the country. The passing of the University of South Africa Act 12 of 1916 is regarded as the first step through which public higher education was formalised in the country. The passing of the University of South Africa Act 12 of 1916 provided for the transformation of two of the university colleges of that time into fully fledged public universities. The University of South Africa Act 12 of 1916 also made provision for the establishment of UNISA and the University of Fort Hare, the first public university established for the South African black communities.

The exposition of the historical development of technical education revealed that the first technikons were established in an attempt to keep up with international trends and in response to the national needs in 1979. As with public universities, public technikons were established along racial and ethnic lines. Technikons have their roots in technical colleges that were established to deal with the theoretical aspects of apprentice education (see section 4.3.4). The introduction of technical education was a private initiative, as is the case with university education.

Developments in technical education were boosted by the introduction of the Higher Education Act 30 of 1923, which provided for certain technical colleges that were later renamed colleges of advanced technical education, to offer higher education. The publication of the Van Wyk de Vries Commission Report in 1974, clarified the position of the colleges of advanced technical education within the higher education framework and its recommendations paved the way for the removal of the ceiling that existed regarding the academic programmes that the colleges for advanced technical education offered. The decolonisation and formalisation of public higher education and granting of status to some of the technical colleges to offer higher education are considered the main features of the second phase in the development of public higher education in South Africa.

The year 1948 marked the beginning of the third phase. The exploration of the historical development of public higher education revealed that although segregation in education existed prior to 1948, policies introduced after the National Party came into power formalised and promoted segregation in public higher education. The National Party government policies gave effect to the promotion of a public higher education system that was based along racial and ethnic lines.

For the purpose of this research, 1994 is regarded as the year the fourth phase in the historical development of public higher education in South Africa commenced. An assessment of the higher education statutory and regulatory framework revealed that post 1994 the new government developed various policies to change the inequitable and racially skewed public higher education system it inherited from the National Party. As indicated in section 4.5, the higher education policy in South Africa post 1994 was thus conceived as part of a vision by the government to mainly introduce a single national coordinated higher education system.

The chapter also provided an assessment of the statutory and regulatory framework which governed public higher education through different phases of its development to its current form. The assessment of the current statutory and regulatory framework revealed that the Higher Education Act 101 of 1997 is the main policy document that regulates higher education across sectors in South Africa and that it reflects a shift from the apartheid conceived racially divided higher education legislation and opened the way to a post-apartheid development (see section 4.5.2). The Higher Education Act 101 of 1997 and other policies developed post 1994 provided the strategic framework for reengineering the public higher education landscape, thus confirming the revelation in a literature review (see sections 2.8 and 3.7) that the application of strategic

planning and reengineering practices is also relevant within the public sector in general and the public higher education sector in particular.

The public higher education strategic reengineering framework post 1994 led to the current South African landscape of 26 public higher education institutions, which reflect a single coordinated higher education system as opposed to the fragmented racial and ethnic based public higher education system that existed prior to 1994. As reflected in section 1.3, due to changes within the public higher education sector post 1994, public higher education institutions, such as TUT, had to reengineer their business processes in line with the new national higher education imperatives and legislative requirements.

In conclusion, it is worth mentioning that for the public higher education sector, including individual public universities, to meet changing demands requires continuous reengineering and setting of new strategic directions. This research was thus informed by an acknowledgement of a need for TUT and similar institutions to strategically reengineer their business processes in order to enhance their strategic orientations.

Having introduced the research topic in chapter one, reviewed literature relevant to BPR and strategic planning in chapters two and three, and explored the dynamics and nature of public higher education in South Africa through its historical development over the years, the next chapter presents the findings from an empirical exploration of the status within the academic administration environment of TUT regarding BPR and its contribution to the enhancement of the strategic planning process of the University. The next chapter also provides an explanation of the methodology the research followed to empirically gather the data relevant to the research.

CHAPTER FIVE

TOWARDS A BUSINESS PROCESS REENGINEERING FRAMEWORK: EMPIRICAL FINDINGS

5.1 INTRODUCTION

Chapters two and three focused on a literature survey to uncover the theoretical underpinnings and to pinpoint core elements of BPR and strategic planning. Chapter four provided an analysis of the nature of the dynamics of higher education, specifically public higher education, including its origin and historical development, and an assessment of prescripts from legislation and regulatory framework governing higher education in South Africa. As stated in section 1.7.1, a literature review was used as a data collection method and was aimed at contributing to a theoretical understanding of the nature and meaning of the problem that triggered the research.

This chapter covers an empirical exploration of the research and presents the findings of the empirical exploration of the strategic application of BPR within the academic administration environment of TUT. The empirical exploration was done to respond to the following research question formulated in section 1.5:

"What is the current status within the academic administration environment of TUT with regard to BPR and its contribution to the enhancement of strategic planning?"

The findings of the empirical exploration will indicate the extent to which business processes of the academic administration environment of TUT are strategically reengineered. An institutional perspective regarding the strategic reengineering of business processes within the University was also sought from sampled managers responsible for quality, planning, and risk management. Managers from the distant campuses were also interviewed to seek their perspectives on the problem the research sought to address. The findings of the empirical exploration are thus based on the opinions and perceptions of participants sampled from the academic administration environment and other categories of participants as indicated above. This chapter will also present the findings of an analysis of relevant TUT documents and provide an explanation of the methodology followed to empirically gather the data relevant to the research.

Although the research focussed on TUT's academic administration environment, it is worth mentioning that in addition to an analysis of institutional documents relevant to the research, standard semi-structured questions used to collect empirical data from managers from distant campuses and managers from the environment responsible for quality, planning, and risk management focused on the strategic reengineering of business processes from an institution point of view, as stated in a paragraph above. This was done to compare and contrast data gathered from participants sampled from the academic administration environment and the institutional opinions and perceptions expressed by participants sampled from environments outside the academic administration environment. Before presenting the findings and explaining the methodology followed to collect empirical data, it is important to provide an overview of TUT, the public higher education institution where the research was conducted.

5.2 OVERVIEW OF THE TSHWANE UNIVERSITY OF TECHNOLOGY

This section provides an overview of TUT in order to locate the academic administration environment within the organisational structure of the University. The section covers a brief reflection of the highest level of governance and operational management responsibility within the University, including the roles and responsibilities of the academic administration environment of TUT. Figure 5.1 below represents a graphic representation of the TUT top level structure. The graphic representation will be followed by a brief overview of TUT and the academic administration environment in particular.

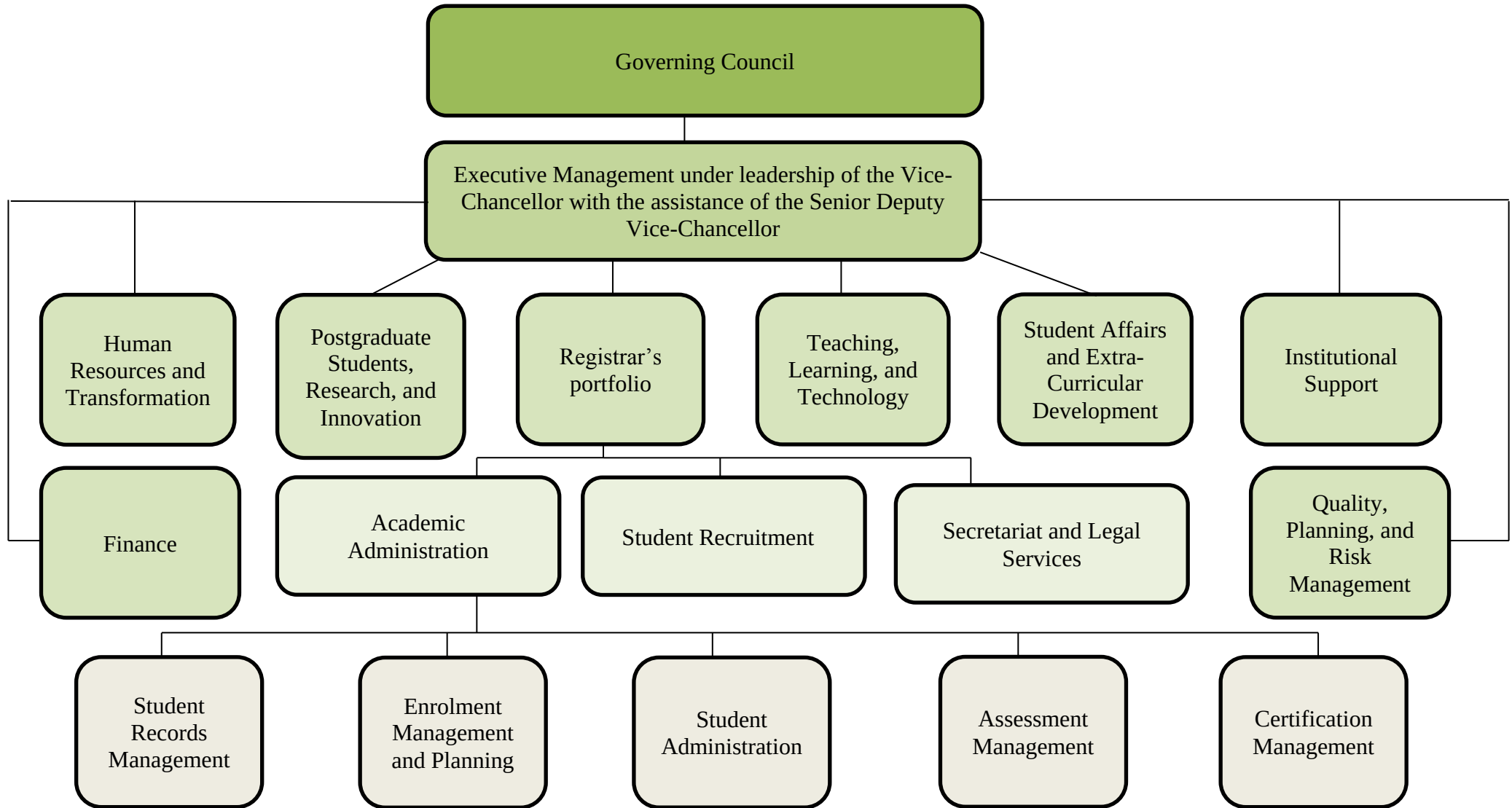


Figure 5.1: Top level organisational structure of TUT

Figure 5.1 shows that at the highest level of the governing structure of the University is the Council. This governance arrangement is in accordance with section 27 of the Higher Education Act 101 of 1997, which provides for the establishment of university councils. The University Council is responsible for general supervision over all organisational activities (Ncayiyana & Hayward, 2000:3). The Institutional Institute of TUT 2012, approved by the Minister of Higher Education and Training on 14 June 2012, provides for the Council to govern the University. However, while the Council ensures that the University is well managed, it is not involved in the day to day running of the institution (Ncayiyana & Hayward, 2000:17).

The operational management of TUT is the responsibility of the Executive Management Committee in accordance with section 58 of the Institutional Statute of TUT 2012. According to the Institutional Statute of TUT 2012, the Registrar, who is an Executive Management Committee member, is responsible for, amongst others, academic administration, which is a trend at almost all public higher education institutions in South Africa. Figure 5.1, as informed by the TUT institutional organisational structure of 2015, shows that the environment responsible for quality, planning, and risk management is also represented at executive management level together with the distant campus managers, which is another sub-group or strata sampled for the purpose of this research. Owing to the pressure on public higher education institutions, such as TUT, to ensure student access, student success, diversity, and transformation, it is critical for executive management of public higher education institutions to embark on effective and ongoing strategic planning (Ncayiyana & Hayward, 2000:21).

According to the Progress Report of the Office of the Registrar 2014, the Registrar's environment i.e. the portfolio within which academic administration environment is located is, amongst others, responsible for:

"Providing an enabling environment for the University's teaching, learning, and technology functions by documenting the extent and quality of students' formal learning experiences within the institutional value chain. It also focuses on providing quality service to students, faculties, staff, and the general public in the creation, maintenance, and release of students' academic records."

The above paragraph summarises the roles and responsibilities of the academic administration environment of TUT. The Academic Administration Annual Report 2009 lists the following as the departments that form part of the academic administration environment of TUT:

- Student records management
- Enrolment management and planning
- Assessment management
- Certification management
- Student administration.

As reflected in section 1.7.2.5, the TUT academic administration environment was the main focus of this research; and therefore 84% of the participants were sampled from this environment. Participants from the quality, planning, and risk management operational units as well as distant campuses were sampled to obtain an institution-wide perspective regarding the extent to which business processes are strategically reengineered, as stated in section 1.7.2.2. The quality, planning, and risk management environment is responsible for, amongst others, facilitating and coordinating strategic planning University-wide.

The following section describes the methodology used to explore the empirical evidence, including an analysis of the TUT strategic documents. The section will also explain how the participants were selected, which data collection techniques were used, and how the collected data was analysed and ethical issues were addressed.

5.3 RESEARCH METHODOLOGY

Schurink (2010:420) states that when considering the research methodology, aspects such as location of the data, method of gathering the data, research procedure, and the method of data analysis play a critical role in deciding on the most appropriate approach to follow. Cloete (2007:512) considers research methodology as the process of gathering data about the nature and extent of the problem the research seeks to address and the envisaged plan of action. Likewise, Brynard and Hanekom (2006:36) show that research methodology reflects on the planning, structuring, and actual conducting of the research so as to comply with the demands of truth, objectivity, and validity. Although the literature review was, for the purpose of this research, also used as a data collection method, this section concentrates only on the explanation of the method used to explore the empirical evidence and analyse TUT documents relevant to the research.

5.3.1 Research design

As stated in section 1.7.2.1, this research followed a qualitative research design, described by Brynard and Hanekom (2006:37) as the type of research that produces descriptive data, which is generally the participants' written or spoken words regarding their opinions and perceptions. Consistently, Mouton (2001:194) argues that the main distinguishing characteristic of qualitative research is that it presents the researcher with an opportunity to understand participants in terms of their own description of the world and Maree (2011:79) reflects that qualitative research is carried out in real life instead of in experimental situations. Leedy and Ormond (2005:139) describe qualitative research as an umbrella concept including a wide range of techniques that seek to describe, decode, translate, and come to terms with the meaning of naturally occurring phenomenon in a social setting.

This research furthermore employed a case study method to gather empirical data from TUT. Baxter and Jack (2008:544) describe a case study as an approach that facilitates the exploration of a phenomenon using multiple data sets. Baxter and Jack (2008) further mention that the utilisation of a variety of data sources ensures that the problem the research seeks to resolve is explored through a variety of lenses. Consistent with the views expressed by Baxter and Jack (2008), the findings of this research were based on a triangulation of data from, amongst others, the TUT documents and opinions and perceptions of sampled participants within the University. Comparing and contrasting document analysis results and opinions and perceptions of sampled participants with data collected using other data collection methods referred to in section 1.7 allowed the problem the researcher sought to resolve to be revealed and understood (Baxter & Jack, 2008:544). Likewise, Maree (2011:113) shows that using data sets from different sources helps researchers to verify research findings and validates the results, especially if the data from different sources arrives at the same conclusions.

Flyvbjerg (2006:219-245) examined misunderstandings about case study research and concluded that case study research is a necessary and sufficient method of research that holds up well in comparison with other qualitative research methods. Concerning the criticism referred to in section 1.7.2.3 that one cannot generalise from a single case, Flyvbjerg (2006:228) argues that one can generalise on the basis of a single case and that case studies may be central to the scientific development of a body of knowledge. In the case of this research, the researcher generalised the findings within TUT as institutional opinions and perceptions were also sourced as reflected in section 5.2. Opinions and perceptions sourced from participants from distant

campus management and the environment responsible for quality, planning, and risk management corroborated views expressed by participants sampled from the academic administration environment. Consistent with the remarks by Yin (2014:41), relevant theoretical underpinnings formed the groundwork or basis for the generalisation of the research findings.

5.3.2 Sampling

This research used two sampling methods, namely, probability and non-probability methods. Maree (2011:172) illustrates that probability sampling methods are based on the principles of random selection of participants, whereas the principles of randomness are not applied in non-probability sampling. As reflected in section 1.7.2.2, purposeful and stratified sampling methods were used to select the participants for this research. Managers from the Quality, Planning, and Risk Management environment were purposefully selected because of their expert knowledge. Flick (2014:176) expresses that purposeful sampling involves selection of participants who have the necessary experience and knowledge of the issue being investigated. The participation of managers responsible for quality, planning, and risk management ensured that institutional views regarding the extent to which business processes are strategically reengineered University-wide were obtained, as stated in section 5.2.

TUT academic administration middle managers were purposefully selected due to their involvement in strategic planning and business process reengineering efforts within academic administration. Purposive sampling was used in conjunction with the stratified sampling method to select entry level managers from the academic administration environment University-wide as well as managers from distant campuses. The purposefully selected population was divided into sub-populations which differ from each other based on the variable required for the research (Burger & Silima, 2006:660). Furthermore, participants were randomly selected from the following sub-populations, bringing the total number of participants to 32 i.e. 73% of the target population (see section 1.7.2.2):

- Managers from distant campuses
- Academic administration entry level managers.

Managers from distant campuses were invited to participate in the research in order to obtain institutional perceptions and opinions from a distant campus perspective. Two out of three

managers responsible for managing distant campuses participated in the research i.e. 67% of the sub-population.

5.3.3 Data collection technique

Interviews were used as the primary empirical data collection method. De Vos (2000:297) considers interviews as the most common method of data collection used by researchers involved in qualitative research. Jarbandhan and Schutte (2006:674) argue that the purpose of interviews as a data collection method is to gather reliable and valid data from participants during a face-to-face conversation. An interview schedule (i.e. questionnaire) was designed to facilitate consistency and uniformity. The schedule was also useful to collect the biographical information of the participants. The schedule was pre-tested (i.e. pilot study) to ensure that all the questions were well formulated and understood by the participants.

Questions to managers from the academic administration environment were standardised even though they were sampled from two different sub-groups. The other set of standard questions was used to interview managers from distant campuses as well as managers responsible for quality, planning, and risk management. Interviews were conducted at different TUT campuses and the duration of the interviews was approximately 60 minutes per participant. Except for exceptional circumstances, all interviews took place in the offices of the participants. This approach provided participants with an opportunity to relax as the interviews were taking place in surroundings familiar to them. With a written permission from the participants, a voice recorder, a notebook, and pen were used for managing and recording data during interviews. The empirical exploration findings will be presented in section 5.4.2.

5.3.4 Data analysis

Three techniques were used to collect data during the empirical stage of the research. A questionnaire (i.e. interview schedule) was used to collect the biographical information of the sampled participants, semi-structured interviews were conducted to gather empirical data, and finally, a content analysis was used to analyse TUT strategic documents. Maree (2011:101) describes content analysis as the process through which similarities and differences in the document under analysis support or disconfirm theory. ATLAS.ti software was used, with the assistance of the Research Assistant of the Faculty of Management Sciences at TUT, to

categorise the opinions and perceptions of the sampled participants. Thereafter the data collected was analysed and interpreted to make sense of the data before presenting the findings.

5.3.5 Research ethics

Flick (2014:48) elucidates that "research has become an ethical issue". To Flick (2014), questions of how to protect those who participate in a research drew research ethics to the fore. Maree (2011:41–42) deems that ethical considerations include, amongst others, obtaining letters of consent, obtaining permission to conduct research, and getting ethical clearance from relevant approving structures within the case study institution. In addition to stringent ethical clearance procedures the research proposal and title were subjected to at the North-West University (NWU), the following documents were submitted to the TUT Research Ethics Committee for evaluation and approval:

- Research proposal
- Information and informed consent letter
- Semi-structured interview questions
- Participants background information document
- A letter from the TUT Registrar granting permission for staff members to be interviewed for the purpose of the research (see Annexure I)
- A letter from the promoter confirming registration of the research title and ethical clearance at NWU (see Annexure H)
- A progress report from the promoter, including confirmation that the research has reached the empirical investigation stage (see Annexure G).

Questions used during the semi-structured interviews were compiled in advance and also submitted to the TUT Senate Committee for Research Ethics for evaluation and approval. The purpose of the evaluation was to determine ethical considerations. The TUT Senate Committee for Research Ethics reviewed all the documents and approved the research to be conducted. The researcher ensured that all the conditions as stipulated in Annexure A and approved by the TUT Senate Committee for Research Ethics were adhered to, thus the research was conducted fairly.

