

UNIVERSITY OF KWAZULU-NATAL

**IT-Business Strategic Alignment in the Context of Business Process Reengineering:
Case Studies of Large Organisations in Lesotho**

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**A dissertation submitted in fulfilment of the requirements for the degree of
Master of Commerce**

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2017

Declaration

I Relebohile Mathipa Shano declare that

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Acknowledgements

I extend my gratitude to all the participants for the time they dedicated to answer all the questions and hence the valuable data collected. I want to also recognise my academic administrator Debbie Cunynghame, for the firm push, for great communication, all well appreciated; I could not have asked for a better you. I further extend my greatest gratitude to my supervisor, my academic angel, Dr. Indira Padayachee for the relentless patience, support, guidance and understanding. I am forever grateful to you. To my supportive family and friends, thank you. To mother, my cheer leader, you are a true angel, thank you dearly for everything. If it had not been for all of you, this would have remained half done.

To myself, for never giving up; regardless the odds.

To God be the Glory.

Dedication

To my muse, my son, Nala-Thabile Lekhooe who became a motivation for me to see this project to the end and for making me smile every time the pressure was getting the best of me, thank you for being in my life. I love you more than my heart can comprehend.

Abstract

The alignment of IT strategy and business strategy is an ongoing topic of interest for many researchers. In the same light is Business Process Re-engineering (BPR). The existing literature considers these two topics separately in the context of developed countries. This study taps into this gap by investigating how IT-business alignment at a strategic level can be achieved in BPR by considering the influential factors that drive this alignment in large organisations in Lesotho. The study empirically builds on centrally placing IT-business strategic alignment at the heart of BPR. Consequently, the findings show that IT-business alignment plays a pivotal role in the success or failure of a BPR project. New directions for future studies are suggested and discussed.

Keywords: Business Process Reengineering, IT-business strategic alignment, Alignment Factors

Glossary of Acronyms

ASYCUDA	Automate System for Custom Data
BPR	Business Process Re-engineering
BSA	Business Strategic Alignment
CBD	Central Business District
EA	Enterprise Architecture
ESS	Electronic Shipping Solution
IT	Information Technology
QDF	Quality Function Deployment
TQM	Total Quality Management
IS	Information Systems
SAD	Single Administrative Declaration

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Chapter 1: Introduction

1.1 Background Information

A need for constant development is a necessity facing the globalised business world. Businesses today are faced with a need to be more competitive, efficient and high performing. This pressure, is to some extent eased by the ever increasing innovations in information technology, that have made it possible for organisations to amend their business models, as well as to revise and/or develop their Information Technology (IT) strategies. As a consequence thereof, organisational business processes are currently undergoing fundamental restructuring. These continuous developments suggest that both business and IT strategies within organisations are continuously shifting. In order to explore the continuous developing global operations in the technologically agile business environment of today, the current study seeks to determine how organisations can align their IT strategies with their business strategies, in the restructuring of their business processes.

To address this objective, the study combines the following concepts: business process re-engineering (BPR), strategy and alignment. The logic underpinning the study covers all three key concepts in a manner that these concepts fall within a feasible scope. The logic underpinning the study is depicted in Figure 1.1 and can be described as follows: with a call to respond to the changing business environment, the business strategy is adjusted, and in so doing, the business processes are also redesigned to meet the new business goals. The redesigned processes are in this regard IT-enabled which suggests that the IT capabilities and technologies will be adjusted such that they are on par with the revised corporate strategy. This logic is supported by Henderson and Venkantraman (1993) who claim that the IT strategy ought to support the business strategy and that business processes, are contributors to a successful business in a dynamic business environment.

Roland et.al (2016) are also of the view that IT strategy is an element that organisations can depend on towards meeting their business objectives whether it is in increasing the organization revenue, cutting costs or pursuing both goals. Their study pointed out that an emphasis on IT strategic capabilities will yield positive results between IT investments and an organization performance.

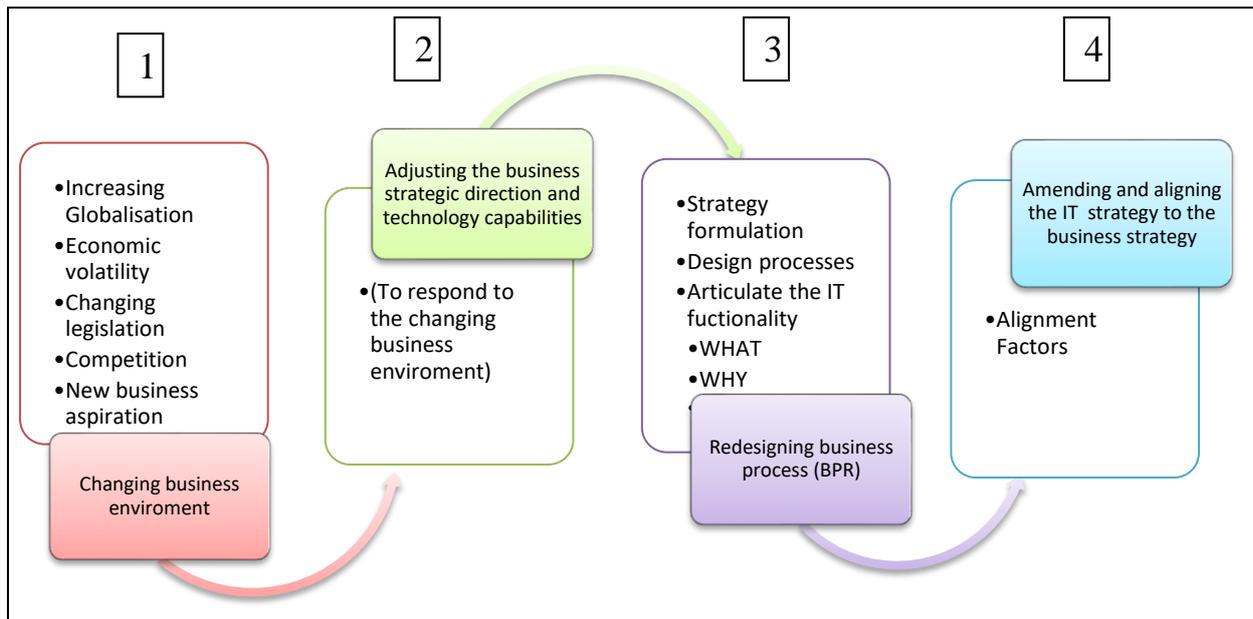


Figure 1.1: The logic underpinning the study

This study is centred on the last two phases depicted in Figure 1.1. The study focuses on IT-Business Strategic Alignment (BSA) in the context of Business Process Re-engineering: (BPR), which is depicted as phases 3 and 4 in Figure 1.1. The fourth phase examines the effect of the restructuring of business process in phase 3 (BPR) on an organisation’s IT-business strategic alignment. Restructuring in phase 3 inevitably impacts the organisations’ IT-business strategic alignment. In phase 4, the study analyses an organisation’s concern as to how to remain and/or become aligned post a BPR project.

1.2 Outline of the Research Problem

Advances made in Information Technology two decades ago have enabled the emergence of IT-enabled business processes (Ketchen and Slate, 2004). In the 1990s, Hammer (1993) popularised Information Technology’s transformative role in BPR. However, a common problem reported by many organisations is that subsequent to performing BPR, a disconnection between business users and IT often crops up (Open Text, 2011). Mavetera (2012) points out that this discrepancy is raised by BPR professionals. They are concerned that BPR projects, more often than not, are found to have a negative impact on the organisations’ strategic alignment. This problem arises from a lack of standardisation, with regards to technology, enterprise processes and interface business componentisation (Shehab, Sharp, Supramanran

and Speeding, 2004). This in a nutshell, is when the enterprise architecture (EA) is compromised.

The inconsistencies of BPR and IT-business strategic alignment are further linked to several factors. On the one hand, the Oracle (2013) white paper attributes the difficulty in aligning IT and business strategies to the increased rate of change when it comes to business and technological innovations. According to Barkhi and Daghfous (2009), companies often have state of the art technological infrastructure, but they are found to lack clear strategic paths to develop a core capability.

Razalli et. al (2017) investigated a similar issue of an Islamic bank in Malaysia. The study investigated measure taken to address the need for this bank to improve its performance. The bank opted to invest in a BPR project with focus on the impact of IT. The IT factor was highlighted in the study and demonstrated neglect on IT drive to improve performance as a factor contributing to the underperformance of the financial sector in Malaysia.

Strnadl (2006) contends that IT alone is not enough for an organisation to achieve efficiency and competitiveness, but added that corporate IT functions should be tightly coupled to the organisation processes and the organisation's information needs. A study conducted by Barkhi and Daghfous (2009) substantiates this point, by indicating the need for organisations to proactively incorporate IT into their services and strategies, in order to realise profitability and success. In simple terms, IT and business are entwined in such a way, that one cannot be meaningfully discussed without mentioning the other (Gates, 2012).

At an organisational level, Karim et al. (2007) explains that IT will only have a positive impact on an organisation, if it matches the business processes. Cox et al. (2009) adds that critical to the business success, is asserting that organisational IT provides support for the organisation's business strategy. The corporate IT function must be tightly coupled to enterprise processes and the organisation's information needs (Strnadl, 2006). Previous studies have indicated that BPR must begin to apply the capabilities of IT. Mashari and Zairi (2000) indicated that, at the core of a successful BPR implementation is the ability to recognise the role of IT in BPR. This is key, as a proper fit between technology and business processes must be established and upheld (Barjis, 2008). Subsequently a successful BPR project needs a constant assurance of the fit between business processes, the environment and the technology (Trkman, 2010).

An inference that can be made from previous discussion is that IT-business alignment should be an integral element of a BPR project. Understanding how this can be achieved has not really been a focus of many studies. The reviewed literature on IT-business alignment has been limited to how IT-business alignment is achieved.

Related studies' focus has been on; maintaining alignment (Henderson and Venkantraman, 1993), improving alignment (Luftman, 2002), measuring IT-business alignment (Sledianowski et. al, 2009), measuring IT-business alignment maturity (Chen, 2009, Luftaman, 2007 and van Hout, 2012) and validating the IT-business alignment frameworks (Luftman, 2000). To bridge this gap, the current study focuses on the attainment of IT- business strategic alignment in a BPR project.

1.3 The Rationale of the Study

The motivation behind the study is informed by its practical applicability. It addresses contemporary issues that organisations are engaged in Lesotho and globally. In Lesotho, organisations are transforming from focusing on reducing IT costs, to striking a balance between IT costs reduction and investing in new technologies. These technologies are aimed at facilitating business expansion in areas of IT-enabled business functions. Such business developments require that an organisation's information system assures an alignment of the IT-business strategy.

In more recent years, organisations in Lesotho have been embarking on BPR initiatives. According to McDonald and Dave (2013), improving business processes ranked as the 11th 2013 top global business strategy. However, a number of BPR project initiated in Lesotho have been popularised by controversial newspaper reports on their vast failures. Below is an example of an uncertain BPR project due to IT-business misalignment.

In 2012, the government of Lesotho under the Ministry of Home Affairs, set out to improve the passport issuing process. The improved process entailed the issuing of electronic passports. The project was awarded to a foreign company Nikuv. In February 2014 the project threatened to shut down, due to non-payment of maintenance fees.

Whilst this was the popularised reason to shut down the project, the Lesotho Times newspaper, (2014) report also revealed the following to be contributing factors to the project uncertainty:

- The system was faulty and the following factors were noted to support this claim. Firstly, the system installed at border posts were failing to scan the e-passports. This was due to a faulty chip. Secondly, the non-visa requiring passports were required visas by the system. Also, the system failed to allocate correctly the legally approved visiting days for travellers.
- Maintenance of the passport management system was done solely by the Nikuv unit and no local people involved in the project, were equipped to operate the system.

According to James (2015) an estimated 50-70% of all reengineering projects have failed for various reasons. There are however reported business cases of organisations that successfully executed IT strategically driven BPR projects. Xerox redesigned its order fulfillment process and improved service levels by 75-97% and cycle times by 70% with inventory savings of \$500 million. Detroit Edison redesigned their business processes and reduced payment cycles for work orders by 80% (James, 2015).

Because of the misalignment that many BPR professionals have attributed to BPR and other factors, IT-business alignment is at present, a key issue in many organisations. It is thus fitting that this study was conducted as it highlights factors that managers should consider in order to assure a state of alignment within their organisations, as this will contribute to the success of the implemented BPR projects.

In addressing the purpose of this study, an in-depth analysis on how IT-business strategic alignment can be achieved in the implementation of a BPR project was conducted. The Lamphathaki et.al (2013) BPR methodology and alignment factors as adopted from van Hout (2012) were selected as units of analysis to demonstrate how researchers and practitioners can apply different alignment factors to attain a holistic IT-business strategic alignment at the completion of a BPR project. In a nutshell the main purpose of the study is to determine issues pertaining to the alignment of IT strategies with businesses strategies in the context of BPR.

This is an important organisational issue brought forth by the advancement of the business world into a digital era. Strategic improvements within organisations are technology driven and

with that come a need for organizations to engineer business processes that achieve business goals that are harmoniously supported by the IT strategy.

The study demonstrates and addresses a theory that is pertinent to both the management and information systems field. It articulates the importance of the roles of the CEO and the CIO in achieving this goal. Whilst the study is not addressing a new issue into the research fields of management and information systems it provides a new outlook into the issues, that is, making IT-Strategic alignment the heart of BPR. It assigns the task of assuring that alignment is attained at every phase of the BPR project to both the system analysts and business process reengineers and it offers guidelines towards achieving that.

1.4 The Scope of the Study

To understand how the study set out its scope, the following considerations were taken into account. The scope of the study reports on only large organisations in Lesotho based in Maseru, the capital town of the country. All three organisations are located in the capital's central business district. This suggests that they all experience similar external business environment forces. However, the organisations represent three different industries; namely the financial sector, logistics and telecommunications sector. What they have in common, is the constantly changing business environment that is driven by technological advances.

This study's focus is on alignment and alignment as discussed in subsequent sections, can be performed on either the strategic level or the tactical level, or on a large scale and considering both levels. In the current study, alignment is investigated at a strategic level.

And lastly, despite the fact that organisations can perform IT-business strategic alignment at any time and situation, the study opted to investigate IT-business strategic alignment in a BPR project context. This measure, to contextualise the study within a BPR project assured that the study's seemingly large scope, was feasible within a practical time frame. In addition, assuring that the study falls within a feasible scope, the following delimitation measures were taken conducting the study solely in large organisations that are within Maseru, Lesotho. It should, however, be noted that while the scope of the study is located in Lesotho, organisation B and C are international companies. Organisation B operates in more than 220 countries and

organisation C on the other hand operates in 3 countries. These organisations have standard operating processes and procedures such that the BPR project for organisation B was on a global level. The BPR project in the organisation was also done on a global context as the implementation of its BPR project was the UNCTAD mandate passed to revenue authorities in different countries that needed to make drastic performance improvements in their respective countries.

Having elaborated on the physical delimitation that define the scope of the study, the parameters under which the study will be operating with respect to the body of knowledge fall within the following areas in the field of IS and management: implementing BPR, roles of alignment factors in a BPR project, IT-Business strategic alignment and achieving IT-Business strategic alignment in the context of BPR.

1.5 Research Questions

To establish the purpose of this study, which is to understand issues pertaining to the alignment of IT strategies with businesses strategies in the context of BPR, the study will answer the following main research question:

What are the main issues pertaining to the alignment of the IT strategy with the business strategy in the context of BPR?

The research questions that underpin the main purpose of the study are:

- 1a. Why are BPR projects implemented in large organisations in Lesotho?
- 1b. How are BPR projects implemented in large organisations in Lesotho?
2. What is the role of alignment factors with respect to IT-Business strategic alignment in large organisations in Lesotho?
3. What are the perceived benefits of alignment between business strategy and business process in large organisations in Lesotho?
4. What are the perceived benefits of alignment between IT strategy and business process in large organisations in Lesotho?

1.6 Research Objectives

The holistic objective of the study is to determine issues pertaining to the successful alignment of IT strategies with businesses strategies in the context of BPR and to determine how they

drive IT-business strategic alignment. The objectives of the study are thus distinctively broken down as follows:

- To determine why BPR projects are implemented in large organisations in Lesotho;
- To determine how BPR projects are implemented in large organisations in Lesotho;
- To determine the role of alignment factors on IT-Business strategic alignment in large organisations in Lesotho;
- To ascertain the perceived benefits of alignment between business strategy and business process in large organisations in Lesotho; and
- To ascertain the perceived benefits of alignment between IT strategy and business process in large organisations in Lesotho.

By achieving all the above objectives, it is envisaged that this study will contribute to the identification of a practical way that organisations can use as a road map towards achieving alignment and as such provide a contribution to the improvement process of attaining and maintaining alignment in a BPR project. It is imperative that a practical process towards achieving IT-Business alignment is identified. As stated by many scholars, it remains vague as to how in real life organisations go about the process of having their IT strategy in harmony with their business strategy.

1.7 Brief Chapter Overviews

This dissertation consists of five chapters; each discussing a different aspect of the study undertaken. A summary of the chapters follow:

Chapter One demonstrated the need for study and neatly positioned the study. This it achieved by giving a background on the study and elaborating the research problem and by delineation. It further gave direction for the study through means of research problems and research objectives.

Chapter Two discusses the literature covering the keys concepts namely BPR, strategy and alignment. It reviews the theories supporting each concept and how they evolved over time, in both academia and in industry. The discussions on these concepts are guided by the study's research questions. This chapter also describes the the Strategic Alignment Model (SAM) and its importance in relation to the study.

Chapter Three discusses the theories and methodology used to carry out the research and justifies the choice of the methodology for this study. It further discusses the limitations of the research methods employed in the study.

Chapter Four commences by giving a description of each organisation and a brief outline of each case. It then presents and analyses the findings from the three case studies.

Chapter Five concludes the study by presenting a summary of the answers to the key research questions. It provides details on how the study has contributed to the body of literature in strategic alignment in the context of BPR. The limitations of the study and future research suggestions are also covered in this chapter.

Chapter 2: Literature Review

Literature Review on Business Process Reengineering and IT-Business Strategic Alignment

2.1 Introduction

The purpose of this chapter is to present a comprehensive review of the relevant literature in order to understand the main concepts, models, factors and issues relating to IT-Business Strategic alignment and BPR. The alignment between IT strategy and business strategy is examined within the context of business process re-engineering (BPR) projects. Thus, the literature review covers three concepts that are crucial to this study; these are: BPR, strategy and alignment.

Section 2.2 of this chapter provides an overview of the BPR concept and BPR methodologies and also looks at how BPR is implemented in large organisations. This is followed by a discussion on business and IT strategy in Section 2.3. Section 2.4 presents insights into alignment by delving into IT-business strategic alignment concepts and providing a detailed analysis of IT-business strategic alignment from a BPR perspective. It also provides a discussion on the benefits of alignment by covering the benefits of alignment between business strategy and business process in large organisations and the benefits of alignment between IT strategy and business process in large organisations. Section 2.5 discusses the framework that underpins the study. Finally, section 2.6 provides a summary of the chapter which then denotes the knowledge gap.

2.2 Business Process Reengineering (BPR)

The changing economic environment has led to an increasing interest in improving organisational business processes to enhance performance (Ranganathan & Dhaliwal, 2001). One of the fields dealing with these advances in organisational business processes is BPR. According to Tiwari and Majeed, (2008) practitioners' interest and a surge of research has been done in this area for more than a decade. BPR has over its time period in the business world, been interpreted differently, by different authors.

The central meaning, however, suggests that BPR is an ongoing process, which is aimed at positively impacting on an organisation's processes and as a result, improves its effectiveness, efficiency and the profitability (Tiwari & Majeed, 2008). Other areas of an organisation that are seen to be positively affected by BPR are an organisation's structures, systems and an organisation's strategies (Eftekhari & Akhavan, 2013).

2.2.1 Definitions of Business Process Reengineering

According to Ranganathan and Dhaliwal (2001) since around 1990 organisations changed from being functional, to being process oriented. As a result, in today's business world, organisations drive performance improvement by enhancing the coordination and flexibility of the business processes. In order to attain a deeper understanding of the concept of BPR, it is important to firstly define the term 'business process'. Guha and Kettinger (1993) and Strnadl (2006) define a business process as a complete, dynamically coordinated set of activities or logically related tasks that must be performed to deliver value to customers, or to fulfil other strategic goals. To compete effectively in the business world, organisations rely heavily on the versatility of business process, through BPR (Ranganathan & Dhaliwal, 2001).

BPR is defined by Talwar (1993) as a practice of radical restructuring and streamlining of business processes, methods of working and managing systems. A popularised interpretation of BPR, is radical rethinking and redesign of business processes, in order to achieve great improvements in performance measures (Champy,1993). According to Petrozzo and Stepper (1994), BPR is defined as a concurrent redesign of processes and their supporting information systems, in order to increase productivity and quality and to reduce costs. Another definition of BPR is that it is a major rethink and redesign of the business processes, that facilitates an organisation with an innovative way for management to deal with its business (Yijing et al. 2007). Taking into account all the above mentioned BPR definitions, with reference to BPR the study will consider a holistic view of BPR. Therefore, the BPR meaning that the study shall consider is; an innovation in management knowledge concerned with improvements in organisations with attention to radical redesign of the business processes.

2.2.2 BPR Methodologies

Since the advancement of BPR, researchers and practitioners have proposed and employed different processes to implement BPR. These processes are adapted differently in different methodologies. This section discusses different BPR methodologies that have been proposed in scholarly articles and some industry adopted practices.

A study by Attaran (2004) proposed a BPR methodology that incorporates the following three phases: before the process design phase, during the process design and during the implementation design phase. Each phase elaborates on the fundamental role IT plays in assuring the success of each. The ‘before the process design’ phase draws up new processes and the activities involved include identifying enabling technologies and aligning them with the corporate strategies.

With the ‘during process design’ phase, important activities highlighted are: documenting proposed change and the matching of the IT strategy to the business goals (Attaran, 2004). On this note, Davenport and Short (1990) cite that BPR has to extensively consider both IT and business views. This BPR methodology emphasises the IT- business strategic element in a BPR process.

Fitzgerald and Murphy (2014) also proposed a process that can be followed in BPR implementation. The following are the six phases of their BPR process and activities involved in each phase.

- Envisage New Process
 - Secure management support
 - Identify re-engineering opportunities
 - Identify enabling technologies
 - Align with corporate strategies
- Initiating Change
 - Set up re-engineering team
 - Outline performance goals
- Process Diagnosis
 - Describe existing processes
 - Uncover pathologies in existing processes

- Process Redesign
 - Develop alternative process scenarios
 - Develop new process scenarios
 - Design new HR architecture
 - Develop blue print and get feedback
 - Select Information Technology platform
- Reconstruction
 - Develop and install IT solution
 - Establish process changes and management changes
- Process Monitoring
 - Performance management
 - Link to continuous improvement

Lastly this section overviews the Lamphathaki, Koussoris and Psarras (2013) study which analysed five BPR contemporary methodologies, namely:

- Process Reengineering Life Cycle (PRLC) Methodology;
- Integrated BPR Methodology by Muthu, Whitman and Cheraghi (1999);
- Object-Oriented Business Engineering Methodology (OO-BEM) by Heeley and Jacobson (2001);
- McKinsey BPR Methodology by Kai (2004); and
- Accenture BPR Methodology.

The above mentioned methodologies follow different steps, which are summarised next.

The steps in the PRLC methodology are as follows; to envision, initiate, diagnose, monitor, reconstruct and redesign. The processes followed by the integrated BPR methodology are prepare for, map and analyse “as-is” processes, design “to-be” processes, implement reengineered processes and improve continuously. The OO-BEM methodology works as follows; envisioning, revising existing business, engineering new business and installing the new business. The Accenture BPR methodology incorporates five steps as follows; share vision, assess and align master plans, design, pilot & implementation and operate. Lastly the McKinsey BPR methodology follows a three phase cycle that includes diagnosing, redesign and implementation.

After reviewing the frameworks Lampathaki et al. (2013) constituted a BPR Life cycle methodology that incorporates all the different phases common in all frameworks they evaluated in their study. These are; visioning, identifying, analysing, redesigning, evaluating, implementing and improving. A short summary for each phase is given in Table 2.1.

Table 2.1: BPR Life cycle methodology (Lampathaki et al., 2013)

Visioning	Defining corporate visions and business goals
Identifying	Identifying business processes to be reengineered
Analysing	Analyzing and measuring an existing process
Redesigning	Identifying enabling IT & generating alternative process redesigns
Evaluating	Evaluating and selecting a process redesign
Implementing	Implementing the reengineered process
Improving	Continuously improving the process

All the above discussed BPR methodologies may follow different order of activities in achieving the reengineering of the business processes, however Vreed and Hangst (2004) state that every BPR implementer has to have clarity on the following before initiating a BPR project: reasons for reengineering, successful requirements for reengineering and indicators of a successful BPR project. Thus the environment that the BPR project is being performed should answer what the organisation stakeholders and customer want, and how process change must be done to meet these wants in an effective and efficient manner. Also of consideration is whether IT is going to drive the streamlined processes to improve quality and market response time.

In all the different phases of the BPR methodologies discussed in the preceding sections, the points that Vreed and Hangst (2004) raised were all addressed. The central phases of BPR per the above listed and discussed BPR methodologies are four and these are analysis, design, implementation and monitoring. Activities may differ per phase but the objective remains standard for each phase. According to Vreed and Hangst (2004), at analysis phase reasons for reengineering should be clear; at design and implementation phases, successful requirements for reengineering and whether IT is going to drive the streamlined processes should be made clear and lastly, at monitoring phase, consideration should be given to indicators of successful BPR projects as discussed by Reijers and Mansar (2015).

According to Reijers and Mansar (2015), indicators of a successful BPR project will be observed by the following aspects: the focus of a business that has shifted from boss to customer, employees who are empowered and involved at all levels of the organisation, more result oriented work as opposed to activity based work, an organisation that is more process oriented as opposed to being functional and the organisation will also operate on simpler business processes as opposed to complex ones.

To guarantee a successful BPR Reijers and Mansar (2015) advise that the following pitfalls should be avoided in order to assure a successful project. Whilst the list is extensive of practices not to do, only four have been considered as they can be related to the BPR methodologies previously discussed. According Reijers and Mansar (2015), BPR implementers should avoid the following: giving non-essential processes a priority; considering only process reengineering and doing away with other important elements of reengineering such as strategy development; implementing BPR from bottom up instead of top down and focusing solely on design and ignoring implementation.

Whilst reviewing the BPR literature Lampathaki et al. (2013) BPR Life cycle methodology was considered the most insightful in understanding and demonstrating the BPR process. However, in understanding what BPR practitioners consider as necessary processes for a successful BPR project, they notably neglected an important element that this study seeks to bring attention to. This is having IT-Business alignment as a central consideration in a BPR project.

