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Business processes alignment for an effective e-government implementation: A case study of a Provincial Government in South Africa

A thesis submitted in fulfilment of the requirements for the
Master's degree in Information Management In the
Faculty of Economic and Management Sciences
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by

Thabani W. Kunene

Supervisor: Dr Zoran Mitrovic

Co-supervisor: Dr James Njenga

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ABSTRACT

The purpose of the research case study was to assess the current state of alignment of business processes to Provincial Strategic Goals (PSGs) and services in the Provincial Government and to identify the way to align business processes to PSGs and services for an effective e-government implementation. Existing literatures were reviewed in order to identify relevant models to achieve the purpose of the research case study. An empirical research case study and comparative approach were used in order to identify suitable models, by means of strengths and weaknesses of the identified models and discussed. A qualitative research design and methodology was applied while assessing existing models from various literatures. A model to identify the current state of business processes was identified by the researcher and tested to assess the current state of business processes in the Provincial Government in question.

There was no existing model to assess the alignment of business processes to Provincial Strategic Goals and services. Alignment elements that were cited by various literatures were used by the researcher to design and propose a Business Process Alignment Model (BPAM). The BPAM was tested and accepted by the Provincial Government where the study was conducted. The research case study predominantly used a qualitative research design and method. The quantitative illustrative approach was applied only to validate the proposed model that was designed by the researcher. A questionnaire was used to conduct interviews with research participants that were selected within the Provincial Government in question. It should further be noted that a quantitative approach was used to illustrate some findings that were analysed by the researcher.

Results confirmed that the current state of business processes within the Provincial Government in question was still at level two (repeatable state). Yet the alignment of business processes to Provincial Strategic Goals and services did not exist; this alignment was assessed using the proposed BPAM which was designed by the researcher during this research case study.

The effectiveness of e-government services is dependent on proper alignment of business processes and the maturity level of business processes across the organisation. Without proper alignment of business processes, it is a challenge for the public sector organisations to realise effective e-government implementation, not excluding other factors that have been identified by other literatures.

This research case study will contribute to the current body of knowledge regarding effective e-government implementation, particularly in the public sector at Provincial level. Public sector organisations in South Africa could leverage on this work to address issues associated with business process alignment.



KEYWORDS

e-Government; Business Process Alignment; e-services; Provincial Strategic Goals (PSGs); Implementation; Effectiveness; Business Objectives; Citizen-centric services; Support Process; Core Business Processes; Chief Directorates; Directorates; Departments; Provincial Government; Business Process Alignment Model (BPAM)



DECLARATION

I declare that this study with the title “**Business processes alignment for an effective e-government implementation: A case study of a Provincial Government in South Africa**” is my own work, that it has not been submitted before for any degree or examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Thabani W. Kunene

Date



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Firstly, I would like to express my sincere gratitude to my supervisor, Dr Mitrovic, for the effective and continuous support during my MCOM study and related research and for his patience, motivation and immense knowledge. His guidance helped me during the period of research and the writing of this thesis. I could not have imagined having a better supervisor and mentor for my MCOM study.

Secondly, I would like thank the Provincial Government management for providing me with an opportunity to conduct my research case study within their environment. Without their support and approval, this research would have had not been a success.



Examiners issues and responses

Examiner	Examiner's issue	Researcher's response or action
Dr Shawulu Nggada	H. You referred to yourself as the "researcher," in some places especially chapter 4 you used another terminology "author," select one of them and be consistent.	Change effected and the name "researcher" was used throughout the document.
Dr A. Budree	Needs a final edit for grammar and syntax errors e.g. pg. ii "existing literatures was...". The errors detract from the research at hand.	Final editing for grammar and syntax errors was applied.
Dr A. Budree	Unnecessary coverage of general research theory. Rather highlight key points and go in depth on those parts that are very specific to the research.	The Supervisor of the researcher recommended the importance of knowing various research methods at a Masters level. This knowledge of different theories was needed to be demonstrated by the researcher. The researcher took an approach to summaries all those research methods that are not applicable to the research at a high level. Furthermore; the researcher unpacked research method theories that were applicable to this research. The evidence of this is shown on page 44-47 pertaining rational of choosing research methods chosen by the researcher.
Dr A. Budree	Maybe diagrammatically depicts some of the findings (e.g. pg. 64 (...most of participants...equivalent to sixty two percent...") as this is easier for the reader to digest.	Some of the findings were depicted as a diagram by the researcher. All results associated with BPAM model were illustrated as diagram for readability and explained as tests. Only finds for research questions 1 & 2 that were challenging to be depicted as diagram. Hence it was in depth opinions for research participants.
Dr A. Budree	References are too old, latest cited was 2013.	The nature of this research is rare and it is challenging to obtain latest literatures that are applicable to the research at hand.

Table of Contents

ABSTRACT	ii
KEYWORDS	i
DECLARATION.....	ii
ACKNOWLEDGEMENTS	iii
1 CHAPTER ONE: INTRODUCTION.....	5
1.1 Background of the research problem	5
1.2 Definitions of business process.....	7
1.3 Statement of the research problem.....	7
1.4 Research question	8
1.5 Research sub-questions	8
1.6 Research objectives.....	9
1.7 Research design and methodology	9
1.8 Data collection techniques	10
1.9 Data analysis approach.....	10
1.10 Delimitation of study area.....	11
1.11 Ethics statement.....	11
1.12 Contribution of the research.....	11
1.13 Chapter outline	12
2 CHAPTER TWO: LITERATURE REVIEW	13
2.1 Salient issues in aligning business processes to the government’s Provincial Strategic Goals (PSGs)	13
2.1.1 Challenges associated with e-Government implementation: Business Processes Perspective.....	14
2.1.2 Approaches to identify the current state of business processes in the Public Sector ..	16
2.1.3 Models to align business processes in the public sector for effective e-government implementation	20
2.2 “Best practices” of aligning business processes to government objectives and services. ...	20
2.3 Discussion of current business-IT alignment models	24
2.4 Deriving a conceptual model for the alignment of business processes to Provincial strategic objectives and services	29
2.4.1 BP Diagnosis model.....	29
2.4.2 Proposed BP Alignment Model (BPAM).....	34
2.5 Literature review summary.....	36
3 CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY.....	38
3.1 Introduction.....	38
3.2 Research design	38
3.3 Research methods	40

3.3.1	Research paradigms or philosophies.....	40
3.4	Research inquiry strategies.....	41
3.5	Rationale for selecting the Case Study Methodology	43
3.5.1	Rationale for using a qualitative methodology	45
3.5.2	Research techniques	47
3.5.3	Data collection process	47
3.6	Summary of Chapter three.....	56
4	CHAPTER FOUR: RESULTS, PRESENTATION AND FINDINGS	57
4.1	Salient issues in aligning business processes to government’s strategic objectives	57
4.2	Best practices of aligning business processes to PSGs and services.....	62
4.3	The current state of alignment of business processes in a researched Provincial Government	62
4.4	Aligning business processes to PSGs and services in a Provincial Government for effective e-government implementation	64
4.5	Application of the BPAM	69
4.6	Definition of key terms used in proposed the Business Process Diagnosis Model	72
4.7	Summary of Chapter four.....	76
5	CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS.....	78
5.1	Objectives revisited	78
5.1.1	Background	78
5.2	Reaching the first research sub-objective.....	79
5.3	Reaching the second research sub-objective	81
5.4	Reaching the third research sub-objective.....	82
5.5	Contribution of this study.....	83
5.5.1	Practical.....	83
5.5.2	Academic.....	83
5.6	Limitations of this study.....	83
5.7	Recommendations for further research	83
5.8	Final concluding remarks	84
	REFERENCES.....	86
6	APPENDIX 1: INTERVIEW TRANSCRIPTS	93
6.1	P2: Interview Part one	93
6.2	P2: Interview Part two	95
6.3	P3: Interview part one	98
6.4	Interview Part two.....	101
6.5	P4: Interview part one	103
6.6	Interview Part one	103
6.7	Interview Part two.....	105
6.8	P5: Interview part one	106

6.9	Interview Part two.....	108
6.10	P6: Interview part one	110
6.11	Interview Part one	111
6.12	113
6.13	Interview Part two.....	113
7	APPENDIX 2: Business process diagnosis model.....	116



1 CHAPTER ONE: INTRODUCTION

1.1 Background of the research problem

Horner et al. (1996); Luftman (2000) and Luftman (2003) reported many years ago that the linkage of Information System (IS) plans with organisational objectives was among the top problems reported by IS managers and business executives and this had led organisations to introduce some changes. Hazlett & Hill (2003); Ibrahim (2011); Janssen & Veenstra (2005); Janssen & Wagenaar (2003); Nsights et al. (2013) and Luftman & Brier (1999) argue that the environment where organisations operate is dynamic, as organisations are subject to rapid changes that are driven by the introduction of new technologies and modernisation (Adesola & Baines, 2005; Conference et al., 2009). It is argued that these changes have a significant impact on business processes (Adesola & Baines, 2005; Amit & Zott, 2001). Dayal et al. (2001:2) wrote as follows: *“an execution of a business process consists of invoking existing business services...”*. Hence, if the alignment of business processes do not exist, such invoking of existing business services would be difficult to achieve (Dayal et al. (2001). This is applicable to all types of organisations, including governments.

When governments try to improve the effectiveness and efficiency of their services, they are increasingly deploying information and communication technology (ICT) to support their operations through the notion of electronic government or e-government, an initiative that proves to be useful in realising effectiveness and efficiencies (Affisco and Soliman, 2006; il-García & Pardo, 2005). However, the introduction of e-government has got an impact on organisational business processes, as often the public sector organisations need to redesign, realign and evaluate their existing business processes (Adesola and Baines, 2005; Affisco & Soliman, 2006; Davenport & Short, 1990).

The adoption of the concept of e-government by public institutions has an impact on organisational structures, business processes and people (Affisco & Soliman, 2006; Miles et al., 1978). In that regard, the main objective of introducing e-government initiatives is to enable organisational business processes and services, which could

be achieved only if the organisational information systems are tailored to support business processes (Paul & Serrano, 2003).

Davison et al. (2003) and Warkentin et al. (2002) stated that as citizens have the right to access services rendered by government institutions and it is mandatory for public institutions to deliver those services, it is imperative that government institutions try new innovative ways to speed up service delivery through the use of ICTs. Hazlett & Hill (2003:2) claimed that one of the main aims for e-government implementation is “...making sure that public service users, not service providers, are the focus, by matching services more closely to the people's lives.”

Affisco & Soliman (2006); Hazlett & Hill (2003) and Pudjianto (2010) state that public institutions have tried to put more effort to improve the effectiveness and efficiency of government services by means of the approach adopted by public institutions known as e-government, in order to perform this duty. Alateyah et al. (2012) also states that public institutions need to be aware that e-government implementation should not be treated in isolation, as if dealing with the implementation of technologies only – other key aspects such as business processes, organisational structures and organisational change should likewise be taken into consideration when implementing e-government initiatives.

Dubey & Bansal (2012) and Fernández-i-Marín (2011) supported the above claim by stating that one of the challenges associated with the adoption of e-government implementation is related to business processes, which means that an organisation would need to redesign or realign its business processes. Business processes change is vital in order to introduce citizen-centric e-services (Indihar Stemberger & Jaklic, 2007). Although it is clear what e-government initiatives could offer to public institutions, the most challenging part is to align e-government initiatives to business objectives (Koh et al., 2006). This concurs with the view of Thomas & Sommer (2002) that if organisational systems are not aligned to business processes, it means the organisation will not be able to meet client needs, because the systems are the interface between the organisation and the service beneficiaries, who are the citizens in this context.

1.2 Definitions of business process

It is imperative to understand the meaning of this term more specifically, as it is predominantly used throughout this research case study. Earl (1994) defines a business process as *“a lateral or horizon form, which encapsulates the interdependence of tasks, roles, people, departments and functions required to provide a customer with a product or service.”* While Davenport & Short (1990) define business process as *“a set of logically related tasks performed to achieve a defined business outcome”*, (Fondas, 1993) defines a process as *“an ordering of work activities across time and place, with the beginning, an end, and clearly identified inputs and outputs.”*

Emanating from the above definitions, in particular that of (Davenport & Short, 1990), it is significant for the organisation or the process management team to understand this relatedness of tasks and functions associated with a particular business process. This could be possible to achieve if the alignment or business process architectures of the organisation do exist. And this alignment could be realised through the application of the definition of Earl (1994) for business processes.

1.3 Statement of the research problem

Currently it is challenging to identify academic literature on a holistic view of business process alignment to strategic goals and services in the public sector, in South Africa – either at national or provincial level. Stemming from the above statements and due to recent research studies conducted in the public sector regarding the business processes alignment in one of the Provincial Governments in South Africa, the aim of this study is to obtain an in-depth understanding of how to align business processes to the Provincial Strategic Goals (PSGs) in order to support an effective e-government implementation.

One of the key objectives of a Provincial e-government strategy is to transform provincial government services for the benefit of citizens and businesses in the Province in which the empirical research was conducted¹. However, to introduce ICT-based services, here named as “e-services”, business processes need to be

¹ In the following text the terms Province and Provincial Government refer to the empirical setting of this study.

aligned to the Provincial Strategic Goals and services. The e-government implementation team of the Provincial Government has indicated that without business processes alignment to PSGs as well as departmental objectives and services, the deployment of e-government in the Province will be neither efficient nor effective. At present, it is not known what the state of the alignment of business processes to PSGs and services is, because the researcher found that the employees of the Provincial Government in question were not aware of such matters. If no knowledge is available regarding the issues of the alignment of business processes and PSGs, the implementation of the further stages² of e-government initiatives in the Province may be impeded.

1.4 Research question

In accordance with the identified research problem, the following main research question was established:

What is the current state of the alignment of business processes to PSGs and services in the Provincial Government and what would be a suitable way to align these processes for effective e-government implementation?

1.5 Research sub-questions

- What are salient issues in aligning business processes to the Government's strategic objectives?
- What is the current state of alignment of business processes in a Provincial Government?
- What are "best practices" of aligning business processes to PSGs and services?
- How should business processes be aligned to PSGs and services in a Provincial Government for effective e-government implementation?

² These stages are explained in more details in section 2.1.2, Approaches to identify the current state of business processes in the Public Sector

1.6 Research objectives

The empirical setting of this research will be:

- To assess the current state of alignment of business processes in a Provincial Government.
- To identify the way to align the governmental business processes to the Provincial Strategic Goals (PSGs) and services for an effective e-government implementation.
- To propose a model for alignment of the governmental business processes to the Provincial Strategic Goals (PSGs) and services.

1.7 Research design and methodology

Eisenhardt (1989) claimed that if there was a lack of existing theories for the particular area of research, case studies should be conducted in order to obtain an in-depth understanding of the research area. Mouton (2012) supported this view by saying that it was imperative for researchers to use research case studies when conducting research in big organisations, regions or a country. Broadbent et al. (1998) found that most case studies researches are conducted by using a qualitative research method and may include quantitative data for the purposes of illustrating results. Emanating from the statements of Mouton (2012) and Eisenhardt (1989), the proposed research study will be conducted by using the research case study methodology.

One of the reasons for conducting this research in the form of a case study, was due to inadequate of theories could address the stated problem. Furthermore, the fact that the Provincial Government in question is a big public organisation, a case study research was suitable for this research. A case study is suitable for conducting research in the big organisation (Mouton, 2012). A qualitative approach was used in order to produce a detailed description of the researched phenomenon and a quantitative approach was used to validate a model that was designed and proposed by the researcher. This approach concurred with the opinion of Broadbent et al. (1998) and Riege (2003) who found that qualitative research case study is usually applied when there are no adequate theories to be referenced by the researcher.

1.8 Data collection techniques

Eisenhardt (1989) and Broadbent et. al (1998) suggested that research case study method should collect data using archives, qualitative interviews, questionnaires and observations. In that regard, the Provincial Government's primary data (e.g. strategic plans or operational plans, policies) was used in this research case study. It was vital to use the existing information to make an assessment of the alignment of business processes to PSGs, objectives and services. The information was verified by the key stakeholders to ensure that information gathered through strategic documentation was relevant or reliable for the analysis by the researcher. The main key stakeholders were the Process Design and Improvement Directorate and the Centralised ICT unit that renders ICT services across the Provincial Government in question.

The relevance of choosing the two stakeholders was due to the centralisation of the ICT services and Business Process Management directorate under the Department of the Premier. Process Design and Improvement (PDI) was mandated to provide business process management services to other departments within the Provincial Government. It was imperative to conduct interviews in this directorate regarding business process alignment to PSGs, objectives and services, as well as data related to the current state of business processes in the Provincial Government. A sample of 20 participants was selected to participate in this research case study. One-on-one interviews were conducted in order to collect data for further analysis by the researcher, starting from Deputy Director to the Chief Director level pertaining to management and the knowledge of the subject area in question.

1.9 Data analysis approach

Broadbent et. al. (1998) claimed that when dealing with philosophical perspectives; data analysis for qualitative research case study, methods such as a positivist and interpretivist approach must be used when analysing data for research case studies. In this research case study, a similar approach was adopted during data analysis, particularly an interpretivist approach, since mostly primary data was gathered by means of interviews.

1.10 Delimitation of study area

This research was limited to one Provincial Government in South Africa. The main business areas that were targeted were the centralised ICT branch and the centralised Process Design and Improvement (PDI) directorate, where interviews were conducted to gather information. This approach inevitably limited generalisation of the findings of the research case study. However, this limitation did not influence the validity of the research case study.

1.11 Ethics statement

The research case study abided by the following principles:

- Ensure quality and integrity of the research;
- Seek informed consent from the research participants;
- Respect the confidentiality and anonymity of research participants and the organisation where the research is conducted;
- Ensure that participants participate voluntarily in the research study; and
- Avoid harm to participants;
- Show that research is independent and impartial; and
- The ethics clearance will be obtained from the relevant committees at the University.

1.12 Contribution of the research

This research case study added value to the existing body of knowledge in the research area of e-government by bringing a more in-depth understanding of the business processes alignment for effective e-government implementation at the Provincial level. This can enable the Provincial Government's e-government team to effectively implement e-government initiatives. Theoretically, this study provided a foundation for further exploration of the role of business process alignment in the context of better delivery of the electronically enabled services.

1.13 Chapter outline

The overall description for each chapter is explained in Table 1 below.

Table 1: Descriptions of each chapter

No.	Chapter	Description
1.	Introduction (Research Proposal)	This chapter outlines the empirical research aims and objectives of the research case study that was conducted. Furthermore, the chapter explains why the research was conducted, by stating the background and research problem that need to be addressed by the researcher.
2.	Literature Review	This chapter outlines the literature findings associated with the research problem and research objectives. This chapter also outlines literature findings and issues related to business processes, alignment of business processes and current models to assess the current state of business processes. The proposed BPAM that was derived from the literature reviewed by the researcher.
3.	Research Design and Methodology	This chapter outlines the research paradigms, design, methods and techniques that were used to gather, code, analyse, interpret and present findings associated with the current state of business processes; the alignment of business processes to PSGs and services and the impact of implementing e-government initiatives based on the current state of business processes.
4.	Results: Presentation and Discussions	This chapter explains the overall results of the research case study, i.e. that there was no alignment of business processes to PSGs and services in the Provincial Government in question. The research findings also confirmed that the current state of business process maturity was still at level 2 (repeatable). The proposed BPAM was tested and its alignment elements were confirmed by the research participants. Furthermore; the effectiveness of the BPAM was confirmed by the research participants.
5.	Conclusion and Recommendations	This chapter explains objectives revisited, the contribution of the research, limitations, recommendations and final concluding remarks pertaining to the research case study conducted by the researcher within the Provincial Government in question.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 Salient issues in aligning business processes to the government's Provincial Strategic Goals (PSGs)

Neubauer (2009) stated that business requirements change over time and so do business processes. Organisations need to assess and align their business processes in order to stay relevant within the dynamic environment. Al-Omari-H, (2006) and Al-Omari (2006) claim that identification of existing processes, either documented or ad hoc processes, would be a key when aligning business processes in the public sector. Affisco & Soliman (2006); Christensen & Overdorf (2000) and Al-Omari-H (2006) are of the opinion that in business processes re-design, the organisational culture, roles and responsibilities, organisational structure and governance processes could be some of the challenges that need to be considered when aligning business processes within the organisation.

Al-Omari (2006) maintained that redundancy of business processes that were being managed manually would be a challenge when aligning business processes to governmental strategic objectives. Ebrahim & Irani (2005) stated that business process integration across all spheres of the organisation was vital. This integration could only be achieved if all business processes were documented, managed, automated and aligned to governmental services and business strategies. This concurs with the stance of Gordijn et al. (2003) that business processes should be supported by business applications, since business applications enables effectiveness and efficiencies of business services.

Stemberger & Jaklic (2007:1) stated that *"e-Government is becoming extremely important, however, it cannot be successfully implemented without changes in business processes that are performed inside governmental institutions."* Scholl & Klischewski (2007) made the statement that the main purpose of e-government was to provide agility, citizen-centric, effective and efficient services. Stemberger & Jaklic (2007:1) defined e-government as *"technology, particularly the Internet, which is used to enhance the access to and delivery of governmental information and services to citizens, businesses, government employees, and other agencies"*, while

Scholl & Klischewski (2007) defined e-government as the seamless integration of governmental services supported by systems.

However, to achieve this seamless integration of e-services, it would be necessary to redesign business processes and align them to citizens' needs, which are services (Scholl & Klischewski, 2007). Ulrica (2005) and Gordijn et al. (2003) cautioned that if organisational business processes were not aligned to the services that they were enabling, e-services or information systems would not add value to business operations and service beneficiaries. Al-Shafi & Weerakkody (2010) concurred with Stemberger & Jaklic (2007:1) by claiming that effectiveness of an e-government initiatives relied on the service design; e-government services should be designed in such a way that they enable citizen-centric e-services and thus address citizens' needs. This was in agreement with what Pudjianto (2010) stated, i.e. that research had shown that approximately 60% of e-government initiatives failed due to the lack of proper alignment of business processes and service design to citizens' needs.