5.4 ANALYSIS AND INTERPRETATION OF EMPIRICAL DATA

In this section, the findings of the empirical exploration are presented and analysed. The section begins with an analysis of background information collected from sampled participants via a biographical information questionnaire distributed together with the informed consent information letter. Thereafter, the findings of the opinions and perceptions of the sampled participants are presented. The findings of the analysis of the TUT documents that were worth referring to will also be presented in this section to contrast and compare data collected through the empirical exploration and analysis of the TUT documents.

5.4.1 Biographical profile of participants

The biographical information questionnaire (i.e. Part A of the interview schedule) was distributed with the informed consent information letter to all participants to collect the following data:

- Gender
- Years of experience within higher education
- Highest educational qualification
- Level of operation within TUT
- Number of years of working experience
- Number of years of working experience at management level.

The biographical profile of participants is briefly presented below.

Sixty-nine percent (22) of the sampled participants were females compared to 31% (10) male participants, which is in accordance with the overall gender demographics of the environment (i.e. units of analysis within TUT) from which the majority of participants were sampled. .

Figure 5.2 below provides a graphic representation of the qualification profile of sampled participants.

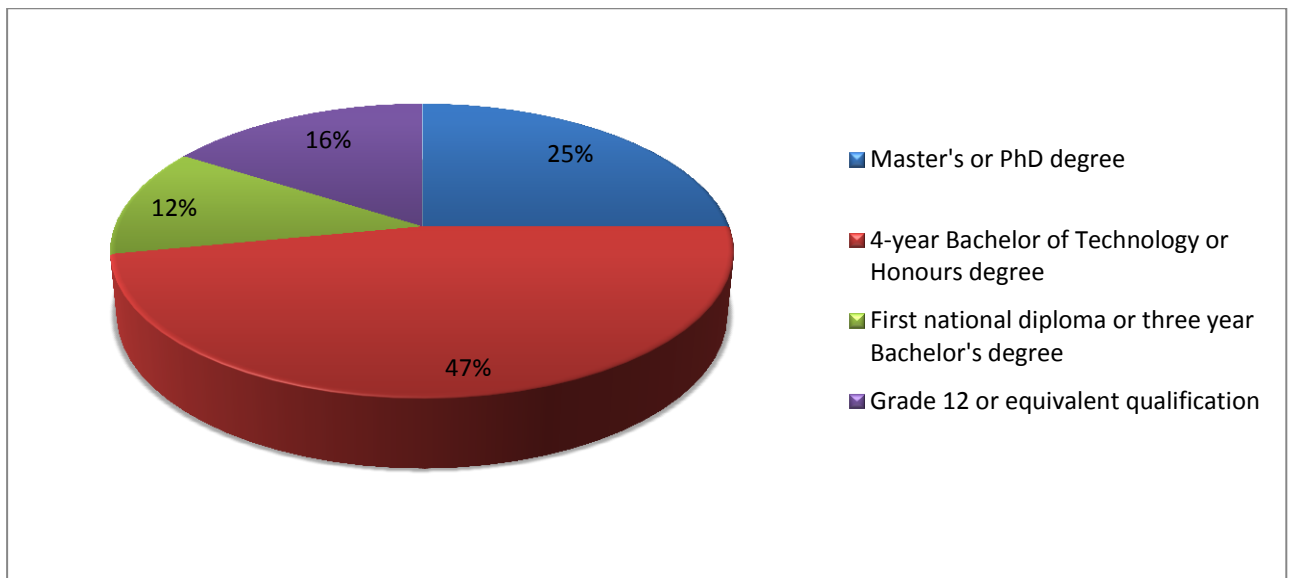


Figure 5.2: Qualification profile of participants

Figure 5.2 reflects that 84% of the sampled participants were in possession of post-secondary academic qualifications. However, it is worth mentioning that all the participants who were not in possession of a qualification higher than a Grade 12 certificate (16%) were experienced managers with between 20 and 30 years of experience in higher education. This reflection shows that the sampled participants were qualified officials either due to their possession of applicable qualifications or having extensive experience within higher education.

Figure 5.3 below is a graphic representation of number of years of working experience of sampled participants.

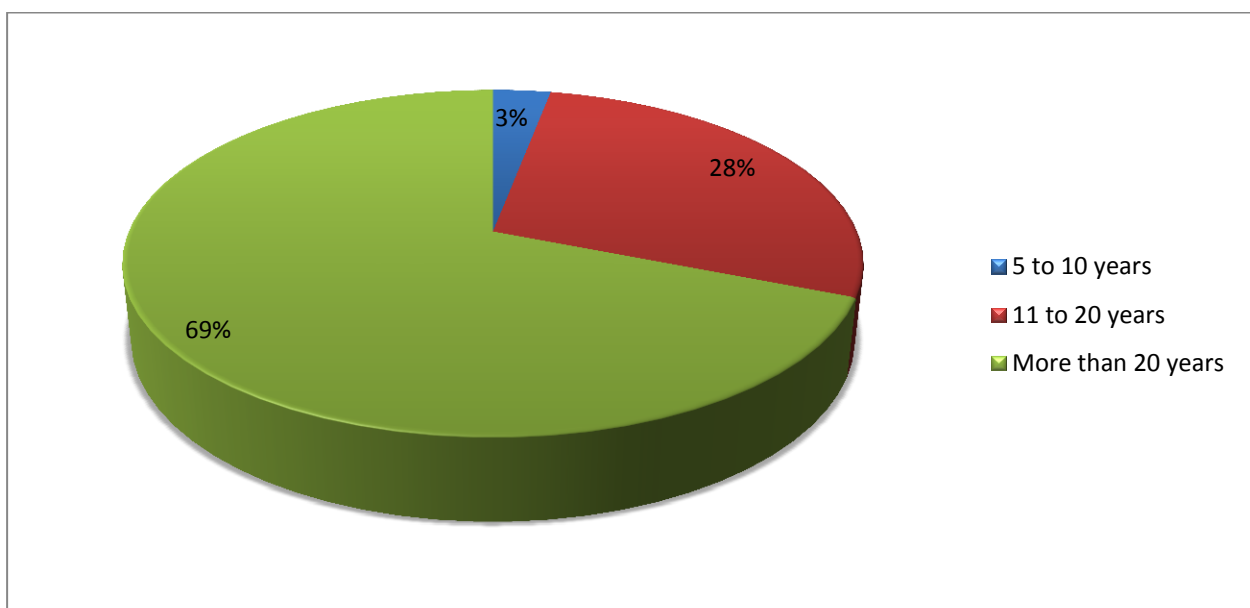


Figure 5.3: Number of years of working experience

Figure 5.3 reflects that only 3% of those who participated in the research had 5 to 10 years of working experience as compared to 28% and 69% of the participants who had 11 to 20 years and more working experience respectively.

Figure 5.4 below provides an indication of sampled participants' working experience at management level.

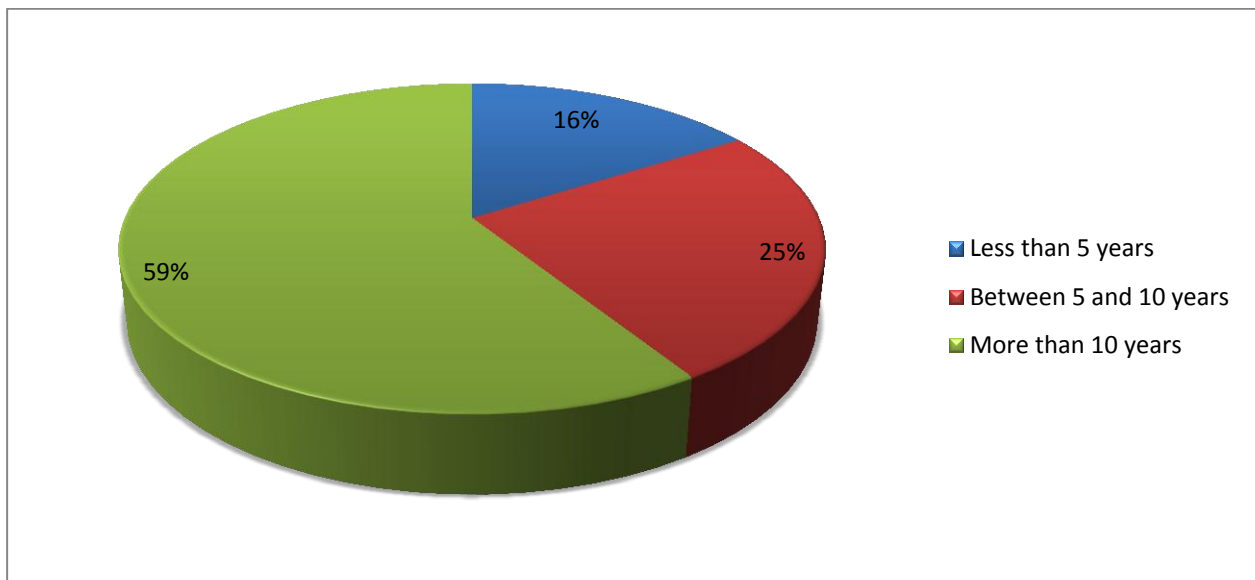


Figure 5.4: Number of years of working experience at management level

Fifty-nine percent of the participants had operated at different levels of management for at least 11 years, while only 16% had occupied management positions for less than 5 years. The remaining 25% of the participants had operated at different levels of management for periods ranging between 5 and 10 years.

Figures 5.3 and 5.4 reveal that the majority of sampled participants had extensive working experience and thus were expected to have adequate knowledge regarding business processes relevant to their areas of operation and an understanding of the process that should be followed for business processes to be strategically reengineered.

A graphic representation of sampled participants' level of operation within TUT is presented below.

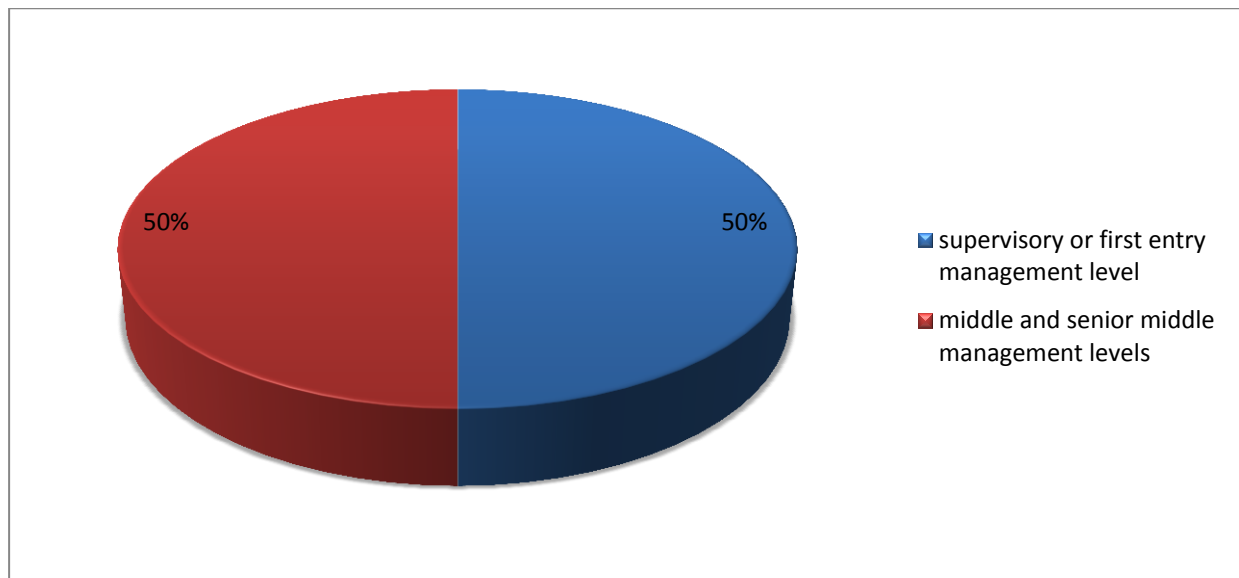


Figure 5.5: Level of operation within TUT

Figure 5.5 reveals that fifty percent of the sampled participants operated at supervisory or first entry management level. The remaining 50% of the participants were managers operating at middle and senior middle management levels. Considering that strategic planning occurs at all levels of management, it is evident that all the participants operated at levels where members of staff are expected to be involved in strategic planning relevant to their respective levels of operation. First-entry and middle-managers who participated in the research also operated at levels where facilitation of BPR takes place. The above is a reflection that the sampled participants operated at relevant levels given that the research focused on BPR and its contribution to the enhancement of strategic planning.

5.4.2 Presentation of findings

The findings presented in this section are based on the perceptions and opinions expressed by participants during the semi-structured interviews. Document analysis results worth referring to will be combined with the empirical exploration results and also presented in this section. The empirical exploration, document analysis, and literature review findings will be integrated later in chapter 6 when a BPR framework to enhance strategic planning within public higher education, specifically TUT, is proposed.

To operationalise research objective RO5, 27 standard open ended questions were compiled in advance and used during semi-structured interviews that were conducted to get the perceptions and opinions of the sampled participants from different sub-populations. While the researcher

limited the presentation of the findings to what is absolutely necessary for the purpose of the research, care was taken to ensure that the findings were captured in the context in which statements were made during interviews (Flick, 2014:385–386).

The interview schedule questions were divided into two sections: Section A dealt with academic administration and Section B with distant campuses and the managers responsible for quality, planning, and risk management, to verify and contrast the answers by participants from the academic administration environment.

Section A: academic administration

Question A1

This question was designed to ascertain how familiar the participants were with the TUT strategic planning process. The question was also aimed at establishing whether managers were aware of the existence of a TUT institutional strategic plan. For managers to strategically reengineer business processes requires an understanding of the dynamics relevant to the development of a strategic plan, the purpose of the strategic plan, and contents of the strategic plan.

[Manager 8] "I am not familiar with the TUT strategic planning process, but have a theoretical understanding of what strategic planning is all about. However, I am aware of the existence of the TUT strategic plan and have read it."

[Manager 14] "I am aware of the existence of the strategic plan of the University, but not familiar with the process that is followed when the strategic plan is developed."

[Manager 25] "I am familiar with the fact that there is a strategic plan which needs to be reviewed on a regular basis to do planning for the next couple of years and is usually circulated and discussed at various forums and staff can give inputs. The strategic plan is approved by all relevant structures before it could be implemented."

[Manager 28] "I have a reasonable understanding of the University strategic planning process and also aware that various environments within the University are expected to develop their own strategies in accordance with those of the institution as a whole."

[Manager 29] "I am familiar with the TUT strategic planning process though the strategic plan itself is not filtered down to lower levels of operation. I am also aware of the existence of the current strategic plan, as it was forwarded to all members of staff via the University webmail and as such everybody had any opportunity of going through the plan."

From the above statements, it is evident that some managers are unfamiliar with the University strategic planning process. However, most managers expressed a view that they are aware of the existence of the University strategic plan. It appears that only those managers who are invited to participate during institutional strategic planning discussions are privileged to know and understand the process that the University follows to formulate the University strategic plan. Consistent with the theoretical understanding that strategic planning occurs at all levels of management, as expressed in section 3.4, and that BPR efforts must be aligned to the strategies of an institution, as exposed in section 2.6, there exists a need for strategic planning activities to be filtered down to lower levels of management to facilitate strategic planning and strategic reengineering of business processes at all levels of the institution. This would also ensure an understanding of the strategic planning roles managers at different levels of operation are supposed to play and alignment of strategic planning efforts at all levels of management.

Question A2

As a follow up to question A1, question A2 was intended to solicit opinions regarding the extent to which TUT strategic planning activities are communicated to staff members University-wide. As reflected in section 3.9.6, effective communication is the key to the success of every project and strategic planning is no exception. Informed by this theoretical underpinning, opinions related to the manner in which strategic planning activities are communicated were sought from participants from all sub-populations.

[Manager 5] "When the current strategic plan was formulated, the idea was to communicate broadly. Executive management portfolios were visited to determine critical success factors of each portfolio. Senior managers from various environments within the University were also consulted and their contributions were considered when the current institutional strategic plan was developed."

[Manager 3] "Managers are invited to strategic planning sessions where existing strategies are reviewed and new ones are formulated or developed. Communication to the entire community is effective to some extent. The normal strategic planning stages are adhered to and managers are

always invited by virtue of the strategic positions they occupy within the University. Though staff members are invited and participate in the crafting of the University strategies, however, the feeling is that at times what is communicated during strategic planning sessions is not captured adequately. At the end, what had been advanced as inputs from participants is not reflected adequately in the final strategic plans."

[Manager 32] "Strategic planning activities are communicated via e-mail and this is not an effective way of communicating. Sending of a global e-mail with important information such as institutional strategies without any form of explanation normally leads to members of staff forming their own opinions and perceptions about the contents of the plan. My view is that there should be formal meetings where strategies could be explained to staff."

[Manager 9] "My opinion is that the strategic plan is not known to some members of staff due to lack of effective communication. My view is that communication regarding strategic planning mainly takes place at senior management level."

[Manager 21] "Members of staff at lower levels of operation are not aware of the implications of strategic planning. Communication must go down to the lowest level within the University. Communication regarding strategic planning is limited to University webmail. My view is that those involved in coordinating strategic planning should interpret the strategic plan to staff."

[Manager 1] "Strategic sessions are held within the environment. During these sessions, key strategic projects are highlighted. The executive manager of the environment takes a leading role in informing members of staff about strategic planning projects and consequently, members of staff within the environment are always well informed and aware of the contribution they are supposed to make towards the achievement of institutional strategies."

From the above responses it can be deduced that although strategic planning is a consultative process, communication is mainly limited to managers who are involved in institutional strategic planning. This is consistent with the findings of question A1. One of the opinions expressed is a need for formal sessions with staff at all levels of operation so that the University strategies could be explained in detail to staff members to ensure a common understanding. Although some executive managers take a lead in cascading the University strategies to lower level staff members within their portfolios, as expressed by manager 1, it appears that there is no common approach as to whose responsibility is it to filter strategic information to all levels of operation.

The filtering down of strategies would assist in raising awareness and facilitating a common understanding as to who does what, when, and how. It is thus imperative for the Strategic Management Support environment (the environment responsible for coordinating strategic planning within TUT) to ensure that strategic planning roles and responsibilities at all levels of the University are clarified to ensure a common approach to strategic planning University-wide. The clarification of roles and responsibilities should include emphasising the importance of the strategic reengineering of business processes so that the chances of the University to successfully achieve its strategic goals and objectives could be enhanced.

Question A3

Smit *et al.* (2011:221) describe coordination as the working together of departments, operational units, and staff members towards the achievement of institutional strategic goals and objectives. They further reflect that effective coordination involves integrating institutional strategic activities and resources to meet institutional strategic goals. Given this background and consistent with question A2, this question was aimed at obtaining views to assist the researcher to establish how well strategic planning activities are coordinated in the University.

[Manager 8] "My view is that strategic planning activities are not well coordinated."

[Manager 9] "My view is that coordination is not effective. Strategic plans are forwarded to staff without any form of engagement. Consequently, members of staff take note and never bother to seriously read and understand the contents of the strategic plan."

[Manager 10] "My opinion is that the environment that drives strategic planning is really trying its best, but it can do more. However, communication must be frequent to highlight important issues and to indicate to staff the importance of the strategic plan and how staff fit in within the planning framework."

[Manager 13] "The coordination is not that bad if one compares the current status with the way things used to be few years back. Attention is now given to strategic issues and managers from various environments within the University have an opportunity to participate in strategic planning and coordination is effective."

[Manager 16] "Considering that involvement in strategic planning is limited to senior managers, it is difficult to make a judgement on the extent to which strategic planning is coordinated."

The above responses reflect varying views regarding the extent to which strategic planning is coordinated within the University. This could be because of the opinions already expressed in response to questions A1 and A2 in relation to the non-involvement of lower level managers in strategic planning.

Considering that there is no institutional approach to the process of cascading or filtering down University strategies to the lower levels of operation, it is not surprising that managers at those levels consider the coordination of strategic planning activities as being invisible. That coordination is invisible appears to be more prevalent at the lowest level of management. The general feeling is that more effort is dedicated towards the coordination of strategic planning at the highest level within the institution. For an institution as large as TUT, the effective coordination of strategic planning activities is critical for members of staff within the University to have a common understanding of its strategic orientation. The Strategic Management Support environment should ensure that all environments and staff members within the University are informed of and motivated towards the achievement of common institutional strategies.

