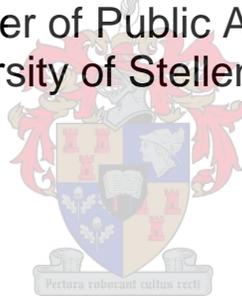


Development through e-government.
Strategic options for South African application

Melanie Janet Heginbotham

Thesis presented in partial fulfillment of the requirements for
the degree of Master of Public Administration at the
University of Stellenbosch



Supervisor: Francois Theron

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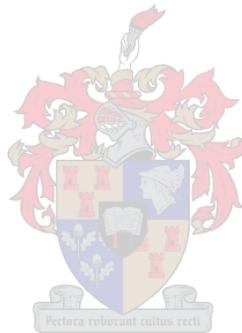
DECLARATION

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

Date: April 2006

MELANIE JANET HEGINBOTHAM



ABSTRACT

Information and communication technologies are rapidly changing the future of public administration. The desire to become part of the "Information Age" has instigated a worldwide transformation process that puts information and communication technologies at the heart of government processes and practices. One strategy that embraces these technologies is electronic government (e-government). The ability to provide government services and information online is becoming a benchmark for governments in both developed and developing nations. E-government has arrived in South Africa and slowly it is starting to shape our lives. Improved service delivery, access to information, an open and transparent form of government and the ability to participate in certain government activities are just some of the advantages that e-government has to offer. Although disparities in access and education levels remain a constant hindrance in South Africa, the e-government strategy does have the potential to promote community development. By providing an opportunity to learn a new skill, gain new information and participate in your local government activities, e-government has the potential to empower local citizens thereby promoting community development. The acquisition of new knowledge is a vital tool in today's modern society. Therefore, through the provision of new knowledge e-government is a strategy for the future.



OPSOMMING

Inligting - en kommunikasietegnologie is vinnig besig om die toekoms van openbare administrasie te verander. Die behoefte om deel te wees van die "inligtingsera" het 'n wêreldwye hervormingsproses aan die gang gesit wat inligting - en kommunikasietegnologie die spil maak waarom regeringprosesse en - praktyke draai. Een strategie wat hierdie tegnologieë insluit, is elektroniese regering (e-regering). Die vermoë om regeringsdienste en - inligting aanlyn te verskaf, word 'n maatstaf in ontwikkelde sowel as ontwikkelende nasies. E-regering is hier in Suid-Afrika en dit is stadig besig om ons lewens te vorm. Verbeterde dienslewering, toegang tot inligting, 'n oop en deursigtige regeringsvorm en die vermoë om aan sekere regeringsaktiwiteite deel te neem, is maar enkele van die voordele wat e-regering inhou. Alhoewel ongelykhede in toegang en opvoedkundige vlakke steeds struikelblokke in Suid-Afrika is, het 'n e-regeringstrategie die moontlikheid om gemeenskapsontwikkeling te bevorder. Deur die geleentheid te bied om nuwe vaardighede aan te leer, nuwe inligting in te win en aan die aktiwiteite van die plaaslike regering deel te neem, bied e-regering die moontlikheid om plaaslike inwoners te bemagtig en daardeur gemeenskapsontwikkeling te bevorder. Die verkryging van nuwe kennis is 'n belangrike hulpmiddel in die hedendaagse moderne samelewing. E-regering is dus 'n strategie vir die toekoms deur middel van die verskaffing van nuwe kennis.

ACKNOWLEDGEMENTS

For me, a South African citizen, of British parents, my loyalties were somewhat divided between two different worlds. Writing this thesis has cemented my heritage firmly on South African soil. This experience has opened my mind to the opportunities available to South Africa in the 21st century. I have learnt so much more than what is presented in this thesis and I feel that I have grown tremendously from the experience. I hope that this study brings a new perspective on the future of public administration in South Africa.

At the outset of my acknowledgement, I am deeply grateful to the following people for their support and encouragement:

To my mother for her love and support throughout this experience, my father for his constant encouragement and the use of his office and Carl for his understanding and valuable contribution to this thesis.

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Lastly I would like to thank all my friends and relatives who motivated me to complete this thesis.



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ABBREVIATIONS

B2B	Business to Business
ECA	United Nations Economic Commission for Africa
E-government	Electronic government
EISI	Egyptian Information Society Initiative
ERP	Enterprise Resource Planning
G2B	Government 2 Business
G2C	Government 2 Citizen
G2G	Government 2 Government
GCIS	Government Communication and Information Systems Department
GEAR	Growth, Employment and Redistribution Strategy
GNP	Gross National Product
ICTs	Information and Communication Technologies
IDP	Integrated Development Programme
IEC	Independent Electoral Commission
IEF	International Efficiency and Effectiveness
IT	Information Technology
ITU	International Telecommunications Union
KEEG	Knowledge economy and e – government branch of the Western Cape
MPCC	Multi Purpose Community Center
NGO	Non governmental organisation
OECD	Organisation for Economic co-operation and Development
PGWC	Provincial Government of the Western Cape
SARS	South African Revenue Service
SERPRO	The Federal Service of Processing of Dados
SITA	South African Information Technology Agency
SMME	Small, Medium and Micro Enterprise
UNDP	United Nations Development Programme

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CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction

Never before has public sector reform received so much attention. The impact of information and communication technologies (ICTs) on political systems worldwide is profound. In South Africa this impact can be felt at National, Provincial and Local level. The introduction of the electronic government (e-government) initiative for improved service delivery, information access and transparency is changing the relationship between citizens and their government. The face of society is changing into an information or knowledge based society driven by technological advancement and the continuous use of the Internet for conducting daily activities e.g. banking.

From a global perspective South Africa may seem a long way off achieving its true e-government potential. While the developed world joins the "Information Age" there is concern that developing nations such as South Africa are continuously hampered by challenges such as poor resources, corruption, inadequate skills base and civil strife. Despite these perceptions there is evidence that South Africa has made significant progress in all aspects of development. The Millennium Country Goals Development Report 2005 on South Africa supports this by providing research that assesses South Africa's performance in relation to the millennium development goals. These goals are listed in Annexure 1.

This study focuses on community development through the use of the e-government strategy. This strategy offers several advantages for both government and citizens. This study acknowledges these advantages and disadvantages from both a local and international perspective while maintaining the premise that the e-government strategy is one approach to development that can promote community development and help South Africa close the digital divide.

1.2 Background and motivation of the study

Across the globe governments are embarking on a new adventure namely, e-government or electronic government. The continuous growth and development of the e-government approach is having a significant impact on how individuals live, firms do business, governments govern and nations interact with each other.

Local government plays an essential role in providing a link between communication and development. Easy access to accurate information is becoming increasingly important as South Africa makes the transformation into an "Information Society". For several decades, both

theoreticians and practitioners have been interested in how to use communication to support development and have been exploring the relationship between communication and development.

In this modern era the concept of “development” has spread far beyond its original boundaries. Development theories, like those explained by Haines (2000:31) such as the dependency theory and modernisation theory constituted by the writings of academics such as Max Weber and Herbert Spencer have been replaced by more holistic and integrated approaches to development (Kotze & Kotze, 1997:61). The importance of communicating development processes and goals in an effective and accessible manner has become a priority for local governments. Communicating development can best be defined as follows: “It is the art and science of human communication applied to the speedy transformation of a country and the mass of its people from poverty to a dynamic state of economic growth that makes possible greater social equality and the larger fulfillment of the human potential” (Queral, 1998).

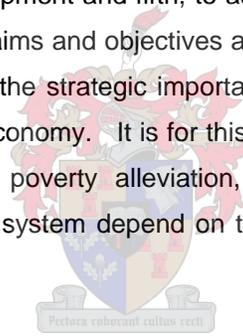
In South Africa, e-government is one of the primary means of communicating development. This form of communication takes into account the needs of society, the developmental goals of government and empowerment of citizenry.

This topic justifies the research for the following reasons: we live in a world where information is crucial in determining economic, political and social activities. Local Governments’ across South Africa are having to adopt new policies and strategies to ensure effective and equal information accessibility and availability to all citizens; ICTs are becoming a critical part of the holistic approach to development and finally, e-government is becoming an essential part of good governance. The following quote from Nulens and Van Audenhove (1999:451) provides further justification for the proposed study by emphasizing the importance of information and communication technologies in becoming a Network or Information Society: “Information and communication technologies play an important part in political, economical and socio-cultural globalisation processes. The fact that one speaks of an emerging Information Society in the North illustrates the prominent role attributed to information and communication technologies in the transformation of society. The benefits of ICTs are not considered to be confined to the West alone. Several observers believe that the wide spread use of ICTs in developing countries will improve the economic and social situation of the third world populations as well. Technological innovation and the drastic reduction in prices will enable Africa to ‘leap frog’ stages of development and catch up with the global Information Society.” Implementing e-government is the first step towards achieving this vision.

1.3 Aim and objectives of the study

The aim of this study is to show that through the use of ICTs, in particular via the e-government approach, local government will be in a better position to communicate development processes e.g. participation, empowerment, job creation and alleviation of poverty, which will bring about the creation of a better future for all South Africans and help the Government close the digital divide.

The objectives of the study are firstly, to show that the growth and development of the information and communication technology industry has had an impact on all sectors of society. Secondly, to show that there is a definite link between the impact of information and communication technologies and the notion of development within local government in South Africa. The third objective is to show that the impact of information and communication technologies in South Africa has been positive and negative but as a result of new policy initiatives and innovative ideas, information and communication technologies are becoming an integrated part of development efforts across the country. The fourth objective is to determine the role of e-government in communicating development and fifth, to assess the impact e-government has on development processes. The above aims and objectives are supported by the fact that the South African Government has recognised the strategic importance of the ICT industry for the growth and prosperity of the South African economy. It is for this reason that most of the Government's socio-economic initiatives such as poverty alleviation, grant administration, education and training, and the national healthcare system depend on the availability of a sound national ICT infrastructure.



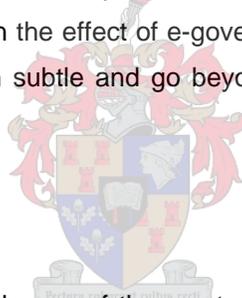
1.4 Statement of the research problem and hypothesis

The fundamental question the researcher is trying to answer is: Can development efforts by local government be better expedited through the use of ICT and in particular the e-government approach and will this better enable South Africa to close the digital divide? It is evident that this research question has two elements that are linked by the common denominator of ICTs. All aspects of the proposed topic are interrelated and rely upon one another if they are to be successful and have the overall impact of improving quality of life for all citizens. The researcher would, however, like to emphasize the following relationships and sectors of society: the relationship between communication and development, the effect and importance of citizen participation in communication, access to information by citizens and e-government as an important strategy to help alleviate some of the existing problems regarding communicating development, information and information access. The following quote outlines the basic theme of the researcher's approach: "A prime factor in fostering change and development can be the

planned and systematic use of communication to help individuals, communities and societies to accept and introduce change” (UNICEF, 2003).

This study will show that communication and information access are crucial factors in South Africa’s journey towards becoming an “Information Society.” E-government is a strategy well suited to assist South Africa in the transformation from a single channeled approach to government administration to a multi-developmental approach. According to Heeks (2001:2), e-governance is the ICT enabled route towards achieving good governance. Heeks (2001:2) takes this statement one step further by suggesting that we might prefer to think of it as: “Integrated governance – since it integrated both the processing and communication technologies and since it integrates people, processes, information and technology in the service of achieving good governance objectives.”

In essence, the researcher will try to prove the importance of communication development to help create a better future for all South Africans. Due to the dynamic nature of development and the gap that exists between ordinary citizens and professionals in gaining access to information, the researcher expects varied opinions on the effect of e-government and ICTs. “The benefits from e-governance are very diverse, often subtle and go beyond cost saving and direct democratic participation” (UNDP, 2004).



1.5 Significance of the study

The e-government strategy is currently one of the most debated topics worldwide. With South Africa striving to become an Information Society and the Western Cape a knowledge economy, this study is relevant in providing a window on the main aspects of the e-government. This study is of significance because e-government is still very much in its infancy in South Africa. By using international case studies from both developed and developing nations, the researcher has created a solid base for comparing South Africa’s e-government approach to some of the best in the world e.g. United Kingdom. In addition, the researcher has investigated e-government at local level in South Africa, in particular the Western Cape. To date, information on e-government at local level in South Africa is limited; therefore this study provides some new insight into that particular area of e-government. This study is significant to all aspects of development. With a focus on community development and citizen participation, this study is not limited to e-government, therefore it has the potential to be of use in more than the social science field.

CHAPTER TWO: RESEARCH DESIGN AND METHODOLOGY

2.1 Introduction

Throughout this study the researcher continuously refers to the following definition of research: "According to Leedy (1989:4-8), research is essentially a thought process on accumulated facts and data in order to determine what the facts 'say' and what the data means. Put differently: research is a method of action by means of which people solve problems in an endeavour to extend the boundaries of knowledge. Hence research encompasses the interpretation of data in order to reach a conclusion" (Brynard & Hanekom, 1997:2).

Terms such as ICTs, e-government and development are becoming the new buzz words in today's technologically driven "Information Society." In the pursuit of valid and valuable knowledge, the research design and methodology were kept systematic and simple (Brynard & Hanekom, 1997:3). The chapters represent a comprehensive approach to the study. From definitions to international case studies to local examples the researcher has done her best to provide a report that illustrates the global nature of the e-government initiative as well as its importance for South African applications.

The following section covers the research design, research methodology and data collection techniques used. These sections will provide more insight into the chapters that follow. The intended outcome of the research methodologies used is a comprehensive overview that presents some new ideas on the way forward for development through the use of ICTs and the empowerment of local citizens through improved information access.

2.2 Research design

Has taken the form of a predominantly qualitative, non-empirical study on community development to show how the e-government approach and the ability of such an approach should help close the digital divide. The type of study that will be undertaken is that of a literature review. According to Mouton (2001:179) such a study provides an overview of a particular topic of an analysis of trends and debates. For the purposes of this study reading current literature on the following topics: e-government; development; ICTs, local government and "Information Society" has been the main focus. The researcher then critically analysed existing data which took the form of either secondary textual, historical or statistical data.

By conducting such a study the researcher hopes to gain a better and more inclusive idea about what e-government is and what its role is in development.

This study is not solely non-empirical. The researcher has made use of two empirical study techniques, namely, the case study and the questionnaire. The case study approach is applied within two contexts. The first is in an international context. The researcher will dedicate one chapter of her thesis to international trends and country examples where e-government has already been implemented. The selection of these cases depended on the information available and the degree to which success or failure of the e-government initiatives was evident. The final selection includes two developed countries, namely the United Kingdom and New Zealand, and two developing countries, namely Egypt and Brazil. Both the United Kingdom and New Zealand represent countries with a sophisticated e-government system in place. Egypt and Brazil represent the battle that so many developing countries face in the implementation of a technologically based approach to service delivery.

The second context within which the case study technique is used is to provide a local example of the implementation of the e-government initiative. In this study the researcher has dedicated a chapter to local implementation of e-government, in particular, the Cape Gateway of the Western Cape. The reason for choosing this case study is that it is one of the only local examples available and to date the researcher has found that information about the development of this e-government initiative is readily available.

The second empirical study technique that is used is the questionnaire. The researcher chose to use this technique as a result of difficulties in setting up unstructured interviews. Many of the public sector officials initially considered for interviewing declined from these appointments at various times during the study. Therefore, the researcher adopted the questionnaire design technique to which there was a much better response.

2.3 Research methodology

The method of study is based on an integrated literature review. The selection of sources (documents, texts, websites,) is driven by the theoretical considerations such as the aim of the study, the research questions, as well as pragmatic considerations such as time frame and level of study (Adesida,2001:180). This will culminate into a study presenting new ideas on the way forward in communicating development processes and empowering local citizens through improved information access. ICTs have become enablers and facilitators of change, innovation and creativity. In addition ICTs are able to help reduce poverty, build capacity and empower citizens while producing skills and creating networks within local government. All these factors contribute towards South Africa becoming an Information Society within a global setting that demands transformation, transparency and integrated technology.

Against the above background, this study was conducted within the qualitative paradigm in three parts:

- A brief overview of the existing process thus far, identifying the shortcomings as seen by the researcher from local government directives, newspaper articles and interviews in the national and international press
- A study on the implementation of new technological procedures (e.g. the e-government initiative) which will drive the movement forward showing that the advent of Internet and Web technologies have already had an impact on the rise of the Information Society.
- The conclusion of this section will link up existing technology and demonstrate how knowledge in Science and Technology is a powerful tool towards achieving Millennium Development Goals.

The following data collection techniques were used in this study:

1. *The Questionnaire:*

In the case of structured questionnaires, as Theron (2005c:176) explains: "as in the case of the interview method and, based on a comparative literature review, the researcher will formulate a set of questions which the receiver of the questionnaire, who is not in face to face contact with the researcher, answers on a hard copy document received by post or an e-mail attachment. The person who answers the questionnaire is called the 'respondent.'"

The method of questionnaire used for this research study was an impersonal one (Theron, 2005c:176). The questionnaire was sent to all 30 local municipalities in the Western Cape. All 30 municipalities were selected as recipients because of the perceived low level of response. In the researcher's opinion 30 recipients was already a minimal target, therefore eliminating any of them would have been a disadvantage when analysing the results. A copy of the questionnaire can be seen in Annexure 3.

- Design:
The design of the questionnaire was simple and straight forward. A cover page was provided giving information on the background and nature of the research; confidentiality issues and instructions for answering the questions. A total of 10 questions were composed, the majority of which required YES/NO answers. Respondents were asked to mark the appropriate box with an X and in some

cases were asked to substantiate their answer. The questions were designed with the intended purpose of gaining more information about e-government at local government level in South Africa.

- Administration:

The questionnaire was sent to via e-mail to 30 local municipalities in the Western Cape. Recipients were asked to return the questionnaire electronically to the address from which it was sent. All questionnaires were administered on the same day. Access to the subjects e-mail addresses was gained through an Internet search and telephone. From the date of dispatch the researcher allowed 5 weeks for recipients to respond.

The questionnaire was sent to the following local municipalities on 21 September 2005: Beaufort West, Bergrivier, Bitou, Breede River, Cape Agulhas, Cape Winelands, Cederberg, Central Karoo, City of Cape Town, Drakenstein, Eden, George, Kannaland, Knysna, Laingsburg, Langeberg, Matzikama, Mossel Bay, Oudtshoorn, Overberg, Overstrand, Prince Albert, Saldanha, Stellenbosch, Swartland, Swellendam, Theewaterskloof, West Coast and Witzberg.

- Analysis:

After 5 weeks all completed and returned questionnaires were printed and counted. Each questionnaire was read and the results recorded and the main points documented. The results of the questionnaire will be discussed in Chapter seven.

2. *The Unstructured interview:*

This was the second data collection technique used. In an unstructured interview as explained by Welman and Kruger (2001:189), an attempt is made to understand how individuals experience their life-world and how they make sense of what is happening around them. The interviewer's question should thus be directed at the participant's experiences, feelings, beliefs and convictions about the theme in question. This was a face to face interview during which the researcher made notes in order to record the participant's comments. For the purposes of this study an unstructured interview was conducted with Prof F. Cloete, a Professor at Stellenbosch University (see Annexure 2). The questions of this interview were semi-structured and dealt primarily with the issue of e-government and citizen participation as well as the use of ICTs for community development. Prof F. Cloete was selected as a participant because of his knowledge of e-government and his contributions to development studies.

In addition to the unstructured interview and questionnaire, personal communications were conducted via e-mail with Mr Alan Levin and Mr Richard Heeks. Mr Levin has knowledge of the Cape Gateway and was involved in its implementation. Mr Heeks, based in the United Kingdom, has written several papers relating to e-government, ICTs and development. Their views and perspectives on e-government (both local and international) were integrated into the study and not quoted directly.

Another method used by the researcher to remain up to date with all the latest newsworthy information on e-government in South Africa was her subscription to a “Google Alert” for any new information relating to e-government in South Africa. Any new updates on e-government in South Africa were sent via the Google search engine to the researcher’s e-mail address.

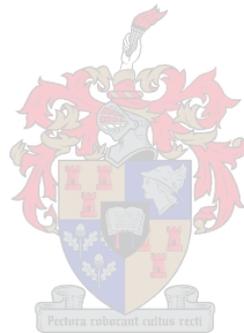
During this study, data was analysed in terms of the definition given by Mouton (2001:108). According to this description: “Analysis involves ‘breaking up’ the data into manageable themes, pattern, trends and relationships. The aim of analysis is to understand the various constitutive elements of one’s data through the inspection of the relationships between various concepts, constructs or variables and to see whether there are any patterns or trends that can be identified or isolated, or to establish themes in data.” This analysis technique was selected because of simplicity and ability to establish patterns and relationships. E-government is not an isolated initiative therefore an important part of this study is showing that e-government is integrated in nature and requires input from all sectors of society.

2.4 Limitations of the study

During the research process a number of challenges were encountered. In order to overcome these challenges the researcher either made the necessary changes or sought an alternative approach to the problem. The following list represents the limitations of this study:

- Due to the “newness” of the e-government topic, particularly in South Africa at local government level, there was not a lot of material available to assess or evaluate.
- Again, due to the “newness” of this topic, material used for this report is often attributed to the same authors over all the chapters. This is because the e-government “knowledge base” is still relatively small.
- Internet research revealed that South African search engines (e.g. Ananzi) do not provide access to adequate information for research of this magnitude. Both the volume and relevance of information available on “e-government” was very disappointing.

- From an international perspective, the e-government project is very topical therefore the need to keep information up to date was increased.
- In South Africa, knowledge of the e-government project is limited to a few elite people who have both business and technological knowledge. As a result these public officials were very busy and often overseas and therefore unable to commit to a face to face interview.
- A central argument of this study is the promotion of e-government at local level. Therefore, all local municipalities of the Western Cape were selected to complete the questionnaire. The poor response is a limitation of the study.
- A decision was made to focus on e-government at local level, however, when looking for an appropriate example it became evident that e-government at this level was still very much in the planning stage or infancy stage of implementation, therefore the researcher moved to the provincial level to find a concrete example of e-government in South Africa. This should not deter from the fact that this study promotes e-government at local level.



CHAPTER 3: THEORETICAL FRAMEWORK

3.1 Key concepts defined

This study works with concepts that should be clarified in order to avoid any ambiguity. This next section provides simple definitions of concepts that are used continuously.

- i. **Citizen Participation** - Burkey (as cited in Theron, 2005a:119) defines this as follows: "...participation is an essential part of human growth, that is the development of self – confidence, pride, initiative, responsibility, and co-operation. Without such a development within the people themselves all efforts to alleviate their poverty will be immensely more difficult, if not impossible. This process, whereby people learn to take charge of their own lives and solve their own problems, is the essence of development."
- ii. **Community** - A specific group of people, often living in a defined geographical area, who share a common culture, values, and norms and who are arranged in a social structure according to relationships the community has developed over a period of time. The term "community" encompasses aspects such as worksites, schools, and health care sites.
<http://www.cdc.gov/healthyplaces/terminology.htm>
- iii. **Development** - The advancement of the management and use of natural resources to satisfy human needs and improve the quality of human life. For development to be sustainable it must take account of social and ecological factors, as well as economic ones, of the living and non-living resource base, and of the long-term and short-term advantages and disadvantages of alternative actions.
<http://www.for.gov.bc.ca/hfd/library/documents/glossary/D.htm>
- iv. **Digital Divide** - The digital divide is a social/political issue referring to the socio-economic gap between communities that have access to computers and the Internet and those who do not. The term also refers to gaps that exist between groups regarding their ability to use ICTs effectively, due to differing levels of literacy and technical skills, as well as the gap between those groups that have access to quality, useful digital content and those who do not.
http://en.wikipedia.org/wiki/Digital_divide
- v. **E-government** - E-government refers to the use by the *general government* (including the public sector) of electronic technology (such as Internet, intranet, extranet,

databases, decision support systems, surveillance systems and wireless computing) that have the ability to transform relations within the general government (bodies) and between the general government and citizens and businesses so as to better deliver its services and improve its efficiency. <http://en.wikipedia.org/wiki/EGovernment>

- vi. **Governance and good governance** – These terms are being increasingly used in development literature. Governance describes the process of decision-making and the process by which decisions are implemented (or not implemented). Hereby, public institutions conduct public affairs, manage public resources, and guarantee the realization of human rights. Good governance accomplishes this in a manner essentially free of abuse and corruption, and with due regard for the rule of law. <http://en.wikipedia.org/wiki/Governance>
- vii. **Government** - A government is an organisation that has the power to make and enforce laws for a certain territory. There are several definitions on what exactly constitutes a government. In its broadest sense, "govern" means the power to administrate, whether over an area of land, a set group of people, or an association. <http://en.wikipedia.org/wiki/Government>
- viii. **ICT** - The building blocks of the Networked World. ICTs include telecommunications technologies, such as telephony, cable, satellite and radio, as well as digital technologies, such as computers, information networks and software. <http://en.wikipedia.org/wiki/ICT>
- ix. **Information Access** - Access to a broad array of research information is critical to the health and wealth of society. Advances in medicine, in technology, in the understanding of our environment and our economy, all depend on scientists, researchers, and scholars building on each others' work. <http://www.informationaccess.org/>
- x. **Information Society** – A type of society in which information and information access plays a central role, economically, socially and individually. Governments are making efforts to bring countries into this era.
- xi. **Internet** - An open network layer that allows for the interconnection of various data networks through the use of the TCP/IP protocol. When most individuals think of the Internet, they are thinking of applications that use the Internet, such as e-mail and the World Wide Web.

