

# **E-GOVERNMENT PROJECT PRIORITISATION IN ZIMBABWE: A PUBLIC VALUE PERSPECTIVE**

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## Abstract

Governments the world over spend billions of dollars on e-government initiatives with the intention of improving the efficiency and effectiveness of service delivery to their constituencies. Despite the large amounts of money that is spent on these projects, lured by the array of potential benefits that can be delivered, the list of failed projects is long, mainly because the complexity of undertaking such projects is often understated and the demands of a public value approach make e-government projects even more complex. Public value theory suggests that citizens value those services they authorise, whose creation they participate in and whose outcomes they relate to. This study seeks to understand how governments prioritise e-government initiatives in order to maximise public value.

This study is based on an interpretive case study of an e-government program in Zimbabwe, a country in Southern Africa, consisting of a number of projects that have to be prioritised. Using public value theory as a theoretical lens, six interviews were conducted with senior managers involved in the program, complimented by a review of various project related documents and followed by a focus group of thirteen managers which was used to rank the relative importance of various criteria that relate to the delivery of public value. Using a prioritisation framework developed as part of this study, a mock prioritisation of a menu of projects was conducted and this was compared to the actual prioritisation that had been carried out during the implementation of the program.

The study finds that public managers believe that seeking public authorisation is undesirable, unnecessary and that governments are often ill equipped to undertake this task. Co-creation of services with the public is seen as desirable, mainly because government does not have the resources to undertake all the initiatives they have to and appear to welcome any assistance that is available. Public managers appear to struggle to relate the projects they undertake to outcomes that citizens relate to, but seem to be focussed on more immediate measures, a likely throwback to new public management thinking.

The study concludes that the lack of citizen participation in project conceptualisation and service creation and delivery can be overcome by the use of more and more commonly available technologies such as social media and the increasing proliferation of the internet even in fairly remote parts of Africa to not only better understand citizen priorities but to engage the citizen in creating the services they consume and deliver on the outcomes they value.

**Keywords:** *E-government, public value, co-creation, co-production, prioritisation, developing country*

## Table of Contents

1	INTRODUCTION.....	7
1.1	Background.....	7
1.2	ZimConnect – A Totally Connected Government.....	9
1.3	Problem Statement .....	9
1.4	Objectives of the Study .....	11
1.5	Justification of the study .....	12
1.6	Research Methodology .....	12
1.7	Limitations and Bias .....	13
1.8	Structure of the dissertation .....	14
1.9	Summary.....	15
2	LITERATURE REVIEW.....	16
2.1	Introduction .....	16
2.2	E-Government and its role in public service delivery .....	16
2.3	E-Government implementation in context.....	20
2.4	E-Government in Zimbabwe.....	25
2.5	Theoretical Perspectives on e-government implementations.....	28
2.6	Public Value of E-Government .....	30
2.7	Co-creation and co-production. ....	35
2.8	Prior work in Project Prioritisation.....	38
2.9	Analytical Hierarchical Process (AHP).....	40
2.10	Summary.....	41
3	PUBLIC VALUE FRAMEWORK FOR PROJECT PRIORITISATION.....	42
3.1	Introduction .....	42
3.2	Theoretical underpinning.....	43
3.3	Prioritisation framework.....	45
3.4	Summary.....	49
4	RESEARCH METHODOLOGY .....	50
4.1	Introduction .....	50
4.2	Philosophical Paradigms .....	50
4.3	Why interpretive research .....	52
4.4	Research Design.....	53
4.5	Data Collection.....	53
4.6	Relating the research instruments to the objectives .....	54
4.7	Data Analysis .....	55
4.8	Summary.....	56
5	RESULTS .....	57
5.1	Introduction .....	57
5.2	Analysis of Results / Findings.....	58
5.3	Application of AHP in E-Government Project Prioritisation .....	68

5.4	Summary.....	77
6	DISCUSSION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS.....	78
6.1	Introduction .....	78
6.2	Summary of Findings .....	79
6.3	Interpretation of the Findings.....	80
6.4	Conclusions .....	88
6.5	Implication of the findings for theory, policy and practice:.....	90
6.6	Limitations of the Study .....	90
6.7	Personal Reflection and Evaluation.....	91
6.8	Suggestions and recommendations for future research.....	92
	Appendix A - Invitation to Participate in Research Letter.....	93
	Appendix B – Research Instrument (Interview Guide).....	95
	Appendix C – Prioritisation Focus Group Forms .....	98
	Appendix D – Ethical Approval.....	103
	Bibliography.....	105

## List of Figures

Figure 1 : An overview of the role of e-government Source: (Karunasena, 2012).....	19
Figure 2: Summary of e-government enablers and challenges.....	27
Figure 3 : The Public Value Dynamic .....	31
Figure 4 : The building blocks of interactions for co-creation .....	36
Figure 5 : What strategy matters the most.....	43
Figure 6 : Project Prioritisation via a Project Prioritisation Model .....	44
Figure 7 : Prioritisation Process .....	47
Figure 8 : Data Collection and Analysis Process .....	55
Figure 9 : Delivery of Quality Public Services .....	84
Figure 10 : Prioritisation Framework.....	87

## List of Tables

Table 1 : Challenges of E-Government Implementation .....	22
Table 2: Comparison of implementation issues .....	24
Table 3 : Paradigms of Management .....	32
Table 4 : Sample Weighted list of strategies .....	45
Table 5 : Sample weighted list of authorisation criteria.....	46
Table 6 : Sample weighted list of service creation criteria .....	46
Table 7 : Sample weighted list of outcomes .....	47
Table 8 : Project Prioritisation Model example .....	48
Table 9 : Example Prioritisation Using the Prioritisation Model.....	48
Table 10: Respondents felt that government does not need to seek authorisation .....	59
Table 12 : Seeking public authorisation is difficult .....	60
Table 13 : Outsiders influence the process of authorising projects.....	60
Table 14 : Political authorisation is not necessarily the voice of the people .....	61
Table 15 : The process ignores the wishes of the people.....	62
Table 16 : Project authorisation criteria summary.....	63
Table 17 : Offering services is the job of government.....	63
Table 18 : Government does not have capacity to offer services alone.....	64
Table 19 : Some government services are the preserve of government.....	64
Table 20 : Criteria for service creation and delivery.....	65
Table 21 : Outcomes summary .....	66
Table 22 : Full list of potential projects .....	69
Table 23 : Relative importance of choices.....	70
Table 24 : Individual ranking of strategies (Example) .....	70
Table 25 : Consolidated ranking of strategies .....	71
Table 26 : Ranking of authorisations .....	72
Table 27 : Ranking of service creation criteria.....	73
Table 28 : Ranking of service outcomes.....	74

Table 29 : Project Prioritisation Model for the Government of Zimbabwe ..... 75

Table 30 : Prioritisation of projects available to the Government of Zimbabwe Using the  
Prioritisation Model ..... 76

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This is a beginning, not an end.

Glory to God.

## Abbreviations

AHP	Analytic Hierarchical Process
AIDS	Acquired Immunity Deficiency Syndrome
ANT	Actor-network Theory
BBC	British Broadcasting Corporation
C2C	Citizen to Citizen
C2G	Citizen to Government
CSO	Civil Service Organisation
CBA	Cost Benefit Analysis
ESAP	Economic Structural Adjustment Program
G2B	Government to Business
G2C	Government to Citizen
G2CS	Government to Civil Society
G2G	Government to Government
GSM	Global System for Mobile (Communication)
ICT	Information and Communication Technologies
iRBM	Integrated Results Based Management
ITIL	Information Technology Infrastructure Library
MICTPCS	Ministry of Information Communication and Technology and Postal and Courier Services
MoF	Ministry of Finance
NGO	Non-Governmental Organisation
NIE	New Institutional Economics
NPM	New Public Management
NPV	Net Present Value
PFMS	Public Financial Management System
PV	Public Value
RBM	Results Based Management
SWOT	Strengths, Weaknesses, Opportunities and Threats
TQM	Total Quality Management
WAN	Wide Area Network
ZIMPREST	Zimbabwe Program for Economic and Social Transformation

# 1 INTRODUCTION

## 1.1 Background

Governments the world over spend billions of dollars on e-government initiatives (Luna-Reyes, et al., 2013) with the intention of improving the efficiency and effectiveness of service delivery to their constituencies (Snead & Wright, 2014). In more and more instances, governments are striving to deliver “citizen centred, socially inclusive and responsive services in aid of sustainable development” (United Nations, 2012, p. 3). E-government initiatives are seen as promoting accountability and transparency while providing a platform for government to work together with the public to solve problems (Wilson, 2014). Studies report e-government systems delivering improved customer satisfaction through better and timely information delivery, service delivery with less bureaucracy while lowering cost of service provision through more efficient processes (Anastacio, et al., 2013). Transparency in procurement and service delivery, along with better coordination of the arms of government that are responsible for the delivery of justice have seen a reduction in corruption through the use of e-government systems (Elbahnasawy, 2014). While e-government, or more specifically e-democracy is flaunted as delivering improved interaction between government and the public, doubts remain about the ability to deliver on the promise of improved democracy (Roman & Miller, 2013).

Despite the large amounts of money that governments spend on e-government projects, lured by the array of potential benefits that e-government can deliver, the list of failed e-government projects is long (Heeks, 2003; Dada, 2006; Hazlett & Hill, 2003). The complexity of undertaking e-government projects is often understated, with the impact and limitations not fully understood. Luna-Reyes, et al. (2013) point out the diversity of stakeholders participating in such projects, the constraints brought to bear by laws and regulations, local demographic conditions, access and economic conditions as all adding to the fatal cocktail that results in failed e-government implementations.

The demands of a public value approach make e-government projects even more complex. Kearns (2004) argues that public value comes from the delivery of quality services, whose quality is judged by their availability, user satisfaction, fairness and importance to the users as well as their cost. The delivery of outcomes that improve the lives of users are also seen as delivering public value, thus a cleaner city is seen as more valuable than the narrow measure of garbage collected every Tuesday for example. Kearns (2004) also points to the building up of trust in government as a major source of public value. Public value demands that the citizen’s voice be heard, that their participation in creating services is key and that what matters is what works (Coats & Passmore, 2008). Public administrators face numerous challenges in trying to engage the public. These include not just the cost, time, skills but

also the capacity to analyse the results once they have been collected. The desire to seek the views of the wider public and satisfy all the ensuing views leads to the development of solutions that almost satisfy everyone but do not actually satisfy anyone. The challenges of citizen participation in e-government project conceptualisation are mirrored in trying to engage citizens in creating services or measuring their effectiveness in line with public value thinking.

The success or failure of many a project usually boils down to project management (Irani, et al., 2005). The ability to select the right project or sub-project to undertake, the ability to identify and mitigate risks, the ability to manage change within an organisation, the actual control of project activities and governance of projects are all critical components that managers of large projects have to deal with. E –government projects are typically large in scale and scope. Knowing how much to tackle and when, is likely to be a key skill in successfully delivering e-government initiatives.

Many governments in Africa find themselves in environments where every service on offer requires a major overhaul and e-government appears to provide a solution. Most aspects of service delivery are still manual and the demand for e-government services is overwhelming. With the whole of government approaches appearing to be en vogue (United Nations, 2012), project managers are likely to be faced with the most difficult of complex projects to undertake. Only through proper prioritisation of e-government initiatives will governments be able to maximise the limited resources at their disposal. Efficient prioritisation of initiatives will ensure that government resources are directed at projects that deliver immediate but sustainable impact (United Nations, 2012). Prioritisation of projects with a public value perspective in mind will ensure that the right projects are authorised, projects created in a manner that maximises citizen involvement are undertaken and projects that deliver sustainable outcomes are prioritised. While Rosacker & Olson (2008) catalogue numerous projects that have investigated project selection (and evaluation) techniques in the private sector, they highlight that few studies have done the same with respect to the public sector. Olphert & Damodaran (2007), while acknowledging the increasing participation of citizens in planning and policy-making, highlight a lack of research into the role of citizens in the development, shaping or selection of ICTs.

This dissertation sought, based on a case study of the “ZimConnect - a Totally Connected government” e-government program being undertaken by the Government of Zimbabwe, to understand how officials prioritise e-government initiatives and use this knowledge to work towards the development of a framework for the prioritisation of e-government projects in a manner that maximises public value. In doing so, this work seeks to contribute to the discourse around project selection and prioritisation as highlighted by Rosacker & Olson

(2008). This work also seeks to contribute to the body of work around the role of citizens in shaping and developing ICT projects as identified by Olphert & Damodaran (2007).

## **1.2 ZimConnect – A Totally Connected Government**

According to the Government of Zimbabwe (2012), in 1987, the Public Service Commission was appointed to review the structure and function of the public service, culminating in a report by the Kavran commission which recommended fundamental changes in the operations of government aimed at improving quality as well as effectiveness and efficiency in service delivery. Post this report; several reforms were adopted between 1991 and 2005. These included the Economic Structural Adjustment Program (ESAP) between 1991 and 1996; Zimbabwe Program of Economic and Social Transformation (ZIMPREST) 1996 to 2000; Integrated Results Based Management System (iRBM) 2005 to 2011.

Although the first two programs contained elements of Public Service reform, their focus was on economic performance. The third phase was, however, targeted specifically at reforming the public service. Its objectives included improving quality of service, coherent strategic planning, linking plans to national vision and priorities, horizontal collaboration and integration, monitoring and evaluation, transparency and accountability, and meeting citizen's needs. Not surprisingly, a major component of this was the implementation of the e-government program code-named ZimConnect. This implementation was driven by the Office of the President and Cabinet and its strategy was documented in the ZimConnect – E-Government Framework and Implementation Strategy [2011-2015]. This project was initiated in 2012 and in line with the strategy; nine ministries were identified for deployment of flagship applications that were aimed at improving citizens' access to government services and making the operations of government more effective. These applications were deployed to compliment several applications that were either in development or were already running in the government such as the Public Financial Management Systems, implemented under the ZIMPREST phase of the reforms, along with the Tourism Information System, Zimbabwe Integrated Transport Management Systems and the Citizen Registry Systems.

A new phase of development programs was launched in late 2013 under the name ZimAsset (Government of Zimbabwe, 2013) with a focus on accelerating economic growth. Contained in this report is a section that renews government commitment to the e-government initiatives (Government of Zimbabwe, 2013, p. 90)

## **1.3 Problem Statement**

Prioritisation of e-government initiatives is important because governments in the developing world typically have limited resources not just for the procurement of equipment, software

and services but also have limited access to skills (Stanforth, 2007). This supply side limitation is met with an overwhelming demand for solutions to improve service delivery, to make processes more efficient and in some cases to improve revenue collection. Many projects are undertaken in response to political pressure and time to market matters, yet a balance needs to be maintained since some services can only be accessed from restricted locations due to infrastructure limitations. The United Nations (2012) points to a need to drive prioritisation and promotion of specific services as a way to narrow the digital divide between nations.

*“At the operational level, prioritization and promotion of some services (which are potentially more conducive to sustainable development than others) will help to narrow the divide within countries. For example, broad based services are likely to have greater sustainable development impact (through greater socio-economic inclusion) than those catering to needs of a few privileged citizens or driven primarily by short-term economic efficiency considerations”*

*(United Nations, 2012, p. 6)*

Heeks & Stanforth (2014) make the point that failure of e-government initiatives which are implemented in the context of broader public sector reform initiatives not only create a negative impression of the implementing government resulting in poor credit ratings with international financing institutions, but their reputation for good governance is also damaged. Balancing these considerations makes project prioritisation a key skill in the development of e-government programs. Yet the process of prioritisation must be made difficult by the challenges in linking projects to strategy, in trying to engage citizens, getting all views to be heard and ensuring that consensus is reached on the projects to be implemented.

While literature on prioritisation or selection of projects in the private sector is broad, there is little in the way of literature on prioritisation of public sector projects (Rosacker & Olson, 2008). Ochara (2010) suggests that poor conceptualisation leads to project failure while pointing to grassroots participation as being key to the sustainability of e-government initiatives. Mzyece (2012) in a study of e-government initiatives in Zambia highlights a number of reasons that led to failure of e-government projects including corruption, lack of skills, foresight, coordination, supporting infrastructure, funding, implementation policies, stakeholder involvement coupled with resistance to change and a poor work culture.

The Government of Zimbabwe has since 2005 embarked on a number of programs, initially to assess the country's e-readiness (2005), to develop an ICT Policy (2010) and more recently to develop an e-government strategy (2011). As a follow up to the e-government strategy planning in 2011, government embarked on a program to deploy nine e-government flagship projects. Similar programs have been embarked on in the SADC region with countries such as Zambia (Bwalya, 2009), Botswana, South Africa, Seychelles (Bwalya &

Healy, 2010), Kenya (Ochara, 2010), Malawi (Makoza, 2013). The processes followed by these governments to prioritise the various initiatives appear varied and from a preliminary scan of the academic literature, little has been written about how the various programs that form these initiatives have been prioritised.

Without a full understanding of the process that governments go through to decide which projects to undertake and when, the problem of failed implementations is likely to continue to bedevil e-government programs. In order to understand this process, one needs to understand the variables that are brought into the decision making process, the players and the constraints at play. Only when this process is understood, documented and optimised can governments reach a stage where projects are optimally prioritised. This study therefore addresses the following question:-

How do governments prioritise e-government initiatives to deliver public value?

In order to answer this, the study focused on a number of sub-questions:-

- How are projects authorised?
- How are projects prioritised?
- Who are the key stakeholders that influence this process?
- What is the role of the public in creation and delivery of services?
- What outcomes does the government have in mind?
- What challenges are faced in this process?

#### **1.4 Objectives of the Study**

The objectives of this study were to establish, describe, and understand the process, the actors and considerations that inform the prioritisation of e-government projects based on the experience of the Government of Zimbabwe with a view to developing a framework for prioritising e-government initiatives. In doing this the researcher sought to understand, through a series of interviews with senior executives how they obtain authorisation for the projects they carry out and how this authorisation is used in prioritising projects. The research also sought to understand who the key players that influence the process are and how they exercise this influence. The researcher had a particular interest in the role of the public and thus understanding how the executives saw the role of the public in creating and delivering services was a key objective for the study. The study also sought to understand the challenges of prioritising projects with public value in mind.

## **1.5 Justification of the study**

There are very few studies on how prioritisation of projects is conducted in the public sector (Rosacker & Olson, 2008). Empirical studies on how governments deliver public value are also few and far apart (Williams & Shearer, 2011). Yildiz (2012) in contemplating the big questions of e-government research argues that researchers should “produce novel and more usable concepts, models and theories in e-government research” noting the weakness of current research efforts. The researcher therefore believes that this study will be of value not only to academics and policy makers but also to managers in the public service that seek to maximise governments’ investment in e-government in a way that delivers public value, moving their source of knowledge from “grey literature” produced by consultancy firms, think tanks and international development organisations to hard research produced by academic researchers.

This work will assist academics by contributing to the discourse on e-Government project implementation, project prioritisation in the public sector as well as building on the body of empirical evidence around public value theory. The description of the e-government project being conducted by the government of Zimbabwe should provide a lens into a real life case study of e-government at work that other governments can learn from. The framework developed as part of this work is a workable tool that can be practitioners to prioritise projects in real life and should appeal to both government executives and consultants alike.

## **1.6 Research Methodology**

This research adds to the body of knowledge around the practice of prioritising e-government initiatives through an explanatory/interpretive case study of the government of Zimbabwe’s ZimConnect program, under which nine initiatives were prioritised across government for early implementation. Data was collected through interviews with the members of a steering committee responsible for the selection and implementation of these projects, centring on their views, experiences and perceptions of the environment, decisions taken and the outcomes. The views of senior managers from the Ministry of Finance who were the funders of the overall initiative were sought and interviews complimented with a study of relevant documentation that highlighted the journey undertaken prior to the start of the flagship applications roll out as well as through the life of the project. A prioritisation framework developed as part of this study was tested with a focus group of thirteen executives and project managers who were responsible for delivering the ZimConnect program and the results compared with the actual prioritisation conducted before.

While exploratory studies can be used to discover relevant features, factors or issues that relate to particular situations (Myers, 2009); descriptive studies used to build up rich descriptions of what happened and how different participants perceived what happened; explanatory studies go beyond simple descriptions. An explanatory case study seeks to identify the various factors that related to a phenomenon and seek to relate these to each other as well as to the literature (Oates, 2006). The interpretive paradigm adopted for this study is one where reality is constructed by those who live it, thus adopting an ontology of an internally constructed reality which can only be studied by an empathetic observer that accepts subjectivity (Terre Blanche, et al., 2006). Given this epistemology, researchers gain knowledge through social constructions such as language, consciousness, shared meanings and instruments (Myers, 2009).

The case study approach adopted for this study allowed for an in-depth look at a single case. While certain general ideas or expectations may be used to guide the case, no hypothesis is formulated (Mouton, 2001). The quality of a case study is defined by the plausibility of the story being told as opposed to measures of validity and reliability as in the case of positivistic studies (Myers, 2009). Case studies can be used to tell interesting stories that others can identify with while exploring or testing theories within the messy realities of real life. On the downside, getting access to the story may be difficult as the subjects of the study may not have the time, may not wish to tell their story or may not think it is important enough to tell. For the researcher, there is little control of the situation as life goes on for the organisation being studied and major changes can impact the study being undertaken. Case studies can take a long time as the researcher arranges time for interviews, conducts the actual interviews and the interpretation of the results.

## **1.7 Limitations and Bias**

The main limitation of this study is that it is a single case study, making it difficult to generalise to a larger population. Myers (2009) however points out that one is able to generalise qualitative research to theory even from a single case study and cites several cases where this has been done successfully. Having been involved with the Government of Zimbabwe since 1998 as a supplier representative on several projects, the researcher is likely to have some pre-convinced ideas about how government should have taken certain decisions. Another down side is that interviewees, who are known to the researcher, could have, during interviews, assumed certain background information to be known to the researcher and thus the researcher had to provide more background information than an outsider would be required to provide.

The focus of this study was to investigate how public managers conceptualise e-government projects with a view to understanding whether such designs lead to public value. A further limitation of the study, therefore, was that it only investigated the views of the public officials and did not look at the demand side of the relationship.

## **1.8 Structure of the dissertation**

This dissertation is presented in six chapters, starting with this chapter which seeks to introduce the proposed work and justify why it is necessary. The second chapter of this work is a literature review, which begins by looking at e-government in general then zeros in on e-government implementation issues. The chapter also looks at how e-government has been implemented in Zimbabwe before turning to the theoretical perspectives on e-government as well as reviewing literature on the work of Mark Moore on public value (Moore, 1995); subsequent work on this approach to public administration and the impact it has on prioritising e-government initiatives. The chapter also looks at literature around co-creation and co-production and how these concepts have been employed in deploying e-government initiatives. Several tools have been used to prioritise projects in the private sector and a section of this chapter is devoted to describing these with a view to incorporating them into a framework for e-government project prioritisation. The third chapter focuses on the methodology adopted for this project, providing justifications for the use of an interpretive paradigm, the use of a case study, as well as the data collection tools employed.

Chapter four is devoted to describing a conceptual framework for prioritising e-government initiatives in e-government for maximising public value. Chapter five presents the findings of the research undertaken and is divided into an initial presentation of findings section which presents the main findings from interviews and analysis of relevant documents. The second section of this chapter presents the findings of a focus group, set up to develop a prioritisation model based on the conceptual framework and using the same to prioritise a menu of projects. A final section sums up the major findings of the study.

The final chapter of this work presents an interpretation and synthesis of the findings presented in chapter five. It tries to weave the connective threads between findings and explain these in the context of this study as well as the literature in general focusing on insights gained, hunches confirmed as well as surprises faced. The chapter ends with conclusions as well as recommendations for practice.