2.1.1 Challenges associated with e-Government implementation: Business Processes Perspective

Janssen & Wagenaar (2003) said that government institutions were failing to provide citizen-centric electronic services (via e-Government initiatives) due to lack of proper alignment of business processes, and Dada (2006) added that one of the challenges concomitant with the adoption of e-government implementation entailed business processes, whereby an organisation would need to redesign or realign its business processes. Ebrahim & Irani (2005) and Dayal, et al. (2001) made it clear that one of the classifications of e-government barriers was the complexity, coordination and the nature of the alignment of the business processes in the public sector. This coincides with the six key factors used by Al-Omari (2006) to determine organisational readiness in order to overcome barriers associated with implementation of e-services initiatives; of which one was organisational readiness, including business processes re-evaluation or redesign as cited by Yousafzai et al. (2005); Majed et al.(1999); Bruin and Rosemann (2005); Al-Shafi and Weerakkody (2009).

Even though it is clearly understood what e-government initiatives can offer to public institutions, the most challenging task is to align e-government initiatives to business objectives and processes. Koh et al. (2006); Thomas & Sommer (2002); Venkatraman (1994); Goeken et al. (2009) are of the opinion that if organisational systems are not aligned to business processes, it means the organisation will not be able to meet client needs, as the systems are the interface between the organisation and its clients. Stemberger & Jaklic (2007) and Nsights (2013) stated that business processes change was fundamental in order to introduce citizen-centric e-services. Affisco & Soliman (2006), Dayal, et al. (2001) and Neo (1997) found that one of the challenges associated with e-government implementation was business process re-engineering and realignment.

Review of the pertinent literature, as shown above, asserted that ICT adoption was a necessity to enable governments to effectively deliver services in this area dominated by information and communication technologies (ICTs). However, business processes need to be assessed for appropriateness and, if necessary, be changed or re-engineered for successful e-government implementation as stated by Gupta & Jana, 2003; Neubauer, 2009; Goeken et al. (2009); and Ulrica (2005). Furthermore, business processes automation is vital in order to render citizen-centric e-services (Davison et al., 2003). Yet, in order to achieve effective business process, Neo (1997) claimed that during re-engineering and automation, organisations would need to apply certain principles such as:

- (i) organising work around outcomes;
- (ii) eliminating non-value adding activities;
- (iii) decentralisation of power to employees; and
- (iv) promoting simultaneous work amongst cross-functional teams.

On the other hand, government institutions need to be very careful when implementing information systems that are not flexible, as this could result in the inability of the organisation to customise business processes that are packaged on the system (Janssen & Wagenaar, 2003) – and, in that sense, it will jeopardise successful implementation of e-government initiatives.

In summary, it can be stated that the main challenges for business processes in the ICT-supported government environment as cited by various researchers mentioned in section 2.1.1, can be set out as follows:

Table 2: Business process challenges in a public organisation (Source: Researcher)

Business processes challenge	Reference
Business process redesign and realignment	Becker et al.(2007); Dubey & Bansal (2012); Al-Omari (2006); Dada (2006); Janssen & Wagenaar (2003); Davenport & Short 1990)
Complexity and misalignment of business processes in the public sector	Ebrahim & Irani (2005) & Miles et al. (1978); Van Der Aalst (1998)
Align e-government initiatives to business objectives and processes	Koh et al. (2006); Segars et al. (1998)
Business processes change	Brewer (2006); Indihar Stemberger & Jaklic (2007); Koh et al. (2006); Ndou (2004); Srivastava et al. (1999); Ulrica (2005)
Business process re-engineering and realignment	Affisco & Soliman (2006), Al-Omari (2006); Becker et al. (2007) and Neo (1997)
Business processes automation	Neo (1997), Dayal et al. (2001) and Al-Omari (2006)
Business process coordination for inter-organisational processes	Dayal et al. (2001); Wan & Liang (2012)
Organisational architecture processes	Alateyah et al. (2012); Hazlett & Hill (2003); Paul & Kraemer (1999)
Duplication of business processes and procedures	Al-Omari (2006)
Understanding business processes and business systems	Hazlett & Hill (2003)

2.1.2 Approaches to identify the current state of business processes in the Public Sector

Paulk et al. (1993) developed the Capability Maturity Model (CMM) for software development and this approach was adopted by many industries. This model has been extended beyond its intended purpose for the software development processes. Hence, a number of researchers claimed that the Software Engineering Institute's CMM was the worldwide approach used to assess the current state of

business processes in various industries (Luftman, 2000); Davenport, 2005); Rosemann & Bruin, 2005). The same applies to the public sector organisations – the CMM is used in governments for process management (Luftman, 2000; Davenport, 2005). This evolutionary model has five maturity levels, including:

- (i) initial,
- (ii) repeatable,
- (iii) defined,
- (iv) managed and,
- (v) optimised stage.

The literature reviewed reveals theories that were derived from the original CMM – the theory of Rosemann and Bruin (2005) is one example. This theory extends CMM by introducing two levels of maturity: low and high. Dubey & Bansal (2012) define BPR as follows: *“Reengineering is the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed.”* Eluding from Dubey & Bansal (2012) BPR, this concurred with the argument of Rosemann and Bruin (2005) that BPM was not similar to BPR. Conversely, BPM considered the alignment of strategic objectives to processes, people and organisational change (Rosemann and Bruin, 2005).

The theory of Thomas & Sommer (2002) purported that business processes management in the public sector was different from the Capability Maturity Model. The theory of Thomas & Sommer (2002) defined the approach to identify current state of business processes in an organisation as follows:

- Documenting business processes with an understanding of how work flows throughout the process;
- Assignment of process ownership in order to establish managerial accountability;
- Managing the process to optimise some measures of process performance;
- Improving the process in order to enhance product quality or measures of process performance.

Zairi and Sinclair (1995) concurred with the model of Thomas & Sommer (2002) by further extending this model of Thomas & Sommer (2002) to include the following attributes: (i) core processes defined and documented, (ii) customer requirements identified, (iv) feedback loops and reporting defined in the process and (v) integration of processes across departments identified.

Al-Omari (2006) developed questions to be used when conducting business process maturity. Business process assessment questions need to include the following: (i) process automation, (ii) process electronic delivery and (iii) average times for services being rendered. An almost similar model was developed by Rosemann and Bruin (2005). The maturity level was, however, replaced by perspective as depicted above.

The main goal for a CMM model is to assess the maturity of the software processes, software evaluation and software process improvement (Paulk et al., 1993). This evolution model provides a guideline for how an organisation can assess and improve its maturity level regarding the maturity of its systems and processes. Paulk et al. (1993) explains all maturity assessment levels as follows: i. initial; ii. Repeatable; iii. Defined; iv. Managed; v. Optimised, providing more details on how to move from one maturity stage to the next and what were the most basic elements an organisation needed to implement. AlAwadhi & Morris (2009) and Ebrahim & Irani (2005) concluded that the success of e-government implementation depended on the maturity of organisational business processes.

If the organisation does not have matured business processes, meaning that business processes are not at level 5 (optimised), it would be very challenging to achieve successful implementation of an e-government initiative (Davenport, 2005). AlAwadhi & Morris (2009) as well as Ebrahim & Irani (2005) caution that the CMM was developed to assess current software process maturity. According to Paulk & Curtis (1993) it has been widely accepted and used across all industries, not only software development industries. Rosemann and Bruin (2005:3) theory differ with Zairi & Sinclair (1995). Thomas & Sommer (2002) theorised and argued that "One shortcoming of the current maturity models has been the simplifying focus on only one dimension for measuring BPM maturity..." Emanating from the above argument,

Rosemann and Bruin (2005:3) proposed a new BPM Maturity Model to assess the maturity of business processes in an organisation, not only software processes; the proposed BPM Maturity model extended the CMM developed by Paulk et al. (1993). Ideally Rosemann and Bruin (2005:3) added other areas that needed to be assessed. The argument of Rosemann and Bruin (2005:3) was that the success of business processes maturity in the organisation does have other dependencies (scope and factors) that need to be assessed during maturity assessment of business processes.

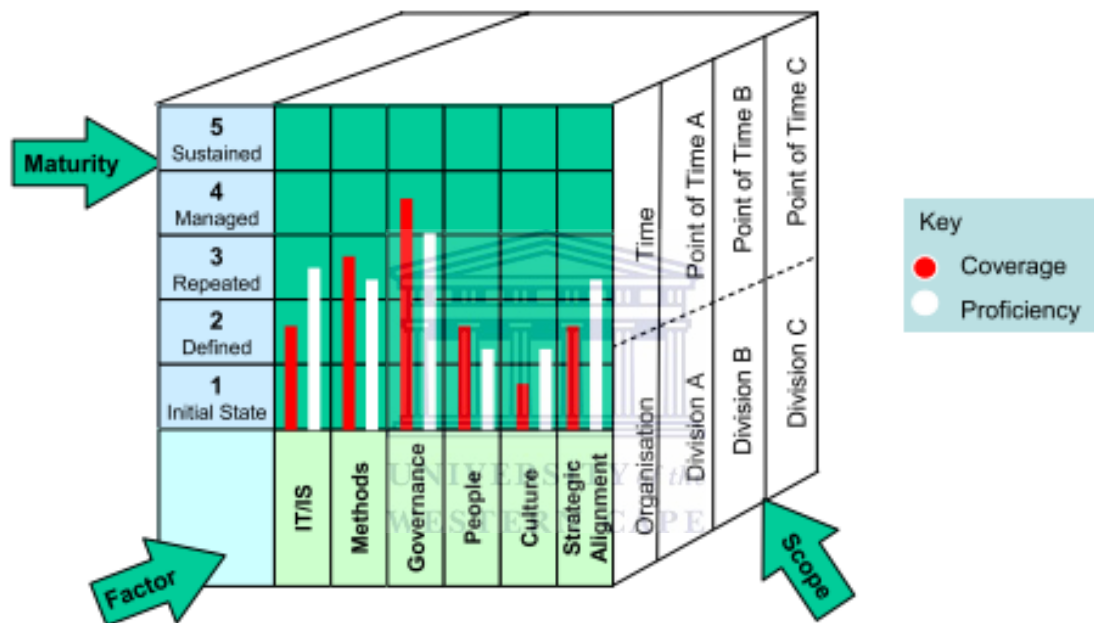


Figure 1: BPM Maturity Model (Source: Rosemann & Bruin, 2005)

The premise of the model depicted in Figure 1 above stems from the argument of Rosemann and Bruin (2005) regarding the current BPM maturity models. The current BPM maturity levels focus on one dimension, i.e. the process of maturity. However, other areas that impact on the process maturity are not taken into consideration, such as people, culture, information technology or information systems. Rosemann and Bruin (2005) extended the model of Paulk et al. (1993) and proposed a BPM Maturity Model that has three focus areas: (i) maturity, (ii) scope and (iii) factor (Figure 1) and this proposed model is the extension of Paulk et al. (1993).

2.1.3 Models to align business processes in the public sector for effective e-government implementation

Luftman (2000) as well as Venkatraman and Henderson (1999) maintain that alignment can be achieved whereby business function and IT function are integrated with each other in order to achieve the common goals and objectives of the organisation. Luftman et al. (1999) identified twelve alignment areas to achieve this integration, one of these areas being processes (both business and IT processes). Strong buy-in and support from the top management is imperative in order to achieve effective alignment in the organisation (Luftman, 2000; Venkatraman & Henderson, 1999). This corresponds with the models of Ebrahim and Irani (2005) and those of Venkatraman and Henderson (1999) in which they claimed that effective alignment can be realised when IT infrastructure is fully aligned to the business processes of the organisation.

The model of Luftman (2000) defines alignment elements such as six strategic alignment assessment criteria and a strategic maturity assessment description, as well as how to conduct a strategic maturity assessment. Nevertheless, the aforementioned theories do not depict how the alignment of business processes to services and strategic objectives could be achieved. This Concurred with the argument of Davison et al. (2005) and (Aalst, 2005) that if alignment of business processes to services does not exist, integrated services delivery across departments to citizens would be difficult to be attained. However, Sabherwal & Chan (2001) argued that there were three strategies that needed to be taken into consideration when doing alignment in the organisation. These strategies that should be derived from the business strategy are as follows:

- i. IT strategy;
- ii. Business strategy; and
- iii. Information Management (IS) strategy.

2.2 “Best practices” of aligning business processes to government objectives and services.

Rosemann & Bruin (2005) developed and proposed BPM Maturity (BPMM) to assess

maturity of business processes in the organisation and this model was tested in the Provincial Government in question. The main purpose of testing the BPMM was to access the current state of business processes in the Provincial Government. The theory of Rosemann and Bruin (2005) does indeed address almost all challenges stated in the problem statement of the research case study. One of the reasons for using a BPMM model was due to its evolution, since it was based on the CMM and CMM is used worldwide, developed by Paulk et al., 1993. Table 3 below depicts some of the current models to assess the maturity of processes in the private and public institutions.

Table three below depicts some of the best practices mostly cited regarding the alignment of business processes.

Table 3: Models to assess the current state of Business Processes (Source: Researcher)

Researcher/s	Model	Business processes literature	Findings
1. Davenport (2005) Paulk et al. (1993)	CMM developed by SEI	The Coming Commoditization of Processes.	<p>Business process standardisation and integration is the key for effective communication and re-usability across the organisation's line of businesses and departments.</p> <p>Promote better hand-offs, consistent and improved performance benchmarking.</p> <p>Standardisation enables easier outsourcing of business processes/capabilities.</p> <p>Business process classification and performance benchmarking are vital.</p> <p>It uses a worldwide capability maturity level that was developed by Paulk et al. (1993)</p>

Researcher/s	Model	Business processes literature	Findings	
2.	Luftman (2000 & 2003)	CMM developed by SEI	Assessing Business-IT Alignment Maturity	An approach for assessing the maturity of the organisational business-IT alignment.
				Provides five levels of strategic alignment Maturity: Business Strategy, Organisation Structure and Processes, IT Strategy and Infrastructure and Processes.
3.	Rosemann & Bruin (2005) Paulk et al. (1993)	Proposed BPM Maturity Model (Includes CMM)	Towards a Business Process Maturity Model	It provides a comparison of low and high maturity, based on five maturity levels originated from Paulk et al. (1993)
				Proposed extended Business Process Management Model (BPMM) and the proposed model is an extension of CMM developed by Paulk et al. (1993).
				Bruin and Rosemann (2005:5) claimed that BPMMs " <i>provide an insight into how process performance can actually be improved rather than measured</i> "
4.	Paulk (1993)	CMM developed by SEI	Capability Maturity Model for Software, version 1.1	Used worldwide and cited by many researchers.
				Does not cater for innovation (Rosemann and Bruin, 2005)
				Provides the evolution of process maturity assessment and evaluation framework.
5.	Sommer et al. (2002)	The process management approach	Business process management: public sector implications.	This theory does provide a process management approach.
				Highlight the benefits of business process management in the public sector.



Researcher/s	Model	Business processes literature	Findings
			Importance of cross functional system integration and alignment of systems to adding value to business processes.
6.	Zairi and Sinclair (1995)	BPR and Process management approach	<p>Business process re-engineering and process management: A survey of current practice and future trends in integrated management</p> <p>Provide tools and techniques for Business Process Re-engineering (BPR).</p> <p>BPR: its main objective is continuous improvement of business process.</p>
7.	Paulk (2009)	CMM developed by SEI	<p>A History of the Capability Maturity Model for Software</p> <p>Offers detailed definitions of stages for process maturity assessment framework.</p> <p>Explains preceding elements required in order to move from one stage level to another level.</p>

Segars et al. (1998); Reich & Benbasat (2000) successful e-government implementation projects depend on proper alignment of business processes to organisational business strategy and services. This concurs to Reich & Benbasat (2000) proper alignment of organisational information systems and services with business strategy is the pre-requisite for effective and quality of e-services implementation. Table 4 below also shows some of the existing business-IT alignment models that are widely cited by many researchers pertaining alignment.

Table 4: Business-IT Alignment Models (Source: Researcher)

	Researcher/s	Model	Theory
1.	Luftman, Jerry (2000)	Maturity Assessment Approach	Assessing Business-IT Alignment Maturity
2.	Luftman et al. (1999)	Research Theory	Enablers and Inhibitors of Business-IT Alignment.
3.	Ibrahim and Iran (2005)	Framework	E-government adoption: architecture and barriers
4.	Venkatraman and Henderson (1999)	Conceptual Model	Strategic Alignment: Leveraging information technology transforming organisations
5.	Jung (2009)	Method	Semantic alignment of business processes

2.3 Discussion of current business-IT alignment models

Luftman et al. (1999:2) claimed that *“Achieving alignment is evolutionary and dynamic. It requires strong support from senior management, good working relationships, strong leadership, appropriate prioritization, trust, and effective communication, as well as a thorough understanding of the business environment.”*

To achieve this, Luftman et al. (1999) defined enablers and inhibitors for business-ICT alignment as depicted in table 5 below. Some of these enablers and inhibitors were noted when the researcher was conducting interviews. The main objective for this research done by Luftman et al. (1999) was to identify the most important enablers and inhibitors for business-ICT alignment as depicted in table 5 below.

Table 5: Enablers and inhibitors for business-ICT alignment (Source: Luftman et al., 1999:4)

Enablers	Inhibitors
1. Senior executive support for IT	1. IT/business lacks close relationship
2. IT involved in strategy development	2. IT does not prioritise well
3. IT understand the business	3. IT fails to meet commitments
4. Business-IT partnership	4. IT does not understand business
5. Well-prioritised IT projects	5. Senior executives do not support IT
6. IT demonstrates leadership	6. IT management lacks leadership

Luftman (2000) defines business and ICT alignment as *“applying Information Technology (IT) in an appropriate and timely way, in harmony with business strategies, goals and need... and this alignment addresses the following; (i) how IT is*

aligned with business, and (ii) how the business should or could be aligned with IT". Luftman (2000) stated that the most fundamental issues or questions addressed by this model were as follows:

- How can organisations assess alignment?
- How can organisations improve alignment?
- How can organisations achieve mature alignment?

The strategic alignment maturity assessment model of Luftman (2000) depicts five levels of strategic alignment maturity as follows:

1. Initial/ ad hoc process;
2. Committed process;
3. Established focused process;
4. Improved/managed process; and
5. Optimised process.

However, each maturity level for the strategic alignment assessment model of Luftman (2000), used in conjunction with six IT-business alignment criteria, thus includes the following:

1. Communication maturity;
2. Competency/value measurement maturity;
3. Governance maturity;
4. Partnership maturity;
5. Scope and architecture maturity; and
6. Skills maturity.

This assessment maturity model was designed for assessing the alignment of business to ICT, but not for addressing the empirical research case study as stated in the research problem for the present study. The maturity assessment model was therefore not suitable to address the research objectives stated by the researcher. Jung (2009) proposed semantic business process integration based on ontology alignment. This model was, however, purely designed for business process management at a more technical layer, rather than strategic view. Ideally, this model takes into account how system processes can be integrated manually or how they

can be automated. The model does not consider an organisational holistic view pertaining to business processes integration impact. Furthermore; the model was not found suitable to be applied by the researcher in order to address the problem statement and research objectives in question.

Ibrahim and Iran (2005) proposed an integrated architecture framework for e-government implementation, which was developed due to lack of integrated architecture framework pertaining to e-government implementation. Ibrahim and Iran (2005) explained that a lot of work had been done regarding the adoption of e-government. There was, however, a gap pertaining to e-government implementation. Although the integrated architecture framework proposed by Ibrahim and Iran (2005) did take into account the potential alignment of ICT infrastructure and business process management, there was little information regarding the theory about the issue of business processes alignment, since this framework covered issues related mainly to e-government ICT infrastructure.

The researcher did not find it plausible to utilise this model in order to address objectives outlined in Chapter one of the research case study. As the paper dealt with addressing e-government adoption and the output was aimed at the framework of e-government architecture layers, this posed some barriers for adoption as it did not address issues related to business process alignment for effective e-government implementation. Venkatraman and Henderson (1999) developed a Strategic Alignment Model that has four domains (see Figure 2 below):

1. Business strategy;
2. IT strategy;
3. Organisational infrastructure and processes; and
4. IT infrastructure and processes.

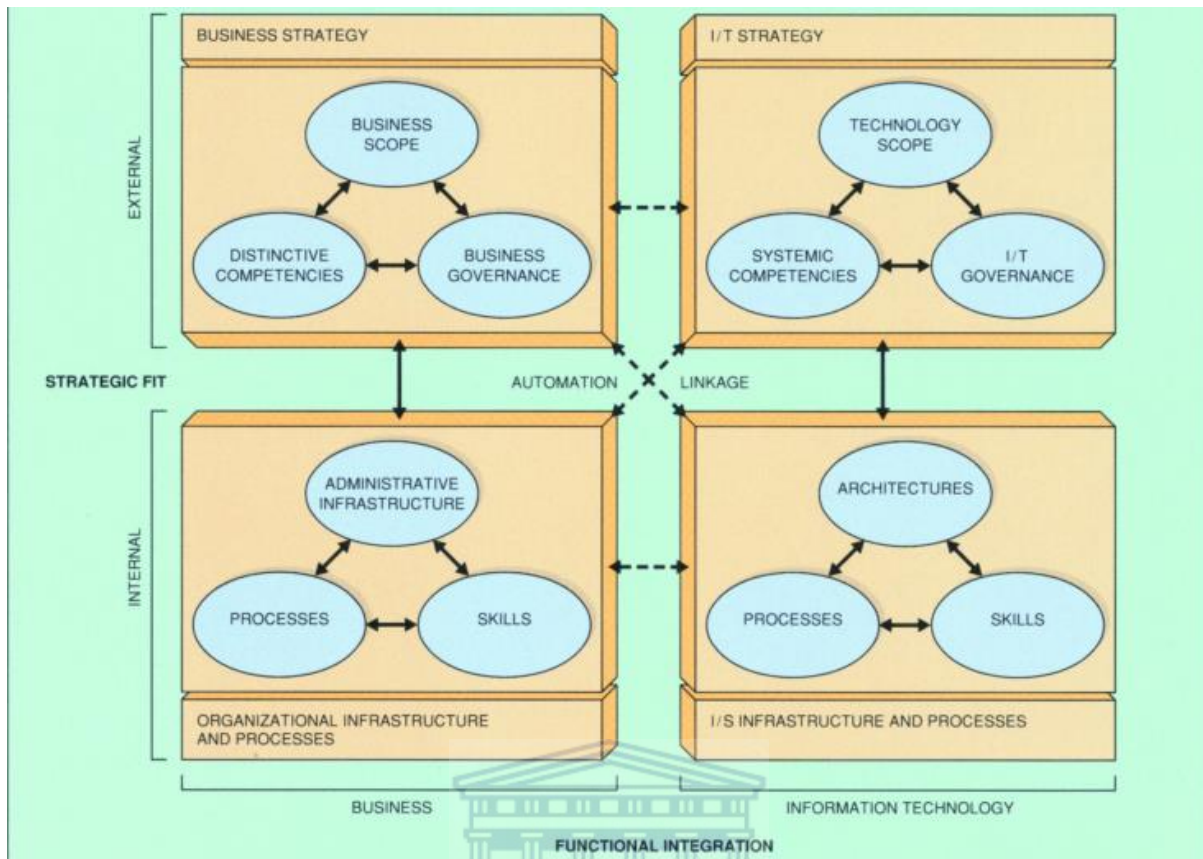


Figure 2: Strategic Alignment Model (Source: Venkatraman and Henderson, 1999)

Venkatraman and Henderson (1999) claimed that “this model is based on two building blocks of which are: strategic fit and operational integration.” The strategic fit is concerned with the organisational health and thus focuses on both external and internal organisational domains. The external domain is concerned with the outside forces, such as competition from the competitors. On other hand, the internal domain is concerned with organisational performance. Venkatraman and Henderson (1999) argued that ICT should be strategically fit for both internal and external domains. This can indeed be achieved if there is proper alignment of business-ICT strategy.