- xii. **Local Government** - That level of government which is commonly defined as a decentralised, representative institution with general and specific powers devolved to it by a higher tier of government (central or provincial) within a geographically defined area. (Ismail *et al*, 1997:2)

- xiii. **Sustainability** - The ability to provide for the needs of the world's current population without damaging the ability of future generations to provide for themselves. When a process is sustainable, it can be carried out over and over without negative environmental effects or impossibly high costs to anyone involved.
<http://www.sustainabletable.org/intro/dictionary/>

- xiv. **Technology** – In an IT context - is the set of tools both hardware (physical) and software that help us act and think better. Technology includes all the objects from pencil and paper to the latest electronic gadget. Electronic and computer technology help users share information and knowledge quickly and efficiently.
<http://home.earthlink.net/~ddstuhlman/defin1.htm>

3.2 Contextualising e-government in the context of a literature study

In this study of there are a number of themes that constituted the researcher's literature study. One of the first themes that should be addressed is that of "development." Development thinking has gone through radical shifts in the past few years (Theron, 2005b:105). In more recent years the questions of equity and equality in the distribution of the benefits from development have become key elements in the ongoing debate on development theories and practice. According to Swanepoel (2000a:72): "One of the most important changes in development thinking over the past few decades has been the central position that the human being has begun to occupy. Development is not the development of an area or of things such as roads and railways, but is about total life transformation. The entire development process has a human and emotional quality and function and development must entail the liberation of human beings." This statement provides a clear understanding of the people-centred approach to development as explained Kotze and Kellerman (1997:38) and will form the basis for this next section. In this sense it is clear that development needs to be addressed in a holistic manner.

Swanepoel (2000a:73) provide a realistic and simple example of development as requiring a holistic approach. They use poverty as an example suggesting that it too is all encompassing. If development is going to address problems such as poverty successfully, then it must be all encompassing i.e. if the problem is holistic in nature then the solution should be too. However,

this situation is problematic on two counts. Firstly, development tends to take place through projects which tend to be one dimensional. One will rarely find a development project, which addresses that totality of the poverty situation. Secondly, government, which is the most important development agent, is a divided entity. It consists of ministries, divided into departments, which are often further divided into branches.

Throughout this study the central theme will be that of a humanistic approach to development (see Theron, 2005b:105). "Development is about people, their needs and their circumstances. For this simple reason, development can never rely on predetermined long term plans and goals. Because development is about people, it is cloaked in uncertainty – the uncertainty of changing circumstances, changing experiences, changing needs and, eventually changing people" (Swanepoel, 2000a:71). In addition to changes in development thinking over the past few years, there have also been changes in the perceived definition of development. The fact that development is a complex and slow moving process remains unchanged. For the purposes of this study the researcher will be using the following definition of development: "In broad terms development may be defined as positive social, economic and political change in a country or community. In our field, development is concerned with positive change in existing human societies and the success of development efforts are measured by the results in society" (Stewart, 1997:1).

In the researcher's opinion, the people-centered approach to development offers a way to overcome many of the problems of the past, regarding development issues. Theron (2005b:104-109) shows support of this opinion. If such an approach were to be used then the building blocks of development, namely, participation, social learning, capacity building and empowerment could be cemented into the community and become strong foundations for future development efforts. A sure way to start this process is through a learning process where the human being becomes the subject of his or her own development (Swanepoel, 1997:3). Those who were the objects of their development now become the masters of their own development. The people centered approach is key to making this happen as is the desire and motivation of local community members to want to change and improve their quality of life for the better.

In terms of the development debate it is important to give a brief clarification of each of the building blocks of development. These building blocks form the basic structure of any development project (Theron, 2005a:119-123). Throughout the development process it is vital that development managers and agents refer back to these building blocks to ensure that they have addressed all the necessary areas of study and possible pitfalls that may be incurred at any time during the development effort. These building blocks should represent the vision of any

development effort and should be used as targets against which the successes of development projects are measured.

- Participation:

According to Burkey (1993:56) participation can be defined as: "...an essential part of human growth that is the self confidence, pride, initiative, creativity, responsibility, co-operation. Without such a development within the people themselves, all efforts to alleviate their poverty will be immensely more difficult, if not impossible. This process whereby people learn to take charge of their own lives and solve their own problems is the essence of development."

- Capacity Building:

Capacity building rests on the premise that: "People can lead their own change process. They can be the actors, not merely the subjects of change" (Gran, 1983:345). Capacity building is the key to successful citizen participation. It requires long term commitment and staying power. When we speak of capacity building, what is really being referred to is the capacity of the people – namely those who were the objects of development should now become the leaders of their own development. Therefore, emphasis is placed on assisting to build capacity rather than on building capacity. Government organisations have the responsibility for the effects of capacity building but non-governmental organisations, voluntary organisations, community based organisations and the private sector also have a responsibility in that they are involved in people development. According to Korten (as cited in De Beer and Swanepoel, 1998:7) "these are organisations that: a) embrace error; b) plans with people and c) link knowledge building with action."

- Social Learning:

Social learning is the golden thread linking all the building blocks of development. It is the ability people have to share their knowledge and resources with local community members to help establish a development programme. The social learning process aims to meet the need for: "... a flexible, sustained, experimental, action-based capacity building style of assistance" (Korten as cited in De Beer and Swanepoel,1998:6). The result of using this approach should be greater emphasis on the poor, their right to decision-making and their empowerment.

- Empowerment:

Empowerment happens when people realise that they can make a difference within their local community. The empowerment of people-centred approach to development builds on participation and the social learning process. The following definition by Korten (as cited in

De Beer and Swanepoel, 1998:8) clearly illustrates the peoples' role in this approach: "...a process by which the members of a society increase their potential and institutional capacities to mobilise and manage resources consistent with their own aspirations." The emphasis of this building block is on a long term process where individuals develop the ability to manage and utilise resources to their own benefit.

A second theme in this study is the link between development and information and communication technologies. Heeks (2001) provides a useful insight into the role of ICTs for development. His research, in particular, looks at the e-government for development. His basic argument, which supports this study, is that governments all over the world are accused of delivering poor quality services and being unresponsive. E-government has the potential to offer a new way forward in terms of making government more transparent, improving quality of services and better communicating development efforts. Through the provision of improved processes and information access, e-governance is the road to good governance and thus the achievement of local government development goals. E-government offers the following advantages which are also important in achieving integrated development: cutting of process costs, managing process performance, making strategic connections and creating empowerment.

In South Africa many development programmes have used communication to increase their chances of success in fields such as agriculture, health, environment, population and industry. Areas such as education, democracy and peace are also opening up to the potential uses of communication for development. Defining communication is no easy task. Simply, one can define it as information in transit. It consists of two basic skills: listening and feedback. Local Government needs to listen while the population gives feedback on proposed government to citizen programmes (Government Communication and Information Systems, 1996).

The lack of a culture of citizen participation and of free flowing information in South Africa is hindered by a number of factors: the print media does not reach the majority of the population and communications infrastructure has ignored many millions of the urban poor and rural masses. Information access is both a right (South African Constitution 1996, chapter 2, section 32) and an essential ingredient in fostering economic development. Without an extension of access to information, South Africa will be unable to generate sustained growth and meet the development needs of its population.

The Government Communication and Information System Department (GCIS) in South Africa has the following objectives in mind in terms of information access and the use of ICTs: determination of the information needs of citizens, development of the necessary communication and public

infrastructure to deliver the information, dissemination of this information in an appropriate and timely format, promotion of an innovative and non-traditional means of disseminating information that incorporates learning, teaching, management and services in addition to conventional approaches to make information useful to clients, and finally, raising the awareness of the availability of government information to all South Africans in compliance with relevant legislation such as the South African Constitution no 108, 1996.

E-government is a strategy well suited towards helping local governments achieve some of these objectives. The amount of information that local government agencies have to deal with is phenomenal. They are often so busy trying to cope with and sort through information that the information needs of society are forgotten. E-government is a strategy designed to provide assistance and support to both parties. What follows is a description of what e-government is and what it entails: "The interaction and conducting of business between citizens, businesses and the government via the use of ICTs." (Mahlangu, 2002:18) According to the E-commerce Green Paper 2001, published by the Department of Communications, "...the real power of e-government lies in its transforming character i.e. to harness information and communication technology in order to optimise government performance in a knowledge based society/economy."

According to the GCIS Comtask Report 1996 (the Communication Task Team set up by the cabinet in 1995 to investigate and make recommendations about government communication) on "A vision for government communications in South Africa" the government should be a centre of excellence. The report suggests that Government should embrace access to information by developing an across-the-board policy through education, research, development, personal needs, decision-making needs and mass communication. The language used for communication must be appropriate and simple. Providers of information will be required to have communication skills that meet the needs of the people in both rural and urban settings. This will provide local governments with the chance to provide the disempowered with access to information in whatever form is relevant.

A third theme of this study is the international influence of e-government. Statistics from the United Nations Development Programme show that governments worldwide have made considerable progress in embracing ICT technologies for e-governance in the past few years. "In 2001, the UN E-government Survey listed 143 member states as using the Internet in some capacity; by 2004, 93 per cent or 178 out of 191 members stated had web presence." (UNPAN, 2000)

From an international perspective, forces such as globalisation are bringing about a new digital revolution that is changing the nature of authority and democracy in a transformational process that brings new meaning to the word “empowerment.” In the Economist magazine: “The World in 2005” an article written by Fiorina entitled “Totally Digital” discusses the extent of this digital revolution. Fiorina focuses on the effects that forces such as digitalization are having on our everyday life and the extent to which digital technologies are affecting every process in every industry. This article illustrates the profound effect that ICTs and digital technologies are having on societies all over the world.

A variety of literature sources were reviewed for this study from books, articles, magazines and the Internet. Literature reviewed and studied supports the aim of this study by indicating that a large number of development interventions do focus on the role of ICTs for enhancing the efficiency, accessibility and democratic accountability of public administration and collective decision-making (UNDP, 2004). The introduction of new and improved ICTs, in particular the Internet, has dramatically increased the capabilities and capacity of local government to gather, process and share information. It is important to note, however, that: “The link between better technology and better governance is not automatic. The opportunities are tremendous, but the challenges are formidable, and the conditions for success or failure need to be carefully identified” (UNDP, 2004)

3.3 The relationship between ICTs and development

For decades the issue of effective communication between government and its beneficiaries has been one of much debate between nations, government officials and citizens. Across the globe societies are changing and in a world that is technologically driven, the social realities (poverty, inequality and unemployment) of developing countries are becoming even more apparent. From the research conducted, the link between ICT and development is clear. ICTs and the implementation of the e-government initiative is an example of one possible strategy that offers a way forward for developing countries. The following quote by Heeks (2001:3) supports this statement: “As is true all over the world, government in the developing nations costs too much, delivers too little, and is not sufficiently responsive or accountable. Good governance reforms aim to address these shortcomings. Yet progress – after many years of effort in implementing such reforms – has been much more limited than expected. E-governance offers a new way forward, helping improve government processes, connect citizens and build interactions with and within civil society.”

Developing countries such as Africa continuously face the challenge of good governance. However, research suggests that ICTs can play an important role in improving governance in countries such as Africa (Adesida, 2001). The rate of scientific and technological development, particularly in the ICT sector has been phenomenal in the last half century. The result of these advances has been the creation of a new economy that is global, interconnected and knowledge based. “The convergence of computers, telephony, and communications is changing the way we live and work, it is transforming many aspects of social and economic organisation. Not only are ICTs affecting the way we do business, they have led to the creation of entirely new industries such as software, e-commerce and e-government” (Adesida, 2001:8).

ICTs, which form the base of the e-government or the e-governance initiative, have the potential to bring about positive changes towards the achievement of good governance goals and development targets. According to Heeks (2001:3) ICTs have the power to provide the following three basic change potentials for good governance for development:

- Automation:

This can be defined as replacing current human-executed processes which involve accepting, storing, processing, outputting or transmitting information, e.g. the automation of existing clerical functions.

- Informatisation:

This can be defined as the supporting of current human-executed information processes, e.g. supporting current processes of decision making, communication, and decision implementation.

- Transformation:

Creating new ICT-executed information processes or supporting new human-executed information processes, e.g. creating new methods of citizen service delivery.

It is important to note that ICTs are not only enablers of change but also facilitators of change, innovation and creativity. They do not only facilitate information exchange, but they are deepening the process, creating new methods of sharing ideas and reducing the costs of collecting and analysing information. As a result, knowledge is becoming an integrated part of the economy, thus producing a “knowledge-based economy.”

From the research conducted it is clear that ICTs do have the capacity and potential to support equitable development. The following statement by Adesida (2001:9) supports this view: “ICTs

are potentially capable of transforming the way in which most public services are delivered and also the relationship between government and the citizen.” In addition to transforming public sector service delivery ICTs can help to reduce poverty, build capacity, establish skills and networks and empower citizens. In a world that is characterised by transformation and technology, ICTs can act as tools in helping governments to achieve their developmental goals.

3.4 The digital divide

The digital divide represents the resource and access gap between the digitally literate and digitally illiterate members of society (Cloete, 2004). The advent of the digital divide is as a result of the of the Internet’s demand for technical infrastructure and human capital. In reference to this demand it is feared that many developing countries will be left behind as they simply do not have the resources to meet this demand. “For most of humanity, the Information Age rhetoric is a far cry from reality. In a world where 80% of Internet users live in the richest nations and half the people on the planet have never made a telephone call, bridging the digital divide will be an immense task” (Gilhooly, 2001). It requires appropriate innovative utilization of technology.

The digital divide is of great importance in the e-government approach because it represents “a barrier to e-government in that people who do not have access to the Internet will be unable to benefit from online services. In the Organisation for Economic Co-operation and Development (OECD) countries, a growing number of people have access to the Internet, but there are still large numbers of people who do not. While e-government can also improve services to citizens through other channels (notably by performing back office procedures), the inability to provide online services to all citizens can hold back e-government projects” (OECD e – Government Studies, 2003:64).

The digital divide exists both between and within nations. The economic divide refers to the digital divide between developed and developing nations. While developed nations are more likely to have the resources and skills available to limit the extent the divide, developing nations suffer the problems of a lack of computers, unstable electricity infrastructure, shortage of telephones and capacity of telephone lines which in turn all challenge the ability of these countries to introduce ICTs (Piazolo, 2001).

A common reality in both developed and developing nations is that those groups of society with low levels of access to the Internet tend to be those that are disadvantaged. The digital divide therefore is not limited to those who are computer literate or not. The divide is also as a result of race, income and age. Comments by Cloete (2005) in Annexure 2 support this view. In 2000

the Administrator of the United Nations Development Programme (UNDP), Malloch, made an important statement regarding the digital divide: “If we fail to act now the Information Gap – or Digital Divide – risks being widened into an uncrossable gulf that increases global inequality and leaves the poor further behind” (UNDP, 2000).

In the next few chapters the growing importance of the digital divide will become clearer as it is evident that developed countries are moving ahead faster and faster with the e-government initiative.

3.5 What is e-government and what does it entail?

The introduction of new ICTs, in particular the Internet, has had a profound effect on almost all aspects of life across the globe. One of the most recognised effects of ICTs is how much they have increased our capabilities to gather, process and share information. “This technological quantum leap can be channeled to support the goals of sustainable and equitable human development. The field of possible applications is wide. More than 90% of developing countries explicitly consider ICTs in their national development plans and more than 40% accord them a particularly prominent role in their poverty reduction strategies. One cross-cutting area that has received special attention is the use of ICT in the pursuit of good governance, usually subsumed under the term e-governance” (UNDP, 2004).

A closer look at the definitions, structure, stages and overall expectations of e-government follows: According to the E-government Services Research Project (2003:7) e-government can be described as follows: “Fundamentally e- government is about transforming government organisations to become more efficient and more customer centered. ICT is the tool that can help to bring this about. ICT can be used to either improve back office processes that support service delivery, or to change for the better the way in which services are delivered to government’s customers. ...The more recent focus on the way in which information technologies facilitate communication has resulted in the application of ICT to directly impact the way in which the recipients of government services interact with government when actually rendering services.” According to this same report a useful definition of e-government is the following: “The provision of online government services – that is, any interaction one might have with any government body or agency – using the Internet or World Wide Web.” Although there are many other definitions of e-government it is important to remember that the implementation of the e-government initiative remains the same, i.e. the use of technology to improve the access to and delivery of government services through three sets of activities:

- Improving back-office administrative processes
- Connecting beneficiaries by providing online services and ensuring that the means to access them are available
- Building relationships between government departments, public agencies and other institutions.

Across the globe, governments are changing in structure as they move away from a bureaucratic organisational form to a more transparent and accessible form of government that has its functions streamlined according to the needs of citizens. At the same time governments are striving to improve internal efficiency and effectiveness – the costs and quality of governance. “Information technology (IT) plays the role of a key enabler of this modernisation. It allows both individual citizens and companies the opportunity to interact (even to conduct business) with government seven days a week and 24 hours a day, and to do so using different means of communication: desktop and handheld computers, telephones and cell phones, self service kiosks and ATMs. On the other hand, IT brings endless possibilities for improving the internal operational and support functions within the realm of government” (Department of Public Service and Administration, 2001:4).



Due to the role that ICT and IT play in this transformation process, e-government must address three important issues: (Department of Public Service and Administration, 2001:4)

- E-governance:

The application of IT to intra-governmental operations, including the interaction between central, provincial and local government. This includes paperless messaging and reporting, electronic document management and archiving, integrated systems for finance, asset and human resource management (including training), as well as systems for real time collaboration and project management, conferencing, decision support and executive information.

- E-services:

The application of IT to transform the delivery of public services from “standing in line” to online: anytime, anywhere, by any means, and in the interactive mode. The services affected include general information and regulations, education and culture, health and consulting and telemedicine, benefits, taxation etc. The new delivery vehicles also offer the opportunity to let citizens participate in government, by collecting direct and immediate citizen input in respect of policy issues, specific projects, service delivery problems, cases of corruption etc.

- E-business:

The application of IT operations performed by government in the manner of business-to-business transactions and other contractual relations. An obvious example is the procurement of goods and services by government: e-procurement covers the steps from electronic tender to electronic payment.

The idea of using information technology to support development is not a new one, even in the case of developing countries. For over 40 years governments in developing countries have made use of information technology. The only difference now is that as a result of e-governance, societies are shifting from IT to ICTs and from IT to information systems (IS) (Heeks, 2001:2).

According to Heeks (2001:2), “the old model was one of information technology automating the internal workings of government by processing data. The new model is one of information and communication technologies supporting and transforming the external workings of governance by processing and communicating data.”

Ideally, e-governance should include all forms of ICTs, but the primary innovation is computer networks – from intranet to Internet – thus creating a variety of original new technologies. According to Heeks (2001:2) these include the following:

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- Connections within government – permitting “joined-up thinking”
 - Connections between government and Non-governmental organisations (NGOs)/citizens – strengthening accountability.
 - Connections between government and business/citizens – transforming service delivery.
 - Connections within and between NGOs – supporting learning and concerted action.
 - Connections within and between communities – building social and economic development.

Although e-government encompasses a wide range of new technologies, activities and actors, three distinct sectors can be identified. According to Bonham *et al*, (2001:3) these sectors include the following:

- G2C – government to citizen: Making information available to the public sector via websites and other electronic mediums.
“G2C initiatives are designed to facilitate citizen interaction with government, which is what some observers perceive to be the primary goal of e-government. These initiatives attempt to make transactions, such as renewing licenses and certifications, paying taxes,

and applying for benefits, less time consuming and easier to carry out. G2C initiatives also strive to enhance access to public information through the use of dissemination tools such as websites and/or kiosks...A potential outgrowth of G2C initiatives is that they facilitate citizen to citizen interaction and increase citizen participation in government by creating more opportunities that overcome possible time and geographic barriers, thereby connecting citizens who may not ordinarily come into contact with one another” (Bonham *et al*, 2001:4).

- G2B – government to business: specifically intended to facilitate business interaction with government. This area has the greatest potential for economic development.
“The G2B initiatives receive a significant amount of attention, in part because of the high enthusiasm of the business sector and the potential for reducing costs through improved procurement practices and increased competition. This sector includes both the sale of surplus government goods to the public as well as the procurement of goods and services” (Bonham *et al*, 2001:3).
- G2G – government to government: it greatly improves the interaction among local, provincial and national development.
“In many respects, the G2G sector represents the backbone of e-government. Some observers suggest that governments at all levels must enhance and update their own internal systems and procedures before electronic transactions with citizens and businesses can be successful. G2G e-government involves sharing data and conducting electronic exchanges between governmental actors. This involves both intra- and inter-agency exchanges at the national level, as well as exchanges between the national, provincial, and local levels” (Bonham *et al*, 2001:3).

There are two other sectors within the e-government initiative that should also be noted although they do not receive as much attention as the three listed above.

These sectors are the:

- B2B – Business to business: this form of e-commerce allows businesses to transact with each other more efficiently; and the
- IEE – International Efficiency and Effectiveness: governments’ adoption of technologies best practices from the private sector, e.g. supply chain management (tracking how

goods are delivered to consumers) and human resource management that can increase efficiency and save money.

- IG2G – International Government to Government e.g. Interpol.

In addition to identifying the particular sector within which an e-government initiative belongs, there are also several stages of development by which an e-government project may be classified. According to Bonham *et al* (2001:5), “although different e-government initiatives strive to accomplish different goals, some observers argue that one of the overarching themes of e-government is to fully realise the capabilities of available information technology in an effort to transform government from an agency–centric, limited service operation into an automated, citizen–centric operation capable of delivering government services to citizens, businesses, and other government agencies 24 hours a day, seven days a week. However, for a variety of technical, economic and political reasons, it will take time for these initiatives to evolve into their full potential. For that reason some observers use a common schema for classifying the stages of evolution of e-government projects. The schema is based on the degree to which the properties of information technology have been utilised to enable the delivery of services electronically. Using this schema, there are four stages of evolution: presence, interaction, transaction, and transformation. It is important to note that an e-government initiative does not necessarily have to start at the first stage and work its way through all of the stages. Instead a project can skip levels, either from its inception or as it develops.”

There are four stages of e-government development which can be defined as follows: (Bonham *et al*, 2001:6)

- Presence:

At this early stage only a few government websites are available offering static information to the users.

“It represents the simplest and least expensive entrance into e-government, but it also offers the fewest options for citizens. A typical example is a basic website that lists cursory information about an agency such as hours of operation, mailing address, and/or phone numbers, but has no interactive capabilities. It is a passive presentation of general information” (Bonham *et al*, 2001:6).

- Interaction:

At this stage the number of websites increase as the information progresses to a more dynamic nature.

“Although interactive web-based initiatives offer enhanced capabilities, efforts in this group are still limited in their ability to streamline and automate government functions. Interactions are fairly simple and usually revolve around information provision. These types of initiatives are designed to help make the customer avoid a trip to an office or make a phone call by making commonly requested information and forms available around the clock” (Bonham *et al*, 2001:6).

- Transaction:

By this stage there is increased interaction between the user and the government.

“These initiatives are more complex than simple information provision and embody the types of activities popularly associated with e-government. They enable clients to complete entire tasks electronically at any time of the day or night. These initiatives effectively create self service operations for tasks such as licence renewals, paying taxes and fees, and submitting bids for procurement contracts...the activities still involve a flow of information that is primarily one-way (either to government or to the client depending on the activity). The electronic responses are generally highly regularised and create predictable outcomes (e.g. approving licence renewal, creating a receipt)” (Bonham *et al*, 2001:6).

- Transformational:

At this stage the full capabilities of the technology are used to transform how government functions are conceived, organised and executed.

“Such initiatives would have the robust customer relationship management capabilities required to handle a full range of questions, problems and needs. Currently there are very few examples of this type of initiative, in part due to administrative, technical, and fiscal constraints” (Bonham *et al*, 2001:6).

E-government services that are delivered online should not be seen as new services but rather a new method of delivering existing services using digital and ICTs to improve convenience, save time, reduce costs and enable the more equitable distribution of services. The e-government initiative has benefits for both government and the intended beneficiaries. For the government these benefits include the following: (City of Cape Town, 2003:4)

- Providing easier beneficiary access
- Increasing service volume
- Getting better information on operations
- Reducing complaints
- Reducing employee time spent on non-productive administrative activities

- Improving the image of government
- Strengthening governance

From the above points it is clear that the e-government initiative has definite advantages for government. But what are the benefits for the beneficiaries? A number of potential benefits for beneficiaries can be identified as follows by the City of Cape Town (2003:8):

- Information about government and its services is much more accessible as all the information is together in one place. The information can be easily maintained and updated to ensure its currency. In addition the information is available 24 hours a day, seven days a week from any place with a computer that has Internet access.
- Increased ability to apply for services and interact with government as the service provider. Therefore information eligibility and costs are easy to understand and forms can be downloaded and printed at the beneficiaries' convenience.
- Being able to get help more easily. Specific contact numbers or e-mail addresses are available so you can go straight to the relevant person.

From the advantages of e- government it is evident that e-government does have the potential to transform government, in particular local government, into both transitional and mature democracies. "The application of Internet based technologies can help not only to promote efficiency, but can, under certain conditions, encourage transparency and build trust in government, as well as increase political participation" (Bonham *et al*, 2001:1).

Transparency, openness and accountability are all principles associated with the e-government initiative. Transparency implies openness of decisions and actions. Within the e-government context a more meaningful definition is: "The free flow of information about decisions and actions, from source to recipient" (Heeks, 2004a:1). For the purposes of this study, the researcher is concerned with public sector transparency. According to Heeks (2004a:1) public sector transparency can be defined as follows: "Flows of information about the decisions and actions taken by civil servants, politicians, judges etc to various groups who would seek to hold them accountable." Heeks (2004a:1) adds to this definition by introducing the concept of e-transparency: "The use of ICTs to handle some or all of the transparency related information flows."

It is important to note that there are various levels of e-transparency. These levels have been identified by Heeks (2004a:1) as follows:

- Publication: The provision of basic information about a particular aspect of government.
- Transaction: Automating some public sector process and reporting on that process.
- Reporting: Provision of specific details of public sector decisions and actions.
- Openness: Allowing users some form of control over public servants.