## 1.9 Summary

This chapter presented a case for the need to undertake a study into how governments prioritise e-government initiatives, focussing on how important e-government initiatives are and how they rarely achieve their desired goals. The chapter also zeroed in on how project management and more specifically project conceptualisation and prioritisation present a challenge for governments undertaking projects of the nature and scope that e-government projects typically are. Having presented this background, a number of questions were posed and a brief overview provided of how this research was conducted. It is hoped that this work will not only add to the body of knowledge about how governments prioritise projects, but also inform the decision making process for other governments undertaking similar work.

## **2 LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents the literature that is relevant to this work. This study is firmly rooted in the e-government domain, so the initial sections take a broad look at the concept of e-government. The first sections seek to provide an understanding of the how e-government has evolved and the role it has played in service delivery in the public sector. The later sections look at the challenges that are associated with deploying e-government systems internationally, in the developing world as well as in Zimbabwe. A section of this chapter is devoted to a review of the literature available on the status of e-government implementations in Zimbabwe followed by a review of the different theoretical perspectives that have been adopted in studying e-government. A discussion on how public value thinking has influenced e-government work and the involvement of citizens in service delivery is followed by a section on co-creation and co-production in the public sector. Having positioned project prioritisation as a challenge in implementation e-government projects, albeit not one explicitly stated in the literature, the last section looks at prior work done on e-government project prioritisation.

### **2.2 E-Government and its role in public service delivery**

This section seeks to provide an overview of the ideas behind e-government, starting with how e-government has evolved and addressing the ideas behind transformational government. The role of e-government in service delivery is also addressed in this section which then ends with a discussion on prioritisation of e-government initiatives.

#### **2.2.1 Conceptual clarifications**

Fang (2002) defines e-government as a way for governments to innovatively utilise ICTs, in particular internet based applications, to serve business and individuals with access to information and services with the aim of improving service quality and broadening participation in “democratic institutions and processes”. Moon, et al (2012) focus on the distinctions between the use of IT in government for back office processes and e-government as being focussed on the provision of government information and services 24/7/365 via the internet and beyond space and time. Studies at the turn of the century focussed on the evolutionary nature of the development of e-government, highlighting four major stages of development.

The study by Layne and Lee (2001) highlighted the four stages as starting with a cataloguing stage, where governments develop an online catalogue of their ministries, departments, services, processes and other static information. In the more advanced cases, search

functionality is provided to allow users to search for information and in some cases downloadable forms are also provided. In the second phase of development, termed the transactional stage, governments begin to offer transactional services allowing forms to be filled in online and users to initiate transactions from the web. The more sophisticated systems at this stage would allow such transactions to be routed directly to a public official through an internal intranet.

In the next stage of development, termed the vertical integration stage, local - in this case local could refer to a local government or a ministry or some such standalone unit - integration is implemented allowing users to access the unit as though it were one whole. Thus a user seeking to submit a complaint about a border dispute with their neighbour on a newly subdivided farm would not need to submit detailed information about the farm as this information would be available within the ministry, albeit in a different department.

In the ultimate stage of development, the horizontal integration stage, the same farmer would only need to provide their name or identification details and all other details relating to their interaction with government would be immediately available to the officer handling their case. Validation of their identification details for example would be done directly with the agency responsible for registering and issuing citizen identification. An application for the replacement of a lost driver's licence would immediately trigger a search and validation that a lost license report has been lodged with the police.

While it has come to be accepted that e-government is an evolutionary process with scholars such as Pardo (2000) warning that "digital government isn't about building a Web site" others such as Lips(2012) warn that the information provision role of government should not be understated. Quoting from Borins(2007), Lips argues that a large part of what government does is the dissemination of information on legislation, services provided, performance of government and budgets; so the transition to an e-commerce style environment of transacting is not necessarily appropriate given that many government services are complex in nature and require face to face interaction and must therefore remain manual. Pardo (2000) goes on to argue that the real business of e-government should be about transformation of government service delivery.

### **2.2.2 E-government and transformational government**

Pardo (2000)'s utopian view of e-government transforming service delivery is not universally accepted. Norris & Reddick (2012), with the benefit of hindsight and empirical evidence, argue that e-government has developed incrementally and has not been transformative; calling into question predictions that e-government would transform government and relationships between governments and the governed.

Weerakkody, et al. (2011) attribute this failure to transform government to a focus on using ICT to replace existing processes, calling for radical change in much the same way that the private sector undertook Business Process Re-engineering exercises in the 1990s. In light of this, they propose a definition of transformational government or t-government as being a transformation of government operations led by the organisation and enabled by ICT that will impact processes, both internal and external, as well as structures to enable government to realise the benefits of efficiency, accountability and citizen centricity.

Weerakkody, et al. (2011) argue that t-government spans a wider organisational and socio-technical spectrum than e-government and its successful deployment demands changes in the structures, operations and culture of government. For successful implementation of t-government, governments need to focus on citizen centred designs, develop a shared services culture that eliminates data duplication while streamlining processes as well as a deepening of professionalism in the areas of planning, delivery and management of the ICT change associated with transformational projects (UK Cabinet Office, 2005).

Gil-Garcia, et al. (2014) note that t-government involves ICT enabled changes in the structure, function, processes and external relationships of government. Practically, they highlight multi-channel access coupled with back office integration, the use of social media and Open Data initiatives as being key components of t-government while Joseph & Johnson (2013) place the use of Big Data in the mix of providing transformational government.

### 2.2.3 The role of e-government in service delivery

E-government, delivered in the transformational manner described above can play a significant role in the delivery of government services. Yildiz (2007) looks at different categories of e-government and uses this to classify the different roles played by e-government in the delivery of government services. In the area of Government-to-Government (G2G) services, e-government's role can primarily be that of facilitating communication, standardization of information and services as well as providing a platform for coordinating the activities of different arms of government. An example application would be the establishment of a common data warehouse such as a master data pool.

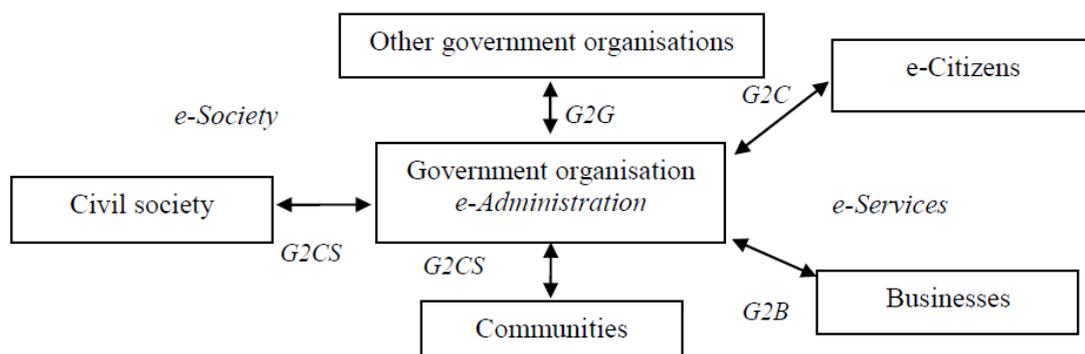


Figure 1 : An overview of the role of e-government Source: (Karunasena, 2012)

For Government-to-Citizen services, an e-government platform can provide a platform for communication, transparency and accountability through reporting mechanisms such as those offered through Open Data platforms. Through standardised interfaces, offering round the clock services with minimal manual intervention, e-government platforms can offer efficient, effective and standardised services that can result in higher productivity. Examples of applications include information web sites, transactional applications as well as e-mail communications between citizens and government officials. Similar applications can be made available for Government-to-Civil Society Organisations (G2CS) which can be employed for example in communication and coordination efforts in the event of a disaster.

In the case of Government-to-Business(G2B) interactions, e-government platforms can facilitate collaboration between government and business as well as allow for transactions to be conducted online. A common example of interaction between government and business could be participation in a procurement process through an e-procurement application. Finally Citizen-to-Citizen(C2C) communication can be facilitated through discussion forums to provide a means to communicate, coordinate or to organise grassroots activities for citizens.

E-government ensures that these services are delivered efficiently and effectively, extending the reach of government by making services available from anywhere a user can access the internet. Anastácio, et al.(2013) suggest seven areas in which e-government improves service delivery; through improving the quality of information supply, reducing the time it takes to process requests and reducing administrative burdens allowing governments to reduce operational costs while improving service levels and work efficiency which in turn leads to increased customer satisfaction.

The United Nations E-Government Survey Report (United Nations, 2012) draws attention to the role that e-government can play in the creation of an institutional framework required to support sustainable development. The report points to improvements brought about through reduced transaction costs, faster transaction turnarounds and better integrated workflows leading to better processes and systems; and ultimately inclusion and sustainability.

#### **2.2.4 Challenges of project prioritisation**

E-government has and will continue to play a significant role in the business of government. Despite many cases of failed projects having been reported in the last 20 years (Heeks, 2003) demand for services continues to exist because of the convenience that e-government brings. Pardo (2000) argues for caution in deciding which initiative to undertake. While studies may be undertaken of “what citizens really want”, attention paid to the priorities of elected officials, or failures of prior initiatives; implementers must create a shared vision of

the potential benefits, the risk, the costs so as to realise the promise of transformational government.

The United Nations E-Government Survey Report (United Nations, 2012) argues for the prioritisation and promotion of services that help narrow the digital divide while warning against the prioritisation of services that cater for the needs of a select few.

## **2.3 E-Government implementation in context**

### **2.3.1 Global implementation issues**

E-government implementations are challenging mainly because of the scale, scope and target audience for services being offered. Much work has been done around the challenges faced in deploying e-government projects globally and within the developing world. In reviewing the literature in this area, the table below has been constructed to summarise some of the main findings of these studies. The Four “P”s framework of People, Process, Product/Technology and Partners from Information Technology Infrastructure Library (The IT Service Management Forum, 2007) has been adopted as a way of grouping the main findings from the different papers that have been reviewed.

Analysis of this table shows that only one writer (Lips, 2012) highlights the failure by providers of systems as being a challenge for e-government implementations. Almarabeh & AbuAli (2010) bring attention to the need for government to partner with the private sector as a key challenge for e-government implementations. Several authors point to technology as being an issue in e-government implementations with all the papers reviewed agreed on the need to provide a robust, permanently available technical infrastructure complimented by supporting infrastructure such as power and telecommunications for users of e-government services.

People issues range from poor leadership, lack of senior management support, poor change management through to lack of availability of human resources. On the citizen front, user literacy along with proper marketing of services to citizens are seen as challenges to successful implementation of e-government services. Issues of language, communication, culture and failure to pay attention to the requirements of those with special needs such as the disabled are also highlighted as challenges for e-government initiatives.

A reference by Jaeger & Thompson (2003) to a US government report that notes that e-government managers’ biggest concerns are not about technology but about policy, coordination, collaboration, agency centric thinking and communication seems to be mirrored in most of the studies reviewed. The majority of challenges highlighted in the literature relate to projects being poorly conceptualised with goals and scope badly defined

with a poor strategic thrust. Studies point to poor project management as a challenge with specific reference being made to failure to build effective business cases, a poor design of structures and processes, and a failure to engage and coordinate all levels of government coming up more than once in the studies reviewed. On the citizen front, a failure to design systems that are citizen centric as well a failure to ensure privacy and security are also seen as challenges for e-government projects. The use of e-government as a cover behind which government employees can hide to avoid responsibility is seen as a challenge along with failure to make the rules of service provision clear to all.

### **2.3.2 Developing country implementation issues**

Schuppan (2009) points out that additional effort is required to implement e-government in the developing world due to differences in the starting points for projects from an institutional and cultural perspective highlighting the need to take a context sensitive approach to implementations. Almarabeh & AbuAli (2010) quoting from The Working Group on E-government in the Developing World, highlight 10 questions that e-government leaders should ask themselves. These begin with questioning why e-government is being pursued, whether there is a clear vision and priorities and what kind of e-government is intended. Questions regarding political will and how projects are prioritised are also posed along with questions on how the projects will be planned and managed while on the relationship front questions are posed on how resistance within government will be managed and relationships with the private sector and citizens and their participation also posed. Issues of measuring and communicating progress are also raised.

Nagi & Hamdan (2009), like Almarabeh & AbuAli(2010), investigating e-government in Jordan, highlighted obstacles and challenges to implementations in the Middle East as being inadequate education and computer literacy, remoteness of areas requiring access, lack of access amongst citizens and a reluctance to accept the services offered. The need to change processes, legislation and the existence of a digital divide were also seen as being challenges to the deployment of e-government. Heeks (2002) in a paper discussing e-government in Africa, poses six questions to 'tease out' the e-readiness of any government in Africa wishing to deploy e-government systems. The first seeks to establish the data readiness of a government, querying whether governments have clean enough data to feed into e-government systems. The second quizzes the legal readiness of governments in terms of the laws and regulations required to support e-government. The paper also questions whether the institutions required to lead e-government programs exist as well the human capital readiness for e-government, pointing out the need for the human resources required to setup, run and maintain e-government systems. The final two enquiries relate to the technological infrastructure and the leadership and strategic thinking required in deploying e-government.

#	Factor	Class	(Lips, 2012)	(Rose & Grant, 2010)	(Jaeger & Thompson, 2003)	(Almarabeh & AbuAli, 2010)
1	Failure by suppliers to deliver on contractual agreements.	Partners	X			
2	Failure to forge private/public partnerships in service delivery	Partners				X
3	Poor project leadership	People		X	X	
4	Lack of support of senior management	People		X		
5	Insufficient attention to change management	People		X		
6	Unavailability of intangible human resources such as time and energy	People		X	X	
7	Ensuring citizens are able to utilise the e-government infrastructure	People			X	X
8	Educating citizens on value of e-government	People			X	X
9	Failure to address issues of language and communication	People			X	
10	Failure to address the needs of the disabled	People			X	X
11	Chronic project delays	Process	X			
12	High cost of making changes	Process	X			
13	Poor strategic thrust	Process		X		
14	Decentralised funding and control	Process		X		
15	Poorly defined goals and project scope	Process		X		
16	Poor design of structure and processes	Process		X	X	
17	Failure to engage and coordinate all levels of government and their initiatives	Process		X	X	
18	Failure to utilise a performance management methodology	Process		X	X	X
19	Failure to utilise a pilot project and obtain feedback	Process		X		
20	Not building effective business cases	Process			X	
21	Failure to maintain a citizen focus	Process	X		X	
22	Failure to protect personal privacy	Process			X	X
23	Failure to implement appropriate security controls	Process			X	X
24	Ensuring Availability of useful information	Process		X		
25	Avoiding the trap of government employees feeling they have no responsibility	Process			X	
26	Failure to make the rules transparent	Process				X
27	Providing costly services is not sustainable	Process				X
28	Gold plated solutions	Product	X			
29	Failure to maintain a robust technical infrastructure	Product			X	X
30	Failure to provide power and telecommunications infrastructure	Product			X	X
31	Failure to provide permanent availability	Product				X

Table 1 : Challenges of E-Government Implementation

Ndou (2004) summarized e-government challenges in Africa as being around seven major areas. Under ICT infrastructure the writer singled out e-readiness, computer literacy and telecommunications equipment; while policy issues such as legislation and human capital development formed two other areas. Within human capital development issues identified included skills, capabilities, education and learning. Issues of change management and partnership/collaboration formed two further groupings while the last two groups were concerned with issues of strategy and leadership.

Weerakkody, et al. (2007) in a study of e-government in Zambia developed a framework in which the major challenges were grouped into four areas which the project leadership needed to address. Environmental factors included politics (a change in government could result in a project being stopped or suspended for example); social dynamics (especially citizen participation projects) as well as economic considerations (because the country's revenue inflows are low, systems that generate revenues have been prioritised). Resource factors identified included funding and human capital while consideration was given to the AIDS pandemic which would impact on and could be impacted on by the use of e-government systems. Cultural factors considered included the national culture, organisational culture as well as resistance to change. The study also highlighted infrastructural factors such as connectivity, the ecosystem for service delivery such as Banks, mobile telephony providers, internet service providers as well as software service providers.

In a study of the factors affecting the effective development of e-government in Zambia skills on the part of both government employees and citizens were seen as an issue by Bwalya, et al. (2012). Respondents to a survey also identified availability and affordability of internet access as an issue along with a lack of user-friendly platforms. Issues of security and privacy were also raised as concerns. Hendriks (2012) discusses some common challenges faced in implementing e-government in the developing world and covers a lack of skills, weak commitment to change, and lack of commitment to institutional reform which would include legal and process reforms as well as technical challenges in much the same vein as the other studies covering the developing world. Looking specifically at the South African environment; the writer points to a lack of appreciation of the scale and scope of the project being undertaken, insufficient capacity as well as project prioritisation issues.

In tying together the issues raised as challenges for e-government projects in the developing world and comparing these with the issues raised regarding the developed world, one sees an overriding concern in the developed world in processes, policies and leadership of projects while in the developing world issues of skills availability, accessibility of systems (internet access, localisation of language) and funding are more commonly raised as issues. Table 2 below, based of the work of Karunasena(2012)

presents a direct comparison of implementation issues between developed countries and developing countries.

<b>Factor</b>	<b>Developed Countries</b>	<b>Developing Countries</b>
History and Culture	Developed Economies, constant rate of growth, higher productivity and higher standard of living.	Emerging economies, no significant economic growth or productivity.
	Long history of democracy, and transparent government processes, procedures, policies and rules	Short history of democracy, less transparent government processes, procedures, policies and rules
Human Resource	Skilled and Qualifies personnel	Shortage of skilled personnel;
	Relatively highly competent staff	Lack of competent staff
	Sufficient professional training	Lack of professional training
	Government has capacity to outsource appropriate human resources for e-government	Government has relatively poor capacity to outsource appropriate human resource for e-government
Infrastructure	Highly sophisticated ICT infrastructure	Poor ICT infrastructure
	Relatively developed ICT infrastructure nationwide	Poor ICT infrastructure nationwide
Citizens	High levels of internet access and ICT literacy	Poor internet access and ICT literacy
	Digital divide exists	Many suffering through digital divide
	Active participation in governmental policy making through e-democracy initiatives	Poor participation in governmental policy making through e-democracy initiatives
		Lack of trust in online initiatives

Table 2: Comparison of implementation issues

Source:(Karunasena, 2012)

### 2.3.3 An assessment of e-government in Zimbabwe

In a review of literature relating to challenges to the successful implementation of e-government initiatives in Sub-Saharan Africa, Nkohkwo & Islam(2013) found no journal items published since 2001 relating to e-government challenges in Zimbabwe. While this appeared to signify a paucity of research in this area, this researcher's work found numerous articles relating to e-government work in Zimbabwe, some of which are documented in the section below. A review of the National ICT policy(Government of Zimbabwe, 2012)highlights a number of challenges facing the ICT sector in Zimbabwe, many of which are in line with the findings of other work looking at challenges of implementing systems in the developing world. Issues of technical infrastructure dominate the list of changes, zeroing in on telecommunications and power, issues of skills availability, limited financial resources as well as

unsatisfactory institutional arrangements. The following section looks at the Zimbabwe situation in detail.

## **2.4 E-Government in Zimbabwe**

This first part of this section looks at the major events in the years since independence that have led to the development of e-government in Zimbabwe. The later part reviews the literature on e-government in Zimbabwe focusing on the major drivers and benefits of the initiatives that have been deployed.

### **2.4.1 Evolution of e-government in Zimbabwe**

Since independence from Britain in 1980, the public service in Zimbabwe has seen numerous changes. Many of these have been aimed at correcting the imbalances that arose from transforming a civil service created to service the needs of a small white minority into one geared to serve a much larger black populace struggling to find its feet in the new dispensation. More recent changes however have been focused on creating a generally more responsive and accountable civil service.

The first of the major changes related to the Economic Structural Adjustment Programme (ESAP) that ran from 1991 to 1996 whose major reform elements included improvements in policy formulation and implementation, redefining ministry mission statements, restructuring the public service through staff rationalisation and improvements in resource utilisation (Government of Zimbabwe, 2012). These initiatives were clearly in line with New Public Management (NPM) thinking, then a rising tide in the public service across the world (Wood, 1991) advocating amongst other initiatives slowing down government spend while maximising resource utilisation, privatisation, automation and adopting an international outlook. The second phase of reforms, under the banner Zimbabwe Program for Economic and Social Transformation (ZIMPREST) ran from 1996 to 2000 and were intended as a consolidation phase of the gains of the first reform initiatives, with a focus on bringing a business mind set to the public sector, again in line with NPM thinking.

While the first two phases of reform seemed focused on the economy, the third initiative, the Integrated Results Based Management (iRBM) running from 2005 to 2011 was focussed squarely on reforming public service administration. Reasons given for the need to implement this initiative included the need to improve the quality of service, enforce coherent strategic plans, link priorities to national vision, instil a sense of urgency, bring about horizontal collaboration and integration between ministries, improve monitoring and evaluation, bring about transparency and accountability as well as to meet citizens' needs. A key objective of the implementation of this initiative was seen as the deployment of e-

government as “an enabler...a catalyst on the overall implementation of iRBM” (Government of Zimbabwe, 2012, p. 41)

As a result of the adoption of the iRBM initiative with e-government as one of its key deliverables, an e-Readiness Survey was launched in 2003 (Government of Zimbabwe, 2005a) whose main findings zeroed in on a lack of a coherent ICT policy, poor infrastructure for power and telecommunications and well as limited skills availability. As a positive, the report highlighted the existence of Cabinet committee with the mandate to drive forward ICT initiatives as well as the continued growth of GSM network connectivity country-wide. Subsequently, the government formulated a National ICT Policy (Government of Zimbabwe, 2005b), whose recommendations included the deployment of ICT in all sectors of the economy while creating a platform to provide information to citizens.

In 2010, the government, having set up a Ministry of Information and Communication Technologies, published its strategy document for the next five years. This document amongst other things set out to enter in collaboration with the public to address areas such as improved infrastructure for connectivity while creating of a common e-business framework. The strategy also addressed the development of content development and sharing platforms as well as development of an e-government platform to service the needs of government and citizens. Finally the strategy set out to create an enabling political, legal and technical environment in order to foster the development of the ICT industry while developing the human skills to support these initiatives (Government of Zimbabwe, 2010). As a result of the adoption of this strategy, a series of consultative meetings were held leading to the adoption of a nation E-government strategy (Government of Zimbabwe, 2011) out of which the ZimConnect project was born.

#### **2.4.2 Foundations of e-government in Zimbabwe**

Several studies have been conducted of e-government projects in Zimbabwe contrary to the assertion by Nkohkwo & Islam(2013) that no literature exists that document e-government projects. In a study of e-records readiness at the National Archives of Zimbabwe, Nkala, et al.,(2012) found the lack of a local ICT policy, the distributed management of records, inadequate infrastructure and a lack of skill as being the major challenges to a successful implementation of a national e-record infrastructure. Ngwenya (2012) draws attention to the information asymmetry between citizens and government as well as an asymmetry in institutions and diffusion of technology between developing and developed economies as challenges for e-government implementation in Zimbabwe. Chaterera (2012), in a study of attitudes towards e-government in Zimbabwe points to a lack of awareness, lack of technical skills as well as general negative attitudes toward e-government as being challenges to the successful deployment of e-government services in Zimbabwe.

In a series of articles on the state of e-government in Zimbabwe, Ruhode(Ruhode, at al. (2008); Ruhode & Owei(2010) and Ruhode(2013)) points to a number of enablers and challenges to e-government in Zimbabwe. Amongst the key enablers are an active private sector, institutional mechanism, high levels of literacy, high mobile penetration, a government wide WAN and a general awareness of e-government, the latter in contrast to the findings by Chaterera. Amongst the challenges Ruhode list restrictive policies, inadequate technical infrastructure, poor energy infrastructure, lack or resources, bureaucracy and political uncertainty. Many of these mirror the findings of Karunasena (2012) on e-government challenges in the developing world in general.