The second building block discussed in the strategic alignment model entails operational integration. Venkatraman and Henderson (1999) claimed that this building block was concerned with the ICT decisions that impact the business domain. The need for proper integration between the ICT strategy and business strategy is emphasised. The integration is categorised into two sections, depicted in Figure 2 above: strategic integration and functional integration, where the *former* is

the link between the ICT and business strategy and the *latter* is the link between the organisational infrastructure and processes, and ICT infrastructure and processes.

Table 6 below depicts some of the strengths and weaknesses of the existing business-ICT alignment models. Ideally, all the models mentioned in table 6 provide an outline of how the business-ICT alignment can be achieved and what criteria or processes can be used to:

- i. Conduct maturity assessment;
- ii. Align business processes and ICT; and
- iii. Overcome barriers that could hinder implementation of e-government.

However, none of these models clearly state how business processes should be aligned in order to achieve effective e-government implementation in the public sector.

Table 6: SWOT analysis of ICT alignment models (Source: Researcher)

Existing Business - ICT alignment models				Strengths	Weaknesses
	Researcher/s	Model	Theory		
1.	Luftman, Jerry (2000)	Maturity Assessment Approach	Assessing Business-ICT Alignment Maturity	<ul style="list-style-type: none"> - Ability to assess organisational maturity alignment level - Well-known and tested model 	<ul style="list-style-type: none"> - This model could not be applied to all industries - It is a conceptual model, not an operational model.
2.	Luftman et al. (1999)	Research Theory	Enablers and Inhibitors of Business-ICT Alignment	<ul style="list-style-type: none"> - List potential inhibitors and enablers for business-ICT alignment. - Widely tested theory across various industries. 	<ul style="list-style-type: none"> - It does not depict how alignment of business-ICT can be achieved. - It is not a model or a framework; however, it is a theory.
3.	Ibrahim and Iran (2005)	Framework	e-government adoption: architecture and barriers	<ul style="list-style-type: none"> - Outlines barriers that could hinder the success of e-government 	<ul style="list-style-type: none"> - The framework does not reflect how the alignment of business processes

				initiatives implementation. - It provides an architecture framework for e-government implementation.	to strategic objectives and services could be achieved.
4.	Venkatraman and Henderson (1999)	Conceptual Model	Strategic Alignment: Leveraging information technology transforming organisations	- It serves as a guideline for the alignment of business with Information Technology. - This model takes into account both internal and external alignment of ICT to business strategy.	- It does not depict the detailed level about how the four domains should be aligned. - The model is more theoretical; not an operational model.
5.	Jung (2009)	Method	Semantic alignment of business processes	- It provides a business processes ontology and business processes meta model approach.	- Ontology alignment process is not linked to business strategy objectives. - It is more technical in nature.

2.4 Deriving a conceptual model for the alignment of business processes to Provincial strategic objectives and services

2.4.1 BP Diagnosis model

Some of the research sub-questions could be answered by testing the BPM Maturity Model (Rosemann and Bruin, 2005). These research sub-questions are:

- What are salient issues in aligning business processes to the government's strategic objectives?
- What is the current state of alignment of business processes in a Provincial Government?

Stemming from the above ICT alignment models depicted in Table 6 and based on

recent research studies conducted in the in both the public and private sector, particularly for business processes alignment to Provincial Strategic Goals (PSGs) and services, it can be gathered that currently there is no research in existence that took into account a holistic view of business process alignment to PSG's and services in the researched Provincial Government. The model illustrated in Table 7 below will therefore be used as the proposed Business Process Diagnosis Model (BPDM), based on the "best practice" reported in the reviewed literature. This model was the basis for designing interview questions with the purpose of collecting empirical data. This proposed model encompasses three types of business processes: (i) Manual business processes; (ii) Semi-automated business processes; and (iii) Fully automated business processes.

Level 1 – Manual business processes (BP)

This stage exists when none whatsoever of all organisational business processes are entirely automated. Everything is indeed done according to the traditional approach and sometimes business processes are not all documented. Christensen & Overdorf (2000) made mention of some of the business processes done in an ad hoc approach to fulfil certain requests for services. These organisational business processes are categorised into two: (i) *supporting business processes* and (ii) *core business processes* (Becker et al., 2004).

In government context; *supporting business processes* are those processes that enable employees to execute their work. Some of these supporting business processes are: human resources, skills development, employee pay remunerations, promotions, retirement and so forth. Government institutions are given mandates arising from the South African Constitution to deliver services to citizens. According to Srivastava et al. (1999), core business processes are all those business processes that create value to customers/citizens and the realisation of organisational goals and objectives. The Provincial Government in question is mandated to render these services to its citizens and businesses. The provision of education, health, agriculture, water, sanitation, human settlements, safety, social welfare, land and so forth, are some of core business processes for the public institutions in South African and the Provincial Government in question.

Level 1 – Manual BP exists in an organisation whereby both core and supporting business processes automation or optimisation does not exist. Through understanding the current status of these elements, the organisation will have an overall view of the amount of work that would need to be done regarding business processes automation. Furthermore, it enables the organisation to make informed decisions pertaining to resources that are required to automate or optimise both core and supporting business processes.

Level 2 – Semi-automated business processes (BP)

This level would exist when some of the business processes are automated, but not fully automated from end to end, meaning that the back-end systems is not integrated with the front-end systems. One of the examples of the semi-automated business processes is the following: for citizens to obtain a grant from the Department of Social Development, they would need to physically go to the Department in order to apply, while the internal employees are using a grant system with automated processes as a service. The process automation is not complete on this scenario, whilst the citizens are supposed to be able to apply wherever they are, regardless of the physical geographic location across the Provincial Government. To make it possible for the Government's business processes to be integrated with those of other Departments for verification and other statutory requirements, seamless business processes integration is fundamental (Srivastava et al., 1999). It is imperative to conduct an assessment of this, because it would enable the organisation to make informed decisions regarding business processes that are not fully automated. Furthermore, it should be possible to identify the amount of work needed to fully automate those semi-automated business processes.

Level 3 – Fully automated business processes (BP)

This stage is achieved when all activities associated with business processes and the associated services are executed through the use of automated business information systems and other means of technologies (Brewer, 2006). At this level, ad hoc processes, physical papers, do not exist, whilst organisational business processes are fully documented, repeatable, managed and automated or optimised. It should be noted that the maturity of this level is dependent on level 2. If level 2 processes are completely automated from end to end, then level 3 is achieved. In

this phase, organisational business processes are optimised. Furthermore, the maturity of this level depends on seamless services/processes integration across departments (Hazlett & Hill, 2003; Scholl & Klischewski, 2007). "By virtue of the integration, services would be comprehensive, effective, efficient, and faster than before for both government and citizens/businesses" (Scholl & Klischewski, 2007:4).

The proposed model also serves the purpose of explaining processes and their potential alignment elements.

Legend: RACI= Responsible, Accountable, Consulted and Informed
 Dir = Directorate, CD = Chief Directorate, PSG = Provincial Strategic Objective, CMM = Capability Maturity Model

Table 7: Business Process Diagnosis Model (BPDM) (Source: Researcher)

	Business Process (BP)	Alignment elements						
		RACI	Division (Dir/ CD)	Organisation (Dept.)	PSG	Support Service	Citizen-centric Service/ core service	References
Business Process Types	1. Manual BP							
	1.1 Core BP	Identify whether RACI approach is being used in the core BP.	Reflects core business processes being executed.	Depts. conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen-centric service	Researcher
	1.2 Support BP	Identify whether RACI approach is being used in the support BP.	Reflects support business processes being executed.	Depts. conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen-centric service	Researcher
	2. Semi-automated BP							
	2.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflect core business processes being executed.	Depts. conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen-centric service	Researcher
	2.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflect support business processes being executed.	Depts. conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen-centric service	Researcher
	3. Fully							

	Auto- mated BP							
	3.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflect core business processes being executed.	Depts. conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen-centric service	Researcher
	3.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflect Support business processes being executed.	Depts. conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen-centric service	Researcher

Figure 3 below depicts types of business processes and alignment elements for the proposed BPDM. These elements have different meanings and purposes as defined below. Becker et al. (2007 and Dayal et al. (2001) define core business processes as those business processes that are adding value, albeit support business processes that enable the on-going operation of the core business processes. The main purpose of using these elements is as follows:

Firstly, is to assess whether organisational business processes accountability is enforced through the application of the RACI approach (Becker et al., 2007).

Secondly, to identify which department/s and divisions (Directorate or Chief Directorate) are executing and rendering the same processes. This would enable the e-government implementation team to be well informed about processes that are similar and consumed by other departments, to replicate automated business processes to other divisions and departments (Becker et al., 2007). By understanding this interrelatedness, the e-government team will be able to identify which processes need to be automated and what departments or division could be affected by this change (Jung, 2009). Some organisational processes are formal; meaning they are documented and adhered to, while other processes are informal, meaning they are not documented; they are ad hoc processes and consistency is not achieved when doing the same activities (Christensen & Overdorf, 2000).

Thirdly, to assess whether organisational business processes do indicate which PSGs and services are being aligned to (Becker et. al., 2007). This assessment is

vital to the e-government implementation team, hence organisational performance and maturity is assessed through PSGs of the departments and its associated services (whether supporting business processes or citizen-centric services/core services). All PSGs have some Key Performance Indicators (KPIs) that are linked to organisational goals and objectives.

This overall view of organisational alignment will enable organisational decision makers to reach sound decisions regarding the business processes or services that will need to be integrated, prioritised and optimised for effective e-government implementation across the Provincial Government (Dayal et al., 2001). Seamless integration of services depends on business processes alignment, maturity of business processes and integration across departments (Lam, 2005; Davenport & Short, 1990).

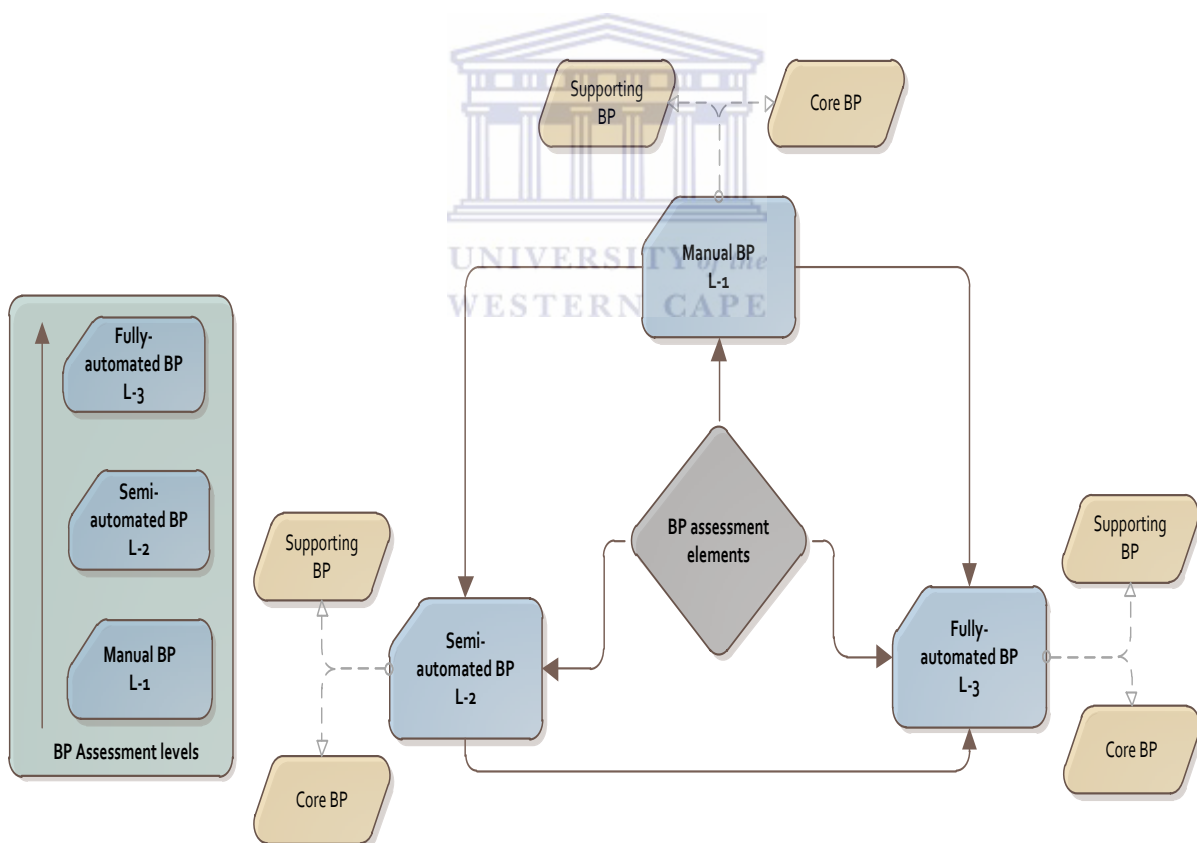


Figure 3 Business processes assessment elements summary (Source: Researcher)

2.4.2 Proposed BP Alignment Model (BPAM)

The proposed BPAM is composed of four steps and depicted in Figure 4 below. These four steps ideally should be: assess, diagnose, align and identify tools and methods to manage alignment of business processes, which is the main theme for this research in the Provincial Government in question. These methods and tools will be suitable for use of employees in the organisation to manage businesses process alignment.

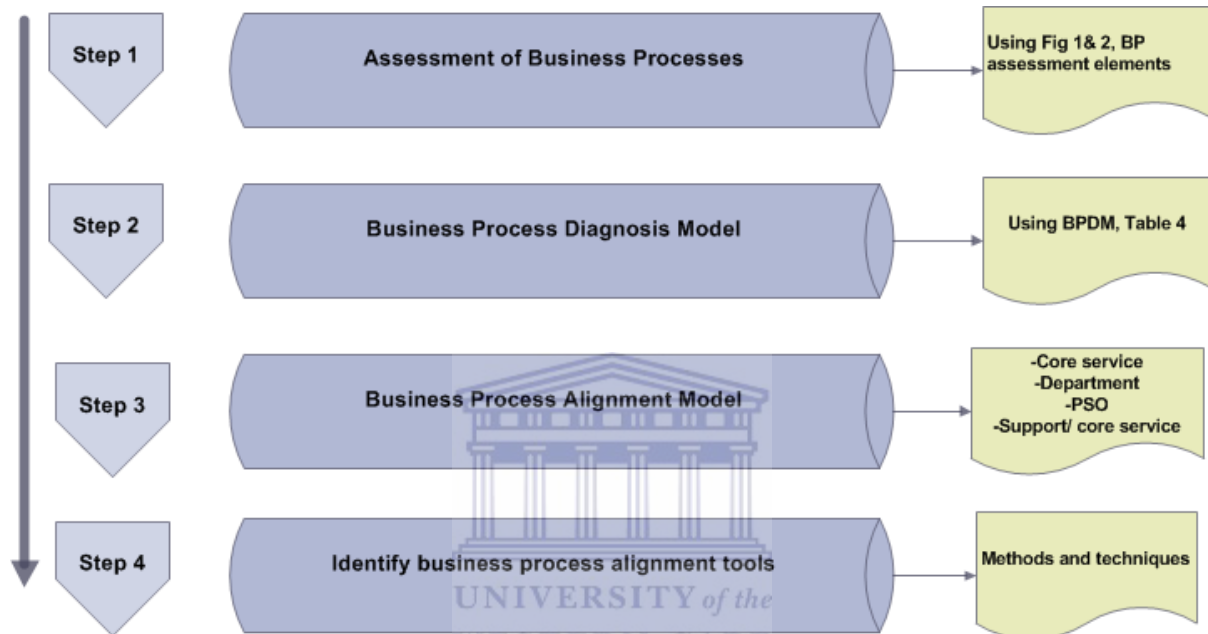


Figure 4: Proposed Business Process Alignment Model BPAM (Source: Researcher)

Figure 4 above illustrates all four steps. The first step takes into consideration the current business processes maturity levels and alignment elements depicted in figure two. The main objective of this assessment is to identify the current state of business processes and whether organisational business processes are: 1) manually operated (2) semi-automated (3) fully automated and furthermore to identify whether those business processes being assessed are core or supporting business processes. Step two is conducted by using table 7 above; whereby the 'as is' business processes diagnosis is conducted. During this step; business processes are identified as to whether they are core processes or supporting processes, and whether they are manual or semi-automated or fully automated.

Furthermore, an attempt is made at a diagnosis of whether business processes do randomly follow alignment elements identified from the literature by the researcher. Step 4, in figure 5 above will be more concerned with the tools implemented by the

organisation regarding business process management and alignment. At this stage, it is vital that the organisation implement certain capabilities that could harness the management and tracking of business processes and alignment to PSGs and services. Since the Provincial Government in question is a big organization, the manual management of business processes would be challenging and cumbersome. It is imperative to effectively implement and manage proper tools or methods for BPM. These tools and methods need to be visible and shared across the organisation. Proper training pertaining to these tools is also imperative, because if training is not provided, the effectiveness and value add will be not easily realised.

2.5 Literature review summary

One of the research questions that were answered by the empirical research findings through the use of business processes maturity assessment was the following: *“What is the current state of alignment of business processes in a Provincial Government?”* Existing models were used to answer this question and one of the widely accepted models is the Capability Maturity Model that was developed by Paulk et al. (1993). This model was tested in conjunction with the model of Rosemann and Bruin (2005) in the Provincial Government in question with the aim of answering the said question.

Resulting from the researcher’s review of all the current literature, it became clear that the current literatures in the e-government and in business process management domains does not provide adequate information to make it possible to clearly answer the main research questions in the empirical setting of this research case study. The research sub-questions that were not answered by the literature are as follows:

- What are the salient issues in aligning business processes to the government’s strategic objectives?
- What is the current state of alignment of business processes in a Provincial Government?

The following research questions were answered by the literature:

- What are “best practices” of aligning business processes to PSGs and

services?

- How should business processes be aligned to PSGs and services in a Provincial Government for effective e-government implementation?

The researcher consequently proposed a Business Process Alignment Model (BPAM) and this BPAM was used in conjunction with the proposed BPDM. Ideally, the BPAM (including the BPDM) was tested in the Provincial Government in question, in order to test whether this model would make it possible to answer the sub-questions stated above, which were not answered by the recent literature found in the e-government and business process management. This model was subsequently tested by the researcher in the Provincial Government in question. The BPAM model was accepted without any modifications by the research participants within the Provincial Government.



3 CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research methodology and process used to conduct the empirical research case study in the Provincial Government in question. It also outlines research methodologies, data collection process, data processing techniques and data analysis method used to analyse and interpret the collected data from the participants. Most importantly, this chapter outlines an overview of the methods and techniques applied to conduct the research and collect data from the target participants in order to answer all the questions as stated in Chapter one.

3.2 Research design

It is imperative to understand what a research design is before unpacking the research methods associated with a research design. Creswell (2008) writes that *“the plan or proposal to conduct research, involves the intersection of philosophy, strategies of inquiry, and specific methods”*. Merriam (1988) and Mouton (2012) stated that *“a research design is similar to an architecture blueprint. It is a plan for assembling, organising and integrating information (data), and its results in a specific end product (research findings).*

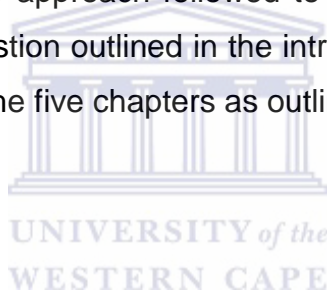
“The selection of a design is determined by how the problem is shaped, the questions it raises and by the type of end product desired.” This definition is in agreement with what Creswell (2008) said, i.e. *“the plan or proposal to conduct research, involves the intersection of philosophy, strategies of inquiry, and specific methods.”* It is a systematic approach to collect and analyse data from the research participants in order to provide significant meaning from the data presented (Darke et al., 1998). Emanating from the above definitions, the systematic approach that was followed to conduct this research case study is depicted below:

- 1) **Identifying the research problem.** In the case of this study the problem was the lack of knowledge of any alignment of business processes. The e-government implementation team of the Provincial Government indicated that

without business processes alignment to PSGs, departmental objectives and services, the deployment of e-government in the Province would be neither efficient nor effective. At that point in time, it was not known whether the alignment of business processes to PSGs, and services did exist in the Province.