So what is the value of using ICTs in projects that promote transparency and thus introducing the letter “e” to create the concept e–transparency? Heeks (2004b:1) answers this question by identifying four possible benefits. These include:

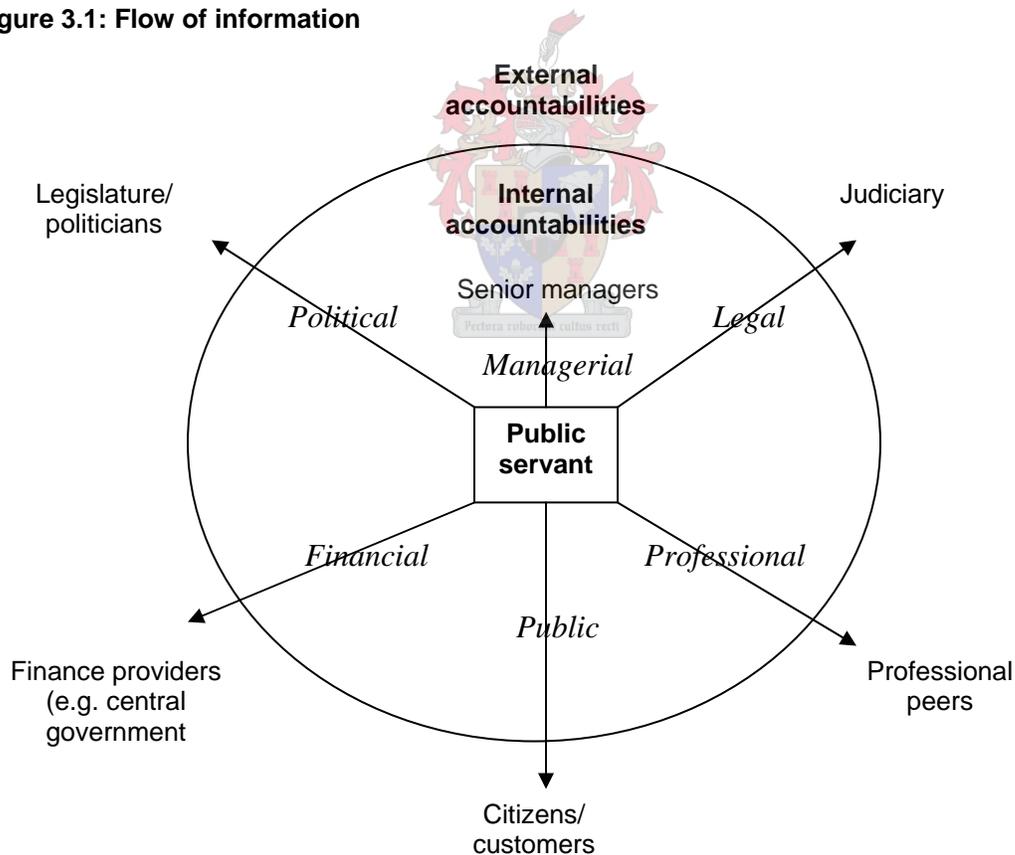
- Process improvement:
 - Cost saving:
 - ICTs have the potential to reduce financial costs to government of handling transparency related data/services.
 - ICTs can reduce the cost to citizens and businesses of accessing transparency related data/services.
 - Time saving:
 - ICTs can reduce the time costs of transparency related data/services.
 - Boundary breaking:
 - ICTs have the potential to break current restrictions of time and geography, making transparency related data/services at home or closer to home.
- Improved information:
 - Calculation:
 - New information can readily be calculated from the digested data, such as the time taken for government work processes to be completed.
 - Integration:
 - Data on one transparency topic that was previously scattered in many locations and media can be brought together.
 - Update:
 - Transparency related data can be kept more up to date.
 - Presentation:
 - Transparency related data can be presented in a more user friendly way.
 - Customisation:
 - Transparency related data can be used to match specific client needs.



- Automation:
 - ICTs can be used to automate public service processes that were previously under the control of humans, e.g. Identification of staff due for retirement.
- Disintermediation:
 - Public servants are often able to be corrupt because they act as gatekeepers standing between the client and the information they require. ICTs can disintermediate thus giving the client improved direct access to online data or services.

“There are many stakeholders to whom a public servant may be accountable, and to whom transparency–related information should flow. Some are internal to government and some are external” (Heeks, 2004a:2). The following figure illustrates the statement above. Each one of the arrows represents a flow of information that forms part of government transparency.

Figure 3.1: Flow of information



Source: Heeks, (2004a:2).

Having discussed the different sectors and types of e-government as well as the use of ICTs for improving government transparency, the researcher would like to expand on the definition of e-government given earlier. This is an appropriate time to introduce this expanded definition as it encompasses a broader range of activities and actors associated with the e-government initiative. According to the expanded definition: "E-government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth and/or cost reductions" (World Bank, 2005).

From this definition it is evident that e-government is a global project of technology transfer. Technology, however, is a complex concept and sometimes a frustrating tool within the e-government initiative. As a result technology is often the deciding factor in terms of success and failure of the e-government initiative. Throughout history a central theme of technology transfer has been failure. Unfortunately the e-government initiative is no exception to this theme because of its dependence for success on technology.

According to Heeks (2003a) this issue of failure can be explored by dividing e-government initiatives into three types, based on outcome. Heeks (2003a:1) provides useful examples to explain these three types:

- Total failure: The initiative that was never implemented or was implemented but immediately abandoned.

Example: India

"India's Indira Gandhi Conservation Monitoring Centre was intended to be a national information provider based on a set of core environmental information systems. Despite more than a year of planning, analysis and design work, these information systems never became operational, and the whole initiative collapsed shortly afterwards" (Heeks, 2003a:1).

- Partial failure: Major goals for the initiative were not attained and/or there were significant undesirable outcomes.

Example: South Africa

“A set of touch screen kiosks was created for remote rural communities in South Africa’s North West Province. These were initially well received. However, the kiosks lack of updated or local content and lack of interactivity led to disuse and the kiosks were removed less than one year later” (Heeks, 2003a:1).

- Success: Most stakeholder groups attained their major goals and did not experience significant undesirable outcomes.

Example: South Africa

The work of South Africa’s Independent Electoral Commission was supported through widespread use of ICTs. In the 1999 elections, this enabled 400 new constituency boundaries to be drawn up, 18 million voters to be registered, voting to take place at 15,000 polling stations, and the results to be transmitted to and collated at a central point (Heeks, 2003a:1)

Research done by the University of Manchester indicates that very few surveys of ICT projects have been done in industrialized countries. However, from surveys that have been done by the University of Manchester, researchers have estimated that around one-fifth to one-quarter of industrialised country governments’ ICT projects fall into the total failure category; approximately one-third fall into the partial failure category; and only a minority into the success category (Heeks, 2003b:1). In developing or transitional countries the following results were evident: 35% are total failures; 50% are partial failures; and 15% are successes (Heeks, 2003b:1). From these results it seems that failure is a prevailing problem. One of the biggest reasons for this is the economic opportunity costs of resource investment in e-government failure as opposed to success. In poorer, developing countries these opportunity costs are likely to be higher because of the limited availability of resources such as skilled labour, technology and capital. Heeks (2003c:1) has identified six categories of potential costs of e-government failure:

- Direct Financial Costs – This refers to money invested in equipment, consultants and new facilities.
- Indirect Financial Costs – Money invested in the time and effort of public servants involved.
- Opportunity Costs – Better ways in which the money could have been spent.
- Political Costs – The loss of “face” and image for individuals, organisations and nations involved in failure.
- Beneficiary Costs – The loss of benefits that a successful e - government project would have brought.
- Future costs – An e-government failure increases the barriers for future e-government projects.

The e-government initiative, however, is not all gloom and misery. From every e-government project failure there are potential benefits and lessons to be learned. Heeks (2003c:1) has identified five categories of potential benefits of e-government failure:

- Knowledge Generation 1: Application learning
Failure can be a very costly method of prototyping – identifying which ideas are workable and which are unworkable.
- Knowledge Generation 2: e-government Learning
For those involved in the e-government process, some valuable lessons can be learned from failure.
- Knowledge Generation 3: Situational Learning
The process of analysis and design can help those involved understand their organisations processes, structure and culture.
- Skills Acquisition:
It is likely that some form of training or on – the – job – learning will have taken place even if the project failed.
- Laying Infrastructural Foundations:
Although the specific e-government application may not be used again, these failed projects often leave behind their ICT infrastructure, which can be used as a foundation for future e-government projects.

In addition to the potential benefits of e-government failure, Heeks (2003c:1) suggests that government should adopt a learning approach (Theron, 2005a:121) to this failure. This approach involves four steps:

- Recognition – It is important to recognise that failure does exist but that they provide opportunities for generating new knowledge.
- Capture Knowledge – Find ways of capturing the knowledge generated by the project.
- Transfer Knowledge – This involves finding ways to move knowledge to from where it was captured to where it is needed, e.g. creating an e-mail discussion list about e-government success and failure.
- Apply Knowledge – This refers to retaining and applying useful knowledge but discarding information that is not useful.

E - government is one of the tools which national government may use to try and achieve other related objectives such as improved governance. According to Bonham *et al* (2001:7) the e-government initiative offers the following potential opportunities:

- Efficiency:

Within the e-government context efficiency can take many forms. Some projects seek to reduce errors and improve consistency of outcomes by automating standardised tasks. For many projects the efficiency goal is to reduce costs and layers of organisational processes by re-engineering and streamlining operating procedures.

- Improved services:

A second opportunity offered by the e-government initiative is the potential to improve the quality, range and accessibility of services. In addition to efficiency being improved, the quality of services may also be improved through quicker transactions, improved accountability and better processes. In essence, e-government projects have the ability to change how government conducts business and how citizens interact with each other.

- Increased citizen participation:

A third potential opportunity offered by e-government projects is increased citizen participation in government. “One way this could occur is by connecting people who live in remote areas of the country so that they can send and receive information more easily. A second way suggested by some observers is through increased participation in government by younger adults. Some advocates believe that the generation of citizens about to become of a political age, who have grown up with the Internet and digital communications technologies in their everyday lives, will be more likely to become participant citizens if the means to do so are similar to the ones they use for personal and professional activities” (Bonham *et al*, 2001:7). In addition, e-government projects may have the potential to promote citizen to citizen interaction by providing opportunities for people with similar

interests, concerns and opinions, who may be geographically separated to share information and interact. Examples may include application forms Identity Documents, Social Grants and the Independent Electoral Commission.

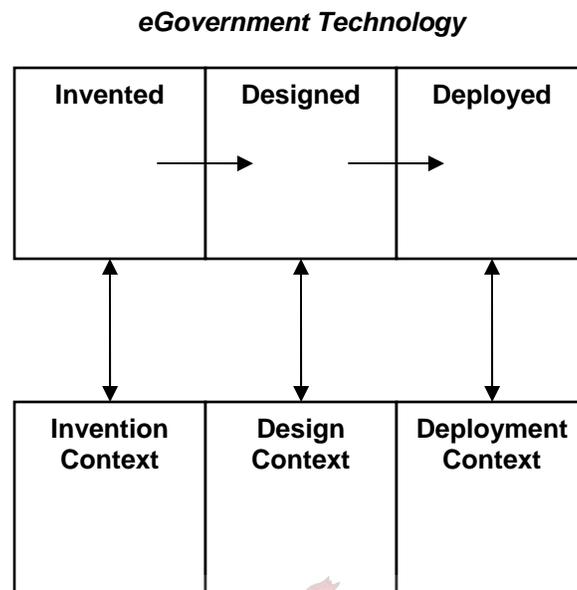
- Transparency:

The fourth possible potential opportunity of the e-government initiative is a more transparent and open form of government. Over the past few decades there have been several significant global economic and political changes that have affected the way governments govern and nations interact. The political changes have called for a more democratic and transparent form of government. A key component of this new form of government is that information is becoming more decentralised and freely available and accessible to citizens.

In order to obtain a well rounded knowledge of the e-government initiative, it is important to understand the context within which e-government operates. In one sense e-government applications can be considered as isolated technical artefacts i.e. a collection of hardware and software that form the basis of any e-government analysis. The shortcoming of this techno-centric view are however, very apparent. Therefore the researcher would be inclined to agree with Heeks (2004c) who states that the e-government initiative is connected to the social context within which it is deployed.

Heeks (2004c:3) states that: "The relationship between technology and social context is bi-directional: the social context of deployment also impacts the technology during deployment." He quantifies this by saying that: "It would be a mistake, though, to conceive the inter-relation between technology and context as some kind of simple duality. Fountain (2001) highlights one issue in her differentiation within e-government between 'objective technology' and 'enacted technology.' The first represents a background of already invented technologies that are available to designers and other e-government decision makers prior to any particular initiative. The second represents the particular design and deployment of e-government within a specific milieu" (Heeks, 2004c:4). Using these ideas, Heeks (2004c) constructed a model illustrating the relationship between technology and context. This model uses an approximate stage approach from the background of invented technology to the specifics of one e-government design to the deployment and impact of that particular design. This model is illustrated in Figure 3.2.

Figure 3.2: E–government technology and context



(Source: Heeks, 2004c: 4)

3.6 Summary

The above figure illustrates the interconnected nature of the e-government initiative. The two sets of arrows depict a two-dimensional flow which supports Heeks' (2004c) comment that within the e-government initiative, there is a relationship between the technology used and the social context within which it is applied. From figure 3.2 it is evident that the social context will impact the design and deployment of the technology used.

Important points emphasized from this chapter include the following: the e-government initiative is one of the fastest growing ICT related development strategies in the world today. Its design and structure may seem complex and multi-faceted. It is, however, the goals of e-government and the potential benefits associated with this initiative that make it a phenomenal strategy for the promotion of improved citizen participation in government processes and projects. Information and communication technologies; digitalization and connectivity are the future buzz words of development initiatives across the globe. E-government is the primary development initiative that embraces these concepts.

CHAPTER FOUR: INTERNATIONAL CASE STUDIES

4.1 Introduction

In both developed and developing countries, governments are under constant pressure to improve the quality and efficiency of their service delivery to citizens, businesses and other government organisations. E-government is an internationally accepted strategy that uses information and communication technologies to improve efficiency of government activities and promote increased citizen participation in government processes. "Worldwide, governments are seeking ways to use information and communication technologies to improve the efficiency, effectiveness and convenience of public services. This has become widely referred to as e-government. Successful delivery of online services has rapidly become an important measure of effective public sector management" (Millar,2004:1).

The idea of using ICTs to improve management is not new. In both developed and developing countries the private sector has been doing it for years. Worldwide, public sectors have fallen behind the private sector and now that we have the so-called "Information Age" its time to play catch up! According to the West (2002:5) "...compared to commercial websites, the public sector lags behind the private sector in making full use of the technological power of the Internet to improve the lives of citizens and enhance the performance of governmental units. In general, national government websites do not take advantage of the interactive and two-way communications features of the Internet." This report goes on to say that: "The regions of the world that have made the greatest progress on e-government are those in North America, Asia and Europe. Reflecting the values of those areas, countries in these locales tend to utilise more advanced technology and put more information online. However, nearly every country needs to work to ensure easier navigation, more common designs and more standardised features in order to make it easy for citizens to move from site to site."

In doing research for this section it became clear that e-government success is measured largely by the provision of online services. According to West (2002:6): "Fully executable, online service delivery benefits both government and its constituents. In the long run such services have the potential to lower the costs of service delivery and make services more widely accessible to the general public, because they no longer have to visit, write, or call an agency in order to execute a specific service. As more and more services are put online, e-government will revolutionise the relationship between government and citizens. " While many countries have made considerable progress in making information available online (publications, forms etc) the degree of online service delivery does not look as promising: "...many countries have not made similar progress in

placing official government services online. There is a wide variation across countries and by regions of the world with regard to the extent to which citizens can access government services through the Internet. While some governments' offices offer services online, most (88%) do not. In terms of foreign translation, non-English speaking countries in Asia and Europe have more English translations of their websites than those countries in Africa and Latin America. Developing countries tend to target foreign visitors and international investment possibilities more than domestic users on their websites. This is illustrated by the fact that tourism and foreign affairs websites often are much better developed than government offices serving domestic clientele" (West, 2002:4).

In addition to the provision of online services, the ability to do transactions online is also a measure of e-government success. Although not many countries have reached this stage, it is the ultimate goal. As a result, many countries have created their dreams and visions around some form of electronic government (Zouridis & Thaens, 2003). A study done on the progress of United Nations member states in which an e-government index was introduced in order to rank the countries (UN – ASPA, 2002:1) provides a useful benchmark for evaluating the status of such developments. The following conclusions were made:

- 89% of the UN Member States used the Internet to deliver information and services;
- 30% of the UN Member States presented interactive online services;
- 9% of the UN Member states offered the capacity to conduct transactions online.

In this section the importance of providing online services and the ability to conduct online transactions will illustrate the differences in the selected case study examples. Another issue that will be looked at in the case studies is e-readiness. "A country's e-readiness is a measure of its e-business environment, a collection of factors that indicate how amenable a market is to Internet-based opportunities" (Economist Intelligence Unit, 2005:1).

E-readiness is a concept that defines how ready a country is to adopt the "e" in front of terms such as services and government. It takes into account the available infrastructure and the stability of a country's political system to make the transition to an electronic based form of government. Broadband access and mobile penetration are examples of criteria that may be used to determine e-readiness. A high e-readiness ranking would mean that a specific country would be well developed and in a good position to implement the e-government initiative.

In this section the researcher has identified four case study examples of countries where e-government has been implemented. Two of the case study examples will illustrate "best

practices” in terms of successful implementation of the e-government strategy and the other two case studies will illustrate countries that are lagging behind in completing the transformation to electronic government. For simplicity purposes the “best practice” examples have been taken from the developed world and the other two from the developing world. This will help the researcher to draw a more concise conclusion.

4.2 Best practices – the developed world

The two countries that have been selected as “best practice” examples are New Zealand and the United Kingdom. Both these countries have well developed political systems and have been striving for a number of years to achieve the e-government vision. The transformation, however, has not been without its problems. Even developed countries are presented with challenges in trying to effectively implement ICTs to improve efficiency of government processes and service delivery: “The development of the Internet and the World Wide Web has posed important challenges for governments across the developed world. Most public sector agencies’ administrative processes have developed first around manual paper based processes, and then in the post war period, around conventional ICT systems. But the lessons learned and the managerial cultures developed for handling either paper systems or web kinds of ICT are not easily transferable to managing the web-enabling of government and the transition to ‘open book administration’, which the current e-government agenda has begun to offer. Instead the experience of a wide range of many different countries now suggests that achieving effective ‘government on the web’ will be a process that requires substantial changes in the managerial and organisational cultures of public sector agencies. This transition promises to be as difficult and traumatic in its own way as the convulsive effects which the Internet has had on the organisation of private sector companies” (Dunleavy *et al*, 2002: 4).

Among Western countries there is consensus on the environment within which the development of Information Systems needs to take place. “At both national and international level a framework has to be established which supports dynamic competition, encourages private investment, supports flexible regulatory frameworks and allows for open access to networks and other essential facilities. Within this framework it is only considered a matter of increased investment and continuous innovation to arrive at a fully-fledged and equitable Information Society” (Van Audenhove *et al*, 1999:389). This dominant viewpoint is based on two assumptions:

- Firstly it is expected that there will be a high demand for a wide range of new network based multimedia services.

- Secondly it is assumed that the willingness of the user to pay for these new services will be substantial.

From the two case study examples provided for this section, the importance of having a clear and comprehensive regulatory framework and strategy for implementation will be illustrated. "In recent years concepts such as Global Information Society and the Global Information Infrastructure have been high on the political agenda of Western countries and their allied international organisations. At the highest level, policy makers have been concerned with the development of national and global strategies to arrive at the Information Society. Within this context the concept of GII and GIS encompasses the development and integration of high speed communication networks, and a set of core services and applications, into global integrated networks. Such networks provide fully interactive access to network-based services within countries and across national borders. The development of such information infrastructures is expected to have important beneficial impacts on society as it stimulates economic growth and productivity, creates new economic activities and jobs, and improves quality of life" (Van Audenhove *et al*, 1999:388).

Success of the e-government initiative in New Zealand and the United Kingdom is conducive to having developed an appropriate regulatory framework and having an above average e-readiness score. These scores have already been released for 2005 and according to the Economist Intelligence Unit e-readiness rankings; New Zealand scored 7.82 and the United Kingdom 8.54 out of a possible total of 10 points. Both countries are ranked within the top 20 out of a possible 65 countries worldwide (Economist Intelligence Unit, 2005).

Each case study will illustrate that achieving e-governance is a long and difficult process. It is a revolutionary process that requires complete transformation of public sector organisation, but once achieved it can only offer benefits to the relationship between citizen and government.

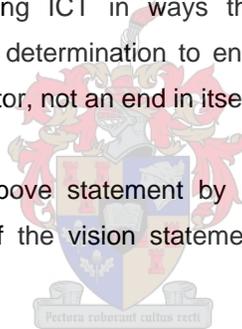
4.2.1 New Zealand (See Annexure 4)

New Zealand provides one of the best examples of the e-government strategy worldwide. The New Zealand government has been working steadily since the 1990's to establish a web presence within all government departments. This action is supported by the fact that in 1996 only 13 of the 38 core public service departments did not have a website (Millar, 2004:1). This initial development of online public services was not centrally co-ordinated or motivated. It was driven by the willingness of individual departments to enthusiastically embrace the potential of information and communication technologies and the e-government strategy. The e-government strategy in New Zealand recognises that the Internet and the emergence of new technologies in

general, are having an influence on the way government, business and people interact. The e-government process is ultimately about managing the process of change within the public sector as the country moves towards becoming a “knowledge society.” This longer term transformation of the public sector is often described as a shift from a “silo” model of government to a networked one.

As web presence continued to grow and develop throughout the government departments, there was a definite need for a more strategic approach to the government’s online presence. This led to the establishment of an IT policy taskforce team in 1997 which subsequently released a vision statement in May 2000 outlining the strategic direction for e-governance in New Zealand. This vision statement read as follows: “New Zealanders will be able to gain access to government information and services, and participate in our democracy, using the Internet, telephone and other technologies as they emerge” (New Zealand State Services Commission, 2001:1). This vision statement does not stand alone. It is supported by strategic principles that envisage the e-government strategy as needing to be: “A methodical, graduated approach; cross government collaboration; a commitment to using ICT in ways that would increase rather than limit opportunities for participation; and a determination to ensure that the technology was only an instrument for an improved public sector, not an end in itself” (Millar, 2004:2).

Millar (2004:2) elaborates on the above statement by indicating that there are three pillars supporting the strategic principles of the vision statement. These pillars can be defined as follows:



- Throughout the development of the e-government strategy emphasis should be on maintaining a planned and systematic approach.
- Working in a multi-dimensional and multi agency environment requires a correspondingly pluralistic perspective in the early stages of planning. “The project teams that worked on the e-government initiatives were made up of public servants from a cross section of government departments. This ensured that the users in each agency remained a key focus throughout the development process” (Millar, 2004:2).
- The focus must be on people and not technology. “Maintaining a citizen-centric and outcome-driven perspective was reiterated throughout the early papers produced by the State Services Commission. The aim was to ensure that the promise of technology was grounded in the business needs of the government and the service needs of the public” (Millar, 2004:2).

Today, these pillars continue to function as the core elements of policy decisions about e-government. These pillars illustrate some of the most important elements of the e-government initiative. They firmly establish what e-government is about and as a result have brought about the successful implementation of e-government in New Zealand. In addition the government felt that the e-government strategy would present the country with an array of opportunities to move forward into the 21st century with higher quality, cost effective, government services and an improved relationship between New Zealanders and their Government (New Zealand State Services Commission, 2001:1).

In New Zealand there are three aspects of e-government that are considered important:

- E-government is built on solid foundations:
“The portal would not exist without the development of the metadata standard that agencies use to create the information in the portal” (New Zealand State Services Commission, 2003a:3).
- The portal shows the benefits of collaboration:
“So far, nearly 90 central government agencies, and 86 local authorities have contributed to the content of the portal” (New Zealand State Services Commission, 2003a:3).
- E-government is citizen-centric:
“The design of the portal reflects what people want not what the Government wants to provide. People were extensively involved in the design of the portal which is now delivering the results that they were looking for” (New Zealand State Services Commission, 2003a:3).

The above points illustrate that the e-government initiative in New Zealand has been part of a combined effort between New Zealanders and Government. This is one of the biggest lessons to be learned from this case study example. From as early as 1997 there were examples of e-government present. These ranged from the New Zealand Government online website (<http://www.govt.nz>) to being able to register a new company on the Internet. From this stage it was recognised that: “The task of Government is to build on these individual initiatives and develop them into a comprehensive plan for achieving the benefits of e-government more widely on behalf of all New Zealanders. The planned development of e-government will improve the ability of all people to participate in our democracy. But, left to develop by itself, it has the potential to create new divisions in society between those who have the skills and tools to use the new technologies to participate in our democracy and those who do not. The Government is not prepared to allow this to happen” (New Zealand State Service Commission, 2001:1).

An important question to consider at this stage is why the New Zealand Government has placed so much emphasis on the e-government strategy and the use of ICTs to improve the citizen participation in government activities. E-government is simply one of many strategies that could be used to improve citizen participation. The following statement indicates why New Zealand chose to follow the e-government strategy: "E-government delivers better results by adapting government to the environment of the Information Age and the Internet. The public has invested hugely in the information, technology and processes used by government as well as in people and public management systems. E-government makes the best of this investment to deliver improved services to New Zealanders" (New Zealand State Services Commission, 2003a:6).

An important point to note, however, is that the New Zealand Government recognises that technological change is only one part of achieving the e-government vision: "...the Internet will not fully replace all the other ways in which government relates to people. Technology does not guarantee better public sector performance on its own. Success also depends on making ongoing improvements to the design, operation, and culture of the public sector, so that it can better respond to the changing demands of New Zealanders" (New Zealand State Services Commission, 2003a:6).

Once the decision had been made by the New Zealand Government to develop and implement the e-government approach, the next step was to create an e-government strategy and outline the transformational stages that would make the implementation process. Below, are the vision, mission, goals and outcomes as set out in the updated June 2003 New Zealand e-government strategy (2003a:9).

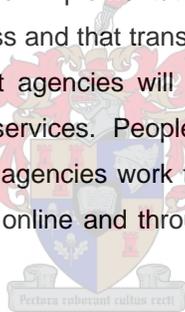
- Vision:
 - New Zealand is a world leader in e-government.