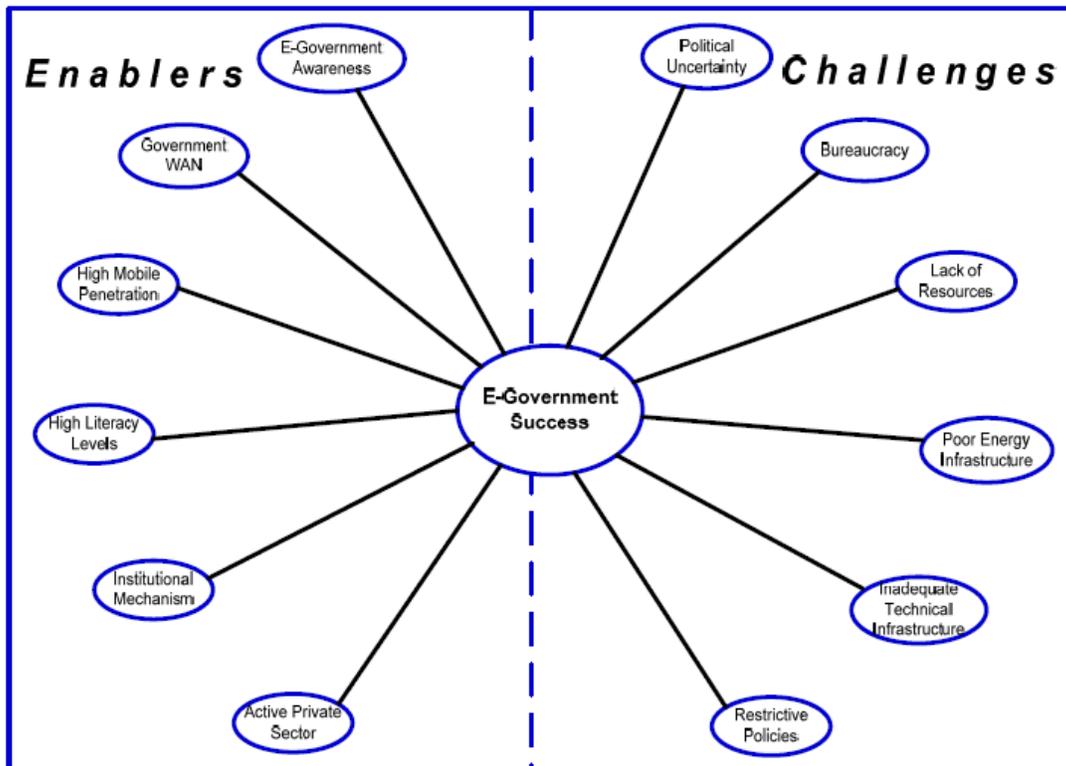


Figure 2: Summary of e-government enablers and challenges

Source (Ruhode, 2013)

The project charter for the ZimConnect project lists a number of project risks which from an implementation team perspective are likely to derail the successful rollout of the e-government initiative (Government of Zimbabwe, 2012). These include technological challenges such as connectivity, late provision of software and hardware, cyber-security threats and difficulties in integrating with existing systems such as the Public Financial Management System (PFMS). A number of people challenges such as availability of the right skills, availability of the right numbers as well as change management skills are also highlighted.

All of the studies and documents cited point to resource challenges in one form or another. Issues of connectivity relate to a resource constraint. Issues of insufficient power, late provision of hardware and software, lack of skills, insufficient numbers of people are all related to a failure to provide resources to procure, to train, to run the e-government initiatives. Given the limited resources available to government, government must, in order to maximise the benefits, and hence the value delivered to the public, effectively prioritise the initiatives to be undertaken in a way that maximises public value. This work seeks to understand the prioritisation process better and hopefully proffer advice that can help government improve the prioritisation process.

## **2.5 Theoretical Perspectives on e-government implementations**

Lips (2012) argues that many of the challenges with e-government implementations are a result of using the wrong theoretical perspectives to understand e-government phenomena. Lips' work goes on to explain the difference between what she calls an e-government 1.0 approach which is largely technology deterministic and e-government 2.0, a perspective that tries to directly relate e-government to transformation of government while advocating for a theoretical lens that is rooted in public administration theory.

Many studies have been conducted that view e-government work from an actor-network theory (ANT) perspective. Heeks and Stanforth (2007) utilise ANT to study how actor-networks, both global and local, and their mobilisation, interaction and disintegration affect the trajectory of e-government projects, basing their work on the implementation of an Integrated Financial Management System in Sri Lanka. Afarikumah & Kwankam (2013) used ANT to analyse an implementation of a Telemedicine service in Ghana as part of a joint project between the Indian government and the African Union. The writers exploited the material-semiotic characteristics of ANT to describe the nature and coherence of the PAN-African network established as part of this implementation, highlighting the transient nature of networks and how they require continuous renewal. Ayyad (2009) uses ANT to study the barriers to successful implementation of e-government based on a project in Palestine benefiting from its ability to analyse a socio-technical system. Ochara (2012) uses ANT to review e-government projects in Africa and concludes that poor mobilisation of grassroots actors, whose role is being reduced to that of e-government service consumers, brings the sustainability of e-government projects into question.

Fountain (2001) uses institutional theory to lay out the foundations for the technology enactment framework, which she then uses to review efforts at reform using technology by the United States government. Kim, et al. (2009) also use institutional theory to evaluate the development of an anti-corruption system in Seoul, South Korea. Their study finds that normative pressure which resulted in

the adoption of the system came particularly from public expectations and demands, while regulatory pressure from central government was the most effective tool in driving the implementation of the project. While there was no mimetic driver to this particular project, it was observed that other local authorities took up similar initiatives after this one in a sign of mimetic isomorphism at play.

Ciborra & Navarra (2005) adopt New Institutional Economics (NIE) to study the implementation of e-government in Jordan. The study concludes that the increasing complexity of state machinery, coupled with a push for democracy in an environment characterised by poor public participation is likely to lead to poorly specified systems that will result in redundant, incompatible systems that are difficult to control.

One of the early works that tries to investigate how citizens perceive government must be Smith & Huntsman (1997) who use two models, a customer model and an owner model to come up with a 'value' model which they then use to investigate how citizens value government. The essence of the value model was that citizens expect government to create value for them by investing in and delivering services, that government would be a trustee of assets, of which citizens are shareholders of the public trust. Their research found that while citizens struggle to think of value in terms of government, they had expectations of government akin to the value model they created.

Yet two perspectives, both rooted in public administration research, have shaped e-government research since the 1990s. New Public Management (NPM), associated with the Margaret Thatcher government in Britain and Ronald Reagan in the United States of America and reviled by Dunleavy, et al. (2006) who instead propose Digital Era Governance, and public value theory, proposed by Moore (1995) are re-visited in more detail below.

There is no single universal definition of NPM, mainly because NPM is not a coherent set of ideas and tools (Pollitt, et al., 2007). Ferlie, et al. (1996) argue that at least four distinct models exist, the earliest focussing on a drive for efficiency and making the public sector more business-like. Characterised by 'crude' notions of efficiency and led by private sector advisors core themes of this model included greater financial controls, stronger management, responsiveness of service providers (including the incorporation of non-public service providers), less self-regulation of professionals and a move from elected corporate governance to appointed boards of directors. These were all aimed at addressing a bloated and ineffective civil service

A second model, focussing on downsizing and decentralisation brought in concepts of management by contract, delayering and downsizing as well as introduction of formal buying organisations. This model saw a move away from command and control management in the first model to more management by

influence. A third model, largely influenced by “excellence” writing (Peters & Waterman, 1982) of the 1980s highlighted the importance of values, culture, rites and symbols in shaping how people behave. Focus moved from tasks to processes and outcomes, as well as a move away from strong privileged management to leadership by small teams or charismatic senior managers. In bottom up approaches, emphasis was on development and learning and radical decentralisation while in top down approaches culture change programs, charismatic leaders, intensive corporate training, mission statements, corporate logos, uniforms and strong strategic human resources functions were key.

In the fourth model, a fusion of public and private sector management ideas was characterised by service quality focus, the concept of citizenship, and a focus on user concerns as opposed to customer concerns. A major shift from previous models was the move back to elected bodies as a source of power as opposed to appointed bodies.

Teicher, et al.(2002) use NPM to study service quality brought about by implementation of e-government in Australia and while observing that the demands of NPM mirror the requirements of Total Quality Management systems (TQM), conclude that the deployment of e-government systems as part of NPM initiatives has not necessarily, at least in the early days, led to the service quality improvements envisioned.

In arguing that NPM is dead,Dunleavy, et al.(2006) summarised the key themes in NPM as being disaggregation, in which large public sector hierarchies are split up to produce wider and flatter hierarchies and the development of systems to support such structures; competition, in which consumers are given a choice in service provision and incentivisation.in which specific performance was rewarded.Dunleavy, et al., (2006)propose a model in response to public sector problems resulting from NPM reforms (Lips, 2012) taking advantage of advances in information handling capabilities now available to governments. The proposed reforms including re-integration of government functions, ‘needs based holism’ – a grouping of functions around specific need, and digitalisation changes such as automation of processes around portal applications.

## **2.6 Public Value of E-Government**

Having reviewed a number of potential theoretical perspectives that could be used to study e-government, this section zeroes in on public value theory. It presents a brief history and an overview of its main concepts while comparing and contrasting it to the other dominant trains of thought in public administration. Several examples of studies that have used public value theory are presented before a formal justification for its use in this study is presented.

### 2.6.1 Overview

Public value theory has evolved since the mid-1990s starting with the work of Mark Moore in the United State of America, focusing on three areas, namely the role of government as a creator of value, the role of government managers as custodians of public assets who have to maximise their use for public value and the techniques required by these managers to ensure consistency and reliability in offering services (Benington & Moore, 2011). Unlike Giddens (1984) who focussed his efforts on the conceptual and theoretical aspects of structuration theory, Moore focussed his efforts more on operationalising his ideas and less on their theoretical development. Three distinct but related processes underpin the creation of public value forming a framework referred to as the strategic triangle (Benington & Moore, 2011). Coats & Passmore (2008) in positioning public value as the basis for public sector reform in the United Kingdom present the strategic triangle as a framework through which public managers must address questions of what the organisation is for, who the organisation is accountable to and how success is defined for the organisation.

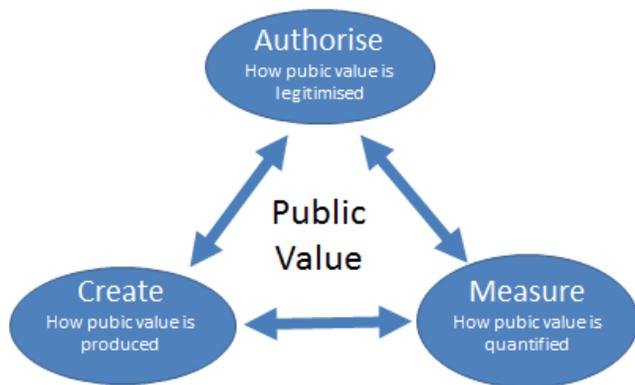


Figure 3 : The Public Value Dynamic

Source : (Coats & Passmore, 2008)

In contrast with the concepts behind the New Public Management movement of the 1980s, which gave primacy to quantitative measures, public value takes the view that what matters is what works, without diminishing the value of performance measures (Benington & Moore, 2011, p. 113). Public value theory makes the distinction between a user as a consumer with individual interests and a citizen, whose interest is in what is good for society, recognising a dual role for citizens as co-producers – or potential co-producers - of services as well as recipients or consumers of services while emphasizing downward accountability to users. Kelly, et al. (2002) argue that public value entails being more efficient at tackling the things that the public care about, from service delivery to system maintenance.

<b>Paradigms of Management</b>			
	<b>Traditional Public Administration</b>	<b>New Public Management</b>	<b>Public Value Management</b>
Key objectives	Politically provided inputs; services monitored through bureaucratic oversight	Managing inputs and outputs in a way that ensures economy and responsiveness to consumers.	The overarching goal is achieving public value that in turn involves greater effectiveness in tackling the problems that the public most cares about; stretches from service delivery to system maintenance.
Role of managers	To ensure that rules and appropriate procedures are followed.	To help define and meet agreed performance targets.	To play an active role in steering networks of deliberation and delivery and maintain the overall capacity of the system.
Definition of public interest	By politicians or experts; little in the way of public input	Aggregation of individual preferences, in practice captured by senior politicians or managers supported by evidence about customer choice.	Individual and public preferences produced through a complex process of interaction that involves deliberative reflection over inputs and opportunity costs.
Approach to public service ethos	Public sector has monopoly on service ethos, and all public bodies have it.	Skeptical of public sector ethos (leads to inefficiency and empire building); favors customer service.	No one sector has monopoly on public service ethos; maintaining relationships through shared values is seen as essential.
Preferred system for service delivery	Hierarchical department or self – regulating profession.	Private sector or tightly defined arms-length public agency.	Menu of alternatives selected pragmatically and reflexive approach to intervention mechanism to achieve outputs.
Contribution of the democratic process	Delivers accountability: Competition between elected leaders provides an overarching accountability.	Delivers objectives: Limited to setting objectives and checking performance, leaving managers to determine the means.	Delivers dialogue :Integral to all that is undertaken, a rolling and continuous process of democratic exchange is essential

Table 3 : Paradigms of Management

Source : (Kelly, et al., 2002)

Public value demands that services be authorised by the public. While politicians derive their legitimacy from elections, public value demands that politicians and public managers explain and justify their work, necessitating continual dialogue that places citizens on the same level as industry, experts, the media, judiciary and government representatives. Engaging citizens helps public managers to improve their decision making, explain constraints, prioritise their work as well as share their dilemmas leading to what Benington & Moore (2011) refer to as “responsiveness to refined preferences”. Kelly, et al. (2002) point out that public authorisation comes not from politicians or aggregated demands by the public but deliberated on public preferences depending on inputs and opportunity costs.

Creating services that deliver public value requires that governments build a strong delivery capability in staff as well empowering them to better manage procurement, projects, subcontractors; and where appropriate, engaging citizens in service delivery, all in a manner that ensures responsiveness to public preferences. Key to this process is the ability to put themselves in the shoes of the citizen and view their work from the position of the citizen.

The measurement of public value involves the conversion of public expectations using the input of politicians and public managers into clear goals against which performance can be measured. For such a framework to work, devolution of power and authority is necessary, allowing goal setting to be conducted at the local level accompanied by local delivery capability. The focus of measuring public value should not be on narrow measures per se, but the broader outcomes that appeal to the public, thus public health as an outcome as opposed to a narrow measure of garbage collection (O'Flynn, 2007).

A public value perspective is useful in evaluating e-government projects. Kearn (2004) suggests criteria with which e-government should be judged such as the provision of widely used services, increased user satisfaction with services offered, increased information and choice, focus on services that citizens value, innovation in provision of services for those most in need as well as reduction in cost of providing services while improving delivery of valued outcomes. The strength of public value theory lies in its re-definition of how government can meet the challenges of accountability, efficiency and equity while explaining how government can be relevant without resorting to rules or incentives to drive public sector reform initiatives (O'Flynn, 2007).

While the field of public value has gained in popularity, it is short of empirical research and the definition of public value is still considered by many to be nebulous at best with a divergence in its use. Uses have varied from using public value as a template for public sector reform, a performance management framework through to it being viewed as the “paradigm for public governance in contemporary society” (Williams & Shearer, 2011). While some accept public value thinking as an academic theory (Benington & Moore, 2011) others contend that it is still in its infancy. Williams & Shearer (2011) argue that there is still little evidence of public value theory’s explanatory power especially between different contexts.

## 2.6.2 Public Value Research

Try & Radnor (2007) use public value theory as a theoretical framework to study an implementation of a Results Based Management system in Canada concluding that while public value theory was useful in identifying some of the limitations and constraints of Results Based Management system implementation, other limitations and constraints such as politics, information use and motivation fell outside the theoretical lens of public value theory. Grimsley & Meehan (2007) use public value theory to develop a framework for evaluating e-government projects based on a study of an e-government project in the housing sector in the United Kingdom and validate their framework on the study of a different entity in the same sector.

Karunasena (2012) in a study of the implementation of e-government in Sri Lanka uses public value theory to identify critical factors for the implementation of e-government, develop a framework for evaluation of e-government implementations and to come up with recommendations of how the Sri Lankan government can improve service delivery.

## 2.6.3 Motivation for the use of public value theory

This paper has discussed the use of a number of theoretical frameworks, none of which are native information systems theories, but all which have been used to study information systems especially in the e-government space. Institutional theory presents the least likely candidate to bring out an understanding of the process of prioritising e-government projects as its focus is primarily on how organisations adopt structures and practices. Structuration theory is likely to provide a very complex way of getting to understand the prioritisation process by bringing into focus the structures around which decisions are made but is unlikely to lead one to a clear understandable exploration of the processes involved. Actor-network theory has been used in similar work and presents a very likely candidate for use in this study. Actor-network theory would allow the research work to revolve around the actors that prioritise e-government projects and provide an understanding of the dynamics that lead them to make the decision they do. It will bring into play the various artefacts that they build around themselves and allow the research to dig into these, and their relationships to build an interesting picture of how the prioritisation process unfolds; the ultimate aim of any interpretive study.

One must not forget, however, that the focus of this study is to understand how e-government projects are prioritised for public value. Public value theory presents the most comprehensive theory available for understanding what goes on in public managers' mind as they prioritise projects. Public value theory therefore presents the most appropriate framework for understanding, without entering the minds of citizens to whom services are being offered, if an attempt has been made to deliver value to them.

The academic world has debated whether Moore's work has resulted in an empirical theory or a normative framework of what public managers should do. Describing public value as a normative theory, Alford & O'Flynn (2009) proffer three potential uses of public value theory. Firstly, public value theory, through the strategic triangle, can be used as a diagnostic tool to interrogate the current environment, thus addressing questions of what public value is currently being produced, how the current authorising environment stands and the existing capacity to deliver public value. Secondly public value can be used to structure thinking about how public value should be delivered. Public managers can use public value to conceptualise what services to provide, how to engage the authorising environment and think about the capability required to provide these services. Thirdly, public value allows researchers to investigate how managers behave.

In seeking to understand how public managers conceptualise e-government projects, this body of work falls into the third category, trying to understand how to prioritise projects in order to ensure that they deliver public value.

## **2.7 Co-creation and co-production.**

Prahalad & Ramaswamy (2004) distinguish co-creation as being about joint creation of value between customers and organisations as opposed to "customer focus", "customer is king" or "customer is always right thinking". While public value theory makes clear the distinction between a customer and a citizen, and labours the point of refined preferences (Benington & Moore, 2011), the idea of citizens working together with government to generate value appears in sync with the thinking behind public value theory. Prahalad & Ramaswamy (2004) point out that co-creation is not only about the organisation trying to please the customer. It is about allowing the customer to co-construct the product or service to be enjoyed, allowing them to participate in defining the problems as well as the solutions to these problems. Co-creation is about creating an environment in which citizens can have active dialogue with service providers allowing them to be at the heart of the process of innovation. Co-creation is about creating an environment through which citizens have access to government; where the risks and benefits of their choices are exposed and where transparency is the order of the day.

The ideas of co-creation cannot however be imported wholesale into public service thinking. The ideas of personalising products and services to allow "the experience of one", where each customer gets to feel that they are the only customer of an organisation are not practical. Yet this concept has been explored in the public sector in thinking about co-production. Brandsen & Pestof (2006) in an article that focuses of the role of the "third sector" - NGOs and other civil society organisations – refers to co-production as an arrangement where citizens produce their own services, at least in part. This concept came about as a result of a realisation that it was difficult to produce services, unlike goods, without the

active involvement of the beneficiaries of the service. In this concept, service providers such as police officers, teachers and workers in the health sector and citizens who wish to see a safer environment, a better education system or a healthier community work together to produce the services required to deliver this ideal world.

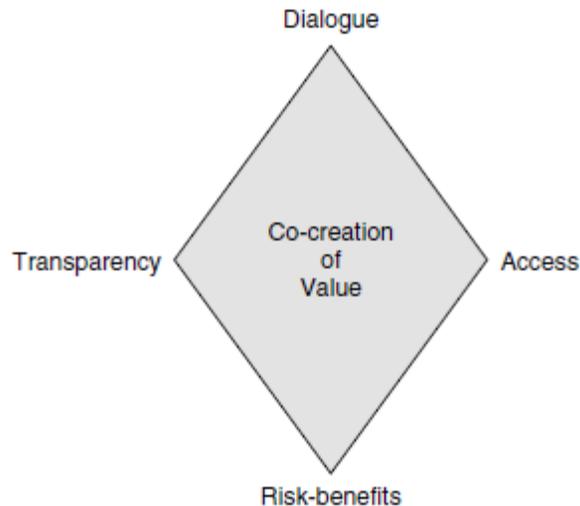


Figure 4 : The building blocks of interactions for co-creation

Source : (Prahalad & Ramaswamy, 2004)

Osborne & Strokosch(2013) make a distinction between user empowerment, where co-production results from the difficulties of separating production and consumption of a service thus bringing in the citizen at the point of operationalising the service; and user participation where the aim is to improve the quality of services through involving the user at planning and design stage. In a paper entitled “It takes two to tango”, Osborne & Strokosch argue that co-production can be enhanced by combining these two approaches, the operational and the strategic, to bring about user-led innovation in service delivery, and come up with a framework that integrates public administration perspectives as well as service management perspectives in designing co-production initiatives.

Clark, et al. (2013)investigate how communication advances have impacted the participation of citizens in co-production of services given advances in technology. Their work notes no significant differences in participation of different racial groups in America, but notes that poorer neighbourhoods participate less and contemplates the impact of the digital divide on co-production. This latter point is revisited by an article in the same publication by Jakobsen & Andersen(2013) who point out that the more disadvantaged communities are hamstrung by a lack of knowledge and resources such that they are unable to take full advantage of the opportunity to participate in a co-production process. The authors advocate the provision of the necessary knowledge and resources to allow full participation of all citizens in co-production.

In advocating a move from e-government to we-government, Linders (2012) argues that governments are operating in increasingly challenging environments and engagement of citizens in service delivery is becoming a must. The article notes that citizen co-production is starting to take centre stage in public service delivery with advances in technology, especially the increasing ubiquity of the internet. Linders discusses various modes of citizen engagement, where citizens contribute time, expertise and effort allowing them to jointly produce outcomes, share responsibility and manage risk with government. These actions allow citizen greater control over both decisions and resources that government brings into play.

The Open Government initiative is given as an example of a co-production initiative that focuses on participation and collaboration. The British government's Big Society program driven by Prime Minister David Cameron is yet another example of co-production, this time with the stated initiatives of decentralising government and devolving power into the hands of citizens. Singapore's Government-with-You is presented as a collaborative initiative that facilitates co-creation and allows government to connect with the people. Opponents of co-production dismiss these initiatives as gimmicks or attempts to hide budget cuts by government by moving work into the hands of citizens.

Linders' key contribution to the co-production debate is a typology for co-production in e-government. In classifying co-production initiatives that employ social media, the article identifies three ways in which citizens engage with government. Citizen sourcing or C2G in the nomenclature employed earlier by Karunasena (Karunasena, 2012) focuses on getting citizens to help government become more responsive and effective. In Government as a platform (G2C) government does not play an active role but provides a facilitating platform that can allow citizens to become more efficient and more productive. In Do-it-yourself Government (C2C), the state provides a policy framework and allows citizens to self-organise for citizen to citizen co-production.

In citizen sourcing, at design stage, consultation and ideation is achieved through citizens offering their ideas to government in helping them prioritise policy and design initiatives, an activity that was typically conducted through town halls or election boards. In the age of social media, this activity is being conducted through technologies such as eRulemaking, IdeaScale or eDemocracy. At execution stage, crowd-sourcing and co-delivery is achieved through allowing the public, either as a community or as individuals, to utilise their knowledge or expertise to participate in the delivery of services. Examples of this in the social media age include CrisisCommons or PeerToPatent. Citizen reporting in the social media age is achieved through apps such as SeeClickFix or FixMyStreet via cell phones or other mobile devices.