- 2) **Set-up research question.** Emanating from the stated problem, this research encapsulated all elements in the research problem set out above. The research question was: What is a current state of alignment of business processes to PSGs and services in the Provincial Government and what would be the way to align these processes for an effective e-government implementation?
- 3) **Setting up the research objectives.** These were designed to achieve solutions that could possibly answer the main research question stated, and address the perceived problem within the Provincial Government in question. These research objectives, which are explained in Chapter one, were refined to research sub-questions in order to collect relevant information to be used in this research case study.
- 4) **Conduct a literature review to answer research question.** The pertinent literature on the topic was scrutinised and literature findings were presented in Chapter two.
- 5) **Choose a research methodology.** Case study research methodology was chosen to conduct this research and the rationale to choose this methodology is explained later on in this chapter.
- 6) **Construct a research instrument/ interview questions.** The interview included 15 questions and all interview questions were designed in such a way that they were related to research sub-questions, as explained later on in this chapter.
- 7) **Conduct interviews to gather data.** Thirteen interviews were conducted in two areas within the Government in question. These areas were as follows: the first was the centralised ICT environment for the Provincial Government in question and the second was the centralised unit that deals with Business Process Design and improvement for the entire Provincial Government in question.

- 8) **Content analysis of qualitative data.** An interpretative approach was applied to analyse data collected after the interviews were conducted and concluded. Common themes and tests were identified from all research participants. These common themes and tests were identified per interview conducted from the thirteen research participants who participated on the research case study.
- 9) **Presentation of results and findings.** Chapter four explains results and findings of this research case study in detail.
- 10) **Conclusion and recommendations.** Using researchers' arguments identified from the various literature reviews and data collected from the interviews within the Provincial Government in question, the researcher made conclusions and recommendations based on those findings.
- 11) **Final report on the research question.** A final report was drawn up to outline the step-by-step approach followed to address the stated arguments and main research question outlined in the introduction of the research study. This report comprised the five chapters as outlined in this document.



3.3 Research methods

3.3.1 Research paradigms or philosophies

Understanding research paradigms or philosophical views as discussed by Creswell (2008) and determining their applicability, was imperative in order to apply a relevant research paradigm when conducting the envisaged research case study. (Krauss & Putra, 2005) defined a research paradigm as a *“basic belief system or world view that guides the investigation”*. The most widely known research paradigms cited by various literatures are those of ontology and epistemology. These research paradigms are defined below:

- (i) Epistemology is the philosophy of how we know what we know (Creswell, 2008), while (Walsham, 1995) defines it as being *“concerned with the nature of knowledge aims.”* This research paradigm seeks to understand the real world of social issues and individuals' perspectives (Krauss & Putra, 2005).
- (ii) Ontology is *“concerned with the nature of reality”* (Walsham, 1995).

Table 8: Alternative stance on knowledge and reality (Source: Walsham, 1995)

Epistemology	Ontology
Positivism: Facts and values are distinct and scientific knowledge consists only of facts.	External realism: Reality exists independently of our construct of it.
Non-positivism: Facts and values are intertwined; both are involved in scientific knowledge.	Internal realism: Reality for us is an inter-subjective construction of the shared human cognitive apparatus.
Normativism: Scientific knowledge is ideological and inevitably conducive to particular sets of social ends.	Subjective idealism: Each person constructs his or her own reality.

Creswell (2008) defined a framework for designing research. This framework design depicted in Figure 5 below, forms the foundation of this research case study and served as the guideline for the researcher when conducting research in the Provincial Government in question. The elements and applicability of the framework define by (Creswell, 2008) are explained in detail in the sections below.

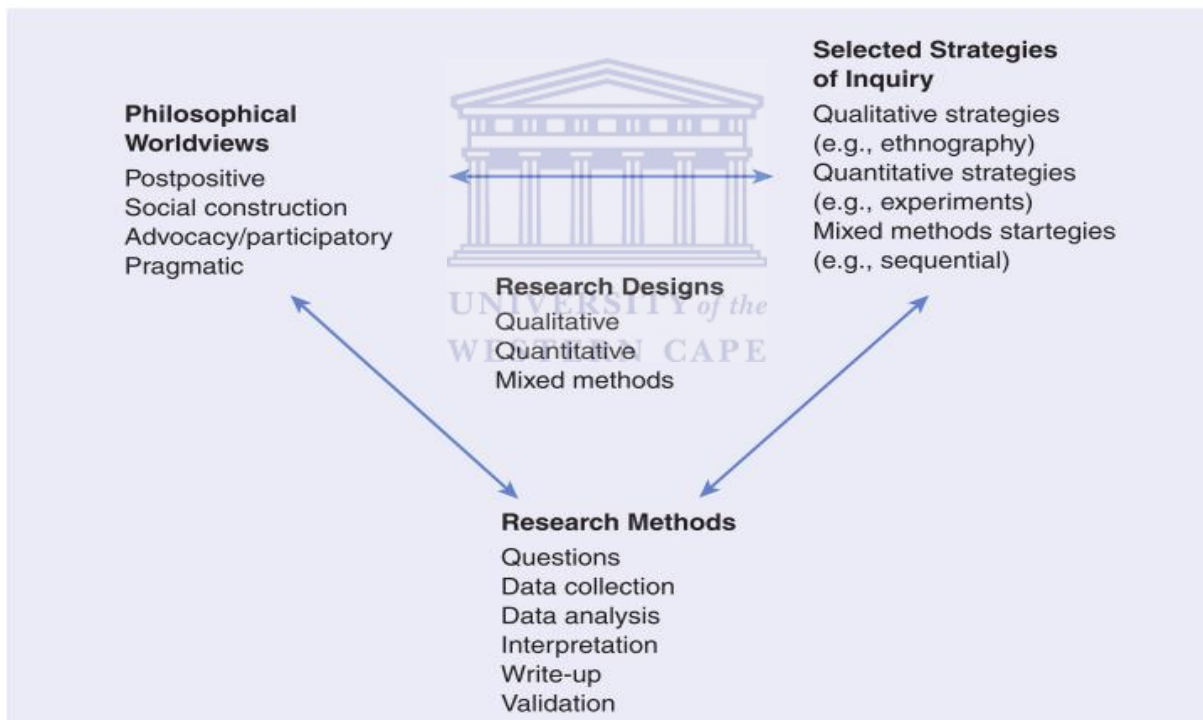


Figure 5: Framework for Design (Source: Creswell, 2008:35)

3.4 Research inquiry strategies

Research methodologies cited by various researchers are: qualitative, quantitative and mixed method and these methods follow different approaches. Shaw (1993); Agarwal et al. (2005); Yin (2003) and Creswell (2008) define research methods as a process of data collection, analysis and interpretation and presentation of results by the researcher. The main research methods mostly found in various literatures are:

- (i) **Action research**, which is research mainly focused on the individual's know-how and it is usually used to conduct studies of social issues (Creswell, 2008; Krauss & Putra, 2005). This research method was not applicable to this study, since it focused on people's social issues rather than an organisation's business processes and alignment.
- (ii) **Case study**, which enables a researcher to collect in-depth information from the participants as they describe experiences in their own manner and not in a manner predetermined by the researcher (Creswell, 2008; Zainal, 2007; Yin, 2013). This research method was adopted by the researcher to conduct the research. The rationale for using it was articulated in Chapter one and in the section on research design at the beginning of this chapter.
- (iii) **Survey**, a method used when dealing with large quantitative data collection and analysis. This method usually uses questionnaires and interviews to collect data (Creswell, 2008). The survey method does not allow a researcher to gain in-depth understanding from the participants since all questions are structured and purely close-ended questions. This method was therefore not used by the researcher for the purposes of the research in question.
- (iv) **Ethnographic** method, which is useful when the researcher seeks to become part of a group or the event and hopes to collect more data than would have been possible if the researcher was a non-participant in the group or event (LeCompte & Goetz, 1982; Walsham, 1995). This method was also not applicable to the case study in question.
- (v) **Ground theory**, the method whereby a researcher is permitted to collect and analyse data simultaneously, a more iterative approach (Eisenhardt, 1989). This approach seeks to discover and build theory based on new data refined (Creswell, 2008; Wan & Liang, 2012). The ground theory method was omitted on this research.
- (vi) **Experiment method** is defined by Smith (2002:2) as “ *it derives a testable hypothesis, H, from a well- specified theory, T; implement experiments with a*

design; implicitly in the latter are auxiliary hypotheses". The Experiment method was not applicable when conducting this research, since there was no hypothesis that was to be tested.

- (vii) **Observation method.** This method is usually applied when the researcher is not the part of the group or event but observing behaviours and movements of selected group of the study (Fransson-Hall et al., 1995). This method was not applicable to this study, as the study required an in-depth understanding of the organisation by the participants and the only way to attain this was to conduct face-to-face interviews with the research participants.

3.5 Rationale for selecting the Case Study Methodology

Darke et al. (1998) define the Case Study Methodology as *"an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident and it realises on multiple sources of evidence."* Based on this definition by Darke et al. (1998); the problem statement of this research case study was formulated in that...*it is not known whether an alignment of business processes to PSGs and services is in existence.*

This problem statement ties in very effectively with the definition mentioned above. The exposition of Darke et al. (1998) regarding case studies is in agreement with that Creswell, 2008 cited above. Case studies are quite often used to conduct qualitative research in information systems and this is more imperative when the purpose of the research is to assess the impact of technology innovations on organisations (Darke et al., 1998). Research case studies are commonly conducted using either a positivist or interpretivist approach (Darke et al., 1998) and these types of research case study approaches are defined below:

- i) **Positivist approach** *"is founded on ontology and is concerned with the empirical testability of theories in order to discover the general principles or laws which govern the natural and social world"*, cited from (Darke et al.,

1998). This approach is not applied for this research since it tests existing theories.

- ii) **Interpretivist approach** tries to *"understand phenomena through assessing the meaning that participants assign to them and focus on their cultural and historical context"*. Interpretivist researchers apply this approach in order to maintain neutrality and try to and gain an in-depth understanding of the problem being investigated. The interpretivist approach further allows the participants to give subjective responses pertaining to the problem being investigated.

Arising from the above definitions, an interpretive approach was adopted for this qualitative research case study since the data collected was transcribed and analysed in order to identify common themes or meanings to answer the research questions outlined in chapter of this research.

One of the challenges associated with qualitative research case studies is associated with difficulties regarding designing interview questions, i.e. those kinds of interview questions could be very difficult for the research participants to answer (Opdenakker, 2006). According to Dixon-Woods et al. (2005) and Kohlbacher (2006), data collection and analysis are more reliable in the approach to research, as the research approach applied might have an effect on the data during data interpretation. Eisenhardt (1989) made it clear that if there was a lack of existing theories for the particular area of research, case studies should be conducted in order to obtain an in-depth understanding of the research area.

Case studies are aimed at individuals, groups or an organisation, using interviews, documents and observations (Riege, 2003). Some researchers supporting this view, such as Mouton (2012), say that it is imperative for researches of big organisations, regions or a country to be conducted in the form of a case study. Broadbent et al. (1998) claimed that most case study researches are conducted by using a qualitative research method and may include quantitative data. Based on the views of Mouton (2012) and Eisenhardt (1989), this research study was conducted using the research case study methodology, since the Provincial Government in question is a

big organisation.

Eisenhardt (1989); Shaw (1993); Yin (2009) and Riege (2003) stated that if there is a lack of existing theories for the particular area of research, research case studies are conducted in order to obtain an in-depth understanding of the research area. Supporting this view, Mouton (2012) explained that it was imperative for researches of big organisations, regions or a country to be conducted by means of a case study. Broadbent et. al (1998) said that most of the research case studies are conducted in the form of a qualitative research method and may include quantitative data. Emanating from Mouton (2012) and Eisenhardt (1989) statements, this research study was conducted using the research case study methodology.

One of the reasons for choosing this research method was related to the lack of theories conducted thus far that could address the stated problem in Chapter one. Furthermore, the fact that the Provincial Government in question is a big public organisation was thus a good choice, based on what Mouton (2012) said.

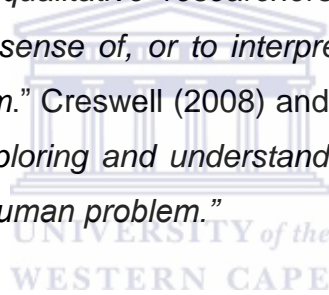
3.5.1 Rationale for using a qualitative methodology

Qualitative methods are defined by Creswell (2008) and Darke et al. (1998) as follows:

- (i) Case studies *“are a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals.”*
- (ii) Phenomenological research *“is a strategy of inquiry in which the researcher identifies the essence of human experiences about a phenomenon as described by participants.”*
- (iii) Grounded theory *“is a strategy of inquiry in which the researcher derives a general, abstract theory of a process, action, or interaction grounded in the views of participants.”*
- (iv) Narrative research *“is a strategy of inquiry in which the researcher studies the lives of individuals and asks one or more individuals to provide stories about their lives.”*
- (v) Ethnography *“is a strategy of inquiry in which the researcher studies an intact cultural group in a natural setting over a prolonged period of time by*

collecting, primarily, observational and interview data.”

Riege (2003) and Darke et al. (1998) claimed that *“qualitative research methods such as case studies commonly follow realistic modes of inquiry; the main objectives are to discover new relationships of realities and build up an understanding of the meanings of experiences rather than verifying predetermined hypothesis”* This is in agreement with what Hoepfl (1997) said, i.e. to *“gain a new perspective on things about which much is already known, or to convey in-depth information that may be difficult to convey quantitatively or where the researcher has determined that quantitative measures cannot adequately describe or interpret a situation”*. Mouton (2012:149) defines a qualitative approach in that it *“...aims to provide an in-depth description of a small number (less than 50) of cases.”* Ormston et al. (2013) define it as follows: *“qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them.”* Creswell (2008) and Shaw (1993) define qualitative research as *“a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem.”*



What is common from the definitions of the researchers cited above is the focus on in-depth understanding of the meanings of experiences rather than predetermined hypotheses. Through using a qualitative method to conduct interviews within the Provincial Government in question; the researcher was able to understand the possible underlying issues and solutions that were associated with the alignment of business processes and the impact implementing e-government.

There was a need to collect data using this approach in order to answer some of the research sub-questions that could not be answered through using a quantitative approach. This approach allowed the targeted audience to give explanations based on their own understanding and work experiences pertaining to the current state of business processes and the impact of implementing e-government across the organisation.

One of the key challenges associated with selecting the case study method, was that it was difficult to design interview questions that would be understood by the research participants. The amount of data collected using a qualitative approach was huge and became difficult to manage, analyse and present (Darke et al., 1998).

3.5.2 Research techniques

Collecting and analysing data is a step-by-step process in view of presenting research findings. A researcher can adopt a structured or unstructured technique when conducting such a research study (Eisenhardt, 1989). Structured techniques usually employ techniques that make use of closed ended questions, while unstructured techniques employ techniques that allow open responses from the research study participants (Riege, 2003; Eisenhardt, 1989). In this qualitative research case study, the same techniques as mentioned above were applied, which means that some of the interviews were structured; in particular pertaining to questions such as to assess the current state of business process in the Provincial Government in question, which were structured and close ended. Other questions, that assessed the alignment of business processes to PSGs and services, and the impact of implementing e-government based on the current state of business processes, were however open-ended interview questions.

3.5.3 Data collection process

When conducting a research case study, it is common that both structured and unstructured in-depth interviews are applied (Krauss & Putra, 2005; Yin, 2009; Riege, 2003), this enables participants to provide in-depth explanations of the research problem being assessed (Creswell, 2008; Walsham, 1995). In the design of interview questions for this research case study, a similar approach as cited above was followed. Some of the questions were structured, while others were unstructured. One of the reasons for ending up with a mixture of various techniques was the nature of the problem being investigated. Information for a qualitative research case study is gathered by using interviews, archives and some observations (Eisenhardt, 1989) and this qualitative research case study used the same approach mentioned by Eisenhardt (1989). Thirteen people were interviewed

in order to collect data for further analysis. On average, interviews were approximately 25 minutes long in terms of duration.

3.5.3.1 Instrument design: Interviews

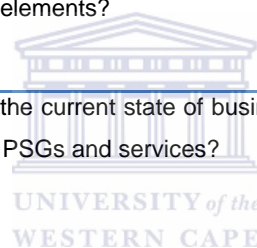
The questions were designed in such a way that they met the requirements for answering the main research question and sub-questions stated in Chapter one of this research. These interview questions were defined and aligned to the research sub questions (more detail is outlined in Table 9 below). Data collection gives an opportunity to sit face to face with participants and observe their reactions and understanding of the matter being investigated (Krauss & Putra, 2005; Riege, 2003). These interview questions were reviewed by the assigned supervisor for the researcher and were tested to five people in order to identify whether they could be easily understood by the research participants.



Table 9: Alignment of research questions to interview questions (Source: Researcher)

Research question	Interview question	Interview question design	Rationale
PART A What are salient issues in aligning business processes to Government's strategic objectives?	1. What is the process or method used for the assignment of business process ownership in order to establish managerial accountability in your organisation?	Open-ended question	An understanding of the current state of business processes within the Provincial Government will enable the researcher to provide significant recommendations pertaining to what needs to be done in the business process domain. Further articulate the possible initiatives that could possibly be initiated and implemented if required. It is imperative to understand whether the organisation has a process management methodology and too and to understand whether the organisation has a central view of business processes and those business processes are categorised as either support or core business processes, because if the categorisation does not exist; this could be a challenging factor when it comes to business process prioritisation and automation.
	2. What business process methodology/tool is used by your organisation to manage business processes?	Open-ended question	
	3. What method or technique is used to classify business processes in your organisations?	Open-ended question	
	4. Are you aware of organisational core business processes? Yes/No or not sure.	Closed-ended question	
	5. Are you aware of organisational support business processes? Yes/No or not sure	Closed-ended question	
	7. What initiatives you think could be proposed regarding your organisational business processes?	Open-ended question	
	8. From the table below, which level of business processes do you think your current organisational business processes are at? <i>Please refer to Table 10 below.</i>	Closed-ended question	
	9. Through you understanding of business processes of your organisation; which maturity level do you think your organisation is at? Please select one from the following maturity levels. <i>Please refer to Table 11 below.</i>	Closed-ended question	

Research question	Interview question	Interview question design	Rationale
PART B What are “best practices” of aligning business processes to PSGs and services?	1. What are “best practices” or methods used for the alignment of business processes to PSGs and services?	Open-ended question	It is imperative to understand whether the organisation does or does not have any best practices or methods currently in use. Most important is to conclude whether the proposed model of the researcher can be adopted by the organisation in question.
	2. Follow-up question for the above question: If these do not exist, what would be the right way or approach to align business processes to PSGs and services?	Open- ended question	
	3. Do you think alignment of business processes in your organisation would be achieved through using the following alignment elements?	Close-ended question	
What is the current state of alignment of business processes in a Provincial Government?	1. How can you define the current state of business processes alignment to PSGs and services?	Open-ended question	To assess whether the participants do have a clear view of the current state of alignment of business processes to PSGs and services across the Provincial government.
PART 3: How to align business processes to PSGs and services in a Provincial Government for effective e-government implementation	1. What would be the impact of implementing e-government initiatives based on the current state of business processes, PSGs and services across the provincial government?	Open-ended question	An understanding of the individual perspective regarding the impact of, and effective way of e-government implementation based on the current state of business processes, will enable the researcher to document relevant recommendations that can be implemented by the organisation.
	2. What would be an effective way to implement e-government strategy initiatives across the Provincial government based on the current state of business processes and services?	Open ended question	



Applicable to question 8 mentioned above

Table 10: Business process levels (Source- Researcher)

Level	Type	Level description	Tick (X)
1.	Manual business processes	Exist in an organisation, meaning that neither core nor supporting business process automation or optimisation is in existence.	
2.	Semi-automated business processes	This level exists when some of the business processes are automated, but not fully automated from end to end, meaning that the back-end systems are not integrated with the front-end.	
3.	Fully automated business processes	This is achieved when all activities associated with business processes and associated services are executed through the use of business information systems and other means of technology.	

Applicable to Question 9 mentioned above

Table 11: Business process maturity assessment model (Source: Paulk et al, 1993)

No.	Maturity level	Maturity description	Tick (X)
1.	Initial state	The process is ad hoc. Few activities are explicitly defined and success depends on individual effort and heroics.	
2.	Repeatable	Basic project management processes are established to track cost, schedule and functionality. The necessary discipline is in place to repeat earlier successes.	
3.	Defined	The process for both management and engineering is documented, standardised and integrated by an organisation methodology.	
4.	Managed	Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.	
5.	Optimised	Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.	

Applicable to PART B Question 3 mentioned above

Table 12: Business process alignment elements (Source: Researcher)

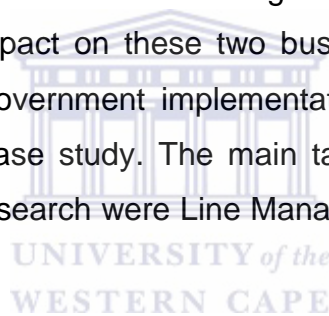
No.	Element	1.Strongly disagree	2.Disagree	3.Neither agree nor disagree	4. Agree	5.Strongly agree
1.	RACI method					
2.	Directorates or Chief Directorates					
3.	Departments					
4.	Provincial Strategic Objective					
5.	Support services					
6.	Core services/ Citizen-centric services					

Adapted Likert scale

3.5.3.2 *Sample design*

Sample design is a process to gather information from the sample population and can be divided into two parts: probability sampling and non-probability sampling (Kalton, Brick, & Le, 2005). In terms of sampling; the sample design of this research hinged on two business units within the Provincial Government in question. The first business unit that provides ICT services, since the ICT within this Provincial Government was centralised, which meant there were no other ICT units in other departments within the Provincial Government in question.

The second business unit was Business Process Improvement. This was a centralised business unit that provides business process management services to the Provincial Government in question and it renders this service to other departments within the province. Since the alignment of business processes to PSGs and service has an impact on these two business units as main drivers of business processes and e-Government implementation, these two business units were vital for this research case study. The main target group of the people who needed to participate in the research were Line Managers (Chief Directors, Directors and Deputy Directors).



3.5.3.3 *Data analysis*

Broadbent et. al (1998) were of the opinion that as regards philosophical perspectives used when dealing with data analysis, the positivist and interpretivist approach should be used when analysing the data for the qualitative research case studies. More specifically, the qualitative researcher is trying to understand the meaning of words explained by the research participants and furthermore to interpret those words in order to arrive at a conclusion. This research report adopted the interpretivist approach during data analysis. The researcher adopted a similar approach by (Creswell, 2008) who suggested that researchers (i) must organise the data, (ii) be acquainted with the data, (iii) code the data, (iv) interpret the data, and (v) present the data.