- Mission:
 - By June 2004 the Internet will be the dominant means of enabling ready access to Government.
 - By June 2007, networks and the Internet technologies will be integral to the delivery of government information, services and processes.
 - By June 2010, the operation of government will have been transformed through the use of the Internet.

- Goals:
 - Cost effectiveness and efficiency
 - Better services

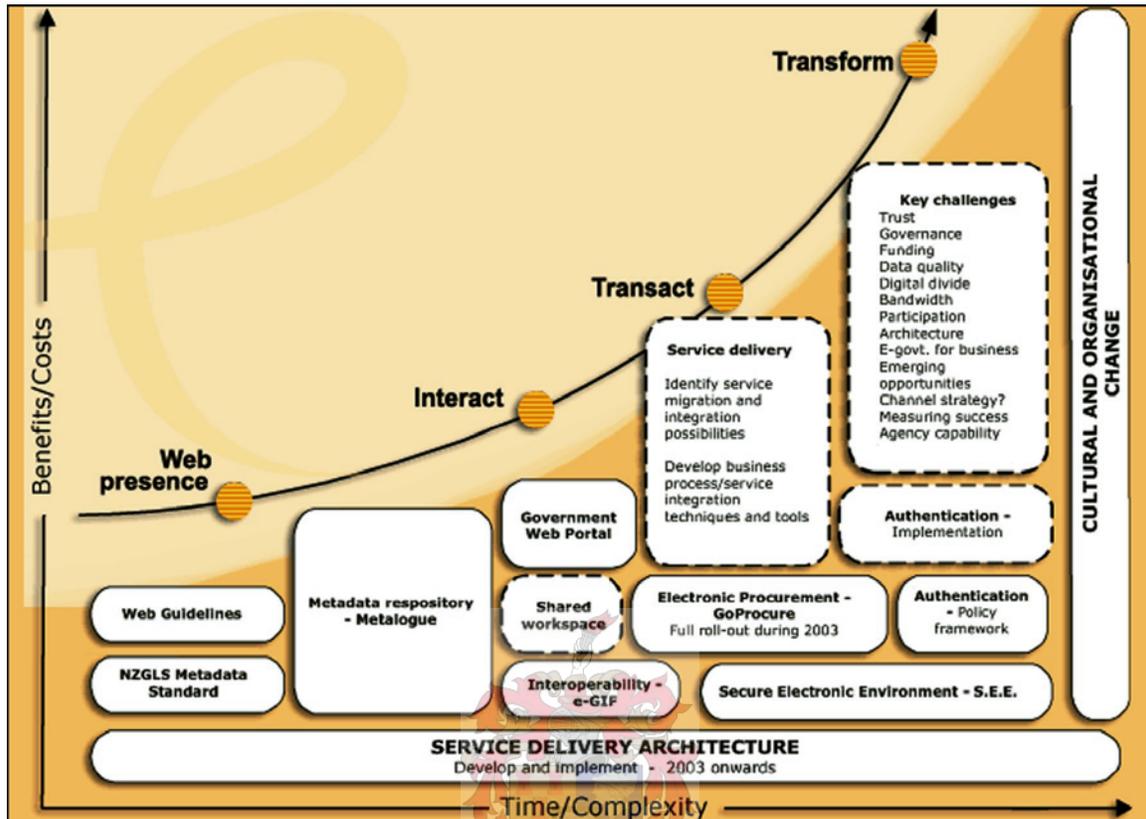
- Improved participation by people in Government
- Improved reputation
- Outcomes:
 - Convenience and satisfaction:
 - People will have a choice of channels to government information and services that are convenient, easy to use and deliver what is wanted.
 - Participation:
 - People will be better informed and better able to participate in Government.
 - Integration and efficiency:
 - Information and services will be integrated, packaged, and presented to minimise cost and improve results for people, business and providers.

Having developed a strategy for the e-government initiative the New Zealand Government moved forward to create a strategic direction for implementation of the initiative. It was noted that e-government is a transformational process and that transformation does not happen instantly. “To be successful in this new environment agencies will need to work together more effectively, sharing resources and integrating their services. People and businesses will have a better, more consistent experience of government if agencies work together. This approach will also help to reduce the costs of delivering services online and through other channels” (New Zealand State Services Commission, 2003a:14).



The figure overleaf illustrates the core components of the e-government initiative and the various phases through which the transformation process will take place:

Figure 4.1: Phases of e-government development



(Source: New Zealand State Services Commission, 2003a:14)

The above figure is supported by explanations of each of the phases. The explanations below have been taken from the New Zealand State Services Commission (2003a:15). Contained in each explanation is a definition of each phase (as prescribed by the New Zealand Government) and a brief description of New Zealand's progress in achieving each phase to date.

- **Phase 1: Web presence**

- *Agencies provide a website to deliver basic information to the public.*

Most government agencies have moved beyond this phase some time ago. Many have moved on from publishing information in a way that reflects their agency's view of people and/or business it services.

- **Phase 2: Interaction**

- *Agencies extend the capability of their website so that people who used to visit a government office now have online access to critical information, can download forms, and can contact the agency by e-mail.*

Again, many government agencies in New Zealand already have this capability.

- **Phase 3: Transaction**

- *Agencies add self-service applications to their websites so that people can complete entire transactions or processes online. The web begins to complement other service delivery channels, providing around the clock access independent of users' geographic location.*

Some New Zealand agencies are currently in this phase with some of their services. Many of the foundation projects in the e-government programme are designed to help agencies move into this phase – especially the work being done on authentication.

- **Phase 4: transformation**

- *The delivery of government services and potentially the operation of government itself is redefined. Information, service delivery and government processes are integrated across traditional boundary lines. Information and services are increasingly customised to the particular needs of individuals and businesses. The identity of individual agencies matters less to people as information and services are accessed through a single point of contact on the web.*

The long term goal of New Zealand's e-government strategy, in conjunction with other programmes, is to change the design, operation and culture of the public sector to better respond to the needs of New Zealanders.

Empirical findings on the implementation of the e-government initiative in New Zealand create a more concrete reasoning for the researcher's choice of New Zealand as a "best practice" example. In October 2004, a report entitled: "Achieving e-governance 2004" was released by the State Services Commission. This report investigates the progress made in realising the goals of the New Zealand E-government Strategy. Five categories were created to measure progress. These include ready access, accessibility, usability, info-delivery and e-services delivery.

- Ready access:

The report found that all departments use websites to provide information about their aim as well as providing: Opportunities to participate in their activities, assess services and contact details. Although all departments provide ready access, however, the degree of access

varies considerably. In this study the standard of websites were rated on a scale using: High, Good, Average and Room for improvement. The figure below illustrates the results:

Figure 4.2: Ready access website ratings for New Zealand



(Source: New Zealand State Services Commission Report, 2004: 26)

- **Accessibility:**

This report found that overall; websites had a reasonably high level of accessibility. In terms of best practice, two departments provide a high level accessibility. They are the Ministry of Economic Development: The Growth and Innovation Framework which can be found at www.gif.med.govt.nz and the Ministry for the Environment which can be viewed at www.mfe.govt.nz .

- **Usability:**

The report found that most of the government departments need to improve the usability of their websites. The New Zealand State Services Commission report (2004:30) makes the following suggestions for improving usability:

- Including information that shows when the website was last updated
- Maintaining links
- Identifying which information is required and which is optional on forms
- Providing an easy means of communicating with the author or to provide feedback

- Ensuring content is up to date
- Providing easy navigation and access

Best practices of usability can be found on the Archives New Zealand website at www.archives.govt.nz or the Department of Internal Affairs: Dog Safety at www.dogsafety.govt.nz .

- Information delivery:

The New Zealand State Services Commission report (2004:31) concluded that on an overall basis, departments had a high level of information delivery available on their websites. This was one of the important criteria in achieving the e-government strategy's target for 2004. Best practices in terms of this category include the Ministry for the Environment: Reduce your rubbish at www.reducerubbish.govt.nz and Statistics New Zealand at www.stats.govt.nz.

- E-services delivery:

In terms of e-service delivery there is no consistent pattern. Some departments offer well developed e-services, others are only just reaching this stage. A best practice in this category is the New Zealand Customs Service at www.customs.govt.nz .

From the above it is clear that the e-government strategy is in full swing in New Zealand. So how has the government successfully managed to get citizens to access government over the Internet? A survey in 2003(b), by the New Zealand State Services Commission e-government unit, entitled "Wired for Well Being: Citizen's Response to E-government" found that most participants enjoyed using the Internet to access government information because of:

- Access anytime, anywhere
- Time saving
- Breadth and depth of information available
- Instant communication

The New Zealand Government believes that the e-government initiative is a strategy well suited to promoting New Zealanders' participation in their democracy: "E-government is a way for governments to use the new technologies to provide people with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in our democratic institutions and processes" (New Zealand State Services Commission, 2001a:1). The Government also recognises that there are important

issues that they need to take into account in developing ways of using information and communications technologies to improve citizen participation. According to the New Zealand State Services Commission (2001:2), the following issues are important:

- Opportunities can be lost because no government organisation takes the leading responsibility to oversee and co-ordinate development of e-government for the benefit of citizens.
- People may be quickly divided into two groups – those who have the skills and tools to use the new technologies and those who do not.
- There are concerns that Governments can know too much about people and could use that information inappropriately.
- Governments can become impersonal.
- People are disappointed because Governments promise much and deliver little.

The future of e-government in New Zealand looks sound. To date, the Government has done well to implement a comprehensive and practical strategy. However, as with any new venture, there are challenges. According to the New Zealand State Services Commission (2003a:23-26) the following are some of the challenges that face the New Zealand Government:

- Building trust in government – authentication, privacy and security:
“New Zealanders must be able to trust government. For e-government, this means, for example, that they require confidence that their personal privacy is not threatened. Agencies require confidence that they are delivering information and services to the right person. This information must also be secure from a wide variety of threats” (New Zealand State Services Commission (2003a:23).
- Governance:
“E-government is a new way of doing business for government. As agencies become more interconnected there will be challenges for public sector governance. In particular there is a need for decision-making processes that support integrated back-office and service delivery strategies and business processes” (New Zealand State Services Commission (2003a:23).
- Funding:
“It is hard to separate e-government funding from normal departmental expenditure on information and communication technologies. E-government funding should not be treated separately from other funding requirements. It should be addressed as part of normal budget processes” (New Zealand State Services Commission (2003a:24).

- Data quality and Information Management:

“The nature and quality of the data held by government agencies in their individual business systems presents a major challenge as the e-government programme moves beyond the initial information access phase” (New Zealand State Services Commission (2003a:24).

- The Digital divide:

“The full benefits of e-government will come when as many New Zealanders as possible have access to the Internet, and the attitudes and skills to make effective use of it. Even though Internet use in New Zealand compares well internationally and the Government is taking steps to address the issue, the digital divide remains a challenge” (New Zealand State Services Commission (2003a:25).

- Participation:

“One of the aims of the e-government programme, since its inception, has been to improve people’s ability to participate in government. There are many facets to participation, ranging from being involved in the design and delivery of services, to consultation on policy, and voting in elections. Participation in the online world poses a number of challenges, ranging from ensuring equity of opportunity through to establishing that people are who they say they are and, therefore, that their contributions are valid” (New Zealand State Services Commission (2003a:25).

Challenges like these are prevalent throughout the developed world. New Zealand is no exception to the trials and tribulations associated with e-government. Despite these roadblocks, the overall impact of the e-government initiative has been a positive one for New Zealand: “The transformation of government operations through the Internet by 2010 will mean that policy development, service design and delivery, democratic and political processes will undergo significant changes as e-government facilitates greater participation in government” (Millar, 2004:9).

4.2.2. United Kingdom (See Annexure 5)

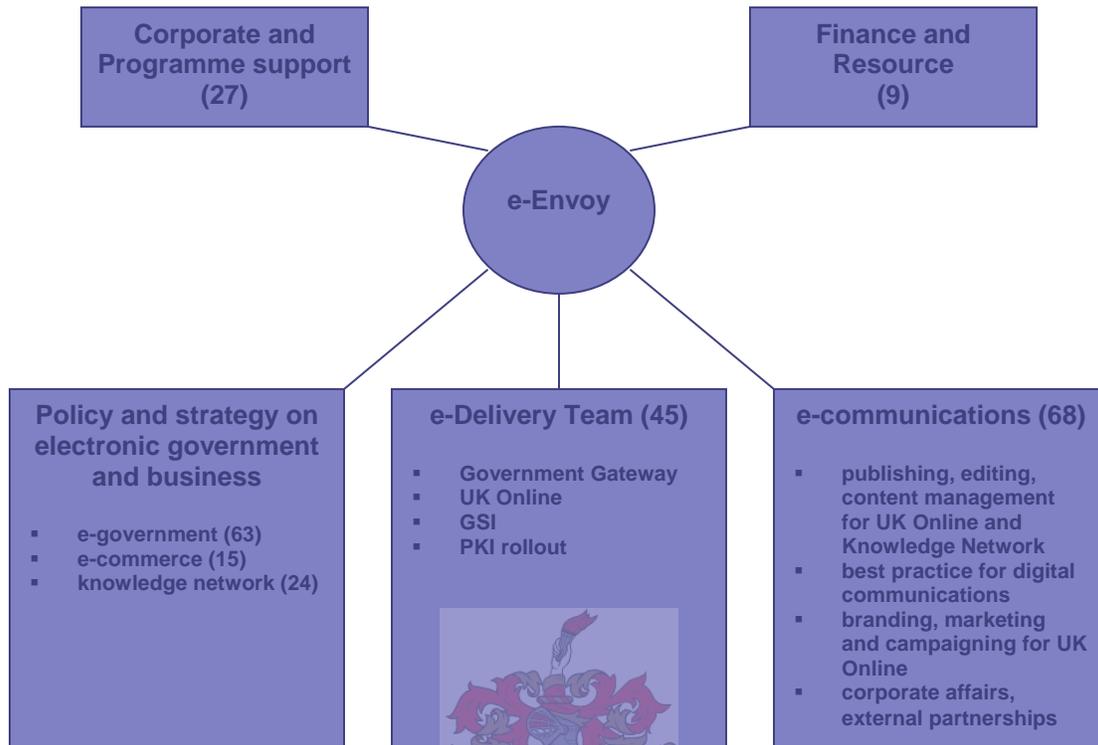
The United Kingdom is the other “best practice” case study example that the researcher has chosen to illustrate how the e-government initiative can be implemented in an effective manner. Like New Zealand, the United Kingdom Government has been working steadily and consistently since the 1990’s to create a clear and comprehensive e-government strategy.

The development of the e-government initiative in the United Kingdom began in 1996 in a small Central IT Unit in the Cabinet Office. The 1990's had left policy in central government in a fragmented and weakened state. In an attempt to rectify the situation it was left to the newly formed small IT unit to try and influence government wide policy. This unit issued an ideas paper suggesting that what it called 'government direct' processes would be more important in the future using call centres and perhaps the Internet. The theme was picked up by both the Conservative and Labour Governments during the election campaign and in autumn 1997, Tony Blair used his Labour Conference speech to pledge that "...by 2002 at least 25% of all government interactions with citizens would be electronic" (Dunleavy *et al*, 2002:9). In 1999 the Office of the e-envoy was established (see Figure 4.3) and by Spring 2001 the newly developed government portal (called UK Online) was fully operational. At this stage, the website was the primary government initiative to enable everyone to make the most of the Internet. This portal was just a small part of the United Kingdom online initiative. A number of public sector departments, including, Inland Revenue (available at www.inlandrevenue.gov.uk) and the Department of Trade and Industry (available at www.consumer.gov.uk) introduced online campaigns to help promote the online initiative. It is important to note, however, that the United Kingdom portal can now be found at www.direct.govt.uk . This is a fully operational site offering e-services and information.

This steady development allowed the Prime Minister to set the target in 2002 of making all central government public services available online by 2005. This section will examine how much progress has been made towards achieving this target as well as the steps and processes involved.



Figure 4.3: Organisation Chart for the e-Envoy office



NOTE
 Figures in brackets show the number of staff in each unit.

(Source: Dunleavy *et al*, 2002:46)

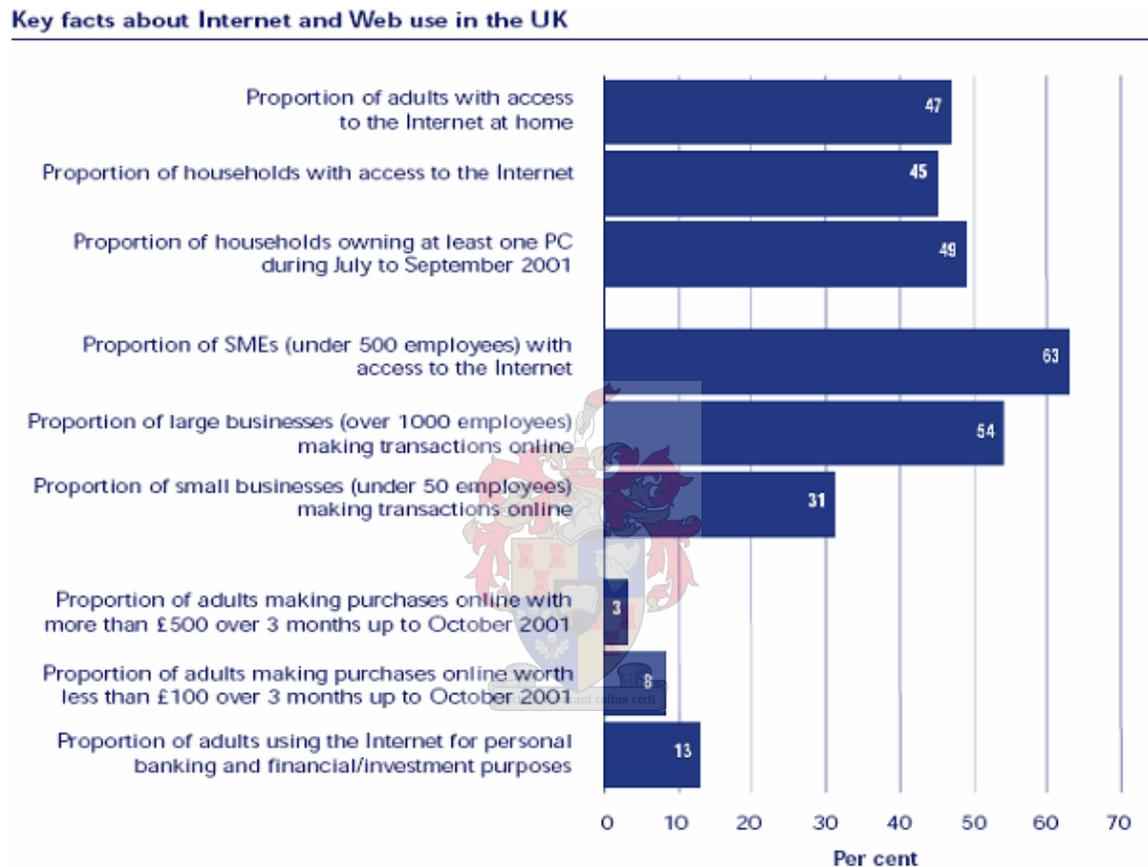


The transition to “electronic interaction” with citizens and within departments was slow. Spending on Internet development was inconsistent and government websites tended to move in spurts with several relaunches followed by long static periods where information was not updated. Gradually, however, the transformation took place and “..by 2003 departments and agencies were assigning more priority to e-government issues, Treasury involvement with the issue has increased and there is more recognition of the need to incentivise departments and agencies to implement radical changes if need be in their methods of working” (Dunleavy *et al*, 2003:10).

Across the globe e-government has become a topical issue and of course there are a multitude of perspectives on how powerful, industrialised countries such as the United Kingdom have adopted this strategy. Some research suggests that the British Government has lagged behind the private sector in capitalising on the potential benefits and attractions of e-government, in spite of a seemingly early realisation of the probable gains of such a strategy (Dunleavy *et al*, 2003). Other reports, however, suggest that the United Kingdom Government has done well to embrace

the so called “Information Age.” This is supported by the fact that: “Amongst major European countries the United Kingdom has one of the higher rates of household and workplace access to Personal Computers (PC) and the vast majority of these are connected to the Internet” (Dunleavy *et al*, 2002:7). Figure 4.4 illustrates key facts about Internet and web use in the United Kingdom.

Figure 4.4: Key facts about Internet and Web use in the United Kingdom



(Source: Dunleavy *et al*, 2002:8)

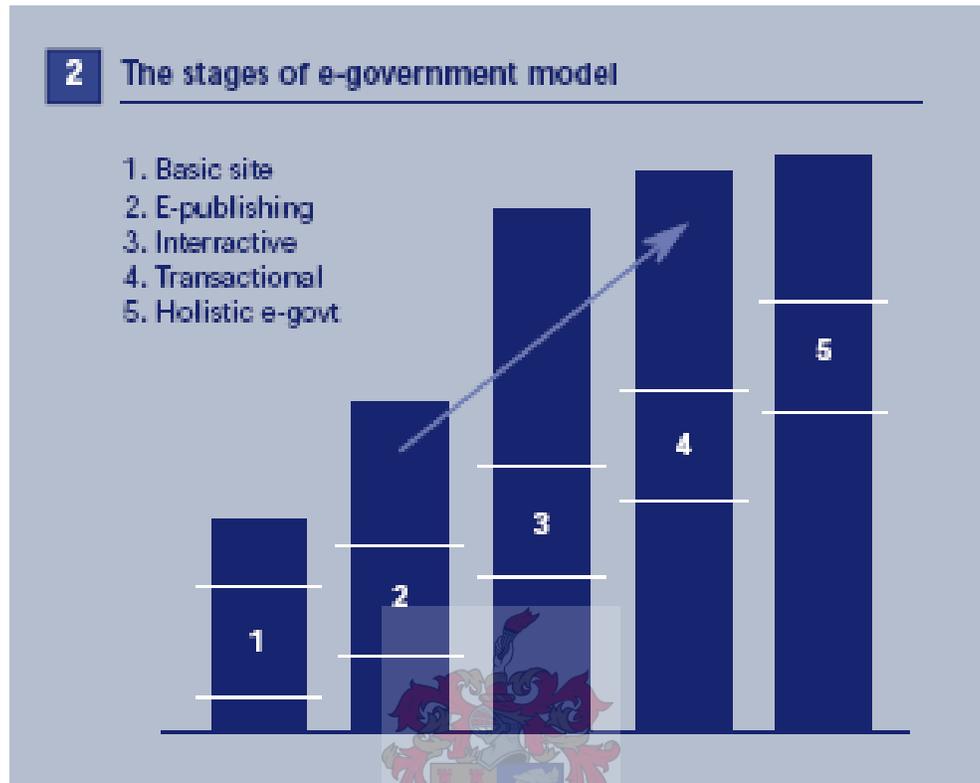
Over the years Internet access has continued to rise. In January 2002, it was reported that 45% of households were connected (Dunleavy *et al*, 2002:7 part 1). The two primary factors contributing to this statistic are occupational class and age cohort. “People in the higher income and non-manual social groups are more than twice as likely to have a home PC with Internet access as similarly aged people in unskilled manual groups, although this differential has reduced since 1999. People aged under 35 are also much more likely to have home Internet access compared with those aged over 55, while the over 65s are the age group most resistant to new technologies” (Dunleavy *et al*, 2002:7).

Within the United Kingdom Government, it is believed that the continuous development of electronic public services will play a role in establishing the United Kingdom as one of the primary locations for e-business and e-commerce to develop. "If citizens and enterprises can interact electronically with government this may play an important role in stimulating the growth and use of business-to-business Web services, and business-to-consumer Websites. The ability to transact electronically and conveniently with government agencies can create useful additional incentives for small businesses to master new technologies, and it can help boost innovativeness and international competitiveness. The evidence from some of our other countries' successful e-strategies suggests that government participation can increase citizens' willingness to invest in learning new media skills and can encourage them to attempt e-transactions with businesses as well as with public sector agencies" (Dunleavy *et al*, 2002:7).

One method that the United Kingdom Government has used to endorse the importance of ICTs in today's world is introducing the subject at schools. Through correct learning and training the legitimacy of the Internet and e-mails as normal communication tools is increased.

Every government department has a different working environment and faces different challenges. In the United Kingdom there was much debate over the "right approach" to e-government but in the end it was concluded that the approach which departments adopted would largely depend on their individual circumstances. The result was the creation of two possible e-government models. The first model introduced was the conventional "stages model" as shown in Figure 4.5. This model follows website development over a period of time. The debate, however, was over how relevant some of these stages were in relation to the public sector. "The model seems to privilege certain kinds of agencies which do transactions, such as collecting taxes from or paying transfers to citizens and enterprises, or selling goods or services to the public. The stages model seems to imply that only 'machine bureaucracies' of a rather traditional kind can progress far with e-government" (Dunleavy *et al*, 2002:12).

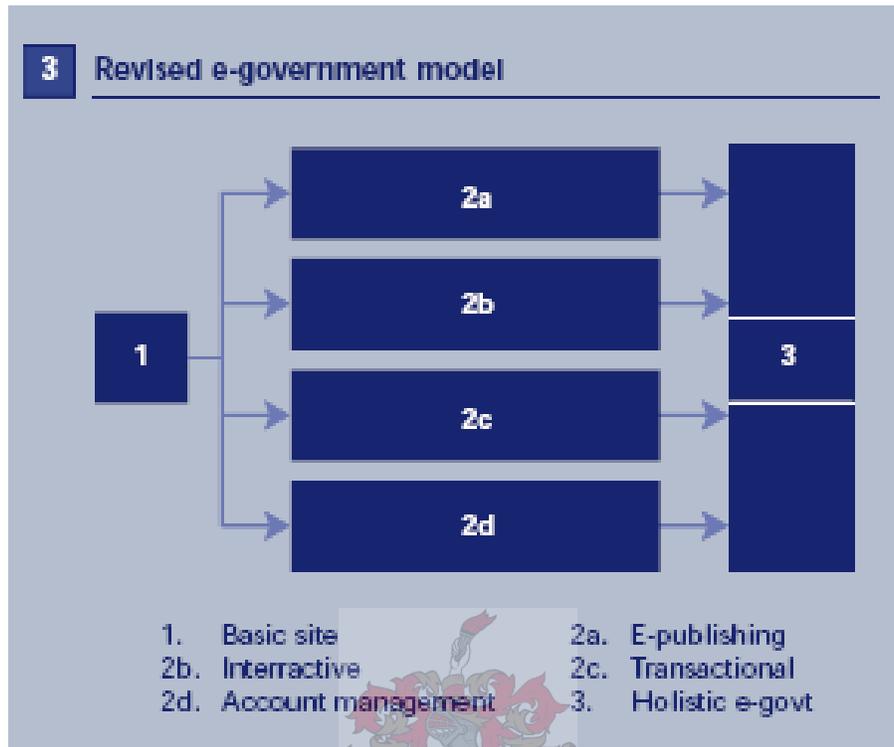
Figure 4.5: The Stages Model for e-government



(Source: Dunleavy *et al*, 2002:12)

The second model is simpler and allows for fewer judgments. Figure 4.6 illustrates this alternative model. The difference between the two models is in the pathways beginning and end points. “Here agencies can make progress in all four remaining ways – by building up full scale electronic publishing, by pushing more interactive publishing strategies, by developing simple on-line transactions, or by ‘account management’ transactions” (Dunleavy *et al*, 2002:12).