In Government as a Platform, at the design stage, citizen involvement is through informing and nudging, providing the public with the data they need to make decisions such as through crime mapping or data mining applications. Execution is achieved through ecosystem embedding, providing

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expertise or infrastructure to allow self-execution by the public. Monitoring is achieved through proactive distribution of information about government initiatives such as through Open Government initiatives like Data.gov or Open Kenya.

Do-it-Yourself government allows citizens to organise themselves with minimal involvement of the government. The design stage is characterised by self-organisation through “smart mobs” or community portals. Execution is achieved through self-service, typically within a framework defined by government but operated by the public for the public. The open source movement is an example of one such execution. Monitoring is achieved through online testimonials managed and employed by the public for their own use.

Linders’ work concludes with an observation that the emergence of co-production in e-government begins to challenge the essence of New Public Management focused on market driven transaction oriented approaches by seeking citizen participation at all stages of service delivery to the public. The ideas of Digital Era Governance as proposed by Dunleavy, et al. (2006) and transformational government – t-government – as discussed earlier in this study are presented as responses to this challenge.

Isett & Miranda (2014) attribute the resurgence of co-production to the ability to utilise technology in involving citizens in participation as well as in service delivery. Drawing from literature the authors point out that while co-production increases efficiency and effectiveness of government, it works best where the benefits of co-production accrue to those participate in the service being delivered. The paper acknowledges shortcomings of co-production as being potential resistance from traditional service providers, with professionals reluctant to partner with lay people leading to resistance in implementing services; the difficulties of co-production with the underprivileged or disadvantaged as well as the challenges of using newer technologies amongst the poorer communities; mirroring the ideas put forward by Clark, et al. (2013). The main findings of their work point to the difficulties that governments face in deploying co-production initiatives at all stages of engagement from design, execution and monitoring.

## **2.8 Prior work in Project Prioritisation**

This study seeks to understand how e-government initiatives can be prioritised to maximise public value. Previous sections of this chapter have discussed e-government and the challenges facing e-government, public value as well as co-creation and co-production and the impact they have on service delivery. This section introduces ideas behind project prioritisation in leading up to the development of a framework for prioritising projects in the public sector.

Rosacker & Olson (2008) observe that while there is plethora of studies that have investigated project selection (and evaluation) techniques in the private sector, few studies have looked at the how projects are selected and prioritised in the public sector. Yet the fact that governments spend significant amounts of money on ICT projects, coupled with the high failure rate of e-government projects make this an area worth investigating.

Bozeman & Bretschneider(1986) in a study of management information systems in the public sector point to a number of differences in the approach to selecting projects. Public sector organisations avoid risk and may be answerable to more than one authority, with politics playing a disruptive role in any long term planning that may be contemplated. Procurement and spending is generally within short term budgets operated in highly regulated environments making the deployment of systems more complicated than in private sector environments. Later work by Bretschneider (1990) points to public organisations as having more inter-dependencies hence more accountability which also led to more red tape and procedural delays. Bretschneider also notes that public sector organisations tend to be less focussed on economic issues than private sector ones.

In a study to assess inhibitors to optimal project selection, Wheeler & Trigunaryah (2010) point out that in ideal environments, projects selected should be in line with strategy, provide a positive return and “value for money”. Sufficient resources should be made available for such projects, ensuring they do not interfere with the normal business of the organisation and without getting in the way of the organisation’s ability to bring in an income. Their research showed that in reality selection processes became too complicated and cumbersome in trying to ensure rigour and fairness resulting in suboptimal results. Where a senior manager (or other project sponsor) had a strong say, there was reluctance, by an evaluating team, to follow procedures that would result in outcomes that would be contrary the wishes of the sponsor. Similarly where senior managers felt that process would take away their decision making powers, such processes would be avoided. A lack of adequate project sponsorship and advocacy was found to result in lax attention being paid to the procurement process.

In an effort to remove subjectivity from selection processes, teams relied on quantitative data at the expense of qualitative data, leaving out important and relevant views that could have affected the selection process. Ignorance of a selection process could lead to the process being used as a “tick box” exercise without bringing meaningful benefit to the process. Inadequate education and training about selection processes and their importance could also be seen to be undermining their use.

The study by Rosacker & Olson (2008) points to a number of financial project selection methods in use in the public sector. Cost benefit analysis (CBA) was found to be in use but less regularly than in the private sector while other methods were found to be even less common. These included net present value (NPV), project payback and budget constraints. Qualitative methods included probability of completion, instinct, senior management support as well as mandatory requirements. In their empirical

study it was found that quantitative methods generally led to more successful projects. A study by Gutierrez & Magnusson (2014) seemed to agree with this finding. While noting that formal and rational approaches are likely to lead to organisations missing out on opportunities for innovation, projects that result from such approaches are more likely to be successful.

Olphert & Damodaran (2007), while acknowledging the increasing participation of citizens in planning and policy-making, highlight a lack of research into the role of citizens in the development, shaping or selection of ICTs. In advocating for open government in delivering public value, the Centre for Technology in Government (2011) argue that selecting initiatives to maximise public value is best achieved not only by linking initiatives to the government's mission and strategy, but can be enhanced by having a clear understanding of who initiatives will serve and what they value.

The work by Kahraman, et al. (2007) investigating the prioritization of e-Government strategies using a SWOT-AHP analysis in Turkey is closest in approach to the approach adopted for this study. Their study catalogues the strengths, weaknesses, opportunities and threats of the e-government initiative in Turkey then employs AHP to prioritise the resulting strategies.

## **2.9 Analytical Hierarchical Process (AHP)**

AHP, based in the work of Thomas L. Saaty (1990) on how to make a decision, is a multi-criteria decision analysis tool that allows one to undertake a decision where numerous complex variables have to be taken into account. AHP allows for the creation of a hierarchical structure with two or more levels; for example one with criteria for evaluation and another with initiatives to be selected from. Triantaphyllou & Mann (1995) sum up AHP as a decision support tool that has gained popularity because of its mathematical robustness coupled with a requirement for input data, both qualitative and quantitative, that is easy to obtain. Its multi-level hierarchical structure caters for objectives, criteria, sub-criteria and alternatives. Through pair-wise comparison of alternatives, relative weights are allocated to decision criteria and ultimately to the alternatives at the lowest level, making for ranking of the alternatives.

Forman & Gass (2001) highlight three features of AHP that are usually taken for granted. Through the creation of hierarchies, AHP enables the structuring of complexity while allowing for measurements on a ratio scale, a feature that is more precise than measures based on interval, ordinal, or nominal scales, all of which can be catered for in a ratio scale but not the other way round. The final feature of AHP is its capability to facilitate synthesis of complex problems once the prioritisation process has been completed.

Arguments against AHP have centred around a weakness in handling situations where two alternatives are closely matched (Triantaphyllou & Mann, 1995) and situations arising out of the introduction of irrelevant alternatives (Forman & Gass, 2001) both of which have been known to lead to rank reversals in early versions of the AHP model which has continued to evolve since Saaty publication in 1990.

AHP has been used extensively in studies in engineering, research and development as well as in government, such as in the work of Kahraman, et al. (2007) described above. Although the choice of a quantitative tool may appear unusual in an interpretive case study, Myers (2009, p. 88) gives the example of an interpretive case study in which quantitative and qualitative data has been utilized to illustrate the acceptability of such studies.

While the mathematics of AHP are beyond the scope of this work, numerous tools are publicly available that facilitate the use of the AHP model as long as one understands the hierarchy of the problem at hand without needing to understand the mathematical principles behind the tool. For purposes of this study, K.D Goepels' AHP model version 12.08.2013 based on Microsoft Excel (available from <http://bpmmsg.com>) will be used for the creation of a Prioritisation Model as described in the following chapter.

## **2.10 Summary**

This chapter has discussed the concepts behind e-government and challenges associated with deploying e-government systems, making a case for the challenge of e-government project prioritisation which forms the heart of this study. This chapter has also put into context the Zimbabwe e-government implementation which becomes the subject matter for the case study later in this work. A discussion about possible theoretical frameworks has led to public value theory as the most appropriate vehicle for investigating how e-government projects can be prioritised to maximise public value. A section of this chapter discusses co-creation and co-production as ideas that can help deliver public value. The next chapter discusses the development of a conceptual framework, using the analytical hierarchical process described in this chapter that can be used for prioritising e-government projects.

## **3 PUBLIC VALUE FRAMEWORK FOR PROJECT PRIORITISATION**

### **3.1 Introduction**

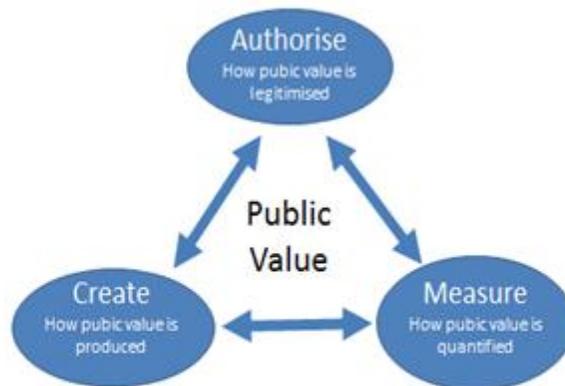
This study sought to understand how governments prioritise e-government initiatives in a manner that maximises the value that the public derive from these initiatives. This task was accomplished through in-depth interviews with civil servants involved in the conceptualisation of an e-government program as well as analysis of key project documents followed by a ranking exercise to create a prioritisation model as described in this chapter.

Public value theory posits that creation of public value depends on public managers paying attention to how services are authorised, how they are created, the outcomes they expect to deliver; and how these public value strategies relate to the public (Moore, 1995). Yet the theory does not provide a mechanism through which public value can be maximised in an environment where resources are limited and projects, services or initiatives have to be prioritised. Prahalad & Ramaswamy (2004) whose work on co-creation was focused on value creation by firms in the private sector argue that value is created by engaging the customer, in this case the citizen, in the process of creating this value. Thinking about co-production of services has built on this and the work of Linders (2012) explored in the last chapter links these concepts to the use of ICT in government. This chapter brings together these two concepts and integrates them with the ideas of multi-criteria decision analysis built on AHP, putting forward a framework that can be employed by governments to prioritise projects.

The first section of this chapter discusses the theoretical work that underpins the proposed framework. While public value theory, co-creation, e-government, project prioritisation and AHP specifically as a multi-criteria decision tool are discussed in detail in the last chapter, this section seeks to explain how these are integrated to come up with the resulting framework. The second section goes through the mechanics of developing the prioritisation framework while the third takes the reader through the process of prioritising a menu of projects using a prioritisation model. The results of an actual prioritisation of a menu of projects undertaken by a focus group of managers, using this framework, as part of the study is presented as part of the research findings of this study in chapter 5.

### 3.2 Theoretical underpinning

This framework was developed on three theoretical concepts; public value theory, co-creation and multi-criteria decision analysis. According to the public value dynamic (Coats & Passmore, 2008), in line with Bennington & Moore (2011)'s strategic triangle of public value, public value is created when the questions of how public services are authorised; how they are created and how they are measured are addressed. The United Nation (2012) argue that prioritisation of some services will lead to greater public value (a case given is that of greater sustainable development). The question remains of how projects can be prioritised to ensure public value is maximised. Yildiz (2012) argues that researchers have not adequately addressed the link between success and failure of e-government projects and how issues of politics, economic, social needs and the agendas of those that determine public policy influence the prioritisations of projects.



Public Managers must address the question of what matters the most to the public; authorisation, creation or the outcomes (measures)

Figure 5 : What strategy matters the most

Public value theory presents three strategies through which governments deliver value to the public; how projects are authorised, how they are delivered and what outcomes they deliver. In developing this framework, consideration was made of the relative importance of the strategies and how they add to public value. While the literature appears to give equal importance to all three (Moore, 1995) there also appears to be a leaning, by accepting that “what matters is what works”(Benington & Moore, 2011), that outcomes matter more. This framework therefore challenges managers to rank what they believe deliver the most value so that their efforts are concentrated on projects that take advantage of that strategy.

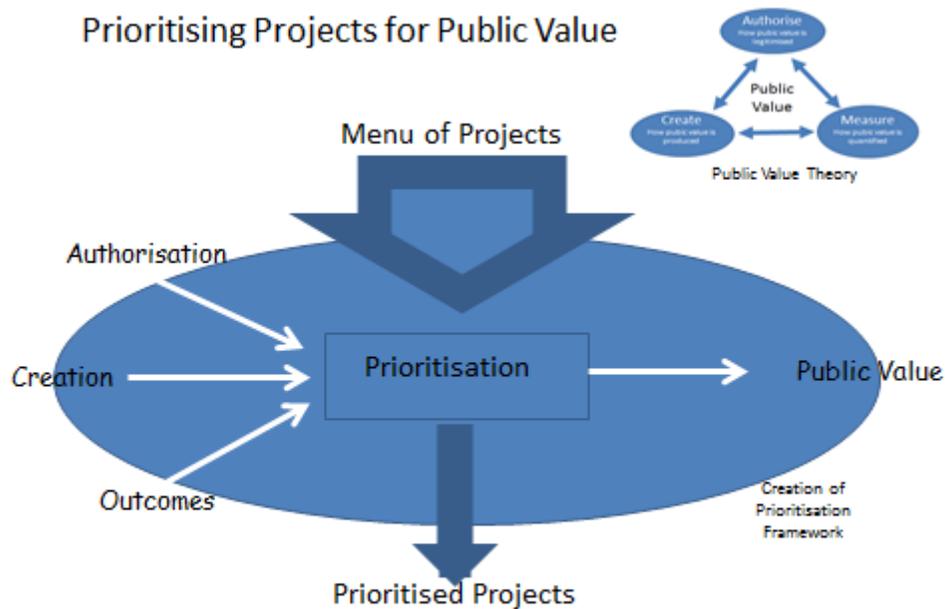


Figure 6 : Project Prioritisation via a Project Prioritisation Model

Co-creation argues that customer engagement (or in this case citizen engagement) delivers value (Prahalad & Ramaswamy, 2004). This framework is therefore built on the premise that prioritisation of projects that deliver maximum value to the public can only be achieved by strengthening the effects of those criteria that the public value. Public value theory argues that authorisation, service creation and outcomes determine the value that the public derives from their interaction with government. Managers must decide which of these are the most important for a given situation. In an environment where the public is distrustful of the government, authorisation is likely to be important. Where the level of public consciousness is high, the public is likely to take a keen interest in the creation and delivery of services (Coats & Passmore, (2008) ; Moore, (1995); Benington & Moore, (2011)). Where the government has not been seen to deliver in the past, outcomes are likely to matter. The relative importance of these strategic constructs forms the basis of the framework.

Within each of these constructs, managers must choose how the strategy is delivered. Managers must for example decide which method or criteria of authorisation delivers the most value to the public. Similarly consideration must be given to the method of service creation and delivery that the public is likely to value the most. Finally managers must decide which outcomes the public is likely to value.

This creates the problem of a decision that requires several criteria to be taken into account. Multi-criteria decision analysis allows managers to handle the complication that arises from having to make a decision that takes so many different variables into account. Analytical Hierarchical Process (AHP) is a

multi-criteria decision analysis tool that allows decisions to be made on complex problems, combining the inputs of multiple decision makers into a single decision.

### 3.3 Prioritisation framework

Based on the theoretical perspectives presented above, together with the review of the challenges associated with prioritising projects in the public sector presented in the literature review chapter, this section focusses on the development of a prioritisation framework that can guide managers in the process of prioritising multiple initiatives in a manner than maximises public value.

This framework seeks the development of a prioritisation model which takes into account all the considerations that relate to prioritizing a set of projects in a way that maximizes public value. The first step in the development of the prioritisation model is the determination of the relative importance of the various strategies that relate to public value. Using the analytical hierarchical process model, a pairwise comparison is made between the three strategies that lead to public value. Thus a public manager is made to choose between seeking public authorisation as a strategy against public participation in creation as a strategy. Goepels' AHP model allows managers, in addition to ranking one strategy over another, to attach a level of importance to their choice, with 1 one indicating that they just prefer their choice over the other while a 9 indicates that they strongly prefer their choice over the other. The process is repeated comparing authorisation to outcomes and finally public participation in creation as a strategy are compared to outcomes as a strategy. This comparison is conducted by all managers involved in the creation of the prioritisation model and this should result in a weighted list of strategies as per Table 4 below.

<b>Strategy</b>	<b>Weight</b>
Authorisation	15.1
Creation	5.2
Outcomes	79.7

Table 4 : Sample Weighted list of strategies

In this mock prioritisation, outcomes are seen as the most important strategy, and thus projects whose outcomes the public relate to the most should be accorded a higher weighting.

The second part of the model development delves into the details of the strategies. A number of potential criteria for project authorisation as a strategy exist. Such criteria may, for example, include demand for a service by the public, management discretion, legal requirements, political requirements, national strategy or ruling party strategy. Managers need to establish what these criteria are for their specific environment and using the same pairwise comparison technique provided for in AHP, a list of weighted criteria should be produced as follows:-

<b>Authorisation</b>	<b>Wt</b>
Authorisation Method 1	25.2%
Authorisation Method 2	11.3%
Authorisation Method 3	34.5%
Authorisation Method 4	6.5%
Authorisation Method 5	12.6%
Authorisation Method 6	3.8%
Authorisation Method 7	6.2%

Table5 : Sample weighted list of authorisation criteria

Managers will also have recognised, in some cases documented outcomes that are in the public interest. Such outcomes may for example be; millennium development goals, public health goals or education goals. In the BBC's creation of a public charter, desirable outcomes were identified as extending the BBC's reach and usage, provision of high quality and distinctive services, impact, cost and value for money (BBC, 2007). A pairwise comparison of these criteria will result in a weighted list of outcomes. Finally government will have identified methods in which services are created, such as through the public service, jointly with the public or through Public-Private-Partnerships (PPP). A pairwise comparison of these using AHP will result in a weighted list of service creation criteria.

<b>Creation</b>	<b>Wt</b>
Service creation method 1	7.4%
Service creation method 2	24.7%
Service creation method 3	7.5%
Service creation method 4	50.5%
Service creation method 5	7.8%
Service creation method 6	2.2%

Table6 : Sample weighted list of service creation criteria

These weighted lists of strategies and criteria are combined in a once off exercise for a public government context, to establish the prioritisation model as shown in Table 8. The prioritisation model is used as a reference table during a project prioritisation exercise as demonstrated in Table 9 and described in the rest of this section.

<u>Outcome</u>	<u>Wt</u>
Outcome 1	42.6%
Outcome 2	5.5%
Outcome 3	15.6%
Outcome 4	16.6%
Outcome 5	7.3%
Outcome 6	4.3%
Outcome 7	6.7%
Outcome 8	1.3%

Table7 : Sample weighted list of outcomes

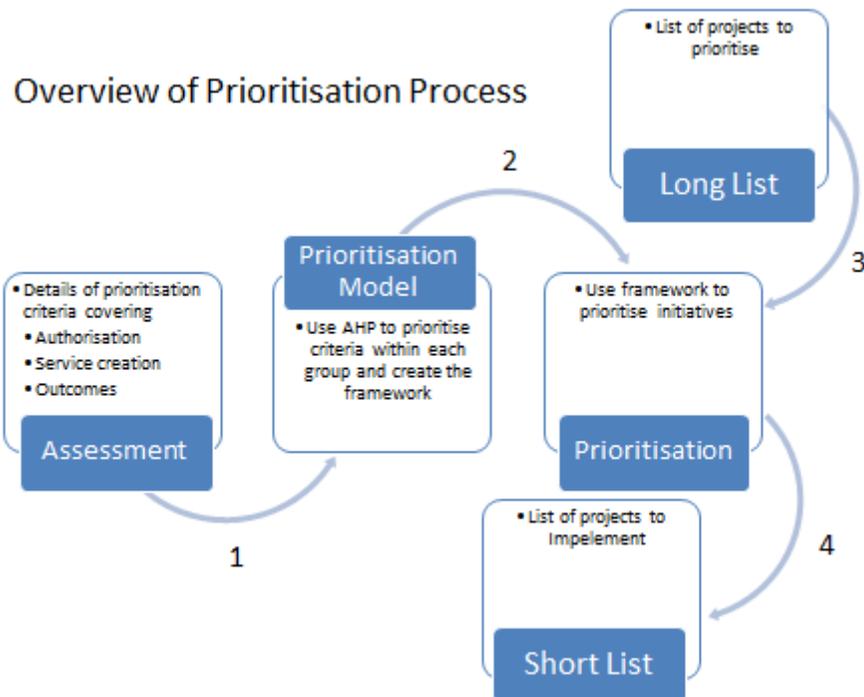


Figure 7 : Prioritisation Process

Project Prioritisation Model						
	<u>Authorisation</u>	<u>Wt</u>	<u>Creation</u>	<u>Wt</u>	<u>Outcome</u>	<u>Wt</u>
1	Authorisation Method 1	25.2%	Service creation method 1	7.4%	Outcome 1	42.6%
2	Authorisation Method 2	11.3%	Service creation method 2	24.7%	Outcome 2	5.5%
3	Authorisation Method 3	34.5%	Service creation method 3	7.5%	Outcome 3	15.6%
4	Authorisation Method 4	6.5%	Service creation method 4	50.5%	Outcome 4	16.6%
5	Authorisation Method 5	12.6%	Service creation method 5	7.8%	Outcome 5	7.3%
6	Authorisation Method 6	3.8%	Service creation method 6	2.2%	Outcome 6	4.3%
7	Authorisation Method 7	6.2%			Outcome 7	6.7%
8					Outcome 8	1.3%

Table8 : Project Prioritisation Model example

Prioritisation of Projects								
	<u>Project</u>	<u>service authorised</u>	<u>Wt</u>	<u>service created</u>	<u>Wt</u>	<u>Outcome affect</u>	<u>Wt</u>	<u>Total</u>
	-	<u>Factor</u>	15.1%	<u>Factor</u>	5.2%	<u>Factor</u>	79.7%	
1	Project 1	Authorisation Method 1	3.8%	Service creation method 1	1.3%	Outcome 6	1.0%	6.1%
2	Project 2	Authorisation Method 4	1.9%	Service creation method 3	0.4%	Outcome 1	34.0%	36.2%
3	Project 3	Authorisation Method 1	3.8%	Service creation method 6	0.4%	Outcome 5	4.4%	8.6%
4	Project 4	Authorisation Method 1	3.8%	Service creation method 3	0.4%	Outcome 5	4.4%	8.6%
5	Project 5	Authorisation Method 2	5.2%	Service creation method 1	1.3%	Outcome 6	1.0%	7.5%
6	Project 6	Authorisation Method 4	1.9%	Service creation method 3	0.4%	Outcome 5	4.4%	6.7%
7	Project 7	Authorisation Method 2	5.2%	Service creation method 1	1.3%	Outcome 6	1.0%	7.5%
8	Project 8	Authorisation Method 1	3.8%	Service creation method 1	1.3%	Outcome 4	5.3%	10.4%
9	Project 9	Authorisation Method 1	3.8%	Service creation method 3	0.4%	Outcome 5	4.4%	8.6%

Table9 : Example Prioritisation Using the Prioritisation Model

In prioritising projects, each individual project within a long list of projects is associated with authorisation criteria, service creation criteria as well as the outcome it is most likely going to affect or have an impact on. In the example provided in Table 9, Project 1 has been authorised through authorisations method 1, weight 25.2; which is part of the authorisation strategy, weight 15.1, giving this project an authorisation factor of  $(25.2 \times 15.1) = 3.8$ . The same project is associated with service creation criteria 1, weight 7.4; which is part of the service creation strategy weight 5.2, giving this project a service creation factor of 1.3. Finally the project outcome is outcome 6, weight 4.3; which is part of outcome strategy weight 79.7 giving this project an outcome factor of 1.0. The sum total factor of this project becomes 6.1  $(3.8 + 1.3 + 1.0)$ . This exercise is repeated for each project to obtain the project factors. Projects with the highest factors are considered likely to deliver the highest public value.