(Leech & Onwuegbuzie, 2007) suggested the following: “*One of the most important steps in the qualitative research process is analysis of data.*” Leech & Onwuegbuzie (2007) define data analysis as “...*the simple search for meaning.*” A number of researchers, (Collector & Module, 2011; Dixon-Woods et al., 2005; Ormston et al., 2013) say that data analysis is the process that should be used in both qualitative and quantitative research to understand the in-depth view of the participants regarding the case study being conducted. Krauss & Putra (2005); Riege (2003) and Miles & Huberman (1984) claim that the main aim of data analysis is to understand human experiences and the point of view of individuals pertaining to real-world scenarios. Data analysis is about understanding different and common themes being used by various participants in particular when doing qualitative research. Miles & Huberman (1984) said that qualitative data analysis was about seeking explanations, and finding common themes and new concepts in the field of study. Some of the qualitative data analyses defined by (Leech & Onwuegbuzie, 2007) are explained below:

A method of constant comparison is the type of data analysis that is commonly used when the researcher reads the entire data collected and then groups common data sets into common themes. Once all common themes have been identified; the researcher then compares those common themes in order to get meaning and to interpret the findings.

Keywords-in-context is a “*data analysis method that reveals how research participants use words in context by comparing words that appear before and after key words*”. The researcher reads the entirety of the data collected and identifies key words that are used quite often and are closely related to the research study being conducted by the researcher.

Word count method is usually used to count words that are used by in the research and this is done once all data has been collected by the researcher. This enables a researcher to identify the meanings of those words being counted (Miles & Huberman, 1994). There are three purposes of counting themes, which are:

- (a) *To identify patterns more easily,*
- (b) *To verify a hypothesis, and*

(c) *To maintain analytic integrity.*

Classical content analysis; this method is similar to constant comparison. The only difference of this method is that it uses codes for data analysis instead of using themes. The mostly used code denotes common meanings from the data being analysed.

Domain analysis “*utilises semantic relationships to help uncover domains. Domains are created from (a) cover terms (concepts; Y), (b) included terms (referents; X), and (c) a semantic relationship between the cover term (Y) and the included terms (X)*” (Leech & Onwuegbuzie, 2007). (Spradley, 1979) defines domain analysis as a six-step process:

- (1) Select a single semantic relationship (repeated);
- (2) Prepare a domain analysis worksheet (repeated);
- (3) Select a sample of informant statements (repeated);
- (4) Search for possible cover terms and included terms that fit the semantic relationship (repeated),
- (5) Formulate structural questions for each domain (repeated); and
- (6) Make a list of all hypothesised domains.

However, the shortcoming of a domain analysis method is that it is commonly used during the interviews, not when interviews are completed.

Leech & Onwuegbuzie (2007) state that **taxonomic analysis** “*helps the researcher to understand how participants are using specific words.*” However, this method is used in conjunction with domain analysis, since it analyses sets of activities that have relationships amongst each other. Taxonomy analysis further depicts the relationships of activities that are related to certain domains in the research. Leech & Onwuegbuzie (2007) define taxonomy analysis as consisting of eight steps:

- (1) Select a domain for taxonomic analysis;
- (2) Identify the appropriate substitution frame for analysis...;
- (3) Search for possible subsets among the included terms;
- (4) Search for larger, more inclusive domains that might include a subset;
- (5) Construct a tentative taxonomy;

- (6) Formulate structural questions to verify taxonomic relationships;
- (7) Conduct additional structural interviews; and
- (8) Construct a completed taxonomy.

3.5.3.4 Unit analysis

The unit of analysis selected for this research is based on content analysis per sub-research question, i.e. meaningful answers from respondents approached with the interview questions. The researcher assessed whether responses answered or did not answer the research sub-questions associated with the common themes. The transcribed documents per research participant were used to achieve this and a few examples were attached as appendices in view of data validity and reliability. Some of the data was presented as numbers, based on the number of participants. However, the numbers that were used do not present a quantitative research case study; it was simply a data presentation of responses from the participants in order to promote ease for readability of results.

3.5.3.5 Data management

The interviews were recorded using an electronic recording device. After completion of all interviews, the data for all recordings were transferred to the computer and all recordings were marked using certain symbols (P1, P2, P3, etc., up to P13) and not using the actual names of the participants, as agreed. The data was then transcribed to a Word document and attached as an appendix to this report. The actual recordings and consent forms were handed to the relevant supervisor as a measure to prove reliability and to validate that the interviews were actually conducted.

3.5.3.6 Data confidentiality

For the sake of confidentiality, the real names of participants were not used. A naming conversion was, however applied, in terms of which the first participant was named “P1”, the second was named “P2”, and so forth, up to the last participant, being “P13”. The organisation where the participants are employed was not disclosed. Their managerial levels are mentioned, since they are generic in the public sector.

3.6 Summary of Chapter three

This chapter outlined the research paradigms, design, methods and techniques that were used to gather, encode, analyse, interpret and present findings associated with the current state of business processes; the alignment of business processes to PSGs and services and the impact of implementing e-government initiatives based on the current state of business processes. Furthermore, on the basis of the data gathered, an approach to be recommended to implement e-government initiatives within the Provincial Government in question.



4 CHAPTER FOUR: RESULTS, PRESENTATION AND FINDINGS

This chapter presents the research case study findings and results that were drawn based on research results analysed by the researcher. The main question of this research case study was:

What is the current state of alignment of business processes to PSGs and services in the Provincial Government and what would be a suitable way to align these processes for an effective e-government implementation?

The researcher conducted an empirical research case study and visited various literatures in order to ascertain whether any research of this nature had been done to address the main research question outlined above. During that investigation, the researcher managed to identify business process maturity assessment models from various literatures. Nevertheless, none of these were adequate to fully meet the requirements of the stated research question. Although the aspect of alignment of business processes was partially addressed by some of the existing models.

The researcher was also able to identify alignment elements from various literatures and used them to develop and proposed a new model. The effectiveness and applicability of the proposed business process alignment model (BPAM) and business process maturity model were tested in the Provincial Government in question. The researcher derived interview questions based on the two stated models, i.e. the proposed BPAM and business process maturity model developed by Rosemann and Bruin (2005). Each of the research findings per question are presented and discussed below:

4.1 Salient issues in aligning business processes to government's strategic objectives

The first research sub-question was: "What are the salient issues in aligning business processes to the Government's strategic objectives?"

Data analysis results showed that the majority (equivalent to seventy seven percent) of research participants claimed that the alignment model for aligning business processes to strategic objectives was not known within the Provincial government in question. The majority of research participants were also not sure whether a business process alignment model was in existence, since business process alignment is not visible, documented and communicated across the organisation. Some of direct quotations that were directly taken from interview notes that were transcribed by the researcher are cited below. These direct quotations were the responses to the first question mentioned above regarding salient issues in aligning business processes to the Government's strategic goals and objectives.

Both participants P1 & P2 (2014) said the following: *"...No, I really don't know about any alignment model..."* This concurred with P3, P4, P5, P6, P7, P8, P9 and P13 in 2014 who all stated: *"We don't have any existing alignment model..."* This finding shows correlation with what the literature claims about public institutions. Alateyah et al. (2012) for instance said that public institutions were not aware of the significance of business process alignment and the need to be cognisant that e-government implementation should not be treated as only being about the implementation of technologies – conversely, other key aspects such as business processes alignment need to be well articulated and aligned before implementing e-government initiatives.

Though the results illustrated that the alignment model was not known or in existence, the researcher identified the gap that needed to be addressed by the Provincial Government in question. The researcher subsequently developed and tested a BPAM within the Provincial Government where the research study was conducted.

Research findings also depicts that the majority of the participants (equivalent to sixty two percent) claimed that one of the reasons why a business process alignment model was unknown, was due to reliance on the way in which all PSGs were derived and formulated within the Provincial Government in question. There are also issues concomitant with the formulation of these PSGs, in that those PSGs were not formulated in accordance with the needs of the people who are the recipients of the services from the Provincial Government in question.

Lack of communication and stakeholder engagement during the development of PSGs were the key issues that caused this misalignment. This gap was recognised by the researcher during data analysis. It appeared from the literature that the main objective for introducing e-government initiatives was to optimise organisational business processes and services and this could be achieved when information systems were tailored to support business processes (Paul & Serrano, 2003). The fact that the participants were not informed of the alignment of business processes to PSGs and services showed that alignment was not taken into consideration by the Provincial Government where the research case study was conducted.

There was a disparity with the reviewed literature, in that Affisco & Soliman (2006) claimed that a business process alignment model must exist and be documented, communicated visibly and known to the officials if benefits were to be accomplished. This view of Affisco & Soliman (2006) was justified by the majority of the participants who also said that a business process alignment model needs to exist, to be documented and communicated across the organisation. The researcher noted that there was a gap in the Provincial Government in question concerning business process alignment, since business a process alignment model was known by the majority of participants. Even though the majority of research participants noted that there was a need for a business processes alignment model, it proved that the knowledge of the organisation was still tacit within this specific Provincial Government.

Another significant finding showed that the majority (equivalent to eighty five percent) of participants claimed that there was no alignment of business processes to PSGs and services since an alignment model did not exist. Direct quotations from some participants: *“I will safety say, there is no alignment between business processes and Provincial Strategic Goals PSGs...”* P3, 2014); *“I think there is a misalignment between business processes and PSGs and due to the lack of standardised alignment model...”* P2, 2014); *“...I would say, currently there is no alignment because public services in the Provincial Government in question are delivered on an ad hoc basis...”* P4, 2014); *“I think that is major lacking in the organisation...”* P5, 2014”); *“I am not sure at this stage; I don’t know...”* P6, 2014); *“...there isn’t a documented business process alignment methodology; it is all stuck in the people’s*

head...” P8, 2014); “*no critical alignment at the moment...*” P9, 2014); “*...I think there is a bigger gap and it is already a problem regarding implementation of e-Government*” P12, 2014); “*No alignment model...*” P13, 2014); “*Not exist*” P1, 2014)).

Even though the organisation in question does try to align certain initiatives to PSGs, that alignment does not take it into consideration the alignment of business processes and services. The majority of participants (equivalent to seventy seven percent) claimed that most of the alignment that was done across the organisation was not explicitly documented and well communicated; the knowledge for the alignment “stays in the people’s heads”.

Direct citations from the participants: “*there aren’t documented business processes and it’s all stuck in the people heads*”, P5, P8 and P12, 2014. And this imposes a risk that the “*...knowledge of the organisation will be lost*”, P12 (2014).

Even though the majority (equivalent to sixty two percent) of participants claimed that they were aware of core and support business processes, they said that all core and support business process were not documented and aligned to services that they support. Poor management of the business process across the organisation was a concern that needed to be addressed. There is no enterprise-wide business process management system or a tool. The following direct quotation comes from the participants “*...all I can say is only tools that can be used to manage business processes are excel reports. Business process management is the still a gap in the Province and business processes are not explicitly documented*”, P5 (2014).

The current state of business processes was assessed using the business process assessment model developed by the researcher. The findings depicted that the majority of participants claimed that the current state of business processes within the Provincial Government in question was still at level two (semi-automated), which meant that only a few of the processes were automated, whereas the majority of business processes were not automated. Furthermore, most of the automated business processes were internal-facing or supporting business processes to improve internal efficiencies, but were not core business processes.

This assessment was further conducted using the maturity assessment of Paulk et al. (1993). The findings also showed that the current state of business processes in the Provincial Government in question was still at level two (repeatable phase). The majority of participants claimed that the Provincial government in question had not succeeded in achieving a fully automated business processes, because the current state of business processes maturity level still needed to be improved by the organisation to attain fully automated business processes.

Arising from the responses of the participants, it was confirmed that the alignment of business processes to PSGs and services did not exist in the Provincial Government in question. This would have a potential negative impact for the implementation of e-government initiatives in this Provincial Government. The research results was in line and validated statements made by the researchers Ulrica (2005) and Gordijn et al. (2003) who warned that if there was no alignment of business processes to PSGs and services in a Provincial Government, the organisation needs to be cautious to implement e-services or information systems that would not add value to business operations or would not benefit the services beneficiaries.

Thomas & Sommer (2002) also said that if organisational systems are not aligned to business processes and services, it means the organisation might not be able to meet client needs, as the systems are the interface between the organisation and the public. This shows that if the alignment of business processes to PSGs and services within the Provincial Government does not exist, effectiveness of e-government implementation would be challenging to achieve and no great benefits would be likely to be achieved. This gives an indication that if the Provincial Government wants to see real benefits of e-government implementation, business process alignment and maturity need to be improved.

Al-Shafi & Weerakkody (2010) also confirmed the previous claims by saying that the effectiveness of e-government depended on proper alignment of business processes to strategic goals and services of the organisation. The research results validated the statement of Janssen & Wagenaar (2003) that government institutions are failing to

provide citizen-centric e-services due to lack of proper alignment of business processes to organisational goals and services.

4.2 Best practices of aligning business processes to PSGs and services

The second research question was “What are best practices of aligning business processes to PSGs and services?”

Results revealed that most of the participants in the research case study (equivalent to sixty two percent) recommended that an effective way of aligning business processes to PSGs and services would be to define and unpack the meaning of Provincial Strategic Goals (PSGs) and break down the PSGs into objectives. Thereafter the organisation needs to start defining what services are required to support those objectives and then to define what business processes are needed for those objectives to be met. Lastly, roles and responsibilities should be assigned, resources and performance should be monitored and evaluation done. This recommendation correlates with the literature and the model that was designed and proposed by the researcher was in line with this.

4.3 The current state of alignment of business processes in a researched Provincial Government

The third research question was: “What is the current state of alignment of business processes in a Provincial government?”

The researcher used three elements from the literature review. These elements were tested within the Provincial Government where the research case study was conducted and research participants were asked to choose between the following elements:

- (i) manual business processes (level one);
- (ii) semi-automated (level two); and
- (iii) fully-automated business processes (level three).

The above elements were cited by Zairi and Sinclair (1995); Thomas & Sommer (2002) and Al-Omari (2006) as the easiest way to assess the current state of business processes in an organisation. According to findings related to the above question, the majority of participants (equivalent to sixty nine percent) claimed that the current state of organisational business processes was semi-automated, meaning some of the business processes were defined, repeatable and optimised. However, it was also noted that most of the optimised businesses processes were not citizen-centric processes or business processes, but rather support business processes which were optimised to improve internal efficiencies. Only a few participants (equivalent to thirty one percent) argued that the current state of business processes was still at level one (manual business processes) within the Provincial Government in question.

Janssen & Wagenaar (2003) stated that government institutions were failing to provide citizen-centric electronic services (via e-government initiatives) due to lack of proper alignment of business processes. This was validated by the researcher in that it was found that there was no alignment model to align business processes to PSGs and services within the Provincial Government where the study was performed. Most of the business processes that were optimised were internal-facing or support business processes.

The second maturity assessment approach that was used to assess the current state of business processes was the maturity assessment of Paulk et al. (1991). The overall maturity assessment results illustrated that the majority (equivalent to seventy seven percent) of participants indicated that the maturity of the business process in the Provincial Government in question was at level 2 (repeatable), while only a few participants argued that the maturity level of business process was at level 1 (initial state). Since the current state of business processes was still at level 2 within the Provincial Government in question; it can be said in line with the literature, that if the organisation does not have matured business processes, it will be challenging to implement effective e-government initiative (Davenport, 2005).

Participants eluded on issues that need to be addressed by the management of Provincial Government in question. Some of these key issues related to the current

state of alignment of business processes in the Provincial Government in question are briefly explained below:

Data analysis results confirmed that the majority of participants (equivalent to fifty four percent) claim that accountability was a concern that needed to be addressed by the Provincial Government in question regarding business processes across the organisation. The researcher also noted that business process ownership was not assigned properly across the organisation. That was instigated by the lack of proper business management tools across the organisation that was mentioned by the majority of participants (equivalent to seventy seven percent of the participants). However, the theory of Thomas & Sommer (2002) regarding business processes management in the public sector emphasises the importance of business process ownership and accountability, which is lacking in the Provincial Government in question.

The majority (sixty two percent) of participants claimed that business process mapping methodology did not exist. The researcher noted that despite the fact that the organisation had adopted a business process standard methodology, i.e. the Business Process Modelling Notation (BPMN), it was not well communicated and shared across the organisation. Hence the majority of participants claimed that business process mapping methodology did not exist. P1 & P4 indicated that Business and Process Analysts were still using different tools and methods when defining, designing, mapping and documenting organisational business processes. The majority of participants also indicated that there was no central repository where all organisational business processes were stored, managed and shared and the central tool to manage business processes for the organisation was not in place.

4.4 Aligning business processes to PSGs and services in a Provincial Government for effective e-government implementation

The fourth question was: “How should business processes be aligned to PSGs and services in a Provincial Government for effective e-government implementation?”

The researcher reviewed various literatures to identify an alignment model that could be potentially used to answer the fourth question. Yet, the researcher could not succeed in finding a suitable model that could be tested in the Provincial Government in question in order to address the stated problem. However, the researcher used various elements from the literature to develop a Business Process Alignment Model (BPAM) to align business processes to PSGs and services within the Provincial Government in question. The researcher proposed a BPAM which was tested during the research case study within the Provincial Government where the research case study was conducted. Figure 6 below depicts findings pertaining to the proposed BPAM.

Six alignment elements were identified by the researcher (RACI, Chief Directorates, Departments, PSGs, Support Services and Core Services) and were tested to assess whether all the identified elements would be effective in order to achieve alignment of business processes to PSGs and services in the Provincial Government in question. The elements emanated from the proposed model (see Figure 6) that was developed by the researcher. The elements used by the researcher in the proposed model are widely used in the South African public sector.

The overall results shown that the proposed BPAM would be effective if it could be implemented in the Provincial Government in question. The majority of participants equally agreed and strongly agreed across all six alignment elements for the proposed BPAM. Findings reflected that the proposed BPAM could probably address the current gap identified by the researcher regarding the current state of business process alignment in the Provincial Government in question. Figure 6 below illustrates how participants rated each element. More detailed findings per alignment element are presented in Figure 6 below.

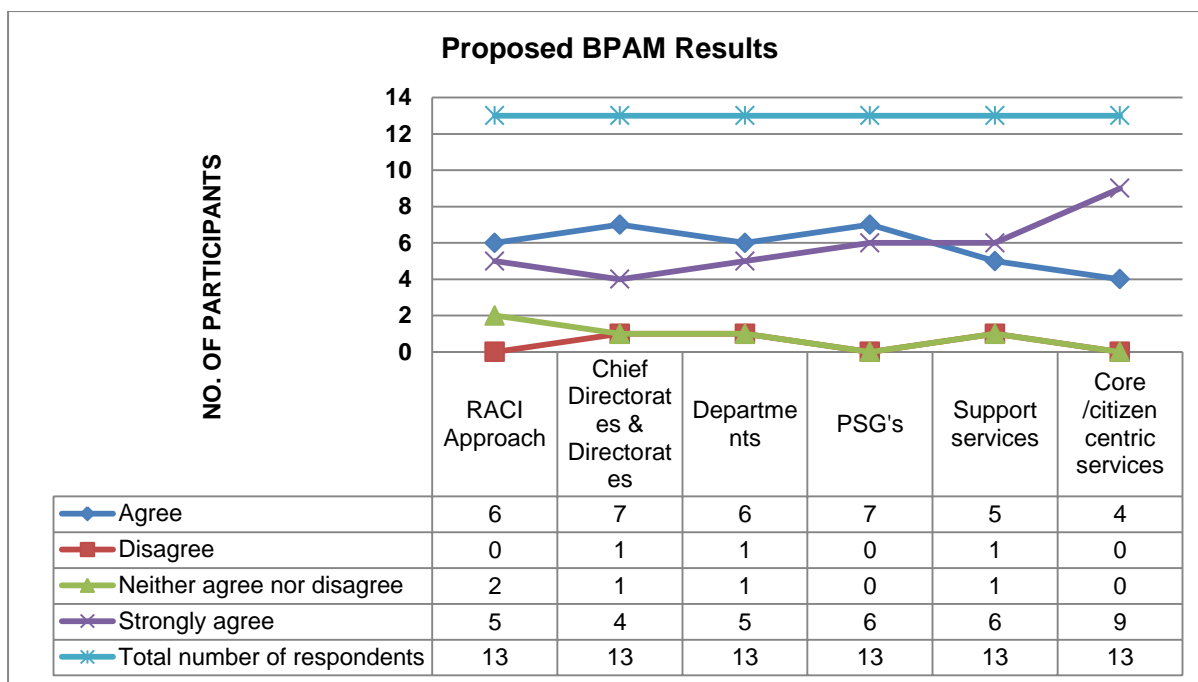


Figure 6: BPAM Research Results

The findings and analysis regarding each element are explained below:

- a) **RACI approach alignment element.** Out of thirteen participants who rated this element from the proposed BPAM, six participants agreed with this element and five strongly agreed that this alignment would be effective in order to achieve alignment of business processes to PSGs and services in the Provincial Government in question, while only two participants indicated that they neither agreed, nor disagreed.

The researcher concluded by claiming that this alignment element was effective and could be used for future assessment of alignment of business processes in the Provincial Government in question. The RACI approach alignment element was not modified, as research illustrated that this element was effective in order to achieve business process alignment. None of the research participants requested modifications pertaining to this alignment element. Results validated the claim that was made by Sommer et al. (2002); Affisco & Soliman (2006); Christensen & Overdorf (2000) and Al-Omari-H (2006), i.e. that the roles and responsibilities (RACI approach) are vital in order to enforce accountability regarding business processes. The research findings also validated this.

- b) **Chief Directorates and Directorates element.** Results showed that seven out of thirteen participants agreed that this element would enable the organisation to achieve alignment of business processes to PSGs and services in the Provincial Government in question. Four participants also strongly agreed with the responses of the previous seven participants pertaining to Chief Directorates and Directorates element, while only one participant was neutral by indicating neither agreement nor disagreement, and one participant differed with the previous participants in rating this element. Another participant disagreed by saying that this alignment would not be effective in order to achieve alignment of business processes to PSGs and services. However, the majority ruled out this opinion of a single research participant.

The researcher concluded that this alignment element would be effective and could be used in the proposed BPAM, which was justified in that the majority of participants overwhelmingly agreed and strongly agreed in favour of the Chief Directorates and Directorates element. The overall results pertaining to this element validate the statement of Ebrahim & Irani (2005), that business process integration across all spheres of the organisation is vital. The term 'sphere' in this context denotes either Chief Directorate or Directorate within the department, therefore, this element of alignment was not modified in the proposed BPAM developed by the researcher, since the research participants did not request any changes to this alignment.