Figure 4.6: Alternative Model for e-government



(Source: Dunleavy *et al*, 2002:12)

According to Dunleavy *et al* (2002:12) there is no correct choice of model to follow. Instead each agency should ask themselves the following: "Given the type of organisation that we are, and the kind of functions that we have, our fundamental mission and role, how far can we and should we move towards fully electronic or digital operators?" (Dunleavy *et al*, 2002:12). Based on the answers to this question the agency should then select the model most appropriate to their circumstances.

When researching the progress of the e-government strategy, it is important to consider the promoters and inhibitors of such a strategy. These may change over time and are likely to have a significant impact on the outcome of the e-government approach. According to research done by Dunleavy *et al*, (2002) for the United Kingdom the following promoters and inhibitors have been identified:

Table 4.1: Table representing “Promoters” of the e-government strategy

PROMOTERS:	
<i>Citizens or firms demand Internet access to government</i>	Measuring the potential demand for websites can be difficult. Some people may be enthusiastic about new technology but others may be more reluctant because they have little idea about what electronic services may be like.
<i>Quality of service potential</i>	Web access offers unique advantages for users in terms of immediate access, the ability to browse databases, search interactively, and tailor your search to meet your individual needs and circumstances.
<i>Growth of Internet/Web usage</i>	A critical mass of Internet users is needed to sustain the web provision of government services.
<i>Extension of service potential</i>	Government websites will be available 24 hours a day, 7 days a week, 365 days a year. Of public sector sites examined, studies show that 45% of weekly traffic occurs outside office hours.
<i>Crisis in policy or communication</i>	A crisis can often provide a starting point for the development of web facilities.
<i>Potential for reducing government costs</i>	If citizens are able to load and update information electronically then the need for government to employ staff for similar tasks is reduced.
<i>Central political support from government leaders and finance ministry</i>	Central initiatives can lead to the creation of centrally provided infrastructure, offering economies of scale to departments planning to implement e-government. e.g. Finance Ministries may see e-government as a potential source for cost saving.

(Source: Dunleavy *et al*, 2002:13)

The primary forces promoting e-government using the Internet are the active demands from citizens and enterprises to better communicate with and access government information. In addition, the ability to do transactions electronically will promote efficiency and citizen satisfaction. These promoters of the Internet are what will make e-government a success. Inability to recognize and act on these issues could be the downfall of any public sector agency wanting to successfully make the transition to e-public services.

Table 4.2: Table representing “Inhibitors” of the e-government strategy

INHIBITORS	
<i>The digital divide and the risk of creating new forms of social exclusion</i>	Even in liberal democracies there are concerns about potential worsening problems of social exclusion through the creation of “2-tier” provision offering superior services only to Internet connected groups.
<i>Capital investment and human resource costs of setting up e-services</i>	Electronic publishing via the Internet is relatively cheap. However, the process of web-enabling large back-office processes often requires heavy IT infrastructure spending.
<i>Low take up by citizens or firms of e-public services</i>	The switch to using e-public services will not be automatic. Firms and citizens will require incentives to make the transition. These may include: extra convenience, time saved or cash discounts.
<i>Privacy and security issues</i>	Regardless of the actual risk, privacy and security problems are perceived by public opinion as being higher with the Internet than any other form of communication.
<i>Initial resistance to new technology in public agencies</i>	The development of the Internet has been fast but public agencies are often not equipped to match the speedy transition to electronic government. Flexibility is often a problem.
<i>Authentication/Identification issues</i>	Establishing authentication and/or identification of a person accessing the web is relatively simple. The following solutions are available: Downloadable identifiers, mailed out identifiers and swipe card technology.
<i>“Channel rivalry” problems inside government agencies</i>	Those people who make their living from conventional services will not welcome the Internet’s presence.
<i>Other cultural blocks on public sector organisations responses</i>	The introduction of the Internet into the public sector may mean loss of dynamic competition between departments, various political accountabilities. As a result the e-based approaches to the public sector may be resisted.

(Source: Dunleavy *et al*, 2002:14)

The above table shows that the primary forces inhibiting change in the United Kingdom Government originate partly from societal pressures to avoid creating any new form of social inequality in terms of access to services and information. There is also a risk involved in setting up large scale e-public services and managing the change process involved in this transition.

Overcoming these challenges is a test of government perseverance and determination. So far, the United Kingdom Government has done well to face these challenges head on. This is illustrated by the fact that the United Kingdom ranks 5th out of a possible 65 countries in terms of e-readiness (Economist Intelligence Unit, 2005:2).

The United Kingdom Government has done well to establish its public sector as one of the European leaders in the provision of electronic government. From an international perspective the United Kingdom stands out as one of the leading examples of e-government and yet some researchers' proclaim that this is only the beginning of e-government in the United Kingdom. If technological development continues at its current rapid pace then the future of e-public services looks very bright for the citizens and public sector agencies of the United Kingdom.

"The whole field of e-government in Britain is still in its infancy, with rapid technological, funding and organisational changes occurring every few months, in part sustained by the strong lead given by the Prime Minister and the programmes run by the Office of the e-envoy. But in our view the most important determinant of effective e-government change is still the transformation of organisational cultures and personal mindsets which is required for an agency to move towards more digital modes of operating" (Dunleavy *et al*,2002:i).

The above quote provides a basis for the next two case studies. Public sector reform in any country is a slow process that requires planned development with input from all concerned parties. The e-government initiative is no exception to this. In developed countries, such as the United Kingdom, the infrastructure and funding is more readily available than in developing countries. Implementing e-government is an enormous undertaking for any political system, however, it is the way of the future. The next two case studies will illustrate how poorer countries battle to keep up the pace of international technological advancement without sending their nations further down the never-ending road of the digital divide.

4.3 Lessons learned – the developing world

Achieving e-government in the developing world is no easy task. Many of these countries have unstable political leadership and poor infrastructure to support such an initiative. In addition "...e-government in the developing world must accommodate certain unique conditions, needs and obstacles. These may include a continuing oral tradition, lack of infrastructure, corruption, weak educational systems and unequal access to technology. Too often, the lack of resources and technology is compounded by a lack of access to expertise and information" (The Working Group on e-government in the developing world: 2002:1).

“At the political level, liberalisation and privatisation have opened up new markets and possibilities for investment and innovation. Both evolutions lead to the so-called convergence or coming together, regardless of the technological platform, of formerly separate communication realms such as audio-visual media, informatics and telecommunication. These changes have primarily taken place in the developed world, however, technological innovations in the field of ICTs are increasingly offering developing countries new opportunities. Politically, the world-wide liberalisation of communication sectors is putting pressure in such sectors in developing countries to do likewise...Communication networks and interactive multimedia applications are therefore often thought to have provided the foundation for the transformation of existing social and economic relationships into an Information Society” (Van Audenhove *et al*, 1999:387).

Although the political and economic environment is very different in developing countries, the scenario for the development of a national information structure as created in developed countries has been extracted as the appropriate strategy for developing countries. “Organisations such as the World Bank, followed in recent years by the International Telecommunications Union, World Trade Organisation and the United Nations Economic Commission for Africa, foster the opening up of ICT markets, the liberalisation of the telecommunication and broadcasting sectors and the privatisation of large operators. Although an exception is made for the least developed countries, developing countries are being advised to adopt the same policies. The argument holds that: 1) liberalisation and privatisation have been successful elsewhere, although most of the evidence is from advanced countries with long established universal services; 2) Investment in telecommunications networks enables greater general use of ICTs in support of competitive economic activities; 3) National monopoly operators normally perform very poorly and this provides a strong incentive for major changes in their ownership and production” (Van Audenhove *et al*, 1999:390).

The two developing countries that the researcher has chosen to investigate are Brazil and Egypt. In both these countries the e-government initiative is underway and a number of government departments have already set up basic websites. However, both these countries still face a number of challenges in trying to make a smooth transition to the use of information technologies. With large populations unable to fully understand and access the Internet or the World Wide Web, the road ahead is a long and bumpy one for these two countries. Research done by the Economist Intelligence Unit to determine e-readiness rankings for 2005, shows just how far these developing countries still have to come. Brazil scored a moderate 5.07 and Egypt a 3.90 out of a possible total of 10. Although these scores do not seem very high, the reality is that at least these countries have made an attempt to adapt to the “Information Age”. The fact that the governments of these countries have taken the initiative to adopt the e-government approach

shows that they are committed to improving the lives of their citizens and the efficiency of their public sectors.

The complexity of the decision to implement e-government should never be underestimated. It is essential that governments in developing countries are aware of the impacts, both positive and negative, that electronic government and e-service delivery can have on the relationship between citizen and government and business and government. According to research done by The Working Group on e-government in the Developing World (2002) there are 10 questions that government in the developing world should ask themselves before implementing e-government:

1. Why are we pursuing e-government?

- *“Understand that e-government is about transformation; technology is a tool. E-government is about transformation that helps citizens and businesses find new opportunities in the world’s knowledge economy. It holds great potential. Yet, if e-government is not part of a larger programme for reform – reforming how government works, manages information, manages internal functions, serves citizens and businesses – then it may not produce all the benefits expected from the time and money invested. Use e-government to rethink the role of government. Use it as a tool to further economic development and good governance”* (The Working Group on e-government in the Developing World, 2002:7).

2. Do we have a clear vision and priorities for e-government?

- *“E-government can refer to many different things, and e-government plans come in all shapes and sizes. Thus, be sure to establish a clear vision for e-government.”* (The Working Group on e-government in the Developing World, 2002:8).

3. What kind of e-government are we ready for?

- *“Because every society has different needs and priorities, there is no one model for e-government and no universal standard for e-government readiness. Each society’s and government’s readiness for e-government will depend upon which objectives and specific sectors it chooses as priorities, as well as the resources available at a given point in time”* (The Working Group on e-government in the Developing World, 2002:10).

4. Is there enough political will to lead the e-government effort?
 - *“Like any government reform effort, political will is required to implement every e-government project. Without ongoing, active political leadership, the financial resources, inter-agency co-ordination, policy changes and human effort required to plan and implement e-government will not be sustained. Political will exists when senior decision-makers have the resolve to exercise leadership in the face of opposition and setbacks”* (The Working Group on e-government in the Developing World, 2002:11).
5. Are we selecting e-government projects in the best way?
 - *“Picking the right e-government projects, especially the very first ones, is critical. A successful initial project can become the selling point for all future efforts and create the political momentum needed to move e-government ahead”* (The Working Group on e-government in the Developing World, 2002:13).
6. How should we plan and manage e-government projects?
 - *“Effective management is vital for the success of e-government, as it is for all government or business operations. Being able to deliver a project on time and within budget, co-ordinate effectively among government agencies and oversee private sector partners all depends on capable management. Before moving forward with an e-government project, set up management mechanisms at both the national/state level and project level”* (The Working Group on e-government in the Developing World, 2002:15).
7. How will we overcome resistance from within government?
 - *“Civil servants may resist e-government projects, and may refuse to adopt new procedures. This problem may be more severe in developing countries where human resources may be less robust, the economy less stable and other job opportunities less plentiful”* (The Working Group on e-government in the Developing World, 2002:17).
8. How will we measure and communicate progress? How will we know if we are failing?
 - *“Because e-government usually involves significant money, human resources, information and political commitment, accountability is critical. In developing and industrialized countries alike, whether democratic or not, the policy makers and agencies responsible for e-government are answerable for money spent, policies set and public services delivered or not delivered once the rollout of e-*

government begins” (The Working Group on e-government in the Developing World, 2002:18).

9. What should our relationship be with the private sector?

- *“E-government is not something government can do alone. The private sector, in particular, has a key role to play, from the vision/planning process through implementation, monitoring and evaluation. However, the private sector and technology are not there to simply tax, regulate, sue and control”* (The Working Group on e-government in the Developing World, 2002:22).

10. How can e-government improve citizen participation in public affairs?

- *“Citizen participation is an important element in many stages of the e-government process, from defining a society’s vision and priorities for e-government to determining e-readiness and managing e-government projects. E-government = participation, not automation”* (The Working Group on e-government in the Developing World, 2002:24).

These 10 questions will form the basis of the case study examples, Brazil and Egypt. Research suggests that e-government projects implemented in developing countries usually end in either partial or total failure (Heeks 2002:10). When considering the progress that these two countries have made in implementing e-government, the researcher will use these questions to draw a conclusion as to whether the respective governments’ implementation methods of the e-government initiative will be sustainable in the long run.

4.3.1 Egypt (See Annexure 6)

“To invest in the technological industry is to invest without the least hesitation in Egypt’s future, particularly in view of the fact that the promising beginnings we have already seen re-affirm that Egypt has the capability of catching up with this significant development” (Mubarak, 13 September 1999 as cited in Egyptian Ministry of Communication and Information Technology, 2002:1).

The above quote will form the basis of this case study. It illustrates that despite a country’s location or economic position it is still important to consider the future and the wellbeing of citizens. Technology is the future; therefore, investing in this industry will help develop a country and its citizens towards becoming an “Information Society”. Developing into an “Information Society” is a top priority for Egypt.

Egypt represents one of the world's greatest civilizations. It is a country rich in culture and heritage and its unique location in Northern Africa, bordering the Mediterranean Sea makes it a popular tourist destination. Egypt is one of the few countries in Africa that has taken the first steps towards implementing e-government. The decision to implement e-government was not undertaken lightly. With a rapidly growing population, limited arable land and dependence on the Nile, available resources are already stretched to the maximum. In addition the government has battled to stabilise the economy for the new millennium through economic reform and massive investment in communications and physical infrastructure (Central Intelligence Agency, 2005).

So why is it that a poorer, less developed African country would embark on the e-government initiative? The answer can be found in the following statement:

"Dealing with the government has always been a challenge for Egyptian citizens. Even if a government department goes out of its way to provide citizens with special services and assistance, it is overwhelmed by the complexity of procedures and the sheer volume of requests it receives each day. It was therefore essential that the Egyptian Government create a central portal to provide quick and effortless access to all services and documentation" (Microsoft Egypt, 2005:1).

As discussed in the first two case studies, e-government is an initiative aimed at participation. The same can be said of Egypt where the vision of the e-government project is to provide Egyptian citizens both at home and abroad with access to the services and information they need. The Egyptian Government believes that the best way to achieve this is; "through the creation of a single gateway that connects to most or all government departments, providing citizens with a focal point for obtaining all services. This will not only enhance the experience of citizens, it will increase productivity and reduce costs by millions of Egyptian pounds" (Microsoft Egypt, 2005).

According to Fawzy (2003) the implementation of the e-government initiative would pave the way for an informatics based Egyptian society that would be able to cope with the information technology revolution and narrow the digital divide between industrialised countries and Egypt. At this point it seems that the Egyptian Government has done an outstanding job in introducing ICTs into its system. The biggest difference, however, between developed and developing countries is how long the e-government initiative has been in place. Developed countries have been working since the 1990's at perfecting the e-government system. Developing countries, such as Egypt are only just beginning with the initial implementation stages. In Egypt, the e-government initiative kicked off in 2001 when the Ministry of Communications and Information Technology signed a four year co-operation agreement with Microsoft. Microsoft was one of the

companies that would be responsible for making the necessary information infrastructure available to the government departments.

In order to provide some form of framework to support the implementation of e-government the initiative was given the following name: The Egyptian Information Society Initiative (EISI) for Government Services Delivery. According to this documentation by the following vision, mission and objectives were set out: (Egyptian Ministry of Communication and Technology, 2004:2)

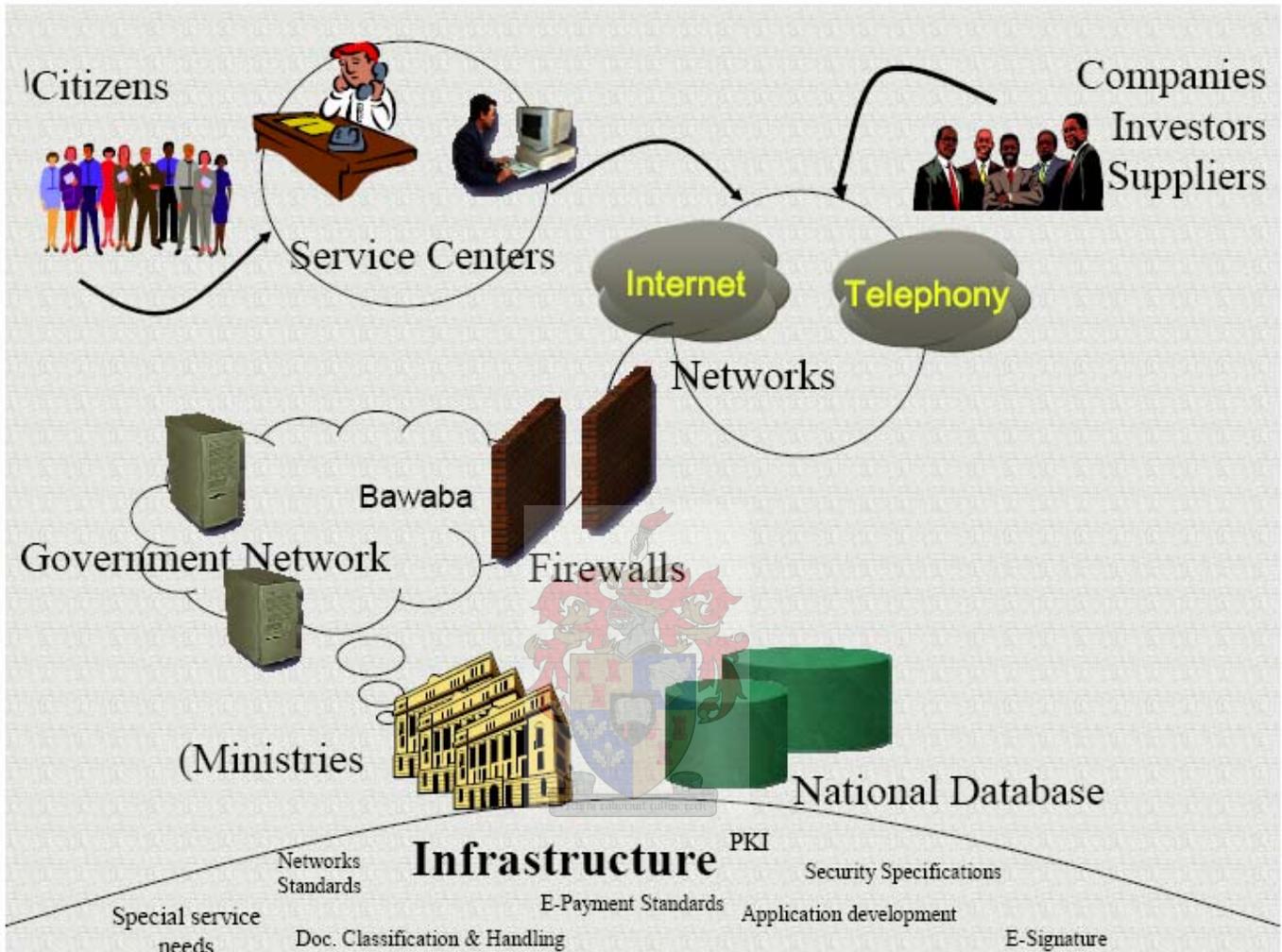
- Vision:
 - By 2007 the Egyptian government will be able to deliver high quality government services to the public where they are and in a format that is convenient to them.
 - The three guiding principles of this vision are:
 - Citizen-centric service delivery
 - Community participation
 - Efficient allocation of government resources.

- Mission:
 - To reach a new level of convenience in government services, and secure a place for Egyptian Government in the globalisation, knowledge bases era.

- Objectives:
 - Delivering services to the public where they are, in the format that suits them, at the right time and allowing them to share in the decision making process.
 - Creating conducive environment to investors by streamlining procedures, easing access to government services and providing one-stop shopping for essential business services, thus encouraging foreign and local investment.
 - Providing accurate and updated information to support the decision-making process and to help planning and following up on the different long term development initiatives.
 - Deploying new philosophies and practices of modern management in the government in a mode that will make government operations more efficient and cost effective.
 - Reducing government expenditure by introducing new models for procurement and Enterprise Resource Planning (ERP).
 - Fostering local competitiveness and increasing globalisation readiness to ensure the smooth integration of the Egyptian Government in the global community both regionally, and internationally.

The figure below illustrates the implementation framework for the EISI – Government project:

Figure 4.7: EISI framework for implementation



(Source: Egyptian Ministry of Communication and Information Technology, 2004:4)

From the above figure it is clear that the Egyptian Government views the e-government initiative as an integrated process that requires citizen co-operation and participation as well as a supporting infrastructure that includes the other government departments and the private sector. The table in Annexure 7 provides a good supporting document for this figure. It clearly sets out the objectives, challenges, projects and components of the Egyptian EISI Government Program.

The EISI Program has four basic components: (Egyptian Ministry of Communication and Information Technology, 2004:7)

The basic infrastructure:

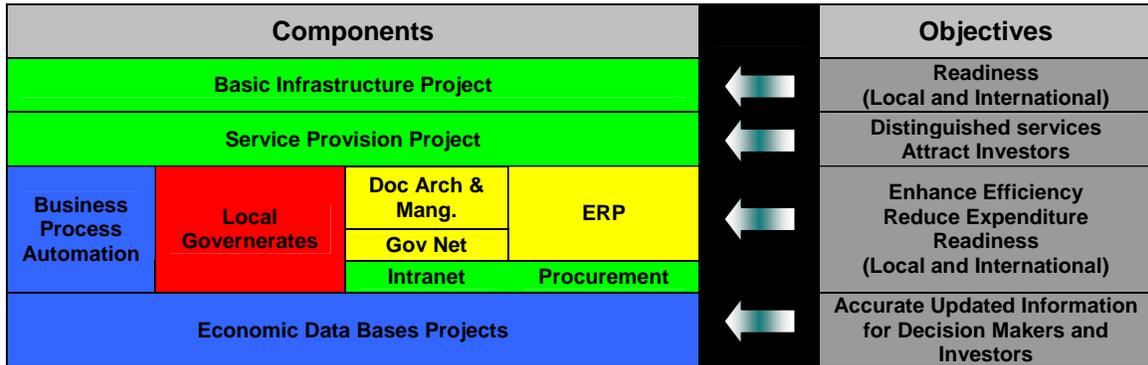
- Legal and regulatory issues
 - Standards
 - Public Key infrastructure
 - ICT Readiness
 - Government Gateway
-
- Service Delivery Project:
 - The e-government initiative will mean more improved and efficient services for citizens. Government services will be designed to meet the specific needs of the citizens and investors. In order to help achieve this, this project introduces customer relationship management. This means that citizens are viewed as customers and government organisations are constantly seeking to maintain their satisfaction.

 - Back-office Automation Project:
 - One of the main aims of the EISI project is to use ICTs to improve efficiency and reduce costs in government departments. “This project proposes automation through a unified EISI–Government applications package for ERP that includes payroll, accounting, budget, personnel, inventory and procurement” (Egyptian Ministry of Communication and Information Technology, 2004:10).

 - Economic Databases and Decision Support Project:
 - The aim of this component is to gain accurate information for decision-making purposes through linked databases that cover different sectors of the economy.

Do the components and objectives of this project fit together in order to create an integrated programme? The figure overleaf provides a useful visual aid by using arrows to link specific objectives to certain components:

Figure 4.8: The integration of objectives and components



(Source: Darwish, 2002:7)

In the previous section the researcher listed 10 questions that developing countries should ask themselves before implementing e-government. The researcher would now like to provide answers to some of these questions in relation to Egypt's EISI program.

1. Why are we pursuing e-government?

“People often complain about the amount of time and effort they spend procuring official papers in Egypt. Standing in lines and moving from one government office to the next to collect approvals and issue papers can be a long, painful process. The e-government project was conceived out of the desire to provide most or all government documents and services to Egyptian citizens, without requiring them to leave their homes or villages and travel long distances. In addition, Egyptian expatriates, foreign investors and potential visitors seeking information or services can easily receive them abroad” (Microsoft Egypt, 2004:1).

2. Do we have a clear vision and priorities for e-government?

The Egyptian Government has done well to establish an all encompassing vision that reads as follows: Delivering services to customers at their finger tips according to their taste and style with appropriate efficiency and allowing them to participate in the decision-making process. Customers include citizens, businessmen, investors and companies” (Darwish, 2002:5).