2.2.3 BPR Drivers

As previously stated, for a proper fit between evolving technology and business process, BPR must apply the capabilities of IT (Barjis, 2008). The proper application of IT capabilities often realises the drive for an organisation's BPR project. Different cases in which organisations implemented a BPR project were reviewed and the motivation behind each project is stated below (Barjis, 2008).

- Transactional motivation unstructured business process is transformed into standardised transactions.
- Geographical motivation refers to IT in this sense transferring information across large distances making business processes independent locations.

- Informational motivation means that with the help of IT great detailed information can be allocated into business processes.
- Knowledge management motivation refers to an aim of improving business processes, IT assists in the capture and dissemination of knowledge.
- Reduction of intermediaries refers to where IT enables the connection of two parties within processes which would otherwise be communicated through multiple intermediaries.
- Tracking refers to IT mechanisms that have made possible a detailed tracking of status, output and input.

Mashari and Zairi, (2000) further add that BPR seeks to improve costs, quality, speed and services. BPR also drives an organisation to become a profitable or an effective competitor in the market place. The drive is involved with two strategies; firstly, to promote the business innovation and lastly, to make great improvements to the business process. The main theme for BPR is to get rid of the silo thinking which will lead to having multi-processes run across the organisation often using multi-disciplinary teams (O'Neil and Sohal, 1999).

In summary, BPR is essential when there is a need to strengthen competitive advantage, to widen the gap from competitors, to map a strategy and future action plan, to consolidate position and to revolutionise strategy and mode of operation. BPR also involves identifying and quantifying process improvement opportunities, establishing objectives, stretching the existing activities, identifying benefits for the organisation and identifying the necessary changes (Earl and Khan, 2007).

2.2.4 Implementing BPR Projects in Large Organisations

As companies become more globalised and more competitive, delivery times, high service levels, quality and reduced costs have become essential for a company's success. In order to achieve this, companies in the late 1980's and early 1990's embarked on different management techniques (Earl and Khan, 2007). Davenport (1993) mentions radical reengineering of business process (BPR) and a gradual improvement technique that is based on total quality management (TQM).

Hokoma and Mabrauk (2016) mention that BPR gained popularity in the 1990's as a leader in modern management and as such, many large companies adopted it and gained valuable performance improvements.

In the business cases discussed by Hokoma and Mabrauk (2016) IT was a driver in restructuring the organisation from operations to functional and communication structures. The findings show that large companies that had adopted BPR failed to consider the critical success factors crucial towards a successful BPR project. Furthermore, the study highlighted that in order to perform a successful BPR, the first important factor is to obtain support from top management and to gain all the necessary resources.

According to Grover, Kettinger and Teng (2013), to successfully execute a BPR project, it is important that the strategic goals of the business are well defined. By so doing, Grover et al. (2013), adds that defining the corporate strategy will steer the business holder towards evaluating the current status of the business and thus giving a clear road map of where to take the business. However, most importantly, is to view BPR as a holistic approach that well integrates people, processes and technology (Grover et al., 2013).

This section has in detail defined the meaning of BPR and explained BPR through the different BPR phases, as viewed by the different scholars. It has also acknowledged an organisation's motives for BPR and BPR implementation within large organisations. The next two sections shift the lens away from BPR and the focus is on the meaning and understanding of IT and business strategy and IT-business strategic alignment. In the last section of the literature study, all three concepts are encompassed with an aim to assimilate IT-business strategic alignment in the context of BPR.

2.3 Strategy

The business world is constantly changing thus creating challenges when building a comprehensive business. According to Applegate (2009), this challenge can be contained if executives accurately define and execute business strategy. Applegate (2009) explains that the starting point for developing a strategy is with understanding the forces that shape the industry competition. Within an organisation, there are functional strategies that are there to drive an organisation. This study considers the organisational business strategy and IT strategy, which are discussed in the following sub sections.

2.3.1 Definition of Business Strategy

Several meanings and variants have been given to the term business strategy. Two definitions that give a comprehensive clarity to business strategy have been selected. According to Schwalbe (2010), an organisation's business strategy outlines the company's long term objectives and how it will be differentiated from its competitors. Wicheret et al. (2006), adds that the strategy will define the organisation's focused purpose and future perspective.

Henderson and Venkatraman (1989) refer to the different components that explain the meaning of business strategy. These components are; the business scope, distinct competencies and business governance. Coleman and Papp (2006) provide a description of each of these components.

- Business scope refers to all factors that can influence the business environment, which are as follows; products, services, sellers, buyers, customers, suppliers, current and potential competitors and location.
- Distinct competencies refer to everything that ensures the success of a business in a market place. These include core competencies, cost and pricing structures and brand.
- Business governance refers to existing relationships between stakeholders, strategic business partners and government regulations.

2.3.2 Definition of IT Strategy

IT has over the years shifted from a support function to being a strategic component within organisations. According to Buchta et al. (2007), IT strategy is defined as the business enabler. With this understating, Buchta et al. (2007) define IT strategy in terms of innovative IT projects that build an organisation's sustainable competitive advantage which will in the long term, increase the organisation's value.

Haes and Grembergen (2008) argue that IT has come to play a crucial role in the support, sustainability and growth of organisations and because of this, there is a bigger focus on managing IT projects. For these IT projects, it is important that they deliver good value for the organisation. In order to accomplish this, the projects need to be in connection with the business side of the organisation. The process of managing and improving this connection is called strategic alignment (Morrison, 2011). This is addressed in detail in section 2.4.1.

As with the business strategy, the Coleman and Papp (2006) definition will be assumed to further relate to the meaning of IT strategy. The components that built the IT strategy according to Henderson and Venkatraman (1989) are technological scope, systematic competencies and IT governance. Coleman and Papp (2006) define them as follows:

- Technology scope refers to all the technology and essential information application that is used by the organisation.
- Systematic competencies refer to the unique capabilities that differentiate the business IT from the rest.
- IT governance defines the business authority structure with regard to IT and the distribution of resources, risks and responsibility between business partners, IT management and service providers. Also taken into account in IT governance, is the prioritisation of IT projects.

2.4 IT-business Alignment

Alignment is a broad field and as such it has fostered a big debate in the information systems (IS) research field. Some of the topical questions of interest are: what exactly is alignment, why do organisations need to attain and maintain the state of alignment and how organisations could go about the task of becoming aligned? However, with all these questions addressed there remains no consensus on what alignment is; why it is needed and how organisations may go about the task of becoming aligned.

The literature indicates that the concept of alignment dates back to the 1970's. According to Hussain, King and Cragg (2002), alignment originated from an organisations' realisation that they were developing information systems that did not support their business strategies. They reported that the development projects were prioritised according to their technical imperatives and not their business necessities. This contributed to low return on IT investment.

In the early 1970's a fit between an organisation and its strategy, technology, processes and the environment, became a basis for theory building and research. Theories constructed on previous studies signify that organisations must effectively align their strategy and structure with the competitive environment, for them to effectively perform (Rogers, Miller and Judge, 1999).

Different interpretations of alignment follow exactly the theories that they have been built on. The next section discusses different interpretations of alignment by different scholars.

2.4.1 Definition of Alignment

According to Luftman et al. (1999), alignment focuses on activities done by management in order to attain solid goals across the organisation. A company is said to have reached alignment, when its current and emerging business strategy is enabled, supported and unrestrained by technology (Pearlson and Saunders, 2012). As such, alignment should address both effectiveness and efficiency (Luftman, 1990).

In defining alignment, Papp (199) uses a fusion method to interpret alignment. This method has eight different perspectives, namely the; strategy execution, technology potential, organisational IT infrastructure, organisational infrastructure strategy, competitive potential, service level, IT organisational infrastructure and the IT infrastructural strategy perspective. These demonstrate how alignment addresses effectiveness and efficiency when there is a strategic fit between business strategy, infrastructure and IT. Papp states that alignment is paramount to achieving increased profitability from IT.

From these different interpretations of alignment, it can be concluded that an organisation is well aligned if there is collaboration between its strategy, processes and infrastructure to jointly drive improved organisational performance and to achieve business goals. It is important to take note that alignment does not happen automatically on its own.

2.4.2 Achieving IT-business Alignment

There are numerous ideologies assumed towards achieving alignment as there is no consensus of the one right way of attaining it. As such, achieving alignment requires an ongoing effort of strategic planning, goal realignment and the implementation of the best practices in supporting and shaping strategies. Alignment can be addressed at the strategic, tactical and operational levels. On a strategic level, alignment assists the organisation with meeting its future IT needs. On a tactical level, alignment sees to it that IT resources are effectively distributed. At the operational level, alignment allows for everyday effectiveness and the efficiency of IT in supporting an organisation's operations.

Organisations that have a high level of alignment are more likely to achieve higher levels of performance and a greater perceived business value from IT, as previously stated.

While there is clarity on the concept of alignment, the question on how organisations can align IT to the business, remains vaguely answered. On this note Smaczny (2001) claims that there are no studies that are focused on exactly how organisations go about achieving alignment. This claim is supported by Sabherwal and Chan (2001), who note that there remains a need to understand the processes by which alignment is achieved. Hussain et al. (2001) suggest that additional research should be done in the area of business process alignment with IT. Liang et.al (2017) further add that good alignment between IT and the business will increase organizational inertia and emerging business IT coordination.

According to Smaczny (2001) the assumption made is that the models are built on automatic principles and that management uses structured and planning-oriented approaches to business objectives. Henderson and Venkatraman, (1989) and Ciborra (1997) believe that although there are models available, a need still remains for a more coherent framework.

Conversely, there are authors who argue that there are techniques in place that can be employed in order to achieve alignment. These authors are evaluating the process of alignment by assessing the relationship between IT strategy and business strategy. Weill and Broadbent (1998) point out that organisations ought to implement IT applications to enable the business strategy. They do, however, warn of the risks involved in using IT to initiate new strategies and business transformation as a way for organisations to achieve alignment. Tallon and Kraemer (2003) support this by claiming that it is not in all cases, that IT will support the business strategy, particularly in cases where business strategy is under-utilising IT. While Avison, Powell and Wilson (2004) do not dispute the practice of strategising as the appropriate way to attain alignment, they leave this matter open to debate.

To a large extent, the Avison et al. (2004) study explains this by elaborating the Coleman and Papp (2006) study. The management tool which they developed, assesses and monitors the state of alignment and reallocates IT resources where need be, to drive the implementation of the strategies. Both studies draw some insight on how alignment might be achieved, however, they focus exclusively on the alignment model.

The Papp (1995) study as previously mentioned in section 2.4.1 uses a fusion method to demonstrate how the strategic alignment can be achieved by employing the eight alignment perspective. The fusion perspectives follow the synchronized assessment of the strategic fit and

the functional integration to try and address how IT-business alignment can be achieved. It employs the following components: the anchor, pivot and area of impact. The anchor is the strongest area of the business, the pivot the weak area whilst the area of impact is the area that is affected through the changes made in the pivot area through re-alignment (Henderson and Venkatraman, 1990; Luftman et.al 1993; Papp, 2004).

The first perspective is the strategy execution which combines business strategy, business infrastructure and the IT infrastructure. In this perspective the business strategy is the anchor, the weak area is the business infrastructure and the area of impact is the information technology infrastructure.

The remaining seven follow in a similar manner the combination of the three constructs as per Figure 2.1 and they are: the technology potential perspective, organization IT infrastructure, organization infrastructure strategy, competitive potential, service level, IT organization infrastructure and the IT infrastructure strategy perspective. The red arrow in Figure 2.1 below highlights the anchor and the area of impact is at the pointed area of the big arrow. These perspectives will form part of the guiding principles towards the design of the research instrument. The section below demonstrates the functionality of each perspective.

- Strategy execution perspective: The goal of this perspective is to reduce errors delays. Focus is paid on IT planning and effect is the business transformation.
- Technology potential perspective: IT strategy drives this perspective. Here the IT contribution to the final products and services is determined by the upheld value of IT in the organization.
- Organization IT infrastructure perspective: The impact of this perspective is on the process improvement steered by IT.
- Organization infrastructure strategy perspective: This perspective allows for capabilities to be exploited in order for new products and services to be improved. It drive the changes in the IT strategy by developments it makes to business strategy.
- Competitive potential perspective: This perspective assist with building competitive advantage in the market place with respectto how organisations employ emerging technologies to drive and enable new business strategy.

- Service level perspective: This perspective addresses IT contribution on how it is employed in the provision of products and services.
- IT organization infrastructure perspective: In this perspective IT forms a base on which organisation visions are executed.
- IT infrastructure strategy perspective: The focus here is on improving IT strategy by enhancing both existing and emerging IT infrastructure.



Figure 2.1: Strategic Alignment Perspectives (Papp 1995)

In the light of the above discussion, there is no fixed agreement on a complete process that can be implemented for alignment. The literature has drawn on numerous studies to address alignment and to address it, most of these studies consider models. There are, however, other

studies that look into other factors that influence alignment, that are paramount to understanding what it takes towards achieving alignment.

In the next section, the literature goes further to examine the influential factors of alignment. It presents optimal sets of factors from various studies and then elaborates on a process adapted to reaching a category of five alignment factors.

2.4.3 IT-Business Alignment Factors

Alignment requires strong support from senior management, good working relationships, strong leadership, appropriate prioritisation, trust, and effective communication, as well as a thorough understanding of the organisation. Seman and Salim (2013) claim that by identifying factors to achieve IT-business strategic alignment, the issue of the absence of alignment, can be addressed. Esmadi et al. (2013) cite that past research findings reveal that successful alignment focuses on managing specific alignment dimensions by investigating factors that facilitate this.

This section focuses on the factors that enable alignment. Within this area of IT-business alignment, there is a rich literature that builds on what may possibly enable or inhibit alignment. Luftman et al. (1999) popularised this aspect with their renowned categorised table of enablers to alignment and inhibitors to alignment illustrated in Table 2.2.

Table 2.2 Luftman et al. (1999) alignment enablers and inhibitors

ENABLERS	INHIBITORS
Senior executive support for IT	IT/business lack close relationships
IT involved in strategy development	IT does not prioritise well
IT understands the business	IT fails to meet its commitments
Business - IT partnership	IT does not understand business
Well-prioritised IT projects	Senior executives do not support IT
IT demonstrates leadership	IT management lacks leadership

Similar studies have also resulted in a number of sets of success factors for IT-business alignment and they are summarised in Table 2.3.

Table 2.3 Sets of success factors for IT-business alignment

Teo and Ang (1999)
<ul style="list-style-type: none"> • Top management is committed to the strategic use of IT • IS management is knowledgeable about business • Top management has confidence in the IS department • The IS department provides efficient and reliable services to user departments • There is frequent communication between user and IS department • The IS staff are able to keep up with IT advances • Business and IS management work together in partnership in prioritising applications development • Business goals and objectives are made known to IS management • The IS department is responsive to user needs • Top management is knowledgeable about IT • The IS department often comes up with creative ideas on how to use IT strategically
Reich and Benbasat (2000)
<ul style="list-style-type: none"> • Shared domain knowledge • Communication between business and IT executives • Connections between business and IT planning • Successful IT history
Chan (2002)
<ul style="list-style-type: none"> • CEO and CIO have a strong working relationship • Business and IS plans are closely linked • IS personnel participate in business planning • IS projects have business sponsors • IS personnel make lateral short- or long-term transfers into business partner area
Kearns and Lederer (2003)
<ul style="list-style-type: none"> • Information intensity of the value chain • The CIO participates in business planning • The CEO participates in IT planning • The IT plan reflects the business plan

Chan et al. (2006)
<ul style="list-style-type: none"> • Shared domain knowledge • Prior IS success • Organisational size
Huang and Hu (2007)
<ul style="list-style-type: none"> • Integrating IT planning with business planning • Maintaining effective communication channels • Developing strong relationships between IT and business • Institutionalising the culture of alignment

The factors presented above, are redundant and as such, they lead to an overlapping of IT-business alignment constructs categorisation. As a result, certain scholars took upon themselves to investigate IT-Business alignment constructs categorisation. A case in point is the Seman and Salim (2013) study that investigates the IT-Business alignment constructs categorisation. Their findings maintain that by developing constructs categorisation, it is possible to have a case for IT- Business alignment factors.

A second case in point which follows a systematic grouping of alignment factors, is a study by van Hout (2012). The systematic processes followed in this study entailed reviewing previous studies on alignment factors and drawing from them as many factors as possible. These factors were then assigned a label to create a grouping of factors with respect to their common labels. At the end of this process, a condensation of alignment factors resulted in five categories of alignment factors. A description of each category as proposed by van Hout (2012) is provided in the next section. These following alignment factors are adopted in the current study and are depicted in Figure 2.2 on page 28.

2.4.4.1 Intention and support

This category enfolds the commitment of top management to use IT strategically and the support they provide to assure this level of use. This is done to ensure the creation and sustainability of strategic alignment. Measures used to assess how committed and supportive

top management towards strategic use of IT are; value recognition, inclusion in vision and resource allocation.

2.4.4.2 Working relationship

This factor category emphasises the relationship between business and IT as it looks at the partnership and communication, between these sectors. Henceforth, an emphasis is on communication between different departments but more so on business and IT executives. This should be followed by the cooperation of IT and business in strategy formulation and project prioritisation. To ensure that there is a working relationship between IT and business executives, partnership and communication measures are employed.

2.4.4.3 Shared Domain Knowledge

This factor acknowledges how well the business knows IT and how well does IT know the business. It simply says that when both functions have appropriate knowledge of each other, their objectivity will positively benefit the company. There are two measures used to assess this: IT's business knowledge and business's IT knowledge.

2.4.4.4 IT Projects and Planning

This concerns the link IT projects and planning have, with the business strategies and plans. On the project prioritisation concern, the integration of technology should enable the creation of an organisation's competitive edge. To assure this, sponsoring, linkage and prioritisation measures are applied.

2.4.4.5 IT Performance

This factor focuses solely on IT. It considers an IT department's performance with regards to competitive position, IT perception by the business and structures to stimulate performance. In so saying, IT staff must be kept abreast of the latest IT trends and also be innovative and they must exploit the existing, as well as the new technologies available to them. In this regard, IT should also steer the organisation's competitive edge. The three measures used to assure IT performance are innovation, reliability and opportunities.

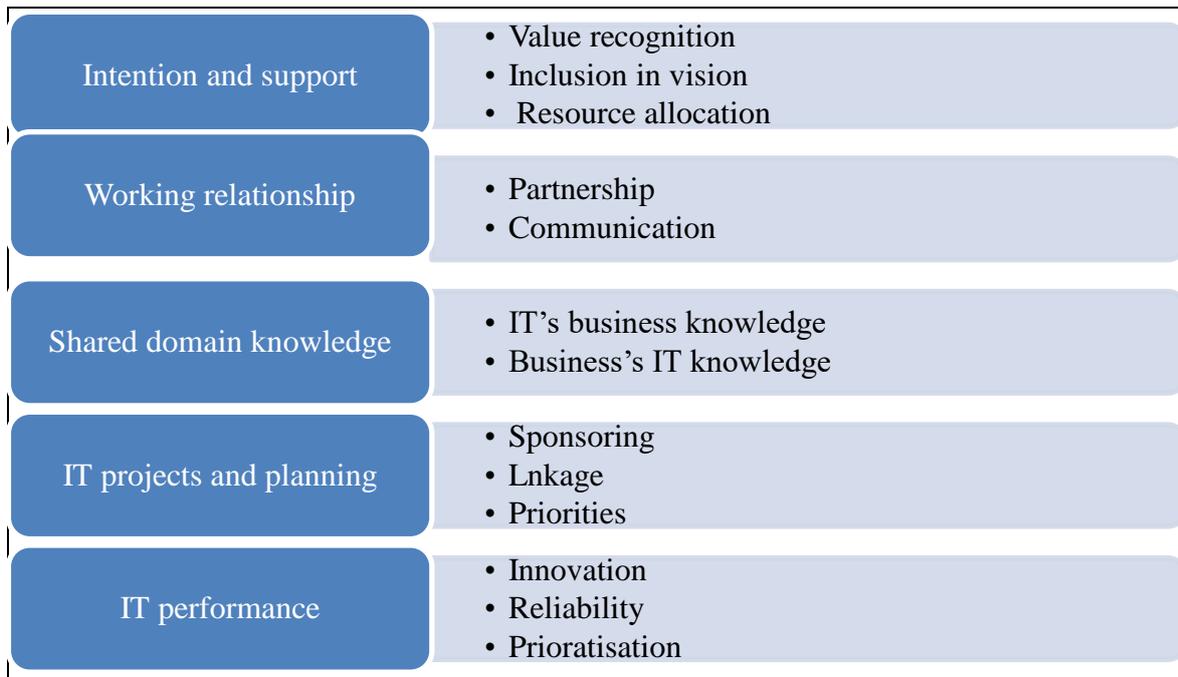


Figure 2.2: Alignment Factors

One of the objectives of the study is to understand the role of alignment factors on IT-business strategic alignment in the context of BPR. This section has helped to identify alignment factors and to understand their applicability in real life cases. The next section gives an overview of IT-business strategic alignment benefits.

2.4.4 Benefits of IT- Business Alignment

When an organisation is properly aligned, the resulting partnership between the CIO and the CEO drives successful development and attainment of strategies and goals. The benefits of good alignment between business and IT go further than a beneficial partnership. The need for alignment is well known and documented. Examples of the benefits of good alignment date as far back as the late 1970s.

McLean and Soden (1977), Parker and Benson (1988), Chan and Huff (1993); Henderson and Venkatraman (1996), Luftman and Brier (1999), Toland et. al (2015) highlight the following benefits of good alignment between business and IT:

- Ideal enabler to support dynamic business strategies
- Improves effectiveness and efficiency
- Improves goal attainment through cohesive activity
- Manages priority

- Allows transparent communication
- Improves business–IT knowledge of each other’s environments
- Improves appropriate application of technology
- Improves commitment and focus
- Provides standardised processes

Liang et.al (2017) further add that good alignment between IT and the business will increase organizational activity and emerging business IT coordination.

However, Smaczny (2001) questions the aptness of IT-business alignment in contemporary organisations. He attests that there should be an alternative paradigm to alignment to manage IT function in contemporary organisations. He proposes a theory of fusion which involves the development of business and IT strategies simultaneously. While this theory is not being disputed, the alignment theory base continues to grow and while challenged, it is being built upon, tested and applied in modern academic work and in different industries.

A study by Davison et al. (2004) indicates that alignment is an ideal IT functional management tool. The study reports the notion that good alignment is seen to assist organisations by maximising the return value from IT investments; presenting a better competitive position through information systems and providing direction and flexibility to react to change.

In view of these findings, a lack of alignment between business and IT, can seriously harm a business performance and as such, can be detrimental to the organisation’s success (Davison et al., 2004). Pearlson and Saunders (2012) also warn that failure to incorporate IT strategy in the planning of both the business and organisational strategy could result in one or all of the following scenarios: a misalignment between the business and organisational strategies, IT that fails to support organisational systems and/or the business goals.

This section has essentially summarised the importance of IT-business alignment. It is apparent from the above discussion how crucial it is for organisations to maintain their state of IT-business alignment in order to realise returns on IT investment. In addition, the preceding discussion has also identified that whilst IT-business alignment is evidently a paramount tool to managing the IT function, there remains other alternatives for this purpose. However, only

alignment is considered for this study and the next section looks at IT-business alignment from a BPR perspective.

2.5. IT-business Alignment from a BPR Perspective

BPR is an important contingency measure to keep business competitive and high performing in a versatile business environment. Equally important is assuring that in the same kind of environment, there is cooperation between IT and business. Before BPR is implemented, there is the development of a business model. This development consequently becomes a lead for BPR. In a study by Trkman (2007), a caution is given, that the business model evolution is a challenge many organisations will need to have a roadmap for. The evolution of a business model suggests that there is an alteration of the business strategy which will drive the IT capabilities, and conversely the adjustment of different technologies so that they are able to execute the revised corporate strategy. Business processes as a result, are also restructured to support the changing strategies. Important in these developments is maintaining the alignment of IT and the business at all times. In this section IT-business alignment is discussed from a BPR perspective.

The literature cites numerous studies on strategic alignment from a BPR stance. This notion is profound to the study, as it gives an opportunity to relate strategic alignment to the context of the study. For example, Amid and Ateno (2004), define strategic alignment from a BPR standpoint, as a state that satisfies the harmonisation of organisational objectives and business process objectives, alongside their enabling technologies. Trkman (2010) claims that the assurance of the link between BPR and business strategy, will lead to the long term success of the organisation's improved processes. Hung (2006), add that strategic alignment is also responsible for value maximisation delivered by improved processes.

The need for a strategically driven BPR approach has been advocated by numerous authors (Zairi & Sinclair, 1995; Sarkis et al., 1997; O'Neil and Sohal, 1998; Terziovski, Fitzpatrick and O'Neil, 2003). Tinnilä (1995) argues that BPR should start with strategies. The desired strategic position should be the starting point for redesign, rather than an improvement of existing operations (Tinnilä, 1995). Edwards and Peppard (1994, 1998) proposed business reengineering as a natural connection with manufacturing strategy. They suggest that business reengineering can help bridge the gap between manufacturing strategy formulation and

implementation. Mandarish and Schaffer (1995) support the idea that BPR can help attain strategic alignment when in its implementation business processes were initially mapped to organisational objectives. In this context, BPR is seen as an approach, which defines the business architecture, thus enabling the organisation to focus more clearly on customers' requirements.

The point of entry for the current study is to understand the organisations' strategies and the business processes that need to be redesigned in order to deliver the organisations' strategy and improve the organisation's performance. The key focus in this section is the relationship between IT-business strategic alignment and the redesign of business processes.

However, it should be noted that it is not at all times that improved business processes will lead to improved performance. According to Hammer and Champy (2004) 50% to 70 % of BPR projects are a failure. Different authors have written about these failures and their causes. Hall et al. (1993) state inadequate stakeholder commitment and a lack of enabling conditions as one factor for a BPR project's failure; Guangming Cao et al. (2001) mention the lack of a holistic perspective. Hammer and Champy (2004) indicate the lack of wide stakeholder participation and lastly, Garvin (1995) states the lack of environmental relevance are reasons for failure. According to Garvin (1995) one of the main contributors to BPR project failures, is assuming that process design can be implemented without rethinking business strategy. Hammer and Champy (2004, p12) concur by stating as follows; "Business revisioning requires devising a new vision and a new competitive strategy, followed by the development of an entirely new business process to support new vision."

BPR involves improving the organisation's strategic goals and this allows for the organisation to be on par with the agile business environment (Grover et al., 2005). BPR has to therefore take into account how business processes reflect the interdependence of IT capabilities and the organisation's strategy. To achieve this integration between IT and the business model, Motwai et al. (2000) advise on strategically placing IT in a BPR project. This entails using IT to make proactive decisions that will improve business performance.