Question A4

Question A4 aimed at determining whether TUT has a business process reengineering framework to guide the manner in which business processes could be strategically reengineered in a uniform, focused, and coordinated fashion University-wide. In accordance with research objective RO6 as formulated in section 1.4, this question was central to the research, as the main contribution of the research was to develop a framework which could assist public higher education institutions, and TUT in particular, to strategically reengineer their business processes. Given the central nature of the question, all sampled participants regardless of the sub-population they belong to, were asked the question.

The question served as the core question which informed all other questions posed during the semi-structured interviews considering that the research was triggered by an observation of a lack of a business process reengineering framework, that strategic reengineering of business processes informed the problem the research sought to achieve (see section 1.3), and that the central theoretical argument upon which the research was based confirmed the importance of strategy alignment in business process reengineering (see section 1.6).

[Manager 2] "There is defragmentation in the manner in which business processes are reengineered due to lack of a common framework. The University does not follow a particular methodology or model that can bring a standardised way of engineering or reengineer business processes. It varies from department to department as there are other departments which have a standard way of reengineering their business processes. Following a particular methodology or framework that can bring a standardised way of strategically reengineering business processes University-wide is currently not a practice."

[Manager 32] "Some environments do have their own guiding documents. However, there is no institutional business process reengineering framework."

[Manager 22] "I am not aware of the existence of a business process reengineering framework. Would love to know if there is one and would definitely use it."

[Manager 1] "Business processes are currently reviewed at different stages and differently triggered by different issues and different reasons due to the lack of a solid defined business process reengineering framework. There is no institutional process to trigger the review and improvement of business processes."

[Manager 5] "There is a lack of a methodology or framework to give guidance to the manner in which business processes could be strategically reengineered in a uniform, coordinated, and focused fashion University-wide. However, there are institutional initiatives that are aimed at ensuring consistency regarding the manner in which matters of strategic orientation could be uniformly tackled University-wide."

The general perception is that the University does not have a standard framework or methodology to guide the manner in which strategic reengineering of business processes could be ensured. Manager 1 summed it up well by indicating that "business processes are currently reviewed at different stages and differently triggered by different issues and different reasons due to the lack of a solid defined business process reengineering framework".

An analysis of the TUT documents relevant to the research revealed that there are various initiatives that are aimed at ensuring consistency in the manner in which matters of strategic orientation could be approached, thus confirming the views expressed by manager 5. An analysis of those documents revealed the University's intent to encourage alignment of business processes

to institutional strategies. For example the TUT Risk Management Framework 2014 provides for departments and operational units within the University to develop implementation plans emanating from the institutional strategic plan to facilitate the achievement of the strategic plan. Consistent with the TUT Strategic Plan 2008– 2012, which identified reengineering and repositioning the University as one of its strategic goals, the TUT Strategic Plan 2014–2019 reflects "pioneering an enterprising and transformative brand twenty-first century University of Technology scholarship" as its vision. Furthermore, the TUT Strategic Plan 2014–2019 advocates the strategic reengineering of business processes to, amongst others, maximise efficiency in the manner in which support services are delivered University-wide.

In line with the Regulations for Reporting by Public Higher Education Institutions 2014, the University also developed an Annual Performance Plan 2015, which amongst others, assists the institution to reveal the extent to which the strategic goals and objectives listed in its strategic plan have been achieved. The Annual Performance Plan 2015 identifies the strategic priorities for each executive management portfolio and links those priorities to University strategic goals or objectives. The specific activities that the executive management portfolios are to work towards to achieve the identified strategic priorities are also indicated, including performance indicators and timelines. This approach assists executive management portfolios to align their strategic priorities and consequently, business processes to institutional strategies.

An analysis of the TUT Admissions Quality Audit Report 2013 and the TUT Registration Quality Audit Report 2013 revealed that the quality audit processes within the University are also aimed at, amongst others, the enhancement of quality and standard of services through the strategic and continuous improvement of business processes. The current disjuncture between the University's intent and practices within some departments and operational units is deemed to be a consequence of a lack of an institutional business process reengineering framework or methodology. It is imperative that the intent to align business processes to institutional strategies expressed in various institutional documents be institutionalised and applied at all levels of operation within the University. This could be achieved through the adoption of an institutional business process reengineering framework which should consolidate all applicable principles related to the strategic reengineering of business processes referred to in the various institutional documents mentioned above.

Question A5

Having confirmed the observation that triggered this research, namely, that TUT lacks a business process reengineering framework, question A5 was aimed at soliciting perceptions and opinions regarding the extent to which business processes are strategically reengineered in the absence of a standard framework or methodology.

[Manager 16] "Business processes are not always aligned to University strategies, however, a quality audit conducted not long ago was an eye opener and from now moving forward the environment would ensure that business processes are aligned to institutional strategies. However, business processes are aligned to policies."

[Manager 31] "Don't necessarily keep the University strategies in mind each time I embark on business process reengineering as that is currently not necessarily the focus. Alignment of business processes to policies is currently the main focus."

[Manager 19] "Yes, business processes are aligned to the overall strategic orientation of the University but not necessarily to identified strategic goals and objectives. It is difficult to align because at times necessary documents are not transferred from higher levels to lower levels of operation. However, all business processes are aligned to University policies."

[Manager 24] "Business processes are aligned to institutional policies as the understanding is that policies are aligned to University strategies and hence the approach."

[Manager 25] "Alignment of business processes to the University strategies is done though it is not formal or guided by any standardised process. The approach is followed due to an understanding that business processes are informed by strategies and policies and members of staff are also always informed about it. However, alignment to individual goals and objectives is not normally done."

The responses provided above reflect mixed views as to whether business processes are aligned to institutional strategies or not. There was, however, a shared view that business processes are always aligned to institutional policies. Some sampled managers expressed a feeling that the alignment of business processes to policies is informed by an expectation that policies are supposed to be informed by strategies. Consequently, the assumption of those who align themselves to this expectation is that by aligning business processes to policies is, by

implication, aligning business processes to strategies. It is evident that due to the lack of a standard business process reengineering framework, business processes reengineering is not approached in a uniform way, even by departments and operational units within the same environment. However, an analysis of the TUT Annual Performance Plan 2015 revealed that alignment at the executive level of operation is ensured and monitored. Executive management portfolios follow a common approach in identifying strategic priorities, including the strategic alignment of business processes aimed at operationalising identified strategic priorities, as already indicated above. However, this approach is not filtered down to lower levels of management and hence the lack of common approach regarding business process reengineering at levels other than executive level. It is imperative that a common approach should be introduced at all levels within the University to ensure uniformity and encourage the strategic alignment of business processes.

Question A6

The following statements were made in response to question A6, which relate to the effectiveness of the process followed by different operational units within the academic administration environment of TUT when they embark on business process reengineering.

[Manager 32] "A group approach is followed and staff members from all relevant environments form part of reengineering teams. The approach is effective as it promotes cross-functional reengineering of business processes.

[Manager 9] "When there are business processes to be designed or reengineered, normally task teams are formed to deal with the situation and investigate best possible way of designing or improving the existing business processes. The approach is effective to a certain extent as consultation is not widely done. Often only senior members of staff become task team members and staff members on the ground are excluded."

[Manager 21] "All processes are documented and development of business processes is done with the involvement of all staff members. Inputs are solicited from all relevant environments before business processes are finalised. The process followed to design and reengineer business processes is effective."

[Manager 22] "The process followed to reengineer business processes tends to be a lengthy process. Without guidelines, it is difficult to measure its effectiveness."

[Manager 19] "The process that is currently followed to reengineer business processes is not effective. There is a need for the process to be streamlined so that a uniform approach could be followed."

The above responses once again confirm a need for the University to have a standard framework to guide the manner in which business processes can be reengineered. A business process reengineering framework with a step-by-step indication of activities to be undertaken when business processes are reengineered could assist in ensuring that all environments within the University follow the same approach. The framework should also identify performance targets so that various environments within the University are able to evaluate and monitor performance towards the realisation of predetermined performance targets in line with other institutional strategic documents referred to earlier.

Question A7

Participants were asked to express their opinions and perceptions as to whether the strategic reengineering of business processes is encouraged, promoted or emphasised University-wide. The question was posed against the background that an institution, such as TUT, can still promote the strategic reengineering of business processes in the absence of a business process reengineering framework.

[Manager 8] "It is vital that environments should be encouraged to strategically reengineer business processes. However, currently strategic approach to business process reengineering is not encouraged, promoted or emphasised."

[Manager 17] "It is important for all environments to reengineer business processes in accordance with the strategies of the University. If the environments are not familiar with the University strategies they will operate against the prescripts of the strategic plan. When strategic sessions are held, environments are encouraged to align their strategies and business processes with institutional strategies. That in itself is an indication that environments are encouraged to strategically reengineer their business processes."

[Manager 12] "I am not aware of any efforts that were or are aimed at promoting or encouraging environments to always ensure that they strategically reengineer business processes."

[Manager 10] "My view is that there is no promotion or encouragement for environments to always strategically reengineer their business processes."

[Manager 28] "There is no strong encouragement for business processes to be aligned to strategies as one only hears of it once after a while and thereafter it falls off. My view is that promotion of strategic reengineering of business processes should be aggressively done."

The opinions and perceptions expressed are that the University is not aggressive in relation to the promotion of strategic reengineering of business processes. It is imperative to mention, once again, that the opinions and perceptions related to the lack of promotion of strategic reengineering of business processes is more prevalent at lower levels of management, confirming earlier findings that it seems that the focus regarding strategic planning and alignment of business processes to institutional strategies is more at executive level than the lower levels of operation (see a summary of responses to question A5). The promotion for environments to strategically reengineer business processes should be expanded to the entire University.

Question A8

Stakeholder satisfaction is the key for institutions across sectors to achieve competitive advantage in order to survive. To cover this important element of business process reengineering, question A8 concentrated on sourcing views on the extent to which the academic administration business processes are focused on the stakeholders. As the academic administration environment of TUT deals mainly with students, the responses provided were mainly centred on students as the main or principal stakeholder.

[Manager 13] "In general, business processes are stakeholder focused, mainly regarding students as they are our key stakeholder. It is at times problematic, as the requirement for satisfying the needs of students has to be balanced with the application of rules and regulations. That balance should be maintained all the time."

[Manager 27] "Business processes are student focused though the balance has to be maintained all the time as everything must be done in accordance with prescripts of the University rules and regulations."

[Manager 6] "Business processes are stakeholder focused and user-friendly to students as students are considered as the main stakeholder of the University. Needs of students are always considered as students are our main clients and must always be kept happy."

[Manager 32] "Business processes are stakeholder focused, specifically when it comes to students as the environment deals mainly with students."

[Manager 25] "Business processes are very stakeholder focused. I believe that stakeholder care and focus and delivering good service to students and other stakeholders is very important and business processes are continuously improved so that needs of different stakeholders could be satisfied all the time."

It is evident that the academic administration environment of TUT design and reengineer its business processes with the intention to satisfy the needs of students who are considered as the main stakeholder of the University. A literature review also revealed in sections 2.6 and 3.9.2 that the foundation of business process reengineering should be the satisfaction of the needs of stakeholders or customers. An analysis of the TUT Strategic Plan 2014–2019 also revealed that stakeholder satisfaction, specifically students, is a strategic imperative within the University. From the preamble to institutional strategic goals and objective, the emphasis is on satisfying the needs of students at all levels of study.

The TUT Student Satisfaction Survey Report 2013 reflects that during 2013 the office of the Registrar initiated a student satisfaction survey in an effort to provide the TUT community with an overview and a diagnostic tool to make improvements to, amongst others, services and to make the University a more student-centered university. The TUT Admission Quality Audit Report 2013 and the TUT Registration Quality Audit Report 2013 indicate that the academic administration environment also volunteered to be quality audited during the 2013 academic year to identify the strengths and weaknesses in its policies and business processes in accordance with the notion of continuous improvement of business processes. The quality audit was done to improve the manner in which the academic administration environment renders services to its principal stakeholder, the students.

Question A9

Considering that a literature review located business process reengineering within the systems management approach and that universities function as an open system (see section 2.2.1), question A9 sought opinions on whether the academic administration environment of TUT considers external influences when business processes are reengineered. The second part of the question sought views regarding internal interaction and consultation during business process reengineering.

[Manager 8] "External factors are considered to avoid conducting business in a way which is against what is guided by the external environment. Engineering or reengineering of business processes which have an impact on what happens within other internal environments is a consultative process."

[Manager 28] "External requirements and conditions are taken into consideration and internally the environment mostly is totally dependent on the support from other environments and as a result consultation cannot be avoided."

[Manager 25] "When business processes are reengineered external influences are always considered. Most of what the environment does is legislated and managers have a responsibility to always ensure that external requirements and developments with high education are taken care of through revision and improvement of business processes. Internal consultation also takes place whenever necessary."

[Manager 11] "External and internal influences and conditions are considered each time business processes are designed or reengineered. Internal consultation is a must."

[Manager 6] "External and internal factors are considered during business process reengineering. Legislation and requirements from the external environment are normally complied with to avoid engaging in activities which are in conflict with what the University is expected to do. Internal consultation also takes place and views from other environments are also considered."

Environmental scanning is critical for the success of public higher education institutions; as they function as an open system they must constantly keep abreast of developments taking place in the environment in which they operate. The systems management approach also calls for institutions across sectors to consider institutional conditions and resources as well as the interaction of various environments within institutions such as TUT. It is evident from the above responses that both external and internal factors are considered when the academic administration environment of TUT reengineers its business processes. The views expressed also acknowledge the need for a cross functional approach in business process reengineering. Consistent with the systems approach to management perspectives expressed in section 3.2.4, the TUT Strategic Plan 2014–2019 also considers environmental analysis as one of the drivers or success factors of its strategies.

Question A10

As the successful application of business process reengineering requires relevant knowledge and skills, it was thus imperative to also obtain views on the knowledge, skills, and experience of academic administration staff members regarding business process reengineering and the execution of business processes. This question was thus aimed at sourcing views related to knowledge, skills, and experience of staff members in relation to business process reengineering.

[Manager 8] "As much as academic administration staff members are experienced and have skills required to successfully execute business processes relevant to the environment, knowledge required for staff to successfully embark in business process reengineering is still lacking."

[Manager 13] "Members of staff with knowledge, skills, and experience related to the process of reengineering business processes are few and the level of understanding is limited. However, staff members have the necessary skills, knowledge, and experience to execute business processes successfully."

[Manager 15] "Members of staff within the environment do have relevant knowledge and skills and are therefore well equipped to can be able to reengineer business processes successfully. However, continuous training is needed to improve the understanding of staff. It is also imperative that staff should be trained on the new ways of conducting business before new business processes are implemented."

[Manager 19] "Staff members are knowledgeable and have required skills for them to can be able to perform all their duties with easy. They also know the basics of what business process reengineering is all about. Training provided to junior staff members is aimed at the execution of daily tasks and not reengineering as that is the responsibility of senior staff. However, senior staff members are clued up with details regarding business process reengineering."

[Manager 18] "Staff members who participate in business process reengineering are knowledgeable. Other staff members also have the skills to execute business processes relevant to the environment and training is also provided after reengineering to equip staff members with skills necessary for them to implement new business processes."

It is clear from the above statements that the general view is that staff members within the academic administration environment of TUT possess the necessary experience, skills, and knowledge to perform their tasks successfully but there is nevertheless the need for all relevant staff members to be equipped with the relevant BPR skills and knowledge to improve the chances of the environment to strategically reengineer business processes successfully.

Question A11

A literature review exposed in section 2.2.2 that the main objective of business process reengineering is to achieve performance improvements. Question A11 was asked so that the participants could express their views on whether business processes reengineered, within the academic administration environment of TUT, in the recent past contributed to any performance improvements.

[Manager 28] "The intention is to improve performance each time business processes are reengineered. Even though there is no formal instrument to measure effectiveness, performance targets are generally met although at times this is achieved after various refinements."

[Manager 31] "One of the outcomes of business process reengineering is that it provides you with an opportunity to apply best practices all the time and this often lead to improvements in the manner in which service is delivered. This is the reason why continuous improvement of business processes is so vital."

[Manager 17] "Planning is an important aspect of business process reengineering. If planning is done well there is no way in which business process reengineering could not lead to performance improvement. Business processes reengineered recently contributed to performance improvement."

[Manager 10] "Yes, I can say that business processes recently reengineered contributed to performance improvement."

[Manager 21] "There is a definite output in terms of business processes and reengineering efforts normal lead to improvement in the manner in which services are rendered to students and other stakeholders."

The business process reengineering operational definition stated in section 1.2.1 is aligned to the assertion that business process reengineering is aimed at achieving improvement in institutional performance across sectors. The above statements confirm that improvement in institutional performance is also an intended outcome of all business process reengineering exercises within the academic administration environment of TUT. Institutional performance improvement was also identified in section 3.9.1 as one of the core common elements between business process reengineering and strategic planning.

Considering that performance improvement is sometimes only achieved after the refinement of new business processes illustrates the importance of applying a continuous approach to business process reengineering. As reflected in sections 2.4 and 3.6.3, continuous approach provides for monitoring and evaluation during implementation to facilitate the readjustment of strategic plans and business processes until the required performance level is achieved.

Question A12

Opinions and perceptions on the general commitment and support of senior management, including commitment and support with regard to business process reengineering, were also sought through question A12. The responses were as follows:

[Manager A10] "The support and commitment from senior managers within the portfolio is wonderful. They are committed to ensuring that business processes are successfully reengineered all the time."

[Manager 15] "General support is provided by senior managers within the academic administration environment, however, financial support is provided to a limited extent due to lack of enough financial resources. Human resources provision is also made should there be a need."

[Manager 16] "Support in general is provided. Financial support is also provided within the limits of available resources. However, there is a challenge regarding human resource provision. The way the environment is structured is also not helping."

[Manager 24] "Senior managers are committed to ensuring that the environment succeeds with regard to fulfilling its mandate and financial support is also provided to a certain extent due to limited funds."

[Manager 26] "Support and commitment from senior managers within the environment regarding ideas in relation to business process reengineering is there. The challenge is that staff members involved in reengineering are not released from daily operations and financial support is limited due to insufficient funding as the University does not have a budget provision specifically for reengineering projects."

Senior management support and commitment play a critical role in the successful application of business process reengineering. From the above responses, it is clear that general management support is provided, including when business processes are reengineered. However, limitations in the form of insufficient funding and human resources challenges were also highlighted. Within the constraints of available funds, it is imperative that an annual budget provision should be made specifically for business process reengineering projects that are of strategic importance to the University. The issue raised regarding the manner in which the environment is structured should also be addressed, as it appears that it hampers the successful execution of business processes. Although business process reengineering needs dedicated teams, whether to release team members from their daily operations should be informed by the nature and scope of the business process reengineering project.

Questions A13 and A14

Participation by key staff members during BPR is considered critical for the successful application of business process reengineering. The responses to questions A13 and A14 below indicate the current status regarding the level of staff members' involvement in business process reengineering.

[Manager 6] "I participate in business process reengineering projects as a team member mainly because of my position and personal interest in business process reengineering activities. Yes and no to the involvement of junior members of staff. They may be involved because of their experience and knowledge of what happens on the ground. Their daily involvement in operational activities places junior members of staff in a better position to can be able to make valuable inputs. However, logistically it is not practically possible that all staff can be invited each time when business processes are reengineered."

[Manager 7] "I do take part in reengineering efforts as a facilitator, specifically when reengineering is aimed at improving campus specific business processes. Viewpoints of staff members when business processes are reengineered are necessary. Staff members should thus be

consulted before and during business process reengineering and their views should also be taken into account."

[Manager 8] "I feel that I am part of business process reengineering efforts. I participate as a facilitator and team member depending on the nature of the business process being reengineered. The role of staff members when business processes are reengineered is vital and the importance of their views should be recognised. When you reengineer, you do not only think strategically as business process reengineering is also about processes applied mostly at operational level."

[Manager 9] "I do form part of business process reengineering efforts and normally participate as a team member. Staff members at lower levels of operation must be involved when business processes are reengineered on the basis that usually the people who are hands on can bring ideas which are very valuable."

[Manager 31] "I do provide leadership during reengineering but normally I let the senior subordinates facilitate reengineering of business processes relevant to their respective areas of operation. Normally I only involve senior subordinates with an understanding that they also consult with those staff members who report directly to them and that they do consider and value their inputs. I am of the view that inputs of all staff members should be considered regardless of level of operation."