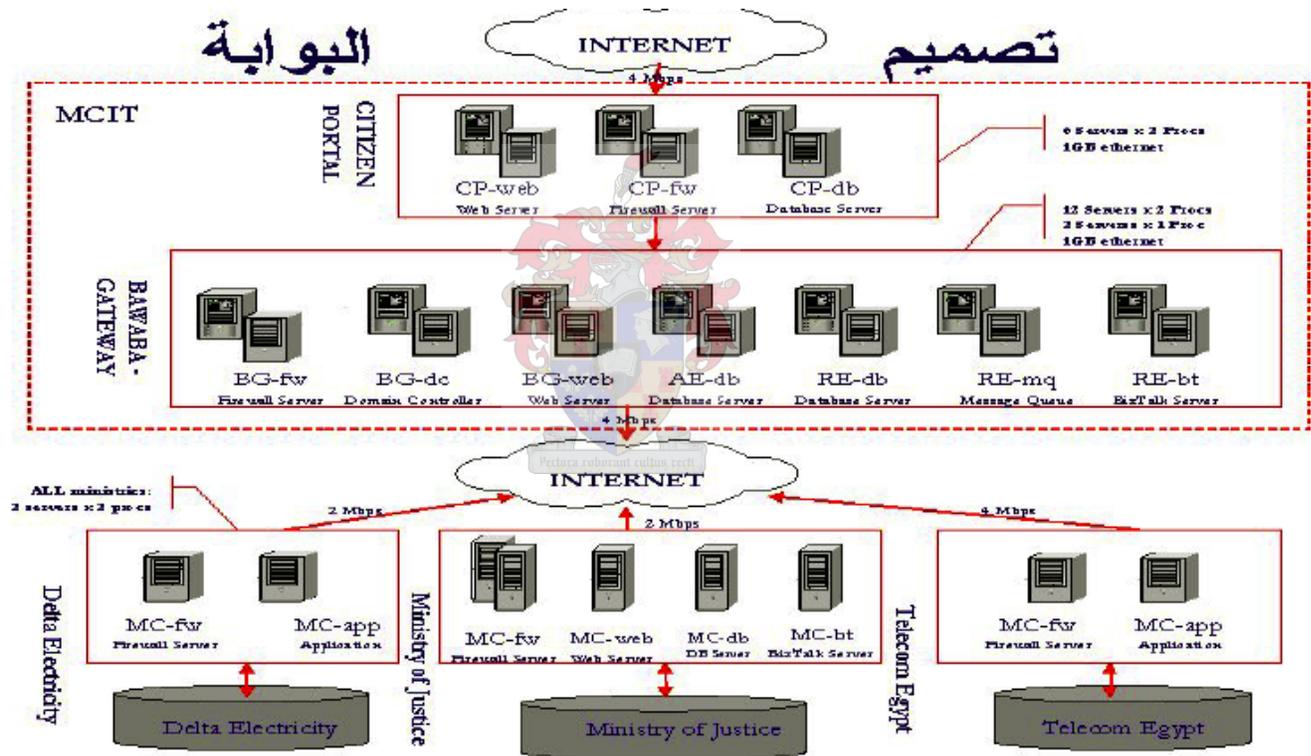
3. Are we selecting e-government projects in the best way?

The Egyptian Government opted for the Gateway Model. This single gateway will connect all or most of government services. In Egypt, the biggest challenge in implementing this model is that not all government departments are on the same platform nor do they use the same technologies. Despite this challenge, however, the Egyptian Government maintains that this is the best model for their country because: “The Gateway model offers an alternative approach that avoids the

drawbacks of conventional implementations. It connects all systems in a unified manner, reducing effort and complexity. The gateway acts as a central conduit through which all requests are sent regardless of their intended recipient. It performs the necessary authentication and routing functions, and guarantees that requests reach their destination. All websites and service providers are interconnected through their single connection to the gateway” (Microsoft Egypt, 2004:2).

Other reasons that Egypt selected a Gateway include its: customer-centric focus, higher security and privacy and higher return on investment. Figure 4.9 illustrates the Gateway design.

Figure 4.9: Egyptian Gateway design



(Source: Darwish, 2002:18)

4. How should our relationship be with private sector?

The Egyptian public sector realises that it cannot implement e-government alone. Therefore, the project welcomes a partnership with the private sector. In addition, the project seeks to promote e-business: “ICT is an important tool for robust economic growth. With the creation of new technology-based firms, the improvement of workforce skills, the use of electronic documents, and the development of e-payment infrastructure, ICTs can be a significant

catalyst to increase employment, create new jobs and improve the competitiveness of Egyptian industries. This is designed to foster the creation of a new industry evolution in e-commerce and e-business” (Egyptian Ministry of Communication and Information Technology, 2002:2).

From the answers to the above questions it is evident that the Egyptian Government has taken the time to plan and develop this project carefully. However, according to the Egyptian Ministry of Communication and Information Technology (2004:6) there are a number of challenges that the Egyptian Government still face. These include:

- Authentication over networks: With no legal framework that allows for remote authentication, there is a difficulty in conducting transactions over networks.
- E-payment: Developed countries tend to favour a system that is highly dependent on credit cards. This type of system, however, is not suitable for developing countries where the use of credit cards is pretty low and there is still a fear of using them to pay online.
- Automation: This refers to problems in automating workflow process in government offices.
- Process workflow: There is a need for current workflow processes to be re-engineered to ensure efficiency and quality in government activities and to meet the objectives of new management techniques.
- Networking: This refers to an insufficient government communication network whereby different government bodies can interact and exchange information and documents.
- Services: The traditional method of delivering government services to the public fails to meet citizens expectation in the following ways:
 - The quality of the service
 - The overlap between government service providers.
- Access: Some of the challenges encountered in implementing the e-government project have meant that the majority of the population have not benefited from this initiative. Such challenges include:
 - A low penetration of personal computers
 - Low penetration of Internet
 - Computer illiteracy

At what stage is the e-government project in Egypt now? Having established web presence and set up a Government Web Portal, the Egyptian Government is now working on stage 3: the

transaction phase. This phase is primarily concerned with improved service delivery and identifying service integration possibilities. The Egyptian Government is committed to achieving its e-government vision. From an international standpoint they still have a long road ahead of them but from an African perspective Egypt could be a country to watch out for in terms of e-government implementation. The Government is making a concerted effort to close the digital divide and create an environment that fosters both local and international development.

“There are now about 500 Egyptian government-related sites on the Internet, which users can access to get the information they need, although they still need to pay a visit to the Mogamma (the huge governmental complex in Midan el-Tahrir) or various ministries, in order to purchase and fill in the relevant documents. Once this giant programme is fully operational, Egypt will continue to foster local competitiveness in the era of globalisation and implement various international agreements successfully” (Fawzy, 2003:1).

4.3.2 Brazil (See Annexure 8)

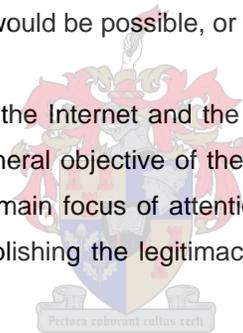
“Despite having nowadays more than 170 million inhabitants, we have achieved the level of only 39 million fixed phone lines and 24 million mobile phones...When we talk about Internet, we are only 10 million surfers, which represents less than one tenth of the total population. In the last five years, however, the growth has been exponential...this scenario of accelerated change in the country’s telecommunication profile brings along the real possibility that in the near future, if we succeed in implementing a well structured strategic policy, we will be able to offer to a great part of the population not only access to these technologies, but also a great leap in the educational, professional and economic status of all people” (Prates, 2001:4).

Brazil is a country where inequality and injustice are rife. Social discrepancies still prevail and these are reinforced by the low income pattern and poorly educated society. Yet, despite such challenges the Brazilian Government has recognised that a change process is required. This change process involves the adoption of technology and the development of policies supporting the creation of an Information Society.

Brazil is an example of a Federal State where the implementation of the e-government initiative is already underway. A variety of online services are available at Federal, State and Local level. The nature of e-government in federations differs from e-government in unitary states. The following are important points to consider when looking at e-government in federations: (Afonso, 2001).

- The implementation of e-government in countries with large land areas and populations involves logistical difficulties significantly different from those encountered in small countries;
- Often, distant sparsely populated regions suffer from basic problems in infrastructure and telecommunications that make the issue of universal access more complicated;
- Developing e-government in federations is different from creating a programme in unitary states;
- The problems encountered are not merely those related to significant regional, cultural and ethnic problems, but often involve legal and constitutional barriers to the vertical integration of government;
- This point is especially relevant in Brazil, where municipalities enjoy a large degree of autonomy guaranteed by the Constitution;
- As a new culture based on Internet spreads, it becomes reasonable to expect growing calls from citizens and users for the development of government portals that are completely integrated both horizontally and vertically;
- It is unclear, however, if this would be possible, or desirable, in a federation.

Despite the points listed above both the Internet and the e-government initiative have achieved growing popularity in Brazil. The general objective of the e-government project is to: "Stimulate the recognition of the citizen as the main focus of attention of the State, making good services available and, consequently, re-establishing the legitimacy of public organs before civil society" (Prates, 2001:9).



The Brazilian Government recognised that to achieve this it is necessary to:

- Deliver an efficient, quick, high quality and low cost service;
- Enlarge the population's access to public services;
- Simplify all bureaucratic obligations;
- Give pro-active responses to complaints and suggestions made by public service users;
- Approximate the citizen to the state, eliminating the need for intermediaries;
- Afford greater transparency to public administration;
- Recover the democratic aspect of services delivered;
- Welcome, orient and inform the population concerning the basic pre-requisites necessary to obtaining the services available;
- Become a reference to public service in the whole country.

The significance of the e-government initiative has been realised worldwide. Each country has its own unique social and economic context within which the e-government approach must fit. If Brazil is to successfully enlist the points above then the following social and economic considerations in relation to Internet access need to be taken into account: (Afonso, 2001)

- Connections between the local and international backbones are still very expensive. Moreover, access providers do not offer local line Internet connection in many small towns.
- The price of hardware represents another difficulty, especially under prevailing social and economic conditions where income per capita remains very low.
- The predominance of English–language content in Internet sites limits accessibility to a very small percentage of the population – essentially those with the highest educational values.
- The general lack of training and lack of public familiarity with new technologies, even though automation of banking services now reaches a significant segment of the population.

With reference to the 10 questions defined on p60 and 61, answers are given below for some of these questions.

1. Are we selecting e-government projects in the best way?

Yes, after a slow start, and proving that initial study is critical, Brazil commenced with increasing its telecommunication base, which in time will increase accessibility over larger areas to more people.

2. How will we overcome resistance within government?

In Brazil, resistance within government is a result of the autonomy with government departments. To overcome this problem, additional education and training is required for all personnel. In addition, regular “refresher” courses must be held and information must be kept up to date.

3. How can e-government improve citizen participation in public affairs?

This can be achieved by continuing the process of efficient, quick, high quality and low cost online service delivery to the public. In addition, Brazil must implement training programmes at grass roots level.

To date, Brazil has implemented a number of successful online services. The services are integrated with and available on the Brazilian portal "Rede Governo." This portal is the Brazilian Government's services and information gateway. The portal has 22,000 links to services and information and it addresses 1,700 sites from the federal, state and local levels (Valeria, 2003).

Some of the most important online services for citizens include: (Afonso, 2001)

- Income tax declaration and tax payment certificates;
- Register of government suppliers;
- Primary and secondary school enrolment;
- Follow up of judicial process;
- Information on retirement funds and other social security benefits;
- Distance learning programmes

Brazil has a number of online services available at local level. The reason for this is the size of the country's cities and population within them. The City of Rio de Janeiro for example (bigger than Los Angeles) is offering citizens the following online services: search and payment of property taxes; traffic tickets; traffic web cams; e-bidding and others. Up to this point it seems that Brazil is a picture of success in terms of the e-government initiative. Unfortunately, one area that the Brazilian Government has lagged behind is on creating a more transparent and open form of government. Services are available online but the degree to which the Internet and ICTs have been used to expand civic participation, is poor.

In addition to poor transparency the Brazilian Government faces the following challenges as a result of the e-government initiative:

- To reduce the social divide remains an ongoing challenge but in addition now there is the growing concern of the digital divide;
- The provision of telecommunication infrastructure to the rural areas in the same manner they did for rural areas;
- The decision to use open source software whenever possible will require co-operation from all levels of government, universities, national and international organisations;
- Integration of systems. The Federal Service of Processing of Dados (SERPRO), the biggest ICT services provider of the Brazilian Government, initially developed unique systems for many different Brazilian agencies and departments.

Many of these challenges represent those that many developing countries face. Although the Brazilian Government has done well to recognise the opportunities associated with the e-government initiative (e.g. services available 24 hours a day, seven days a week, better quality of service, possibility of new partnerships with private sector, foreign government) the level of intercommunication and integration is still very poor. In addition there is the lack of a consolidated legal framework to help ensure the authenticity of electronic documents, particularly with regard to electronic payments. These are basic problems that need to be addressed before Brazil can be considered an e-government success story. Indeed Brazil has some good e-government services in place but the majority of the population is yet to be included and receive the benefits of becoming an Information Society (Valeria, 2003).

4.4 Summary

From the four case study examples provided it is clear that e-government implies transformation, regardless of whether you are in a developed or a developing country. Gartner (2000) characterises e-government as: "The transformation of public sector internal and external relationships through Internet enabled operations, ICT to optimise service delivery, constituency participation and governance." This revolution of e-government will fundamentally change the foundation of government IT infrastructures as they strive to interact electronically with citizens, and within and between government departments. Globally, the expectations set by the e-government initiative are high. Accenture in (2001:6) stated that politicians are espousing the benefits of a connected government and have recognised that e-government implementation can lead to dramatic improvements in public sector service delivery.

In the researcher's opinion it is evident from the research provided for this chapter that the majority of public administrations worldwide have taken at least some initiative to achieve a certain degree of electronic government. The road to achieving electronic government is not without its barriers. Many countries, particularly the developing ones, face ongoing organisational and financial barriers. On the other end of the scale are the developed nations that continuously strive for perfection of the e-government approach. One such country is the Netherlands. Recently the Dutch Government undertook an initiative in the 30 biggest cities in the Netherlands to improve societal use of the Internet. One such initiative was implemented in Rotterdam. Costing around £6 million this initiative gave homeless people e-mail addresses so that they would have some form of contact address! (Dunleavy *et al.*, 2003:19)

There are some important lessons to be learned from the four case studies provided. Some of the lessons include:

- From the United Kingdom, a lesson to be learned is that e-government should not focus solely on government to citizen interaction, but also on business to business interaction. Greater interaction of all sectors of society will foster greater development.
- Regardless of what type of political system a country has, e-government does have the potential to bring citizens closer together.
- Developing countries must realise that e-government is not a shortcut to economic development. The “big bang” theory – a single event that immediately forever changes the universe of government – does not apply to this initiative. E-government is a process, a form of evolution (The Working Group on e-government, 2002:1).
- Lessons learned by developing countries are as important as lessons learned by e-leaders like the United Kingdom. And for other developing countries they are often more important and relevant.
- Despite the challenges that developing nations face, they can still benefit from ICT in government. For example, Egypt has noted the benefits: cutting through red tape; increased productivity, empowered employees and cost savings (Microsoft Egypt, 2005:2).

Achieving a sustainable level of e-government is a process that takes time and resources. With this in mind the researcher has created a table that lists the main principles associated with the e-government approach. These principles have been created with a view to helping South Africa better achieve its e-government potential.

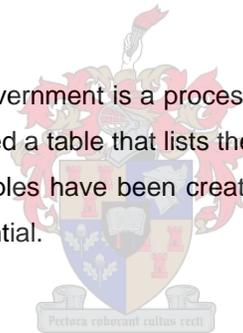


Table 4.3: Recommendations for South Africa

RECOMMENDATION	COMMENT
<i>Establish a clear vision</i>	This vision should be all encompassing and holistic in nature, taking into account the needs of government, citizens and the private sector.
<i>Set achievable targets</i>	Set realistic expectations that take into account your country's available resources and expertise. The "BIG BANG" approach does not work!
<i>Provide incentives</i>	It is human nature to resist change. One means of overcoming this resistance is to provide incentives to encourage people to adopt and use e-government.
<i>Citizen focus</i>	Citizens and their needs should be the number one priority. Access and transparency should be promoted and assurance should be given that those without access to information are not prejudiced in any way.
<i>Strong political leadership</i>	Strong leadership is critical to the success of the e-government initiative. Countries such as the United Kingdom have a history of high ranking political leadership.
<i>Investment/Procurement</i>	The e-government approach requires a high investment in time and money.
<i>Partnerships</i>	More than once the researcher has stated that the e-government approach cannot be undertaken alone. Government should look to the local communities and the private sector for support.
<i>Consistency</i>	A uniform set of standards for implementation and monitoring needs to be established.
<i>Enabling infrastructure</i>	Government must ensure that suitable infrastructure is provided in relation to the conditions of that country.
<i>Benchmarking/measurement</i>	A little bit of competition is healthy for any country. Developed countries can be used as an example but developing nation should not feel compelled to copy the same model of e-government. Measuring the use and performance of websites should become standard practice.
<i>Knowledge based work place</i>	Public servants must be trained and encouraged to make use of the potential benefits offered by ICTs.
<i>Change Management</i>	The e-government approach will require a change in attitude and a willingness to promote the use of ICTs.

<i>Empowerment</i>	Citizens and stakeholders should be able to access information and services, to conduct transactions and to make decisions appropriate to their needs.
<i>Access Points</i>	Whether it be MPCCs, gateway, telecenters. People must be able to access the government services freely and easily if e-government is to work.
<i>Websites</i>	The starting point for electronic service delivery. Websites present a more uniform approach for delivering government services and giving government information to the public.

If South Africa follows the recommendations provided in this table the impact of ICTs will in turn better enable South Africa to close the digital divide and empower the development process.

From the four case studies it is shown that the growth and development of the ICT industry has had an impact on all sectors of society worldwide, all be it different countries are at different stages in the process of adopting ICTs for improved governance and communication with citizens. Despite the difference in the pace of development, ICTs are having a universal impact on society.



PART ONE: The Influence of the South African Government

5.1 Introduction

Since the first democratic elections in April 1994, South Africa has evolved into a prosperous country that has become a leading example to the rest of Africa. This country has entered the global political forum and has become an international symbol of how peace and democracy can be achieved. However, in this new “Information Age”, entering the international world of politics and maintaining a voice in the midst of powerful and industrialised countries such as the United States of America and the United Kingdom, requires sound policies, political stability, and the ability to keep up the pace of technological advancement. Never before has technology, in particular ICTs received so much attention. The ability to put ICTs to effective use is becoming a measure of a country’s progress and type of relationship that exists between government and citizens, government and government and government and business. If South Africa is to retain its international relationships, Government must demonstrate that it can put ICTs to effective use. This implies that a country must be “e-ready” in terms of accessibility of ICTs to the population, supporting infrastructure, and the impact of the legal and regulatory framework of ICT use (Docktor, 2002).

If South Africa is going to demonstrate that it has the resources to introduce the “e” into its government system then, like many other governments worldwide, it has the challenge of modernising its administrative practices and managerial systems. This modernisation process requires the creation of an information management culture thus creating a supporting environment for the development of the e-government initiative (Khan & Swanborough, 1999). One of the first steps the South African Government took towards achieving this, was placing greater emphasis on information and communication policies. From as early as 1995, information and communication policy issues were present on the political agenda. In addition, five principles that guide the Government on its approach to information and communication issues were established. These principles were identified as follows: (Mcnube and Wild, 1995:1)

- Information infrastructure must serve as a means to support Gross National Product (GNP) goals. In this context, information and communication policies are considered an engine for economic development.

- Initiatives to build and modernise South Africa's information and communication infrastructure must be situated within the context of the needs of the Southern African region as a whole – regional integration is key to the approach.
- A global approach must be adopted. Building South Africa's information and communication infrastructure is a multi-faceted proposition that encompasses economic, financial, technological, social, cultural and moral aspects.
- South Africa is keen to acquire and grasp the technologies that enable people and institutions to access tremendous processing, storage, retrieval and delivery capacities.
- Information and communication infrastructure initiatives involve a great variety of actors, from investors, financiers and manufacturers to operators, educators, and so on. They must therefore be based on international co-operation.

In South Africa there are a number of Government, citizen and service provider issues relating to the e-government initiative. A closer look at these issues reveals the integrated nature of e-government (Opperman, 2003).

- Government Issues:
 - During the initial formation and development stages of e-government, consideration should be given towards assigning responsibility of the e-government initiative to a specific cabinet member with a support structure provided from within an existing Government Department that has the available resources and staff required to launch the e-government initiative. This is required to provide the drive and motivation for e-government and ensuring that underlying government objectives such as maximising the benefits for previously disadvantaged communities, is achieved.
 - Co-operation needs to be established between all three spheres of Government. It is only through mutual and co-ordinated efforts that an effective and integrated e-government solution can be implemented in all regions of South Africa.
 - The change management process associated with the e-government initiative is likely to affect all aspects of the public sector organisation, including the average public servant. Therefore, change management programmes will have to focus inter alia on legal issues pertaining to potential layoffs or redeployment of personnel as a result of automation.

- Citizen Issues:
 - Education: The provision of an easy to use solution that takes into account all levels of literacy within South Africa is a particularly challenging task.
 - Sufficient measures should be implemented to ensure that when intermediaries or electronic access channels are utilised, citizens are provided with sufficient information on the proposed services to ensure their informed consent in relation to the requested services.
 - Each particular access channel (MPCC, Public Information Terminals, and Government Electronic Gateway) has its own unique legal considerations that need to be addressed.
 - Government must “know its citizens” when providing e-government. This can be achieved through the use of biometric identification systems; however, this may infringe on privacy and trust issues of the citizens that are associated with the e-government initiative.
 - There may be a need for a specific complaints or dispute resolution procedure with regard to e-government services. This will ensure that Government has made provision for any discrepancies or quality issues that may arise unexpectedly.
- Service Provider Issues:
 - Change management is also relevant when considering the position of service providers, as some current services may become redundant due to e-government initiatives. In this regard a vested rights due diligence needs to be conducted to assess Government’s exposure in terms of its existing contractual obligations.
 - Although government departments may choose to outsource the provision of e-government services to private service providers, in an effort to quickly improve efficiency, the responsibility and liability of rendering government services will always remain with the department mandated by statute to provide such services. As a result, there is a need for strong enforceable service standards, succession planning and change control provisions in the agreements with such service providers.
 - Government may decide to join forces with the private sector in the provision of e-government services by establishing a Public Private Partnership. In such partnerships the emphasis is on affordability, value for money and the transfer of



risk from the public to the private entity. This partnership allows for a more business orientated outlook on service delivery.

The above issues show just how complex and interrelated the e-government initiative is. It requires co-operation between all three spheres of government and with the inclusion of the private sector the efficiency gains are greatly increased. What has become clear from these issues is that ICTs are the definitive catalysts for transformation and change in the contemporary world (Theunissen, 2001:143). This section will show that South Africa has made tremendous progress in terms of the e-government initiative. Having established an average e-readiness position, formulated supporting legislation and created web presence at provincial level, our Government is committed towards becoming an "Information Society."

5.2 E-readiness in South Africa

The creation of an information management culture is not limited to the above mentioned principles. In addition South Africa must show that it has the e-readiness capacity to implement and sustain e-government. Where is South Africa in terms of e-readiness? According to the Economic Intelligence Unit's annual e-readiness rankings report for 2005, South Africa scores an average 5.53 out of a possible total of 10 and is ranked 32 out of a possible 65 countries. But what does this score mean in terms of infrastructure and accessibility? According to research done by Docktor (2002) of McConnell International for the "Regional workshop on building e-governance capacity in Africa" there are five attributes to assessing e-readiness:

- *Connectivity: Are Networks easy and affordable to use?*

This includes the following issues:

- *ICT affordability*
- *ICT access and availability*
- *ICT quality and reliability*

- *E-Leadership: Is e-readiness a national priority?*

This includes the following issues:

- *Vision and aims*
- *Planning, strategy and co-ordination*
- *E-government usage and action*
- *Public – private partnerships*
- *Digital Inclusion*

- *Information and security: Can networked information be trusted?*

This includes the following issues:

- *Legal frameworks*
- *Enforcement and prosecution*
- *Internal system security*
- *Collaboration and partnerships*

- *Human Capital: Are the right people available?*

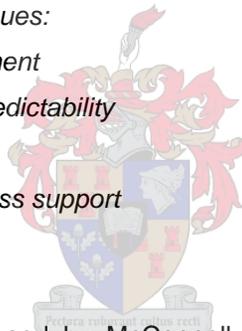
This includes the following issues:

- *The use of ICT in primary and secondary education*
- *Post secondary education and training*
- *Workforce skills and efficiencies*
- *Creativity and sharing*

- *E–Business climate: How easy is it to do e-work?*

This includes the following issues:

- *Competitive environment*
- *Transparency and predictability*
- *E-adoption*
- *Financing and business support*
- *Trade policy*



These e-readiness attributes were used by McConnell International to measure e-readiness levels in several African Countries. South Africa was included in this survey. Five levels of rating were created: Low, low medium, medium, medium high and high. South Africa scored as follows:

Table 5.1: South African Scores for e-readiness

Attribute		Level
Connectivity	Access	Medium
	Bandwidth	Medium High
E - Leadership	Vision and Planning	Medium High
	Usage	Medium High
Information and Security	Secured Servers	Medium High
	Collaboration	High
Human Capital	Education (Gross enrollment ratio)	Medium
	Workforce (IT Students in tertiary education)	Medium High
E – Climate:	Competitive environment (High Tech Exports)	Low
	Transparency (Efficiency, Perception)	Medium High

(Source: Docktor, 2002)

It is interesting to note that these ratings place South Africa as having an average level of e-readiness. This co-incides with the score given by the Economist Intelligence Unit (2005), therefore, the researcher draws the following conclusion: From an international perspective South Africa shows both promise and progress in achieving an above average level of e-readiness. This demonstrates that our Government is prepared to make a commitment to adopt initiatives that will modernise South Africa's information and telecommunication industry. In addition, it shows that this country's Government will do its best to keep up the pace of those more industrialised countries. Currently South Africa has a higher e-readiness ranking than both Egypt and Brazil and if the e-government initiative continues to grow at a steady and progressive rate, South Africa may become a leading example to developing countries, but more importantly, the Southern Hemisphere. From a local perspective South Africa stands out against Africa as a "third world country having first world technology." South Africa is leading the way for what the rest of Africa hopes to achieve.