According to Livari (2006), alignment needs to be between the design of an organisation, the environment, effective organisation and its subsystems. Cox et al. (2006) state that organisational IT should provide support for the organisation's business strategy to ensure the

success of the business. This can be achieved by assuring that the application of IT in business processes maps to the business strategy. Karim et al. (2007) supports this, by stating that IT will only have a positive impact on an organisation, if it matches the business processes. Trkman (2007) warns that business process advancement brings about many problems and to mitigate against this, there is a need for constant assurance of the fit between business processes, environment and technology.

From the reviewed literature, it is further suggested that there is limited information on how BPR realises IT-Business strategic alignment. Open Text, (2011) even argues that subsequent to performing BPR, a disconnection between business users and IT often crops up. However, from different topics related to this objective, a few suggestions are proposed. The Papp (2004) study illustrates the role that business processes play in selecting IT/IS solution that support the implementation of business strategy. He points out that business strategies ought to be based on first class business processes that provide an agreeable degree of customer satisfaction.

This section has demonstrated the need for BPR in the dynamic business environment. It has in so doing stipulated that IT-business alignment should be a process aspect of BPR. Two suggestions for achieving this are to have IT capabilities matching the functions that must be performed and to also deploy IT effectively in the business strategy. Lastly, this section has also built a case for the definite role business processes play towards achieving IT-business alignment. Contrary to the popular belief that BPR has a negative impact on the IT-business alignment, it can be argued that BPR is the starting point for shaping and maintaining alignment of IT and business and consequently their environment. As such the study addresses the knowledge gap on how alignment factors can influence the alignment between IT and the business in the context of BPR. Section 2.6 presents the principal theory which underpins the study.

2.6 Theoretical Framework

From its conception era, the theory base on alignment has been supported by sound theoretical models. From the early days, models of strategic alignment that have been prominent are the MIT90s model Morton, (1991) and the strategic alignment model, SAM, (Henderson and Venkatraman, 1989, Avison et al., 2004).

A distinction that Henderson and Venkatraman (1989), drew between the MIT90s model and SAM is that SAM considers both the IT internal and external perspectives, whilst the MIT90s focuses only on the internal areas of the organisations that need be aligned. Externally SAM reflects on the IT strategy and internally on the IT infrastructure and processes.

As a consequence, SAM elevates the applicability of the IT function within organisations as its role translates from solely being a support function, to transforming the business policy (Avison et al., 2004).

In a similar study, Roland et. al (2016) used the modified constructs of SAM in an adapted framework to demonstrate which antecedents are influential towards achieving strategic alignment. They tested the internal and external factors. The following internal factors were evaluated, namely shared domain knowledge, relationship management, and prior IS success. The external factors evaluated were market uncertainty, technological uncertainty and regulatory uncertainty (Roland et.al, 2016). The findings of the study conducted by Roland et. al (2016) showed that environmental uncertainty, shared domain knowledge, relationship management and prior IS success all have a positive influence on strategic alignment. Henderson and Venkatramen, (1993) used SAM to evaluate its internal and external factors impact on IT-business alignment.

SAM internal factors are described as the administrative components that drive the organisation strategy and these are skills, processes and infrastructure while the external factors described an organisation competitive positioning. In a similar manner all the components of SAM were found to be influential towards achieving IT business alignment.

SAM is further applied by Farnaz et. al (2015) as a framework for their study whose focus was on aligning strategy with business processes. They extended the use of SAM by considering the alignment perspective in SAM and focused on a strategy execution perspective. They argue that business processes are an important factor in aligning IT with strategy.

SAM is adopted in this study for its extensive base in the IT strategic research. Whilst there are doubts on SAM's practicability, Avison et al. (2004) demonstrates that SAM has both a conceptual and a practical value in creating, assessing and sustaining strategic alignment between IT and the business. They affirm that SAM demonstrates that organisations cannot be fully functional or effectively compete if they fail to align their business and IT strategies.

The SAM framework as adopted from Henderson and Venkatraman (1989) is built on four quadrants, each consisting of three components as shown in Figure 2.3 on page 35. These twelve constructs of SAM are great tools in defining alignment, (Papp, 2001). The next section gives a short analysis of the SAM framework as interpreted by Henderson and Venkatraman (1989), Papp (2001) and Coleman and Papp (2006). Through the analysis of SAM, it will be demonstrated how it is relevant to the study.

The model's four quadrants are; business strategy, information technology strategy, organisational infrastructure and information technology infrastructure. These quadrants are mapped to each other by two linkages. The first link is the strategic fit, which is a vertical link that explains the need for organisations to determine their market position (Coleman and Papp, 2006). It also derives how strategy is used to determine the business infrastructure. The second linkage and paramount to the study, is the functional integration. It is directly related to IT-business alignment and as such, addresses the main research question of the study.

According to Coleman and Papp, (2006) this link assures that technology is on par with the business processes as the business changes to be responsive to the changing environment. It also describes how well a business can position itself in the market, by leveraging the use of IT. According to Henderson and Venkatraman (1996) and Papp (2004) competitive advantage and value maximisation of IT are dependent on this link.

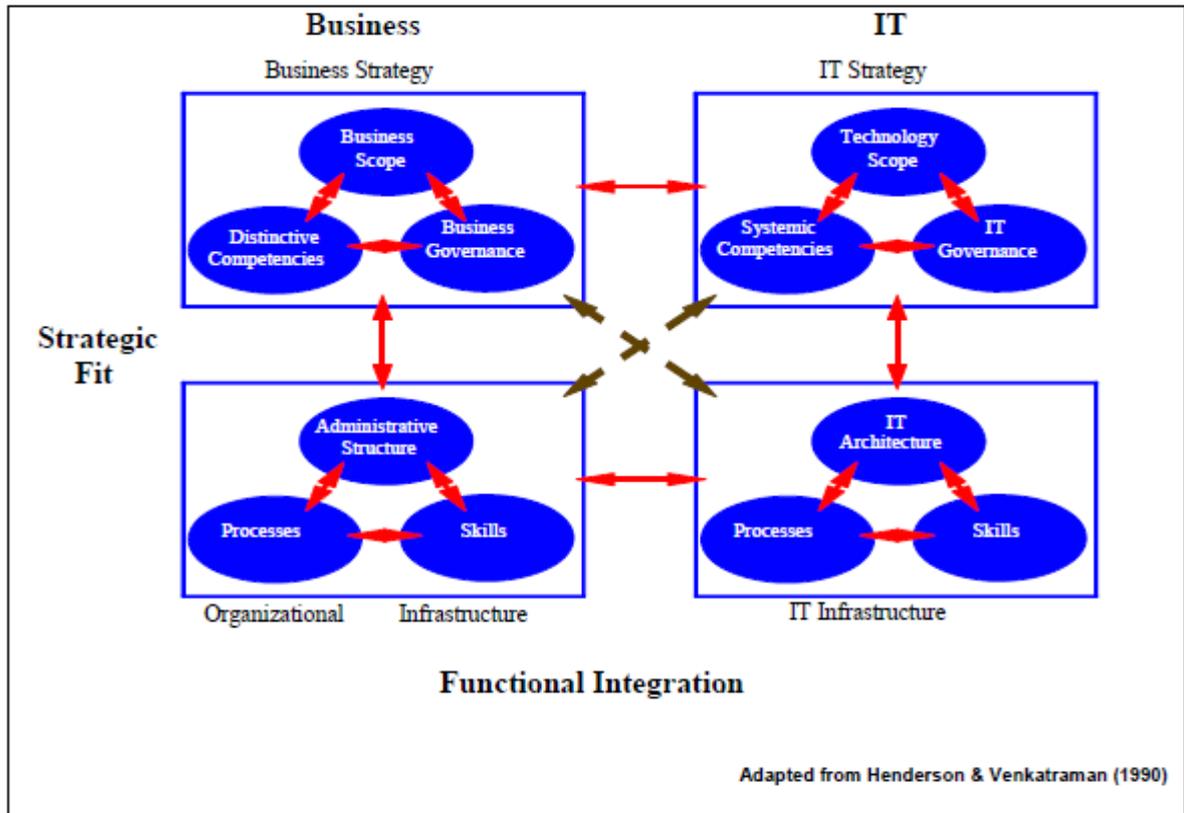


Figure 2.3 Strategic Alignment Model (Henderson and Venkatraman, 1990)

The application of SAM to this study will be demonstrated next. As the study views alignment from a higher level, which is at the strategic level, the SAM model is thus applied from a functional integration point. This is alignment between the business strategy and IT strategy. In the same light, the remaining constructs of SAM also come into effect from a BPR stance whereby processes mainly are under investigation. In this respect, the strategic links assist with linking the BPR to both the IT strategy and the business strategy constructs. This phenomenon is depicted in Figure 2.4.

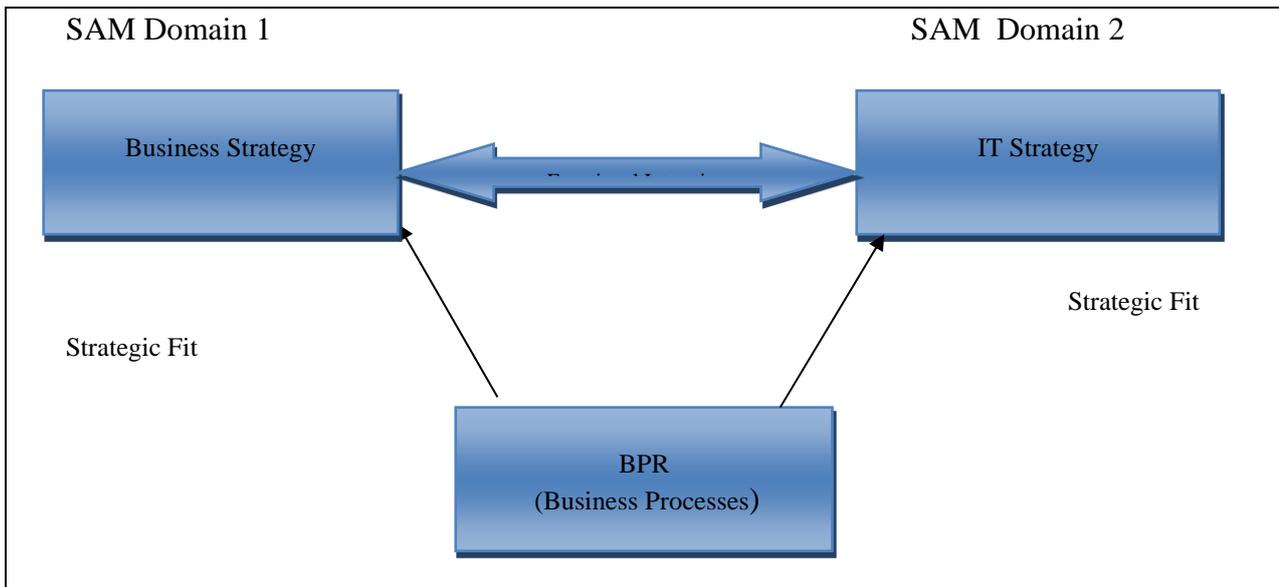


Figure 2.4: Maintenance of IT-Business Strategic Alignment in BPR projects

2.7 Conclusion

The reviewed literature has looked into different areas of the research topic. The bigger picture was to gain insights of how and if the BPR process considers IT-business alignment as an important function of BPR and how can IT-business strategic alignment be achieved in BPR. The literature addresses an important area, which are the alignment factors. With having reviewed different methodologies of BPR, alignment factors prove that they can be easily applied in different phases of the BPR process.

However, in terms of reviewed literature, there is evidence that there is an existing gap in relation to assessing IT-business alignment within a BPR project. Whilst there is rich theory from research conducted on strategic alignment and BPR, independently much has not been addressed with regard to the perceived benefits of aligning IT strategy and business strategy within a BPR project

This study is thus conducted on the grounds that there is not enough literature contributing to the alignment of IT-Business strategy within the context of BPR. It suggests that by understanding the roles of alignment factors in a BPR project and considering the benefits of alignment between business strategy and business processes and between IT strategy and business processes, a BPR project will conclude with a proper alignment between business strategy and IT strategy.

In a nutshell, in view of this chapter, many a time a BPR project failure is related to the misalignment of a business and IT. However there is not enough research that addresses the misalignment of business and IT in a BPR project. The current study thus aims at addressing this gap.

Chapter 3: Research Methodology

3.1 Introduction

This chapter looks holistically at the stance, theories and processes that were involved in carrying out the study. It covers research philosophy, design, paradigm, population and sampling, data collection and data analysis. Section 3.2 describes research philosophy adopted for the study. Section 3.3 discusses the research design followed by the research paradigm in section 3.4. Section 3.5 discusses the study site and population sampling. Methods used for data collection are described in section 3.6 followed by data analysis in section 3.7. Section 3.8 describes the study's limitations, while data validation and reliability are discussed in section 3.9. The chapter concludes by addressing the ethical grounds on which the study was conducted.

3.2 Research Philosophy

The current study was underpinned by an interpretive philosophy. The philosophy is deemed appropriate for the study when considering certain dynamics of this study. To begin with, Orlikowski and Baroudi (1991) claim that an interpretive approach provides a large scope that addresses issues that delve into technological influences and impacts in organisations by addressing the research questions of how and why. Walsh (1993) also advocates the use of the interpretive approach to best understand the context of an information system and the processes it influences. Klein and Meyers (1999) propose the contextualisation principle, which considers reflecting on the historical and social background of the research setting.

This study adopts a case study approach underpinned by an interpretive philosophy, where three cases were examined for IT-business alignment. Furthermore, the current study is more reliant on the human thought and action in the social and organisational context and these as elaborated by Klein and Myers (1999) can only be understood using an interpretive philosophy

3.3 Research Design

The multiple case study method was employed to conduct the current study. Walsham (1993) claim that a case study is the main vehicle for research in the interpretive tradition. The concepts of BPR and strategic alignment explored, were basically influenced by the current state of IT, the environment and business processes. According to Yin (1994) a case study is a great tool for investigating a contemporary phenomenon within its real life context. Three organisations constituted three cases for the study and the investigation focused on the current state of alignment following the implementation of each BPR project.

3.4 Research Paradigm

A qualitative approach was adopted to fulfill the objectives of the study. A qualitative approach aims at assuring that the meaning of a research topic is understood (Hallway and Wheeler, 2010). Hallway and Wheeler (2010), explain that this is achieved by elaborating and analysing the gathered data in detail. Brod et al. (2009) substantiate this approach in claiming that unlike quantitative methodology that mainly authenticate existing theories, the qualitative methodology contributes to the body of knowledge by interpreting, developing and seeking further clarification on the topic of interest.

The qualitative approach was adopted for the following three main reasons. Firstly, the review of the literature for this study indicates that insufficient research has been done to address the phenomenon under study within a BPR context. According to Golicic et al. (2002) a qualitative approach is appropriate when building a theory on the phenomenon of interest. Thus, by employing the qualitative approach, this study has built on the theory of IT-business strategic alignment within a BPR context.

Secondly, the exploratory nature of this study justifies the adoption of the qualitative approach. Users' perceptions play a vital role in the gathered data and a qualitative approach is suitable for this purpose. According to Treiblmaier and Pinterist (2001), exploratory means like focus groups and interviews allow for all possible attributes to be explored, in order to meet the objectives of the study. Through the use of interviews, a reliable and valid set of data was collected.

The last reason is similar to a case that Klein and Myers made for an interpretive philosophy. Papp and Mays (1995) state that a qualitative approach allows for the development of a proper understanding of a social phenomenon in a natural setting, by capturing both the perceptions and experiences of the participants. The qualitative study was deemed suitable for the study because of the above-mentioned reasons.

3.5 Population and Sampling

3.5.1 Study Site

The study was conducted in three different organisations located in Maseru, which is the capital city and the business hub of Lesotho. Maseru hosts both the country's largest organisations and largely all their headquarters as well.

These three large organisations operate in different industries and have in the past and of recent years, implemented medium to large scale BPR projects. Organisation A operates in the financial industry, organisation B in the logistics industry and organisation C in the telecommunications industry.

All the three organisations are narrowly dispersed from each other at the hub of the central business district. Being at the heart of the CBD, these organisations are exposed to a cut throat corporate world of a competitive business environment of growing entrants to their respective markets and to the world of ever changing technology, politics and the economy. They have adequate access to network and infrastructure. The industries that they operate in and their clientele necessitate a global mindset.

3.5.2 Sampling

For the purpose of gathering data, a non-probability, purposive sampling was used in selecting the staff members who worked on the BPR projects and on the strategy services. Robson (2003) states that for case study based researches, the population is usually small and thus non-probability, purposive sampling methods are often used. Non-probability sampling offers alternate techniques based on subjective judgment and purposive sampling allows for the selection of a case that will best answer the research question and meet the objective (Robson, 2003).

The criteria for selecting the interviewees, considers experience, involvement and seniority in the BPR implementation and strategic alignment fields respectively.

The strata from which interviewees were selected, is summarised in Table 3.1 and it was made up of diverse professionals. The deciding factor for these categories was as per the exploration done on roles these different experts assumed, from previous studies. With reference to studies by Harrington (1991), Hammer and Champy (1993) and Petrozzo and Stepper (1994), the professional categories that were thought suitable for the study as listed in Table 3.1 were as follows; the BPR team facilitator, IT strategy specialist, business strategy specialist and the process owner.

A review on the assumed strata is as follows; BPR team facilitator or leader is a senior executive who authorises and motivates the overall reengineering effort. The steering committee is a group of senior managers acting as a strategy team for reengineering. Lastly the process owner is a manager who oversees all processes that are reengineered.

It should be noted that while organisations' professional reference to their staff in some cases differed to those listed, the roles were similar. Thus the purposive sampling criterion was met on all grounds with reference to role, seniority and experience. On selecting the strata presented in Table 3.1, selection was with reference to job responsibilities meeting the role criterion. A document that described different roles in previous sections was drawn and was used as a guideline on getting hold of participants who were ideal to contribute to the study. Another important aspect of the sample to meet was seniority. For this criterion, one had to be on a senior management level to participate as a BPR team facilitator and steering committee member, whilst a process owner, a participant was selected on merits of being in either senior or middle management.

The last sampling consideration was experience, the more the number of years in a certain role the better. However due to staff turnover this last criterion was compromised. This did not become a major issue as the study considered that the participants had acquired relevant knowledge to perform their duties from previous roles held. The interviewees answered questions on both technology and business related aspects.

Table 3.1: Interviewee Strata

BPR Team Facilitator /Leader
Steering Committee Member – IT Strategy Specialists
Steering Committee Member – Business Strategy Specialist
Process Owner

The above strata indicate that four interviews were done per organisation. Thus, in total the study is built on twelve interviews from three organisations operating in three different industries.

3.6 Data Collection

Data collection describes the process of gathering, observing and organising data from different sources. Data can be said to be either primary or secondary type data, depending on the data source. Primary data is the original data collected for the first time from different sources. Secondary type data is data that is being reused. A flow chart depicted in Figure 3.1 shows the different methods of data collection.

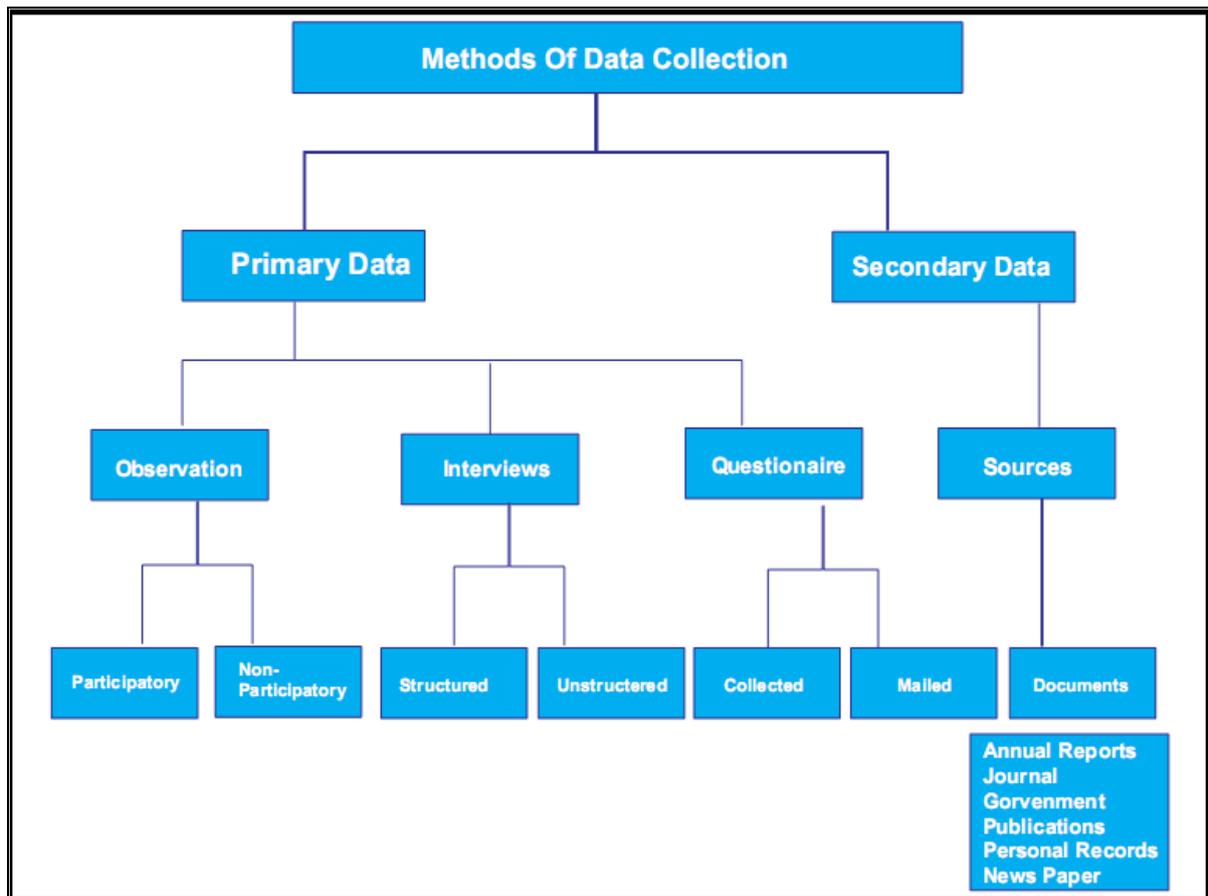


Figure 3.1: Data collection methods

The current study collected data across three BPR projects. In order to answer all of the research questions presented in the previous sections, both primary and secondary type data was gathered. Three data collection techniques were employed namely; document analysis, literature study and interviews. The choice of these techniques was related to the qualitative nature of the study.

A multiple case study approach was used to collect both primary and secondary data by using interviews and document analysis techniques. A literature review was used to gather secondary data. Below is a description of how the above mentioned criteria were reached.

Questions 1b established how BPR is implemented in large organisations in Lesotho. Document analysis was used to answer the research question: How are BPR projects implemented in large organisations? Interviews were implemented to address research questions 1a, 3 and 4. The interview schedule was designed so that it addressed the study's objectives, which was to determine why BPR projects are implemented in large organisations in

Lesotho and to determine the perceived benefits of alignment between business strategy and business processes and between IT strategy and business processes in large organisations in Lesotho respectively.

Lastly, Question 2 sought to understand the role of alignment factors with regard to IT-Business Strategic alignment in large organisations in Lesotho. In order to address research question 2, a literature study was done. This process resulted in five alignment factors being selected to direct the study. These alignment factors were central in formulating the study’s interview schedule. Figure 3.2 demonstrates what has been described in this section.

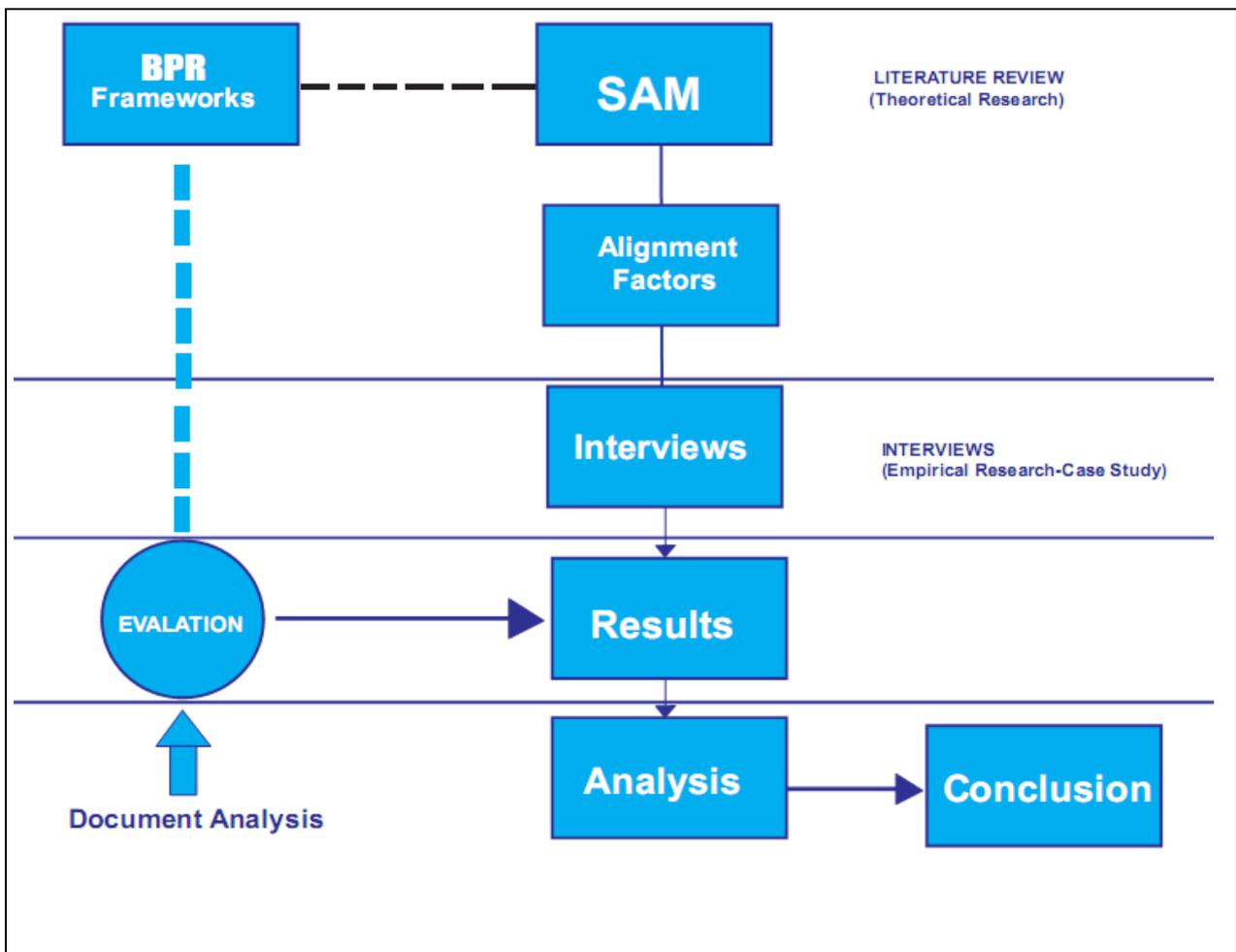


Figure 3.2: The case study strategy

The interview schedule was semi-structured comprising key questions that guided the interview process. According to Robson (2002), interviews are very instrumental in case studies as they seek to find what is happening and how it is happening. The structured interview schedule was designed around the alignment factors. As previously stated, SAM has both the

conceptual and practical value essential for capturing the objectives of the current study. The interviews were one-to-one between the researcher and the participants. On average, an interview took one hour 30 minutes and in other instance it took two sessions to complete the interviews, this was due to time constraints. The sessions were held at the premises of the participating company. Textual data was captured by taking notes and recording the interview sessions.