It is evident from the above responses that participation by staff members at all levels of operation is considered vital for the successful application of business process reengineering. There is a strong emphasis on the involvement of staff members at lower levels of operation considering that they are the ones who execute business processes. The emphasis is based on the understanding that being at operational level exposes them to the daily challenges experienced when business processes are executed. However, it is important to highlight that as participation is not limited to forming part of reengineering teams, other available options that could be used to source inputs from all staff members should be explored. As it was clearly indicated by manager 6, while involvement of all members of staff in business process reengineering is important, it is practically impossible. As staff members are considered to be the best positioned resources to bring success in business process reengineering, as discovered in section 2.2.2, staff members should be made to feel part of the reengineering process and should also be equipped with the necessary skills and knowledge required for them to embark in business process

reengineering successfully, including the execution of reengineered business processes (Hammer & Champy, 1993; Davenport, 1993).

Question A15

As indicated in sections 2.6 and 3.9.7, in a technology driven world, utilisation of information technology cannot be ignored. The literature review revealed in section 2.2.2 that as with human resources, the application of appropriate enabling information and communication technology is also critical for the success of business process reengineering. The aim of question A15 was to solicit views regarding the importance of utilising information technology as a tool to facilitate the successful application of business process reengineering within the academic administration environment of TUT.

[Manager 17] "We live in a technology driven world. It is imperative to use information technology as a tool to facilitate reengineering."

[Manager 18] "Utilisation of information technology during business process reengineering is important. If you have technology which can assist you why not use it."

[Manager 22] "As a university of technology it is imperative that we must utilise the technology at our disposal, including when business processes are reengineered."

[Manager 23] "Business process reengineering is supposed to be technology driven and information technology plays an important role in that regard."

[Manager 28] "Utilisation of information technology during reengineering is necessary. Fortunately enough the University has business analysts who assist when business processes are reengineered regarding mapping up of business processes and providing technical support."

The opinions and views expressed by the sampled managers reflect general consensus regarding the utilisation of information technology as a tool to facilitate the successful application of business process reengineering and are consistent with the findings of a literature review that the application of information technology is a useful enabler in business process reengineering. The opinions expressed thus support the theoretical claim that the application of information technology is the key to the success of business process reengineering (see section 2.2.2).

Question A16

Question A16 was set to obtain opinions and perceptions regarding challenges which could prevent the academic administration environment of TUT or the entire University from reengineering business processes such that they could contribute to the enhancement of strategic planning.

[Manager 8] "Lack of guidelines and an office to drive and facilitate business process reengineering are some of the challenges that prevent the environment from strategically reengineering business processes."

[Manager 19] "Lack of common understanding, unwillingness to follow a uniform process, and lack of effective communication are the main challenges which prevent environments from reengineering business processes strategically."

[Manager 22] "The main challenges which prevent the environment from strategically reengineering business processes are that staff members are too busy with operations and too comfortable with the current way of doing things."

[Manager 25] "Staff structures need to be reviewed and all positions be filled, financial resources should be provided, and members of staff involved in business process reengineering should be excused from daily operations for business process reengineering to be successfully applied."

[Manager 26] "Having dedicated reengineering teams, following a cross-functional approach, setting of time lines, development of project plans, and insisting on regular feedback could assist regarding improving the chances of reengineering business processes successfully."

[Manager 29] "Lack of training opportunities, lack of promotion of strategic alignment of business processes, and the manner in which the environment is structured are some of the challenges which prevent the environment from achieving success during business process reengineering."

[Manager 30] "Lack of a business process reengineering framework is the main challenge that prevents the environments from reengineering their business processes strategically."

Some of the challenges identified by the participants are consistent with causes of failures recognised during the early stages of business process reengineering in the literature review in section 2.5. It is vital to find solutions to improve the chances of the academic administration environment of TUT and the entire University to reengineer business processes that could contribute to the enhancement of strategic planning. The core elements identified above would be incorporated with elements identified during a literature review and serve as the basis upon which the business process reengineering framework the research seeks to propose would be developed.

Question A17

Participants from all sub-populations were requested to suggest elements that should be included in a framework that could assist TUT to ensure that business processes are strategically reengineered.

[Manager 1] "Identification of key business processes; strategy alignment; linking of critical success factors to different steps and phases within the framework; implementation, monitoring, evaluation, and readjustment; and communication channels should form part of the proposed BPR framework."

[Manager 2] "Communication, standard way of approaching business process reengineering projects, considering the University as a complete environment, consideration of external environment influences, strategy alignment, and implementation of better ways of monitoring and evaluating implementation are some of the elements which should be included in a business process reengineering framework."

[Manager 3] "Elements to be considered in a BPR framework should include internalising business process reengineering within the University, definite phases and steps to be followed, stakeholder consultation, briefing sessions, communication, active participation by all key role players, monitoring and reporting on progress, refinement were possible, and definite reengineering cycle/s."

[Manager 4] "Participation of stakeholders in business process reengineering, consultation, proper planning, and following of the SMART principle are elements which should be included in a BPR framework. The framework should also be user friendly."

[Manager 5] "Corporate governance approach, determination of performance problems, critical success factors, problem analysis, identification of drivers for strategic goals and objectives, identification of specific interventions, and consideration of financial implications through proper costing are the core elements necessary for a BPR framework to be successfully applied."

[Manager 6] "The reengineering process must be clearly stated, the existence of the framework must be communicated to the entire University, and the need for environments to always ensure that they engineer or reengineer their business processes in line with the University strategies must be emphasised for the framework to be successfully applied."

[Manager 10] "Sensitising staff and making them aware of the need to reengineer, involving all staff members regardless of levels of operation, getting inputs and sifting when necessary, and implementation of new business processes are critical phases around which the framework should be structured."

[Manager 26] "Specification of time lines; identification of inputs and outputs; securing of senior management support; and commitment in relation to provision of financial, human, and other resources should be made prerequisites for reengineering projects."

The responses include a list of reengineering steps to be incorporated in the framework the researcher seeks to propose and the elements considered to be critical for the framework to be successfully applied. Like the elements identified in response to question A16, the core elements would be incorporated in the business process reengineering framework to be proposed later in the research. This is of critical importance, as it could help to ensure that business processes are reengineered so that the University strategic planning process is enhanced.

Section B: Distant campuses and managers responsible for quality, planning, and risk management

Question B1

Awareness of the existence of a University strategic plan is critical for environments to strategically reengineer their business processes. Question B1 required the participants to express whether they feel there is enough awareness regarding the existence of the TUT strategic plan. This question ties up with questions A1 and A2.

[Manager 1] "Awareness is limited and not enough. Level of awareness depends on the level at which different individual members of staff operate within the University as well as the environments they are part of. There are environments where awareness is a prerequisite for the day to day performance of duties."

[Manager 2] "There is a need for continuous engagement between the environments responsible for coordinating and driving strategic planning and corporate communication to explore effective and efficient ways of communicating strategic planning activities. The environment responsible for corporate communication can be a vital role player in terms of raising strategic planning awareness to the University stakeholders."

[Manager 3] "Awareness is lacking. Under normal circumstance one would expect that a conscious decision and processes are embarked on to ensure that environments are visited by those responsible for driving and coordinating strategic planning in order for members of staff to understand where the institution was and why the need to change and what the new changes entail. However, this was not done after the adoption of the latest strategic plan and it was solely left to line managers to explain to members of staff as to what the strategic plan entails. This is not as solid as one would have achieved had members of staff from the relevant environment visited different environments and do the explanation themselves."

[Manager 4] "Awareness is not there. Staff should be made aware of the latest strategic plan and its implications. There is a need for senior management to bring awareness by visiting different campuses and talk to members of staff about the strategic plan. There should also be more guidance and help to managers and staff at lower levels of operation to assist them regarding how strategic plans at those levels are formulated such that they tie with institutional strategies."

[Manager 5] "Awareness is limited mainly to those managers who participate during strategic planning. However, there is a need for the University community to be aware and familiar with the strategic plan. Engagement is necessary between the environment responsible for coordinating strategic planning and the Corporate Affairs and Marketing division as the later can play a crucial role in ensuring that the University strategic plan is brought to the attention of all stakeholders."

It is clear from the above responses that awareness of the TUT strategic plan is inadequate. The reasons that some managers who were sampled from the academic administration environment of TUT expressed views which reflect their unfamiliarity with the University strategic planning process could be partly attributed to their lack of awareness. More efforts are needed to ensure that awareness is raised for staff members University-wide to understand the strategic planning process, including the contents and implications of the strategic plan. Creating awareness should include making staff members across TUT realise the importance of their roles in making sure that strategic goals and objectives set for the University are successfully realised. As suggested by some of the participants, cooperation between the environments responsible for coordinating strategic planning University-wide and corporate affairs and marketing is vital for the level of awareness to be improved.

Question B2

Views regarding the extent to which the TUT strategic goals and objectives are realistic and achievable were solicited through question B2. The following responses were provided:

[Manager 2] "If one drills down to strategic objectives, there are substantially achievable and realistic. Strategic goals and objectives are related to key performance indicators and risks associated with each goal and objective. The strategic plan also incorporates ways and means of achieving strategic goals and objectives. There are mechanisms, activities, and projects that are planned in order for various environments within TUT to work towards the achievement of individual strategic goals and objectives."

[Manager 3] "The strategic goals and objectives are realistic and achievable to a certain extent. One would have to wait for the implementation plans to be developed and thereafter is then that one would be able to make a judgement regarding the extent to which strategic goals and objectives would be achieved. Realisation of strategic goals and objectives would only be achieved provided financial, human, and other resources required for the successful implementation of crafted strategies are made available to various environments responsible for operationalising institutional strategies."

[Manager 4] "Often in many institutions senior management develop goals and objectives which are not achievable. This is mainly due to lack of consultation with members of staff at lower levels. Senior managers are normally not clued up with operations and crafting strategies without

consulting members of staff on the ground at times leads to the development of goals and objectives which are not informed by practical realities."

[Manager 5] "Latest strategic goals and objectives are achievable and realistic as they were formulated after a broader consultative process which involved soliciting inputs from faculties and support environments. The strategic plan incorporates performance indicators and targets for all second- level objectives. There are also executive management flagship projects that emanated from the strategic plan. These flagship projects are planned such that they could contribute to the achievement of institutional goals and objectives."

It can be deduced from the above responses that strategic planning at the University is a consultative process, as it involves sourcing inputs from all environments within the University. Based on that understanding, the perception from the sampled managers is that set strategic goals and objectives are realistic and achievable. It is imperative to highlight that, in line with the views expressed in response to questions A1, A2, and A3, it is evident from some of the views expressed above that consultation occurs mainly at senior levels of management and often members of staff at lower levels of operation are not properly consulted and briefed about strategic planning in general. For the University to achieve its strategies successfully there exists a need for the broader consultation referred to above to include all managers regardless of their level of operation.

Question B3

Institutions reengineer their business processes to improve performance and to, amongst others, satisfy the needs of stakeholders. Given this statement, question B3 sought to source opinions and perceptions as to the extent to which stakeholder focus principles are applied during business process reengineering University-wide. The purpose of repeating the question to distant campus managers as well as manager responsible for quality, planning, and risk management was to confirm and verify opinions and perceptions expressed by sampled participants from the academic administration environment. The focus in this instance was on stakeholder satisfaction, mainly students, University-wide i.e. not limited to a specific environment within the University.

[Manager 1] "The University strategic plan is student focused. The preamble of the strategic plan places an emphasis on ensuring that students successfully transit from secondary to higher education. Furthermore, it focuses on quality teaching and learning, postgraduate studies, and research and innovation so as to ensure student success at all levels of study."

[Manager 2] "The student is the principal stakeholder as the academic project is the main project why the University exists though it can be supplemented with other activities. Three of the four institutional strategic goals are student focused and everything is centred on students as they are considered the principal stakeholder."

[Manager 3] "Not sure about the extent to which students were consulted during the crafting stage of the latest strategic plan. But the view is that the plan is student centred as it is aimed at addressing the needs and aspirations of students. However, it is imperative that all the dynamics of the students the University deals with are strategically addressed."

[Manager 4] "In general the strategic plan is stakeholder focused. Considering that students are the University's main stakeholder, the latest strategic plan is student focused and there is also a focus towards members of staff as well. However, inputs from stakeholders are not necessarily solicited or considered when strategies are developed."

[Manager 5] "The TUT Strategic Plan 2014 – 2019 is stakeholder focused. Considering that the academic project is the main reason why universities exist necessitated the placing of students at the core of the strategic plan. The strategic plan also highlights other activities which are central to the existence of universities and thus focusing on all key stakeholders of the University."

It is clear that stakeholder focus is a strategic imperative within the University. The TUT Strategic Plan 2014–2019 is centred on students and hence the focus from the preamble and throughout the strategic plan is mainly around satisfying the needs and aspirations of students. While the strategic plan also highlights other activities which are central to the existence of the University, as manager 5 indicated in response to the above question, it is evident that students are considered as the principal stakeholder of the University considering that all but one of the strategic goals set by the University are aimed at satisfying the needs of students. It is imperative to also point out that Goal 3 of the TUT Strategic Plan 2014–2019 which is aimed at promoting partnerships with other stakeholder groupings, highlights the importance of other stakeholders as well. Consistent with one of the core common elements identified in section 3.9 and considering the strategic importance of stakeholder satisfaction, it is of critical importance that business processes be reengineered to satisfy the needs of all strategic stakeholders.

Question B4

As strategic planning takes place at different levels with an institution, as exposed in section 3.4, the participants were asked to express their opinions regarding the extent to which strategic planning efforts are aligned at different levels of operation. Though strategic planning at each level of operation has a distinct role to achieve in the realisation of institutional strategies, strategic planning efforts at different levels must be aligned in a well-designed strategic planning system, as exposed in section 3.3.

[Manager 1] "It is not clear whether environments are engaging in strategic planning or not. There is a misunderstanding as to what constitute strategic planning because of lack of common flitting through as to what strategic planning entails. Environments embark on operational planning under the impression that the outcome of the exercise will be a strategic plan. Within environments where there is a clear understanding as to what constitutes strategic planning, there seems to be an alignment of strategic planning efforts at different levels of operation."

[Manager 2] "Determination of the way the University has implemented strategic goals and objectives needs to be evaluated. However, a personal view is that strategic planning efforts should be aligned at all levels of operation."

[Manager 3] "Alignment of strategic planning efforts at different levels of operation is supposed to be there. Under normal circumstance one would expect an institutional strategic plan to inform strategic planning at lower levels of operation. The problem is that it is assumed that managers at various levels are trained in management. The reality is that there are managers who are not qualified to craft strategic plans. Cascading of strategies to lower levels is also a challenge. It is critically important that executive managers should develop their own strategies as individuals or a collective and cascade their strategies to lower levels within their respective environments. If that is done, surely there must be articulation and alignment of strategies from the highest to the lowest level of operation."

[Manager 4] "The dynamic nature of TUT makes it difficult at times for strategic planning efforts to be aligned to strategic planning efforts at various levels of operations. The manner in which the University is structured also poses strategic planning challenges. It feels that often efforts are haphazard. It is imperative that there should be a clear direction as to who is supposed to do what within the context of strategic planning. There should be more direction so that all staff members could be on the same strategic planning path."

[Manager 5] "Alignment occurred at the highest level within the University. Linking of strategic goals and objectives to strategic or flagship projects was also done as already indicated so as to align strategic planning efforts at institutional level with what happens within various executive management portfolios. The idea was that executive managers should provide leadership regarding strategic planning that occurs at levels lower than the executive management level, including ensuring aligning strategies to be formulated at those levels to institutional goals and first- and second- level objectives."

Consistent with the findings presented in section 3.3, the feedback received confirms the importance and need for strategic planning that occurs at different levels of management to be aligned. It is once again important to highlight that while the intent is there, it is not filtered down to lower levels of management. The focus, as already mentioned more than once, is on aligning strategic planning efforts at the highest level within the University and paying too little attention to what happens strategically at other levels of management.

It is important that the intent to emphasise aligning strategic planning efforts, including the alignment of business processes to University strategies, is institutionalised, as this would assist in ensuring that the culture of alignment of strategic planning efforts and strategic reengineering of business processes is created University-wide. By so doing, issues identified as challenges related to some of the environments not aligning business processes to institutional strategies, as expressed in response to question A5, would be resolved. As much as there is an acknowledgement that executive and senior managers within various environments have a role to play regarding cascading institutional strategies to lower levels, including ensuring alignment, an aggressive institutional approach is needed considering that this is critical for the enhancement of strategic planning within the University.

Question B5

Alignment of business processes to institutional strategies is the key for institutions to strategically reengineer business processes to achieve competitive advantage. Hence question B5 was aimed at soliciting opinions regarding the extent to which business processes University-wide are aligned to institutional strategies.

[Manager 1] "Yes and no. Due to lack of an institutional framework to trigger reengineering, changes in strategies do not necessarily always translate to review of business processes. Sometimes strategies change and business processes would remain the same. Consequently, at

times one finds a disjuncture between institutional strategies and business processes of some environments."

[Manager 2] "It needs institutional research to authenticate one's judgement as to what extent business processes of various environments are aligned to institutional strategies. However, personal judgement is that environments are at times used to doing things in a certain way. To embrace change and to execute business processes in a different way, they take their time and at times there is resistance to change. Change must be embraced by staff members at all levels of operation, including senior managers. Alignment is there but to a certain extent. The adoption of a standardised methodology or a framework would improve the extent to which business processes could be strategically reengineered University-wide as that would force all environments to follow a particular standardised methodology or framework."

[Manager 3] "Alignment of business processes of various environments within TUT to the strategies of the University is done to a certain extent. The dynamic nature of the University, including the manner in which the University is structured, sometimes prevents the environments from aligning business processes to strategies."

[Manager 4] "It is work in progress. Most of the business processes are aligned. However, considering that we live in such a rapidly changing environment we sometimes need to adapt to changes taking place around us. Strategic planning is long-term, however, short-term changes are rapid and the University is supposed to continuously adapt to short-term changes, which sometimes is not possible."

[Manager 5] "Consistent with the response provided for one of the questions I have already responded to, alignment of business processes is more prevalent at the highest level within the University. Business processes aimed at operationalising strategic or flagship projects are strategically designed or reengineered. Alignment of business processes to University strategies at levels lower than the executive management level is the responsibility of line managers and is difficult to make a judgement on it."

The responses provided confirm the views expressed in response to questions A5, A6, and A8 that the strategic alignment of business processes is done to a certain extent. According to the above responses, this could be attributed to lack of an institutional framework, the dynamic nature of TUT, and misunderstanding regarding the roles managers at different levels of

operation are supposed to play within the strategic planning framework. Alignment is more prevalent at the executive level, as indicated above and verified through the analysis of University documents as already stated earlier in this chapter. Given the above responses, one can deduce that the adoption of a standardised business process reengineering framework to enhance strategic planning University-wide in a uniform, coordinated, and focused manner is imperative and in need of urgent attention.

Question B6

The incremental approach to BPR provides for the continuous improvement of business processes. For institutions to achieve this, it is imperative that the implementation of business processes is carefully monitored and evaluated. Question B6 was asked in order to determine the current status within TUT regarding the monitoring of implementation of business process improvement plans University-wide.

[Manager 1] "This is one area where the University is not doing well. During quality audits, efficiency and effectiveness of business processes are checked and recommendations made. However, monitoring and evaluation remains the responsibility of line management and the institution currently does not have a uniform approach to monitor the extent to which business process improvements plans are implemented."

[Manager 2] "Effective monitoring of the implementation of business process improvement plans can be done in a much better way if there is a mechanism in place to monitor and evaluate progress regarding the implementation process. Currently there is no standard way of monitoring and evaluating the extent to which reengineered business processes are achieving intended results."

[Manager 3] "The culture of monitoring implementation of business process improvement plans is not well promoted. However, one should appreciate the current initiatives regarding improvement of business processes from a quality perspective."

[Manager 4] "There is no effective way of monitoring implementation of business process improvement plans."

[Manager 5] "The intention is there, but there is no dedicated structure to fulfil the role of ensuring strict monitoring of the implementation of business process improvement plans at lower

levels of operation. Executive management flagship programmes are strictly monitored as the strategic plan provides for ways and means of monitoring and evaluating progress."