The modernisation of government practices is not the only intervention required to bring about a change process in South Africa. Establishing sound policy frameworks is equally critical. This is one area however, that South Africa has not necessarily fulfilled expectations. In the researcher's opinion, the South African Government could learn a lot from the phrase "practice what you preach!" Endless discussions are held and promises made but the results of poor policy implementation remain a reality. Many poor areas still do not have access to adequate basic services and as long as this situation continues so the digital divide will grow. "A framework for the transformation of the social and economic arenas has been put in place through lengthy negotiations and consultations involving the major players of State, capital, and labour as well as other formations of civil society. Attaining agreement on constitutional matters has often been lengthy, but the process of dialogue has been hailed as unique among those nations within which great chasms of ideology exist. The implementation of these policies is another matter, with the acid test being the degree to which budgets reflect policy intent. Ultimately the putative beneficiaries should perceive that the services they receive have changed for the better. In providing goods and services to their electorate, governments make use of state revenues, their direct employees, physical infrastructure, various associated processes and their associated information systems. In seeking to bring about improved and more equitable service delivery, the transformation agenda has thus far mainly concentrated on three broad areas: finance, access and governance" (Kahn & Swanborough, 1999:3).

Finance, access and governance represent South Africa's future and provide a good basis for this chapter. Therefore it is important that an understanding of these terms and the policies associated to them is created before continuing. In a discussion by Kahn and Swanborough (1999:3) "finance" is viewed in terms of two policies, the structural adjustment programme called the Growth, Employment and Redistribution strategy (GEAR) and a second set of policies that requires government departments to implement a three year budgeting cycle rather than an annual one. "Access" is looked at in terms of both redistribution and redress. Policy frameworks controlling access include a wide range of issues from control of natural resources to access to facilities. "Governance" is viewed in terms of the following: labour relations, employment equity, higher education and workplace conditions. The graphs in Annexure 9 illustrate the use of ICTs in South Africa and provide a useful visual aid when considering finance, access and governance. These graphs show that progress has been made in ICT development and Internet access.

This chapter will look at some of these issues, in particular, the role of provincial and local government in improving the quality of life for citizens through the use of ICTs and therefore bridging the digital divide. An important issue in relation to this is whether or not e-government can be implemented at local level. At present, South Africa has predominantly provincial

examples of e-government available. However, if implemented at local level, is e-government feasible and will it create that sense of “community belonging” that so many people look for? If the answer is “yes” then community development has a bright future in South Africa. In addition, this chapter will investigate the legislation pertaining to information access, service delivery and the obligations of Government to practice as efficiently and effectively as possible.

5.3 E-government: A local initiative or not?

Pre – 1994 South Africa’s Government system was in a state of turmoil. It was a system characterised by deception, failure and hostility. Provinces were simply a product of legal statute and co-operation between local and provincial government was non-existent. One of the influences in this regard was the establishment of the South African Constitution no 108, 1996. South Africa now has three spheres of Government, namely, Central Government which must develop and promote the well being of the whole country; Provincial Government which must develop and promote the well being of the whole province; and Local Government which must develop and promote the well being of its inhabitants. Although this section will focus primarily on local and provincial government it is interesting to note that the Constitution, “makes provision for intergovernmental relations by stipulating that government is constituted as national, provincial and local spheres (not tiers)” (Ismail *et al.*, 1997:65).

According to Chapter 3 of the South African Constitution, Section 40 these spheres of government are distinctive, interdependent and interrelated. This notion of co-operative government will form the basis of this section.

Co-operative government is a concept that addresses problem resolution related to intergovernmental relations. “It attempts to address the difficulties experienced by most large bureaucracies in co-ordinating their government functions and streamlining their administrative activities” (Ismail *et al.*, 1997:139).

As mentioned in previous chapters, e-government is one strategy that can assist in overcoming some of these difficulties. The link, therefore, between co-operative government and e-government is critical towards achieving good governance. Co-operative government can provide a supporting environment while e-government aims to address some of the difficulties associated with intergovernmental relations.

In South Africa some of the best examples of e-government can be found at provincial level. This study, however, is concerned with local community development through e-government. Therefore, research in this section is motivated by whether or not e-government can become a

local initiative through the existing roles and expectations of local government in South Africa. By using provincial government as the point of departure the researcher will establish whether or not e-government can be achieved at local level through co-operative government (in particular the relationship between provincial and local spheres).

In the Constitution, Chapter 6, Section 34 there are a number of functions assigned to the ongoing development of Provincial Government. These include the power of provincial legislatures, legislative authority and public access to and involvement in provincial legislature. The roles of provincial government can be defined as follows: (Titus, 2000:19)

- A strategic role
- A development role
- An intergovernmental role
- A regulatory role
- An institutional development and capacity building role
- A fiscal role
- A monitoring role
- An intervention role

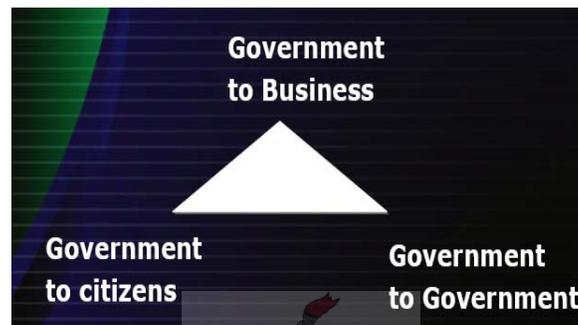
Local government also has specific purposes that should be considered. According to Zybrands (2001: 216) municipalities have the following functions:

- Providing democratic and accountable government for local communities
- Ensuring the provision of services to communities in a sustainable manner
- Promoting social and economic development
- Promoting a safe and healthy environment
- Encouraging the participation of communities and community organisations in the matters of local government
- Achieving objectives within financial and administrative capacity.

From the points above it is clear that provincial and local government have more in common than both just being spheres of Government. Many of their functions are similar and roles aligned in order to help create a notion of co-operative government. The biggest difference between the two is in the number of beneficiaries and the expectations of these beneficiaries for provincial and local government to deliver efficient and affordable services.

From the international case studies the researcher has drawn the conclusion that the e-government initiative is more than just a policy idea with no implementation plan to substantiate it. It is about access, good governance and the ability to meet citizens' needs in a timely, affordable, efficient manner. More so, it is about communication and development. Within the e-government initiative it is possible to identify a triangular relationship between the different constituents. Figure 5.1 illustrates this relationship by showing that at one point or another we are all citizens.

Figure 5.1: The triangular relationship



(Source: State Information Technology Agency (SITA), 2002:13)

In South Africa, e-government is starting to take shape at provincial level. At present all provinces have websites that provide information. The two provinces that have developed ICTs and government to the fullest are the Western Cape and Gauteng. The reason is because these two provinces have the advantage of a well developed communication infrastructure due to their being in economic hubs.

Having established itself at provincial level, the researcher is interested whether or not the e-government initiative can be implemented at local level too? From the research conducted it has become evident that e-government is a strategy designed to satisfy the needs of citizens and produce customer satisfaction. Therefore, if the strategy is to succeed in this objective then it is best implemented at local level.

E-government is one strategy that can help create that all important link between citizens, Government and business (as can be seen in Figure 5.1). A communication and development strategy such as e-government not only has the ability to link all sectors of society but it also provides a means of integrating people and infrastructure thus facilitating business growth as well as being a socio-economic development strategy in its own right (Stavrou, 2001). As a result of this reality, access and communication are becoming key concepts in local governments'

development efforts. Both are critical to address the issue of the digital divide and create a greater sense of empowerment amongst communities across South Africa.

Community development is one of the biggest responsibilities facing local government in South Africa. Unfortunately it is also one of the biggest challenges. In many provinces, particularly the Northern Province, the digital divide continues to grow. The primary developmental role of local government is to “promote effective poverty alleviation through the maximisation of growth and social development initiatives, while alleviating spatially entrenched socio-economic inequalities in an environment of limited resources” (Stavrou, 2001:4) This incorporates four interlinked approaches:

- Integrated planning, budgeting and management
- Managing the growth of human settlements
- Mobilising capacity for effective service delivery
- Linking growth and development

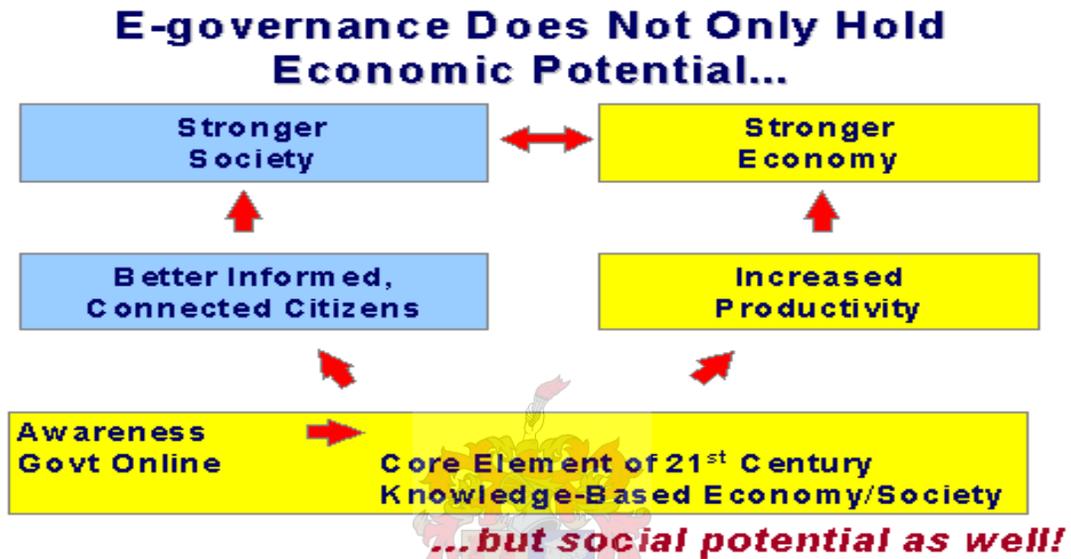
One area that e-government could make a difference is in helping to manage the growth of human settlements. “One of the roles of local government is the promotion of more effective information flows within government and between the government and communities. It is thought that a more effective flow of information will improve the implementation of government policies and programmes, a tool often neglected by development and planning initiatives. Telecommunications and postal services are vital for communication but very few government plans take into account the fact that many communities in South Africa do not have the basic infrastructure necessary to receive/access information” (Stavrou, 2001:4).

E-government could help address this situation by ensuring that the necessary infrastructure is in place to support community development. It is an initiative that has gains for both government and business therefore neither side should want to disgrace the other. The best way for these two sectors to work together is through a co-operative public-private partnership. The success of e-government lies in integration. The e-government initiative will generate a better flow of information, thus more trust in Government and last but not least, a sense of empowerment for local citizens. The final result will be sustainable local community development.

The researcher acknowledges that the e-government initiative will not have an immediate impact on some of the poorest areas of society. Access to public information and basic services is a human right and with the world becoming an “Information Age” South Africa and its nine provinces need to initiate the e-government process as soon as possible. It will, however, take

time to infiltrate into some of the more rural communities. An important point to note in this regard is that e-governance does not only offer economic potential but social potential as well. Therefore it is a strategy that will help to reduce some of the inequalities South Africa faces. Figure 5.2 illustrates these potentials:

Figure 5.2: The ultimate benefits of e-governance



(Source: South African Green Paper on Electronic Commerce, 2001, Theme 4:10)

This figure illustrates the relationships that exist within the e-government initiative. Due to its integrated nature this initiative offers important developmental benefits such as: community empowerment; informed citizens; access, economic gains and increased productivity. If South Africa is going to bridge the digital divide, a transformation needs to take place at local level. For this to happen, Provincial Government needs to step up to provide support for local municipalities and show them how change can be achieved. Provincial departments must conform to the constitutional mandate of co-operative government as set out in the Constitution (Chapter 3: Section 41(1)). In addition there is need for the development of a National Information Management system which would: (SITA, 2002)

- Co-ordinate, monitor and support integrated development planning activities
- Build capacity and knowledge sharing within the three spheres of government.

The objective of this National Information Management System is to connect National, Provincial and Local Government.

From the above paragraphs the researcher concludes that e-government can and should become a local initiative. This opinion is supported by an intervention recently undertaken by the City of Cape Town. In addition to having their own website they have initiated a “smart city” strategy that aims to reach out to citizens without access to information technology and its opportunities (See Annexure 10 for an article detailing this approach).

5.4 Legislation pertaining to the e- government initiative in South Africa

Establishing clear and unambiguous legislation to support a government initiative is crucial to the success and sustainability of that initiative. Although e-government is a relatively new and innovative initiative, this strategy requires sound guiding principles that provide a basis for implementation. For this reason, the researcher has chosen to discuss some of the important pieces of legislation pertaining to e-government in South Africa, particularly at local level. It is important to note that this legislation is not only relevant to e-government. Each document makes stipulations and provides guidelines that should be considered during implementation of the e-government initiative. The following legislature will be discussed:

- Batho Pele – People first: White Paper on Transforming Public Service Delivery 1997.
- Promotion of Access to Information Act no. 2 of 2000
- The Municipal Systems Act no. 32 of 2000
- Electronic Communications and Transactions Act no. 25 of 2002

The issues discussed in this section include: The citizen as a customer; openness; transparency and accountability; access and good governance.

1. *Batho Pele – People First*

The Batho Pele represents Government’s commitment towards increased efficiency and a reduction in wastage within the Public Service. “Its aim is to progressively raise standards of service, especially for those whose access to public services have been limited in the past and whose needs are greatest” (Batho Pele, 1997:1). This aim is linked to the e-government initiative, which also strives for improved standards of service and putting the citizens’ needs first. The purpose of the Batho Pele is to provide a; “policy framework and practical implementation strategy for the transformation of public service delivery” (Batho Pele, 1997:2).

E-government is a transformational process that calls for a shift in management thinking and modernisation of the public sector. Batho Pele recognises the need for change and notes that

such modernisation of the public sector cannot take place in isolation: “The introduction of a service delivery improvement programme cannot be achieved in isolation from other fundamental management changes within the public service. It must be part of a fundamental shift of culture whereby public servants see themselves first and foremost as servants of the citizens of South Africa, and where the Public Service is managed with service to the public as its primary goal. Improved service delivery cannot only be implemented by issuing circulars. It is not only about rule books and ‘prescripts’, because it is not simply an ‘administrative’ activity. It is a dynamic process out of which a completely new relationship is developed between the public service and its individual clients” (Batho Pele, 1997:3).

The Batho Pele consists of eight principles. Three of these principles, namely, access; information and openness and transparency are important for the e-government initiative.

- Access: “All citizens should have equal access to the services to which they are entitled” (Batho Pele, 1997:8). The e-government initiative can assist this aim through the creation of MPCCs’ where disadvantaged communities can go to access the government portal. Through the establishment of MPCCs’ all citizens will be given the option of whether they want to access the government online.
- Information: “Citizens should be given full, accurate information about the public services they are entitled to receive” (Batho Pele, 1997:8). The e-government initiative offers a new, convenient and cost effective medium through which public information can be broadcast.
- Openness and transparency: “Citizens should be told how national and provincial departments are run, how much they cost and who is in charge” (Batho Pele, 1997:8). Through the use ICTs the public sector can be transformed from a bureaucratic structure to a more open and transparent form of government. E-government is a strategy well suited to supporting this transformation process and improving the relationship between government and citizens.

2. Promotion of Access to Information Act, no. 2, 2000

The Promotion of Access to Information Act stipulates the rules, regulations, processes and obligations associated with access to information held by the State. It is “to give effect to the constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights; and to provide for matters connected therewith” (Promotion of Access to Information Act no. 2, 2000a:9). The effective implementation of this Act is critical if the e-government initiative is to succeed.

Although this initiative strives to make more government information available to the public it is important some limits and procedures are still enforced, otherwise information that is not suitable for public knowledge could fall into the wrong hands.

3. *The Municipal Systems Act, no. 32 of 2000*

The Municipal Systems Act no. 32 of 2000 provides the necessary guidelines that enable local municipalities to bring about development that will improve the quality of lives of local community members. Ensuring access to essential services and working in partnership with the municipality's political and administrative structures are just two of the issues discussed in this Act. Two chapters of importance to the e-government approach to service delivery are Chapter 4: Community Participation and Chapter 5: Integrated Development Planning. Chapter 4 states that a municipality must establish appropriate mechanisms or procedures for citizen participation in government processes. E-government is one such mechanism. If implemented at local level, it provides a convenient way for e-literate people to participate in government processes. Chapter 5 discusses the Integrated Development Plan. This type of development cannot take place without participation and co-operation from all sectors of society. With the additional pressure of having to bring ICTs into the equation the link between integrated development planning and strategies such as e-government is becoming increasingly important. According to the Municipal Systems Act, no. 32 of 2000 the Integrated Development Plan must reflect: "the council's development priorities and objectives for its elected term, including its local economic development aims and its internal transformation needs" (Municipal Systems Act, no. 32, 2000b, Chapter 5, Section 26(c):38). With access to information becoming more important and the influence of ICTs on the internal transformation of local administrations, the e-government strategy is already starting to make its mark on local government in South Africa.

4. *Electronic Communications and Transactions Act, no. 25, 2002*

The purpose of this Electronic Communications and Transactions Act (ECT), no. 25, 2002 is: "To provide for the facilitation and regulation of electronic communications and transactions; to provide for the development of a national e-strategy for the Republic; to promote universal access to electronic communications and transactions and the use of electronic transactions by Small, Medium and Micro Enterprises (SMME); to provide for human resource development in electronic transactions; to prevent abuse of information systems; to encourage the use of e-government services; and to provide for matters connected therewith" (ECT, 2002:1). This Act is the closet piece of legislation that South Africa has regulating the implementation of and issues surrounding the e-government initiative. The objectives of this Act which can be found in Chapter 1(2):1,

clearly denote the importance of the e-government initiative in creating an open, transparent form of government that recognises the importance of ICTs to facilitate e-service delivery and the importance of an information economy for the social and economic development of this country. The ECT regulates some of the key issues of e-government, such as access; authentication; consumer protection and cyber crime. This Act, therefore, is the cornerstone of the e-government initiative in South Africa.

PART TWO: The influence of citizens – the role of citizen participation

5.5 Introduction

Citizen participation has become a key word in development strategies across the globe. Over the last few years the debate on citizen participation and whether it is good or bad has ceased (Swanepoel, 1997:4). Today, citizen participation is recognised within the context within which it takes place. According to Theron (2005a:113) the core values of citizen participation read as follows:

- The public should have a say in decisions about actions that affect their lives;
- Citizen participation includes the promise that the public's contribution will influence the decision;
- The citizen participation process communicates the interest and meets the process needs of all participants;
- The citizen participation process seeks out and facilitates the participation of those potentially affected;
- The citizen participation process communicates to participants how their inputs affected the decision and;
- The citizen participation process provides participants with the information they need to participate in a meaningful way.

In the researcher's opinion there is a definite link between citizen participation and empowerment. This is supported by the "strong interpretation" of citizen participation as cited in Theron (2005a:117). According to this interpretation empowerment and participation share an equal status in terms of development. However, what is the relevance of this relationship in terms of ICTs? With the advent of digital technologies and the increasing role of ICTs in public sector performance, one of the potential benefits of ICTs is their ability to enhance democratic processes and practices in society. In this sense ICTs have become critical in promoting the principles of a "digital democracy" (Theunissen, 2001:146) which can be defined as follows:

“...any electronic exchange of value in the democratic process. The spectrum includes campaigns, elections, voter registration, voting, public opinion polling, communication among elected representatives and their constituencies, universal access to technology from public libraries, wired legislative bodies, and legislative processes that encourage greater citizen participation” (Caldow, 1999:10).

Through the provision of access to information and a selection of different ways to participate in government citizens will feel a greater sense of empowerment and thus power of the decision that affects their quality of life. It is this sense of empowerment that will improve citizen participation.

For the purposes of this study, the researcher is concerned with participation at local or grass roots level. The question is whether or not e-government is a strategy that supports citizen participation at this level. The section will answer this question by showing that e-government and participation are linked and that this link can be established at local level with the support of local development plans such as the Integrated Development Plan (IDP).

5.6 E-government as a citizen participation strategy

“The empowerment of the people is necessary so that they can participate in the process of changing their lives...freedom of information by itself, good solid, acceptable to all the people does not necessarily solve the problem. What clearly becomes important is that the government itself should assume a proactive stance in terms of informing people” (Mbeki, 1995).

The role of ICTs in public sector organisations is becoming more and more apparent. Their role, however, is not limited to improving the efficiency of Government departments. With the rapid development of online communication strategies such as the Internet, there are many more opportunities for people to be better able to participate in government. In this section the researcher will show that the e-government initiative is a citizen participation strategy.

Communication is the key to citizen participation and without participation development cannot be successful (Cloete, 2005). Local government should focus on improving participation in the target areas through negotiations and allowing the public to express their views. The Government Communicators’ Handbook outlines the following key elements of the development communication approach:

- It must be responsive/empowering:
Communication must have, as its central message, the improvement of quality of life for all citizens. It does not provide futile or sterile information, only deemed essential by central

planners. People understand their own needs and through this approach communication becomes a tool in the planning and development process and not a mechanism to persuade communities once unpalatable decisions have been made.

- It is interactive and hinges on feedback:

It is fundamentally, about consultative processes being managed at community level and encourages intense interaction around Government's programme of action. It is not a one-way based process but involves dialogue mechanisms about the information, which was transferred.

- It should be innovative and creative:

When the message is uninspiring it affects the entire communication. The message must show clearly how the information transmitted will make a difference in the life of the recipient.

- It enhances participatory democracy:

This approach builds participatory mechanisms and functional networks involving NGOs' and CBOs' and traditional leadership structures while also encouraging links with networks from across the country and indeed all over the world. It is not about "government speak."

- It is about sustainability and continuity:

All appropriate forms of media have been used to provide required information and two-way communication services, e.g. print and electronic media, the Internet and telecentres.

From the above points it is clear to the researcher that the process of communicating development is about participation, social learning, empowerment and sustainability i.e the building blocks of development (Theron, 2005a:119). In addition it is about being innovative and interactive. The e-government approach is one that embraces all these elements and therefore is a strategy for communicating development that local government should seriously consider.

In addition to being a communication strategy that enhances citizen participation, the e-government approach can also be considered a citizen participation strategy in its own right. The reason for this is that this approach uses websites as its method of communication. According to Theron (2005a:127), websites can be considered as level 1: Citizen participation strategies through "informing" participants. Websites in this regard refers to: "websites which contain information, announcements and documents and allow the public to provide their views on an issue or project; public debates on important issues via the Internet etc."

Development is a process that requires both participation and communication (Cloete, 2005). E-government is a strategy that incorporates both these elements. Local government must understand that communication is a 2 way process. The communication language must be simple and easy to follow and the information being communicated must be clear and concise (Cloete, 2005). The e-government initiative offers a uniform, standardised approach to communication and the provision of information. Effective communication necessitates feedback processes or a response in some form. This feedback is important in the creation of opportunities.

E- government is a strategy that can enhance citizen participation in the following ways: (The Working Group on e-government, 2002:24)

- ***Learn as you go:***

When it comes to e-government and citizen participation, all countries, whether developed or developing, are in the learning process. All countries are having to learn how to organise, manage and encourage citizen participation. Citizen participation is becoming an increasingly important element in all aspects of the e-government process from defining a society's vision to determining e-readiness. "The public which includes the private sector, civil society groups and individuals can participate in e-government affairs in many different ways by: (i) commenting on e-government plans themselves; (ii) retrieving information (e.g. accessing information from government websites) or offering information (e.g. through citizen surveys, focus groups or e-mails); or (iii) participating in dialogues, both citizen dialogues with the government and citizen to citizen dialogues hosted by the government" (The Working Group on e- government, 2002:24).

An important part of participating in public affairs is receiving some form of feedback. Citizens who participate will expect something in return so that they feel their input has been taken into account.

- ***Click and collaborate:***

"Participation requires collaboration. Being willing to collaborate with the private sector and civil society groups who may possess much needed expertise and resources is an important element of readiness. Government must see itself as a facilitator and not simply a director of e-government projects. Lead the e-government effort, but replace command-and-control with click-and-collaborate" (The Working Group on e-government, 2002:24).

- ***Citizens are the e-government experts:***

Ultimately the e-government initiative is meant to serve citizens. Therefore, it is critical that projects are designed to serve the public directly, to assess their needs and solicit their input. “As importantly, all e-government services should be piloted with full participation of citizens before a government invests in or embarks on a full scale, nationwide version of the project. Without this pilot – and – citizen involvement scheme, any e-government project can be very risky” (The Working Group on e-government, 2002:24).

- ***Make public input easy:***

Participation in the e-government process should be easy and accessible. The use of ICTs, however, can mean expensive channels of communication. In countries where Internet penetration is low, government can make use of traditional methods of gaining public opinion such as group meetings and surveys (see also Theron, 2005a:127). In addition to this it is important to ensure “...that the public can give their input anonymously. This ensures that citizens evaluate government services and effectiveness openly. It is the only way that government will receive the information it needs to evaluate and improve its e-government programs and services, even improve policymaking” (The Working Group on e-government, 2002:25).

- ***E-government is evaluated through citizen participation:***

Convenient access to public services is only one element of the e-government initiative. Facilitating, broadening and deepening openness and involvement are equally important in the e-government process. Techniques such as participatory dialogue and interaction can be used to evaluate the success of e-government. “Such participation can either be discreet, one-time participation or ongoing participation by individuals or community groups. The important thing is to ask the public for feedback, and ask regularly” (The Working Group on e-government, 2002:25).

- ***Warning: be prepared for the flood:***

“When e-government enables the public to communicate with government, citizen participation often turns into a flood of communications and often complaints. Managing citizen participation and processing government-to-public contacts are big challenges for e-government” (The Working Group on e-government, 2002:25).

To help overcome this challenge it is important that Government Departments have the resources and personnel in place as well as clear policies to deal with any complaints or queries.

Mismanagement of citizen participation risks alienating the public creating even greater dissatisfaction with government processes and policies.