3.7 Data Analysis

As discussed, the qualitative approach has been advocated for this study for its merits towards understanding social phenomena and their dynamics. According to Vaismoradi, Jone, Turnen and Snelgrove (2016), qualitative research method faces challenges at the analysis stage where researchers run into a lack of applications to employ for analysis purposes. With the development of qualitative research, techniques for textual data analysis emerge and the two that are highly utilised are content analysis and thematic analysis (Vaismoradi et al., 2016).

Stemler (2014) defines content analysis as a method of collecting and organising data that involves developing formats that can be used to summarise statements or count how often a statement occurs. Shannon (2005), adds that content analysis involves categorising verbal or behavioural data for the purpose of summarising, classifying and tabulating it. This helps the researcher to deduce meaning and characteristics of the data. Mills et al. (2006) adds that content analysis is used either inductively or deductively, with either qualitative or quantitative data. A deductive approach is useful if the general idea was to roll over previous studies in a different situation, at different time intervals; and the inductive approach is the complete opposite of the deductive. It is used if there are no previous theories based on the process. A deductive content analysis approach will be employed for document analysis in Chapter 4.

Thematic analysis on the other hand draws from different approaches that are used in the analysis of textual data. Vasmoradi et al. (2016) elaborates on this by explaining that from its inception, the approach building blocks are a combination of principal theories and frameworks. These are the grounded theory and the principle of the chronological stance augmentation. As a form of qualitative descriptive design, thematic analysis uses a set of techniques to extract data themes and analyse textual data (Forman and Damschroder, 2008).

According to Vasmorodi et al. (2016) thematic analysis follows a systematic process of coding and the creation of themes to understand meaning and description of the social context.

Stirling (2001) points out that there is a need for a sophisticated tool to facilitate the analysis of qualitative data. Following on the systematic process explained for thematic analysis, the study employs the quality function deployment (QFD) technique. According to Tashakkori and Teddlie (1998) the QFD strategy involves quantification of each variable under review by using subjective judgment, obtaining a value that represents the variable and then making a quantitative assessment attached to the variable.

This process involves handling qualitative data with quantitative techniques to convert them into quantitative data (Tashakkori and Teddlie 1998). With the QFD strategy, the human input is important in assigning a score to each variable. The Likert scale is the main quantifying instrument used in QFD where humans translate their perceptions into numerical scales (Errol and Ferrell 2003). Tashakkori and Teddlie (1998) who advocate for this practice have designated the transformation of qualitative data into quantitative data as quantitising. They achieve this by reducing verbal data from interviews into variables or constructs that are intended to have one implication and as such can be denoted numerically. Fluery (1993) advises that the qualitative meaning should however be preserved.

The current study quantitised data by subjectively classifying the responses of the interview questions using a 5 Likert scale. The 5 Likert categories that are employed are: strongly disagree, disagree, neutral, agree and strongly agree. The overall findings are then presented per number of times made per each Likert category. This strategy is adopted for its ability to capture a vivid picture on the value that the participants give on issues addressed.

3.8 Limitations

By strictly adhering to the described research methodology, it was envisaged that a comprehensive data set was collected. However, that being said, the implemented methodology does pose some challenges to the study. As previously mentioned the case study method ran across only three industrial sectors and the study's findings can only be generalised within these three organisations.

Furthermore, Nvivo software, as a more advanced research tool was the more preferred analytic tool for study but due to technical glitches, the software could not be employed in the study. Nvivo software's main objective is to organise and find insights in text based data, whether it be transcripts or articles. The more advanced versions of Nvivo further help in supporting findings and the research story by visualisation. Nvivo assists the researcher with data management and query, visualisation of concepts, mapping of connections and the sharing of findings. However, the QDF strategy still managed to achieve this though the process was rather extremely manual and as such time consuming.

3.9 Data Validation and Reliability

Data validity and reliability were assured through triangulation. By employing interviews and document analysis, the reliability of the results were augmented by cross-checking one set of results against another set. The choice of interviews, through it is inductive in nature assured validity of data through verification. Saunders et al. (2003) affirms this by citing that interviews assist in the gathering of data that is reliable and valid to the research questions and objectives. Other considerations of data validity and reliability which are further addressed in Chapter 4 are credibility, transferability, dependability and conformability. According to Panday and Patnaik (2014), all these measures will ensure the trustworthiness of a qualitative research.

According to Panday and Patnaik (2014) techniques that can be adopted to ensure credibility in qualitative research are prolonged engagement between the researcher and the participant, persistent observation of the researcher in order to identify elements and characteristics that are relevant to the problem. On the other hand transferability is established if the research explicitly defines the confines of the study site (Tracy, 2010). By doing this, Lincoln and Guba (1985) state that it then become easier to evaluate the extent to which the conclusions can be transferrable to other settings, times, situation and people. Dependability considers the consistency of the study and its ability to be repeated. Lastly, conformability ensures that researcher has not been biased in their findings and that the results are the views and experiences of the participants (Panday and Patnaik, 2014).

3.10 Ethical Considerations

The study was conducted on the grounds that it complied with the University of KwaZulu-Natal's code of conduct for research. In order to abide by this, a letter requesting permission to conduct research was sent to all the selected organisations. This was reciprocated by a gatekeeper letter from such organisations granting permission to conduct the study.

In terms of protecting confidentiality, the names of all the participants would not be divulged during the presentation of results. Names and details would not be provided and questions about participants themselves would not be asked to protect the identity of the participants. When disseminating the results, labels; O, P, Q, R, S, T, U, V, W, X, Y and Z would be used to represent the views of participants. Lastly, with regards to the storing and disposing data, the research data would be handed over to the school where only the school would have access to it. This guarantees the security of the data. The data will then be disposed of after a period of five years.

3.11 Conclusion

This chapter has basically demonstrated a road map that the study was built on. The study followed an interpretive perspective and from this emerged a qualitative research paradigm. The study adopted a multiple case design. The data collected was both the primary and secondary type data. Semi structured interviews were done to collect primary data and document sources were used to gather secondary data. The chapter's closing sections further demonstrates the limiting factors of the employed research methodology but also elaborated how those factors were mitigated. Lastly, considerations on the University's research ethics are discussed.

Chapter 4: Qualitative Findings and Analysis

4.1 Introduction

This chapter provides a synopsis of the case studies in section 4.2, followed by a presentation of case study findings in section 4.3. Section 4.4 covers case study analyses, followed by a chapter summary in section 4.5. A resultant conceptual process map from the study's findings is presented in section 4.3 and analysed in section 4.4.

4.2 A Synopsis of the Case Studies

This section provides an outline of each case study and a description of how BPR projects were initiated.

Content analysis was adopted to determine the BPR implementation process adopted in the three organisations. The primary data gathered from the interviews addressed reasons behind the BPR implementations, role of alignment factors in BPR and perceived benefits of aligning the business processes to the IT strategy and the business strategy alike. To determine the role of alignment factors in BPR, the interview schedule adopted the five alignment factors from the van Hout (2012) study where each alignment factor was assessed using a unique measurement scale. The interview schedule is presented in appendix A. In cases of direct quoting, the interviewees are referred to as participants (O–Z). Four interviews were conducted per organisation.

4.2.1 Case A: BPR Project Outline and Characterisation of Organisation A

Organisation A is a revenue administration entity of Lesotho. This organisation is classified under the financial sector. Its vision is to be identified by integrity, innovation and service excellence. The organisation collects its revenue using efficient and effective processes and by building strong and sustainable relationships with its stakeholders. To achieve the aforementioned, organisation A has implemented strategic objectives that focus on amongst others, revenue optimisation, service excellence, organisational sustainability, enhanced compliance and sustainable stakeholder relationships. To deliver on this mandate organisation A launched several projects between 2012 and 2017 and the main focus is on customs modernisation and alignment.

Organisation A operates in a global sector. Thus its BPR initiative is a subsidiary of a world project. Threats to this sector were identified to be increased international movement of people and trade and unsynchronised border management between countries. In 1984 the United Nations Conference on Trade and Development (UNCTAD) agreed to a standardised international customs administration. Automated customs processes that would reform the customs administration processes and procedures followed this agreement.

4.2.1.1 A Brief Description of the BPR Project

With a well-defined strategy that emerged from the UNCTAD directive, in early 2012 after reviewing the manual processes that were tedious and time consuming, the automation programme took precedence. The program was mainly about restructuring and the automating of the business processes. When the automated processes proved to be a success, a step further was taken to drive the modernisation programme.

The modernisation programme employs the Automate System for Custom Data World project, ASYCUDA World project herein ASYCUDA. ASYCUDA is a computerised customs management systems used to control the movement of goods in and out of the country and it also specialises in calculating and collecting duty. It further provides comprehensive robust declaration processing capability which uses the Single Administrative Declaration (SAD) as the standard declaration form. Prior to the implementation of ASYCUDA, manual declarations were done. The manual process involved determining the value of goods (imported and exported) subject to tariffs. In addition, the declaration documents were processed manually.

The customs modernisation programme through the integrated border management approach effectively and efficiently executed the international standard process for trade administration on revenue collection, border management and security. The integrated border management approach is aligned to the best customs management practices and the maintenance of effective social protection and national security and the reduction and minimisation of the burden on business and the public in meeting revenue payment, border management, and security provisions. The current study is focused on the customs modernisation programme which is organisation's A current BPR project. Figure 4.1 illustrates the authority's business process rethinking scenario.

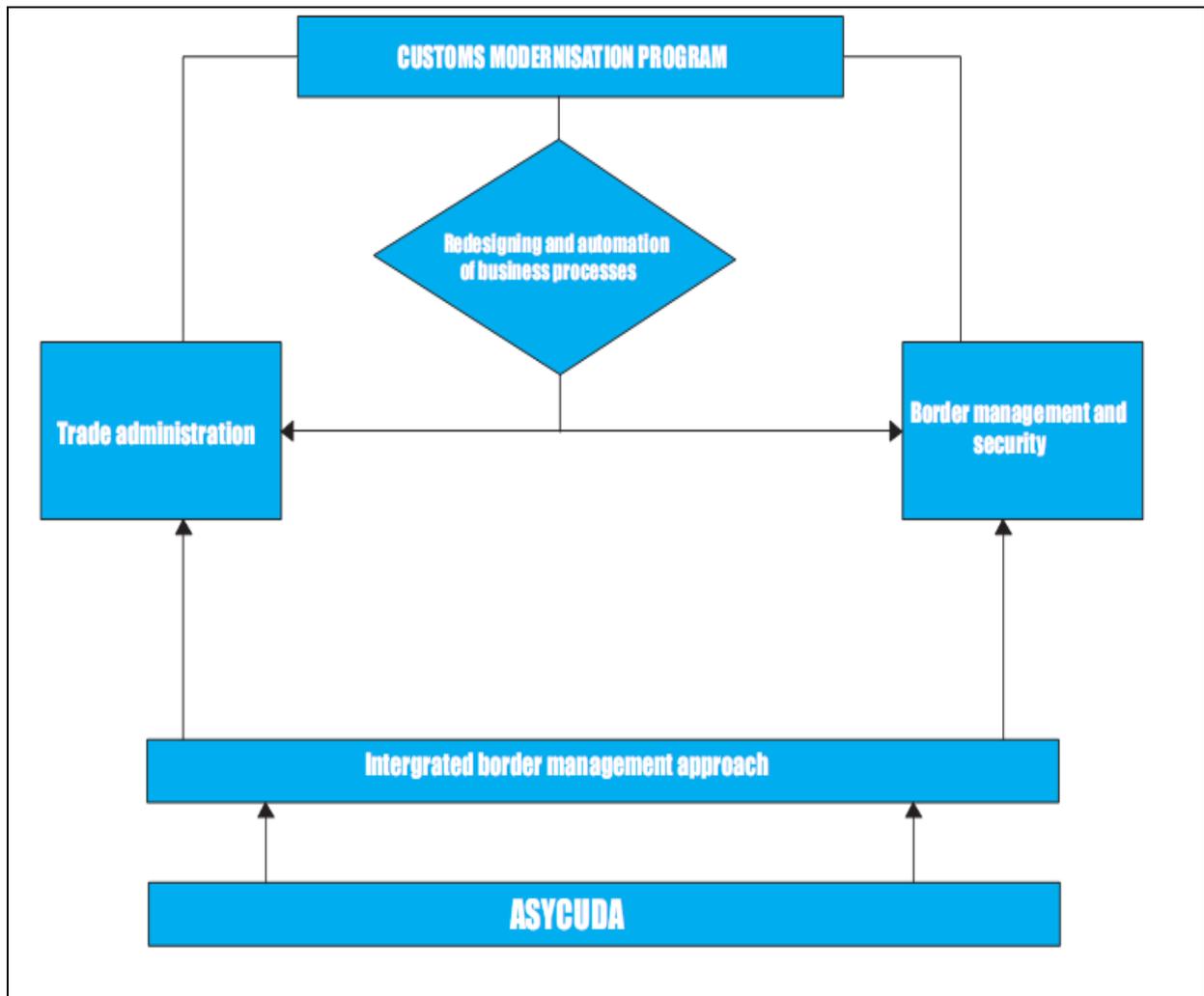


Figure 4.1: Organisation A BPR project flow diagram

4.2.2 Case B: BPR project outline and characterisation of organisation B

Organisation B is an international specialist company in both shipping and courier service. It is a business unit of a larger business group that is present in 220 countries operating in the logistics industry. The logistics industry that organisation B operates in, is very competitive and versatile. According to organisation B their market is affected by four global trends, which are as follows: continued global trade growth but with a shift in pattern; acceleration of eCommerce and more demand for a last mile-solution; an accelerating impact of process technology and automation and lastly an increasing demand for responsible business.

In addition to identifying the market forces, between 2011 to date, 2017, organisation B identified the following threats in the logistics markets: new competitors entering the market,

logistics companies venturing into e-commerce to support logistics and e-commerce companies venturing into logistics to support e-commerce.

In order for organisation B to be on par with the changing business environment, it had to ensure timely delivery, convenience, real time information availability and visibility. To achieve the company's business strategy, organisation B embarked on e-commerce and initiated the Electronic Shipping Solution (ESS) project. This project encompasses a number of mini projects, namely the Intra ship, email ship and online shipping applications

4.2.2.1 A Brief Description of the BPR Project

The BPR implementation of organisation B basically followed the following process; analysis of the current situation – (customer opinions, complains and suggestion were taken into consideration), review of the processes, documentation of the analysis and process review results, redefining the business, presentation of the business needs with business specifications to IT, presentation review by the IT, assessments and solutions by IT. Depending on the solutions and IT needs, IT requests for three quotations from vendors to be taken and it draws its own budget and sends out the budget to the business unit, which will review and approve the budget. Figure 4.2 illustrates the organisation's business process rethinking.

Basically organisation B's BPR project encompasses the redesign and automation of the shipping process. Three business processes that are directly affected by the ESS project are; shipment booking, shipment processing and shipment delivery. All these processes used to be manually performed from shipment booking, which involved calling a service centre to book a collection and completing a paper air waybill to process a shipment and finally signing a delivery sheet when receiving a shipment. With the realisation of the ESS project, all these processes are automated and are done electronically.

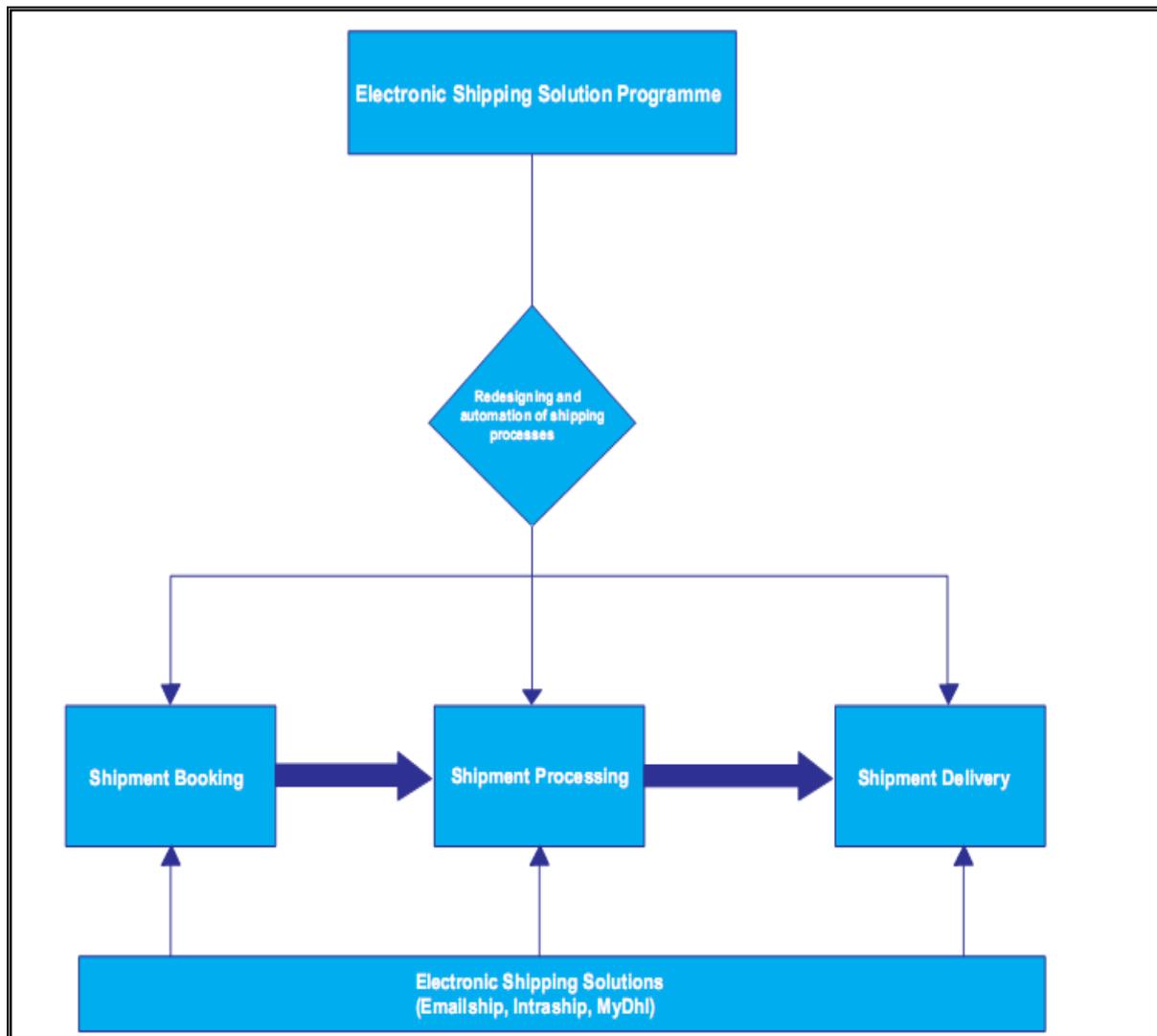


Figure 4.2: Organisation B BPR project flow diagram

4.2.3 Case C: Outline and Characterisation of Organisation C

Organisation C is a communication company that came into effect in 2008 after the merger between Lesotho’s fixed and mobile telecommunication companies. Service offerings for organisation C are fixed and mobile communication, internet and data services. Organisation C is one of the two major players within the telecommunication industry in Lesotho.

Following the merger, organisation C the now formed company, re-evaluated and agreed on one strategic direction. The company’s business strategy was to improve productivity, efficiency and effectiveness. The challenges encountered were the organisation’s redundant business processes and isolated systems. With their traditional business processes, the information flow was from one department to another.

As a result, there was a delay in making quick responses to market change and because there were no shared business processes between different entities, there was no clarity in the relationship between the different functions within the organisations and different stakeholders outside the organisation.

4.2.3.1 A Brief description of the BPR project

In order to be effective and productive, subsequent to re-evaluating the organisational strategy, organisation C resorted to modernising their business model. At the core of executing the business model is to address the strategy's 'how' question. These are the activities involved in a business setting as explained in Chapter 1. As has already been established in the previous section, business processes were redundant and the initial phase for organisation C was to streamline business processes. Organisation C introduced the concept of e-business to their organisation. According to Smith and Fingar (2003) e-business is the simplified way organisations conduct business by interacting through electronically enabled networks.

However, since different functions were operating in isolation and resulted in the duplication of some business processes, enterprises resource planning system (ERP) was embedded in the e-business systems. This entailed the integration of finance, HR-payroll and procurement systems. The ERP Systems was deemed ideal for the collaboration between departments and also for achieving standardised, seamless processes to execute the business activities, in a timely manner.

Prior to the ERP implementation, organisation C had to first redesign its business processes to allow seamless information sharing. This attests to Christofi et al's (2013) finding that often times ERP implementation failure, is a result of assuming the "as is business process" will result in new business process after ERP implementation.

The case for organisation C BPR accounts for the organisation's ERP implementation and e-business project roll out. It took into consideration of Christofi et. al caution that BPR should proceed, and be an element of an ERP implementation. Therefore, in a nutshell, the BPR process in organisation C followed a review of organisational strategy under a new merger.

The main challenges which were redundant business processes and isolated systems, were reviewed and this was followed by identifying technologies which would make possible the envisioned business solutions, which was the e-business. Before ERP was implemented, business processes were redesigned and then the ERP implementation followed. Figure 4.3 illustrates Organisation C's business process rethinking flow diagram..

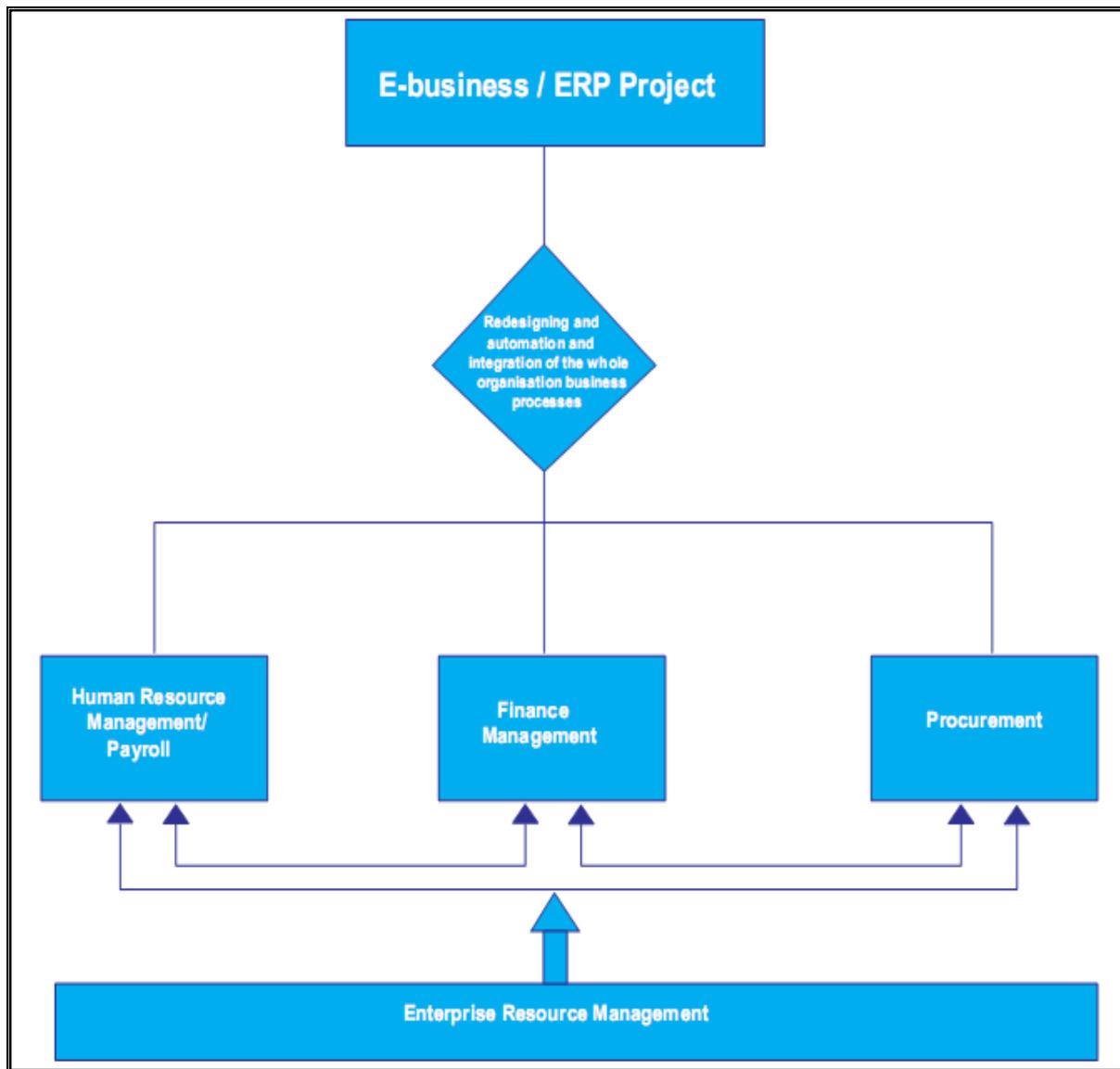


Figure 4.3: Organisation C BPR project flow diagram

4.3 Case Study Findings

4.3.1 Summary Results on Document Analysis: BPR Implementation in Large Organisations in Lesotho

Document analysis has been employed to present findings on research question 1b which is how BPR projects are implemented in large organisations in Lesotho. To address this research question, the Lampathaki et al. (2013) BPR Life cycle methodology as discussed in the literature review in Chapter 2 has been employed. The BPR life cycle methodology as proposed by Lampathaki et al. (2013) is used to assess the approach employed for BPR implementation by large organisations in Lesotho. The decision to employ the Lampathaki et al. (2013) BPR life cycle methodology, was mainly influenced by the fact that their BPR methodology, took account and studied different BPR frameworks and incorporated different phases common, in all the frameworks that were under their study.