Once again there is a clear indication that the monitoring and evaluation of progress regarding the extent to which executive management portfolios are achieving flagship strategic programmes that emanated from the institutional strategic plan is done and there are mechanisms in place to track progress. However, it is also evident that the monitoring and evaluation of progress regarding the extent to which improvement plans, including quality audit improvement plans, are implemented at other levels of operation is not strictly done. It is of critical importance that mechanisms be put in place to ensure that the implementation of business process improvement plans is strictly monitored and evaluated to identify challenges and suggest remedial actions.

Question B7

Linked to question B6 and considering that a literature review exposed in section 2.4 that of late, continuous improvement of business process is generally the most favoured approach to business process reengineering, participants were asked to indicate, by responding to question B7, their perceptions regarding the extent to which strategic continuous improvement of business processes is promoted University-wide.

[Manager 1] "Culture of continuous improvement of business processes is promoted. However, mainly environments which go through a formal quality review process are the ones which benefit as the process facilitates for continuous adjustment or refinement of business processes."

[Manager 2] "The culture of continuous improvement and alignment of business processes to institutional strategies should be established and promoted as all environments within the institution are expected to work towards the achievement of common strategic goals and objectives."

[Manager 3] "Currently there is no structure to ensure monitoring, evaluation, and readjustment of business processes so as to ensure continuous improvement of business processes."

[Manager 4] "Currently the focus is not that much on business processes but on survival. The promotion or emphasis is not chased as the focus is on the survival of the University and as a result strategic reengineering of business processes is not promoted as it should be. However,

there is a drive to start doing it the right way. There are departments that are really doing their best."

[Manager 5] "The TUT Strategic Plan 2014 – 2019 allows for continuous improvement of business processes. Provision is made for environments to continuously revise business processes in order to maximise efficiency and effectiveness of various environments within the University. This is a reflection of an intention to promote continuous improvement of business processes across the institution."

The opinions expressed above reflect that the intent to promote the culture of continuous improvement of business processes exists. As indicated by manager 1, quality audit initiatives also allow for the continuous improvement of business processes. An analysis of the TUT Strategic Plan 2014–2019 confirmed the view expressed by manager 5 that the strategic plan provides for the continuous improvement of business processes in order to render services effectively. The TUT Risk Management Framework 2014 also advocates the continuous review of strategic and operational risks, including alignment of the risks to the strategic goals and objectives of the University. Measures should be put in place to ensure that the intent to promote continuous improvement of business processes is operationalised and that monitoring and evaluation is strictly enforced University-wide.

Question B8

Question B8 focused on the status with regard to the support of senior management in relation to business process reengineering and strategic planning. The question was informed by an understanding that senior management support is critical for the successful application of business processes reengineering. While the question is similar to question A12, question B8 was asked to get an institutional view and distant campus perspective in relation to senior management support.

[Manager 1] "Senior managers do support and are committed to ensuring that business process reengineering and strategic planning projects are successfully executed."

[Manager 2] "The commitment and support of executive management in relation to business process reengineering and strategic planning projects is there."

[Manager 3] "There is lack of commitment and support from senior managers of some environments. It is imperative for senior managers to avail themselves and show support and commitment to the concept of continuous improvement of business processes. Relevant members of staff should actively participate during reengineering discussions and the plight of all environments and campuses should be highlighted so that decisions informed by practical realities could be taken."

[Manager 4] "There is support and commitment from senior management."

[Manager 5] "The commitment and support of executive management in relation to providing leadership is visible during strategy formulation and flagship projects identification stage of strategic planning. All executive managers participate and show commitment to the strategic orientation of the University."

According to the views expressed above and in accordance with one of the core common elements identified in section 3.9, senior management support and commitment regarding business process reengineering and strategic planning is visible within TUT, except for some senior managers who fail to avail themselves for further engagements that are critical for the continuous improvement of business processes. The opinions are consistent with views expressed in response to question A12, which also reflect a general feeling that managers within the academic administration environment of TUT do provide support and are committed to ensuring that business processes are successfully reengineered and executed.

Question B9

As Universities function as an open system, there exists a need for them to interact with the environment within which they operate. As pointed out in section 3.2.4, the systems management approach also provides for the internal interaction of departments and operational units within an institution. Question B9 thus sought to determine the status at TUT in relation to the extent to which environmental conditions are considered and the cross functional approach to business process reengineering is promoted University-wide. The question is related to question A9, which was specific to the academic administration environment.

[Manager 1] "We do not have a choice. The University must always find a balance between what happens within the institution and beyond its borders. Business processes should always be guided and aligned with national legislation and directives from the Department of Higher

Education and Training as well as statutory and professional bodies. Internal consultation also takes place so as to ensure that there is an alignment of what happens within different components of the University."

[Manager 2] "The University should be looked at as a complete environment. By so doing, the cross-functional approach to business process reengineering and strategic planning would be easily achieved. A lot of desk top research is conducted in order to determine the needs and requirements of the external environment."

[Manager 3] "Environmental analysis is done each time business processes are reviewed with an intention to achieve performance improvements. One area which should also be considered is the extent to which the business community should be consulted, especially professional bodies as universities of technology are expected to respond to the needs of government, commerce, and other external entities. Though relevant external stakeholders are represented at the University Council level, there exists a need for regular consultations at operational level. It is also crucial for departments and operational units to interact and consult each other when business processes are reengineered as the University operates as one big system."

[Manager 4] "Often people tend to focus on what happens within their environments. There is a need for people to talk more. However, there are departments which always engage other environments when reengineering business processes that have an impact on what happens within other environments."

[Manager 5] "Environmental scanning is always done in order to identify threats, opportunities, weaknesses, and strengths. The current TUT strategic plan also reflects, amongst others, external environment and internal conditions and resources as drivers of the strategies of the University." As it has already been stated in this section (see a summary of responses to question A9), the TUT Strategic Plan 2014–2019 recognises the importance for the University to interact with the environment within which it operates. Furthermore, the strategic plan promotes the consideration of internal conditions and resources as a strategic imperative. The above remarks are consistent with the opinions and perceptions expressed in response to question A9 that environments within the University do consider external and internal influences whenever they embark on business process reengineering. The views expressed also confirmed that interaction between environments also takes place to ensure a cross functional approach to business process reengineering.

Question B10

Participants were asked to identify the main challenges which prevent environments within TUT from reengineering their business processes strategically from an institutional perspective.

[Manager 1] "Lack of a common institutional BPR framework, lack of common understanding of what constitutes strategic planning at different levels of operation, and lack of understanding of what needs to be done in order to align the strategic imperatives of the institution are some of the challenges which prevent some of the environments within the institution from reengineering their business processes strategically."

[Manager 2] "Resistance to change, lack of a standardised BPR methodology or framework, and lack of a policy document to regulate business process reengineering are the challenges that prevent the University from engineering or reengineering business processes in a strategic manner."

[Manager 3] "Challenges which prevent some of the environments from strategically reengineering their business processes include lack of a standard business process reengineering methodology or framework, lack of support from some of senior managers, involvement of inexperienced staff in some of business process reengineering projects, lack of management knowledge and experience with some of the managers, and the dynamic nature of the University."

[Manager 4] "Prioritising the urgent needs of the University, external factors beyond the control of the University, quality of students the University deals with, and size and complexity of the University are challenges which prevent the University from strategically reengineer its business processes."

[Manager 5] "To me lack of a standardised business process reengineering framework is the main challenge that prevents the University from engineering or reengineering business processes in a strategic manner. However, there are other institutional initiatives that are aimed at more or less achieving the same objective as already stated earlier on."

Most of the challenges mentioned are consistent with those provided in response to a similar question (A16), which was asked specifically in relation to challenges experienced within the academic administration environment. As already indicated, core common elements suggested will, together with the elements identified in section 3.9, form the basis upon which the proposed

framework will be based. Though it is not the intention of this research to resolve all the challenges raised, development of a comprehensive framework to guide the manner in which business processes could be strategically reengineered in a uniform, coordinated, and focussed fashion would serve as a departure point in ensuring that strategic planning within the University is enhanced, as reflected in section 1.3.

5.5 CONCLUSION

In this chapter, the empirical exploration and document analysis results were presented. The chapter also explained the methodology followed to collect the empirical data. Before the empirical exploration and document analysis results were presented and the method followed to collect empirical data was explained, a brief overview of the top organisational structure of TUT, a public higher education institution where the research was conducted, was provided. The main objective was to locate the academic administration environment of TUT, the main focus of the research, within the organisational structure of the University.

The results of the empirical exploration confirmed the problem that triggered this research (see section 1.3), namely, that TUT lacks a business process reengineering framework to guide the manner in which the University could strategically align and reengineer business processes. An analysis of TUT documents and the empirical exploration results revealed that although various strategic documents allude to the strategic alignment and reengineering of business processes, lack of a standardised methodology hampers the operationalisation of this noble intent, which is of critical importance for the enhancement of strategic planning within public higher education institutions, such as TUT.

In the next chapter, a framework intended to assist public higher education institutions, such as TUT, to strategically reengineer business processes will be presented. A literature review, empirical exploration, and document analysis results will serve as the foundation upon which the proposed business process reengineering framework will be based considering that the data collected from various data sets pointed to the same conclusion, namely, that strategic alignment of business processes is vital for institutions across sectors to realise improvements in institutional performance to achieve competitive advantage.

CHAPTER SIX

SUMMARY AND RECOMMENDATIONS: A BUSINESS PROCESS REENGINEERING FRAMEWORK

6.1 INTRODUCTION

The first chapter provided the orientation and context of the research and subsequently articulated a problem that triggered the research. The orientation and context offered an overview of the research and assisted in locating the research within the Public Administration field of study. Flowing from the research problem stated in section 1.3, the central theoretical argument on which this research is based was formulated in section 1.6 i.e. that BPR is a strategic endeavour and that the match between strategic planning and core business processes is critical for the enhancement of strategic planning. The central theoretical argument informed the theoretical framework upon which the chapters that focused on a review of literature relevant to the research were based.

The research objectives were formulated according to the central theoretical argument and research problem stated in sections 1.6 and 1.3 respectively. Relevant research questions were formulated to maintain focus and operationalise the identified research objectives. Chapter one (see sections 1.4 and 1.5) also identified the research objective and question relevant to the current status regarding BPR and its contribution to the enhancement of strategic planning within the academic administration environment of TUT. The findings provided in chapters two to five were thus based on triangulation of data from a robust literature survey to uncover the generic theoretical underpinnings and to pinpoint core elements of BPR and strategic planning; an exploration of the dynamics of public higher education, including an assessment of the prescripts from statutory and regulatory framework governing higher education; an analysis of TUT strategic documents; and opinions and perceptions of sampled respondents within TUT. This approach was followed to compare and contrast the data gathered from different data sets.

Based on the data collected from multiple data sets, as indicated above, this chapter seeks to propose a BPR framework that would assist public higher education institutions and TUT in particular, to find a solution to the research problem stated in section 1.3. The main contribution of this chapter is thus to present a proposed BPR framework that would assist TUT and other similar higher education institutions to strategically reengineer their business processes to

achieve performance improvements and eventually realise a competitive advantage. Before the presentation of a proposed BPR framework, a summary of the findings of the literature review and empirical exploration will be provided. The section will summarise only the findings of the literature review and empirical exploration which are of critical importance for the researcher to draw final conclusions regarding the extent to which each chapter contributed to the realisation of the different objectives that the research sought to achieve.

Given the above background, this chapter is divided into two sections.

- A summary of the findings and conclusions of an exposition, exploration, and analysis of the theoretical data that was reviewed in chapters two, three, and four as well as the findings of the empirical exploration outlined in chapter five.
- The proposal of a BPR framework (the main contribution of the research). The methodologies, phases, and steps that best capture the BPR and strategic planning processes, including core elements that serve as the best predictors of successful BPR and strategic planning endeavours across sectors, will be used as the departure point for the development of a BPR framework that would assist TUT to strategically reengineer business processes.

A presentation and discussion of the general conclusions of the research will also be presented and discussed.

6.2 SUMMARY OF THE FINDINGS OF A LITERATURE REVIEW

This section presents the findings of the literature review as exposed, explored, analysed, and assessed in the theoretical chapters of the research. The exposition and exploration of BPR and strategic planning theories, analysis of the dynamics of public higher education in South Africa, and assessment of the statutory and regulatory framework governing public higher education in the country was aimed at operationalising the research objectives the research sought to achieve; and this was done through a set of research questions formulated in section 1.5.

To summarise the findings, a graphic representation of the content of each chapter will be provided. Thereafter, a narrative summary indicating the extent to which each chapter attempted to achieve the relevant research objective/s is provided. The summary of the findings will be linked to the different chapters of the research considering that the chapter layout is according to the objectives that the research sought to achieve.

6.2.1 Exposition of theories and principles that underpin BPR (RO1) – chapter two

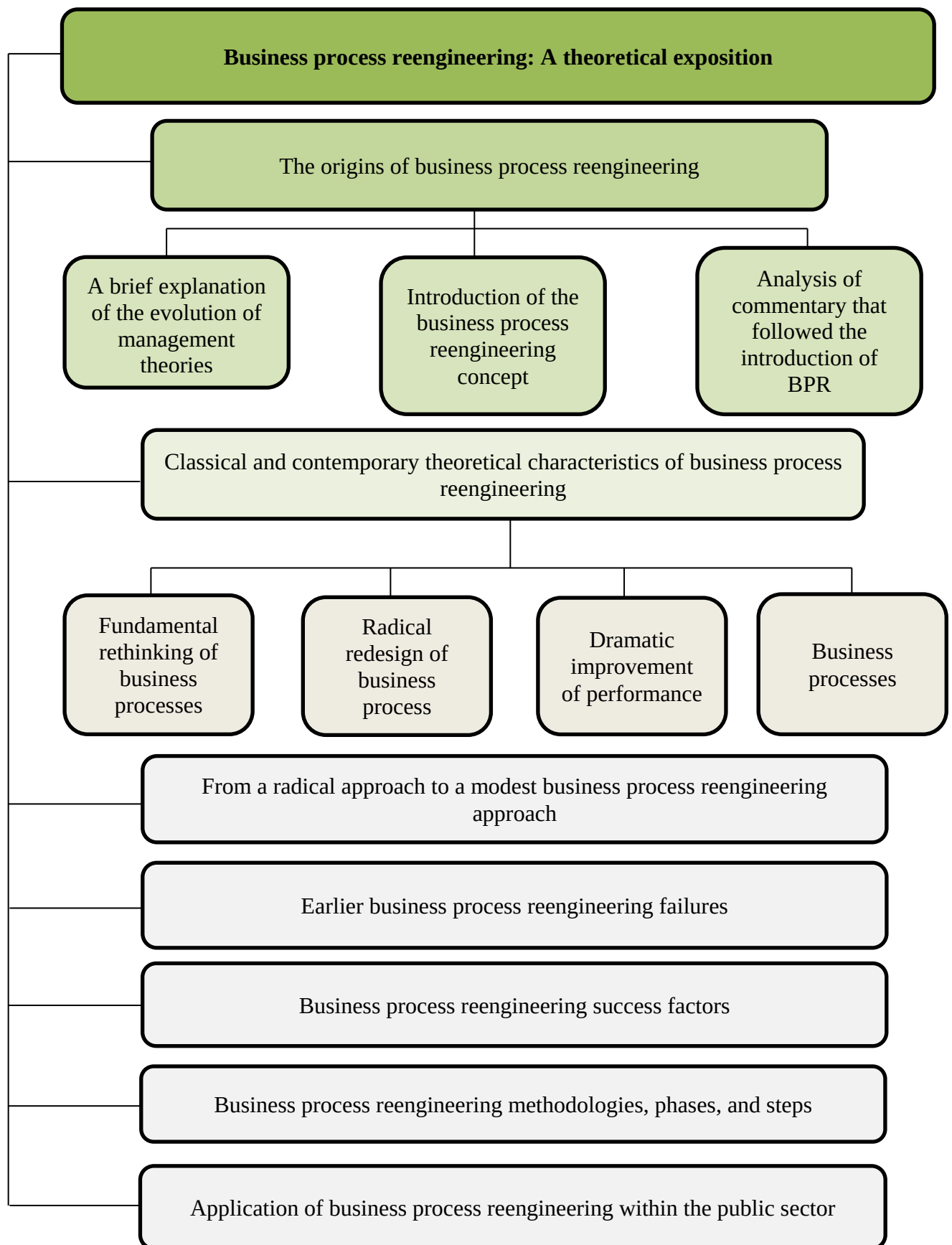


Figure 6.1: A summary of BPR theories and principles

Figure 6.1 is a graphic representation of chapter two that exposed theories, models, principles, and international best practices relevant to BPR to respond to and realise research question RQ1 and research objective RO1 respectively (see sections 1.5 and 1.4). An exploration of the evolution of management theories located BPR within the modern or contemporary management perspectives. The evolution of the BPR concept can be traced back to 1990 when the first two BPR articles by Hammer (1990) and Davenport and Short (1990) were published; these articles were followed up by two books that were extensions of the two articles. As discovered in section 2.3, the early BPR texts triggered academic interest and subsequently various authors conducted research on the concept, mainly concentrating on the analysis of the writings of the early BPR exponents.

The exposition of the BPR theory discovered that despite its early failures and criticisms, BPR can achieve significant improvements in institutional performance if well executed. Institutions worldwide continue to embark on BPR, which could be attributed to it being a powerful intervention tool that managers across sectors use to achieve improvements in institutional performance. The main reasons that authors, such as Chan and Choi (1997) Attaran (2004) and Suhendra and Oswari (2011), identified as causes of early BPR failure were more widespread during the "early days" of the evolution of the BPR concept. As indicated in section 2.5, further research done since BPR was introduced refined and developed BPR principles, led to a better understanding of BPR, and advanced its boundaries; hence the continued application of the concept. As reflected in section 2.3, questioning the fundamentals and radical redesigning of business processes to achieve dramatic improvements in performance is considered the cornerstone of BPR. Consequently, fundamental, radical, dramatic, and business processes are considered the key words that are central to BPR and form the basis of the classical and contemporary theoretical characteristics of the concept.

However, the exploration of the evolution of BPR (see section 2.4) revealed that with time the emphasis on a radical approach to BPR gave way to the reality that there is not only one way of reengineering business processes, as performance improvement can also be achieved through an incremental approach. Choosing between a radical and incremental approach to BPR is dependent upon institutional circumstances, including the nature of the performance problem that needs to be addressed. The summation this research is making, in accordance with existing theory, is that BPR has since shifted from a radical approach advocated by its originators to a modest approach. The modest approach allows for business processes to be either radically or incrementally reengineered depending on the nature of the performance problem at hand.

An exposition of BPR international best practices in section 2.6 revealed a need for institutions across sectors to identify a framework consisting of elements that are best predictors of BPR to increase their chances of improving institutional performance. Authors, such as Terziovski, Fitzpatrick, and O'Neill (2003), refer to these elements as the principles for successful BPR and factors that increase the likelihood of succeeding in BPR. Linking of factors that increase the likelihood of succeeding to a BPR methodology institutions choose to follow is also considered key to the success of BPR projects. In addition to identifying the principles for successful BPR, section 2.7 identified a methodology and associated phases and steps that seem to capture a sequence of BPR. As revealed in section 2.7, BPR can take different forms and consequently authors, such as Grover and Malhotra (1997), suggested different methodologies, phases, and steps that could be followed when embarking on BPR. These suggestions were compared and subsequently common phases were identified. The identified common elements were collectively used as the departure point when a BPR framework was developed in section 6.4.

BPR also found its way to the South African public sector. With globalisation, managerial practices within the South African public sector also had to change to be aligned with international best practices. The change was necessitated by a need to retain and protect local markets against international and private sector competition. As demonstrated in section 2.8, a literature review revealed that with the introduction of New Public Management (NPM), a number of countries, including South Africa, moved from traditional public administration. Although available literature claims that the application of NPM achieved little there are those who advocate for the preservation and continued application of its best practices. It is argued that the introduction of NPM in South Africa led to the adoption of management approaches such as BPR to increase effectiveness, efficiency, and competitiveness within the public sector, including public higher education institutions. The contextualisation of BPR within the broader South African public sector assisted in establishing an extent to which its application also forms part of the practice of public administration and, subsequently, its theory. As exposed in section 2.8, the application of BPR is as relevant within the public sector as it is within the private sector and hence its relevance to the study of Public Administration. Proposing a BPR framework and advocating the strategic reengineering of business processes within a public higher education institution, such as TUT, constitute an advancement of knowledge within the Public Administration field of study. It is imperative to indicate that the recognition of the application of BPR as a performance improvement tool within public higher education institutions necessitated the research on a BPR related topic. However, as stated in section 1.2, its application should be done with due consideration of the unique nature of the public sector.