While the mathematics of the calculation may appear convoluted, once the prioritisation model has been set up in a spreadsheet, the actual prioritisation consisting of listing the projects and through a drop down menu, selecting the relevant criteria and the spreadsheet will automatically calculate the factors.

### **3.4 Summary**

This chapter has taken the reader through a framework which may be used for prioritising e-government initiatives. This framework is based on the principles of public value theory, coupled with the thinking behind co-creation for customer value and using AHP as a multi-criteria decision tool, created the basis of a prioritisation model which any government can develop and employ in the prioritisation of e-government initiatives. The next chapter will look at the philosophical stance adopted for this study and the methods to be adopted in the study.

## **4 RESEARCH METHODOLOGY**

### **4.1 Introduction**

This chapter describes the philosophical stance taken for this study as well as justifies the use of an interpretive case study as the vehicle for conducting the research. It also describes the method of collecting data that was employed as well as describing the method of analysing the resulting data.

This study adopts an interpretive approach to build a case study of an implementation of an e-government implementation in Zimbabwe. Using public value as a theoretical lens, the case is built through a series of interviews conducted with six senior managers responsible for the program which is made up of nine projects. The 'one-on-one' interviews lasted between an hour and two and half hours and were recorded and subsequently transcribed. One interview was conducted over a period of twenty four during stopovers in airports while the interviewer travelled with the respondent. After the results of the initial interviews were analysed, a focus group session was conducted with a group of 13 managers who prioritised various criteria for delivering public value extracted from the earlier interviews.

The prioritised criteria formed the basis of a Prioritisation Model which was then tested on the prioritisation of a menu of projects. The results of this prioritisation exercise were compared with an actual prioritisation that had been done prior to the study and the results reported in the findings section of this study.

### **4.2 Philosophical Paradigms**

Mouton (2001) describes a framework developed for helping researchers understand research especially in the social sciences, distinguishing between three worlds. The world of everyday life is characterised by pragmatic interest and the world in which most ordinary people relate to each other. The world of science and scientific research is characteristic by epistemic interest or the interest in truthful knowledge. Lastly is the world of meta-science, which is characterised by critical interest. While the everyday world concerns itself in the ordinary social and physical realities of the world we exist in, the scientific world concerns itself with building up of knowledge about the everyday life in a systematic and rigorous manner. The world of meta-science concerns itself with the philosophies and methodologies adopted in building up knowledge in world of science.

Oates (2006) notes that the philosophy underlying a research question and the process of answering it can depend on an individual's own views about the nature of the world and therefore how to investigate it, identifying three distinct philosophical paradigms; positivism, interpretivism and critical research.

Mouton (2001) identifies various paradigms in the philosophy of science such as positivism, realism, interpretivism, phenomenology and critical theory.

Terre Blance, Durrheim and Painter (1999) summarise positivism as having an ontology rooted in a stable and law-like reality while the nature of the relationship with the researcher or its epistemology as being objective, with the observer detached. This philosophy is associated with experimental, quantitative and hypothesis testing research methodologies. Interpretivism is summarised as having an internal reality of subjective experience where knowledge is built by an empathetic and subjective observer. Associated with the philosophy are interactional, interpretation and qualitative research methodologies. Constructionism is summarised as having a fluid, socially constructed reality with knowledge built by a suspicious, political observer deconstructing versions of reality and is associated with deconstruction, textual analysis and discourse analysis research methodologies.

Having received training in the natural sciences, this researcher's natural inclination is towards positivism. A desire to explain and predict, to understand the rules within which phenomenon can be modelled using a scientific approach, based on testable knowledge points toward this paradigm. An approach where research is proved through empirical means rather than argumentations, where common sense does not blind research and where facts have more weight than values have a much stronger appeal than the softer approaches of the qualitative methodologies.

Yet this mere acknowledgement of the inclination (towards positivism) is a confirmation of the assertion by Walsham (1995) and acknowledgment by Trauth (2001) that a researcher's knowledge of reality is itself a social construction and that "objective, value-free data simply cannot be obtained" a weakness in one of the epistemological legs that positivism stands on. Positivism ignores the meaning that people attach to social phenomena and is weak at understanding social factors. The theory testing nature of positivistic research leads to inflexibility, which makes a change of course once started impossible.

At the other extreme end of the philosophical paradigm is the critical research paradigm, defined by Oates (2006) as being concerned with identifying power relations, conflicts and contradictions and empowering people to eliminate them as sources of alienation and domination. Comstock (1982) presents a comparison between the positivist paradigms with a critical research paradigm. He suggests that the positivistic paradigm is concerned with identifying problems, gathering data, hypothesis testing then confirming or revising theoretical understanding. The critical research paradigm on the other hand, looks at ideological distortions in groups that are dominated and frustrated by present social conditions and proceeds with analysis with the intention to inform the emancipation of these groups. Thus, this approach advocates not only disciplined analysis with the intention of understanding the world but also changing it.

Critical researchers advocate for change to create a better society through empowering themselves and others, taking an interest in investigating exploitation, repression, unfairness, unbalanced power due to gender, race, class and other such classifications bringing “to consciousness the restrictive conditions of the status quo” (Orlikowski & Baroudi, 1991). Post-modernists challenge the manner in which research is conducted in the more dominant paradigms described above, seeking to break down disciplinary boundaries and giving voice to those that do not subscribe to the current beliefs (Mehra & Kilduff, 1997). Pragmatists focus their efforts on finding solutions to problems and aim to use research as a practical outcome oriented method of inquiry based on iterations of action to eliminate doubt (Johnson & Onwuegbuzie, 2004) leading to beliefs that allow humanity to adapt to its environment (Almeder, 2008).

Interpretive research is a form of research that allows us to gain a better understanding of reality by trying to understand phenomena through the meanings that those involved assign to them. Interpretivists assume that reality is socially constructed, subjective and is subject to change (Orlikowski & Baroudi, 1991). Interpretive researchers reject the notion of a single universal truth held by positivistic researchers, arguing that the truth depends on one’s position.

### **4.3 Why interpretive research**

*What is required is that researchers understand the implications of their research perspective, and act in ways that reflect that knowledge ... researchers should ensure that they adopt a perspective that is compatible with their own research interests and predispositions.*

*(Orlikowski & Baroudi, 1991, p. 24)*

The nature of this research is such that one needs to look beyond the numbers that positivistic study is likely to yield and understand the social context in which e-government is being deployed as well as the social process by which it is developed, deployed, influences and is influenced by. Interpretive studies allow one to go beyond simplistic characterisations and addresses real world complexities such as those that arise from the complex relationships between citizens, civil servants, development partners and politicians. Interpretive studies are consistent with the epistemological position adopted above; that the researcher cannot be divorced from his work (Ponterotto, 2005) and that understanding of reality and knowledge are social constructs and are thus subjective; being created from the on-going interactions during the research process (Orlikowski & Baroudi, 1991). Johnson & Christensen (2012) argue that human beings are situational, social, contextual, personal, and unpredictable and only through interpretive studies are we able to gather a full understanding how and why they come to the decisions they do.

This research, sought to understand how e-government can contribute to the transformation of service delivery in the public service in Zimbabwe and looks specifically at how projects can be prioritised to

maximise public value. Focusing on the supply side of service delivery, an interpretive approach allowed the researcher to capture the perspective of public officials who create, deliver and measure services that are offered to the public. This approach allows for one to extract deeper insight than would be possible with a positivistic study while shying away from a critical approach that would result in nervousness in a politically sensitive government setting. The rest of this paper discusses a number of possible theories, in the interpretive paradigm, that could provide a theoretical framework for such a study.

#### **4.4 Research Design**

Case studies typically investigate a single social unit, located in one place with people within the unit being differentiated from outsiders, providing a clear boundary of the unit (Myers, 2009). Yin (2003) defines a case study as investigating phenomenon in a real life setting where the boundary between the phenomenon and context is blurred, where there are more variables of interest than data points. Multiple sources of evidence exist giving an opportunity to triangulate findings; and prior theory is useful in data collection and analysis. While other forms of qualitative research such as ethnography typically involve field work or participant observation, case study research typically involves only interviews and document analysis (Myers, 2009, p. 77).

One of the main advantages of case studies is the ability to generate interesting contemporary stories that readers are likely to relate to and learn from. Case studies allow researchers to test theories in the messiness of real life. Disadvantages of case studies include difficulties in gaining access to willing organisations since case studies may take too much time, result in unexpected and possibly unflattering reports as well as lack of control of the process by the researcher; Case research may be difficult to conduct and may thus take a long time to conduct, especially for inexperienced researchers.

The explanatory case study approach is seen as being appropriate for this study, allowing an in depth look at how the government of Zimbabwe has prioritised and implemented e-government. This allows for the different factors that went into the decision making to be brought to the fore in understanding the decisions made and comparing this to the conceptual model developed as part of this study. An explanatory approach also allow for the comparison of findings to those found in the literature.

#### **4.5 Data Collection**

Interviews with decision makers formed a basis for most of the data collection for this study. A guideline was developed for the interviews which introduced the subject and discussed issues of ethical considerations and confidentiality while reassuring the respondents of the need to record the interviews to assist in transcription and the need to accurately reflect the output of the interview. Fourteen

questions were available to the researcher as a guideline but were not presented to the respondents but acted as a guide. A total of nineteen managers involved in the ZimConnect program were interviewed as part of this study. Six formal, recorded interviews were conducted with senior civil servants, lasting between forty five minutes and two hours. Three of the interviewees were part of the ZimConnect project steering committee which oversaw the implementation of the project. The other interviewees represented the Ministry of Finance, the Ministry of Information Communication and Technology and Postal and Courier Services (MICTPCS) as well as an end user ministry. Thirteen managers participated in a focus group discussed below.

Documents formed an important source of information for this project. The research therefore included the collection and analysis of national strategy documents, project strategy documents as well as project documentation for the ZimConnect initiative. Data from documents collected was found to be useful in providing a context for the study as well as in supplementing and triangulating information from interviews especially in the area of outcomes. Rather than undertaking a broad study of documents, a targeted search for information to complement the output of interviews was conducted, informing mainly the project background as well as the outcomes section of the public value strategic triangle.

The conceptual framework for analysis of this project required that a simulation of a prioritisation be undertaken for comparison with the actual prioritisation that was done on the project. This step is referred to as creation of the “Prioritisation Model” in Figure7 above after step 1. A focus group of thirteen public managers, consisting of some members of the steering committee, project managers from government as well as the implementation company responsible for the ZimConnect implementation undertook the ranking exercise to create a prioritisation model. This model took as its input the analysed output of the interviews and document analysis, which provided the criteria associated with authorisation, creation and the outcome of e-government initiatives. Through the process described in the last chapter, a prioritisation model was developed and this was used to rank the relative likelihood of a menu of projects to deliver public value.

#### **4.6 Relating the research instruments to the objectives**

The questions in the questionnaire were designed to address the objectives of seeking to understand the senior managers’ experience of project prioritisation. Questions followed the three main constructs of the public value triangle. Questions around authorisation interrogated not just the source of authorisation but also the motivation of the actors that influenced the motivation. The researcher sought to explore how managers balance the wishes of those with conflicting interests and placed a special emphasis on the role of the public in this process. Questions around outcomes looked at the key

outcomes expected and how these would be measured and related to the work that the managers were doing.

The researcher used the interviews to understand how services are created and delivered, and focussed on the role of the public in the co-creation of services. Throughout the interviews, the researcher sought to understand any challenges associated with the different constructs in order to frame the challenges related to prioritising projects with public value in mind. The experiences of managers were complemented with data extracted from project documents, national strategy and policy documents. These brought more light on sources of authorisation, project outcomes as well as how services were created.

The focus group session served as a way bringing consensus, through the use of the AHP tool on the importance of the various public value criteria obtained during the interview session. The output of this session was then used to create the Prioritisation Model.

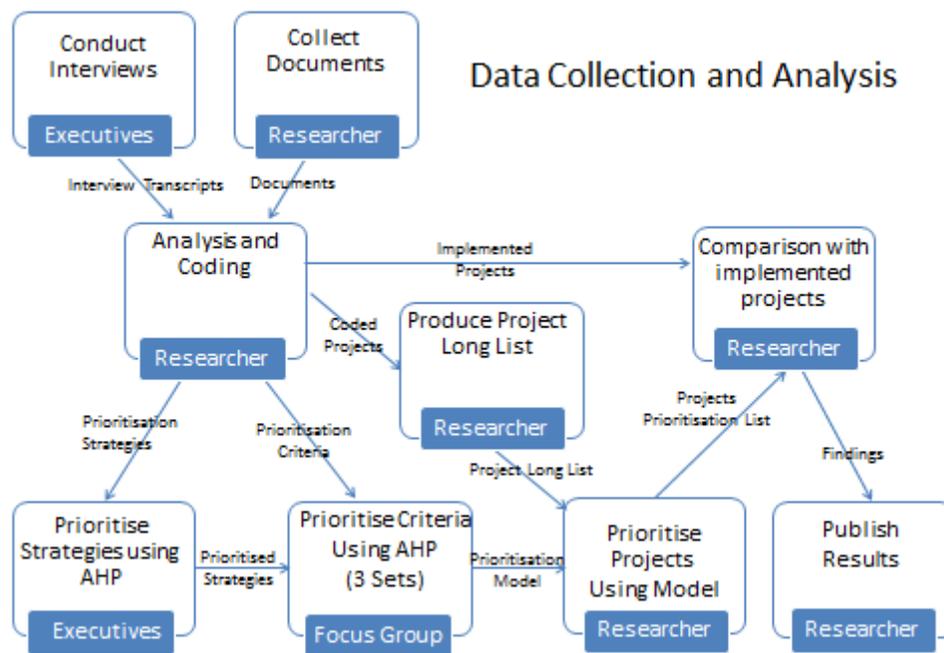


Figure 8 : Data Collection and Analysis Process

#### 4.7 Data Analysis

Analysis of the interviews was guided by the public value project prioritisation framework developed in chapter three which in turn was built on Moore (1995)'s strategic triangle and public value theory. Thus a theory led thematic analysis of interviews was used to analyse the data. Thematic analysis allows not only for the identification, analysis and reporting of patterns in data but also interpretation of aspects of the research (Braun & Clarke, 2006).

Braun & Clarke (2006) warn that theory led thematic analysis leads to less rich descriptions as the researcher focusses on predefined constructs. The upside to this however is that greater insight is provided on the specific areas focused on. In keeping with the interpretive paradigm adopted for this study, the analysis adopts a semantic approach focussing on the explicit meanings as presented by respondents without, at this stage, seeking the latent meanings embedded in their responses.

All interviews conducted were recorded and each interview was transcribed. The key messages from each interview were extracted and entered into a matrix recording themes with a column for each respondent. In addition to the core themes of authorisation, service creation and outcomes as prescribed by the public value strategic triangle, data was coded into additional themes relating to project drivers, challenges associated with each of the core themes as well as other insights that related to the delivery of projects. The findings in each theme were then grouped into one table and analysed for and grouped into similar meanings which represented the major findings presented below. The presentation starts with a table of quotes from respondents followed a brief discussion that brings the comments together, woven with, where appropriate more detailed quotations from the interviews.

A second set of results is the “Prioritisation Model” as described in the conceptual framework proposed in the last chapter (see Figure 7 above). The input for this model came from the analysis of the interviews and document analysis. The main task of analysing this data was to group the criteria for project prioritisation under the themes of authorisation, service creation and outcomes using thematic coding. This data was codified into tabular form as simulated in Tables 5 to 7 above. Starting with the grouped criteria; working with a focus group of executives; and using an Excel based AHP model, a pairwise comparison was made of all stated criteria resulting in a weighted list of criteria within each group as per example in Table 8, forming the prioritisation model for the government of Zimbabwe.

The final set of results is the list of prioritised projects based on the framework, which was then compared to the actual list of implemented projects that was chosen without use of this model.

## **4.8 Summary**

This chapter has set the stage for the rest of the research project by describing how the research was conducted, focusing on research philosophy, method of collecting data and how this data was analysed. The remaining chapters of this work present the findings of the study as well as conclusions and recommendations.

## 5 RESULTS

### 5.1 Introduction

This study sought to understand the process through which e-government initiatives are prioritised by looking at the key considerations in prioritising initiatives; who the stakeholders are and how they influence the process with a view to understanding how public value can be maximised. The research work was based on the work of Mark Moore (Moore (1995); Benington & Moore (2011); Moore (2013)). Of particular focus is the strategic triangle around which the case study was built, guiding the researcher to understand how public authorisation, public participation in service creation and the impact of outcomes influence public value.

The purpose of this chapter is to present the findings of the research carried out. In trying to understand how government prioritises e-government initiatives, several documents were reviewed in order to appreciate the background to the ZimConnect project, its conceptualisation, context and its implementation. These included strategy documents, national policy documents, budget presentations, and minutes of project meetings as well as project review reports.

Six interviews were conducted with senior executives that were involved in the implementation of the project, all of whom were of the level of Director or above. Their roles in the project ranged from end users of the resultant systems through implementing agents to the project director. These interviews were recorded and transcribed. The data collected from the documents and interviews was coded as proposed in line with the public value strategic triangle and the attributes of the three major constructs extracted. An analysis of the results and findings of this study are presented in Section 5.2 of this chapter.

Section 5.3 of this chapter presents a sample project prioritisation exercise conducted with a focus group of thirteen executives and project managers to prioritise a list of 18 potential projects based on the criteria obtained from this study using the framework developed in Chapter 3.

## 5.2 Analysis of Results/ Findings

This section presents the major findings of this study grouped under the major themes of authorisation, service creation and outcomes.

### 5.2.1 Authorisation

Public value theory posits that projects that the public authorise deliver the most value to the public (Coats & Passmore, 2008). This study found that the process of getting public authorisation was not a smooth one with many views distorting the public voice. Many of the respondents felt this process was a challenging one and some wondered if it was worthwhile or even desirable to get the views of the public and most agreed that government in Zimbabwe was generally not shaped to solicit public views directly.

#### ***Finding 1 : Government sovereignty***

*“I would say it is because as a developing country.... that engagement is not seen as a priority. You are not structured to be able to focus on this because the assumption is that this has already been done through other structures. So you do not want to come and have government re engaging the people....that process has been done and you do not want to be causing confusion.” (Interview Respondent 1)*

A senior member of the team interviewed felt strongly that it was not necessary for government, at least civil servants, to seek the authorisation of the public prior to implementing projects (interview respondent 1). This particular executive felt that civil servants were expected to know what the public wanted from their interaction with politicians and that they could not be seen to be cross checking the work of the politicians or worse still be seen to be contradicting what the politicians were relaying to them. The same executive felt that government, at least in the Zimbabwean context, was not structured to go out and seek the views of the public and engagement was not seen as a priority. Another senior executive, while acknowledging the need to consult the public in contrast with his colleague, felt that consultation of the public may not be necessary, especially where the concepts being introduced were likely to be beyond the understanding of the public, giving the example of the introduction of internet in rural areas (interview respondent 2).

A different executive felt that there was an asymmetry between the short term wishes of the people, sometimes personal as opposed to for the greater good of the public, and the long term desires of a 'better informed' government. His view was that the thinking of the public was consistent with the economic theory behind the tragedy of the commons (Dutta & Sundaram, 1993) in which individuals prioritise their own needs ahead of the greater good of the group. The same executive felt that seeking public authority would be difficult as the public was usually unaware or unsympathetic to the reality facing government (interview respondent 6).

Comment	Respondent
There is an expectation that ministries should know what the public want	IR1
Public managers do not want to be seen to be cross checking what politicians report the citizens as having said..	IR1
...that bureaucracy is not structured to look out its internal looking.	IR1
Engagement of the public is not seen as a priority	IR1
The government in not structured to listen to the voice of the public	IR1
...too much consultation may not be necessary since people may not fully grasp the concepts being introduced	IR2
...asymmetry between short term wishes of the public and the long term desires of government	IR6
...challenges of reconciling the needs of the public and the reality facing the government	IR6

Table10: Respondents felt that government does not need to seek authorisation

### ***Finding 2 : Complexity in Authorization***

Respondents felt that there were a number of logistical challenges that made seeking authorisation difficult. At least four executives gave various reasons indicating why they believed involving the public was difficult. Access to the working public was difficult, as citizens prioritised work commitment over participating in outreach programs. Where people attended meetings, they tended to represent one section of the population, resulting in skewed input. Meetings organised during working hours were, for example, patronised by business people as opposed to ordinary workers. One respondent summed it up by noting that the biggest challenge of seeking public views was creating an appropriate platform at which the public could put forward their ideas.

Issues of cost were raised, along with complications of language especially where outreach programs involved the rural areas (Table10). The capacity of government to conduct an effective consultation process was also questioned with one respondent noting that there were only 'so many officials' available to face the entire population while another pointed to an inadequacy of skills amongst civil servants to conduct such an exercise. Issues of language were raised by two separate executives with one highlighting that this was particularly problematic in the rural areas.

Several respondents felt that government did not have the capacity to interact with the public sufficiently to be able to get a meaningful understanding of public wishes. Civil servants were simply overwhelmed by the task and therefore chose not to do this work. Where consultations were done, respondents felt that government did not have the capacity to process the outcomes that resulted from the interactions with the public.

Comment	Respondent
...logistical issues of mobilising the public such as meetings conducted during working hours while most people are at work..	IR6
...an inadequacy of skills among the civil servants	IR5
... well the cost is a very important aspect..because the cost would not only be confined to transport, upkeep costs but also printing of materials...so the cost is in my view a critical challenge.	IR2
...perhaps the biggest challenge is creating the appropriate fora at which there is proper interaction....when you have events like the shows...every year they have the ICT exhibition ..ICT Africa..yes you have these events but the question is how many members of the public come and how many public officials are there to talk to the people...so that challenge is the size of the interface between the public and government	IR3
...public participation events dominated by business	IR6
... the size of the interface between the public and government. ...there are only so many officials	IR3
... to a small extent language	IR2
... when you look at rural areas... their level of education is not that high.	IR5
... we need to work out an appropriate mechanism when we are doing certain things...a way of trying to get the people themselves involved in saying what they want	IR5
· you consult them in the beginning because you want to hear their role contribution but at the same time some people will say that you might end up with a lot of information, which will make it difficult for you to select from	IR2

Table11 : Seeking public authorisation is difficult

### ***Finding 3 : External Framing in the Authorization Process***

Respondent1 felt that the authorisation of projects was often influenced by outsiders such as multilateral agencies like the World Bank, The International Monetary Fund (IMF) or other donors either directly or through Non-Governmental Organisations (NGOs) that typically hijacked any attempts to seek public opinion on initiatives that government seeks to embark on. The influence of the NGO community was strongly felt in the rural and poorer communities where food, work and other material inducements allowed NGOs to influence the thinking of the public.

Comment	Respondent
...when you look at non-government organisations in civil society in the developing world, the agenda of the NGOs is being driven from outside the countries. As a result they are not genuine civil society organisations which are able to push or influence government to deal with certain issues. The civil society we have is 80 or 90% driving a foreign agenda where their resources come from.	IR1
...there are other influences which have affected negatively..and these influences come from our development partners... the World bank, and the African Developing Bank all these development partners... have heavy influenced our ministries of finance.	IR1

Table12 : Outsiders influence the process of authorising projects

Donor agencies were seen as actively influencing the activities of the Ministry of Finance who in turn influenced which projects were actually implemented by virtue of being in control of funding. The decisions of which project to implement were often at odds with the wishes of the people or other sections of government. NGOs, by virtue of operating closely with the public, both in the rural areas and urban areas were seen as having a strong influence on the thinking of the public, thus influencing the process of authorising projects.