Coding was implemented so that every phase of the Lampathaki et al. (2013) BPR Life cycle methodology was translated to a category in order to evaluate the BPR process in the three cases. Each of the categories had themes that also emerge from the Lampathaki et al. (2013) BPR Life cycle methodology. This is illustrated in Table 4.1.

Table 4.1: Content analysis for themes in BPR implementation process phases

Categories	Theme Codes	Themes
A – Visioning B – Identifying C – Analysing D – Redesigning E – Evaluating F – Implementing G – Improving	A1	Defining corporate visions and business goals
	B1	Identifying business processes to be reengineered
	C1	Analysing
	C2	Measuring an existing process
	D1	Identifying enabling IT
	D2	Generating alternative process redesigns
	E1	Evaluating and selecting a process redesign
	F1	Implementing the reengineered process
	G1	Continuously improving the process

As is discussed in Chapter 3, different documents are acceptable for use in academic research. Table 4.2 below illustrates different documents that were used for the three cases.

Table 4.2 Content analysis for themes in BPR implementation process phases

Documents Analysed	Organisation A	Organisation B	Organisation C
Annual Report	4 (Form 2013 - 2016)	–	–
Training Articles	2	1	1
Research Article	2	–	–
Media – Newspaper	1	–	2
Organisation Online Research Portal	–	3	–
Service Review Report	–	1	–
Strategy Article	–	1	1
Project Report	2	–	1
Total	11	6	5
	22		

Content Analysis Results

With reference to the review of the documents and the reports, the frequency tables are shown in Tables 4.3 to Table 4.9 and they illustrate the number of occurrences of each theme in the three BPR projects. The frequency of each theme to a large extent demonstrates a common practice towards implementing BPR projects in large organisations in Lesotho. It should be noted that the themes were not explicitly stated in documents and reports, rather interpretations and inference were done by the researcher.

A total of 129 references were made for all the themes. To determine a percentage occurrence of each theme, the following technique was used: total number of references made for each theme divided by total of references made for all the themes and that multiplied by a 100.

$$\text{This is; } \frac{\text{Total number of references made for each theme}}{\text{Total number of references made for all the themes}} \times 100$$

In the following nine subsections, the findings will reveal that more references were made to some themes than others. However, that is not what is important as the study only seeks to determine the process the three organisations followed in implementing BPR with reference to the Lampathaki et al. (2013) BPR life cycle methodology.

4.3.1.1 Visioning- Content Category A

Table 4.3 frequencies for BPR implementation process phase

	Themes	Theme Codes	Total	Percentage
1	Defining corporate visions and business goals	A1	19	14.7%

Table 4.3 shows that 19 references were made to defining the organisational strategy, visions and goals in the BPR implementation process. This reference rate indicates great knowledge and understanding of the organisational strategy. The reports and documents show that the organisations had well defined organisational strategy and business goals, which were well communicated and documented.

The data excerpts from source documents providing evidence of this theme are as follows:

In the 2016 annual report, organisation A’s vision is to be identified by integrity, innovation and service excellence. From organisation’s B 2020 strategy booklet, their strategy is built of three pillars that are termed as to “focus, connect” and to “grow”. The strategy was implemented as assurance that the organisation is redirected to focus on the right markets and that its future is secured. The study taps on the “grow” strand that defines the organisation target to tap into new markets and by becoming a leader in the e-commerce logistics, this is said to be possible. In accordance with their strategy, organisation C’s business goal is to be the business leader in telecommunications and they seek to achieve this through integration, transparency effectiveness and efficiency in their daily business operations.

4.3.1.1 Identifying – Content Category B

Table 4.4: Content analysis for content category B showing relative frequencies for BPR implementation process phase

	Themes	Theme Codes	Total	Percentage
2	Identifying business processes to be reengineered	B1	12	9.3%

Table 4.4 shows that 12 references were made to identifying business processes to be reengineered in BPR implementation process. Common in all the three organisations was doing away with manual business processes.

In organisation A’s identified processes at this phase were, automated customs processes that would reform the customs administration processes and procedures. In organisation B customer inputs were recorded to help identify processes that customers identified as tedious and time consuming when processing their shipments. In addition to this, the remark below was noted on their online research portal;

“Our company e-Commerce shipping rationale is to create a platform enabling a transition from a traditional manual process of shipping to an electronic aided process. As a global company, ESS project is aimed at realising standardized electronic shipping processes worldwide that have eliminated the inadequacies that are the effects of manual shipping process. The project outcome should be world-class processes that guarantee leadership position for our company in e-commerce related logistics.”

In organisation C, the project report highlighted that all duplicate processes were to be merged. Furthermore, all organisations identified manual process that they set up for redesigning and elimination. It is evident with the information provided that the organisations were clear on which business process needed re-engineering. Organisations identified all business processes

that were ineffective and inefficient or did not at all align to the organisation’s strategy. The business processes were then either improved or eliminated all together.

4.3.1.2 Analysing – Content Category C

Table 4.5: Content analysis for content category C showing relative frequencies for BPR implementation process phase

	Themes	Theme Codes	Total	Percentage
3	Analysing	C1	11	8.5%
4	Measuring an existing processes	C2	9	7.0%

Category C considers analysing business processes and measuring existing processes. Table 4.5 shows that eleven references are made to analysing the business processes and nine to measuring existing process. With reference to the excerpts below it is evident that that the organisation assessed the effectiveness of the business processes, they considered how they can be improved and their execution of business activities.

In organisation A an extract from the UNCTAD referred to the analyses phase and said:

“...the national team, together with the international advisers, identified areas requiring reform such as the introduction of international codes, the streamlining and simplification of clearance procedures, the alignment of forms to international standards, and the modernization of the national customs law to conform the Kyoto Convention”.

In the same light organisation B on a year to year basis conducts a service audit and from these audits the overall performance is measured against key performance indicators (KPIs) targets. The review of the report identifies processes contributing to low performance in instances where the KPIs had been scored low. The audit report leading to the current BPR had pointed out that manual processes were contributing hugely to service failures due to the human errors that were associated with them.

In organisation C, there was a report of a remark stating that the organisation was to do away with all the traditional, redundant business processes. The report further indicated that their business processes are to drive collaboration between departments.

4.3.1.3 Redesigning- Content Category D

Table 4.6 Content analysis for content category D showing relative frequencies for BPR implementation process phase

	Themes	Theme Codes	Total	Percentage
5	Identifying enabling IT	D1	14	10.9%
6	Generating alternative process redesigns	D2	16	12.4%

Table 4.6 shows 14 references were made to identifying enabling IT and 16 were made to generate alternative process redesigns for the redesign phase of the BPR implementation process. This is to say all three organisations considered and identified different technologies that would drive their re-engineered business process to efficiently execute the communicated business goal.

In organisation A, the ASYCUDA system was at the heart of the BPR projects. Organisation B invested in centralised servers and databases and enterprise-wide architecture and lastly, organisation C’s BPR was enabled by the ERP system. In all the organisations prior to the BPR project, the common approach to performing tasks was following paper based manual processes and with the organizations’ strategic redirection it was imperative that automated alternative processes be created.

4.3.1.4 Evaluating- Content Category E

Table 4.7: Content analysis for content category E showing relative frequencies for BPR implementation process phase

	Themes	Theme Codes	Total	Percentage
7	Evaluating and selecting a process redesign	E1	13	10.1%

Table 4.7 shows that thirteen references were made to evaluating and selecting business process. The organisation at this juncture, had a well-established process objective.

In both organisations A and B, the process flow chart did not change much in that the major improvement to it was automating most processes and merging some. In organisation C, there was a major rethinking in regard to the business processes. In organisation A, the project report illustration goes as follows; “measures were taken to simplify procedures, documents and data prior to their automation... understanding of process to discontinue achieve simplified procedures”. For organisation B, reference is made to the “as is processes” and the online research portal illustrates that major improvements were made towards the shipping processes. As for organisation C, the evaluation phase was seemingly intense. The training documents, specified that process mapping was done and cross functional processes were reviewed as with the merging, many processes were overlapping.

4.3.1.5 Implementing- Content Category F

Table 4.8: Content analysis for content category A showing relative frequencies for BPR implementation process phase

	Themes	Theme Codes	Total	Percentage
8	Implementing the reengineered process	F1	17	14.3%

This theme follows the previous phases of the BPR process. Table 4.8 shows that the documents and reports made reference to this theme 17 times. It realises the technology and processes agreed to. With reference to the implementation phase different sources indicated a reengineering process in this particular order; a need for technical configuration, personnel training sessions, system testing and running and lastly, process automation.

This is articulately reported in organisation A’s project report in the next extract:

The implementation phase included the preparing for the installation of the national ASYCUDA configuration, i.e. the coding of the tariff and the related regulations and legislation, the data entry of the control tables

(declarant codes and addresses, customs office codes, etc.), and the preparation of valuation and selectivity systems. A large ASYCUDA familiarisation training programme for customs staff and trade users was delivered during this phase.

4.3.1.6 Improving- Content Category G

Table 4.9: Content analysis for content category G showing relative frequencies for BPR implementation process phase

In this category, organisations are observed to put necessary emphasis on ongoing process

	Themes	Theme Codes	Total	Percentage
9	Continuously improving the process	G1	18	14.%

improvement, 18 references are made on this theme as demonstrated in Table 4.9. This is a clear indication of great thoughtfulness that organisations gave to monitoring the implemented BPR project and at improving the process with the changing dynamic business environment.

There are data excerpts from source documents providing evidence of this theme:

In organisation A, the project report indicates that there was post installation assistance UNCTAD offers on towards the maintenance of the modernisation project. The report extract read as follows:

“Once the system has been installed UNCTAD continues to assist in software maintenance and provides system updates.”

Organisation B’s online research portal reports that they are constantly working on improved versions of their IT solutions. The following comment was made:

“EasyShip is a powerful tool that streamlines shipping process and increases speed and productivity to ensure the efficiency of the EasyShip new version of their solutions are released over time.”

EasyShip has been ongoing for six years and to date nine versions of the ESS has been released. Organisation C's report indicates that the business processes are documented every three years and are enhanced as per need.

4.3.1.1 Discussion and Conclusion

This section has evaluated how the three organisations executed their BPR projects. Their execution process in every phase of the BPR methodology is supported by the literature as discussed in Chapter 2.

Theme 1 discussed defining corporate visions and business goals. The results demonstrated that in all the three organisation the organisations' strategies were well articulated. In defining strategy according to the SAM framework, under business strategy Henderson and Venkantraman (1990), looked at the business scope, distinctive competencies and business governance and for IT strategy technology scope, systematic competencies and IT governance was considered. Hammer and Champy (1993) spoke of the three Cs as the driving force for BPR. These three Cs are: customer, what the customer wants, competition, the unpredictability of existing and new entrants to the market and lastly change, change in technology, new product designs and organisation structures.

These three Cs fall within the definitions of IT strategy and business strategy. With reference to document analysis, the changing technological landscape drove for change for organisation A, for organisation B it was more of what the customer wanted and facilitation of the intensifying competition and for organisation C it was more on a need for change, change in technology and organisation structure.

Theme 2 discussed identifying business processes to be reengineered. According to James (2015), this is the screening criteria, which is what the implementer is looking for, namely inefficient processes, processes that have the greatest impact on the organization's customers and processes that are most likely to be successfully reengineered. The results show that all the organisation identified all process that were rather dysfunctional and were of no value to the organisation. Organisation B went further to identifying processes which will be of benefit to their customers and organisation C indentified those that could be merged and thus be easier to re-engineer.

Themes 3 and 4 discussed analysing and measuring existing processes. In this regard James (2015) states that attention should be given to business processes that would add value to the organisation. To achieve this, in organisation B, they measured their business process against their performance indicators and in organisation C they matched them to their desired collaboration work space. These gave an indication to the organisations on which processes they wanted to re-engineer. What the organisation did in this phase substantiates the assertion by Heeley and Jacobson (2008) that the analyses phase in BPR takes into consideration the actual state of the business processes and the performance rating in executing an activity.

Theme 5 discussed identifying enabling IT. In Chapter 2 it was established that IT is the enabler and central to BPR. According to Eftekhari and Akhavan (2013) IT capabilities should drive the business processes. In accordance, all the organisations identified technologies that would enable and drive the success of their BPR projects.

Themes 6 and 7 discussed generating alternative process redesigns and evaluating and selecting a process redesign. To guide organisation in this exercise process flow charts were important tools for describing formal processes that were vital for re-engineering. Supporting literature also recommended that before the actual implementation of the process redesign, there should be a comprehensive understanding of the current process (Grover and Malhotra, 1997). Sohal and O'Neil (1999) further substantiate this notion with a similar observation that a prerequisite to BPR is that managers understand the current business processes in detail.

Theme 8 discussed implementing the reengineered process. The goal of BPR at the end of the day is a continuous display of improved organisation performance achieved through successful redesign and implementation of business processes (James, 2015). This phase is the cumulative of the preceding phases during which previous activities were conducted through organizations' undergoing extensive personnel training, process automation, system testing and configurations.

Theme 10 discussed continuously improving the process. In this regard it has been observed in every organisation used different measures to continuously improve and monitor that their business processes are on par with the business environment and that they remain effective and efficient.

This theme confirms as per the literature that a BPR project is an ongoing process. Sohal and O'Neil (1999) state that the redesign of a new process should be continuous. This involves assuring the BPR team is accountable on the process merit on an ongoing basis, has clear communication lines and uses appropriate technology.

From the reviewed source documents, it is shown that there is a common systematic process flow that these organisations followed. To conclude this section, Figure 4.4 illustrates the identified systematic process flow in implementing BPR in large organisations in Lesotho.

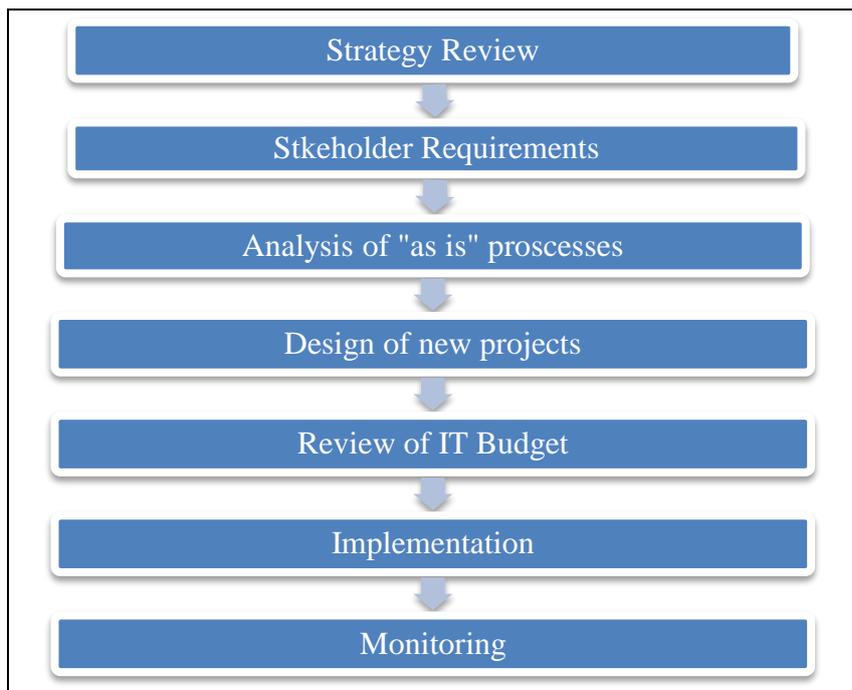


Figure 4.4: BPR Process Flow in Large Organisations in Lesotho

4.3.2 Summary Results of the Thematic Analysis

This section is presented in three subsections. Firstly, it illustrates thematic results for the second part of the BPR implementation research question and then it summarises results for the role of alignment factors in BPR and lastly, it presents perceived benefits of aligning business processes to the IT strategy and the business strategy. Section 4.3.2.1 outlines the participants' demographic data.

4.3.2.1 Participants Demographic Data

The demographic data presented in this section concerned the participant involvement in the project. This was based on the number of years a participant has been involved in a BPR project. The level of involvement in a BPR project was necessary in that it gave the researcher a stance to engage in a mutual understanding with the respondent. This justifies the non-probability, purposive sampling technique employed in the study. As mentioned in section 3.5.2 this technique considers experience, involvement and seniority in the in the topic of interest being evaluated.

Table 4.10 demonstrates the respondents' demographic data. Table 4.11 shows 66.67% of the respondents were males and 33.33% were females. Table 4.12 shows that only 25% of the participants have been involved in the project for more than three years and a large percentage of 41.67% had been in the BPR project for a period spanning between one year and two years and 33.33% of the participants had only been involved in the project for less than a year.

Table 4.10 BPR Gender Distribution

BPR Role	Male	Female
BPR Team Facilitator	3	0
IT Strategy Specialists	2	1
Business Strategy Specialist	1	2
BPR Sponsor	2	1
Total (%)	66.67%	33.33%

Table 4.11 BPR Involvement Period

BPR Involvement Hierarchy	Years Involved	Frequency	Percentage
Slightly involved	0 -1	4	33.33%
Moderately Involved	1 -3	5	41.67%
Highly Involved	3 -5+	3	25%

Table 4.12 Participants per Organisation

Organisation	Participants	Total number of participants
A	O, P, Q, R	4
B	S, T, U, V	4
C	W, X, Y, Z	4

4.3.2.2 Summary Results of the Thematic Analysis: BPR Implementation in Large Organisations in Lesotho

This part of the study section focuses on BPR implementation and it aims to establish reasons behind the BPR implementation. This section was included to establish whether business processes act in response to the changing business strategy and hence, the need for BPR. Themes that emerged for BPR motivation in the three organisations are as follows; efficient business processes, effective business process, business operations management, defined and up to date business process, business processes that meet the IT needs and lastly business processes that meet the business need. The results are presented below.

Table 4.13: Relative frequencies showing BPR motivators

	BPR Motivators		
1	Efficient business process,		12
2	Effective business process		12
3	Business operations management	Whole organisation	4
		Some functions in the organisation	8
4	Defined and up to date business process		12
5	Business processes that meet the IT needs		4
6	Business processes that meet the business need.		12

Table 4.13 shows frequencies made by participants for each BPR motivator. Statements were made by participants to substantiate the aforementioned themes.

Twelve references were made to cite efficient and effective business processes. Participants mentioned that their organisation constantly pay focus on assuring that their business processes up to date and effective.

In organisation B, participant S was quoted in this regard saying:

“We operate in a very competitive business environment as such we always strive for the best in class business processes.”

In organisation C, participant Y was quoted in this regard saying:

“Our process improvement is something that is done continuously to assure effective and efficient business processes.”

With reference to above statements made regarding the drive for BPR in these three organisations, it is apparent that organisations engaged in the BPR exercise in order to make sure that their business processes are up to date, efficient and effective. Also of note is that the redesign of the business processes was also to make sure that the organisations are competitive in the dynamic market that the organisations are operating in.

Business operations management is another factor that was evaluated as a driver for BPR. Eight participants from two organisations pointed out that their BPR projects were initiated in certain departments of their organisations, but have direct influence in the whole organisation. In organisation A, four participants indicated that the BPR targeted the whole business operations. In organisation B the redesign directly affected the operations, commercial and customer service departments and in organisation C, the BPR directly affected the human resource, finance and procurement departments. This demonstrates that BPR can be done on a small and large scale depending on the organisation needs.

With regards to theme 4, defined and up to date business processes, the findings show that all the three organisations have controls in place on having appropriate business processes. The findings reveal that a common practice in all the three organisations is to have their business processes reviewed periodically. The participants, who answered on time frame, indicated that they review their business process on average, between six months to three years. In organisation C, participant X mentioned that it is a standard practice for them to review their business process every three years with an aim of assuring that they still efficiently execute the business goals.

This BPR motive of up to date business processes is very important in different responses. For instance by insuring up to date business processes, the organisations are in a position to be on

par with the changing business environment, as mentioned by participant X, it is guaranteed that the business processes are efficient and thus can effectively execute the organisations' strategies.

Regarding the theme of business process that meets the IT need, only four participants agreed that the BPR project was initiated to address the organisation's IT needs. The rest of the eight participants were not of that impression that their BPR projects were initiated to meet the IT needs and participant O, from organisation A responded as follows:

“Basically our IT strategy follow after the business strategy has been formulated and the business needs are identified, our IT strategy then puts well defined measures to meet those needs.”

Contrary to the participants' belief that their BPR projects only addressed their business strategy, the quoted statement above, reveals that though the business strategy may have been identified first the BPR project, however, considers both strategies. This is expressed at the end of the comment by the following remark:

“our IT strategy then puts well defined measures to meet those needs.”

In support of BPR projects that were initiated to meet the IT needs, participant T from Organisation B expressed this as follows:

“The ESS project assisted hugely on the miscoding issue that was a result of manual shipment processing. The consequence of this was a great back log in the IT department with regards to rerouting miscoded destinations”.

The last theme to be discussed is business processes that meet the business needs
Twelve references were made to this theme. The majority of participants shared a view that their business processes are geared towards achieving their business goals.

Participant Q shared this view with the remark made below;

“Our everyday activities are guided by our organisation's strategy principle.”

The twelve references made for this theme collaborates with everything that is in the literature of BPR. BPR is viewed as a call for strategic change that a business needs. The respondent indicated that the need for BPR for their organisations to achieve their business needs.

4.3.2.3 Discussion and Conclusion

This section has discussed a need for BPR. This it achieved by reviewing six BPR motivators as per the literature discussion in Chapter 2.

The literature highly cites that one of the many goals of BPR is to eliminate dysfunctional BPR processes. In support for a need for effective and efficient business process, Javorski and Kohli (1993) state that over and above all the needs cited for BPR, crucial to an organisation is having value adding business processes, that will steer the business towards success. As such one could translate his meaning to effective and efficient business processes. In both occasions addressing effective and efficient business processes all the participants indicated these as a driving factor in their recent BPR projects.

On business operation management, Earl and Khan (2007) pointed out that BPR can be performed on different scales; this means that BPR may at times be bounded in scope and only affect certain business operations while at times BPR can be on a full scale and affect the whole organisation. The results indicate that four participants from one organisation indicated that their BPR project was initiated for the whole organisation. They indicated that their BPR project followed a merger, hence there had to be reduction of duplicate processes across all departments and integration of different business functions.

The last theme reviewed how business processes meet the business need. This theme has been substantiated vastly by the BPR literature. O'Neil and Sohal (1999) state an organisational need for BPR centres on improving the strategic goals and competitiveness of a business. They mention that the driving force behind BPR, is the need to satisfy the needs of a particular market. Lamphathaki and Koussouris (2013) indicate that BPR can be performed at all times to meet different business needs. For instance if the business is performing well, BPR can be initiated to strengthen the organisation's competitiveness in the market, as was the case with organisation B. On the down side they state that BPR can be performed to refocus the organisation strategy and or to rescue an organisation on the brink of bankruptcy.

This section has emphasised different need for BPR implementation in the three organisations. Worth noting is that, the preceding discussed drivers of BPR in the three organisations have also been academically researched and proven to be drivers for BPR. Trkman (2009), stated that BPR support the organisation by executing strategic programs that steer alignment between the organisation strategies, information systems and the business processes. Trkman also adds that BPR drives a change needed by the organisation to stay abreast of competition and for its continuous success.

4.3.2.3 Summary Results of Thematic Analysis: Roles of Alignment Factors in IT-Business Strategic Alignment in a BPR Project

This section presents results on interviews and addresses the study’s objective aimed at determining the role of alignment factors with respect to IT-Business strategic alignment in large organisations in Lesotho. The section addresses this objective by assessing the five alignment factors and their measures within a BPR context.

4.3.2.3 a Alignment Factor 1 Evaluation: Intention and Support

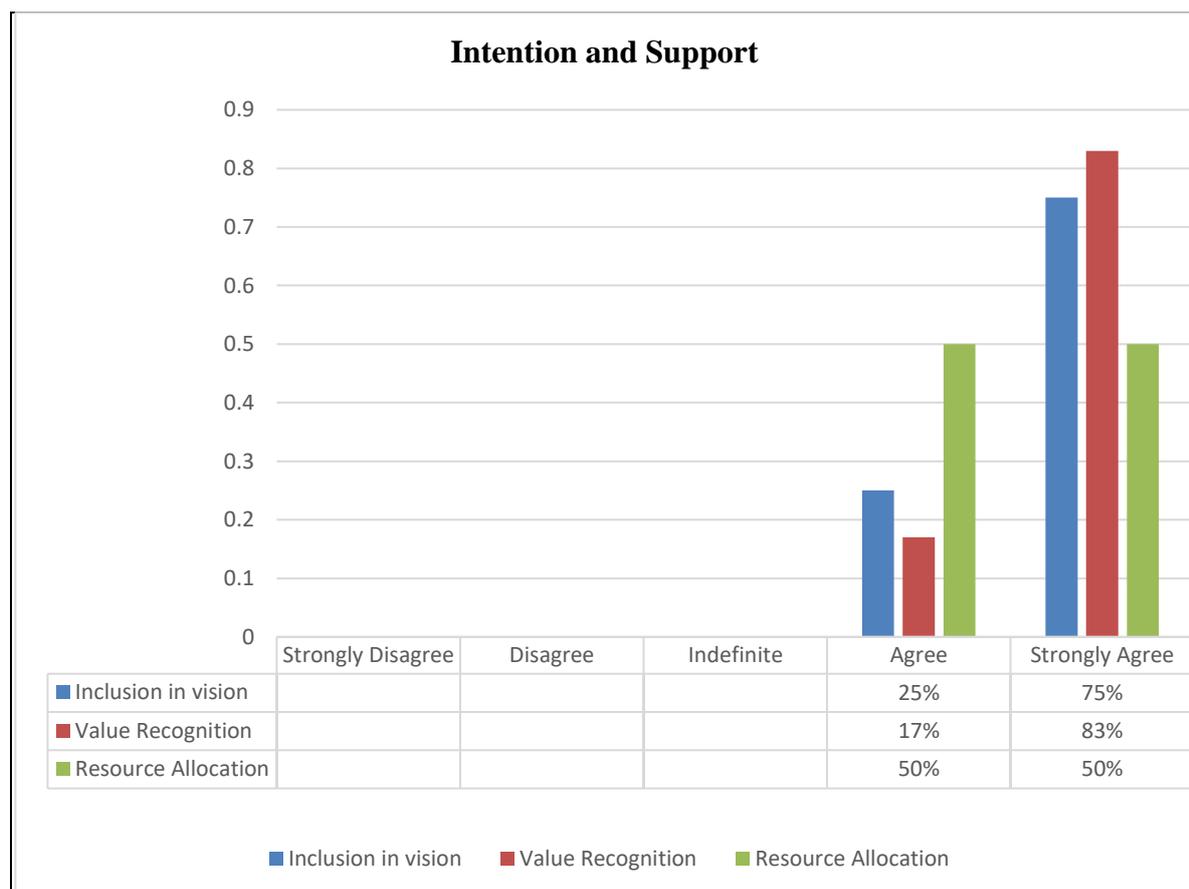


Figure 4.5: Alignment Factor 1 Evaluation: Intention and Support

Three themes were identified when measuring how intention and support were placed in the context of BPR projects under evaluation. These themes are inclusion in vision, value recognition and resource allocation as depicted in Figure 4.5. The findings are presented next.