6.2.2 Exploration of strategic planning theories (RO2 and RO3) – chapter three

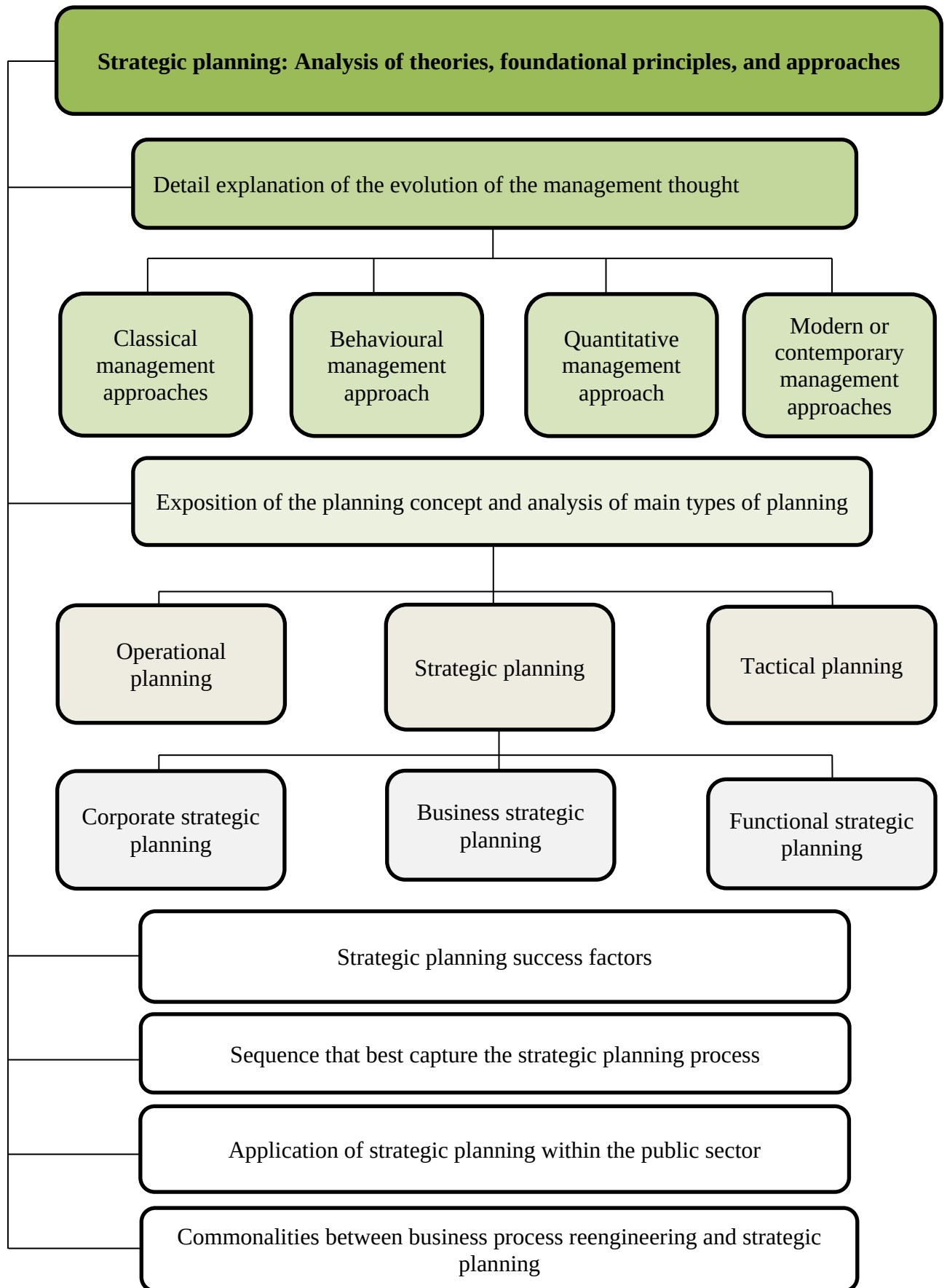


Figure 6.2: A Summary of strategic planning theories

Having established the correlation between BPR and strategic planning, chapter three analysed theories, foundational principles, and approaches related to strategic planning. The analysis was done to realise research objective RO2 and in response to the corresponding research question RQ2 formulated to operationalise the research objective identified in section 1.4. The evolution of the management theories was explained, from the classical management approaches through to modern or contemporary management approaches. The explanation was crucial considering that planning is a fundamental function of all those who operate at different levels of management. As revealed in section 3.2, just like business process reengineering, strategic planning is based on the systems management approach and was located within the modern or contemporary management approaches. The systems management approach advocates that for institutions across sectors to strategically reengineer their business processes, it is imperative that there be cross functional cooperation between various departments and operational units as well as interaction between the institution concerned and the external environment within which it operates. It is generally recognised that the management theories that preceded the current management approaches laid a foundation upon which the latest management theories are based. As a consequence, institutions across sectors are encouraged to follow a flexible management approach and to adopt best practices from different management theories.

An analysis of what constitute planning was also done to locate strategic planning within the planning framework. The main purpose of the analysis was to establish the link between strategic planning and other types of planning that are not strategic in nature. The analysis discovered that strategic planning, tactical planning, and operation planning are the main types of planning that are found in most institutions across sectors. Furthermore, it was revealed in section 3.3 that different types of planning differ from each other mainly in terms of purpose, focus, time horizon, nature of issues addressed, management level where planning is undertaken, conditions under which planning occurs, and level of detail. What is of critical importance is that different types of planning should be closely linked in a well-designed planning system: strategic planning is considered as the foundation for other types of planning. As stated in section 3.3, unlike other types of planning, strategic planning provides strategic directions for an institution.

An analysis of generic strategic planning theories, principles, and approaches revealed that strategic planning is associated with the type of planning that occurs at the highest level of management. As a consequence, institutional strategic planning is what some practitioners and commentators refer to when they talk of strategic planning. The assumption made is that strategic planning is only undertaken at the highest level within an institution and that it does not

exist at other levels of operation. However, further review of literature, as exposed in section 3.4, revealed that despite this assumption, there is general consensus that strategic planning occurs at all levels of operation within an institution. In line with the three basic levels of management, an analysis of strategic planning theories discovered that there are three levels of strategic planning, namely, corporate or institutional, business or departmental, and functional levels. A literature review in section 3.4 discovered that the complexity of strategic planning at different levels of operation differs as strategic planning at each level has a different focus. Considering that strategic planning across sectors is undertaken at all levels of operation, it is imperative that managers at all levels integrate and coordinate their planning efforts to ensure consistency in the overall strategic planning process of an institution concerned.

An examination of the strategic management process discovered that the concepts strategic planning and strategic management are often used interchangeably. However, an extensive literature review (see section 3.6) revealed that strategic planning is the first phase in strategic management and if properly executed, it lays a solid foundation for the successful execution of other strategic management responsibilities, such as strategy implementation, evaluation, and control. An analysis of the strategic planning success factors in section 3.5 contributed to the identification of key strategic planning drivers. The identified key drivers are considered the best predictors of a successful strategic planning process. The analysis, done in section 3.9 to respond to and realise research question RQ3 and research objective RO3, discovered that strategic planning and BPR share a number of commonalities. As reflected in section 3.9, performance improvement was found to be the main common element that reflects the interface between strategic planning and BPR. The identified core common elements that are crucial for the successful execution of BPR and strategic planning were the foundation upon which the framework that this research sought to propose was based.

A comparative analysis of the application of strategic management within the private sector and the public sector conducted in section 3.8 revealed that similar steps and phases are followed within both sectors but with due consideration of the unique and distinct nature of each sector. This serves as confirmation that like with BPR, strategic planning approaches are applied within the public sector in an attempt to improve performance and service quality. This research aligns itself with the theory that the attainment of a match between strategic planning and BPR across sectors should have positive effects on institutional performance and service delivery.

6.2.3 Higher education landscape in South Africa (RO4) – chapter four

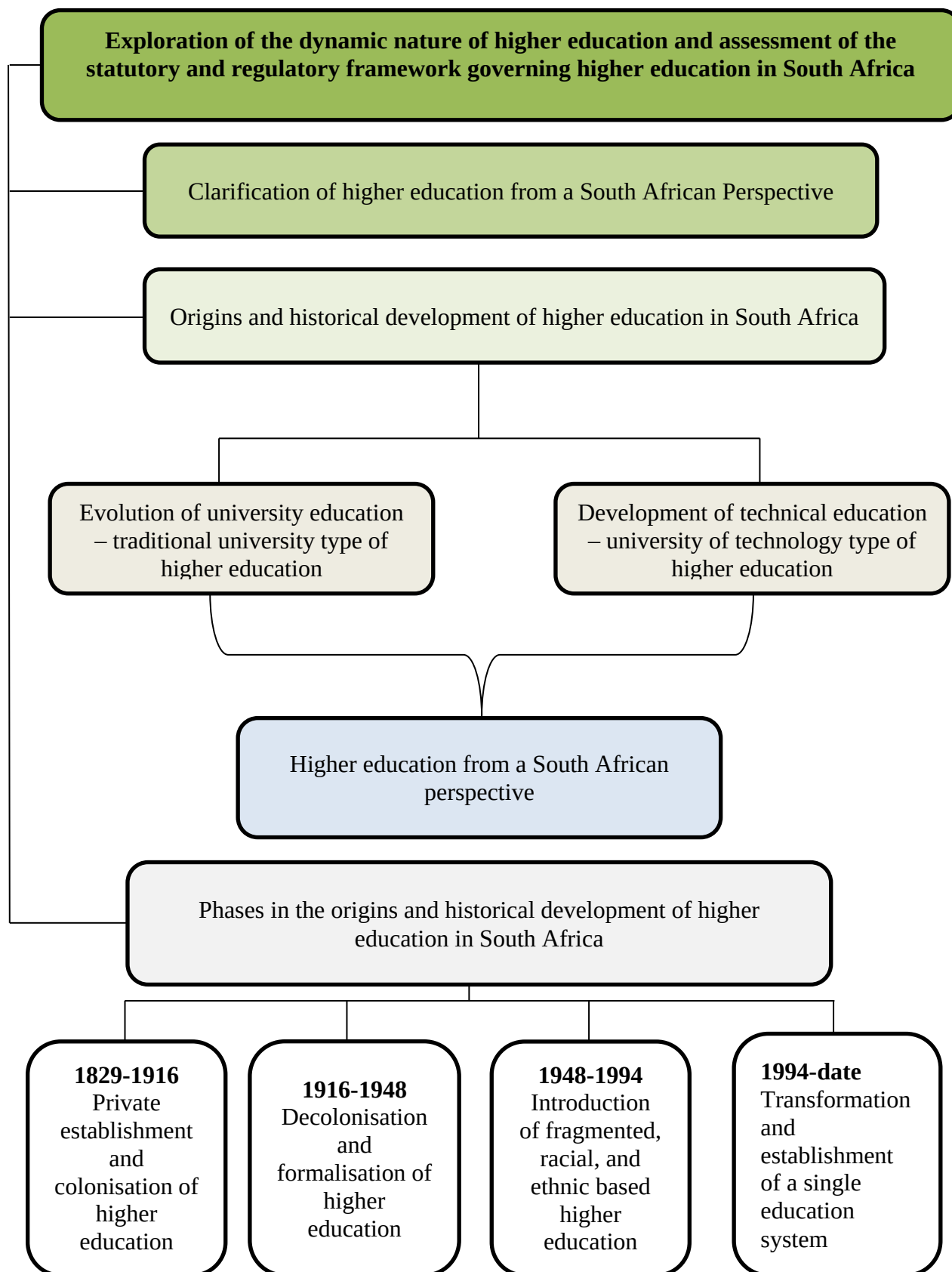


Figure 6.3: A summary of the dynamics of higher education in South Africa

Figure 6.3 indicates that chapter four explored the dynamics of higher education in South Africa to achieve research objective RO4. The exploration included clarification of what constitutes higher education from a South African perspective, a review of the evolution or historical development of public higher education, and assessment of the statutory and regulatory framework governing the type of education provided by higher education institutions as contemplated in the Higher Education Qualification Sub-Framework (HEQSF). For the purpose of this research and in accordance with the provisions of the Higher education Act 101 of 1997, higher education is considered as the context in which, of late, research universities, comprehensive universities, and universities of technology are located; these are the institutions that offer learning programmes that are in line with the HEQSF requirements (see section 4.2).

As pointed out in section 4.3.1, the exploration of the historical development of public higher education in South Africa discovered that its origins can be traced back to 1829, when the first university college to offer post-secondary education was established. There is general consensus that the South African College was the first institution to provide post-secondary education, followed by the Victoria College. Other university colleges that were established after the South African College were modelled around it. The period between 1829 and 1916 was characterised by the private establishment of university colleges, incorporation of university colleges as public higher education institutions, and the colonisation of public higher education, which was modelled along the education systems of the countries which influenced the historical development of South Africa.

A literature review in section 4.3.2 revealed that the passing of the University of South Africa Act 12 of 1916 formalised public higher education in South Africa. The University of South Africa Act 12 of 1916 provided for the transformation of the South Africa College and the Victoria College into the University of Cape Town and the University of Stellenbosch respectively. The University of South Africa Act 12 of 1916 also facilitated the introduction of the Universities of South Africa and Fort Hare, the first public university to be established for the black communities. The University of South Africa was established through the reorganisation of the University of the Cape of Good Hope, a central examination board modelled along the University of London at that time. Consequently, the University of South Africa served as an examination body and incorporated various colleges, except for the Universities of Cape Town and Stellenbosch. As pointed out in section 4.3.3, university colleges that were affiliated to UNISA broke away from UNISA between 1921 and 1952 and became independent public higher education institutions and UNISA became a distance education institution.

As stated in section 4.3.3, after the National Party came into power in 1948, the dynamics of public higher education in South Africa changed. The passing of the Bantu Education Act 47 of 1953 formalised segregation in public higher education. This position was reaffirmed with the passing of the Extension of University Education Act 45 of 1959 that provided for the establishment of public universities for Africans, Indians, and coloureds and formalised the restricted entry to public universities along racial and ethnic lines. The division of South Africa into five separate geo-political entities, namely, Transkei, Bophuthatswana, Venda, Ciskei, and “South Africa” led to further fragmentation of public higher education in the country.

An exposition of the evolution of technical education in section 4.3.4 revealed that technical education was not considered as higher education until 1923, the year the Higher Education Act 30 of 1923 was passed. The Higher Education Act 30 of 1923 provided for some technical colleges to be incorporated as fully fledged colleges and this paved the way for these colleges to offer higher education. The need for higher level skilled personnel led to the transformation of technical colleges into colleges for advanced technical education, later renamed technikons. Technikons and universities were separately administered and coordinated and South Africa did not have a single higher education system until post 1994.

As pointed out in section 4.5.1, the transformation of public higher education after the attainment of democracy in 1994 was aimed at the establishment of a single national coordinated higher education system. From the National Commission on Higher Education (NCHE), the main objective was to transform the higher education system into a single national coordinated higher education system. The report of the NCHE is considered as the beginning of higher education policy development post 1994.

A literature review further revealed in section 4.5.2 that the various processes that took place before 1994 also contributed to the significant development of public higher education post 1994. The Higher Education Act 101 of 1997, the main policy document that regulates higher education in the country, was built on some of the contributions of the processes that took place prior 1994. As exposed in section 4.5.1, the Higher Education Act 101 of 1997 reflects a shift from a fragmented public higher education system to a single national coordinated higher education system. Considering the continuous changes and challenges the public higher education sector is faced with, the strategic reengineering of the public higher education sector and individual public higher education institutions to continuously transform and facilitate continuous improvement remains and will always be a strategic imperative.

6.3 EMPIRICAL EXPLORATION: A SUMMARY (RO5)

In section 5.4.2, the empirical exploration and data analysis results were presented. The findings were based on the data collected through an analysis of TUT documents relevant to the research and interviews conducted to obtain the opinions and perceptions of respondents sampled from managers responsible for academic administration; quality, planning, and risk management; and distant campus management. The approach ensured that the data collected during the empirical exploration stage of the research was compared and contrasted to validate and determine the integrity of the data collected from sub-populations referred to above. Section 5.3 explained how the empirical evidence was collected.

The empirical exploration confirmed the observation that triggered the research i.e. that TUT lacked a BPR framework to give guidance to the manner in which business processes could be strategically reengineered in a uniform, focused, and coordinated fashion University-wide. A lack of a standard framework was identified as one of the main challenges which prevented some environments within the University from reengineering their business processes strategically. The empirical exploration in section 5.4.2 further revealed that although the TUT Strategic Plan 2014–2019 advocates the maximisation of efficiency through an incremental approach to BPR and that there are several initiatives aimed at the enhancement of strategic planning, strategic reengineering of business processes at levels lower than executive management remains a challenge.

The following were suggested by various sampled managers as the main critical success factors which should be included in a framework that would assist TUT to ensure that business processes are continuously strategically reengineered in a uniform, coordinated, and focused manner University-wide (see section 5.4.2):

- Senior management commitment and support
- Communication
- Provision of resources needed for successful implementation of reengineered business processes
- Consideration of environmental factors, including national legislation and requirements and directives from the Department of Higher Education and Training and relevant statutory bodies
- Consideration of internal conditions within the University

- Continuous improvement of business processes
- Cross functional approach to business process reengineering
- Satisfaction of the needs of stakeholders, specifically students.

The above elements were lifted from a long list of suggested critical success factors considered to be consistent with core common elements and best predictors of successful strategic business process reengineering identified in sections 2.6, 3.5, and 3.9. Corroborating theoretical underpinnings reflected in section 2.6, the views expressed by most sampled respondents were that including critical success factors in a BPR framework would improve the chances of the University to strategically reengineer its business processes successfully. The selection of critical success factors identified through different data sets was done with due consideration of the unique nature of TUT and included consideration of the internal factors.

While the academic administration environment of TUT was the main focus of the research, institutional views on the current status regarding strategic reengineering of business processes were also sought through interviews with managers from the environment responsible for quality, planning, and risk management. As stated in section 5.3.2, the distant campus perspective regarding the problem which the research sought to resolve was also tested through interviews with sampled officials responsible for the management of distant campuses. The perceptions and opinions expressed by respondents sampled from environments other than the academic administration environment, specifically in relation to the main problem the research sought to address, generally confirmed views expressed by the respondents sampled from the academic administration environment. The views expressed by respondents sampled from managers responsible for academic administration; quality, planning, and risk management; and distant campus management pointed to the conclusion that TUT does not have a framework to give guidance to the manner in which business processes could be strategically reengineered University-wide. Given the above background, the following section presents a proposed BPR framework aimed at enhancing strategic planning within public higher education institutions, specifically TUT.

6.4 BUSINESS PROCESS REENGINEERING FRAMEWORK TO ENHANCE STRATEGIC PLANNING WITHIN HIGHER EDUCATION

As stated in section 6.3, the research was triggered by an observation that TUT lacks a framework to guide the manner in which business processes could be strategically reengineered in a uniform, coordinated, and focused manner across the University. Given that TUT lacks a comprehensive BPR framework, the main contribution of this research was to develop a BPR framework which would assist the University and other similar public higher education institutions to strategically reengineer their business processes. Against the above background, and central to this research, the following research problem was formulated in section 1.3:

"How public higher education institutions, such as TUT, could align and reengineer their core business processes such that they could contribute to the enhancement of strategic planning."

Based on data from different sources as reflected in section 1.7, a BPR framework to guide the manner in which TUT and other similar public higher education institutions should strategically reengineer their business processes will be designed in this section, to realise research objective RO6. The proposed framework is designed to resolve the problem that triggered the research by responding to RQ6, as stated in the introductory chapter. Flowing from the findings of a literature review and an empirical exploration presented in chapters two and three, BPR and strategic planning common elements identified in section 3.9 will be used as the foundation upon which the proposed framework will be built.

Considering that a literature review located both BPR and strategic planning within the modern or contemporary management perspectives (see sections 2.2.1 and 3.2.4) and that the concepts are based on a systems management approach, the proposed framework will be developed with due consideration of external and internal influences and factors respectively. As public higher education institutions, such as TUT, function as an open system, the research considers external environment influences and internal factors as BPR imperatives relevant to all public higher education institutions. Given this background, a BPR framework aimed at the enhancement of strategic planning within higher education, with specific reference to TUT, is presented below. The presentation will be followed by an explanation of the main features of the proposed BPR framework.