- c) **Departments' element.** Six participants agreed that this alignment element was effective to address the issue associated with business process alignment to PSGs and services. The other five participants also strongly concurred with the previous six participants, as they indicated that they strongly agreed regarding this element. Only one participant was neutral and neither agreed or disagreed whether this alignment element would be effective. This finding was also in agreement with Ebrahim & Irani (2005) who said that business process integration across all spheres of the organisation was vital, and 'spheres' in this context denote various departments within the Provincial Government in question. Davison et al. (2005) & (Aalst, 2005) were

also in agreement with the previous conclusion that if there was no alignment of business processes to services, integrated services delivery across departments to citizens would be difficult to attain.

Stemming from the findings above, the researcher did not modify the department element and concluded by claiming that the department element was effective in order to achieve alignment of business processes to PSGs and services.

- d) **Provincial Strategic Goals (PSGs) element.** All participants indicated that this alignment element was suitable to be used in order to achieve alignment of business processes to PSGs and services. This finding validated the claim made by Ebrahim & Irani (2005) as well as Scholl & Klischewski (2007) that business process alignment across all spheres of the organisation is vital.

Without any hesitation, the researcher decided not to modify this element, as the results showed that all participants believed that the PSG element was fit for the proposed BPAM developed by the researcher.

- e) **Support services element.** According to research findings, eleven participants decided in favour of this element, by stating that this element would be effective when used to align business processes in the Provincial Government. Only two participants disagreed.

The researcher used the majority rating to prove that this alignment model should be not modified, nor removed from the proposed BPAM. The researcher concluded that the support services alignment element was fit for the proposed BPAM.

- f) **Core services element.** Results showed that all thirteen participants agreed that the core services (citizen-centric services) element was fit for the proposed BPAM and could be used to achieve business process alignment, which proved it fit for use in the proposed BPAM.

In a summary regarding the proposed Business Process Alignment Model (BPAM), the researcher concluded that the proposed BPAM could effectively be used by the Provincial Government in question to address the current gap in business process alignment to PSGs and services.

The literature also proved that if organisational business processes were not aligned to the core services that they are enabling, e-services or information systems would not add value to business operations and service beneficiaries (Ulrica, 2005 and Gordijn et al., 2003).

4.5 Application of the BPAM

Figure 7 below depicts the model that was proposed and tested by the researcher within the Provincial Government as a research case study in South Africa. The model shows four steps that need to be taken to achieve alignment of business processes to PSGs and services by the Provincial Government. This model should be used in conjunction with the business process diagnosis model which was developed by the researcher as well. The application of this BPAM is explained below:

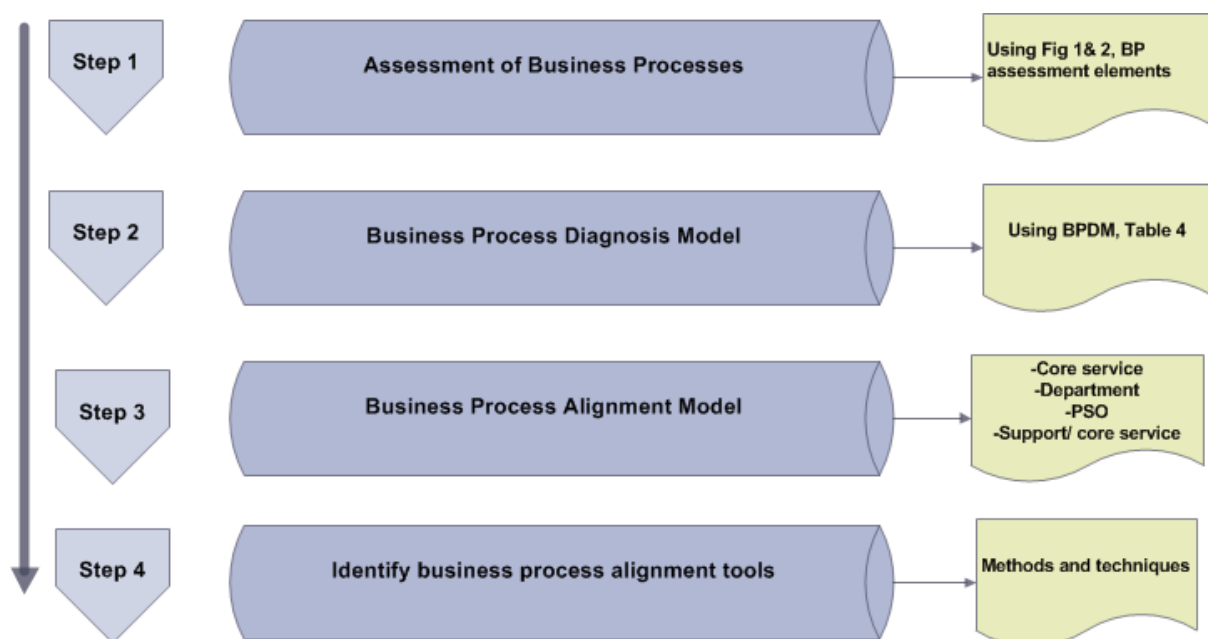


Figure 7: Business Process Alignment Model (BPAM) (Source: Researcher, 2014)

a) Step one: The researcher recommended that the first step would be to conduct business process maturity assessment using the extended proposed BPM Maturity Model of Rosemann and Bruin (2005), that has three focus areas: (i) maturity; (ii) scope; and (iii) factor (Figure 1). This proposed model is the extension of Paulk et al. (1993). The researcher further recommended that business process assessment should be assessed by using the researcher's assessment elements (see Figure 8 below), which are:

- I. Manual business processes (L-1 denotes level one);
- II. Semi-automated business processes (L-2 denotes level two); and
- III. Fully automated business processes (L-3 denotes level three).

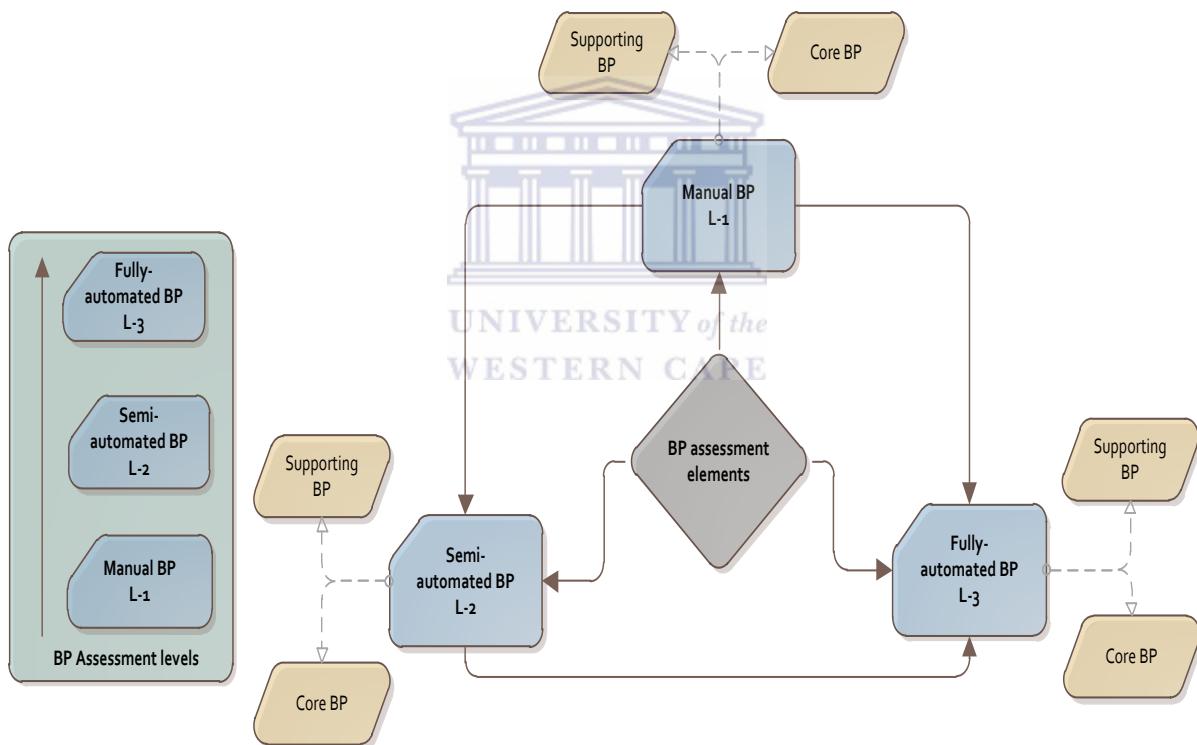


Figure 8: Business process assessment model {Source: Researcher}

It is vital that business processes should be properly defined and classified i.e. whether the business process is either a core business process or a support business process. The holistic view of business processes would enable management to make the right decisions regarding which business processes need to be prioritised for business process automation or optimisation.

- b) Step two: The researcher developed a diagnosis model (see table 13 below) to be used in conjunction with the BPAM. The researcher briefly explained in Table 13 below how each element should ideally be used.

Firstly, it is imperative to assess whether the accountability of organisational business processes is enforced through the RACI approach (Becker et. al., 2007). This is the first step in order to identify whether business process management and governance is in place, because if this approach is not applied; organisations found it challenging to monitor and manage business process performance.

Secondly, it must be identified which department/s and divisions (Directorate or Chief Directorate) are executing and rendering the same processes. This would assist the e-government implementation team to be well-informed about processes that are similar or are consumed by other departments and replicate the automated business process in other divisions and departments (Becker et. al., 2007). By understanding this interrelatedness, the e-Government team would be able to identify what processes need to be automated and what departments or divisions would be affected by this change (Jung, 2009).

Some organisational processes are formal; meaning that they are documented and followed, while other processes are informal, meaning they are not document; they are ad-hoc processes and consistency is not achieved when performing the same activities (Christensen & Overdorf, 2000). The e-government implementation team would be able to make informed decisions and would minimise duplication of business process automation. This would probably minimise costs for e-government implementation, since it would eliminate some of the business processes being replicated across the organisation.

Thirdly, it must be assessed whether organisational business processes do indeed depict which PSGs and services are aligned (Becker et. al., 2007). This assessment is vital to the e-government implementation team; hence organisational performance and maturity are assessed through PSGs of the departments and its associated services (whether they are supporting business processes or citizen-centric services/core services).

All PSGs have some Key Performance Indicators (KPIs) that are linked to organisational goals and objectives. This holistic view of organisational alignment will enable organisational decision makers (including the e-government implementation team) to make sound decisions regarding the processes or services that need to be integrated, prioritised and optimised for effective e-government implementation across the organisation (Dayal et. al., 2001). Seamless integration of services depends on business processes alignment and integration across departments (Lam, 2005; Davenport & Short, 1990).

4.6 Definition of key terms used in proposed the Business Process Diagnosis Model

This proposed model encompasses three types of business processes: (i) manual business process; (ii) semi-automated business process; and (iii) fully automated business. Ideally, these elements are used to identify the current state business processes within the organisation.

Level 1 – Manual business processes (BP)

This stage exists when all organisational business processes are not automated at all, meaning that everything is done in a traditional approach, that business processes are not all documented, that things are done ad hoc and processes are not standardised, neither are they followed. Christensen & Overdorf (2000) indicated that some business processes take place in an ad hoc fashion in order to fulfil certain requests for services. Organisational business processes are categorised into two types: (i) *supporting business processes* and (ii) *core business processes* (Becker et al., 2004). In the case of some business processes, it is not clear whether they are support or core business processes. All business processes and knowledge about them exist only in people's minds, due to the lack of documented business processes.

In government context, *supporting business processes* are those processes that enable employees to execute their work. Some of these supporting business processes are: human resources, skills development, employee pay remunerations, promotions, retirement services and so forth. Government institutions are given

mandates on the basis of the South African Constitution to deliver core services which are basic need to the citizens. Srivastava et al., 1999 explained that core business processes are business processes that create value for customers/citizens.

Furthermore, if they are implemented effectively, the realisation of organisational goals and objectives is usually achieved. The Provincial Government in question is mandated to render these core services to the citizens and businesses, providing education, health services, agricultural services, water, sanitation, human settlements, safety, social welfare, land and so forth as some of the core business processes for the public institutions in South Africa and the Provincial Government in question.

Level 1 – Manual BP exists in an organisation where neither core, nor supporting business processes optimisation are in existence, meaning that all activities associated with certain processes are done manually only. In order to understand the current status of these elements, the organisation would need an overall view of the amount of work that needs to be done regarding business processes automation. Furthermore, this exercise will enable the organisation to make informed decisions pertaining to resources (budget, people, effort, technology and tools) that are required to automate or optimise both core and supporting business processes.

Level 2 – Semi-automated business processes (BP)

This level would exist when some of the business processes are automated, but not fully automated from end to end, meaning the back-end systems are not integrated with the front-end systems. One of the examples of the semi-automated business processes is that for citizens to obtain a grant from Social Development, that citizen would need to physically go to the department in order to apply and fill in hard copies manually, while the internal employees would be using a grant system with automated processes as a service to capture information for the citizen.

The social grant business process automation is therefore insufficient in view of this scenario, because it should be possible for a citizen to apply for a social grant wherever they are situated, regardless of physical geographic location.

The Government's business processes would need to be integrated with those of other departments business for verification and other statutory requirements. Seamless business processes integration is fundamental (Srivastava et al., 1999).

It is imperative that such assessment be conducted, because this would enable the organisation to make informed decisions regarding business processes that are not fully automated. Furthermore, the gap, and the amount of work needed to fully automate those semi-automated business processes, must be identified. This would enable the Provincial Government to have a clear scope of the work to be done. Further, business processes integration points with other departments must be identified, in the event that business processes overlap with those of other departments.

Level 3 – Fully-automated business processes (BP)

This stage is achieved when all activities associated with business processes and associated services are executed through the use business information systems and other means of technology (Brewer, 2006). At this level, ad hoc processes and physical papers do not exist, because organisational business processes are fully documented, repeatable, managed and automated. The maturity of this level is dependent on level 2. If level 2 business processes are fully automated from end to end, then level 3 is achieved. During this phase, organisational business processes are optimised. Also, the maturity of this level depends on seamless integration of services across departments (Hazlett & Hill, 2003; Scholl & Klischewski, 2007). "By virtue of the integration, services would be comprehensive, effective, efficient, and faster than before for both government and citizens/businesses" (Scholl & Klischewski, 2007:4).

Table 13: Business Process Diagnosis model (Source: Researcher, 2014)

	Business Process (BP)	RACI	Division (Dir./CD)	Alignment elements				References
				Organisation (Department)	PSG	Support Service	Citizen-centric Service/core service	
Business Process Types	1. Manual BP							
	1.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflects core business processes being executed.	Depts. conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen-centric service	Researcher
	1.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflects support business processes being executed.	Depts. Conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen centric service	Researcher
	2. Semi-automated BP							
	2.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflect core business processes being executed.	Depts. Conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen-centric service	Researcher
	2.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflect support business processes being executed.	Depts. Conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen-centric service	Researcher
	3. Fully automated BP							
	3.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflect core business processes being executed.	Depts. Conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen-centric service	Researcher
	3.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflect Support business processes being executed.	Depts. Conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen-centric service	Researcher

Step 3: Once step one and step have been completed, the researcher recommends that in order to achieve the alignment using BPAM, each business processes should be aligned to each alignment as follows:

- Business process is aligned to Department, Chief Directorate and Directorate.
- Business process is aligned to Provincial Strategic Goals.
- Business process is aligned to core services.
- Business process is aligned to support services.

Once the business processes are aligned to all elements outlined in the BPAM, then step 4 is required to ensure that effective tools and methods are in place for the proper management, automation and alignment of business processes to all alignment elements defined in the proposed BPAM developed by the researcher. Tools are vital in order to store, share and communicate the aligned business processes across the organisation. One of the challenges that were noted by the participants was the lack of proper central tools and communication. Therefore, these tools and methods would be utilised as a central means for access and diffusion of business process management across the organisation. Furthermore; these tools will be captured in the memory of the organisation to ensure that organisational knowledge is stored and managed as a strategic asset.

4.7 Summary of Chapter four

The overall results of this research case study revealed that there was no alignment of business processes to PSGs and services in the Provincial Government where the research was conducted. One of the reasons for this misalignment was the lack of a proper alignment model to be used across the organisation. The research results also illustrated that the current state of business processes maturity across the organisation was still at level 2 (repeatable stable).

This was mainly due to lack of assignment of roles and responsibilities, undocumented business processes, poor communication, lack of central view and the management of business processes across the organisation. It was found that the Provincial Government did not have a proper tool to manage all business processes of the organisation. This hampers the ease of access, sharing,

referencing and re-usability of existing business processes across the organisation. The literature also validated that even though it was clear what e-government initiatives could offer to public institutions, the most challenging function was to align e-government initiatives to business objectives and processes (Koh et al., 2006; Jr & Sommer's, 2002; Venkatraman,1994; Goeken et al., 2009).

The proposed BPAM that was developed by the researcher, was tested and accepted by the Provincial Government in question to address the gap identified in Chapter one. The participants did not require that the proposed BPAM be amended; it was recommended and accepted that the model needs to be kept unchanged in order to achieve proper alignment of business processes to PSGs and services across the Provincial Government in question.



5 CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Objectives revisited

5.1.1 Background

Adesola and Baines (2005); Affisco & Soliman (2006) as well as Davenport & Short (1990) stated that the introduction of e-government has an impact on organisational business processes, as often the public sector organisations need to redesign, realign and evaluate their existing business processes. Affisco and Soliman (2006); il-García & Pardo (2005) also said that as governments are trying to improve the effectiveness and efficiency of their services, they are increasingly deploying information and communication technology (ICT) to support their operations through the notion of electronic government or e-government. The e-government team was tasked by the Provincial Government to implement e-government initiatives, claimed that it was not clear whether implementation of e-government initiatives would be effective.

The e-government team then requested an in-depth academic study and recommendations regarding the current state and the alignment of business processes across the organisation to enable them to conclude whether implementation of e-government initiatives would indeed be effective when implemented across the Provincial Government in question. The Provincial Government where the research case study was conducted, anticipated fully automated e-services by introducing e-government (Affisco and Soliman, 2006; il-García & Pardo, 2005).

However; e-services have various dependencies, such as technology, user adoption, e-literacy, organisational structure, business processes, digital divide and so forth. The scope of this empirical research case study was, however, narrowed to the business processes domain as set out by Adesola & Baines, 2005; Amit & Zott, 2001. According to Dayal et. al. (2001:2), these changes have a significant impact on business processes. The researcher was tasked to conduct a case study on the

alignment and maturity of business processes of the Provincial Government in question. The main research objectives of the case study were:

- To assess the current state of alignment of business processes in a Provincial government, the empirical setting of this research.
- To identify the way to align the governmental business processes to the Provincial strategic goals (PSGs) and services for an effective e-government implementation.
- To propose a model for alignment of the governmental business processes to the Provincial strategic goals (PSGs) and services.

The researcher firstly conducted a literature review to determine whether there was any study conducted on this nature to address the stated problem outlined in Chapter one. However, the researcher was not able to obtain a relevant assessment model for business process alignment. Then the researcher defined the research objectives based on the outcomes of the literature reviewed and managed to find models to assess the maturity of business processes as discussed in Chapters two and three. Yet, there was no model in existence at that stage to assess the alignment of business processes in the public sector. The objectives were defined, based on the existing business process maturity models and the gap identified due to non-existence of a business process alignment model. The researcher defined three key objectives that needed to be achieved at the conclusion of this study. These three key objectives are listed and discussed below:

5.2 Reaching the first research sub-objective

The first research objective was to assess the current state of alignment of business processes in a Provincial Government, the empirical setting of this research.

The researcher conducted an in-depth literature review in order to identify what models could possibly be adopted by the Provincial Government in question to assess the current state of alignment of business processes to PSGs and services. However, there was a gap in the existing literature regarding the studies of this nature that had been undertaken. The researcher used literature reviewed to derive

a business process alignment assessment model, and derived a series of business process alignment elements which were piloted to a group of people and approved by the Supervisor who was allocated to guide the researcher during this case study. The researcher identified alignment elements from the literature reviewed and used those elements to develop a model. These business process alignment elements are:

- a) Core services
- b) Support services
- c) Departments
- d) Chief directorate or directorate
- e) RACI approach application
- f) Provincial Strategic Goal (PSG)
- g) Process automation (semi or fully automated business processes).

These elements were discussed in detail in Chapter four regarding the application of the proposed business process alignment model (BPAM) by the researcher. The researcher further conducted interviews with research participants to identify the current state of business processes maturity across the Provincial Government. The researcher used the Capability Maturity Model developed by Paulk et al. (1993) to determine the current maturity of business processes across the organisation. The model consists of five maturity levels of which are:

- a) initial,
- b) repeatable,
- c) defined,
- d) managed, and
- e) the optimised stage.

The results pertaining to this research objective demonstrated that the majority of research participants validated that in the current state of affairs, business processes alignment did not exist and the business process maturity level was at a repeatable stage at the time when this research case study was conducted. The researcher concluded that there was *no alignment of business processes to PSG and services.*

and the current state of maturity of business processes within the Provincial Government was at repeatable stage.

5.3 Reaching the second research sub-objective

The second objective was to identify the way to align the governmental business processes to the Provincial strategic goals (PSGs) and services for an effective e-government implementation.

The researcher identified alignment elements from the literature review, not a model and used those elements to develop a model. These business process alignment elements are:

- h) Core services
- i) Support services
- j) Departments
- k) Chief directorate or directorate
- l) RACI approach application
- m) Provincial Strategic Goal (PSG)
- n) Process automation (semi or fully automated business processes)



The participants were asked interview questions in order to determine whether they were able to identify the way to align business processes to PSGs and services for effective e-government. The researcher found that during the time of the research case study, the alignment model did not exist and the way to align business processes to PSGs and services was not known either. Therefore the researcher developed an alignment model consisting of the alignment elements mentioned above and this alignment was tested in the Provincial Government in question to determine the effectiveness and applicability. The outcome of the research objective was met, since the researcher was able to develop and test the model in the Provincial Government in question. The researcher concluded that there was no business process alignment model that was used by the Provincial Government in question and a new business process alignment model for the public sector was developed by the researcher in 2014.