Inclusion in vision: This makes IT the prime strategic component of an organisation's goal setting. In organisation A, the BPR project saw the IT department expanded over the years from a support function, to where it is today, as a strategic function. Participant N made a remark that the IT department transformation was necessary for the uptake of the modernisation project. In organisation B, participant expressed that IT is always central component in all that they envision.

Participant emphasised this point by a lengthy note below:

Our IT department is always abreast of technology trends and to be number number one in our field we try to pioneer and incorporate these trends in order to enhance our customer experience and to build new business models. We are currently having our eye on trends like internet of things, robotics and automation, big data and cloud logistics.

In organisation C, the participants indicated that management communicated clearly the role IT was to play in the e-business/ERP project. Participant X made the following remark:

“Expectation at the completion of the project were well articulated, we knew what we had to do and how IT was to come into play.”

Value recognition: Value recognition takes into account the articulation of the value of IT in an organisation (van Hout, 2012). As per the findings illustrated in Figure 4.5, participants were of the impression that management saw value in IT in the implementation of the BPR project. Participant O, in organisation A made a following remark:

“In our organisation, our IT department move from just being a support function to be an integral element of the organisation so much that I doubt any of our business units will be functional without it.”

In support of both inclusion in vision and value recognition, Morrison et al. (2011) state that an organisation’s IT strategy will be aligned to business strategy, if there is an understanding of how IT and IT applications will contribute to the business goals in the present day and in the future. They further add that in order to achieve IT-business alignment, an organisation should recognise the value IT adds to it, as this will assist in giving a clear IT strategic road map.

Resource allocation: The findings show that IT resources were moderately allocated to BPR projects. The findings indicate that organisation B made a huge investment in IT resources to make sure that the roll out of the ESS project was a success. Respondent R expressed this by stating that organisation B infiltrated and grew the IT landscape in its network by ensuring that every country had the e-commerce tools, standardised infrastructure and IT network capacity. In this case, management saw the value of IT in achieving its mandate and their commitment and support to the project had been firm. It was in organisation C, where participants indicated that there was a budget constraint and IT resources, were to a large extent compromised.

4.3.2.3b Alignment Factor 2 Evaluation: Working Relationship

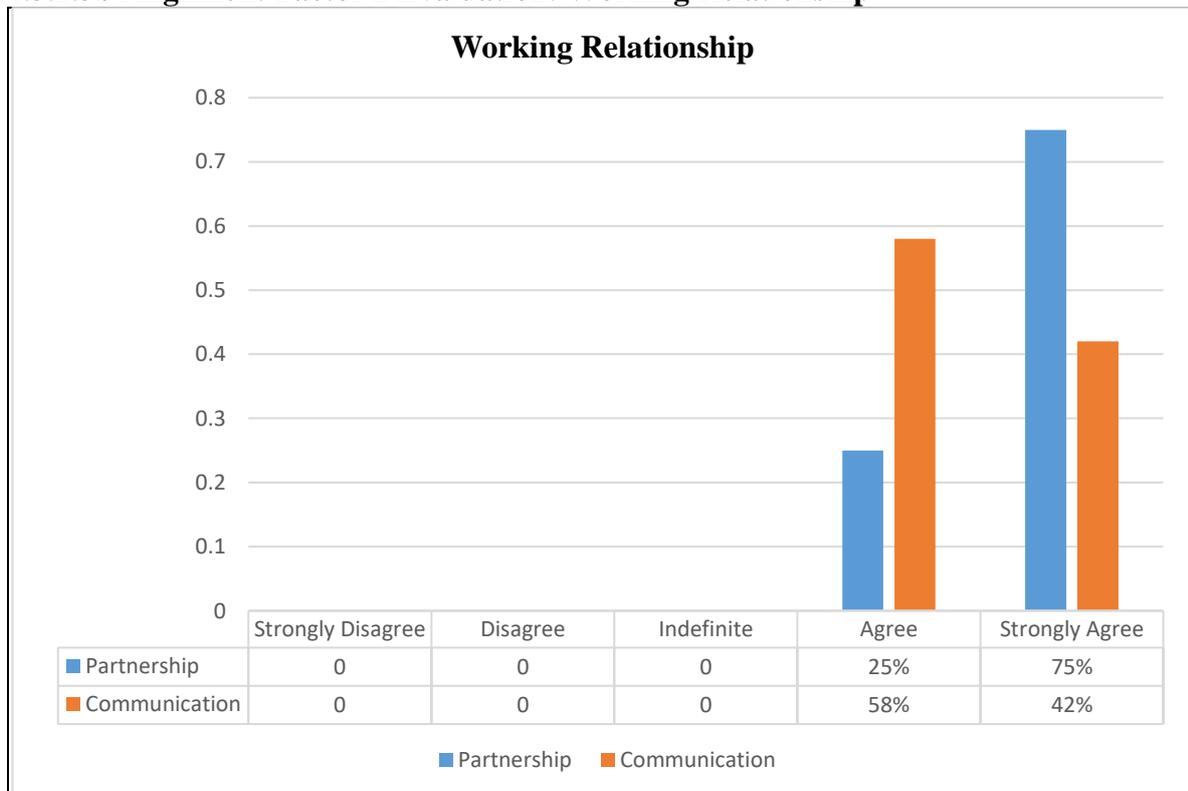


Figure 4.6: Alignment Factor 2 Evaluation: Working Relationship

To evaluate how working relationships were established, the partnership and communication themes were measured as depicted in Figure 4.6. The findings are elaborated on as follows.

Partnership: IT manager's involvement in business strategy planning is what facilitated partnership in all the organisations. Organisation B indicated that with all the projects that the organisation engages in, internal relationships and inter-functional collaboration are enforced. The participants elaborated that the success of the ESS project is owed largely to how well the IT and the business worked closely together, from the initiation of the project, to seeing it through and in monitoring it. Another contributing factor that the participants raised, was that the ESS project was as much an IT need, as it was a business need. The IT unit perception was that the ESS project met its objectives and that of its business unit alike.

Participant S expressed the following view on the partnership theme:

The success of our project is owed largely to how well the IT and the business worked closely together from the initiation of the project to seeing it through and then again this could just have been because this project was much an IT need as it was a business need, but IT and business here work well together.

Communication: Findings revealed that there was generally good communication between the IT department and the business department.

The results revealed existence of a firm communication between the business and IT in organisation A. The communication has been both formal and informal. Channels that facilitated effective communication were forums and presentations. According to participants in organisation A, this has resulted in quick feedback and collective decision making on the way forward, to mitigate unforeseen glitches. Participant P made the following statement:

"In many occasions the IT and business executives were present and active. This improved the team morale and steered the team towards working for one goal."

Participants from organisation B regularly referred to their "AS ONE" philosophy that brings everyone together, to work together and achieve the set goals.

However the findings from Organisation C revealed that although the IT manager was involved in business strategy planning, the perception about communication was that it was rather one way, with basically the business unit requisitions from the IT unit. The only platform that facilitated interactive sessions, were formal meetings that were held only periodically.

4.3.2.3c Alignment Factor 3 Evaluation: Shared Domain Knowledge

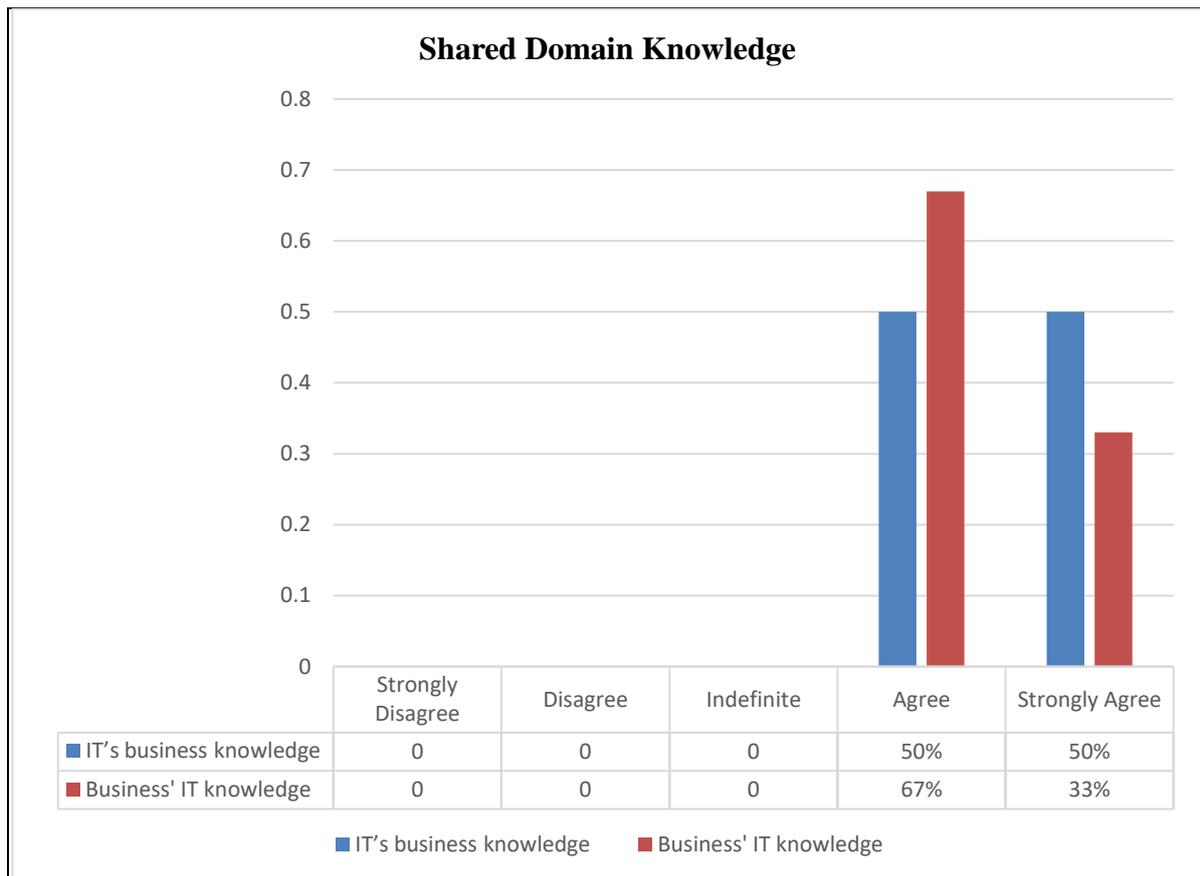


Figure 4.7: Alignment Factor 3 Evaluation: Shared Domain Knowledge

Shared domain knowledge was measured with respect to both the IT sector’s knowledge of the business and the business sector’s IT knowledge. Findings are illustrated in Figure 4.7.

IT sector’s knowledge of the business: The results indicated that the IT sector’s knowledge of the business was adequate. In organisation A, prior to the implementation of the customs modernisation programme, extensive training was organised and attended to by both the business and the IT units. The training was both internal and external. Workshops were conducted internally and areas of focus were on system usage. The respondents all felt that there was an adequate understanding of the organisation at large.

Business sector’s IT knowledge: The findings above show that business personnel had a limited knowledge of IT. In organisation C the trend of communication indicated in section 4.3.2.3b contributed to the findings of the limited knowledge that business had of IT. Respondent X was overseeing the whole project in Organisation C and he expressed that

collaboration on huge projects, has to be encouraged. His argument was that good communication will help with interdepartmental knowledge and also with achieving the project deadlines and fostering quick responses to unforeseen setbacks.

4.3.2.3d Alignment Factor 4 Evaluation: IT Projects and Planning

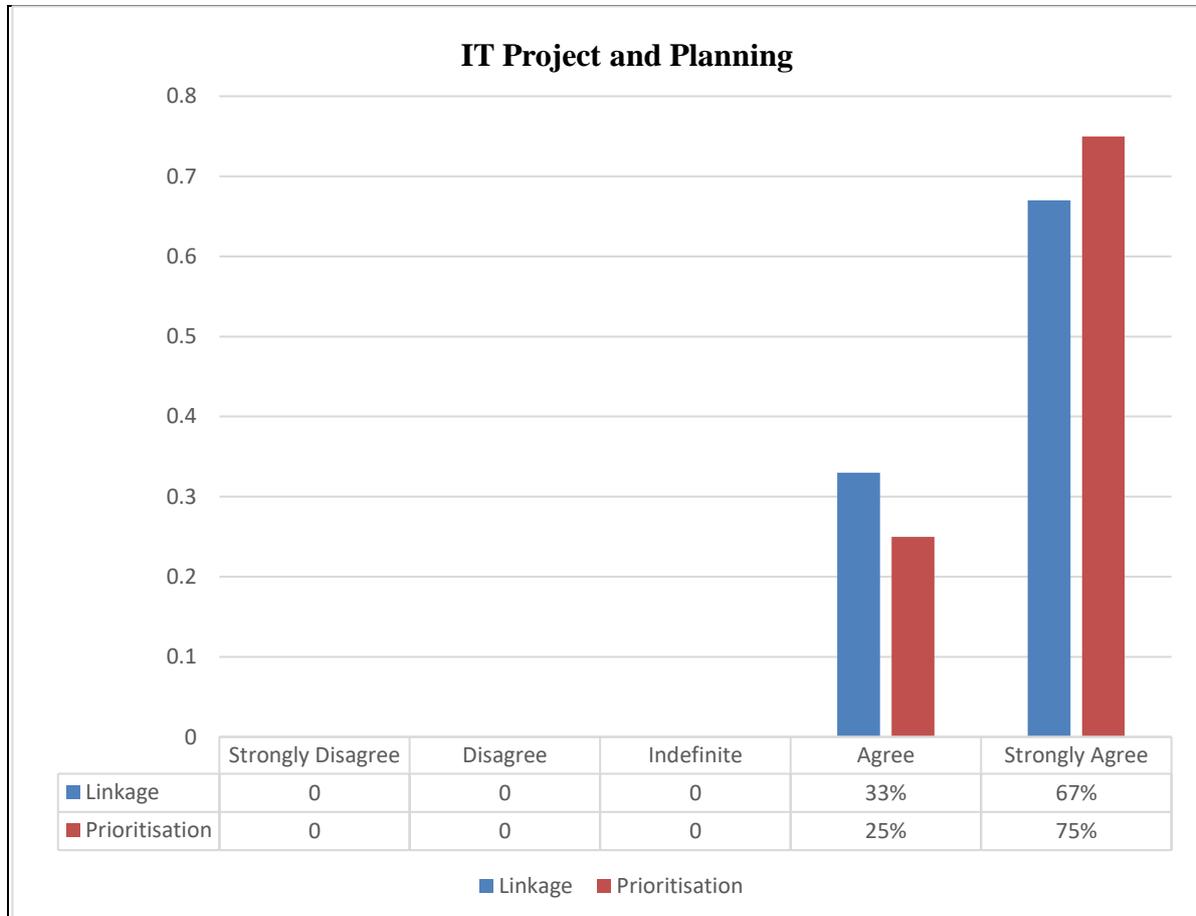


Figure 4.8: Alignment Factor 4 Evaluation: IT Projects and Planning

Regarding this factor, two themes that were measured are namely linkage and prioritisation.

Linkage and Prioritisation: The results indicate that prioritising IT projects and linking them to business strategies took primacy in the BPR projects.

To this participant U stated the following:

“The business needs were first identified and IT plans were made in consideration to the business needs.”

Other participants put it differently stating that business strategy set direction for the IT strategy. Participant W put it as follows:

“Our BPR project was paramount towards achieving the organisation’s goals; it thus took precedence to all IT projects.”

4.3.2.3e Alignment Factor 5 Evaluation: IT Performance

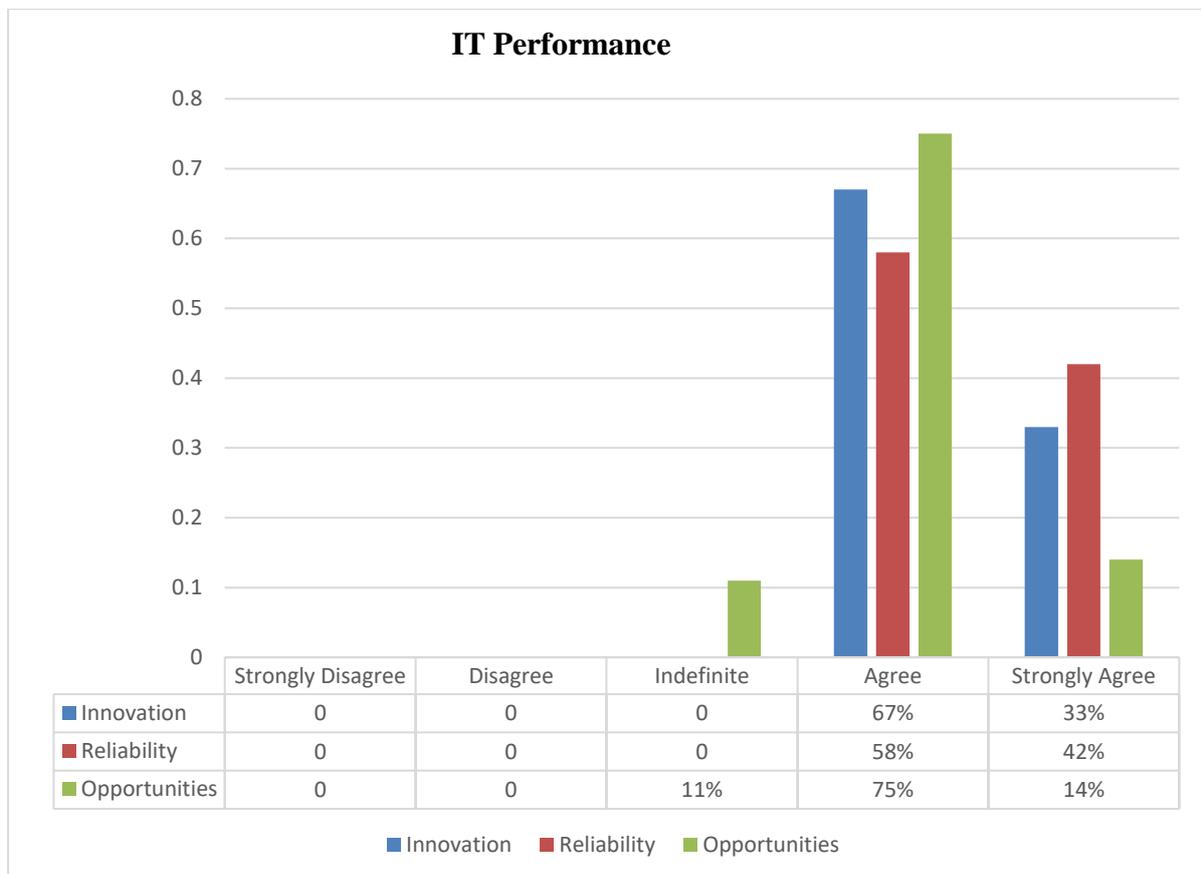


Figure 4.9: Alignment Factor 5 Evaluation: Performance

IT performance was measured using three themes: innovation, reliability and opportunities. The findings for these themes are presented below.

Innovations: Previous findings discussed in section 4.3.2.3 indicate that the IT sector reacted to business needs. Though the IT unit is autonomous with respect to solutions it provides for the business, their flexibility and innovations are limited to the business needs.

Reliability: The findings reveal that Organisation B focused strategy has set very well-defined IT priorities in order for the realisation of its mandate.

To achieve the “grow focus” strand there has been a drive for centralisation of IT capabilities, to drive standardised business processes, a uniform database and a stable platform to ensure that the organisation remains competitive, in its business environment. Respondent S indicated that the ESS project is a subsidiary of a larger scale IT initiative to drive improvements in innovation and real time information, productivity and quality service.

4.3.2.3f Discussion and Conclusion

This section has presented analysis on the role of five alignment factors in IT-Business strategic alignment in the context of BPR.

Intention and support measured inclusion in vision, value recognition and resource allocation. A high score was obtained on value recognition of IT in an organisation. Other measures also scored well. Morrison et al. (2011) statement is geared more on resource allocation and their advice is that a shared focus on budgeting and on distributing scarce resources, time and money will contribute immensely towards achieving IT-business alignment in the organisation. Luftman et.al (1999) support for inclusion of IT in vision implies that senior executive should show support for IT. Other remarks they make in support for inclusion of IT in vision and value recognition of IT are that IT should demonstrate leadership and should be involved in strategy development.

The findings for working relationship communication and partnership indicates that there was great evidence of partnership. Morrison et al. (2011) suggest that a credible working relationship will forge a successful alignment, between IT and business. This would be achieved by innovative solution delivery, reliable daily operations and responsive service recovery management.

IT business knowledge and Business IT knowledge were measures for shared domain knowledge. Considering the results across the three organisations, there is still a great room for improvement in this regard. According to Luftman (2014), understanding of the business requirements by the business unit is paramount to achieving alignment. Thus the IT and business units have to improve their knowledge sharing platform. In the same vein, Luftman et.al (1999) argued that IT should also understand the business.

IT project and planning measured linkage and prioritisation and IT performance measured innovation, reliability and opportunities. In this regard, according to Luftman (2014), alignment will be achieved when both the business and IT have a respective level of readiness. On the other hand Luftman et.al (1999) added that IT projects should be well prioritised. Other elements that will drive the success of this alignment factors in achieving IT-business alignment are prior IS success. Chan et al, (2006), Reich and Benbast (2008) argued that IS departments should provide reliable and efficient service to user departments and be responsive to user needs, which can be achieved with creative ideas on how to use IS strategically (Teo and An, 1999).

Business Process Change Management

It should be noted that this last factor, is an addition to the five alignment factors discussed. In more than one interview and in different organisations, references were made to aspects of business process change management. According to Fahad (2016) business process change management involves the following four phases: making a proposition to stakeholders and participants, understanding why change is necessary and what it will achieve, evaluating business process's impact on performance and implementing change. In the interview, participants made clear references to making propositions to stakeholders and participants and to understanding why change is necessary and what it will achieve.

The concept of business process change management has in previous studies been viewed as a success measure towards achieving a successful BPR project and not as a factor that addresses IT-Business alignment in a BPR project. Kia (2004) refers to business process change management as an important activity in BPR implementation as it gives details of the migration plan on how daily business activities will remain uninterrupted with the changes being introduced. Another important aspect that Kai (2004) states which relates to the alignment aspect of the study is that business process change management gives a map on how the redesigned business process will relate to the organizational business goals and technology. However, this is addressed from the point of view of assuring a successful BPR project and not so much on alignment.

Organisation A indicated that successful meetings with high level government officials were conducted to attain buy-in and approvals with regard to certain aspects of the project.

Furthermore, organisation A had to communicate change management to clearing agencies and train them with regard to the ASYCUDA system. In organisation B, customers were asked about their service experience and for their suggestions on what can be improved prior to the actual implementation of the BPR, and in organisation C, it was important for the organisation to make sure that their systems communicated with that of their suppliers. Participants indicated that without having considered all other sectors that affected their operations, their project would not have been entirely successful. The proposed additional alignment factor shown in Table 4.14 follows.

Table 4.14: Business Process Change Management

<i>Alignment Factor</i>	<i>Measuring Variable</i>
<i>Business Process Change Management</i>	Inclusion of External Stakeholders

This section concludes by highlighting the alignment factor ratings.

4.3.2.5 Alignment factor ratings

This section highlights alignment factors that have proven prominent towards the success of the BPR projects and the attainment of IT-business strategic alignment within those BPR projects. Equally, it also highlights alignment factors that contributed only to some extent towards the success of the BPR projects and the attainment of IT-business strategic alignment within those BPR projects. The importance of highlighting these factors is so that, the BPR team is aware, which alignment factors they will have to improve on to enhance the success rate of the BPR project and of achieving IT-business strategic alignment within a BPR project.

Highly Rated

Findings indicate that alignment factors that were properly applied in the organisation's BPR projects were those of intention and support. High scoring variables were IT strategic value recognition and IT inclusion in vision. IT projects and planning was also well placed in the BPR projects. Findings indicate that linkage and prioritisation were recognised in the implemented BPR projects. This means that enabling technologies were well integrated in the BPR processes.

Table 4.15: High rated alignment factors in IT-business strategic alignment

Alignment Factor	Measuring Variable	Agreed	Strongly Agreed
Intention and Support	IT strategic value recognition	3	9
	IT inclusion in vision	2	10

Table 4.16: High rated alignment factor in BPR

Alignment Factor	Measuring Variable	Agreed	Strongly Agreed
IT Projects and Planning	Linkage	4	8
	Prioritisation	3	9

Poorly Rated

On the other hand organisations need to improve their opportunities between the IT unit and the business unit. This will give employees a rounded knowledge of the organisation and positively impact on other factors such as working relationships and shared domain knowledge.

Table 4.17: Poorly rated alignment factor in BPR

Alignment Factor	Measuring Variable	Indefinite	Agree	Strongly Agreed
IT Performance	Opportunities	1	9	2

4.3.2.4 Summary Results of Thematic Analysis: Perceived benefits of aligning business processes to business strategy and IT strategy.