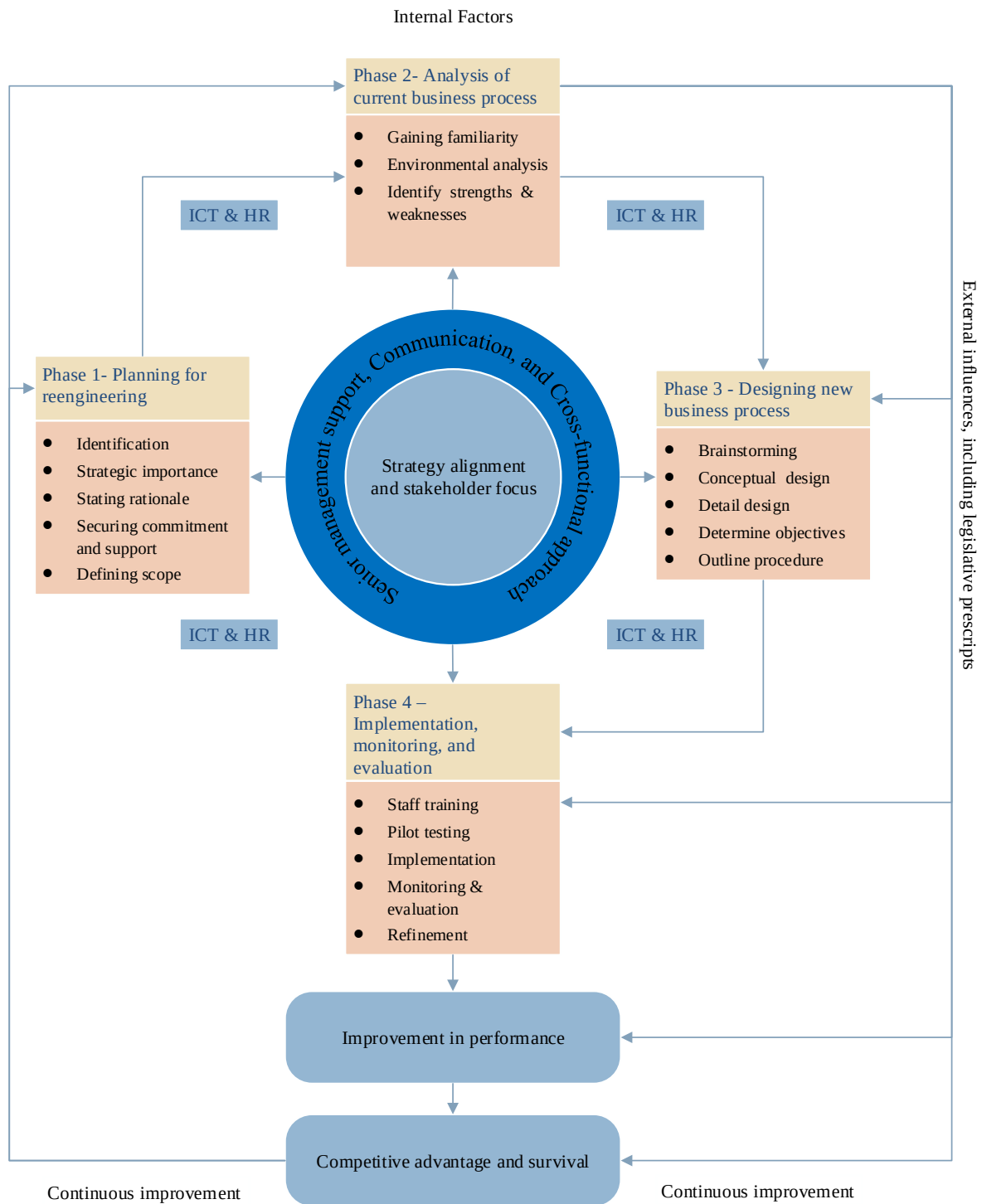


Figure 6.4: A proposed business process reengineering framework for TUT

ICT = Information and Communication Technology
HR = Human Resources

6.5 EXPOSITION OF THE ELEMENTS OF THE PROPOSED BUSINESS PROCESS REENGINEERING FRAMEWORK

The proposed framework advocates for an incremental approach to BPR so as to allow for the continuous improvement of business processes. In line with one of the objectives articulated in the TUT Strategic Plan 2014–2019, which is aimed at maximising efficiency through continuous improvement of support services, the framework suggests a BPR methodology that provides for the regular monitoring, evaluation, and refinement of business processes. The TUT Strategic Plan 2014–2019 provides for departments and operational units to continuously improve performance with revised business processes as a performance indicator. For TUT to achieve competitive advantage and in line with the principles for the successful application of BPR identified in section 2.6, the proposed framework suggests a strategic approach for the improvement of services across the University. The approach calls for departments and operational units to direct all their reengineering efforts towards the enhancement of strategic planning within the University.

Given that public higher education institutions, such as TUT, operate as an open system, as indicated in section 6.4, and that the TUT Strategic Plan 2014–2019 recognises the external environment and internal conditions and resources as drivers of institutional strategies, the proposed framework is based on the systems approach to management. Considering the dynamic nature of the South African public higher education sector, the proposed framework promotes a BPR methodology which, amongst others, involves the reengineering of business processes with due consideration of the national higher education imperatives and legislative requirements. Consistent with the remarks made in section 3.6.1.2, consideration of the external environment should thus include an analysis of critical developments within higher education, including changes to national legislation and the requirements of the Department of Higher Education and Training and relevant regulatory bodies. TUT should continuously monitor changes that might have an impact on its business processes to ensure the timeous and strategic reengineering of business processes in accordance with the changing environment. Cognisance of the internal factors should also be the basis of all business process reengineering efforts across the University.

The proposed framework suggests a BPR methodology structured around four basic phases according to the continuous improvement principles and with due consideration of external and internal influences, as indicated above. The four phases around which the proposed BPR

framework is structured are a consolidation of different phases suggested by authors such as Davenport and Short (1990); Patching (1995); Grover and Malhotra (1997); Lockamy III and Smith (1997); Love and Gunasekaran (1997); Harrington (1998); Kettinger and Teng (1998); and Hayes (2007) as exposed through a literature review (see section 2.7). In section 2.7, various BPR methodologies, phases, and steps were exposed and compared and subsequently, phases and steps which best capture the BPR sequence were identified. The four phases around which the BPR framework is structured are thus informed by core common elements identified and summarised into phases that best capture a BPR methodology, as suggested in section 2.7.

Linked to the four phases are six principles, which according to the findings of a literature review and empirical exploration (see sections 2.6 and 5.4.2) are considered the best predictors for a successful BPR or principles for effective deployment of BPR across sectors. The linking of principles for a successful BPR or effective deployment of BPR to the four suggested phases will be the key to the successful application of BPR within TUT. This theoretical understanding was also confirmed by the findings of the empirical exploration, as presented in section 5.4.2. At the core of the proposed BPR framework is strategy alignment and stakeholder satisfaction, specifically students. In keeping with the BPR operational definition provided in section 1.2.1, the proposed BPR framework suggests a methodology that would assist TUT to prioritise the reengineering of business processes which would contribute to the enhancement of its strategic orientation, including stakeholder satisfaction, to improve institutional performance and, subsequently, achieve competitive advantage. According to Amason (2011:9), competitive advantage is often described as an institution's ability to perform better than other similar institutions. In line with the assertion by Amason (2011), the proposed framework is aimed at ensuring that TUT directs all its reengineering efforts to performance improvement, as performance improvement is the key to ensuring the ability of Public higher education institutions, such as TUT, to perform better than their competitors. The proposed BPR framework also promotes the utilisation of information technology and human resources as BPR useful enablers.

Given the above background, the suggested phases around which the proposed BPR framework is structured, identified critical success factors, and useful enablers relevant for the successful application of BPR are briefly explained below.

6.5.1 Phases of a proposed business process reengineering framework

The application of the suggested phases around which the proposed BPR framework is structured is explained in this section.

Phase 1: Planning for business process reengineering. This is the first and crucial phase in the proposed BPR framework, as the successful application of BPR is dependent upon the efforts that go into the planning of the project. As stated in section 2.7.1, planning is important for the successful execution of any activity or event. The findings of a literature review in section 2.7.1 confirmed that when done well, planning lays a solid foundation upon which BPR can be successfully executed. The proposed steps of this phase include the identification of business processes to be reengineered, determination of the strategic importance and stakeholder satisfaction, stating of the BPR rationale, securing of senior management commitment and support, and defining the project scope. It is worth mentioning that while this is not a full list of activities to be carried out during the BPR planning phase, for the purpose of this research the listed steps are considered the most critical for the successful application of BPR within TUT, as suggested by the literature review and empirical exploration findings in sections 2.7.1 and 5.4.2 respectively.

Considering the strategic nature of BPR, it is imperative that TUT should develop a standard criterion to be used by all departments and operational units across the institution to identify the business processes to be reengineered. Adoption of a standard criterion is imperative to guarantee a common approach to the identification of key business processes for reengineering. To ensure strategy alignment (a BPR success factor that will be explained later in section 6.5.2), it is imperative that the identified business processes be linked to strategic goals and objectives which the identified business processes would enhance. Focus should be given to the strategic reengineering of business processes which would satisfy the needs of stakeholders, specifically students as a principal stakeholder. Section 3.9.2 identified satisfying the needs of customers or stakeholders through performance improvement as one of the core elements critical for the successful application of BPR. This theoretical underpinning was confirmed in section 5.4.2 by the findings of the empirical exploration within TUT.

The rationale of BPR should also be stated during the planning phase of the reengineering process to ensure a common understanding as to why a specific business process has been identified for reengineering purposes. The project scope should also be defined during this stage,

including identifying staff members who will form part of a cross functional reengineering team. The commitment of senior management could not be emphasised enough. It is necessary that senior management must commit leadership support, including the provision of resources needed for BPR to be successfully applied, as empirically confirmed in section 5.4.2. Securing senior management commitment is considered as a critical step in the BPR planning phase and should occur early in the BPR process to avoid developing business processes that could not be implemented due to lack of enough financial, human, and other resources required for the successful application of BPR. The importance of senior management commitment will be further explored later in section 6.5.2, as it is theoretically and empirically considered one of the critical success factors in the application of BPR (see sections 2.6 and 5.4.2).

Phase 2: Analysis of current business processes. Johnston and Clark (2008:425) state that BPR requires a clear understanding of current business processes. In this phase, it is important that TUT BPR teams should spend considerable time analysing current business processes in order to understand them before proceeding to designing future business processes. It is imperative to analyse the current business processes to identify anything that prevents them from achieving the desired results before embarking on BPR. Gaining familiarity with the current business processes, analysing external and internal environments, and identifying the strengths and weaknesses in order to understand performance problems to be resolved are, for purposes of the proposed TUT BPR framework, suggested as the steps which should be undertaken during this proposed TUT BPR phase.

Gaining familiarity with current business processes is essential for the reengineering team to understand the purpose of the business process to be reengineered. In accordance with the systems management approach and considering that public higher education institutions, such as TUT, function as an open system, this phase should also involve an analysis of the environment within which public higher education institutions operate as well as internal factors. The TUT Strategic Plan 2014–2019 also identifies an analysis of the external environment and internal conditions and resources as the University’s strategic drivers, as empirically confirmed in section 5.4.2. Identifying the weaknesses of the current business processes would avoid designing new business processes with similar weaknesses and performance problems. Identification of the weaknesses and strengths could be achieved by, among others, benchmarking with major competitors by comparing both the performance of business processes and the way those business processes are executed. As indicated in section 2.7.3, benchmarking is the search of best practices among competitors that lead to superior performance. An analysis of the current

business processes will assist the TUT reengineering teams to understand the performance problems preventing business processes from achieving efficiency and effectiveness before the business processes are improved or a new ones are designed.

Phase 3: Design future business processes. Having identified the shortcomings of and the potential improvements to the existing business processes, the next logical step would be to design the future business processes to improve efficiency and effectiveness in the manner in which services are delivered within the University. This phase of a proposed BPR framework should include brainstorming the future business processes, creating a conceptual business process design, creating a detailed business process design, determining the future business process objectives, and outlining the procedure to be followed to execute the newly designed business processes.

BPR could only be considered a success if the new business processes assist institutions across sectors to close the performances gap and to achieve the performance objectives identified during the planning phase. Given that BPR is a strategic endeavour, the new business processes must be designed to contribute to the achievement of strategic goals and objectives as laid down in the strategic plan of the University. A cross functional approach should be adopted in all phases, including the business process design phase, to ensure a cross functional perspective.

Phase 4: Implementation, monitoring, and evaluation. After having designed new business processes, the manager within the relevant environment embarking on BPR should put the newly designed business processes into action through an implementation plan, which should indicate the financial, human, and other resources needed for the new business processes to be successfully executed. The framework suggests training of staff members, pilot testing, the full implementation of the new business processes, the monitoring and evaluation against predetermined performance objectives/targets, and refinement as the steps that should form part of this phase. The training of staff members is essential, as the new business processes may require new skills, as was confirmed by the empirical exploration findings in section 5.4.2.

Given the suggestion for mainly an incremental or continuous approach, phase four of the proposed framework includes the monitoring and evaluation of the new business processes against predetermined performance targets to allow for the detection of problems that might need adjustments. This approach will provide for TUT to gradually refine the new business processes until the required performance level is achieved. Adopting a pilot testing approach could ensure

that the areas of concern are identified and resolved during the pilot stage before the new business processes could be rolled out and fully implemented across all campuses.

The following section presents the principles that are considered key for the successful application of the four phases around which the proposed BPR framework is structured. These principles are informed by the findings of a literature review and the perceptions and opinions expressed during the empirical exploration within TUT.

6.5.2 Principles for the successful application of the proposed business process reengineering framework

Based on the findings of different data sources, the discussion below explains the themes or principles that the proposed framework suggests would serve as the best predictors of a successful BPR application within TUT and similar institutions.

Strategy alignment. Figure 6.4 shows that strategy alignment is at the core of the proposed BPR framework which suggests that all BPR endeavours within public higher education institutions, such as TUT, should be strategically driven. Consistent with the findings of the literature review and empirical exploration, the proposed framework suggests that for TUT to reengineer its business processes successfully, a need exists for the University to align its reengineering efforts to institutional goals and objectives. Priority should be given to the reengineering of those business processes which are more likely to positively contribute to the enhancement of strategic planning within the University.

As already stated in section 5.4.2, the empirical exploration findings corroborated a preliminary review of TUT documents relevant to the research i.e. that the University lacks a framework to guide the manner in which BPR could be strategically approached across the institution. There was general acknowledgement by the sampled respondents from all the sub-populations that lack of a BPR framework prevents various environments within the University from adopting and following a uniform, coordinated, and focused strategy alignment approach to BPR (see section 5.4.2). The proposed framework suggests that aligning the reengineering of core business processes to strategic goals and objectives could facilitate the enhancement of strategic planning within the University. The strategic alignment of BPR projects could also raise an awareness of the strategic direction of TUT, as insistence on the linking of business processes to institutional strategies could ensure that all staff members familiarise themselves with the University

strategies and always direct their efforts towards their achievement. This was informed by an empirical exploration finding that the majority of sampled respondents operating at entry management level expressed that they were unfamiliar with the strategic planning process, including institutional strategies (see section 5.4.2).

Stakeholder satisfaction. As with strategy alignment, the proposed framework also places stakeholder focus at the core of BPR. When probing the commonalities that exist between BPR and strategic planning, the researcher discovered that institutions need to commit to customer or stakeholder satisfaction and put this into action. A literature review, as indicated in section 3.8, revealed that institutions could achieve this by placing the needs of stakeholders at the centre of their BPR and strategic planning projects. TUT should thus prioritise the reengineering of business processes that provide stakeholder satisfaction, as this could create competitive advantage for the University. Considering that the TUT Strategic Plan 2014–2019 is stakeholder driven, it is imperative that business processes across the institution should be designed and reengineered to contribute to the satisfaction of the needs of its stakeholders, primarily students. The TUT Strategic Plan 2014–2019 places emphasis on the “offering of career-oriented academic programmes, promotion of research and innovation, engaging in community projects, and partnering with local and international communities in pursuit of common goals”. Given that stakeholder satisfaction is the University’s strategic imperative (see section 5.4.2) and an understanding that teaching and learning, community engagement, and research and innovation are the core functions of public higher education institutions, necessitated the placing of stakeholder satisfaction at the core of the proposed BPR framework in addition to strategy alignment.

Senior management commitment. The framework considers senior management commitment and the provision of strategic leadership critical for the success of BPR, as already stated in section 6.5.1. It is imperative that senior management must commit to the provision of financial, human, and other resources required for the successful execution of BPR. Considering that public higher education institutions, such as TUT, rely mainly on public money and have limited funds to finance their operations, business processes should be reengineered with due cognisance of the nature of their financial positions. Consequently, the proposed framework suggests that senior management should, as theoretically exposed in section 2.6 and empirically corroborated in section 5.4.2, provide the type of leadership that ensures effective and efficient allocation of available limited resources, including making budget provisions for BPR projects so that performance improvement could be maximised. Senior management commitment and support

should ensure compliance with all imperatives that are considered prerequisites for higher education institutions similar to TUT, to strategically reengineer their business processes successfully.

Effective communication. The importance of communication cannot be emphasised enough. Effective communication is considered key to the successful execution of any project. Effective communication principles should be applied from the BPR planning phase until the implementation, monitoring, and evaluation phase to keep members of staff informed. Lack of communication normally leads to misunderstanding and misinterpretation, specifically by staff members who are not directly involved in BPR. Empirical exploration findings in section 5.4.2 revealed that lack of effective communication at TUT hampers the filtering down of institutional strategies to lower levels of operation and that this has a negative consequence to the strategic reengineering of business processes. As reflected in section 3.9.6, communicating effectively assists in dispelling confusion, misunderstanding, and resistance by staff members during BPR. Chan and Choi (1997) also identified the misunderstanding of BPR and unrealistic expectations as some of the causes of earlier BPR failures (see section 2.5). Regular updates would make staff members within various environments feel that they are part of the BPR projects relevant to their areas of operation and thus spark active participation and support.

Given that the findings of the empirical exploration suggest that lack of effective communication was one of the factors which prevented some TUT environments from reengineering business processes strategically, it is imperative that the University develop a plan detailing how BPR and strategic planning information should be communicated. Identifying the source of information to the University community is essential to avoid confusion due to members of staff receiving differing messages from multiple sources. The plan should indicate what to communicate, how to communicate, when to communicate, and to whom the communication should be directed. Communication during the BPR planning phase should include clarifying the rationale of BPR projects. In the absence of clarity, members of staff could form their own opinions and perceptions regarding the rationale of BPR. In the case of TUT, communication should also be utilised to inspire staff members with the slogan of the institution i.e. "We empower people".

Continuous improvement approach. It was indicated in section 2.4 that BPR shifted from the radical approach advocated by its originators to a modest approach. The modest approach advocates both the radical and incremental approach to BPR depending on the performance problem an institution seeks to resolve. The proposed framework suggests mainly an incremental

approach to BPR, as the approach provides for the continuous improvement and refinement of business processes. Given that phase four of the framework advocates the adoption of a pilot implementation approach, including monitoring, evaluation, and refining, the proposed framework considers the allowance of a continuous improvement as one of the principles for BPR success.

The empirical exploration also revealed a need for the continuous improvement of business processes, as sampled respondents expressed a need for an approach that provides for the continuous refinement of business processes. Although the primary objective of BPR is to improve institutional performance in order to achieve efficiency and effectiveness, it is not always the case that efficiency and effectiveness is achieved immediately after the implementation of reengineered business processes; hence a need for monitoring and evaluation to determine the extent to which the new business processes are contributing to the achievement of predetermined performance targets. Should the new business processes fail to achieve the intended results, refinements should be made until the desired results are achieved. It should also be noted that even the best business processes require regular maintenance and that the continuous improvement approach to BPR within TUT will also facilitate this requirement (Smit *et al.*, 2011). The proposed BPR framework thus suggests that public higher education institutions, such as TUT, should adopt an incremental approach to BPR to allow for the continuous refinement and improvement of reengineered business processes.