5.4 Reaching the third research sub-objective

The third objective was to propose a model for alignment of the governmental business processes to the Provincial Strategic Goals (PSGs) and services.

This research objective was met since the researcher managed to develop business a process alignment model (BPAM) which is depicted in Figure 9. The BPAM was developed and proposed by the researcher to be adopted by the Provincial Government in order to address the gap that was identified in Chapter four. The results showed that the BPAM was accepted by the research participants as a model that could address the gap that was identified by the researcher within the Provincial Government in question. The research participants accepted the proposed BPAM without any changes to it.

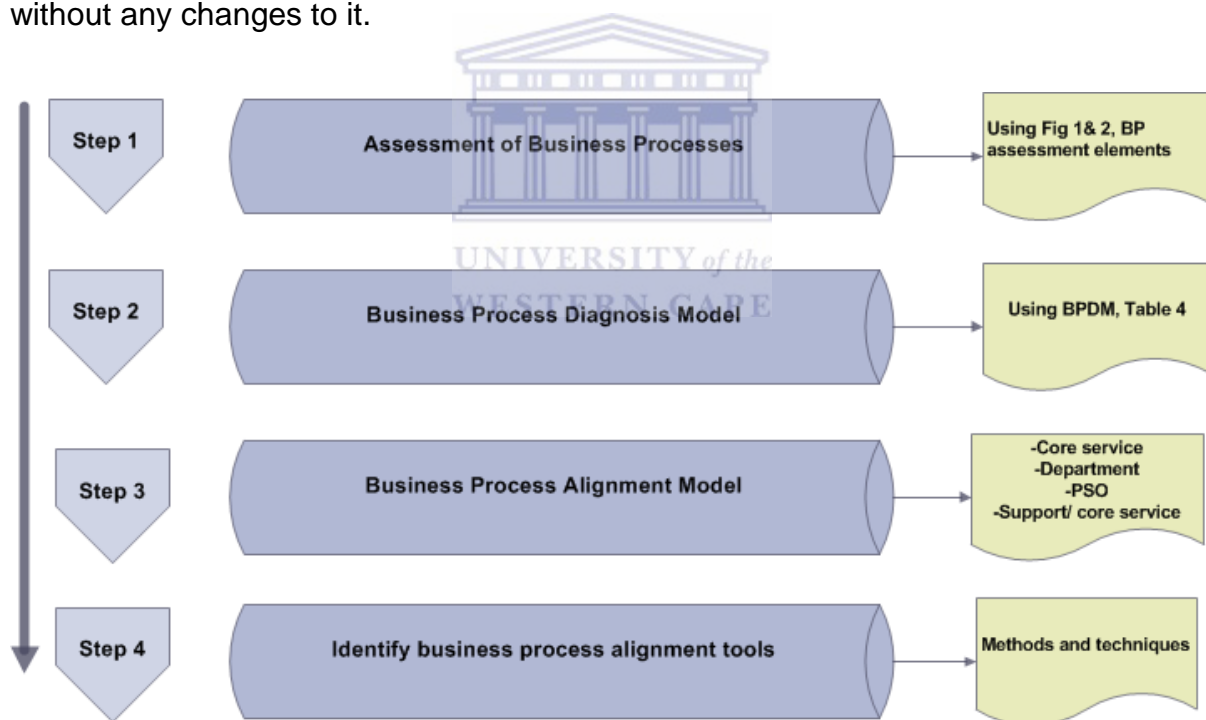


Figure 9: BPAM (Source: Researcher, 2014)

The above BPAM is utilised in conjunction with business process diagnosis model which is also explained in Chapter two and the application of this model is explained in Chapter four. The researcher concluded by developing a new model and the model (BPAM) was tested and accepted by the Provincial Government in question.

5.5 Contribution of this study

5.5.1 Practical

- The proposed BPAM could be used by the Provincial Government in question as well as by other Provincial departments in order to achieve alignment of business processes to PSGs and services.
- The proposed model could be tested in the Local Government (LG) within South African government for its applicability in the LG.
- The proposed BPAM could be used by other Provincial Governments within South Africa.
- The proposed BPAM could enable the Provincial Government's e-government team to effectively implement e-government initiatives, through the use of the proposed BPAM to align business to PSGs and services.

5.5.2 Academic

- The outcome of this research case study contributes to the body of knowledge of business process management in the public sector and also overlaps to business alignment to ICTs.
- It is envisaged that this research will add value to the existing knowledge in the research area of e-government by a better in-depth understanding of the business processes alignment for an effective e-government implementation at the provincial level.

5.6 Limitations of this study

This research is limited to one Provincial Government in South Africa where the interviews were conducted to gather information and the proposed BPAM was tested. This will inevitably limit generalisation of the findings of this study.

5.7 Recommendations for further research

The main objective of this research was to assess the current state of business process alignment to PSGs and services, and to identify an effective the way to align these processes for an effective e-government implementation. This main objective

was met through the proposed model which was tested and accepted by the Provincial Government in question. However, future research is required to investigate or define maturity assessment for business process alignment to ensure that continuous improvement pertaining to the alignment of business processes to organisational goals and services is attained. It is recommended that a similar research study be conducted in the Local Government as well, since both these spheres of government within the Provincial Government in question do implement e-Government initiatives. Furthermore, some of the Provincial ICT initiatives are transversal and do overlap to the Local Government.

5.8 Final concluding remarks

If the issue of misalignment of business process to Provincial Strategic Goals and services still persists in the Provincial Government in question, there would be a misrepresentation of services via e-government portals. This could result in the failure of e-government initiatives to meet intended objectives of the Provincial Government. Alignment of business processes to PSGs and services is a fundamental issue that needs urgent attention from the Provincial Government in question if they would like to succeed in moving to the e-services environment as anticipated by the e-government team for the Provincial Government where this research case study was conducted.

The researcher recommends that BPAM model be fully implemented by the e-government team with the assistance of other relevant key stakeholders such as; the Process Design and Improvement Directorate.

The researcher also recommends that business process management is prioritised, because e-services are dependent on the maturity of organisational business processes. Proper tools and methods need to be implemented across the organisation.

Furthermore, roles and responsibilities need to be clearly defined and the RACI approach is an ideal to achieve this. Various communication methods and techniques are used by the Provincial Government in question to communicate all

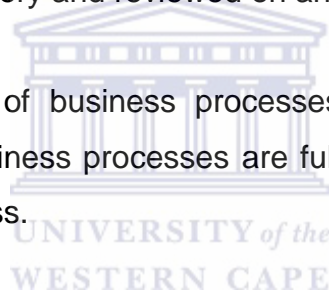
business aims, strategic goals, objectives and business processes across the organisation.

A central repository for business processes and services is implemented in order to reduce redundancy and promote ease access to information.

A clearly defined service catalogue for all services rendered by the Provincial Government is in place and those services are mapped back to processes, PSG, departments and roles and responsibilities is assigned.

Business process architectures of all the departments across the Provincial Government in question are well defined, modelled and documented for future referencing purposes. Business process architecture is well articulated on the Enterprise Architecture repository and reviewed on an annually basis.

Lastly, maturity assessment of business processes is conducted annually, and initiatives associated with business processes are fully implemented, managed and evaluated for their effectiveness.



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6 APPENDIX 1: INTERVIEW TRANSCRIPTS

6.1 P2: Interview Part one

Interview 1 of 2 with ABC Employees
Recording: Voice004
Site: ABC participant meeting room
Data collection method: Formal interview
Data collection date: 21 July 2014
Data collector: Thabani Kunene
Transcriber: Thabani Kunene
Interview duration: 18 min and 11 seconds
I: Interviewer
P2: Participant two

(I) Interview part one is about to assess the current state of business process in your organisation.

1. *(I) What is the process or method used for the assignment of business process ownership in order to establish managerial accountability in your organisation?*

(P)The answer is I don't know but I assumed we use RACI chart and it's difficult to say whether in all the places we use RACI and it's not clear how the process ownership is being assigned. Or it could be a legislative mandate. The assignment of business process ownership is not clear.

2. *(I) What business process methodology/tool is used by your organisation to manage business processes?* (P2) It will depend on which part of the organisation, since the Organisational Design they have their own methodology. I am not sure whether that same methodology is used by other departments. I think it does exist, don't think is universally implemented.

3. *(I) How can you define the current state of business processes alignment to PSG' and services?* (P2)I think, there is a misalignment because how the Provincial Strategic Goals are derived at, is separate from the administration. They are arrived at politically or from the mixture of political and administrative lead to the PSG's and from the PSG's people start defining projects...it's often project not services. If you defined services, you will define business processes and assign business process ownership. The way it is done, they start define project and define business process, somewhere to the conclusion of project, someone starts by defining business processes. The alignment of business processes to PSG's is weak at the moment because of the approach. The business processes might speak of something things

and PSG's speak of something else. The process of getting those things aligned might take some time. Because from PSG is project and from project is trying to articulate those business processes in order to align... it's not about defining of project first and business processes later. There's a bit of misalignment there.

4. (I) *What initiatives you think could be proposed regarding your organisational business processes?* (P2) The first initiative is to start with PSG's and define what the Provincial Strategic Goals are. From the goals then you break them down into objectives, on the objectives you start saying what services or project you need in order to support those objectives. Then, from there you start by defining business processes that need to exist for those objectives to be met. Assign roles and responsibilities and assign resources and do monitoring and evaluation. So, the articulation of business processes must be either part of PSG's processes or must stem immediately after the PSG process. Someone has to define business processes and mapped the business processes that need to happen and then, assign roles and responsibilities, assign resources and monitor evaluate progress.

5. (I) *From the table below, which level of business processes do you think your current organisational business processes are at?*

Please select one that is applicable.

Level	Type	Level description	Tick (X)
1.	Manual business processes	Exists in an organisation whereby both core and supporting business processes automation or optimisation does not exist.	
2.	Semi-automated business processes	This level exist when some of the business processes are automated but not fully automated from end to end, meaning the back-end systems is not integrated with the front-end.	A (P2)
3.	Fully automated business processes	is achieved when all activities associated with business processes and its associated services are being executed through the use business information systems and other means of technologies	

6. (I) *Through you understanding of business processes of your organisation; which maturity level do you think your organisation is at? Please select one from the following maturity levels:*

No.	Maturity level	Maturity description	Tick (X)
1.	Initial state	The process is ad hoc. Few activities are explicitly defined, and success depends on individual effort and heroics.	A (P2)
2.	Repeatable	Basic project management processes are established to track cost, schedule, and functionality. The necessary discipline is in place to repeat earlier successes.	
3.	Defined	The process for both management and engineering is documented, standardized and integrated by an organization methodology.	

4. Managed	Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.
5. Optimised	Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.

(Source: Paulk et al., 1993).

6.2 P2: Interview Part two

Interview part two is to conduct a research in your organisation, particularly for business processes alignment to Provincial Strategic Goals (PSG's) and services. And, e-Government implementation.

1. *(I) What are "best practices" or methods used for the alignment of business processes to PSG's and services? (P2) Yes, I think the method that we are using is starting with Provincial strategic goals and this is not a best practice but it's just a method. You come up with PSG's and from there you allow the business unit within the departments to articulate the contributions to the PSG's and how they going to reach the goals and objectives. From there you need to start working with the project that will meet PSG's. It's not the best practise because business processes are often not determine in that process they usually come later on when people are trying to implement things and the business processes might not be aligned to PSG's but aligned to the goal of the project and that project might minor a contributor to the over PSG. The best practice again might be to do to do that process again, after you articulated PSG's and objectives. You start braking down possible services and things that need to happen within the organisation. And, then from there you can start mapping out business processes and the business processes would tell you who is responsible and what project you possible need to be in place and making sure that service is delivered. The best practice partially exists.*
2. *(I) Follow-up question for the above question; if it does not exist, what would be a right way or approach to align business processes to PSGs and services? (P2) Partially exist.*
3. *(I) What method or technique is used to classify business processes in your organisations? (P2) I am not aware of anything for me; it is very difficult to answer. I suspect we do, but I don't know.*

4. (I) Are you aware of organisational core business processes? (P2) Yes /No or not sure.
5. (I) Are you aware of organisational support business processes? (P) Yes /No or not sure.
6. (I) Do you think alignment of business processes in your organisation would be achieved through using the following alignment elements:

Please select relevant rating.

P2 rating

No.	Element	1.Strongly disagree	2.Disagree	3.Neither agree nor disagree	4. Agree	5.Strongly agree
1.	RACI method				4	
2.	Directorates or Chief Directorates		2			
3.	Departments			3		
4.	Provincial Strategic Objective				4	
5.	Support services			3		
6.	Core services/ Citizen-centric services				4	

Using Likert scale



E-government implementation

1. (I) What would be the impact of implementing e-government initiatives based on the current state of business processes, PSG's and services across the provincial government? (P2) I think the impact would that we will achieve partially successes and the reason for that we can some successes maybe in rendering technical or technological base solutions. However, they would be some gaps in terms of what is happening at the back-end. So you will succeed in creating presentation area or layer saying these are services that we provide but we will struggle in delivering services efficiently in the background because business processes will be ill-defined roles and responsibilities will be not as firm as we would like to be. If you take a simple service such as applying for a drivers licence. If you do this using e-Government, when the e-Government has been defined, yes you can have an ICT enabling service. But, what ICT is introducing is a lot of efficiencies if you

don't have roles in the background to define business processes differently, so to work differently, for example; you have to look at e-mail, you have to check this database and you have to do all those processes and responsibilities at the background. All you can do is e-Government is to enable those service but is based on non-optimal business process and non-existence roles. All you gonna have is just a presentation layer, is not gonna be an efficient service. The danger is that we have now is implementing e-Government services without articulated business services is that we will have partial successes.

2. (I) *What would be an effective way to implement e-government strategy initiatives across the Provincial government based on the current state of business processes and services?* (P2) So the best way will be to go back to PSG's, define objectives and from there come with project or services and for each service of which will have a project mapped out business processes that are required. Not that business process for the department but end- to end business processes. So if it's a service that says, deliver social grant to a child or mother, map the full process including all the departments that are involved in the provision of that service. Once you have that map then, people working in IT or ICT can come and say this is where we can help to automate that process more efficient. But, the nice thing that we would have is the full defined business processes where all different stakeholders know their required contribution in the process and required response level and required skills in the process. So if it does not work, you can always go back to the process and note that this does not work. So that would be the best way of implement e-Government initiatives. So we will implement them once, business processes and services have been defined. E-Government will come by improving those services by automating using IT by increasing delivering platforms, through internet, mobile and through access channels. So one of the easiest ways of implementing e-Government is to define and designed services based on strategic goals and using ICT's to enable the delivery of that services.

6.3 P3: Interview part one

Interview 2 of 13 with ABC Employees
Recording: V005
Site: ABC employee meeting room
Data collection method: Formal interview
Data collection date: 21 July 2014
Data collector: Thabani Kunene
Transcriber: Thabani Kunene
Interview duration: 26 minutes and 07 seconds
I: Interview
P3: Participant three

(I) Interview part one is about to assess the current state of business process in your organisation.

1. *(I) What is the process or method used for the assignment of business process ownership in order to establish managerial accountability in your organisation? (P3)*

If I can look at it, I am gonna look at it at two perspectives. One, given a knowledge of Planning and Development team, uhhm, if I can start with that first; given that I have been here since April, I spent time observing where are the gaps and where the areas of improvement are because that is part of my role. I think, definitely internally there has been a sufficient in place on the departmental processes in order to deliver the services.

So they are other processes that they don't used in other departments that are inside documentation and how to do certain documentation like delivering the ICT plan and what the process is. But, from the Business Analyst perspective where you start and where you end, what are the inputs and what are the outputs. So, that I think is or there are gaps there that we could address and definite areas of improvement. And, in terms of the ownership of it, I would make an assumption that the Lead of that team like Zee for instance will own that process of the BA's. But I don't know whether my assumption is correct or actually someone like Lee has to actually own that process or we just executors.

There is definitely an area there that there is a gap in terms of knowing where the process is particularly owned. If I can look at the department of Health perspective, I spent the last three months with the department of Health and a lot of our conversation goes around business processes. And it's clear that it's so very immature space for them. They do acknowledge that they need to start documenting their current layer of lending of processes and with that, I don't think there is clear

ownership in their space. What I think they do, per project bases or per initiative bases there is an owner and that owner driver's similar conversation around business processes. But there is no central point that shows all current business processes, because the department of Health is huge. What I have seen, there not a lot of emphasis around business processes.

2. *(I) What business process methodology/tool is used by your organisation to manage business processes?* (P3) From Planning and Development perspective, Uhhm, Visio is the tool that is used and BPMN is the preferred modelling language. What is lacking there is that, we got a fairly new consulting BA's and constantly joining and we got three Junior BAs. The missing bit is, yes we have a modelling standard but it is not communicated. It is not communicated to the people who are joining the team, that is a standard that is used and if there are template for BPMN modeller and the stencils...that need to be formulated. If I look at Health, there isn't a standard a tool and standard methodology because I have seen some of them using like process flows, some of them using pictures and actual images. That I wanna show a flow of information from the Hospital to emergence services. There will use a picture of Hospital and an ambulance. There will use a method that is applicable to that conversation, they aren't standard or specific tools in Health.

3. *(I) How can you define the current state of business processes alignment to PSG' and services?* (P3) Based on the level of my exposure, I am gonna talk about the Health first, their focus on business processes is layered. I will safely say, there is no alignment between business process and strategic goals. They might have some processes mapped in their facilities like hospitals and clinics and it is the working progress and I know in some of their clinics. They actual have an external business consultant who is driving their workflows within the clinics but this is to improve on their operations. It's not necessary aligning to any strategic goals.

4. *(I) What initiatives you think could be proposed regarding your organisational business processes?* (P3) I like that question, I am very passionate about business processes; I believe everything has to start with business processes. Because, I think internally in ZXX there is that role and I think that information it existing somewhere. What I think, is to understand the as-is business processes per division within that department. So like, Planning and Development, what are they business processes and roles and responsibilities, inputs and outputs...everything that goes with as-is. And, then identify what are the gaps are and proposing the improving.

Work improves efficiencies and I think that will improve the overall of services that we offer. So that is not necessarily translating that into automating something but it's about understanding current process where are the gaps are and filling those gaps. From Health perspective or even on a larger scale on the our internal department, they need a larger scale across Health, whether it's a back-end business process, like HR, Finance , procurement and information management and understanding those as-is business processes. But even more critical because we are strategic thinking and diving in Health is moving towards more people centric and patient centric. So it's about understating the ground level what are those business processes are; clinics, hospitals and emergency services. Mmmh understanding stats where there are possible spikes in death rates because people they just wait for a service, whereby if the process what optimised, you could have possible saved a life. So it's like speak of life or death, I think whereby health will benefit is having an initiative where it looks at the as-is business processes and it will take a while but they will need to prioritise where are the pain points are and identify the gaps and proposed the improvements and build efficiencies. Once they have an efficient business process model, they can look at tools and technology that they can help to improve it further. So that will be my personal view.

5. (I) From the table below, which level of business processes do you think your current organisational business processes are at?

Please select one that is applicable.

Level	Type	Level description	Tick (X)
1.	Manual business processes	Exists in an organisation whereby both core and supporting business processes automation or optimisation does not exist.	
2.	Semi-automated business processes	This level exist when some of the business processes are automated but not fully automated from end to end, meaning the back-end systems is not integrated with the front-end.	A (P3)
3.	Fully automated business processes	is achieved when all activities associated with business processes and its associated services are being executed through the use business information systems and other means of technologies	

6. (I) Through you understanding of business processes of your organisation; which maturity level do you think your organisation is at? Please select one from the following maturity levels:

No.	Maturity level	Maturity description	Tick (X)
1.	Initial state	The process is ad hoc. Few activities are explicitly defined, and success depends on individual effort and heroics.	A (P3)
2.	Repeatable	Basic project management processes are established to	

	track cost, schedule, and functionality. The necessary discipline is in place to repeat earlier successes.
3. Defined	The process for both management and engineering is documented, standardized and integrated by an organization methodology.
4. Managed	Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.
5. Optimised	Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.

(Source: Paulk et al, 1993)

6.4 Interview Part two

(I) Interview part two is to conduct a research in your organisation, particularly for business processes alignment to Provincial Strategic Goals (PSG's) and services. And, e-government implementation.

7. *(I) What are "best practices" or methods used for the alignment of business processes to PSG's and services? (P3) COBIT and ITIL,*
8. *(I) Follow-up question for the above question; if it does not exist, what would be a right way or approach to align business processes to PSGs and services? (P3) I don't know whether we have any alignment tool or method in place. Understanding the PSG's, it's almost what you wanna be. So its understanding where you are in relation to those PSG's, identify the gaps and then put everything in the building blocks on how to reach that alignment. So where the misalignment and understanding is how big is the gap is and then determine priorities, need to narrow the gap and determine what actions need to be taken to fulfil those gaps.*
9. *(I) What method or technique is used to classify business processes in your organisations? (P3) Ooh okay, when you say classify business processes; what you mean? I don't know the answer, because you need to explain what you mean by classifying business processes.*
10. *(I) Are you aware of organisational core business processes? (P3) Yes /No or not sure.*
11. *(I) Are you aware of organisational support business processes? (P3)Yes /No or not sure.*
12. *(I) Do you think alignment of business processes in your organisation would be achieved through using the following alignment elements:*

Please select relevant rating.