4.3.2.4b Perceived benefits of aligning business processes to business strategy

Table 4.18: Perceived Benefits of Aligning Business Processes to the Business Strategy

Perceived Benefits	Strongly Agreed	Agreed	Neutral	Disagreed	Strongly Disagreed
Improved customer satisfaction	4	8	-	-	-
Reduction in total cost	2	7	2	1	-
Better Return on IT investment	-	4	3	5	-
Increased profits	4	5	3	-	-
Reduced time to market	2	6	2	2	-
Higher quality products	2	9	1		
Improved use of IT to support business operations	-	2	8	2	-

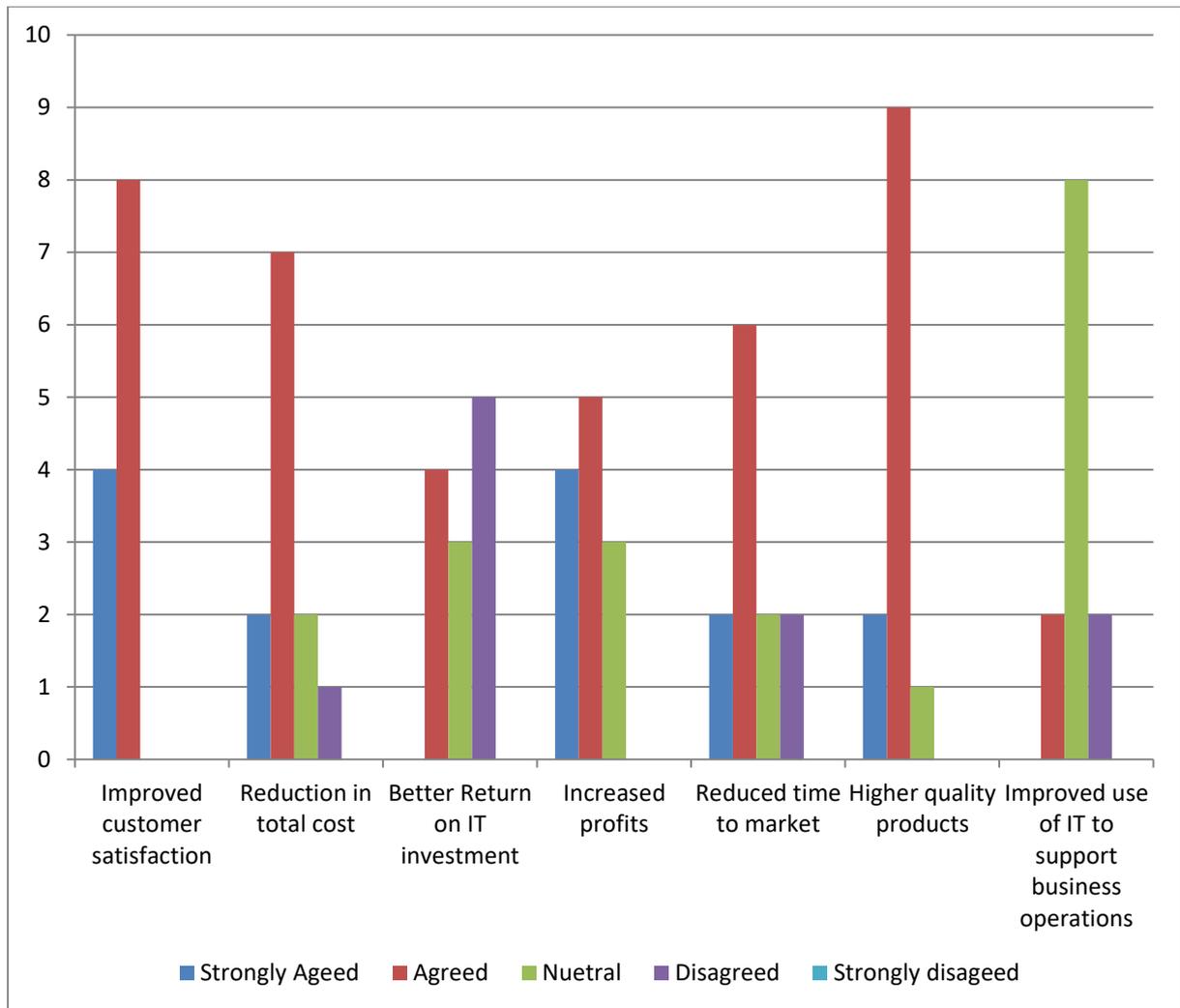


Figure 4.10: Perceived Benefits of Aligning Business Processes to the Business Strategy

Table 4.18 together with Figure 4.10 show that aligning business processes to business strategy has positively influenced all areas of the organisations, from customer satisfaction, to how IT can best be used to support business operations. The perceived benefits of aligning business processes to the business strategy are highly notable in improved customer satisfaction. Four participants strongly agreed to have observed remarkable improvements in customer satisfaction and eight agreed in support of the same perception. On the other hand, improved use of IT to support business operations has been rated low as a benefit to aligning business processes to strategy. The other perceived benefits of aligning business processes to business strategy show moderate improvements under each benefit.

4.3.2.4a Perceived benefits of aligning business processes to IT strategy

Table 4.19: Perceived Benefits of Aligning Business Processes to the IT Strategy

Perceived Benefits	Strongly Agreed	Agreed	Neutral	Disagreed	Strongly Disagreed
Improved customer satisfaction	2	9	1	-	-
Reduction in total cost	1	8	2	1	-
Better Return on IT investment	3	6	3	-	-
Increased profits	3	5	4	-	-
Reduced time to market	3	8	1		-
Higher quality products	2	9	1		
Improved use of IT to support business operations	2	8	2	-	-

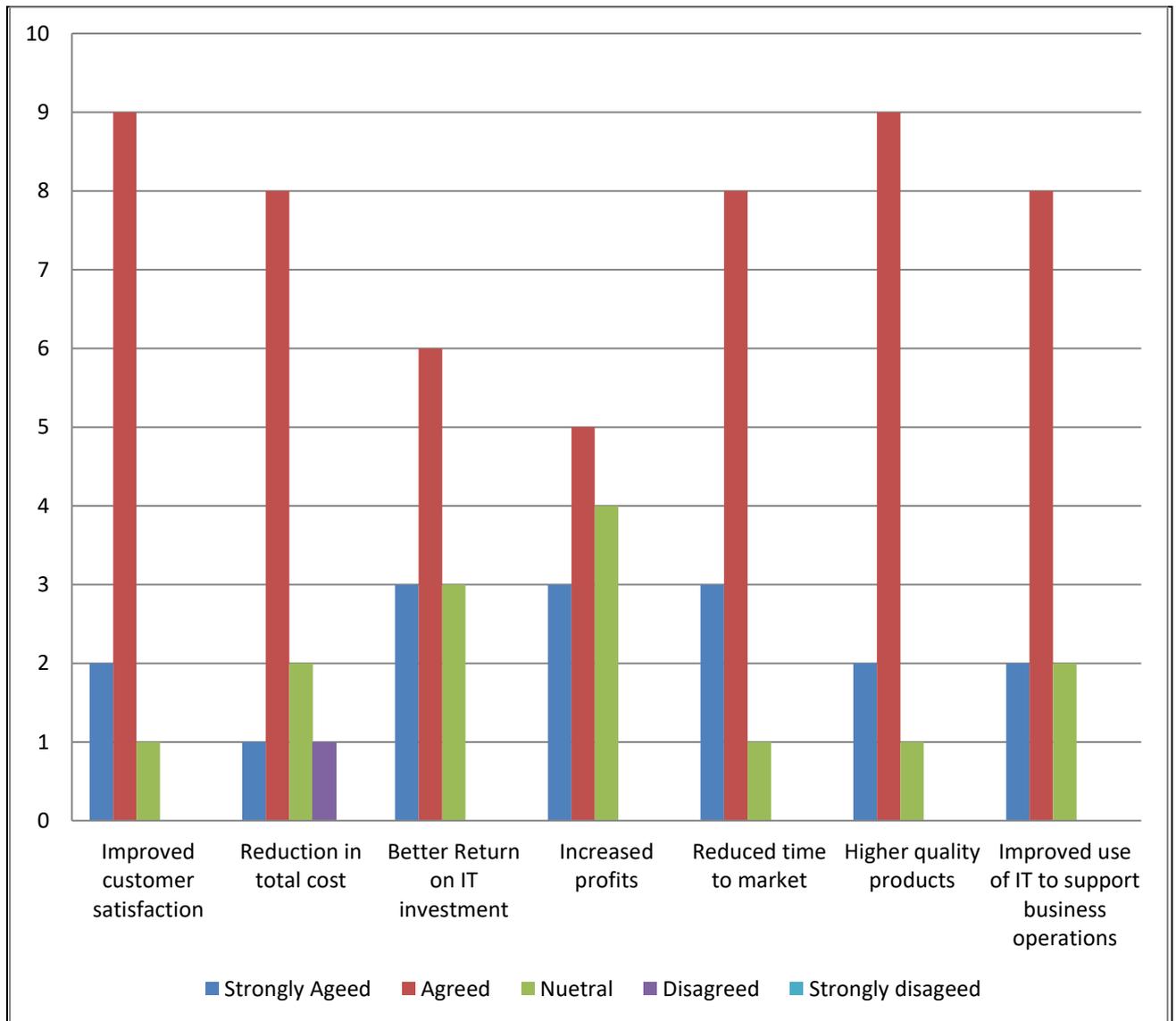


Figure 4.11: Perceived Benefits of Aligning Business Processes to the IT Strategy

Similar to aligning business processes to business strategy, there are benefits too in aligning business processes to IT strategy. The results as illustrated in Table 4.19 and Figure 4.11 show that there was a major improvement in areas of customer satisfaction, reduction in total costs and in high product quality. The findings also show that, one participant was not of opinion that mapping business processes to IT strategy resulted in reduced total costs. The participant view was that the IT capital investment was high and the maintenance costs that the organisation is enduring thus far are exceedingly high.

Additional supporting remarks made for aligning the business processes to the business strategy and to the IT strategy as per Table 4.18 and Table 4.19 and Figure 4.10 and Figure 4.11 above are noted as follows.

In Organisation A the participants noted that by mapping their business processes to their IT strategy, the modernisation project was able to achieve its goal which was to strategically use IT within the organisation. On mapping their business processes to business strategy, the participants indicated that the results are business processes that are efficiently performing the customs administration and procedures. Respondent Q additionally remark that:

“Besides improved processes, the authority has in the year 2014 / 2015 collected more revenue than ever before which actually exceeded their target by over 30%.”

Additional benefits revealed through the interviews were as follows: For organisation A’s performance major highlights were:

- improved service delivery and,
- major service improvements

Respondent P noted the following:

“Pre-declarations which have reduced time taken at the border, minimisation of the burden on business and public in meeting revenue payment and improved border management.”

In organisation B, the major highlight was perceived to be the assurance of delivering quality service and products that were tailor made for customer needs. Participant U made a remark that substantiates this statement:

“With the ESS project we were able to deliver a solution to our customer needs that simplify and make convenient their shipping process”

Organisation C additionally highlighted the interdepartmental collaboration and the reduced amount of paper based filing and procedures. A major result that the organisation denotes as a success factor to aligning the business processes to the business strategy and to the IT strategy, is the integration of their business processes.

4.3.2.4C Discussion and Conclusion

This section basically confirmed the perception of the benefits of aligning business process to IT strategy and business strategy. Whilst one would think the responses would be positive in all instances, there were areas like reduction in total cost, better return on IT investment, reduced time to market and improved use of IT support business operations in which there were participants who were of view that the cost of IT capital and maintenance was high and the returns on the investment was relatively low.

On other aspects like reduced time to market other participants noted the time it took to pilot a new product into consideration. There was also an argument towards improved use of IT to support business operations, which was directed to miscommunication between the IT and the business, and this is where shared knowledge domain should be emphasised. However, the holistic picture is that there are marked benefits to aligning business process to IT strategy and business strategy. These benefits further relates back to alignment factors, which would give an indication of the factor(s) failing to align the business and IT.

In conclusion to this section, Grover and Otim (2009), do support the findings in this section by stating that when business processes are managed in an agreeable manner and are well aligned to the business strategy and IT strategy there will be apparent efficiency and effectiveness within the organisation. Supplementary literature is further in accord to the findings made in this section; Garvin (1995) and Cleveland (2006) sustain that proper alignment of the business process to business strategy and IT strategy will result in the following; improved customer satisfaction, shorter time to market, reduced costs, and high quality products.

4.3.2.5 Resulting process map in IT-Business strategic alignment in the context of BPR

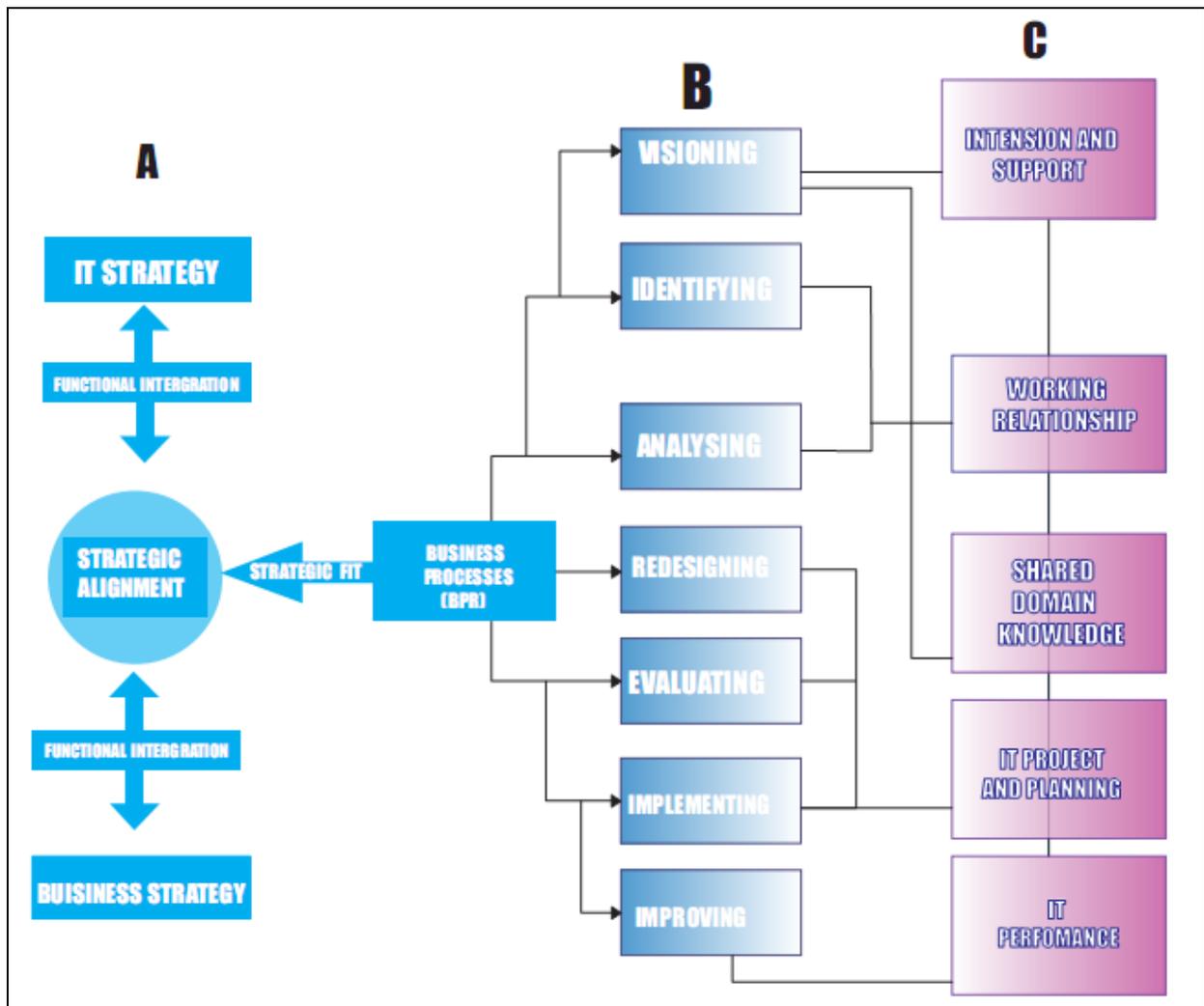


Figure 4.12: Conceptual BPR process mapping to IT-Business Strategic Alignment

Figure 4.12 illustrates the conceptual process map for IT-business strategic alignment in BPR as per the study findings. The conceptual process map is the epitome of what the case study has been about and has brought to light. It is made up of three pillars namely, A, B and C. A illustrates the IT- business strategic alignment concept of the study, B the BPR framework as per the literature study and C the alignment factors per the literature study alike. The process map demonstrates the interrelationship between the BPR phases and the alignment factors. This relationship is explained by the application of the relevant alignment factor to the correlating BPR phase.

The three step approach of the case study demonstrated in Figure 3.2 is the foundation of the above conceptual process map. The case study approach followed the three methods of collecting data, namely: literature review, document analysis and interviews. To arrive at the formulation of the process map, evaluation on findings from interviews from document analysis was done. This notion can be clarified with reference to the three aforementioned pillars as below;

Pillar A illustrates the IT-business strategic alignment concept of the study. To incorporate this concept in the study, the SAM framework was adopted from the literature review. The business strategy and IT-strategy constructs of the SAM framework were operational in the study and both the SAM links were functional in the study. The functional integration demonstrated the harmony between business strategy and IT strategy to arrive at a point whereby an organisation has attained strategic alignment. Strategic fit acted as a linked between the study's two links, which are the aforementioned strategic alignment and BPR.

Pillar B illustrates the BPR framework extracted from the literature review. The framework seven-phased process was evaluated against 24 document sources.

Pillar C illustrates the alignment factors, also emerging from the literature study. The alignment factor variables were also evaluated in the three organisations by means of interviews.

From the said evaluations, interrelationships emerged and assisted in the construct of the conceptual process map. Section 4.4.2 analyses in-depth what is demonstrated by the conception process map.

4.4 Case Study Analysis

4.4.1 Analysis of BPR Implementation in Large Organisations in Lesotho

With regards to the BPR implementation process, the study established first why the BPR projects were implemented in the three organisations and then addressed how they were implemented. Viewing the reasons why the BPR projects were implemented, the findings showed a need for efficient business process, effective business process, business operations management, defined and up to date business processes, business processes that meet the IT needs and business processes that meet the business need. These BPR motivators were evident in all organisations. The reviewed literature in section 2.2 cites similar reasons. According to Eftekhari and Akhavan (2013) BPR improves the strategic goals, effectiveness, efficiency and competitiveness within the different organisations.

However, some participants only identified BPR as a measure to meet the business needs and not the IT needs. The results showed that BPR addresses the IT needs and in so doing, it recognises the IT strategy. Indeed, BPR is closely linked with strategic change, however the strategic change that BPR is said to drive, should be explicitly detailed, as to whether it is business oriented or IT oriented. According to Leavitt (2000) BPR derives its existence from different disciplines; four major areas identified as being subjected to change in BPR are organisation, technology, strategy, and people.

External business environment also emerged as an indirect BPR project motivator. This is the manner that organisations respond to their external business environment, as an opportunity to meet their customer needs and to be abreast of the competition. This finding further confirms the logic that underpinned the study as indicated in chapter 1 section 1.1. The logic states that, with a call to respond to the changing business environment, the business strategy is adjusted and in so doing, the business processes are also redesigned to meet the new business goals.

The redesigned processes are in this regard IT-enabled which suggests that the IT capabilities and technologies, will be adjusted so that they are on par with the revised corporate strategy. (Refer to Figure 1 in Chapter 1)

4.4.2 Analysis of the Role of Alignment Factors in a BPR Implementation Project

Motivated by a need for strategic change, the organisations assessed whether their current business processes would efficiently drive their formulated organisational strategy. They concluded that they would not. BPR implementation then followed. All three organisations had essentially progressed from seeing IT as a support tool, to strategically placing it within their organisation. At the centre of the redesigned business processes was IT. In all the cases BPR, much as the business strategy was identified, the IT value was also highlighted. Therefore the redesigned business processes recognised both the business strategy and IT strategy. This allowed for the alignment of the redesigned business processes to both the business strategy and IT strategy.

The findings have illustrated the roles alignment factors played towards achieving IT-business strategic alignment. Guided by van Hout (2012) study on alignment factor, the study measured different alignment factors' variables in each BPR project. Table 4.20 shows alignment factors and the deduced roles they played in the investigated BPR projects. It should be noted that the alignment factors mentioned below were not stipulated in the BPR project, rather the interview questions allowed to identify areas and practices that implicated alignment factors.

Table 4.20: Induced roles alignment factors play in a BPR project

Alignment Factor	Induced role alignment factor played in a BPR Project
Intention and Support	Understanding of the IT value that led to appropriate allocation of IT resources to the BPR project and strategically placing IT in BPR project.
Working Relationship	Communication that facilitates strategy development speed of action and meeting project deadlines.
Shared Domain Knowledge	Understanding of the business needs and adequately placing IT in a BPR project to achieve the identified business need.
IT Projects and Planning	Understanding and communicating business solutions with already an indication of budget, technology and timeline.
IT Performance	Driving innovation in driving a BPR project and keeping organisations competitive in their respective industries

Therefore, the study's findings show that alignment factors as investigated are key to achieving IT-business alignment, at a strategic level.

The findings have further elucidated IT project and planning as a critical factor in driving a successful BPR, while on the other hand intention and support, are critical elements in driving alignment between IT and the business at a strategic level. This is not to say other alignment factors play an insignificant role.

The study has determined that all alignment factors should be applied in an organisation during a BPR project and the BPR team can best facilitate this. Thus, the findings indicate that the BPR team thus have a daunting task in bringing to the fore, top management from both IT and the business. The responsibility of a BPR team in this regard, will be to facilitate communication between those two entities, to assume commitment and to foster support through means of allocating necessary resources. To add to this, the BPR team will further have to ascertain that the business needs are an integral part of the IT projects. Section 3.4 explored different roles assumed by the BPR team. The leader and the steering committee will in this regard, facilitate commitment and support from both the business and the IT sector.

The study further discovered a notable element besides the five alignment factors investigated that is also key to the success of a BPR project and in aligning the IT strategy to the business strategy in a BPR project. This element is the involvement of the organisation's stakeholders as discussed in section 4.3.2.3 under business process change management. This element entails identifying customer needs and making them part of the change requirement. And also, in other instances, making other bodies directly and/or indirectly involved with the organisational part of change management. This has been elaborate in a number of interview responses where participants indicated a stakeholder involvement in the planning and execution of the BPR project. Organisation A, trained the customs clearing agencies in the country. On the other hand, in organisation B, user preference was obtained from their customers on the user interface and features they hoped to see in the e-com applications.

4.4.3 Analysis of Perceived Benefits of Aligning Business Processes to IT Strategy and Business Strategy

To address perceived benefits of aligning business processes to business strategy and IT strategy, the study investigated the following benefits: improved customer satisfaction, reduction in total costs, better return on IT investments, increased profit, and reduced time to market, high quality products and improved use of IT to support business operations. The

findings show that they are all perceived benefits of aligning business processes to IT strategy and business strategy. In evaluating the perceived benefits of aligning business processes to IT strategy and business strategy, a 5-point Likert scale was used and participants could either, agree, strongly agree, be neutral, disagree or strongly disagree.

On perceived benefits to aligning business processes to business strategy, the following references were made: 14 references were made to strongly agree, 41 references were made to agree, 19 references made to neutral, 10 references were made to disagree and no references were made to strongly disagree. In the same manner, on perceived benefits to aligning business processes to IT strategy, 16 references were made to strongly agree, 53 references were made to agree, 14 references were made to neutral, 1 reference was made to disagree and no reference was made to strongly disagree. This demonstrates that participants see value in aligning their business strategy to business processes. It is therefore important that there is a process map that will demonstrate how organisations can achieve this.

This section concludes by looking at the literature that supports the study's findings on the benefits of aligning business process to strategy. According to Garvin (1995) when business processes reflect the strategy, BPR will accomplish improvements across all functions of the organisation, quality, speed, reduced costs and customer satisfaction. BPR directly improves strategic goals, effectiveness, efficiency and competitiveness for different organisations (Cheng and Chiu, 2008). In order to keep alignment with strategy, business processes should integrate components of strategy (Cheng and Chiu, 2008). In section 2.3 these components were discussed and included; business scope, distinct competencies, business governance, technology scope, systematic competencies and IT governance.

4.4.4 Analysis of the IT-Business Strategic Alignment Process Map in the Context of BPR

With inference to data gathering and presentation of the findings, the study constitutes a conceptual process map, as illustrated in section 4.3.2.5. The interpretation of the conceptual process map is explained below. The general idea is that at every phase of the BPR depending on the phase activities, alignment factors should be put into effect to assure that IT-business alignment is made an allowance for and achieved at every phase of the BPR process.

Following is the demonstration and interpretation of the conceptual process map. The purpose of this section is to elaborate how alignment factors can be employed at different phases of the BPR methodology. This is achieved by mapping different alignment factors to different phases of the BPR methodology illustrated from Figure 4.12 to Figure 4.15.

4.4.4.1 Alignment Factor Mapping at the Visioning Phase

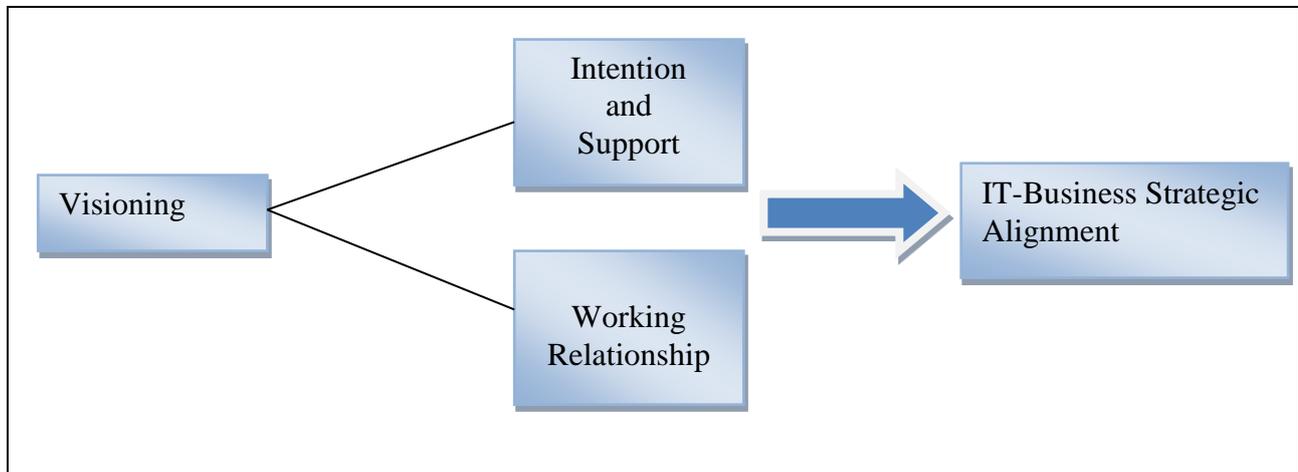


Figure 4.13: IT-business strategic alignment in BPR phase 1

At visioning phase of the BPR methodology, corporate visions and business goals are defined. By incorporating the intention and support alignment factor during this phase, it can be assured that IT has been strategically placed in the vision and business goals of the organisation. By achieving this at an early stage, the value of IT is clearly communicated and understood and the necessary IT resources are timely and efficiently allocated to the BPR project. The above BPR phase mapping to alignment factor is supported by Sohal (2007). He concurs that in order to implement BPR, it is important that strategic goals of the business are defined as this will give an organisation a direction to their growth path.