**Finding 4 : Message distortion in authorisation**

While the literature (Williams & Shearer, 2011) appears to endorse political authority as representing what the people want, several of those interviewed seemed to question this, citing difficulties of hearing the voice of the public both within and outside the party (respondent 1 and 5). The voice within the party was frequently drowned by the more outspoken who typically were the voice of more powerful interests (respondent 4). One respondent questioned whether the views of a majority in the party translated into the wishes of the population at large, pointing to the large disparity between the numbers of people in the party and the number of people that voted (respondent 5).

Comment	Respondent
...you would find that the party would be claiming to represent the people and the people would table their demands to government through the party, but there are difficulties in hearing the voice of those that are not in the party...	IR1
But there are inherent complications there...how many people are in the party? How many people voted? Out of 14 m people only 1 m voted	IR5
..the people have gone to the party and said this is what we want..the party has put these into a manifesto, they have gone into an election, won on the basis of the manifesto and that has now been translated by government into a development plan and this now influences what is implemented....so there is a long chain from people to development plans	IR1
...because of weak government systems you can have a minister who can be overbearing and literally determine where projects are supposed to be happening...this is because of weak system...you will have a strategy document but because the systems are not strong enough to move the government agenda forward...	IR1
The biggest problem is that irrespective of how important a project is...the actual allocation is funds depends more on how influential the people at the province are and how much the minster delivering a specific project is close to the ministry of finance..  So the system is weak...and fails to link priorities to what the people want or what the national strategy is.	IR4

Table13 : Political authorisation is not necessarily the voice of the people

The issue of weak systems allowing the manipulation of the people’s wishes was raised by more than one respondent, both of whom pointed to the possibility of people’s wishes being abused in the process of authorising e-government initiatives (interview respondent 1 and 4).

Two respondents (1 and 4) felt that the process, despite being structured on paper to take the people’s views into account, actually ignores these views. While it was found earlier (Table 13) that the citizens’ wishes could be distorted, these two respondents pointed out that citizens’ wishes were often ignored during project prioritisation. One respondent gave an example of a situation where a senior civil servant, in connivance with a politician simply implemented what they wanted (respondent 4). Another respondent felt that a deeper problem arose in the misalignment of the budget process and the political approval process. An example of this was that while the political blueprints were made available in December, the budgeting process, and the final seal in the approval of projects, would have been completed in October, thus projects in the following year would simply not relate to the blueprints provided at the end of the year (respondent 1).

Comment	Respondent
: that disconnect has always been there...with the belief that contemporary economic management would deal with the situation but it would not because the trajectory there which Min of Finance would come with to plan the budget and to move the country forward was not informed by the peoples wishes held in the manifestos	IR1
it's a challenge to a lot of countries, because of where we are coming from...where the ministry of finance, the reserve banks, they drive the agenda and that agenda to a large extent is not advised from the development plan	IR1
the actual allocation of funds depends more on how influential the people at the province	IR4

Table 14 : The process ignores the wishes of the people

**Finding 6 : Sources of project authorisation**

The research sought to understand and summarise the criteria for authorisation of projects in line with the prioritisation framework proposed in chapter 4. Respondents described national policy documents as being the voice of the ruling party in government and typically mirrored the contents of the party manifesto. The national budget was driven by the Ministry of Finance and according to one respondent was heavily influenced by the multi-lateral agencies such as the World Bank and International Monetary Fund. Because of the financial muscle these organisations held, they typically had a lot of say in what government actually implemented. Ministers represented the politicians and in some cases members of parliament, with the former having more say through their direct contact with civil servants.

Government officials were presented as a source of project authorisation, where they initiated projects that they felt would deliver value to the public. Three respondents gave examples of direct public input as a source of authorisation either through direct request for service or participation in road shows

seeking public opinion. Finally, project funders, operating either through the Ministry of Finance or in some cases through lobbying via Non-Governmental Organisations were also seen as initiators of projects.

	<b>Authorisation Criteria</b>	<b>Respondent</b>
1	National Policy eg ZimAsset	IR1, IR5
2	National Budget	IR1, IR6
3	Politicians/The Party	IR3, IR4
4	Bureaucrats/Government Officials	IR1,IR2,IR5
5	Directly by the Public	IR2, IR3,IR5
6	Project Funders	IR1,IR4

Table15 : Project authorisation criteria summary

### 5.2.2 Service Creation and Delivery

Public participation in service creation and delivery is viewed as a source of public value (Coats & Passmore, 2008). The research sought to establish how executives in the public sector perceive public participation in service creation and delivery. The issue of co-creation of services was not well understood by the respondents, possibly because the interview format assumed that this was a concept that was well understood and accepted. Once the concept was explained, respondents were able to relate to some examples of co-creation but saw some potential challenges with having the public participate in service creation and delivery.

#### ***Finding 7 : Service provision by government***

The researcher sought to understand how the respondents viewed the roles of government and the public in service delivery. Most of the respondents agreed that it was the role of government to offer services to the public, with one respondent pointing out that this was the primary role of government. Another respondent pointed out that in designing e-government systems it was important to keep this in mind.

<b>Comment</b>	<b>Respondent</b>
That is the purpose of a government. To provide services to the people....at least for developing countries. And that is why we do a lot of planning...	IR1
... bureaucracy is not focused on (engaging) the public...it's focused on delivery	IR1
On the e-government it was proper for the government itself to know what it's mandate is...that is providing service to the citizenry	IR2

Table16 : Offering services is the job of government

**Finding 8 : Lack of capacity in service delivery.**

Two respondents noted that while understanding that it was the role of government to offer services, with its limited resources, government would not be able to fulfil all the requests that the public had. One respondent felt that it was government’s role, especially in an e-government setting, to provide robust platforms on which others can build additional services that could be offered to the public. Another respondent felt that where government could not provide a service, they needed to bring in third parties that could offer services and gave examples of Public Private Partnerships where services could be provided by third parties jointly with government.

Comment	Respondent
...do we have adequate resources to put into application here	IR3
Because government on its own? I don't see it delivering these services.	IR3
... let us take on projects that we can successfully carry to the end.	IR3
They must create the robust platforms that these services can come from. And then people will play their role in delivering.	IR3
you need (champions/ templates?)	IR3
. So the private partner invests and proceeds are shared. There have been areas where business have offered to partner government in service provision..	IR4
but if there is a service they can't deliver as government they must bring a third party that is able to deliver this service to the people	IR4
. , the government alone cannot provide these e-services	IR5

Table17 : Government does not have capacity to offer services alone

**Finding 9 : Service Provision Unique to Government**

Despite the general agreement that it was the role of government to offer services, and that government needed help in offering services, respondents agreed that some services were the preserve of government. Services that are likely to be unprofitable, had no revenues associated with them or were unpleasant to offer were unlikely to attract the attention of external parties. Respondents noted that government would be unwilling to let others provide services that have implications on security.

Comment	Respondent
Some services are only offered because they are mandatory and there is no willingness to participate in their delivery by citizens	IR5
Some services are unprofitable	IR5
Need to pay attention to security	IR5
..can third parties provide services that are affordable or are they profit focused.	IR3

Table18 : Some government services are the preserve of government

### **Finding 10 : Realizing Public Participation**

A number of ways were highlighted of how the public can participate in service delivery. While the extreme view was that it was the role of government and government alone to offer services, some respondents felt citizens could work with government in service delivery. One respondent gave the example of the online filling in of a passport form as an example of shifting work away from civil servants in a way that did not burden the citizen. He pointed out that this actually lightened the load they had to bear if they otherwise had to travel to a passport office, while lightening the load of the government department which otherwise would have had to capture the form.

Public private partnerships were pointed out by several respondents as ways in which government could work with the public or the private sector in offering services. Non-governmental organisations and other Civil Society organisation who already are involved in assisting government in education and other social sectors were also seen as a way in which government could lessen the burden of service delivery. One respondent envisaged services where the people alone could offer services, but explained that it was important for government to put up a framework within which such services could be offered and find champions to run with this service within the general populace. Similar comments were made about opportunities to offer services either by the private sector alone or by NGOs/CSOs alone.

	<b>Service Creation and Delivery</b>
1	Government directly
2	Government with the people
3	Public Private Partnership
4	Government through NGOs/CSOs
5	The people alone
6	The Private sector alone
7	NGOs/CSOs alone

Table19 : Criteria for service creation and delivery

#### **5.2.3 Outcomes**

In introducing Recognising Public Value (Moore, 2013), Moore points out that what citizens expect from government is the efficient and effective delivery of mandated (read properly authorised) social outcomes. This research sought to find out what outcomes were seen as being relevant to the public. As with service creation, the concept of outcomes was not well understood and many gave the objectives of specific initiatives that they were working on. Perhaps the most meaningful response was given by a senior manager who directed the researcher to a document, ZimAsset (Government of Zimbabwe, 2013), which defined seven broad areas, called clusters, where government wanted to

make a difference. Although these areas are broad and consist of a number of sub-outcomes, these have been adopted for purposes of this study as the main findings regarding outcomes.

	<u>Outcomes</u>
1	Fiscal Reform Measures
2	Food Security and Nutrition
3	Infrastructure and Utilities
4	Public Administration, Governance and Performance management
5	Social Services and Poverty Eradication
6	Value Addition and Beneficiation

Table20 : Outcomes summary

*“We perhaps take it for granted that everybody will understand and perhaps a function of our being focussed on doing things but not accounting for the costs versus the benefits so that at the end we can say we did this and achieved this benefit...did we do it in a cost effective way..was it the best way..but it is an issue we have not focussed on”*

*Interview respondent 4*

Fiscal reform outcomes relate to reinforcing fiscal management, stabilising the financial sector, improving government revenues and forging public private partnerships (PPPs) amongst other measures (Government of Zimbabwe, 2013). Food security and nutrition outcomes relate to increased crop and livestock production and marketing while developing infrastructure that support agriculture. Infrastructure and Utilities outcomes relate to the development of water and sanitation infrastructure, public amenities, energy and power supplies as well as ICT and transport infrastructure.

Public Administration, Governance and Performance management outcomes relate to improved policy coordination, reduced policy inconsistencies, better resource mobilisation and allocation, improved program implementation, monitoring and evaluation, civil service reforms and public service modernisation. Amongst the key objectives of this outcome are measures related to e-government that include improving government efficiency; improving standards of education through e-learning and improving ICT infrastructure in schools. Other components of this outcome include capacity building and human resources development as well as public sector accountability and transparency. Peace and security are also included as desirable outcomes in this cluster of outcomes. Within the social services and poverty eradication cluster the government aims to improve living standards and empowering society while growing the economy. Specific outcomes within this cluster relate to indigenisation and empowerment of the indigenous population of Zimbabwe, developing skills for consumption by the local market, while improving social services delivery.

Within the value addition and beneficiation cluster, several initiatives are proposed, all aimed at stimulating the participation of local industry in adding value to raw materials produced in Zimbabwe.

These include initiatives in energy and power production, agriculture and agro-processing, manufacturing, mining and tourism. Along with these are initiatives for improving the human capital development, marketing, and trade facilitation.

#### **5.2.4 Role of Stakeholders in E-Government Projects**

The key players involved in the deployment of the ZimConnect project were represented in the steering committee that was responsible for the deployment of the project. Amongst these players, and chairing the committee, was a senior representative from the Office of the President and Cabinet (OPC). OPC were instrumental in getting the project started as they commanded the respect of the entire government and the project resonated with their own initiative of modernising government. In the process of prioritising projects they looked for initiatives that would be quick to deliver and hence allow for some quick wins. The OPC was also tasked with keeping cabinet and the President abreast with developments on the ZimConnect platform. Activities relating to change and communication management in general were assigned to the OPC as the agency responsible for the overall delivery of the project.

The Ministry of Information and Communication Technologies were also represented on the committee as they would be the most involved agency in delivering the technology required for the project. Their interest in the project revolved around maximising existing technology in the form of hardware, network infrastructure as well as software applications. The security services, represented by their technology arm, the Government Internet Service Provider (GISP), were mandated with providing internet connectivity for the project, developing and hosting citizen facing application as well as ensuring that the system was safe and secure.

The Ministry of Finance (MoF) were responsible for sourcing of the funding for the implementation of the project. As alluded to in the authorisation section above, the finance team were driven by a different agenda and were reluctant participants to the implementation of the ZimConnect project having implemented a fully functional Public Financial Management System (PFMS) twelve years earlier. Having nursed the project through a hyperinflationary environment from 2003 to 2009, they were reluctant to add more applications to allow for the e-government requirements of the ZimConnect team. Heavily influenced by international donor agencies who were sceptical about the ambitious scale of the ZimConnect project, MoF pay little more than lip service to the project and were reluctant to provide funding for the project.

The Ministry of Science and Technology were at the forefront of pushing for the project prior to the establishment of a standalone ministry for ICT and were retained in the project. They were mandated with being the government scouts, looking around the world for 'cutting edge' technology that could be utilised on the project.

## **5.3 Application of AHP in E-Government Project Prioritisation**

### **5.3.1 Introduction**

Chapter 2 of this dissertation highlighted the challenges of project prioritisation and in chapter 3 a framework, based on AHP, was proposed that could be used for prioritisation of projects. This chapter looks at a prioritisation of a menu of projects, conducted with a focus group of thirteen executives and project managers, using the proposed framework. Input for the development of a prioritisation model in line with the framework was obtained from interviews with six managers who were involved in the implementation of the ZimConnect program as well as a review of relevant project documentation. In developing the prioritisation model, the focus group was asked to rank how they perceived the public would rank the three strategies that according to public value theory lead to public value; namely authorisation, service creation and outcomes. Samples of the input forms used for this exercise are provided in Appendix C of this document.

Secondly the same group was asked to rank a number of criteria within each strategy, these rankings being used to complete the model into which a menu of projects was entered and a ranking of projects obtained.. At the end of this chapter a comparison is made between the projects proposed by the model against the projects that the managers decided on without the model and had actually implemented.

### **5.3.2 Menu of projects**

In line with the ZimConnect strategy developed at the end of 2010, government was faced with the challenge of implementing e-government initiatives in a number of ministries. A strategic decision taken was to base all work on an SAP system that was already in use at the Ministry of Finance and extend its functionality to other areas of government. The following ministries or departments were selected for implementation of this project, based largely on their contribution to the economy:-

<b>Ministry/Department/Application</b>	<b>Implemented?</b>
Cabinet Secretariat : Records Management	Yes
Health : Chitungwiza Hospital , Health Information System	Yes
Economic Planning : Online Investment Application and Tracking	Yes
Education, Sport, Arts and Culture	No
Energy and Power Development	No
Home Affairs	No
Information & Communication Technology	No
Justice : Deeds, Companies and Intellectual Property	Yes
Lands : Lands Information System	Yes
Local Government : Core Applications	No
Local Government : Liquor License Application	Yes
Mines : Licence Applications	Yes
National Archives : Document Management	No
National Housing and Social Amenities	No
Public Service Commission : Human Capital Management	Yes
Science and Technology	No
State Enterprises and parastatals	No
State Procurement Board	yes

Table21 : Full list of potential projects

Due to severe financial constraints, a further prioritisation initiative was undertaken. This resulted in government implementing only nine of the projects initially proposed. Many of those that were involved in the projects agree that the prioritisation of projects was not scientific as a result of the lack of a tool that would help in the prioritisation of projects.

### 5.3.3 Prioritisation Model

Public value theory suggests that public value comes from balancing three strategies that lead to public value; how projects are authorised, how they are created and what outcomes they result in. Using an Excel based AHP model, managers involved in the initial prioritisation of projects conducted in 2012 were asked to rate how important they felt the public valued each of the three strategies that lead to public value by using a pairwise comparison. Thirteen managers, seven from the government and six from service providers responsible for assisting government in the implementation were asked to rank the strategies as well as the criteria related to each of the strategies. For each choice made, managers were asked to specify how more important their choice was over the one they did not prefer by specifying a rating between 1 and 9. As illustrated in the following table, 1 meant that they just preferred their choice and 9 meant that they strongly preferred the one they had chosen.

Intensity of importance	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favour one element over another
5	Strong Importance	Experience and judgment strongly favour one element over another
7	Very strong importance	One element is favoured very strongly over another, it dominance is demonstrated in practice
9	Extreme importance	The evidence favouring one element over another is of the highest possible order of affirmation
2,4,6,8 can be used to express intermediate values		

Table22 : Relative importance of choices

The ratings for all the managers responding were entered into a spreadsheet which calculated the preference or more precisely what the managers perceived would be public preference, for each strategy. Table 23 gives an example of a response from one manager while Table 24 shows the cumulative effect of the choices made by the various managers. Based on this exercise, managers felt that Outcomes were more important for the public than either the way in which projects were Authorised or Services Created.

		Public Value Strategy		more important ?	Scale
i	j	A	B	- A or B	(1-9)
1	2	Authorisation	Creation	A	5
1	3	}	Outcomes	B	9
1	4				
1	5				
1	6				
2	3	Creation	Outcomes	B	9
2	4	}			
2	5				
2	6				
2	7				
2	8				

Table23 : Individual ranking of strategies (Example)

n=  Number of criteria (3 to 10)      Scale:      

N=  Number of Participants (1 to 20)       $\alpha$ :       Consensus:

p=  Selected Participant (0=consol.)      2      7     

**Objective**

**Author**

**Date**

EVM check: 1.049E-05

Table	Criterion	Comment	Weights	Rk
1	Authorisation		18.0%	3
2	Service Creation		22.3%	2
3	Outcomes		59.7%	1
4				
5				
6				
7				
8				
9				
10		for 9&10 unprotect the input sheets and expand the question section ("+" in row 66)		

Table24 : Consolidated ranking of strategies

A similar exercise was conducted to rank the importance of the criteria for project authorisation, with every manager undertaking a pairwise comparison of the various authorisation factors and rating the strength of their preference. These criteria included National Policy documents such as the ZimAsset; National Budget; Politicians or the party represented by ministers or the party manifesto. Other sources of authorisation were given as Bureaucrats or Government Officials; Direct Authorisation by the public or Project Funders. Much like the prioritisation of strategies there was a high level of agreement between participants in the focus group (78.3% consensus), the ranking of authorisation criteria also showed a relatively high level of consensus at 72.1%.

n=  Number of criteria (3 to 10)      Scale:

N=  Number of Participants (1 to 20)       $\alpha$ :       Consensus:

p=  selected Participant (0=consol.)      2      7     

Objective

Author

Date

EVM check: 1.674E-10

Table	Criterion	Comment	Weights	Rk
1	Policy	National Policy e.g ZimAsset	30.3%	1
2	Budget	National Budget	17.7%	3
3	Politicians	Politicians or the party	5.2%	6
4	Bureaucrats	Bureaucrats/Government Officials	4.0%	7
5	Public	Direct Authorisation by the public	21.1%	2
6	Project Funders	Project Funders	13.4%	4
7	Other	Other Authorisation	8.3%	5
8				
9				
10		question section ("+" in row 66)		

Table25 : Ranking of authorisations

The ranking exercise showed that managers felt that projects that were authorised through National Policy documents such as ZimAsset delivered the most value to the public. It was also felt that initiatives that were directly authorised by the public would deliver value to the public while projects initiated by the politicians or civil servants were seen as being unlikely to deliver public value. A similar exercise to rank criteria for service creation showed that managers felt that Private-Public partnerships were likely to generate public value, along with initiatives that allowed the government to deliver services jointly with the public. Services that were offered by the public alone or the private sector alone were seen as unlikely to deliver public value.

n=  Number of criteria (3 to 10)      Scale:      

N=  Number of Participants (1 to 20)       $\alpha$ :       Consensus:

p=  selected Participant (0=consol.)      2      7     

**Objective**

**Author**

**Date**

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Table	Criterion	Comment	Weights	Rk
1	Government directly	Government directly	12.2%	4
2	Government with the people	Government with the people	22.8%	2
3	Public-Private-Partnership	Public-Private-Partnership	30.7%	1
4	Government through NGOs/CSOs	Government through NGOs/CSOs	12.8%	3
5	The People Alone	The People Alone	5.4%	7
6	Private Sector Alone	Private Sector Alone	5.7%	6
7	NGOs/CSOs	NGOs/CSOs	10.4%	5
8				
9		for 9&10 unprotect the input sheets and expand the		
10		question section ("+" in row 66)		

Table26 : Ranking of service creation criteria

In ranking outcomes of initiatives, managers felt that the outcome that would deliver most value to the public was Food Security and Nutrition, followed by Investment in Infrastructure and Utilities. Delivering an Information Society by 2020 and Value Addition and Beneficiation were seen as delivering the least value to the public. An analysis of the responses indicated that there was a much lower level of consensus among the participants in the focus group on which outcomes were important with a consensus rating of 52.1%

n=  Number of criteria (3 to 10)      Scale:      

N=  Number of Participants (1 to 20)       $\alpha$ :       Consensus:

p=  Selected Participant (0=consol.)      2

Objective

Author

Date

EVM check: 2.432E-11

Table	Criterion	Comment	Weights	Rk
1	Fiscal Reform Measures	Fiscal Reform Measures	11.8%	5
2	Food Security and Nutrition	Food Security and Nutrition	30.9%	1
3	Infrastructure and Utilities	Infrastructure and Utilities	15.7%	2
4	Public Administration, Governance and Performance management	Public Administration, Governance and Performance management	13.7%	3
5	Social Services and Poverty Eradication	Social Services and Poverty Eradication	13.7%	4
6	Information Society by 2020	Information Society by 2020	6.1%	7
7	Value Addition and Beneficiation	Value Addition and Beneficiation	8.2%	6
8				
9		for 9&10 unprotect the input sheets and expand the		
10		question section ("+" in row 66)		

Table27 : Ranking of service outcomes

Having undertaken a ranking of the strategies, the authorisations, service creation criteria and outcomes, the following prioritisation model was obtained:-

<b>Project Prioritisation Model</b>						
	<b><u>Authorisation</u></b>	18.0%	<b><u>Creation</u></b>	22.3%	<b><u>Outcome</u></b>	59.7%
		<b><u>Wt</u></b>		<b><u>Wt</u></b>		<b><u>Wt</u></b>
1	National Policy e.g ZimAsset	30.3%	Government directly	12.2%	Fiscal Reform Measures	11.8%
2	National Budget	17.7%	Government with the people	22.8%	Food Security and Nutrition	30.9%
3	Politicians or the party	5.2%	Public-Private-Partnership	30.7%	Infrastructure and Utilities	15.7%
4	Bureaucrats/Government Officials	4.0%	Government through NGOs/CSOs	12.8%	Public Administration, Governance and Performance management	13.7%
5	Direct Authorisation by the public	21.1%	The People Alone	5.4%	Social Services and Poverty Eradication	13.7%
6	Project Funders	13.4%	Private Sector Alone	5.7%	Value Addition and Beneficiation	6.1%
7	Other Authorisation	8.3%	NGOs/CSOs	10.4%	Information Society by 2020	8.2%
8						

Table28 : Project Prioritisation Model for the Government of Zimbabwe

The model once developed is available to use to prioritise any set of projects, provided that the same conditions apply. Should for example the outcomes change, the same pairwise comparison of importance is conducted and a new prioritisation model developed which can then be applied to the new set of projects. In order to get the project priorities, a means of authorisation was assigned to the project, together with the method in which the service was to be offered and this was associated with the outcome it was most closely aligned with.