Cross functional approach. In line with the theoretical underpinnings exposed through a literature review and empirically confirmed, Figure 6.4 proposes a BPR framework that should promote the integration of efforts from staff members from different environments. This approach is informed by an understanding that business processes often cut across departments and operational units. Starting from the planning phase of the proposed framework, there should be an emphasis for departments and operational units to involve staff members from all the relevant environments so as to draw skills and knowledge from diverse environments: this reflection was empirically confirmed in section 5.4.2.

The cross functional approach proposal is also informed by a realisation that like all other public higher education institutions TUT functions as an open system with an emphasis on interdepartmental cooperation. It is imperative for the University to promote interdepartmental cooperation in all its BPR endeavours considering that it consists of interdependent and interrelated departments and operational units. As the cross functional approach to business

process reengineering calls for cooperation between departments and operational units (see section 3.9.5), the University should put measures in place to ensure that interdepartmental synergy is promoted and monitored. By so doing, the culture of working together and cooperation between different departments and operational units within the University could be achieved and maintained.

6.5.3 Enablers relevant for the successful application of the proposed framework

A literature review, supported by the findings of the empirical exploration, revealed that the effective utilisation of human resources and the application of appropriate information and communication technology are important for institutions to reengineer business processes successfully (see sections 2.2.2 and 5.4.2). The empirical exploration revealed general consensus that TUT should recognise the importance of encouraging staff members to participate in reengineering projects and the application of information and communication technology as a tool to facilitate the success of BPR. Against this background, figure 6.4 proposes a BPR framework that recognises the importance of the effective utilisation of human resources and information and communication technology as its enablers. Staff members should thus be equipped with the necessary skills and knowledge to enable them to successfully reengineer and execute business processes. This should include ensuring the effective and efficient provision of human resources to ensure the successful execution of business processes. Considering that we are living in a technology driven world, as pointed out in section 3.9.7 and empirically confirmed in section 5.4.2, the proposed BPR framework advocates for TUT to effectively utilise available technology as an enabling tool to improve its chances of reengineering its business processes successfully.

6.6 RECOMMENDATIONS FOR FURTHER RESEARCH

A literature review revealed that despite the differences between private sector and public sector institutions, the key principles for successful BPR applied in the private sector are equally relevant to the successful application of BPR within the public sector (see section 2.8). Considering that the comparative analysis of generic and public sector strategic planning processes also confirmed similarities regarding the application of strategic planning within the private sector and the public sector, the generic BPR and strategic planning theoretical underpinnings guided the empirical exploration in section 5.4.2 and the development of a BPR framework that was proposed in section 6.4. However, it should be noted that the strategic

application of BPR within public higher education institutions, such as TUT, should be done with due consideration of the unique and distinctive character of the broader South African public sector. Although the research discovered that the application of BPR within the public sector is as relevant as it is within the private sector and that both sectors apply similar strategic planning steps, the research did not explore the comparative extent of the successful application of BPR within the two sectors, as this was not an intended objective that the research sought to achieve. Considering the uniqueness of the two sectors, a comprehensive comparative research into the application of BPR between the private sector and the public sector could contribute to providing an overview of the extent of differences and similarities between the private sector and the public sector application of BPR. A comprehensive comparative study of the application of BPR within the private sector and the public sector is thus recommended as an area for further research.

6.7 CONCLUSION

In this chapter, a BPR framework aimed at assisting public higher education institutions, such as TUT, to strategically reengineer their business processes was proposed as the main contribution of the research. The introduction provided a summary of the key features of chapter one, thereafter a summary of the findings of a literature review and empirical exploration was presented. Only the key findings of a literature review and empirical exploration that were critical for the researcher to determine the extent to which each chapter contributed to the realisation of different research objectives were summarised. Based on data triangulation, a BPR framework was designed to resolve the problem that triggered the research by responding to research question RQ6 to operationalise research objective RO6.

The proposed BPR framework is structured around four basic phases and supported by principles considered to be the best predictors of BPR success across sectors. The four phases around which the proposed framework is structured are linked to a set of activities that are considered to be critical steps of a proposed BPR methodology. With strategy alignment and stakeholder focus at the core, the proposed BPR framework suggests a methodology aimed at assisting public higher education institutions, and TUT in particular, to strategically align and reengineer their core business processes. Considering the stakeholder focus element of the proposed BPR framework, priority should be given to those business processes which would contribute to the realisation of stakeholder satisfaction for TUT to achieve competitive advantage and survival.

The framework, which is based on the systems management approach (see section 3.2.4), advocates an incremental approach to BPR for TUT to continuously monitor, evaluate, and refine business processes. Given the adoption of the systems management approach, the framework recognises a need for cross functional cooperation between different departments and operational units within TUT and interaction between the University and the environment within which it operates. The proposed framework suggests that business processes should be strategically reengineered with due consideration of institutional factors and external influences, as public higher education institutions are deemed to function as an open system. Considering that the focus of the research was on TUT, a public higher education institution, the proposed framework should be applied with due cognisance of the unique nature of the broader South African public sector and public higher education imperatives, including the legislative and regulatory requirements.

In conclusion, it is imperative to reiterate that the research was necessitated by an observed need for TUT, a South African public higher education institution, to have a framework that could assist the University to strategically reengineer its business processes in order to achieve improvements in performance to become more competitive, as exposed in section 1.3. Proposing a business process reengineering framework and advocating the strategic reengineering of business processes within a South African public higher education institution constitute an advancement of knowledge within the Public Administration field of study.

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ANNEXURE A

Study title: A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology

INVITATION AND INFORMATION LETTER

Dear prospective participant

You are invited to participate in a research to be conducted by Mr AM Mushaathoni, a Doctor of Philosophy (PhD) in Public Management and Governance student at the Potchefstroom Campus of the North-West University. The research proposal and title were subjected to an ethical clearance procedure at the North-West University. To further address the ethics issues, the research documents were reviewed by the Tshwane University of Technology (TUT) Ethics Committee after which an approval for the research to be conducted was granted. The researcher is a senior manager within the academic administration environment of TUT. However, positional power will not be used to obtain information or to demand certain actions from the participants, and the research will be conducted fairly.

The primary objective of the research for the completion of a PhD thesis is to propose a framework that would assist higher education institutions, specifically TUT, to reengineer business processes such that they could contribute to the enhancement of the strategic planning process of the institution concerned. Participation in the research is voluntary. Throughout the research, your right to participate and to withdraw from participating at any stage of the research will be respected. The information received will be treated as private and confidential and your right to privacy and confidentiality will be respected throughout the research and after its conclusion.

The information received during the research will be used only for academic purposes and will not be released for any employment related performance evaluation, promotion, and/or disciplinary purposes. Any information obtained that can be identified with you will be treated as private and confidential and will only be disclosed with your permission or as required by law. Strict anonymity will be maintained throughout the research and the research results will be reported in a way that does not allow the identification of any participant.

For the purpose of this research, a voice recorder, note book, and pen will be used for managing and recording data. One interview per participant will be conducted and follow up interviews will only be conducted in cases where there could be a need for clarification in relation to the data collected during the first round of interviews. The duration of the interview will be approximately 60 minutes per participant. Except in exceptional circumstances, all interviews will take place in the offices of the participants. This will give you, as a participant, an opportunity to relax, as the interview will be taking place in surroundings that are familiar to you.

For further information, please do not hesitate to contact the researcher, his promoter or the North-West University Research Ethics Committee at:

- Researcher: Mr AM Mushaathoni, Tel (012) 382 4421/5130, e-mail MushaathoniMA@tut.ac.za
- Promoter: Professor G van der Waldt (North-West University), Tel (018) 299 1633, e-mail Gerrit.vanderwaldt@nwu.ac.za
- North-West University Research Ethics Committee contact person: Ms Hannekie Botha, e-mail ethics@nwu.ac.za

Should you have any questions regarding the ethical aspects of the study, you can contact the Chairperson of the TUT Senate Committee for Research Ethics, Dr WA Hoffmann, during office hours at Tel (012) 382 6265/46, e-mail hoffmannwa@tut.ac.za. Alternatively, you can report any serious unethical behaviour at the University's toll free hotline 0800 21 23 41.

By completing, signing, and returning the attached biographical information form, you are consenting to participate in the research.

Please note that employees who currently have labour disputes with the University, employees who currently have a court case against the University, and employees who are not in full time employment are excluded from participating in this research.

Yours faithfully

AM Mushaathoni (Researcher)

Date

ANNEXURE B

Study title: A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology

BIOGRAPHICAL INFORMATION OF PARTICIPANTS AND INFORMED CONSENT

Interview schedule - Part A

Please answer the following questions by crossing (X) the relevant block

1. Gender

Male	1
Female	2

2. Years of experience within higher education

Less than 5	1
Between 5 – 10	2
Between 11 – 20	3
Above 20	4

3. Highest educational qualification

Grade 12	1
First diploma or degree	2
B Tech or Honours degree	3
Master's or PhD	4

4. Level of operation

Supervisor/Senior Administrator	1
Manager/Deputy Director	2
Director	3
Executive Director	4

5. Total number of years of working experience

Less than 5	1
Between 5 – 10	2
Between 11 – 20	3
Above 20	4

6. Total number of years of working experience at management level (supervisory, middle, and executive management)

Less than 5	1
Between 5 – 10	2
Between 11 – 20	3
Above 20	4

I, _____, have read the informed consent details and understand that I am being asked to participate in a research.

I consent to the interview.

Participant's signature

Date

Kindly return this document to the researcher via e-mail (mushaathonima@tut.ac.za) no later than 20 February 2015.

ANNEXURE C

Study title: A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology

Interview schedule - Part B

Section A

Academic Administration

- A1.** How familiar are you with TUT strategic planning process?
- A2.** What is your opinion regarding the extent to which strategic planning activities are communicated to members of staff across the University?
- A3.** How well do you think TUT strategic planning projects are coordinated across the University?
- A4.** Does TUT have a business process reengineering framework to guide the manner in which business processes could be strategically reengineered in a uniform, focused, and coordinated fashion University-wide?
- A5.** What is the current status within your environment regarding the extent to which business processes are strategically reengineered?
- A6.** How effective do you regard the manner in which business processes are strategically reengineered within your environment?
- A7.** What is your view with regard to the extent to which strategic reengineering of business processes is encouraged or promoted or emphasised University-wide?
- A8.** How satisfied are you regarding the extent to which your environment's business processes are stakeholder or student focused?

- A9.** To what extent does your environment consider external influences and internal consultation or interaction when business processes are reengineered?
- A10.** Do you think that the staff members in your environment have the relevant knowledge, skills, and experience to successfully reengineer and execute business processes successfully?
- A11.** What are your views regarding the extent to which business process reengineering contributes to the achievement of performance improvements within your environment?
- A12.** What is your view on the general commitment and support of senior management, including commitment and support with regard to business process reengineering?
- A13.** Do you feel that you are part of the business process reengineering efforts within your environment?
- A14.** What is your view on the involvement of lower level staff members when business processes are reengineered?
- A15.** What is your opinion regarding the utilisation of information technology as a tool to facilitate the successful application of business process reengineering within your environment?
- A16.** What would you identify as the main challenges which prevent your environment or the entire University from reengineering business processes strategically?
- A17.** What do you suggest should be included in a framework that could assist your environment and TUT to ensure that business processes are strategically reengineered?

ANNEXURE D

Study title: A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology

Interview schedule – Part B

Section B

Quality, planning, and risk management and distant campus management

- B1.** Do you feel that there is enough awareness regarding the existence of the TUT strategic plan?
- B2.** What is your view regarding the extent to which TUT strategic goals and objectives are realistic and achievable?
- B3.** How focused on the stakeholders is the TUT strategic plan?
- B4.** What is your opinion regarding the extent to which strategic planning efforts are aligned at different levels of operation?
- B5.** What is your opinion regarding the extent to which the business processes of various environments within TUT are aligned to the strategies of the University?
- B6.** How well do you think the implementation of business process improvement plans is monitored across the University?
- B7.** How well do you think the culture of continuous improvement of business processes is promoted across the University?
- B8.** How would you describe the support of executive management in relation to business process reengineering and strategic planning projects?

- B9.** What is your view regarding the extent to which external influences and internal factors are considered University-wide during business process reengineering?
- B10.** What would you identify as the main challenges which prevent TUT from reengineering its business processes strategically?

Collins Consultants

Editing, copywriting, formatting, translation

3 Frans Boshoff, 225 Mackenzie Street, Brooklyn, Pretoria. Tel/Fax 012-346-5298
Mobile 082-633-7524, collins.consultants364@gmail.co.za

April 2015

To whom it may concern

I hereby certify that I did the language editing for the following thesis:

**A BUSINESS PROCESS REENGINEERING FRAMEWORK TO ENHANCE
STRATEGIC PLANNING WITHIN HIGHER EDUCATION: THE CASE OF THE
TSHWANE UNIVERSITY OF TECHNOLOGY**

By

Avhashoni Michael Mushaathoni

Please note that only the text was edited and that the onus is on the author to either accept or reject my suggestions.

Margaret Collins

Declaration form on research ethics

This form deals with research ethics for a mini-dissertation, dissertation, thesis or a research project. The student or researcher concerned needs to fill in this form as an appendix to the research proposal.

Indicate with a cross (X) in the box the type of research for which you fill in this form:

Undergraduate project	☐
Honours mini-dissertation	☐
M mini-dissertation	☐
M dissertation	☐
PhD thesis	☐
Research project	☐

Mark each of the 10 questions below by drawing a cross (X) over the **Yes** or **No** inside the particular box as it is applicable to your research.

Questions on the handling of participants:

- Does the research involve vulnerable/affected participants who are coerced into participating but are unable to give informed consent? (E.g. underage children, people with learning or other psychological or physical disabilities, prisoners, people that are economically or educationally disadvantaged, or other affected respondents that have to answer the questions.) ☐ Yes ☐ No
- Will the research compromise/expose participants to the discussion of intimate and/or sensitive topics? (E.g. sexual behaviour, sexual orientation, drug abuse, drinking habits, harassment, victimisation or abuse.) ☐ Yes ☐ No
- Will the research induce physical, psychological or social stress or anxiety; or could it have negative consequences beyond the risks encountered in normal life? (E.g. invasion of privacy, loss of confidentiality, psychological trauma, indirect physical damage, embarrassment, labelling, stigmatisation, group stereotyping, questioning of values.) ☐ Yes ☐ No
- Will the research expose the participants to drastic, intrusive or potentially harmful procedures of any nature or to any form of physical or psychological intervention? (E.g. due to experimental research designs entailing far-reaching interventions.) ☐ Yes ☐ No
- Does the research involve participants without their knowledge and consent? (E.g. observing people without them being aware of this.) ☐ Yes ☐ No

Questions concerning the research process:

- Will the research require the co-operation of a gate keeper (such as a school principal, head of an institution, head of a department, manager, traditional leader, community leader) to gain the initial access to the groups or individuals that you aim to involve? ☐ Yes ☐ No
- Will the research record participants' personal details (name and contact information) so as to be available for follow-up? (E.g. when the follow-up interviews form part of the research plan.) ☐ Yes ☐ No
- Will the researcher offer the participants financial instruments (other than the acceptable expenditures and compensation for their time) or any means of coercion? ☐ Yes ☐ No

Questions concerning the impact on the NWU and the institutions concerned:

- Does the research involve any students or staff of the NWU? ☐ Yes ☐ No
- Is there any danger of the research having a detrimental effect on or tarnishing the image ☐ Yes ☐ No

of the NWU, the relevant academic entity, your employer, or any other institution that is involved or is taking part in the research?

If you have answered **No** to all questions, sign the declaration below and submit the completed and signed form as an appendix to your research proposal.

If you answered **Yes** to any of these questions, also sign the declaration below. Thereafter submit the completed and signed form as an appendix to your research proposal. Because your research deals with ethical aspects, you will also need to describe more fully how you plan to address the ethical aspects raised by your proposal. You will need to explain these ethical aspects on the Research Ethics application form, which you can obtain from the following website of the university:

<https://intranet.nwu.ac.za/opencms/export/intranet/html/en/in-im-rs/researchethics/index.html>.

The research ethics committee concerned will then consider your explanation. If the committee approves your proposal with the accompanying explanation, you can continue your research. Otherwise your research proposal will be referred back for you to rectify the issue. Your proposal can also be rejected.

Please note that it remains your responsibility to follow the NWU's guidelines for ethical research which are explained in the *Manual for Postgraduate Studies*. This also applies to any academic or professional guidelines that could concern your research. It implies, for example, providing respondents with the appropriate documentation to gather information and completing letters of consent, where applicable. This also requires ensuring that complete confidentiality or protection will be maintained when you store the data.

Any significant change in the research question, design or conduct over the course of the research must be notified to the supervisor. Keep in mind that such a change could make it necessary to fill in a new form.

Declaration by the applicant:

I have read the NWU's *Manual for Postgraduate Studies* and have acquainted myself with the guidelines for research ethics contained in it. In light of this I declare that I will conduct my research according to ethically acceptable norms. I give the undertaking that, when I present any research under my own name, this indeed will be my own research. I will also insert proper references in the research (in the text as well as the bibliography) for each quotation and contribution obtained from other sources.

Applicant:

Name: Student number/Staff number:

Signature:

Date:

Study leader/Promoter/Head of research

Name:

Signature:

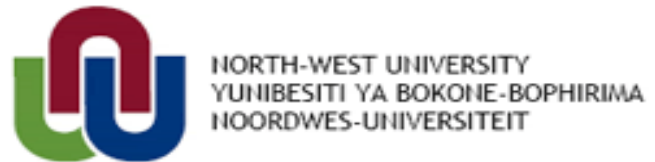
Date:

Chairperson of the research committee concerned

Name:

Signature:

Date:



Prof Gerrit van der Waldt
Research Professor: Public Governance
Research Focus Area: Social Transformation
Private Bag X6001
North-West University (Potchefstroom Campus)
POTCHEFSTROOM
2520
Tel (018) 299-1633; Fax (018) 299-4254
Email: Gerrit.vanderwaldt@nwu.ac.za

28 January 2015

Mr AM Mushaathoni
Student nr: 25299824
Box 94454
Boordfontein
0201

TO WHOM IT MAY CONCERN

PhD STUDIES: PROGRESS REPORT

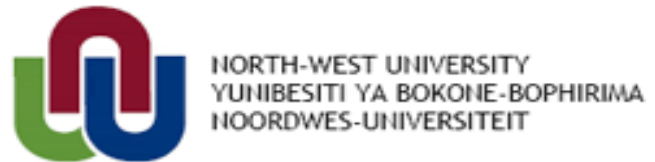
This letter serves to confirm that Mr Mushaathoni is currently registered for a PhD study with the title "A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology". He has successfully completed the theoretical chapters (1-4) of his study and has reached the empirical investigation stage (chapter 5) of his research.

Due to the excellent progress made, there is a high likelihood that he will complete his studies this year.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'Gerrit van der Waldt', is written over a light blue rectangular background.

Prof Gerrit van der Waldt
Promoter



Prof Gerrit van der Waldt
Research Professor: Public Governance
Research Focus Area: Social Transformation
Private Bag X6001
North-West University (Potchefstroom Campus)
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Email: Gerrit.vanderwaldt@nwu.ac.za

27 October 2014

Mr AM Mushaathoni
Student nr: 25299824
Box 94454
Boordfontein
0201

REGISTRATION OF PhD TITLE AND ETHICAL CLEARANCE

This letter serves to confirm that your PhD title, "A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology" has been registered on 23 September 2014.

This letter further confirms that the research proposal and title were subjected to stringent ethical clearance procedures at the university and an ethical clearance certificate, with number **NWU-00167-14-S7**, was issued.

Kind regards

A handwritten signature in black ink, appearing to read 'Gerrit van der Waldt', is written over a light blue rectangular background.

Prof Gerrit van der Waldt
Promoter



OFFICE OF THE REGISTRAR

24 October 2014

AM Mushaathoni (25299824)
Faculty of Arts
Potchefstroom Campus
North-West University

PERMISSION TO INTERVIEW STAFF MEMBERS AT TUT

Permission is hereby granted to interview staff members at the Tshwane University of Technology for the purpose of this research **only**.

Title: “A business process reengineering framework to enhance strategic planning within higher education: the case of the Tshwane University of Technology”

Qualification: PhD in Public Management and Governance

Supervisor: Prof G van der Waldt

The permission is granted on condition that the research is conducted according to the procedures and methods as approved by the Tshwane University of Technology Research Ethics Committee.

Yours sincerely,

Prof MS Mothata
Registrar
(012) 382 5180/5182