Working relationship is another alignment factor that should be included at the visioning phase. This takes into consideration the communication between IT and the business and primarily, at the executive level. In organisation B, it was highlighted that the success of their project was owed largely to the working relationship between the IT and the business units, from the initial stages of the project. When the working relationship is achieved, the cooperation of IT and business can be realised during the strategy formulation.

4.4.4.2 Alignment Factor Mapping at the Identify and Analyses Phases

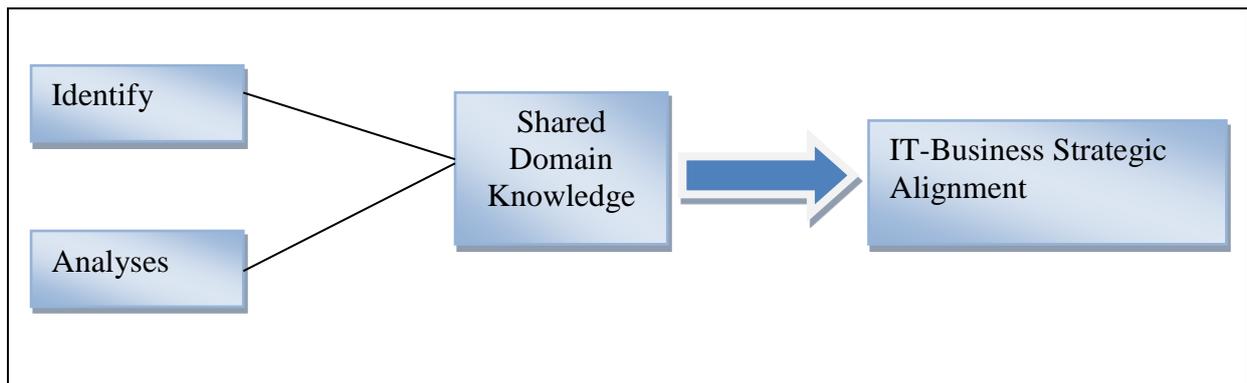


Figure 4.14: IT-business strategic alignment in BPR phase 2 and 3

At the “identify and analyses” phases of the BPR methodology, existing business processes are defined and measured. Shared domain knowledge is basically saying how well does the IT function know the business function and conversely, how well does the business function know the IT function. When IT and business have appropriate knowledge of each other, their objective will be in accord. As such, this will encourage a thoughtful process on identifying and analysing processes to reengineer.

George and Mwalaku (2009) mention that even though it is unnecessary for general managers to understand all technologies, it is necessary that they seek and understand the consequences of using the technologies that are relevant to the business environment. They further add, that general managers who leave IS decisions solely to their IS professionals, put themselves and the organisations in a detrimental position. This expresses the notion that when IT and business have appropriate knowledge of each other, their objective will be in accord with identifying and analysing processes to reengineer.

4.4.4.3 Alignment Factor Mapping at the Redesign, Evaluate and Implement Phases

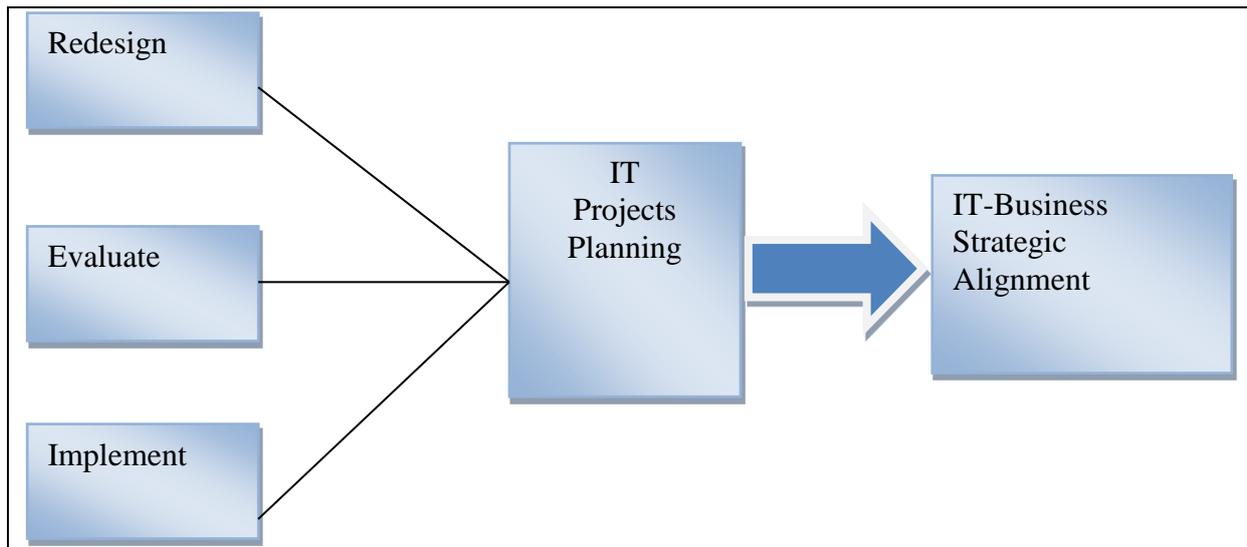


Figure 4.15: IT-business strategic alignment in BPR phase 3, 4 and 5

With reference to figure 4.15 to achieve IT-business strategic alignment at the redesign phase, evaluate phase and implement phase, IT projects and planning have to be realised during each of these phases. IT projects planning involves linking IT projects and plans to the business plans and strategies.

At the redesign phase, IT projects planning will assist in the integration of technology that will enable the creation of an organisation’s competitive edge. This suggests cautiously selecting an IT platform at the redesign phase. Lampathaki et. al (2009) states that the “evaluate” phase of a process redesign, a new process is assessed and selected. IT projects and planning will guide this process by linking an appropriate process redesign, the business strategy and the plans. In a similar manner, IT projects and planning through pulling all resources in terms of sponsorship, will assure the implementation of the BPR project.

4.4.4.4 Alignment Factor Mapping at the Improve Phase

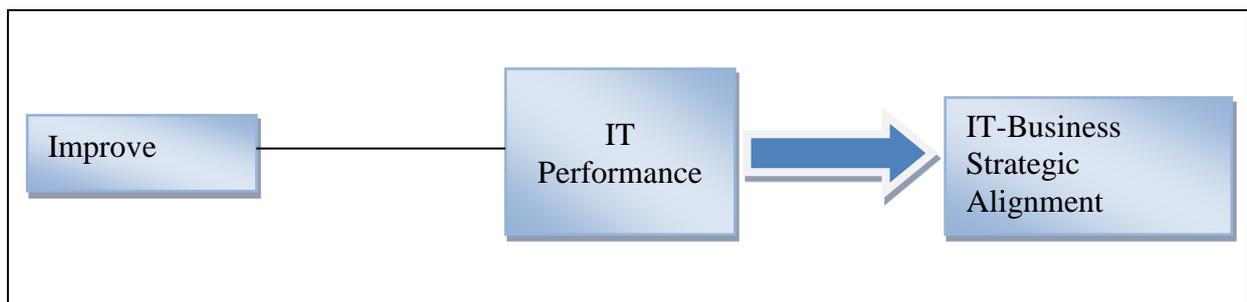


Figure 4.16: IT-business strategic alignment in BPR phase 4

Ultimately, to assure that the state of alignment is maintained post the BPR project, this is at the 'Improve phase', it is important that IT performance is incorporated during this phase. The 'Improve phase' involves continuous improvement of the BPR process. According to Garvin (2012) this requires performance management and the IT performance through innovation and a look out for new opportunities can assure that new and existing technologies are exploited, in order for the redesigned process to continue delivering enhanced performance.

4.5 Validity and Reliability

To attain credibility of the research great consideration was given to the validity and reliability of the study. In being agreeable to the considerations of the study's validity and reliability, external validity was met by extending the study to three different industries and three different BPR projects. The BPR projects are further not inclined to a particular industry or organization hence forth transferability of the study has been met in a sense that the findings of this study can be applied to other different contexts.

Other measures taken to assure the trustworthiness of the study are ensuring conformability and credibility of data. The data has been interpreted as it has been captured and there has been no biasness. This assured the accuracy of the findings such that everything was held constant and similar results will still be achieved thereby ensuring dependability of the study.

4.6 Conclusion

This section has essentially explored the study's findings and addressed each research question. It further analysed the findings with an intent to bring together different phases of the research in order to depict a holistic picture on how within a BPR project IT-business strategic alignment can be attained and / or maintained. With reference to the Figure 4.12, the conceptual process map, the study achieved to depict such a picture. Section 4.4.4.1 to section 4.4.4.4 illustrates how the conceptual process map can be applied in real life settings.

Chapter 5: Summary, Conclusion and Recommendations

5.1 Introduction

After discussing the qualitative research findings, this chapter presents a summary of answers to the key research questions. It provides details on how the study has contributed to the body of literature in strategic alignment, in the context of BPR in the following discussions. The summary of findings is presented in section 5.2; in this section all the research questions are addressed. Contribution of the study is presented in section 5.3. Section 5.4 presents recommendations of the study and future research suggestions. In section 5.5 limitations of the study are presented. The conclusion of the study is presented in section 5.6.

5.2 Summary of Findings

This section provides a summary of the findings. These major research findings accommodate the views of 12 respondents and data from twenty two different documents. The findings are discussed under different research questions that address the following objectives: How BPR projects are implemented in large organisations in Lesotho presented in 5.2.1, followed by the role of alignment factors in IT-Business strategic alignment in the context of BPR in section 5.2.2. Perceived benefits of alignment between business strategy and business process and between IT strategy and business process are collectively presented in section 5.2.3.

5.2.1 How are BPR Projects implemented in Large Organisations in Lesotho?

The findings highlight common key processes that the organisation followed when undertaking a BPR project. From the findings in Chapter 4, the BPR project implementation processes followed the following summarised systematic approach; strategy review, stakeholder requirements, analysis of 'as is' processes, design of new processes, review of IT budget, implementation of the BPR project and lastly monitoring of the BPR project. Between the aforementioned BPR implementation process and the Lampathaki et al. (2013) BPR life cycle methodology as discussed in section 2.1 of the literature review, there is barely any difference in the two approaches. It can therefore be concluded that the three organisations followed the standard academically approved BPR methodology.

The research findings indicate the following:

Visioning

A total of fourteen references from document sources were made in defining corporate vision and business. This was in all the three organisations combined.

Identifying

A total of twelve references from document sources were made to identifying processes to be redesigned. This was in all the three organisations combined.

Analysing

A total of eleven references from document sources were made regarding analyses of process to be redesigned and nine references were made with regarding measuring existing processes. This was in all three organisations combined.

Redesigning

A total of fourteen references from document sources were made regarding enabling IT and sixteen references were made to generating alternative process redesign. This was in all three organisations combined.

Evaluating

A total of thirteen references from document sources were made to evaluating the “as is process”. This was in all three organisations combined.

Implementing

A total of seventeen references from document sources were made regarding the actual implementation of BPR. This was in all three organisations combined.

Improving

A total of eighteen references from document sources were made to describe the continuous redesigned process improvements. This was in all the three organisations combined.

In conclusion to this findings section, the study has determined different phases that large organisations in Lesotho follow when implementing a BPR project. They follow the standard agreed BPR methodology framework that has been researched and academically approved except with an addition of stakeholder requirements. The findings deem it important that at every phase of the BPR processes be communicated, understood and measured on.

5.2.2 What is the Role of Alignment Factors in IT-Business Strategic Alignment in Large Organisations in Lesotho?

Intention and Support

The findings indicate that intention and support, through understanding the IT value in an organisation will lead to the appropriate allocation of IT resources to the BPR project and in strategically placing IT in the BPR project.

Working Relationship

The findings indicate that working relationships, through the use of communication, facilitate strategy development, speed of action and meeting project deadlines.

Shared Domain Knowledge

The findings further show that shared domain knowledge will assist in the understanding of the business needs and adequately placing IT in a BPR project, to achieve the identified business needs.

IT Projects and Planning

The findings also indicate that IT projects and planning will facilitate understanding and communication of business solutions with already an indication of budget, technology and timeline.

IT Performance

IT performance is shown to steer innovation within BPR projects and thus it retained the organisations' competitive positions, in their respective industries.

Business Process Change Management

And lastly, the study's findings discovered that stakeholders play a very influential part in the success and / failure of a BPR project. Positive findings from both the BPR implementation and the IT-business strategic alignment, is related to making stakeholders part of the BPR project. This will be achieved when strategy review also takes into account the stakeholders requirements.

In conclusion, it has been established that the roles of alignment factors are key to assuring alignment between IT strategy and the business strategy. Thus, the identified roles of alignment factors with respect to IT-Business strategic alignment should constitute a BPR process to assure that IT-Business strategic alignment is achieved.

According to Avison et al. (2004) the alignment theory states that proper alignment requires the right process to fulfill the strategies. The findings confirm this theory, with the indication that before embarking on a BPR project, the BPR team should ensure that the business processes are aligned to both the IT strategy and the business strategy. This is at the core of a BPR project, which will then result in an IT strategy that is well aligned to the business strategy.

5.2.3 What are the perceived Benefits of Alignment between Business Strategy and Business Process in Large Organisations in Lesotho?

What are the Perceived Benefits of Alignment between IT Strategy and Business Process in Large Organisations in Lesotho?

The study findings further revealed that a BPR project will more likely be successful and achieve IT-business alignment if alignment factors are considered. In occurrences where alignment factors were put to action in a BPR project, the following were achieved; communication that facilitated strategy development, speed of action and hence meeting project deadlines and the understanding of the IT value that led to the appropriate allocation of IT resources for the BPR project.

Furthermore, alignment factors drove innovation and kept the organisations' abreast of the in their respective industries. It has also been seen that alignment factors have the ability to realise

business needs and adequately place IT in a BPR project to achieve the identified business needs.

Specific benefits that the participant mentioned to aligning business processes to business strategy and to IT strategy are as follows: improved service deliver, shorter return time doing declarations, tailor made solutions for customers, integrated business processes, increased revenue collection and interdepartmental collaboration.

In a nutshell, the findings showed that when business processes are aligned to both their IT strategy and business strategy, organisations are more efficient, productive, and profitable and this then results in an improved customer experience.

5.3 Contributions of the Study

5.3.1 Implications to the body of knowledge

This study signifies an important contribution to the body of literature in IT-business strategic alignment in a BPR context. The research set out to determine issues pertaining to the attainment of IT-business strategic alignment within the context of a BPR project.

The research findings assisted in understanding the mapping of different alignment factors to different phases of the BPR methodology. The research analyses determined different roles played by alignment factors at different phases of a BPR project and from this understanding a conceptual process map for IT-business strategic alignment in BPR context was developed, and is depicted in Figure 4.12 in Chapter 4. The construct of the conceptual process map is valuable to the BPR team who are required to carry out the different phases of the BPR project taking cognisance of the various alignment factors; understanding all factors of alignment and applying each at the rightful stage.

The research findings and analyses indicate that alignment factors are an imperative element in a BPR process for both its success and for the attainment and sustainability of the IT-business strategic alignment. The study has played an important role in highlighting this fact and in demonstrating how it can be practically achieved.

Lastly, the study has further identified business process change management can be added as an additional factor to the five alignment factors adopted by the study. The study's findings have indicated that stakeholders play a significant role in shaping an organisation's strategy.

5.3.2 Implication for practice

As discussed in the previous section, this study contributed to the body of knowledge in the IS research field, and makes a further contribution to practice. Process owners, project managers, strategists in both management and informatics field will find this study to be of value as it provides a clear process map on how IT and business misalignment can be avoided and inversely how alignment can be achieved and maintained within their respective organization and industries. As an example, software engineers can use the conceptual process map as a guide on how they can integrate alignment factors in a BPR project.

5.4 Recommendations and Suggestions for Future Studies

From the literature review and the empirical study, a couple of recommendations are evident. These recommendations are addressed to the BPR team and towards strategy review and formulation.

The BPR Team

Based on the findings, the BPR team must make IT-business alignment an integral part of BPR initiatives. The BPR team has to first understand how IT-business alignment is achieved. They can begin by considering the five factors of alignment as discussed in the literature review section. The implementation of these alignment factors will not only assure that IT-business alignment is achieved, but the study has shown that by implementing them, the success of the BPR project is ensured.

Strategy Review and Implementation

When organisations review and formulate organisational strategies, they should also consider alignment factors. This assumes that from the onset, IT and the business should understand each other. The starting point of IT-business strategic alignment is during the organisations' strategy review and formulation.

Organisations should review their business processes periodically against their business strategy to ascertain that they efficiently meet the organisation's business strategy. In the same light, organisations should review their business processes periodically against their IT strategy to ascertain that they efficiently meet the organisation's IT strategy. Furthermore, the organisation should understand their stakeholders' requirements and ensure that the BPR take into account such requirements and that they also translate them into the organisation's strategies. In this regard future studies can investigate the stake-holders requirements as an additional success factor towards IT-business strategic alignment in a BPR context. The study's findings reveal that the stakeholders' involvement in a BPR project plays a vital role, in the success of a BPR project.

Lastly, the following suggestions are made for future studies. In previous studies, business process change management has always been viewed as a technique for successful BPR projects. However, this study demonstrated that alignment factors are also key to the success of BPR projects. As such future studies can assess whether business process change management can indeed facilitate alignment between IT and the business and derive measurement for the alignment factors. Whilst in-depth information had been obtained through conducting interviews and analysing documents, the sample size was rather small. Future studies can thus conduct this study on a larger scale using a quantitative approach. Despite BPR and IT-Business alignment being popular topics of interest in the IS research field, IT-Business alignment in the context of BPR is not prevalent. Future studies can thus validate the formulated conceptual process map for IT-business strategic alignment within a BPR context and recommend improvements that can be made to the model.

5.5 Limitations of the Study

There were several limitations with conducting the study. The first challenge that the researcher faced, was identifying a list of organisations that have undertaken, or are currently undertaking BPR projects BPR. A pilot research had to be done to identify organisations fitting the category. Subsequent to identifying these organisations, another challenge was getting these organisations to agree to undertake the study. This limited the study to a small sample size. A large sample size would have brought more insights to the study, which would have perhaps led to discovering more factors that could positively drive IT-business alignment in a BPR project. Nonetheless, the design of the interview schedule allowed for rich data to be obtained from respondents

5.6 Conclusions of the Study

This chapter has in essence concluded the study. It summarised the following key aspects of the study; findings, contributions and limitations. It covered also the conclusion, recommendations and suggestions for future studies.

The Research Instrument

From the theoretical Data

Alignment Factors

From the literature review, it has been established that the most critical factors of alignment are the five listed below with. These alignment factors in collaboration with their corresponding variables will assist in formulating critical assessments both business and IT managers need to consider in IT-Business alignment assurance. For the evaluation of these factors a research instrument constructed by van Hout, (2012) was replicated. Some questions are directed solely to the IT function and some to the business function whereas a few of them can be answered by both the IT and the business.

Intention and Support

Working Relationship

Shared Domain Knowledge

IT Projects and Planning

IT Performance

Holistically these alignment factors address such elements of the business that are vital to the IT-Business alignment and assist to capture the research question cited below:

What is the influence of alignment factors in IT-business strategic alignment?

The subsequent section outlines thus the structure of the interview.

Appendix A

The interview outline

The In Depth-Structured Interview Design

All of the interviews will follow the same structure. This structure is presented below:

Introduction of the researcher:

Relebohile Shano, MCom student from University of KwaZulu-Natal. Pursuing a Masters degree in Information Systems and Technology.

Description of research project:

The holistic objective of the study is to determine enablers, activities and techniques for successful alignment of IT-business strategy in the implementation of a business process reengineering project. The structure thus that the study follows is in two phases. The first phase overviews analysis of as is processes, design and implementation of reviewed processes, this in a nutshell BPR. The second phase considers how the restructuring in phase one impacted the organisations' IT-business strategic alignment and what roles do the alignment factors play to then assured the IT-Business strategic alignment.

Goal of the interview:

To understand from the perception of the BPR implementers and the supporting professionals (IT and business strategist) how IT-Business strategic alignment is achieved during a BPR project and the importance of redesigning business processes with regard to the IT and business strategy.

Structure of the interview:

The interviews first sought to formulate the condition under which BPR is conducted. Then follow how IT strategy and business strategy are respectively influential in a BPR project and what the roles of alignment factors towards achieving are and or sustain strategic alignment.

Appendix A

Detail on anonymity of informant in the project:

In terms of protecting confidentiality, the interviewees will be referred to as respondents, or respondent 1 or 2 and without the disclosure of their positions

Request to record interview:

For easy of transcribing, permission from the interviewees to record interview sessions will be requested.

Main interview questions (45 minutes)

Please see below under full listing of interview questions.

Closing

Thanking the informants for their cooperation

Full listing of interview questions

Part 1: Background

The aim for this part is to introduce the informant.

The general interviewee information required:

Company:
Current Title:
BPR Role:
Email Address:

Appendix A

Part 2: Implementing a business process management project in the organisation

The purpose of this section is understand why and how the BPR project is implemented in your organizations i.e. what are the consideration in implementing the BPR project and how are they addressed.

1. How important is the efficiency and effectiveness in business processes to your organisation?

Not important at all	Not important	Neutral	Important	Very important

Please comment on your answer

.....

.....

2. Your organisation has well- defined, documented and up to date Business processes

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

3. Did your organisation implement a project in order to manage business operations in a better way?

Yes, whole business operations/ processes	Yes, in some departments or functions in the organisation - Please specify the departments.....
---	--

Appendix A

4. Did your organisation implement a BPR project in order meet the IT needs?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

Did your organisation implement a BPR project in order meet the Business needs?

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on your answer

.....

.....

Part 3: Business Strategy and IT Strategy from a Business Process Management perspective

The purpose of this section is understand the perceived benefits of alignment between IT strategy and business process and between business strategy and business process and evaluate how the maintained alignments map into overall IT- business alignment.

5. Your organisation has well- formulated business strategy

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

Appendix A

6. The organisational strategy helps selecting and linking your business processes/operations?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

7. Your organisational strategy was the basis for process improvement?

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

Appendix A

8. Do you think alignment between business strategy and business processes achieves the following in your organisation?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Comment (Why or how)
Improved customer Satisfaction.						
Reduction in total cost.						
Better return on IT Investment.						
Increased profits.						
Reduce the time to market.						
Higher quality product.						
Improved use of IT to support business operations.						

9. Your organisation has well- formulated IT strategy

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

Appendix A

10. The IT strategy helps selecting and linking your business processes/operations

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

11. Your IT strategy was the basis for process improvement

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Please comment on your answer

.....

.....

Appendix A

12. Do you think alignment between IT strategy and business processes achieves the following in your organisation?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Comment (Why or how)
Improved customer Satisfaction.						
Reduction in total cost.						
Better return on IT Investment.						
Increased profits.						
Reduce the time to market.						
Higher quality product.						
Improved use of IT to support business operations.						

13. What is the strongest link in business process management that positively affect the overall IT-business alignment?

Please elaborate

.....

14. What is the strongest link in business process management that positively affect the overall IT-business alignment?

Please elaborate

.....

Appendix A

Part 4: The role of alignment factors in IT-Business strategic alignment

This section of the interview evaluates the measuring variables of alignment factors within a BPR project. The intention is to formulate their role and influence in IT-Business strategic alignment. This section is intended to provide a road map towards IT-Business alignment.

Intention and Support

Inclusion in vision

15. Top management defined their vision of the role of IT in the recently implemented BPR project.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree	

Please motivate your answer

.....

16. Top management communicated their vision on the role of IT in the recently implemented BPR project.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please motivate your answer.

.....

Resource Allocation

17. Adequate IT Resources were provided in terms of funds and manpower.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please motivate your answer.

.....

Appendix A

Working Relationship

Partnership

18. The CEO was accessible to the CIO for IT strategy planning in the recently implemented BPR project.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please motivate your answer.

.....

19. The CIO/IT manager was involved in business strategy planning in the recently implemented BPR Project.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on the impact the answer you provided had on the overall BPR project and the organisation.

.....

Communication

20. During the recently implemented BPR project, there was frequency of official forums for communication ie Forums used in your company for IT-Business communication e.g business strategy meetings, IT strategy meetings, board meetings, special meeting and discussion forums etc.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on your answer

.....

Appendix A

21. During the recently implemented BPR project, the communication between the business and IT was a one-way process.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please elaborate on your answer and the impact that sort of communication had on the overall BPR project and the organisation.

.....

.....

22. During the recently implemented BPR project, the communication between the business and IT was formal.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please elaborate on your answer and the impact that sort of communication had on the overall BPR project and the organisation.

.....

.....

Shared Domain Knowledge

IT's business knowledge

23. During the recently implemented BPR project did IT managers have business knowledge of the organisation to use IT as a strategic instrument and communicate it to the business managers?

Appendix A

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on the impact the answer you provided had on the overall BPR project and the organisation.

.....

.....

During the recently implemented BPR project measures were taken to increase business knowledge amongst IT managers.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on the impact the answer you provided had on the overall BPR project and the organisation.

.....

.....

Business's IT knowledge.

24. During the recently implemented BPR project, measures were taken to increase IT knowledge amongst business managers.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on the impact the answer you provided had on the overall BPR project and the organisation.

.....

Appendix A

IT Projects and Planning

Linkage

25. IT plans adequately reflected the mission, goals and strategies of the business in the recently implemented BPR project.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on your answer.

.....
.....

Prioritisation

26. During the recently implemented BPR project your organisation applied prioritisation criteria to incorporate technologies in a timely manner.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on your answer.

.....
.....

Appendix A

IT Performance

Innovation

27. Your IT staff had ideas on how to use IT for the organisation in the recently implemented BPR project.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

Please comment on your answer.

.....

.....

Opportunities

28. Your company provides opportunities for IT staff to move over to business related positions.

Strongly Disagree	Disagree	Indefinite	Agree	Strongly Agree

And in the context of the recently implemented BPR would you say this is somehow beneficial?

Please comment on your answer.

.....

.....

Appendix B



23 August 2016

Ms Relebohile Mathipa Shano (212559943)
School of Management, IT & Governance
Pietermaritzburg Campus

Dear Ms Shano,

Protocol reference number: HSS/0381/016M

Project title: IT-Business Strategic Alignment in the context of Business Process Reengineering: Case studies of Large Organisations in Lesotho

Full Approval – Expedited Application

With regards to your response received on 10 August 2016 to our letter of 27 May 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.

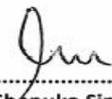
Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully



.....
Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Indira Padayachee
Cc Academic Leader Research: Professor Brian McArthur
Cc School Administrator: Ms Debbie Cunynghame

Humanities & Social Sciences Research Ethics Committee

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