Prioritisation of Projects									
			<b>Weight</b>		<b>Weight</b>		<b>Weight</b>	<b>Result</b>	<b>Imple?</b>
	<b>Project</b>	<b>service authorised</b>	18.0%	<b>service created</b>	22.3%	<b>Outcome affect</b>	59.7%	(Weighted)	
1	Lands : Lands Information System	National Policy e.g ZimAsset	30.3%	Government with the people	22.8%	Food Security and Nutrition	30.9%	29.0%	Yes
2	Local Government : Core Applications	Bureaucrats/Government Officials	4.0%	Government directly	12.2%	Food Security and Nutrition	30.9%	21.9%	No
3	Economic Planning : Online Investment Application and Tracking	National Policy e.g ZimAsset	30.3%	Government with the people	22.8%	Fiscal Reform Measures	11.8%	17.6%	Yes
4	Energy and Power Development	National Policy e.g ZimAsset	30.3%	Government directly	12.2%	Infrastructure and Utilities	15.7%	17.5%	No
5	Justice : Deeds, Companies and Intellectual Property	National Budget	17.7%	Public-Private-Partnership	30.7%	Fiscal Reform Measures	11.8%	17.1%	Yes
6	Home Affairs	National Budget	17.7%	Government with the people	22.8%	Public Administration, Governance and Performance management	13.7%	16.4%	No
7	Chitungwiza Hospital / Health Information System	National Policy e.g ZimAsset	30.3%	Government directly	12.2%	Social Services and Poverty Eradication	13.7%	16.4%	Yes
8	Local Government : Liquor License Application	Direct Authorisation by the public	21.1%	Government with the people	22.8%	Fiscal Reform Measures	11.8%	15.9%	Yes
9	Mines : Licence Applications	Direct Authorisation by the public	21.1%	Government with the people	22.8%	Fiscal Reform Measures	11.8%	15.9%	Yes
10	Information & Communication Technology	National Policy e.g ZimAsset	30.3%	Government with the people	22.8%	Information Society by 2020	8.2%	15.4%	No
11	National Housing and Social Amenities	National Budget	17.7%	Government directly	12.2%	Infrastructure and Utilities	15.7%	15.3%	No
12	State Procurement Board	Project Funders	13.4%	Government with the people	22.8%	Fiscal Reform Measures	11.8%	14.5%	Yes
13	Education, Sport, Arts and Culture	National Budget	17.7%	Government directly	12.2%	Social Services and Poverty Eradication	13.7%	14.1%	No
14	Public Service Commission : Human Capital Management	Project Funders	13.4%	Government directly	12.2%	Public Administration, Governance and Performance management	13.7%	13.3%	Yes
15	Science and Technology	National Policy e.g ZimAsset	30.3%	Government directly	12.2%	Information Society by 2020	8.2%	13.1%	No
16	Cabinet Secretariat : Records Management	Bureaucrats/Government Officials	4.0%	Government directly	12.2%	Public Administration, Governance and Performance management	13.7%	11.6%	Yes
17	National Archives : Document Management	Bureaucrats/Government Officials	4.0%	Government directly	12.2%	Public Administration, Governance and Performance management	13.7%	11.6%	No
18	State Enterprises and parastatals	Bureaucrats/Government Officials	4.0%	Government directly	12.2%	Public Administration, Governance and Performance management	13.7%	11.6%	No

Table29 : Prioritisation of projects available to the Government of Zimbabwe Using the Prioritisation Model

### **5.3.4 Comparison of Prioritised projects against actual priorities**

While the e-government program leadership selected nine projects for implementation based on gut feel and instinct, the prioritisation model suggested a slightly different list, with six of the projects implemented being suggested for implementation while three of the projects actually implemented would have been dropped. Food Security and Nutrition was rated highly as an outcome, and this coupled with the fact that outcomes were ranked highly as the strategy that brings in the most public value meant that projects with this outcome would be rated highly. Projects that had a lowly ranked outcome such as Public Administration, Governance and Performance management ended up being ranked lowly.

Projects that involved the public in their delivery were ranked, in general, higher than those in which government alone was offering the service. Projects that were considered to be national policy projects were ranked highly, along with projects that were directly authorised by the public, while projects that were initiated as result of political or bureaucratic interest were ranked the lowest.

## **5.4 Summary**

This chapter presented ten major findings related to this study, which were presented in line with the public value theoretical perspective adopted for this study. The data presented was obtained from a study of strategy, policy and project documents; interviews with senior civil servants as well as a focus group consisting of senior managers and project managers from both the government and supplier's representative on the ZimConnect program. In presenting the findings, the participants own words were used as much as possible in order to give a clearer insight into the experiences of the participants.

## 6 DISCUSSION OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Introduction

The objectives of this study were to establish, describe, and understand the process, the actors and considerations that inform the prioritisation of e-government projects based on the experience of the Government of Zimbabwe. This was done with a view to developing a framework for prioritising e-government initiatives. The study also sought to understand the challenges of prioritising projects with public value in mind. The study sought to answer specifically the question of how governments prioritise e-government initiatives in order to deliver public value.

In order to answer this, the study focused on a number of sub-questions:-

- How are projects authorised?
- Who are the key stakeholders that influence this process?
- What outcomes does the government have in mind?
- What is the role of the public in creation and delivery of services?
- How are projects prioritised?
- What challenges are faced in this process?

In trying to answer these questions, a review of the literature relating to the implementation of e-government project was undertaken, focusing on the challenges associated with implementing e-government projects world-wide, in the developing world and in Zimbabwe specifically. Literature relating to public value theory was also reviewed, along with literature on co-creation and co-production, central to the idea of engaging the public in delivering value. In trying to position the framework for prioritising projects, a review of literature relating to project prioritisation in the public sector was undertaken, leading to the use of Analytical Hierarchical Process as a prioritisation tool in the framework.

A survey of documents relating to the ZimConnect initiative, an e-government program involving nine state entities, was conducted to compliment in-depth interviews conducted with six managers involved in the implementation of the program. Out of these two activities, a set of projects that could have been implemented was obtained, along with criteria relating to project authorisation, service creation and outcomes of initiatives. Thirteen managers involved in the initiative were constituted into a focus group and asked to rank the relative importance of the criteria obtained. The output of these activities was used to develop a prioritisation model as part of the framework developed in the course of this work.

The previous chapter presented ten major findings related to this study, which were presented in line with the public value theoretical perspective adopted. Also presented in the last chapter are the results of a prioritisation exercise conducted using the prioritisation model, results of which are compared to a

prioritisation undertaken earlier in the life of the ZimConnect initiative and the results are compared. This chapter starts by presenting a narrative summary of the significant findings of this study as presented in the previous chapter. The interpretation section of this chapter attempts to address the question of why? and why not? of the findings, thus allowing the researcher an opportunity to delve into the findings and understand what lies beneath them (Bloomberg & Volpe, 2012) in presenting an interpretation of the findings. This section seeks a deeper meaning of the findings by stepping back from individual findings and taking a more holistic view, thus comparisons are made within the three dimensions that underpin public value theory of authorisation, service creation and outcomes; across the three dimensions and comparisons made with findings in literature.

In presenting conclusions, this chapter attempts to expand on the significance of findings by making new connections among ideas while bringing out the relevance of this study. While the results section of the last chapter focused on presenting what the research found; this chapter presents what the researcher thinks the results mean in relation to the questions raised in the introduction. This chapter also looks at possible interpretations of the findings and links these to literature. Limitations of this study are presented along with implications of the study for theory, policy and practice. Suggestions and recommendations for future research are also presented in this chapter.

## **6.2 Summary of Findings**

The study found that managers felt that seeking public authorisation for projects was an unnecessary, undesirable, difficult task that complicated the project conceptualisation process. Managers also felt that the voice of the public was distorted by others that influenced the conceptualisation of projects such as politicians, non-governmental organisations or donors, to the extent that some felt that the wishes of the people were often ignored when conceptualising projects.

Projects were authorised through one or a combination of six 'sources of authority'. Some projects were initiated because they were declared to be national policy, such as those defined in the ZimAsset blueprint. Some projects were implemented by virtue of having been specified in the national budget, while both politicians and civil servants also initiated projects. The public, through direct requests for service were also said to be responsible for authorising projects while project funders such as the World Bank or International Monetary Fund (IMF) were also capable of initiating projects in government.

The study found that managers felt that the creation and delivery of services was the job of government, but agreed that government did not have the capacity to offer all the services that citizens desire and therefore had to partner with the public, private sector players or non-governmental organisations in creating and delivering services. Despite this admission, managers felt that some

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services are the preserve of government and could only be offered by government. In line with these views, seven methods of service delivery were identified; government alone, government with the people, public-private partnerships, government through Non-governmental organisations (NGOs) or other civil service organisations (CSOs), the people alone, the private sector alone or NGOs/CSO alone.

When asked to rank the relative importance of the three different strategies for delivering public value, managers, through the focus group of thirteen managers convened for this study, felt that outcomes were the most important, followed by the way in which services were delivered. Managers felt that the manner in which projects were authorised were of the least importance. The main outcomes identified were presented in the ZimAsset strategy and related to seven areas of the economy which varied from Fiscal Reform Measures; Food Security and Nutrition; Infrastructure and Utilities; Public Administration, Governance and Performance management; Social Services and Poverty Eradication; Value Addition and Beneficiation and Development of an Information Society by 2020.

In ranking criteria relating to authorisation, the focus group felt that National policy was the most important form of authorisation followed by request for service from the public while the wishes of the civil servants or politicians were seen as the least important. The group also felt that Public-Private partnerships were likely to be the most effective way of delivering public value while services offered by the public themselves or by the private sector alone were seen as delivering the least public value. The most important outcomes were seen as Food Security and Nutrition while Value Addition and Beneficiation and Development of an Information Society were seen as unimportant.

While the e-government program leadership selected nine projects for implementation based on gut feel and instinct, the prioritisation model, based on the output of the interviews as well as the focus group rankings, suggested a slightly different list, with six of the projects implemented being suggested for implementation while three of the projects actually implemented would have been dropped.

## **6.3 Interpretation of the Findings**

### **6.3.1 Introduction**

This case study sought to understand how civil servants prioritise e-government initiatives in a manner that maximises public value. The study approached the challenges of prioritisation from a theoretical perspective of public value theory which argues that understanding public value comes from understanding how services are authorised, created and what outcomes matter. The research used a document review, interviews as well as a focus group of executives in the civil service in Zimbabwe to try and understand this process. While the document review and the interviews provided an understanding of the criteria that related to authorisation, service creation and outcomes, the focus

group was used to get the executives' perspective on what they thought the public valued the most, which output was then used to produce a mock prioritisation of a menu of projects.

### 6.3.2 Authorisation

*“Discerning public preferences is notoriously difficult and there are dangers in relying on what an uninformed public states about what it wants provided.”*

(Blaug, et al., 2006, p. 7)

In order to interpret the findings in the right light, it is necessary to state what the researcher's initial ideas were and compare these to what was found on the ground. The study's initial premise was that what the public would value most was that which they directly authorised. An unexpected finding was that some civil servants felt that seeking public authorisation was undesirable and unnecessary (Finding 1) while all the interview respondents seemed to agree that seeking public authorisation was difficult (Finding 2) in line with the literature (Blaug, et al., 2006). Further findings which suggested that the voice of the public was usually corrupted anyway by the time it reached executives may explain this reluctance to seek public authority. The fact that the process of seeking authorisation could be influenced by outsiders to represent their views, that politicians who claimed to represent the public were likely to present their own interests rather than those of the public and that the possibility to totally ignore the public in the system, appeared to give executives an excuse to ignore public opinion. Seeking public opinion appears to be an obvious way of delivering value to the public, yet civil servants appear to loathe having to do this, confirming the views of Fisher & Grant (2013).

*“With so much authority now vested in the public manager, it may well be that accountability to elected politicians, if not eliminated, is significantly threatened in an operational context.”*

(Fisher & Grant, 2013, p. 254)

The answers appear in the responses from some of the interview respondents. The unwillingness to cross check the work of politicians who claim to represent the people; the unwillingness to contradict the politicians; the desire to please senior civil servants all add to the reluctance to seek the views of the public. This appears consistent with Moore (1995)'s argument that public managers who fail to acknowledge the “legitimate superiority” of politicians are not acting ethically.

A lack of resources, coupled with a poorly structured and poorly equipped civil service makes the work of seeking public authorisation difficult while the ease with which the system could be abused appeared to make civil servants lose faith in the process of seeking of authorisation from the public. Despite showing a reluctance to seek public authorisation for their work, when asked to rank the relative importance of the means of authorisation, managers seemed to agree that direct authorisation of initiatives by the public was important in delivering public value, ranked only behind National Policy. This behaviour appears to be an acceptance of Try & Radnor (2007)'s argument that initiatives without

public support cannot be sustained both internally, as in provision of resources or staff support; or externally, as in the endorsement of the public.

By ranking national policy as the ultimate form of authorisation, public managers appear to act consistently with Try & Radnor (2007)'s argument that their activities must be grounded in legislative mandates, departmental missions and vision statements. These, in the authors' argument, must be backed by consistent and enthusiastic public support for sustainability. This call for participation of the public is regularly backed by public administration literature. Wang & Wan Wart(2007) argue that public participation through, amongst other things public hearings, citizen advisory boards, citizen focus groups, business community meetings, chamber of commerce meetings leads to public trust and inter alia public value. Simrell King, et al.(1998) in a study aimed at understanding how citizen participation can be improved, acknowledge many of the complications in engaging the public highlighted in this study and argue for a re-alignment of the public service to allow for meaningful dialogue between the public and the public service to take place.

The relative high ranking of both national policy and the national budget as sources of authorisation appear consistent with a traditional public administration thinking which places a premium on rules, policies and procedures. With the study centred on providing value to the public, the ranking of public authorisation in second place appear to be a response to the core theme of the study, which was made explicitly clear to the focus group. The low ranking of politicians, donors and senior civil servants appear to reflect a disdain for any other forms of authorisation for projects.

In discussing this conundrum of the difficulties of seeking public authorisation and the desire for public support during the focus group session, managers seemed to think that the solution lay in the use of technology which would allow them a much wider reach but also the ability to better analyse the wish of the public with greater precision. Ideas around the use of mobile platforms which could be accessed even by rural folk, coupled with the use of big data techniques for analysing large amounts of information seemed to appeal to the managers. This thinking appeared to resonate with the literature especially Ochara & Mawela (2013) who argue for the use of mobile technology as a way of improving e-participation and Bryson & Quick (2012) who advocate the use of technology in enhancing public participation. Ochara (2012) argues for the 'joining-up' of community organising forms such as schools, churches and other community organisations together with arms of government as a way of encouraging and facilitating the participation of the masses in e-governance and thus providing an input into the authorisation process. The work by Linders (2012) goes to great lengths to investigate how government can use social media to seek public opinion in the design of services, in tandem with the idea of the public managers' discussion.

### 6.3.3 Service Creation

An initial premise of this study was that the public values the most those services where they participate in. Prahalad & Ramaswamy (2004) argue that engagement of the customer in service creation and delivery creates a unique competitive advantage for the firm. This study argues that the same must be true for government in their effort to deliver public value to their citizens. Thus if government can convince the public to capture their details on a service application online, an effort that would otherwise have been done by a civil servant, and government sees this service through, continued requests for such services must be delivering value to the public, otherwise the service dies. These ideas are re-enforced by the work of Linders (2012) who position the use of technology at the centre government service delivery in the future given the limitations in the capacity of governments.

*“With the scale of society's ever-evolving challenges increasingly outstripping the capacity of the public sector, budget-strapped governments have had to look for innovative new ways to deliver public value.”*

(Linders, 2012, p. 446)

Karunasena (2012) finds in his study that the delivery of quality public services is achieved through four means; quality of information, functionalities of e-services, user-orientation of the delivery of public service, and information and services through e-enabled counters (see Figure 9). This study focused on the user-orientation of service delivery, looking specifically at how government involves citizens in delivering services. The study found that public managers believed that service delivery was the job of government but that government was not able to fulfil all the desires of the public on its own therefore appeared open to citizen participation in service creation and delivery, a move that would lead to increased public value. When forced to rank the manner in which services were delivered to the public, managers gave priority to methods in which the public were involved in service delivery, confirming the findings of Karunasena's study and lending credence to the assertion by Linders that government have to work with the people to deliver services.

The use of technology in service delivery is advocated for not only by Linders (2012), but also by Clark, et al. (2013) and Isett & Miranda (2014) as offering government the opportunity to cost effectively offer services to the public. Technology allows governments to achieve the user orientation in the delivery of public services by allowing multiple channels of access, a direct channel to government and citizen centric features as prescribed by Karunasena (2012). All these features are consistent with the objectives of the ZimConnect initiative.

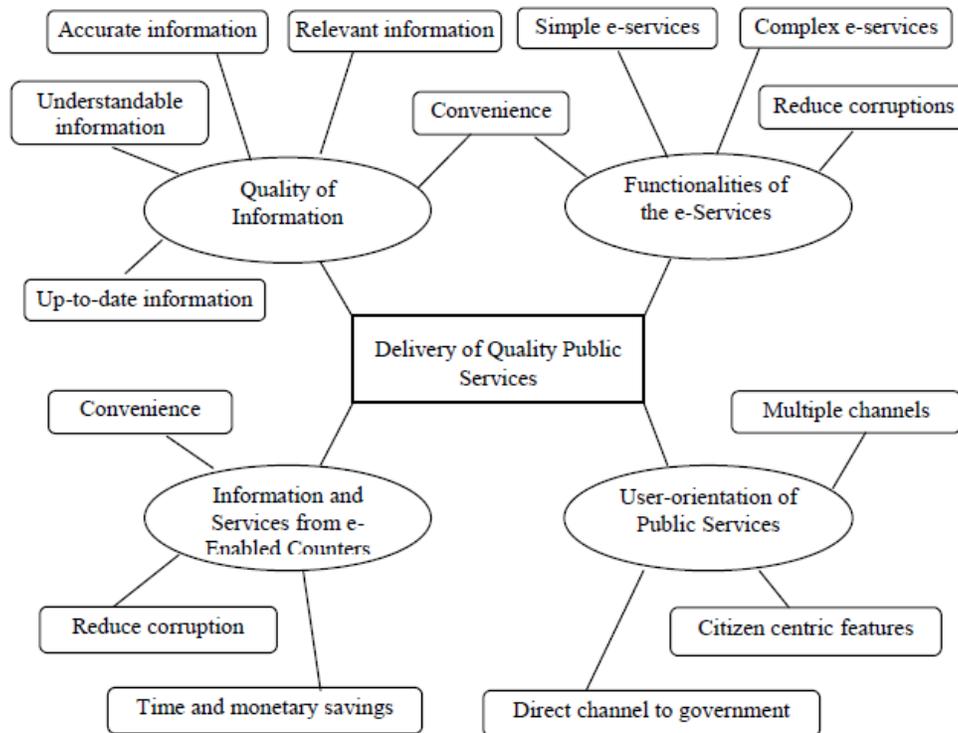


Figure 9 : Delivery of Quality Public Services

Source : (Karunasena, 2012)

Studies such as one conducted by Takavarasha, et al. (2012) on assessing Zimbabwe's capacity gap in the context of e-government, focus themselves on the limitations in the capacity of the public managers' ability to lead e-government. The study found that issues of technological competence at senior levels, lack of national readiness for e-government and cultural issues were amongst the factors inhibiting e-leadership in e-government. This study, built largely on the views of public managers point instead to lack of financial capacity to deploy the infrastructure, the systems, the change management activities and mass education required to make e-government successful as the biggest capacity constraints.

In advocating a move from e-government to we-government, Linders (2012) investigates how social media has transformed how citizens can co-produce services with government allowing them to play the role of partner as opposed to customer in service provision. Citing challenges of budget deficits as bringing the ideas of co-production into focus for governments, Linders (2012) extols the virtues of citizens participating in service design through consultation and ideation, service delivery and execution through crowd-sourcing and service monitoring through citizen reporting. The findings of this study, in which managers see co-production as a means of lightening the burden of service delivery, appears consistent with the findings in literature.

When asked to rank various ways in which services could be offered, public – private partnerships were ranked highly, along with other forms of co-creation of services with the public and unsurprisingly, services that would be offered by the public alone or the private sector alone were ranked the lowest, indicating a genuine desire to work with the public in service delivery. Prahalad & Ramswamy (2004)'s assertion that co-creation of services delivers competitive advantage in firms (and public value in this case) resonates with public managers' perception that co-creation is desirable, but at once appears at odds with the reluctance of public managers to seek authorisation for the initiatives they embark on. Osborne & Strokosch (2013) in arguing for user led innovation, advocate the involvement of the public in both the planning and design of services as well as in the actual production of services as a means of achieving public value.

The desire to enter into public-private partnerships by public managers appears to make sense given their ability to reduce the risk associated with project delivery on the part of government. Shen, et al. (2006) in their study of projects in Hong Kong, point to the opportunity for government to share with the private sector development risks, market risks, financial risks and force majeure. Bovaird (2004) points out how such partnerships have become increasingly acceptable especially with the requirements for good governance for PPPs which include amongst other measures citizen involvement, accountability and transparency; all of which contribute to public value. Majamaa, et al. (2008) in a study of PPPs in Finland however highlight that customer-oriented service production, highlighted by Karunasena as necessary for public value, is still lacking in PPPs.

Despite the desire to involve the public in all aspects of service creation, the study found that provision of some services was the remit of government alone. While the study did not try to dig deeper into this finding, the responses to this issue suggested that services that did not benefit specific individuals but the community at large were unlikely to be candidates for co-production. Services that related to the writing and promulgation of laws were of benefit to the public and not individuals and were likely to remain in the arms of government. Similarly issues that relate to security and the enforcement of laws would be offered by government alone. Services that relate to the education of the public, such as in public health are also likely to remain in the arms of government. Services that are un-economical for individuals to participate in their individual capacities and uneconomical for government to partner on are also likely to be offered by government.

#### **6.3.4 Outcomes**

During the ranking exercise, respondents were almost unanimous (78.3% consensus) in ranking outcomes as the most important way of achieving public value. Yet during the interview sessions, public managers appeared to struggle to relate the projects they undertake to outcomes that citizens relate to, a central tenet of public value thinking. When questioned on the outcomes that they expect to achieve through their work, most seemed to be focussed on more immediate measures, a likely

throwback to new public management thinking. This apparent divorcing themselves from the broader outcomes is contrary to what Williams and Shearer (2011) refer to as a necessary (for public value)rejection of past ideas of leadership.

*“...public value implies a rejection of the narrow conceptions of leadership associated with previous models of governance and requires those involved to move beyond delivery on performance targets to the pursuit of multiple objectives and accountabilities in the context of complex systems.”*

(Williams & Shearer, 2011, p. 7)

The difficulty in identifying and relating work to specific outcomes does not appear unique to the Zimbabwean environment. Try & Radnor (2007) point to the difficulties of attributing specific initiatives to outcomes, one that became apparent during the focus group where managers struggled to agree which outcome specific initiatives would contribute to. Issues of timing, also brought to the fore by Try & Radnor (2007) were apparent, with some initiatives being identified as having been related to outcomes that were no longer relevant. While this study’s focus was on how initiatives had been prioritised, a casual discussion around the focus group mused on how the contribution of specific initiatives to the broader outcomes could be measured, a point also highlighted by Try & Radnor.

In ranking outcomes, managers appeared to rank outcomes that had clear, almost immediate benefits higher than those with longer term less tangible benefits. Thus “Food security and Nutrition” and “Infrastructure and Utilities” were ranked highly while “The Development of an Information Society” and “Value Addition and Beneficiation” were rated lowest. Richard Norman, writing in *Public Value: Theory and Practice* (Benington & Moore, 2011), argues that managers should account for outputs while managing for outcomes. Outputs in his view are associated with clear, measurable statements of results defined by quality, quantity and timeliness while outcomes are purpose oriented descriptions of results with a broad and long term perspective. The rankings obtained along with the earlier observations appear to point to a management focussed on short term outputs as opposed to long term outcomes.

One respondent (respondent 4) went to great lengths to catalogue why public sector projects fail. In summing up his comments, he felt that a tragic reality of public sector service delivery is that focus is on justifying and creating services and rarely is anyone called to account for work done or asked to relate their initiatives to the outcomes that citizens value. This sentiment seemed to be in synch with Heeks (2003)’s finding that “costs are intangible; few are ever measured in the event of e-government failure; e-government failures are often hushed up”.