(P3) ratings

No.	Element	1.Strongly disagree	2.Disagree	3.Neither agree nor disagree	4. Agree	5.Strongly agree
1.	RACI method				A	
2.	Directorates or Chief Directorates					A
3.	Departments					A
4.	Provincial Strategic Objective				A	
5.	Support services					A
6.	Core services/ Citizen-centric services					A

Using Likert scale

E-government implementation

3. *(I) What would be the impact of implementing e-government initiatives based on the current state of business processes, PSG's and services across the provincial government? (P3) My personal view is, we are not ready as an organisation yet, without understanding our current business processes. So, once we understand our current business processes and we can identify where are the gaps are; purely thinking process not slapping technology on top of it and improve on those processes as the part of that improvement journey. We can then, plug in e-Government processes on top of that technology to support it. But, my personal view based on what I have seen, if we are pushing to go smarter with technology without addressing where we are we will possible spending money effort on items of either is not really business critical or its not mission critical for example in Health if you were to give a ...Mmmh, I don't know...the emergency service guide or a tablet to work with to deal with a patience, how do you assess whether its gonna add value to the patients or its going to delay the process further. So for me, it is critical to understand business processes than adding technology and as a part of the roadmap to getting to the new improved processes and doing that exercise then adding e-government services.*
4. *(I) What would be an effective way to implement e-government strategy initiatives across the Provincial government based on the current state of business processes and services? (P3) So for me, an effective way will be adding that initiative as a part of the journey to get where would like to be or*

need to be as an organisation. So, once we have as-is embedded down and we looking at the future will be as a part of the to-be picture. The process of identify the as-is and the gaps and we can consider the e-government as part of that picture. Personally, the right journey is to understand where we want to be and overlaying it and working in conjunction of knowing where we are and it could add value

6.5 P4: Interview part one

Interview 4 of 13 with ABC Employees

Recording: V006

Site: ABC employee meeting room

Data collection method: Formal interview

Data collection date: 21 July 2014

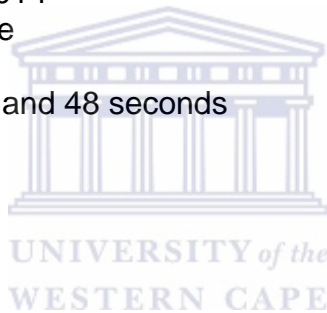
Data collector: Thabani Kunene

Transcriber: Thabani Kunene

Interview duration: 31 minutes and 48 seconds

I: Interviewee

P4: Participant four



6.6 Interview Part one

Interview part one is about to assess the current state of business process in your organisation.

1. What is the process or method used for the assignment of business process ownership in order to establish managerial accountability in your organisation? I don't know dear.
2. What business process methodology/tool is used by your organisation to manage business processes? Heeh, I will be lying to you... I never have seen it in this Provincial government.
3. How can you define the current state of business processes alignment to PSG' and services? Ok, because currently we don't necessarily have document business processes, it's only now that the organisation is busy with the project to document and map our current business processes. And, Hum...honestly to check the alignment of business processes is bit tricky because you definitely have nothing to go by. I can't say there is an alignment or not. If I were to give my opinion and view based on my experience, I would say currently there is not alignment because public services in the Provincial government are delivered on the ad-hoc basis. To such an extent that the process that is followed to deliver a same service to different citizens, it differs all the time. Like, if we say we are both beneficiaries of social grants, when I speak to you as beneficiary, you give a process and I go in to apply for the civil

service and I get a complete different process, that's why I say to as a beneficiary there is no alignment.

4. What initiatives you think could be proposed regarding your organisational business processes? Okay, first of all as an organisation we need to be clear about the strategic objectives and that should be done an enterprise wide exercise. Yes, we do have strategic objectives, the new strategic objectives, but the challenge that I have with them at the moment is that there is no collaboration. Everything is done in silo approach, at an Executive level politically and internally as much as in some instances there is buy-in and commitment, there is no active participation. For them is about to make sure that we have budget and the funds are available. In terms of participating (internal employees) in the process to ensure that everything that has been identify as strategic objective is carried through, I don't see them featuring anywhere. The only time you see them is when the budget is decided and then at the end of the financial year when we are reporting this is what has been done.

5. From the table below, which level of business processes do you think your current organisational business processes are at?

Please select one that is applicable.

Level	Type	Level description	Tick (X)
1.	Manual business processes	Exists in an organisation whereby both core and supporting business processes automation or optimisation does not exist.	
2.	Semi-automated business processes	This level exist when some of the business processes are automated but not fully automated from end to end, meaning the back-end systems is not integrated with the front-end.	A
3.	Fully automated business processes	is achieved when all activities associated with business processes and its associated services are being executed through the use business information systems and other means of technologies	

6. Through you understanding of business processes of your organisation; which maturity level do you think your organisation is at? Please select one from the following maturity levels:

No.	Maturity level	Maturity description	Tick (X)
1.	Initial state	The process is ad hoc. Few activities are explicitly defined, and success depends on individual effort and heroics.	A
2.	Repeatable	Basic project management processes are established to track cost, schedule, and functionality. The necessary discipline is in place to repeat earlier successes.	
3.	Defined	The process for both management and engineering is documented, standardized and integrated by an organization methodology.	
4.	Managed	Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.	
5.	Optimised	Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.	

(Source: Paulk et al., 1993)

6.7 Interview Part two

Interview part two is to conduct a research in your organisation, particularly for business processes alignment to Provincial Strategic Goals (PSG's) and services. And, e-Government implementation.

13. What are "best practices" or methods used for the alignment of business processes to PSG's and services? No.
14. Follow-up question for the above question; if it does not exist, what would be a right way or approach to align business processes to PSG's and services? I think as an organisation we need to identify the way that will work for this Provincial government.
15. What method or technique is used to classify business processes in your organisations? No.
16. Are you aware of organisational core business processes? Yes /No or not sure.
17. Are you aware of organisational support business processes? Yes /No or not sure.
18. Do you think alignment of business processes in your organisation would be achieved through using the following alignment elements:

Please select relevant rating.

No.	Element	1.Strongly disagree	2.Disagree	3.Neither agree nor disagree	4. Agree	5.Strongly agree
1.	RACI method					A
2.	Directorates or Chief Directorates				A	
3.	Departments				A	
4.	Provincial Strategic Objective				A	
5.	Support services				A	
6.	Core services/ Citizen Centric services				A	

Using Likert scale

E-government implementation

5. What would be the impact of implementing e-government initiatives based on the current state of business processes, PSG's and services across the provincial government? I think, it will improve accessibility of citizens being able to access services. They will not need to travel to services centres.

Secondly the costs of delivering service to them by the organisation will also be minimised because the costs of setting online services is cheaper than the walk-in centre or a call centre. In terms of citizen experience that are satisfaction levels if it done correctly it will definitely citizen will be satisfied and will strengthen a relationship between citizens and the Provincial government.

6. What would be an effective way to implement e-government strategy initiatives across the Provincial government based on the current state of business processes and services? The first is to define what the e-Government is and be on the same page in terms of what is e-government means. Because different people understand it differently. Secondly, we need to be clear about the business objectives in terms of why we want to do e-government. How is gonna benefit different stakeholders. Then, thirdly we need to ensure that in terms of stakeholder engagement, each and every stakeholder is engaged right from the onset, instead of making a decision and then going out to the people ask their opinions. In terms of management of the whole programme they need to ensure that we have all resources because it's one thing that you say you want to do e-government but you don't have people that's actually is going to manage the programme. In terms of resources, they just not looking at people only, we also need money because certain or new roles will be created and also the structure of the organisation might change to accommodate new strategy in order to meet e-government. So we need to look at things like that before we can start implanting.

6.8 P5: Interview part one

Interview 5 of 13 with ABC Employees

Recording: V007

Site: ABC employee meeting room

Data collection method: Formal interview

Data collection date: 21 July 2014

Data collector: Thabani Kunene

Transcriber: Thabani Kunene

Interview duration: 26 minutes and 07 seconds

I: Interview

P5: Participant five

Interview part one is about to assess the current state of business process in your organisation.

1. What is the process or method used for the assignment of business process ownership in order to establish managerial accountability in your organisation? If things happening or by accident, it would not necessary or I don't think there is formal process to be followed but the way things are done, the province set its strategic goals and departments sets their goals and it goes down to program level and that level that's where business processes should lies is the normal a Director or person in charge of the programme. Ahm, I don't recognise any formal accountability and I don't see that happens...maybe it might the case that it doesn't exist in some places.

2. What business process methodology/tool is used by your organisation to manage business processes? I think, that a large point in the Province in the government. Ahm, the only tools that might be used will be ad-hoc sort of excels reports that are made and managed, but I can say there is not business process automation tool and relevant times for that business services. I think that is am major lacking in the organisation.

3. How can you define the current state of business processes alignment to PSG' and services? Ahm, I think on the business process level is probably not explicitly documented. For example, I have seen PID initiation document that speak about the alignment of National goals and Provincial goals etc. Now I can imagine if it would be possible to do it in business processes and I think that is not explicitly done.

4. What initiatives you think could be proposed regarding your organisational business processes? Ahm, I will make a distinction between business process operation and management. Business process management is the high level, it's about how you manage change in the business processes. At the business process management level that where you can make sure that PSO are aligned and that would be part of the process. And, I have eluded the business process management framework and would be something that if you would address and it's a lot of value in it to address.

5. From the table below, which level of business processes do you think your current organisational business processes are at?

Please select one that is applicable.

Level	Type	Level description	Tick (X)
1.	Manual business processes	Exists in an organisation whereby both core and supporting business processes automation or optimisation does not exist.	A
2.	Semi-automated business processes	This level exist when some of the business processes are automated but not fully automated from end to end, meaning the back-end systems is not integrated with the front-end.	
3.	Fully automated business processes	is achieved when all activities associated with business processes and its associated services are being executed through the use business information systems and other means of technologies	

6. Through your understanding of business processes of your organisation; which maturity level do you think your organisation is at? Please select one from the following maturity levels:

No.	Maturity level	Maturity description	Tick (X)
1.	Initial state	The process is ad hoc. Few activities are explicitly defined, and success depends on individual effort and heroics.	Between 1 & 2
2.	Repeatable	Basic project management processes are established to track cost, schedule, and functionality. The necessary discipline is in place to repeat earlier successes.	
3.	Defined	The process for both management and engineering is documented, standardized and integrated by an organization methodology.	
4.	Managed	Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.	
5.	Optimised	Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.	

(Source: Paulk et al., 1993)

6.9 Interview Part two

Interview part two is to conduct a research in your organisation, particularly for business processes alignment to Provincial Strategic Goals (PSG's) and services. And, e-Government implementation.

1. What are "best practices" or methods used for the alignment of business processes to PSG's and services? I think is a glaring mission that we don't have a business process management framework for this sense and it's not a formal discipline one is responsible for whether provincial or departmental level. And, so ahm...without that broad business process management framework it is possible to have that best practice and that would be a first recommendation that we need to establish proper way to manage business processes and how are we gonna to do it. Ahm, as part of establishing that what is your methodology or best practices in this context. Again I can allude back to my framework from the 17 things that need to be considered and that is a starting point.
2. Follow-up question for the above question; if it does not exist, what would be a right way or approach to align business processes to PSG's and services? I think, an Enterprise Architecture will need to talk about formal methods like taking business strategies and articulate it into business processes and services. But services are important and business processes are supporting those services. From that approach we get alignment of processes. But we

have other things that covered inside of business process management that if are done okay and you can end up with this alignment, like people, operational and business processes.

3. What method or technique is used to classify business processes in your organisations? I am not sure what is business classification mean, but I am aware of the work done by the Enterprise Architecture, I am aware about the work done by ABC in the organisation. I presume they will classify business processes in one way or another but I am not sure whether that question is answered.
4. Are you aware of organisational core business processes? Yes /No or not sure.
5. Are you aware of organisational support business processes? Yes /No or not sure.
6. Do you think alignment of business processes in your organisation would be achieved through using the following alignment elements:

Please select relevant rating.

No.	Element	1.Strongly disagree	2.Disagree	3.Neither agree nor disagree	4. Agree	5.Strongly agree
1.	RACI method				A	
2.	Directorates or Chief Directorates				A	
3.	Departments				A	
4.	Provincial Strategic Objective				A	
5.	Support services				A	
6.	Core services/ Citizen-centric services				A	

Using Likert scale

E-government implementation

7. What would be the impact of implementing e-government initiatives based on the current state of business processes, PSG's and services across the provincial government? I think there are two elements that need to be narrowed done. One is the improving service delivery and human developments. And, that involves two elements being becoming more efficient and more effective. Arranging services to become more efficient and effective by using e-platform and we can reach further reduced costs and blah blah

blah. And, the other is public participation that if we want to use e-government services to do survey at and get inputs from the participants. If for example a service is rendered you could have a last question to rate a service. By rating a service and you get a feedback that can help you to improve that service. That, I think is the main drive for me and you can un pack that down into things like, that would give you impact on service delivery and you can talk about new tasks and utilisation of resources and turn-around times and blah blah and this is low level detail.

8. What would be an effective way to implement e-government strategy initiatives across the Provincial government based on the current state of business processes and services? I think a level programme is needed, by high level I mean, it needs to be driven by at a political level, particularly a Minister by taking a responsible and drives it or the highest level in the sort of administration side. Maybe or a DG or senior Head of the department somewhere. I think, the challenges are its cutting across the departments and all activities, and coordinating activities and try to align it to projects or programme. I think, that's required a high level or a senior person to say that's where we are going and has a researchery to direct and the team follows the and ahm, I think we need a dedicated teams to do implementation on ...so there is a whole of business process management aspects of which it include non-technical things. There is a deciding on technical things that needs to be in place and technical platforms and have a proliferation of technical solutions we want to come up with solutions that integrates, maybe a common suites that will need technical support in that aspect. I think this thing of whole culture change is needed in all levels, that's requires change management approach and HR change management is required and also the public participation aspects as well, those are things.

6.10 P6: Interview part one

Interview 6 of 13 with ABC Employees
Recording: V008
Site: ABC employee meeting room

Data collection method: Formal interview
Data collection date: 23 July 2014
Data collector: Thabani Kunene
Transcriber: Thabani Kunene
Interview duration: 36 minutes and 54 seconds
I: Interview
P6: Participant six

6.11 Interview Part one

Interview part one is about to assess the current state of business process in your organisation.

Interview part one is about to assess the current state of business process in your organisation.

1. What is the process or method used for the assignment of business process ownership in order to establish managerial accountability in your organisation? Yes, the model that we use and I think you are aware of it of which is business process management notation that we use as a model in developing business processes. Now...beside business processes everybody think of the maps, we have full maps. However, what accompany maps is our tables that we also develop and also the templates that we use. In those templates it extends more that the block that says that you need to take file somewhere. It will asks, why you need a file and what governance and controls those things; inputs and outputs. The table is the extension of the maps, and then the whole document is called the SOP. I think you must have seen it...the SOP is the complete document that need to be signed off by the process owner that we put on the Director Level. So the Director will sign-off and accept that this document is the standard operating procedure for a particular service. So that how we make then accountable. That they will hopefully implement it; remember at this stage we are not part of implementation. We try to be where as we can, there are some examples whereby other departments have asked us to be part of implementation. It is just a little bit of round work session with the same people that we interview to get information on how we can take it forward so that you can phase it in basically. We have that example especially in Human Settlements area. Mmmh...what is it; is the data warehouse for housing tribunal. We are still busy with. So that ownership from the Managers point of view at the Director level. I think that's answers your question.

2. What business process methodology/tool is used by your organisation to manage business processes? Okay, I did elude to it...the business process notation model that we are using and it was accepted Provincial wide. It has gone through the Ce-I thing. There is document and submission that we wrote to them to accept it and it's all been done. I don't know the terminology used there. But, that is method that we used Provincial wide in this Province. So any process is gonna be done in that...according to business process notation model. We are working towards simulation now, there is sort of training in it. The simulation basically we are not into

it yet, but we are going there... is the tool that you can sort of simulate...follow-up question, do we have that tool currently? We don't have tool yet. But we are working on something. Currently, we are using the s-drive to keep our work. But that access drive is not accessed by anybody beside people that are working the Directorate.

3. How can you define the current state of business processes alignment to PSG' and services? Mmmh, I will be honesty with you, I am not familiar with PSG's and I think the Province one are not finalise yet. I think the Province one they gonna be five now and I think, they are still in draft form and I don't think they are finalise yet. They are still busy with them into the strategic sessions. But, I am sure at this stage I don't know, honestly and I wouldn't know where it fits in. Even if take PSO and look at service delivery and you link it to PSO, I think you could see it there.

4. What initiatives you think could be proposed regarding your organisational business processes? Remember we got BPO initiative and that's a three year thing. That's initiative is there already to ensure that all business processes are there and all departments have all business processes. I think it's started this year... I think it's a good initiative going forward. I think what is going to happen, 13 departments they will try to do to be at a level that we want to be and it's a memories task to know all the services that we have. But one has to start a point and I think, we are still concentrating to service delivery side business processes that link back to PSO's basically by prioritising work.

5. From the table below, which level of business processes do you think your current organisational business processes are at?

Please select one that is applicable.

Level	Type	Level description	Tick (X)
1.	Manual business processes	Exists in an organisation whereby both core and supporting business processes automation or optimisation does not exist.	1.5
2.	Semi-automated business processes	This level exist when some of the business processes are automated but not fully automated from end to end, meaning the back-end systems is not integrated with the front-end.	
3.	Fully automated business processes	is achieved when all activities associated with business processes and its associated services are being executed through the use business information systems and other means of technologies	

6. Through you understanding of business processes of your organisation; which maturity level do you think your organisation is at? Please select one from the following maturity levels:

No.	Maturity level	Maturity description	Tick (X)
1.	Initial state	The process is ad hoc. Few activities are explicitly defined, and success depends on individual effort and heroics.	
2.	Repeatable	Basic project management processes are established to track cost, schedule, and functionality. The necessary discipline is in place to repeat earlier successes.	A
3.	Defined	The process for both management and engineering is documented, standardized and integrated by an	

	organization methodology.
4. Managed	Detailed measures of the process and product quality are collected. Both the process and products are quantitatively understood and controlled.
5. Optimised	Continuous process improvement is enabled by quantitative feedback for the process and from piloting innovative new ideals and technologies.

(Source: Paulk et al., 1993)

6.12

6.13 Interview Part two

Interview part two is to conduct a research in your organisation, particularly for business processes alignment to Provincial Strategic Goals (PSG's) and services. And, e-Government implementation.

9. What are "best practices" or methods used for the alignment of business processes to PSG's and services? Well our model that we used is basically aligned to PSG's, remember the people need to identify the citizen centric services and the whole thing started when each department is required to identify 5 citizen centric business processes that talks to the citizens. We need to go in and develop business processes for all five. Of which we did as a first step, of which follow over from there of which is BPO. Through BPO, we are aligning business processes to PSG's. So I can say that alignment is there.
10. Follow-up question for the above question; if it does not exist, what would be a right way or approach to align business processes to PSG's and services?
Not applicable
11. What method or technique is used to classify business processes in your organisations? We use business process architectures, yes used for instance from level one and break it down to activities. Yes we have business process architecture for all departments.
12. Are you aware of organisational core business processes? **Yes** /No or not sure.
13. Are you aware of organisational support business processes? **Yes** /No or not sure.
14. Do you think alignment of business processes in your organisation would be achieved through using the following alignment elements:

Please select relevant rating.

No.	Element	1.Strongly disagree	2.Disagree	3.Neither agree nor disagree	4. Agree	5.Strongly agree
1.	RACI method				A	
2.	Directorates or Chief Directorates				A	
3.	Departments				A	
4.	Provincial Strategic Objective				A	
5.	Support services				A	
6.	Core services/ Citizen-centric services				A	

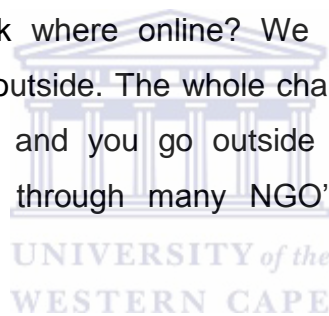
Using Likert scale

E-government implementation

15. What would be the impact of implementing e-government initiatives based on the current state of business processes, PSG's and services across the provincial government? Ja, you know as I am saying; you need to understand your own business processes before you can go into an e-government thing for people outside, that is number one. And, I don't think we are there yet, we even don't understand our own business processes inside. Because when we do business processes in work session and workshops with people especially in certain areas you notice that even if you doing it for different departments you are the Specialist in that area and you will notice that they exactly doing the same thing but doing it differently, you know. So those are the things that we still need to iron it up. And even now where we have already put business processes in place, some they have not yet implemented it yet. You know, they sign-off on it but they haven't implemented it. That's work is just a desktop exercise lying on their desks. What I can say is the plus sign is when the Auditors come around; they would ask questions so in the alignment on this one. Because we are getting work via them as well, because what are they doing when they do their audits when they pick up that departments do not have business processes, so guys there is audit report so that we know that we need to do business processes. So we need still to unpack that part; understanding our own business before we can even go to the public. We need to understand our business and the whole thing of change navigation when it comes in because we gonna get change in the mind set, they are lot of people in government that you change them. And if you gonna go outside,

you need to educate even people outside, need to consider access of service online to different people, consider larger infrastructure that will have impact on.

16. What would be an effective way to implement e-government strategy initiatives across the Provincial government based on the current state of business processes and services? The effective way is... I think is gonna be... if we identify first a service. Let's take you want to apply to... what are the good examples? Let's say hypothetical you want to go to a clinic for a check-up or whatever ...its gonna take a lot of awareness number one and but again the only way that you make someone to understand what we got. Is to first understand what we have and what we can offer because we can't go and make it nicer, like the online application service. Because we know people and they would ask I want to join government. If you tell them to go online, they would ask where online? We ourselves don't understand it properly before we go outside. The whole change need to be considered, get to know your house first and you go outside and you make awareness is obviously participation through many NGO's and through our Thusong centres...



7 APPENDIX 2: Business process diagnosis model

Business Process (BP)	Alignment elements					
	RACI	Division (Dir./ CD)	Organisation (Department)	PSG	Support Service	Citizen-centric Service/ core service
1. Manual BP						
1.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflects core business processes being executed.	Depts. Conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen centric service
1.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflects support business processes being executed.	Depts. Conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen centric service
2. Semi-Automated BP						
2.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflect core business processes being executed.	Depts. Conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen centric service
2.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflect support business processes being executed.	Depts. Conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen centric service
3. Fully Automated BP						
3.1 Core BP	Identify whether RACI approach is being used in the core BP	Reflect core business processes being executed.	Depts. Conducting or using same core business processes.	Core BP is aligned to certain PSG	Core BP is aligned to certain support service	Core BP is aligned to certain citizen centric service
3.2 Support BP	Identify whether RACI approach is being used in the support BP	Reflect Support business processes being executed.	Depts. Conducting or using same support business processes.	Support BP is aligned to certain PSG	Support BP is aligned to certain support service	Support BP is aligned to certain citizen centric service