### 6.3.5 Towards a Public Value Prioritization Model

The findings of this study demonstrate that the work of delivering public value is difficult. Seeking public authorisation is acknowledged as being necessary but problematic. Managers see their work as that of delivering services, but appear to struggle to bring citizens into the creation and delivery of services. Managers acknowledge that outcomes that matter to the public are important, but relating the work they do to these outcomes is difficult. This study argues that these challenges are a result of the gut-feel based approach to the conceptualisation of e-government initiatives.

Public value theory presents a model that allows managers to think of their work in a way that can help them deliver public value. Governments that prioritise projects that have been approved by the public, that involve the public in their delivery and that contribute to outcomes that the public values are working towards, deliver public value. The difficulty that public managers face is in ensuring that all the necessary criteria for guaranteeing that public engagement is maximised are met. This study proposes the development of a prioritisation framework, through which governments can develop a model to be used to prioritise projects in a way that maximises public value.

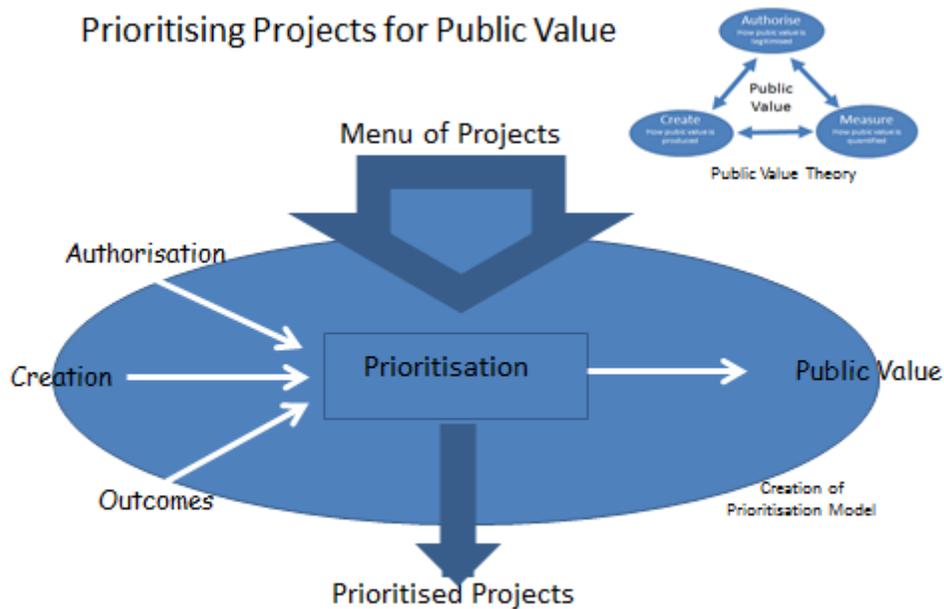


Figure 10 : Prioritisation Framework

The proposed model takes in as its inputs all the possible ways of authorising projects and managers rank these according to how they perceive the citizens will value their output. A similar consideration is made for how services will be created and what outcomes will be intended. By associating every project in a menu of projects with an authorisation method, a service creation method and an outcome within the model, a ranked list of projects is obtained which takes into account all the attributes that are

deemed to deliver value to the public. The prioritisation model proposed allows managers to think consciously about what initiatives are likely to benefit the public the most by taking into account their participation in the authorisation, creation and their views about the targeted outcomes.

In addition to taking into account the relative level of involvement of the public in the three strategies of authorisation, creation and outcomes; the model also takes into account the relative importance that the public is likely to place on the three strategies themselves. Thus while different forms of authorisation are likely to be important to the public, the fact that outcomes matter more than the manner in which services are authorised is also taken into account.

The use of AHP in the ranking process allows government to seek consensus on the views of managers while allowing each manager to input numerous criteria that relate to the decision at hand. The once off exercise of producing the model based on the circumstances of a particular government forces public managers to think about what matters to the public in terms of the three public value strategies. It is also hoped that the exercise of reflecting on how the public participates will also help managers refine how they engage the public in future so as to ensure public value is maximised. The exercise of prioritising projects by linking them to the relevant criteria should be a mechanical exercise, but one that replaces the traditional method of prioritising projects that has been hitherto based on gut feel as opposed to a scientific method that takes into account views of all managers involved in the prioritisation exercise.

## **6.4 Conclusions**

This study has shown that the prioritisation of projects is a complex exercise, with numerous potential influences, such that the wishes of the public risk being ignored. Public managers are under pressure to respond to these sometimes contradictory pressures that their decisions tend to reflect only the most immediate of demands. While managers are aware of the need to deliver public value, the demands of the public are numerous and integrating these into a single decision that takes into account as many of their wishes as possible is a difficult task. The number of different players that impact on the decision on what initiative to implement make the process an even more complicated one. The use of a public value based framework in thinking about this task allows managers to compartmentalise the ultimate decision about what initiatives to deploy into fewer, more practical decisions that may be made more accurately.

The study has shown that projects are authorised by a broad range of players, ranking from the public, civil servants, and politicians through to a broad spectrum of outsiders that include donors and civil service organisations. The study has also shown that the process of getting this authorisation, especially from the public is a difficult one and typically frustrated by the voices of all the other players

that have an interest in how government resources are utilised. In addition to the plethora of outsiders that take an interest in how government money is being spent on initiatives, various stakeholders within government influence the process of prioritisation of initiatives. The Ministry of Finance keep an interest in how and where funds are being spent; the security arms of government want to ensure that the security of the nation is not compromised by the initiatives being deployed; the technology sectors of government are tasked with ensuring the best technologies are deployed while Office of the President and Cabinet play a coordinating role in the delivery of government initiatives.

Public managers see the role of government as being that of providing services to the public. Yet managers acknowledge that government does not have sufficient funds to undertake the initiatives that deliver all the services that the public desires. This opens government up to the possibility of engaging the public in service delivery. While the use of technology is increasingly allowing citizens to co-produce services with government, private-public partnerships are still viewed as a viable option for delivery of services by government along with other forms of cooperation with outsiders such as civil service organisations. Despite this acknowledgement, public managers are aware that some services will always be the business of government because of their appeal to the broad public as opposed to individuals, or their security nature or simply because they cannot be gainfully be deployed by individuals but have to be deployed by government.

Governments seek to deliver on outcomes that move the nation forward, yet managers appear to be more pre-occupied with more immediate measures that appear to relate to their day to date jobs. The relevance of outcomes appears to shift with time, making the process of prioritising, and monitoring and evaluating of initiatives difficult for managers especially as outcomes may no longer be relevant by the time initiatives are complete.

Managers appear concerned about the need to deliver public value, but seem hamstrung by the more immediate challenges of getting their work done. Balancing the demands of politicians and more senior managers; paying attention to elections against their own immediate objectives; synchronising the demands of an increasingly discerning populace against limited and shrinking resources; are all challenges that managers face in prioritising projects. A framework for the prioritisation of projects such as the one proposed, that allows them to take into account the many variables that come into play, is likely to make the work of public managers seeking to prioritise projects much easier.

This approach distinguishes itself from the focus on targets and responsiveness of new public management thinking through which citizen's wishes are aggregated and the organisations offering services remain at an arm's length to those there are delivering services to. Equally distinct is the traditional public management approach, focussed on rules and procedures which exalt those offering services as the experts; seeking little or no public input. A public value approach such as that advocated for in this study allows public managers to bring the public into the centre of service delivery,

making them a core element of authorising projects, delivering services and seeking their input on the outcomes.

## 6.5 Implication of the findings for theory, policy and practice:

Most of the findings in this study are consistent with the literature: public value has been used as a theoretical lens in studies before (Try & Radnor, 2007); public value thinking has been shown to be valid (Meynhardt & Metelmann, 2009); so one is left to pose the question “so what?”. The researcher is convinced that this work has made a contribution to the debate on public value in a number of ways. Firstly very little of the literature on public value is based on empirical work (Williams & Shearer, 2011). This work adds to the small body of empirical evidence that has been built around public value. Secondly the study has highlighted some practical problems that managers face in trying to deliver public value in the manner that public value theory advocates.

*“The most striking feature is the relative absence of empirical investigation of either the normative propositions of public value or its efficacy as a framework for understanding public management. On the negative side, the risk is that public value fails to develop a secure empirical foundation and loses clarity and distinctiveness as an approach to practice.”*

(Williams & Shearer, 2011, p. 8)

At a practical level the prioritisation framework developed as part of this study offers a tool that managers in the process of conceptualising projects can use to help them to think about how best to seek authorisation for projects in a manner that will deliver value to the public. The framework will also allow them to consider the ideal way of delivering services if they are to be valued by the public. Understanding what outcomes the public value will always be a challenge for public managers and this study has shown that this likely to be the most important variable in maximising public value.

*“...public value, like its cousins--the public interest and the common good, is notoriously illusive.”*

*Kaifeng Yang (Unpublished work)*

At a policy level, managers realise the inevitability of public participation in conceptualisation of projects, in co-creation of services and how trust and accountability arise out of focusing on outcomes that the public relate to. The use of the framework proposed as part of this study that moves decision making beyond gut-feel, is likely to result in more value for the public.

## 6.6 Limitations of the Study

The limitations of this study arise from the purely supply side perspective adopted. Throughout this study, participants were asked to put themselves in the shoes of the people they serve. While that in

itself is useful in understanding how public managers conceptualise initiatives, that being the main purpose of this study, it lacks the counter view of those for who services are being offered to but provides interesting insight into their thinking process. The prioritisation framework is a centre piece of this work and during the mock prioritisation conducted with managers, it became apparent that rarely is there a one to one relationship between no between initiatives and outcomes, presenting an opportunity to improve on later versions of the tool.

A further limitation is the focus on ICT projects, which may limit public participation due to computer illiteracy. As one of the respondents highlighted, some of the concepts that they try and seek public opinion on are new to the public, making the consultative process more difficult. It is possible that participation of the public in projects may be different in non-ICT projects.

## **6.7 Personal Reflection and Evaluation**

This study was conducted over a fairly short period of time, roughly six months from conception to final write up. Data collection was made easier by the fact that the researcher had been involved in the ZimConnect project for many years and had easy access to documents from previous interactions with many of the senior executives. Where additional information was required, this was made available fairly quickly. A more serendipitous opportunity was a visit to the United States by the entire senior management responsible for this program over a ten day period. The researcher used much of the downtime to corner individual executives for interviews. The focus group session was arranged around a regular project technical committee meeting where all the necessary players were available.

This level of familiarity may be responsible for some bias, but on the upside it allowed the participants to be more open about their ideas, thoughts and fears without the fear of being exposed to an outsider. During the interview sessions, it became very clear that many of the executives had been schooled in traditional public administration and a few were aware of new public management thinking. None of the executives interviewed seemed to be aware of public value thinking, but the ideas seemed to resonate with them as being appropriate. One respondent [IR1] was very vociferous with his views and seemed to have strong opinions on most of the issues presented which may have introduced some bias into the results.

The focus group session was conducted fairly quickly, but it aroused some interest and generated discussion around how projects had been prioritised in the past. Members also felt that the prioritisation model could be useful for gaining consensus on very complex decisions over which projects to implement. Members commented on practical problems with the model such as the inability to associate a project with more than one method of authorisation or the handling of projects that contribute to more than a single outcome.

## 6.8 Suggestions and recommendations for future research.

Many of the studies into public value take, much like this one, the public managers' perspective. A demand-oriented perspective that takes into account citizens' perspective may further illuminate the use of public value theory in project prioritisation. Such research will strengthen public value thinking and provide a framework through which public managers can make meaningful decisions about the projects they wish to implement. While this study was a single case study based largely on interviews and document analysis, the use of other research designs such as surveys would be more appropriate in seeking a demand side perspective.

This study focussed on the prioritisation of e-government initiatives but many of the ideas explored herein are relevant to the public sector in general and similar work conducted in other non-ICT areas can help in better understanding and conceptualization of public value theory constructs. This study, unintentionally, leaned more on the authorisation aspects of the strategic triangle. Further in-depth exploration of the individual constructs of the strategic triangle can help in better operationalization of public value theory in different contexts.

## Appendix A - Invitation to Participate in Research Letter



UNIVERSITEIT VAN PRETORIA  
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YUNIBESITHI YA PRETORIA

Department of Informatics  
IT Building, Level 5  
University of Pretoria  
Cnr. Lynnwood Road & Roper Street  
Hatfield  
Pretoria, 0083  
South Africa

30 May 2014

Dear Sir/Madam,

### **RE: e-Government in Zimbabwe**

I am a student within the Department of Informatics at the University of Pretoria, Gauteng Province, South Africa. I am currently conducting research for the purposes of my dissertation focusing on the implementation of Information and Communication Technology within the African public sector context. I intend to follow up this study with a broader study for a doctoral thesis next year.

The objectives of this study are to establish, describe and understand the process, the actors and considerations that inform the prioritisation of e-government projects based on the experience of the Government of Zimbabwe with a view to developing a framework for prioritising e-government initiatives. The study also seeks to understand the challenges of prioritising projects with public value in mind.

Your participation in the study as a respondent is herewith requested. This will require no more than an hour of your time to participate in an interview. Please be assured that the information provided will be utilised for research purposes only and all responses will be strictly confidential. No individual responses will be identified as such and the identities of the respondents will not be published or released to anyone. All information will be used for academic purposes.

Your input will be greatly appreciated. If you have any queries please do not hesitate to contact me on: +263-772-177-786 or alexmarufu@gmail.com. Also, note my research supervisor is Dr. Nixon Ochara and he is available on 012 420-3373 or nixon.muganda@up.ac.za.

Yours sincerely,

Alex Masiya Marufu  
University of Pretoria  
+263-772-177-786

**Approved by:-**

Dr N.Ochara  
University of Pretoria  
+27-12 420-3373

## Appendix B – Research Instrument (Interview Guide)

### E-GOVERNMENT PROJECT PRIORITISATION: A PUBLIC VALUE PERSPECTIVE

*Note: Researcher discussed ethical issues regarding confidentiality of respondents, reinforce open and honest feedback (there are no wrong answers), and reconfirm reasons for recording the interview is to assist in transcription and reflecting the outcomes of the interview accurately.*

#### **Section 1: Demographic Information of Interviewees**

Date of Interview	
Time of Interview	
Venue	
Total Duration of Interview (Hours)	

**Interviewee to please supply the following details:**

Current Position/Role in Government	
Number of years in Government	
Number of years involved in an ICT/e-Government Projects	
Role(s) on the ICT/e-Government Project	

## **Section 2: Experiences of Respondents**

1. What were the drivers behind the initiation of the ZimConnect Project?
2. In shaping the e-government priorities, how do you decide what is important; what for example, is the role of
  - National Strategy
  - Party Strategy
  - Budgeting Process
  - Political Influence
  - Public Influence
  - Any Other influences?
3. Who are the key players? What is their role in the process of project prioritization?
4. How do you balance the wishes/desires of the many stakeholders that seek to exert their influence on the projects you embark on?
5. What are their objectives?
6. How does the public participate in the process of project prioritization?
7. What challenges do you face in engaging the public specifically?
8. What challenges do you face in prioritising projects?
9. What strategic outcomes do the initiatives in the ZimConnect project contribute to?
10. How will these initiatives be measured in relation to the strategic outcomes?
11. How do the strategic outcomes influence how the projects are prioritised?
12. What challenges do you face in measuring the efficiency and efficacy of the projects you initiate?
13. How do you design and deliver services?
14. What is the public's involvement in service creation and delivery?

15. Are there other ways of engaging non-government players in service creation and delivery that you employ?

16. What challenges do you experience in involving the public in service creation?

17. Are there other criteria that you take into account when prioritising projects?

- Capacity
  - Flexibility
  - Costs
  - Ease of implementation
  - Extension of existing platforms
- 

18. What are the main lessons you have learned from the implementation of the ZimConnect project

19. Any other comments/thoughts on your experiences in pursuing e-Government in Zimbabwe?

## Appendix C – Prioritisation Focus Group Forms

### E-GOVERNMENT PROJECT PRIORITISATION: A PUBLIC VALUE PERSPECTIVE

*Note: The purpose of this focus group was to test the prioritisation model as developed in this study. As part of the brief, the group is asked to rate how they believed the public would rank the relative importance of the criteria presented to them. Each participant was presented with four forms to rank*

- i. Strategies for delivering public value*
- ii. Criteria for authorising public projects*
- iii. Criteria for creating and delivering public projects*
- iv. The relative importance of various outcomes.*

#### **Section 1: Demographic Information of members**

Date of Interview	
Time of Interview	
Venue	
Total Duration of Interview (Hours)	

**Interviewee to please supply the following details:**

Current Position/Role in Government	
Number of years in Government	
Number of years involved in an ICT/e-Government Projects	
Role(s) on the ICT/e-Government Project	

### AHP Analytic Hierarchy Process

n= 3

Input 1

Objective: Prioritisations of Strategies for Public Value Creation

**Only input data in the light green fields!**

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Criteria	Comment	RGMM
1	Authorisation		33%
2	Creation		33%
3	Outcomes		33%
4			
5			
6			
7			
8			
9			
10		for 9&10 unprotect the input sheets and expand the question section ("+" in row 66)	

$\alpha$ : 
CR:

Name \_\_\_\_\_ Weight \_\_\_\_\_ Date \_\_\_\_\_ Consistency Ratio \_\_\_\_\_ Scale \_\_\_\_\_

		Strategy		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Authorisation	Creation		
1	3		Outcomes		
1	4				
1	5				
1	6				
1	7				
1	8				
2	3	Creation	Outcomes		
2	4				
2	5				
2	6				
2	7				
2	8				
3	4				
3	5				
3	6				
3	7				
3	8				
4	5				
4	6				
4	7				
4	8				
5	6				
5	7				
5	8				
6	7				
6	8				
7	8				

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values

### AHP Analytic Hierarchy Process

n= 7

Input 1

Objective: Prioritisation of Authorisations

**Only input data in the light green fields!**

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Criteria	Comment	RGMM
1	Policy	National Policy e.g ZimAsset	14%
2	Budget	National Budget	14%
3	Politicians	Politicians or the party	14%
4	Bureaucrats	Bureaucrats/Government Officials	14%
5	Public	Direct Authorisation by the public	14%
6	Project Funders	Project Funders	14%
7	Other	Other Authorisation	14%
8			
9			
10		question section ("+" in row 66)	

$\alpha$ :  CR:

		Name	Weight	Date	Consistency Ratio	Scale
		Criteria			more important ?	Scale (1-9)
i	j	A	B	A or B		A B
1	2	Policy	Budget			
1	3		Politicians			
1	4		Bureaucrats			
1	5		Public			
1	6		Project Funders			
1	7		Other			
1	8					
2	3	Budget	Politicians			
2	4		Bureaucrats			
2	5		Public			
2	6		Project Funders			
2	7		Other			
2	8					
3	4	Politicians	Bureaucrats			
3	5		Public			
3	6		Project Funders			
3	7		Other			
3	8					
4	5	Bureaucrats	Public			
4	6		Project Funders			
4	7		Other			
4	8					
5	6	Public	Project Funders			
5	7		Other			
5	8					
6	7	Project Funders	Other			
6	8					
7	8					

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values

Prioritisation of Authorisations - focus group-In1

### AHP Analytic Hierarchy Process

n= 7

Input 1

Objective: Prioritisation of Creation criteria

**Only input data in the light green fields!**

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A** or **B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Criteria	Comment	RGMM
1	Government directly	Government directly	14%
2	Government with the people	Government with the people	14%
3	Public-Private-Partership	Public-Private-Partership	14%
4	Government through NGOs/	Government through NGOs/CSOs	14%
5	The People Alone	The People Alone	14%
6	Private Sector Alone	Private Sector Alone	14%
7	NGOs/CSOs	NGOs/CSOs	14%
8			
9		for 9&10 unprotect the input sheets and expand the	
10		question section ("+" in row 66)	

Name Weight Date  $\alpha$ :  CR:   Scale

		Criteria		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Government directly	Government with the people		
1	3		Public-Private-Partership		
1	4		Government through NGOs/CSOs		
1	5		The People Alone		
1	6		Private Sector Alone		
1	7		NGOs/CSOs		
1	8				
2	3	Government with the people	Public-Private-Partership		
2	4		Government through NGOs/CSOs		
2	5		The People Alone		
2	6		Private Sector Alone		
2	7		NGOs/CSOs		
2	8				
3	4	Public-Private-Partership	Government through NGOs/CSOs		
3	5		The People Alone		
3	6		Private Sector Alone		
3	7		NGOs/CSOs		
3	8				
4	5	Government through NGOs/CSOs	The People Alone		
4	6		Private Sector Alone		
4	7		NGOs/CSOs		
4	8				
5	6	The People Alone	Private Sector Alone		
5	7		NGOs/CSOs		
5	8				
6	7	Private Sector Alone	NGOs/CSOs		
6	8				
7	8				

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values

Prioritisation of Creation - Focus Group-In1

### AHP Analytic Hierarchy Process

n= 7

Input 1

Objective: Prioritisations of service outcomes

**Only input data in the light green fields!**

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Criteria	Comment	RGMM
1	Fiscal Reform Measures	Fiscal Reform Measures	14%
2	Food Security and Nutrition	Food Security and Nutrition	14%
3	Infrastruture and Utilities	Infrastruture and Utilities	14%
4	Public Administration, Govern	Public Administration, Governance and Performance management	14%
5	Social Services and Poverty	Social Services and Poverty Eradication	14%
6	Information Society by 2020	Information Society by 2020	14%
7	Value Addition and Beneficia	Value Addition and Beneficiation	14%
8		0	
9		for 9&10 unprotect the input sheets and expand the	
10		question section ("+" in row 66)	

Name Weight Date  $\alpha$ :  CR:    
 Consistency Ratio Scale

		Criteria		more important ?	Scale	
i	j	A	B	A or B	(1-9)	
1	2	Fiscal Reform Measures	Food Security and			
1	3		Infrastruture and			
1	4		Public Administration,			
1	5		Social Services and			
1	6		Information Society by			
1	7		Value Addition and			
1	8					
2	3	Food Security and Nutrition	Infrastruture and			
2	4		Public Administration,			
2	5		Social Services and			
2	6		Information Society by			
2	7		Value Addition and			
2	8					
3	4	Infrastruture and Utilities	Public Administration,			
3	5		Social Services and			
3	6		Information Society by			
3	7		Value Addition and			
3	8					
4	5	Public Administration, Govern	Social Services and			
4	6		Information Society by			
4	7		Value Addition and			
4	8					
5	6	Social Services and Poverty	Information Society by			
5	7		Value Addition and			
5	8					
6	7	Information Society by 2020	Value Addition and			
6	8					
7	8					

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values

## Appendix D – Ethical Approval



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Reference number: EBIT/34/2014

8 July 2014

Mr MPA Marufu  
19 Shottery Road  
Greystone Park  
Harare  
Zimbabwe

Dear Mr Marufu,

**FACULTY COMMITTEE FOR RESEARCH ETHICS AND INTEGRITY**

Your recent application to the EBIT Ethics Committee refers.

- 1 I hereby wish to inform you that the research project titled "E-Government project prioritisation: A public value perspective" has been approved by the Committee.

This approval does not imply that the researcher, student or lecturer is relieved of any accountability in terms of the Codes of Research Ethics of the University of Pretoria, if action is taken beyond the approved proposal.

- 2 According to the regulations, any relevant problem arising from the study or research methodology as well as any amendments or changes, must be brought to the attention of any member of the Faculty Committee who will deal with the matter.
- 3 The Committee must be notified on completion of the project.

The Committee wishes you every success with the research project.

  
**Prof JJ Hanekom**

Chair: Faculty Committee for Research Ethics and Integrity

**FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION  
TECHNOLOGY**

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