Citizen participation is a necessary element of any e-government initiative. However, for citizens to participate they need information. The e-government initiative can offer them this information. The following quote from Theunissen (2001:147) supports the researcher's view that access to information enhances participatory action on public affairs: "Participatory citizens need (and receive) more information in order to enhance and exercise their democratic rights [Ionescu, 1993:228]. The effective functioning of democracy has therefore become reliant on the availability of adequate information, and the individuals independent evaluation thereof [Jones, 1986:197]. Consequently, information and its accessibility and use have placed immense power in the hands of citizenry and individuals with regard to their relationship with the state. The flow of information and effective communication can therefore be considered crucial to the democratic political process [Mulgan, 1991:7], and are especially important for nations such as South Africa who subscribe, or want to subscribe, to the democratic ideal."

5.7 The Role of the Integrated Development Plan (IDP): *Participation at local level – Cape Town IDP*

The point of departure for this section is that the Integrated Development Plan (IDP) is the primary plan guiding development efforts at local government level. In addition to this, the success of IDP depends largely on how the public sector and the general public embrace the number one building block of development, namely, citizen participation (Theron, 2005d: 146). With the increased role that ICTs are having on development efforts and the importance of participation at local level, the link between ICT access, participation and local development will have a profound effect on the outcome of e-government in South Africa. Thus, a strong link needs to be established between IDP and the e-government initiative. This section will take a closer look at the Cape Town IDP and provision it makes for some of the elements of the e-government initiative.

The integrated nature of the IDP means that it should be approached in an all encompassing, holistic manner. According to the Cape Town Draft IDP 2004: "The Municipal Systems Act, no. 32 of 2000 requires that municipalities must draw up an IDP which is a strategic plan upon which all development within a municipal area is based. The plan is developed in consultation with the community, stakeholders, Province and National Government. The IDP is the principal planning instrument that guides and informs the municipal budget" (Draft IDP, 2004:4.) The need for a holistic local development approach means that no new initiative should be overlooked. E-

government is no exception to this. The e-government initiative is not only about information access but also about improving peoples' lives, therefore, it is important that this initiative is considered in IDP.

The IDP is both a plan and a process. The purpose of the IDP is to: "foster more appropriate service delivery by providing the framework for economic and social development within the municipality" (Department of Provincial and Local Government, 2005:18). In doing so it:

- Contributes towards eradicating the development legacy of the past;
- Operationalises the notion of developmental local government;
- Fosters a culture of cooperative governance.

One of the conceptual elements of the Cape Town IDP is the importance of "understanding our city." This concept can be clarified in terms of four key areas, which according to the South African Cities Network City Scoreboard (www.sacities.net), are what makes a successful city.

- Cities have to be inclusive: *This means that cities have to ensure that all citizens share in the benefits and opportunities provided by the city - economic, cultural and recreational.*
- Cities have to be productive: *The resources of the city are used effectively to generate economic benefits. Infrastructure, people and the environment are city assets that play a role in the productivity of cities.*
- Cities have to be well governed: *Cities are spaces in which many different agencies shape development and change, including local authorities, provincial and national government, parastatals, business and citizens. A well governed city implies that all these agencies work together to ensure that the city works effectively and efficiently.*
- Cities have to be sustainable: *The way in which the city develops needs to ensure that it doesn't result in social instability or that its natural resources are damaged or depleted.*

(Draft IDP, 2004:7)

The Cape Town IDP 2004/2005 shows that this city has indeed made some progress in terms of development efforts. There still however, remains the challenge of achieving a sustainable level of local development. An important question that needs to be asked is: "What needs to be done to shift Cape Town's development path to one that will ensure sustainable development through greater inclusiveness and increased productivity of the city? Section C of Cape Town's IDP strategy tries to answer this question. The researcher will discuss those answers that in her opinion relate to the e-government initiative. The reason for this is that the Cape Town IDP does

not make specific mention of e-government but rather addresses several issues that are important to the success of e-government.

The City vision for Cape Town reads as follows: (Draft IDP, 2004:14)

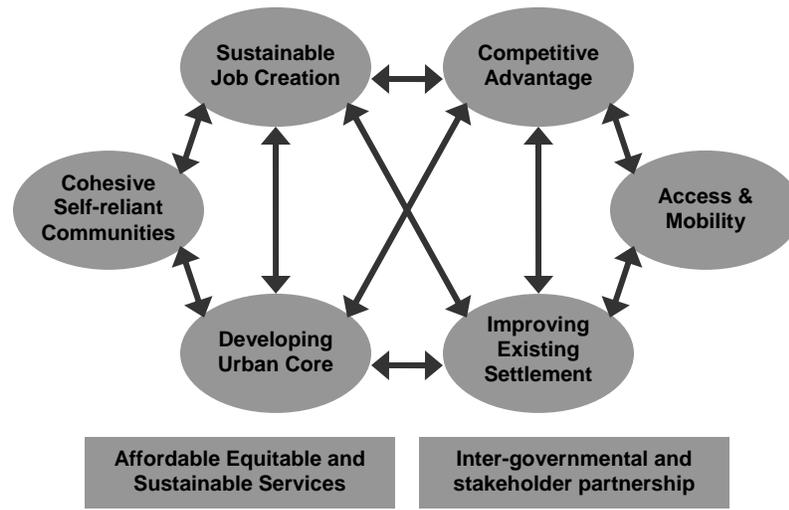
- A sustainable city that offers a future to our children and their children;
- A dignified city that is tolerant, non-racist and non-sexist;
- An accessible city that extends the benefits of urban society to all and builds the capacity of its people;
- A credible city that is well governed and trusted by its people;
- A competent city with skills, capabilities and competitive edge;
- A safe and caring city that cares for its citizens and values the safety and security of all who live, work and play in it;
- A prosperous city known for its ability to compete globally in the 21st century and its commitment to tackling the challenges facing South Africa;
- A city known for its leadership in Africa and the developing world.

So how does the Cape Town City Council intend to achieve this vision? Their strategic approach outlines six interrelated strategies designed to help Cape Town along its developmental path and achieve its overall vision. The six strategies are: (Draft IDP, 2004:14)

- 
- Shifting the development emphasis from the periphery to the urban core;
 - Upgrading existing settlements to places of dignity and opportunity;
 - Building competitive advantage;
 - Facilitating sustainable job creation for all;
 - Building co-hesive self-reliant communities;
 - Improving access and mobility.

It is important that these strategies are viewed from a holistic perspective and not as individual approaches. Figure 5.3 illustrates the integrated nature of these strategies.

Figure 5.3: The six development strategies and two fundamental foundations



This set of six interrelated strategies seeks to pull together our best thinking and our best practices into a simple and tangible framework that enables implementation and learning through doing. It seeks to achieve the necessary scale and impact required to shift the City on a more efficient and equitable development path.

(Source: Draft IDP, 2004:17)

From an e-government and participatory perspective the researcher would like to take a further look at the fifth strategy: Building co-hesive self-reliant communities.

“This strategy focuses on improving community cohesion and self-reliance through creating a supportive environment and encouraging community organisation, interconnectedness and leadership. This strategy recognises that people are our most important resources and that the provision of basic services and infrastructure will not automatically give rise to socio-economic development. Social cohesion is critical for building safer communities for societies to prosper economically and for development to be sustainable” (Draft IDP, 2004:30).

Earlier in this chapter the researcher indicated that e-government could make a difference in helping to manage the growth of human settlements. The development of self-reliant communities is simply an expansion of this.

Throughout this study the researcher has promoted the idea that ICTs can have a positive impact on community development. Ultimately the outcome of this impact should be a self-reliant community where everyone who wanted to participate in the process could. So how is it that ICTs can promote self-help?

1. ICTs have the power to create a sense of empowerment amongst communities. This is achieved by transferring more power and resources to community members thus introducing the notion of self-help, as confirmed by Theron (2005a: 119-123).
2. If used correctly ICTs can create a brighter future with more opportunities. Proper education and training is essential for South Africa's youth if they are going to succeed in an economy driven by ICTs.
3. Access to government information and the ability to participate in public affairs will give citizens a greater sense of "participation and responsibility." This is likely to lead to improved morale amongst community members. Although many disadvantaged communities face the problem of poor access to information, the important element is that the choice of participating or not is available. It is up to the citizen to take the final step.

The Cape Town Draft IDP 2004/2005 recognises the importance of ICTs in community development. Each strategy in the Cape Town IDP has identified several immediate initiatives that should be implemented. One of these initiatives in strategy 5: Building cohesive self-reliant communities, is: making information accessible through libraries, community centres and digital business centres. This strategy forms a close link to the e-government initiative. With local legislation paving the way for improved information access the e-government initiative is likely to have a positive impact on local communities.

5.8 Summary

E-government may still be in its early stages of development but the early commitment of Government to this initiative shows their ambition and determination. "At a parliamentary media briefing held on 13 September 2000, the Minister of Public Service Administration, Geraldine Fraser Moleketi, announced that, with South Africa having the highest number of Internet connections in Africa, the government recognises the role of information technology in providing opportunities to assist in service delivery and enhance government efficiency" (Moleketi, 2000).

Current trends regarding e-government in South Africa are primarily focused on the integration of structures and processes both between and within public institutions, and not necessarily between public institutions and their key clients – the general public. "However, government initiatives include the provision of multimedia (computer-based) kiosks and bringing certain services such as those provided by the South African Revenue Service (SARS), into a position where citizens may submit their tax forms electronically in the future. Another example is the website of the Independent Electoral Commission (IEC), which members of the public may

access to verify their voting status and find out where they must vote, etc. These are but a few of the web based services provided by the South African Government, but are reliant on access to the Internet via traditional methods such as the desktop computer” (Theunissen, 2001:148).

One of the primary objectives of Government is to function as an integrated entity with a single corporate identity. According to Theunissen (2001:148), “By developing a comprehensive homepage, the government has created a mechanism whereby information from government departments, provinces and other government bodies is accessible through a one stop gateway. This will give users a comprehensive overview of information available on government websites and enable them to quickly navigate the vast information resources available in government. The main objectives are to:

- Facilitate easy access to government information on the Internet
- Avoid duplication of government information on the Internet
- Ensure a co-ordinated approach to government Internet publishing
- Meet transparency goals
- Keep the electorate informed
- Place information on the global network”.

At present the South African government has achieved STAGE 1 of the e-government initiative: Web Presence. The primary Government resource on the web can be found at <http://www.gov.za>. This website allows access to all current pieces of legislation, including the Constitution, Bills, White Papers and speeches. From the researcher’s own experiences with using this website she concludes that it very useful for research purposes, however, it has yet to offer interactive features or online services.

So what is holding South Africa back? The legislation is in place and Government has shown its commitment to implementing this initiative yet, from an international perspective it seems that South Africa is still very far behind. Reasons for this include:

- Interoperability issues: A balance needs to be found between implementing First World strategies in a Third World country. South Africa has its own unique developmental aspirations that need to be considered when adopting strategies used by the developed world.
- Security and Identity Management Issues: Internet security issues need to improve in order for citizens to trust and adopt the e-government initiative.

- Organisational issues: Implementing technology is easy but teaching people new skills and helping them adapt to organisational change is more difficult.
- Clients and the type of services needed.

An important issue discussed in this chapter is the relationship between citizen participation and e-government. The research provided for this section shows that the e-government approach is indeed a promoter of citizen participation and therefore does have a role in the process of community development. “The responsiveness of government to the most disadvantaged communities is only ensured if the provincial (and local) spheres of government honour their obligation to enlist the maximum amount of citizen participation in the public policy design and delivery process...The ongoing efforts by provinces to maximise citizen participation in the development delivery process represent perhaps the most fundamental achievement of provincial government” (Besdziek, 2001:198). E-government is a strategy that has been created on the principle of citizen participation. With the support of local government legislation such as the IDP the e-government strategy does create that sense of “community belonging” that so many citizens across South Africa seek.

From this chapter the following points can be deduced in relation to the stated objectives of the study: local governments to are embarking on the e-government initiative. ICTs do have the potential to be utilised for either good or evil. It is the manner in which they are utilised that will determine whether or not the potential benefits are received in a positive or negative manner by society. From a socio-economic development perspective it is important that the e-government approach is holistic and humanistic in nature. Emphasis should not be on physical development but on the human being and their participation in the process. “People must progress in realising their inner potential while working to fulfill their physical needs” (Swanepoel, 1997:3).

This chapter shows that development efforts can be better expedited through the use of ICTs, in particular, through the e-government approach.

CHAPTER SIX: CASE STUDY – THE CAPE GATEWAY

6.1 Introduction

“In today’s world no country or region is untouched by the forces of globalisation and the rise of the knowledge economy. Such forces present obvious opportunities for wealth creation and the betterment of the human condition in those countries and regions that are well equipped to take advantage of them. But for those who are less well equipped, particularly in the developing world, globalisation can just as easily lead to growing poverty, inequality and marginalisation. The challenge facing countries such as South Africa and regions such as the Western Cape is therefore, how to channel the forces of globalisation for the elimination of poverty and the empowerment of people to lead to fulfilling lives” (DEAAT, 2001:vii).

The above quote forms a good point of departure for this chapter, which will focus on how the Western Cape has successfully managed to channel forces such as globalisation through an online initiative. The purpose of this online initiative, which will be discussed later in the chapter, is to help prepare the Western Cape for becoming a knowledge economy of the 21st Century. Up until recently there has been some debate about the efficiency and quality of service delivery within provincial government in South Africa (Besdziek, 2000:196). The following quote by Deputy President Thabo Mbeki (1999) illustrates the need for a change process in provincial government across South Africa:

“The very future of provinces has become a topic of public debate, with calls for changes to the structure and powers of the provincial sphere, and even the number of provinces. It is true that the establishment of nine provinces has brought government closer to the people, created more space for regional diversity and provided a mechanism for the implementation of national policies. At the same time, serious concerns have been raised about the state of provincial governance, underscored by the instances of financial crisis and the failure of delivery institutions, which we have experienced during the last five years” (Mbeki, 1999:5-6).

The transformation to a knowledge economy will mean the introduction of a variety of new ways of working, new management practices, new skills amongst employees and a new role for Government. How does the Western Cape intend to become a knowledge economy? The following “golden rules” taken from lessons learned and experiences in other parts of the world constitute a recipe for success: (DEAAT, 2001:ix)

- Develop a work force with high-level cognitive skills and the capacity to continue learning at high efficiency;
- Put in place conditions and policies to attract foreign investment and well qualified expatriates;
- Speed up the diffusion of knowledge through specialised training;
- The provision of an efficient and excellent low-cost environment and excellent low-cost infrastructure;
- The creation of an environment that supports entrepreneurs and business start-ups;
- Encourage the development of world class universities with close ties to the business communities;
- Encourage inter-firm collaboration, networking and knowledge training.

This chapter will discuss one of the approaches implemented by the Provincial Government of the Western Cape (PGWC), namely, the Cape Gateway. This is one of the best working examples of the e-government approach in South Africa that is fully operational. The following quote supports the development of such an initiative at provincial level: “One of the major objectives of provincial government is to provide user -friendly and excellent services to the people. E-government is an important means to achieving this goal, and much valuable work has already been done in the planning of e-government in the province...The role of provincial government in this effort should be understood as a kind of cement that keeps the overall e-government implementation together. One element that will be helpful in fulfilling this role is the creation of an information gateway that encompasses broader Western Cape initiatives and it is in this capacity in particular that the planning of the Cape Online programme is needed” (PGWC, 2001a:8).

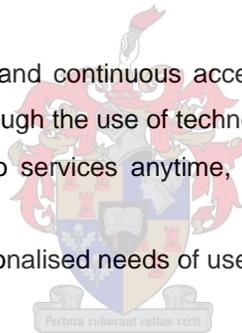
As yet there are no “best practice” examples of e-government at local level. For this reason the researcher chose the next best thing, e-government at provincial level. In this chapter, however, it will become clear that the Cape Gateway is not an isolated provincial initiative. It embodies the help and knowledge of both local and national spheres of Government.

6.2 What is a Gateway?

A Gateway is a website that acts as a doorway to the Internet or a portion of the Internet. A Gateway can also be called an Internet portal website. The purpose of such a website is the following: "To be the first website a user will find or use when seeking information or a service from a particular organisation. It provides guidance to users for finding information, using electronic services, and sending questions and comments. Portals provide a broad array of resources and services, including a directory of other websites, a facility to search for other sites, news, e-mail, phone and map information, and sometimes a community forum" (Definitions of 'portal' on the web, 2005).

According to SITA (2002) a gateway can act as a single point of access to all information about, and services provided by the government. For this reason the PGWC chose to implement the Cape Gateway: a single point of access to government information and services for the citizens of the Western Cape. The development of the Cape Gateway has the following implications: (City of Cape Town, 2003)

- The creation of a seamless and continuous access to information and services of the South Africa Government through the use of technology;
- Provision of online access to services anytime, anyplace (24hours/7days a week/365 days a year) and;
- The ability to respond to personalised needs of users.



Although a gateway offers the advantage of a "one-stop" channel to online information and services, there are considerations such as "how" and "what" type of services can be offered and sustained online? Such considerations were an important element of the PGWC decision to implement a gateway. Initial research carried out for the design and development of e-government services in the Western Cape concluded that what can be delivered online are certain elements of services (City of Cape Town, 2003:14). These include:

- Promotion:

Promotion refers to the following: "It is the dissemination of information about a service to intended beneficiaries. In order to benefit from a direct service or comply with an obligation, beneficiaries must first have knowledge of the service...The Internet and related digital media are ideal for informing enquirers about the range of services offered and publishing information about these services. This information can be relatively easily updated without the need to reprint leaflets and booklets" (City of Cape Town, 2003:14).

- Access:

Access refers to the following: “The selection or procurement of the service required by the beneficiary, with appropriate qualification of the applicant...Providing access to a service means providing information about it, and the means to apply for it. This can include electronic forms that can be downloaded for completion or even forms that can be completed and submitted electronically” (City of Cape Town, 2003:14).

- Fulfillment:

Fulfillment refers to the following: “This is the actual provision of the service resulting in the beneficiary experiencing the benefits of the services...The Internet is really only useful for the fulfillment of information based services, that is where the benefit is in the form of information” (City of Cape Town, 2003:15).

- Support:

Support refers to the following: “Providing help, training, information, repairs and other ancillary activities to make sure that the beneficiary receives the full benefits of the service” (City of Cape Town, 2003:14). This included business support services, e.g. queries about payments or charges.



Almost every service can be broken down into these four elements and together, these elements represent a value chain.

Through the implementation of a gateway the PGWC hopes to become more responsive and transparent to the needs of local citizens. Convenient accessibility is an important element of the gateway initiative. The creation of a responsive online Government has the following implications for citizens: (SITA, 2002)

- Accessible information and services on or before demand;
- Accessibility in convenient locations, i.e. home, work, rural and urban;
- Accessibility in a multi-channel manner, i.e. in person, by fax, phone, e-mail, online;
- Improved integration and transparency through the provision of a “one-stop” service.

A gateway has the ability to offer a broad range of services and resources. Therefore it is a sensible choice for an online initiative that will make the PGWC more accessible to its citizens. In addition to offering a more responsive government, a gateway also has the potential to improve communication between citizens through the use of online tools such as free e-mail and chat

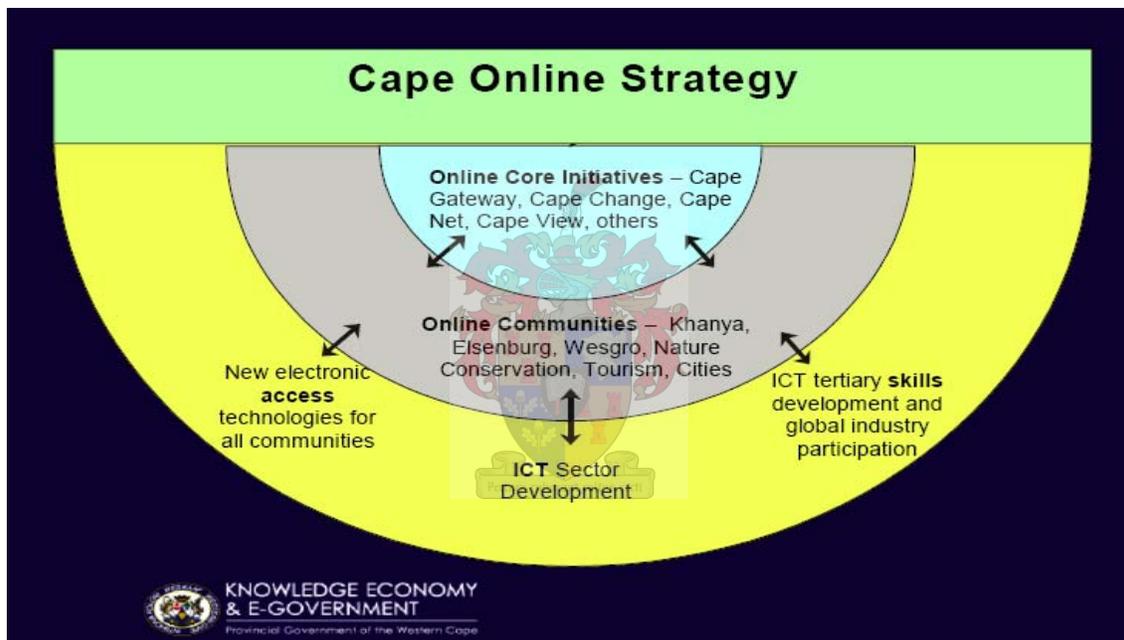
rooms. In this way a gateway can help create a new basis for communication between: government to citizen; government to business and Government to Government.

6.3 The Cape Gateway

The Cape Gateway (available at <http://www.capegateway.co.za>) is part of a greater online initiative called the “Cape Online Strategy.” This strategy is composed of a number of core online initiatives including: Cape Change; Cape View; Cape Net and of course the Cape Gateway.

Figure 6.1 illustrates the nature of these initiatives in relation to the Cape online strategy.

Figure 6.1: Cape Online Strategy



(Source: PGWC, 2003:2)

From the above figure it is clear that each of these initiatives is taking place within the broader context of ICT development and change, including: (PGWC, 2001a:10)

- The degree to which businesses and citizens have access to pertinent new technologies;
- The health and growth of the ICT industry in the private sector;
- The development of critical ICT skills among workers.

All these initiatives are currently underway in the Western Cape. This section will focus on the Cape Gateway initiative. It is important to note that this is not an isolated initiative. “Whilst the

narrow goals of the Cape Gateway can be achieved in isolation, there has always been an expectation that the Cape Online Programme would be required in order for the broader potential impacts of the Cape Gateway to succeed. Cape Online identifies the process gaps and supports the implementation of Cape Gateway by creating the environment that is required to legitimise the Cape Gateway. Process gaps extend throughout the entire administrative and service delivery structure of the PGWC and these as well as broader infrastructural and environmental concerns are addressed in the broader programme” (PGWC, 2001b:15).

In July 2001, the Provincial Cabinet approved the development of the Knowledge Economy and e-government (KEEG) Branch of the PGWC. The vision of this branch is the following: “To provide a vision, leadership, policy, strategy and operational direction in order to promote e-government and to get the Western Cape online, to ensure that the province, its citizens and its businesses derive maximum benefit from the knowledge economy” (PGWC, 2003:3). Setting up this e-government branch was an important milestone in helping the Western Cape to become a knowledge economy.

The KEEG was responsible for the creation of the Cape Online Programme. The mission of the Cape Online Strategy (PGWC, 2003:3) is the following:

- 
- To enable government;
 - To harness the capabilities of the Internet;
 - To develop knowledge capacity and promote the appropriate use of ICT;
 - To increase the internal efficiencies, and
 - To provide a better service to its citizens.

The Cape Gateway has the following specific vision and mission:

Vision:

- “Provide easy access to quality Government Information, resources and services, enabling government to improve service delivery and to create and enabling environment for economic growth to the benefit of all in the Western Cape” (PGWC, 2003:3).

Mission:

- “To provide, manage and maintain easy access to Government information, resources and services” (PGWC, 2003:3).

The Cape Gateway is the first of its kind in South Africa. It is a means of accessing government information and services. "The aim of this project is to develop a single online system that will provide South Africans with access to government services anytime, anywhere. It will deliver optimised service delivery, citizen participation and governance through technologies such as the Internet and one-stop shop services" (Mazibuko, 2005:1).

The Cape Gateway has three channels of access:

- A telephone (contact centre) 0860 142 142
- A physical walk in centre (142 Long Street Cape Town)
- A web portal (www.capegateway.gov.za)

In order to achieve a better understanding of Cape Gateway and its mission to provide improved access to services and information, the researcher decided to investigate these three channels of access further, i.e. through participatory use and observation. What follows is a brief description of the researcher's thoughts on each of the channels of access.

- The telephone (contact centre):

This is a very useful and accessible channel of access. It is as simple as picking up a phone, dialing the number and then making your request. The first voice prompt allows you to select which language you would like to communicate in with your operator. The choices are English, Afrikaans or Xhosa. Having made your selection you are then connected to an operator who will help you with your query. This channel of access is very user friendly and easy to follow. Many citizens may prefer this channel as it does allow for interpersonal communication as opposed to the website where there is no direct contact with another individual.

- Physical walk in centre:

Well located in one of the main streets in Cape Town, namely Long Street, this office type building allows free Internet access to government websites. It also offers additional consulting services for all members of the public. A personal visit to this centre revealed a friendly and inviting atmosphere, open and easily accessible to all members of the public. One negative aspect of this centre is that it is not open on weekends (See Annexure 11 for photos and leaflets).

- The Web Portal:

This is the most convenient channel of access for citizens who have PCs and the skills to navigate around the website. The Cape Gateway site offers valuable information and useful

links that may help you even further with your query. Services such as traffic fines, drivers' licences, learners' licence application forms, marriage licences, domestic workers' Unemployment Insurance Fund application forms are also available.

A case study done by Alan Levin and Ryan Dingly entitled "Opening Government Information via the Cape Gateway" (2003) reveals some interesting insights into the design and development considerations taken into account in the implementation of the Cape Gateway initiative. Some of the topics addressed include: transparency and the poor, challenges and stakeholders.

- Transparency and the poor:

According to the case study, there are many poorer areas or communities in the Western Cape that do not have Internet access either at home or at work. Two of the Cape Online initiatives address this problem: Cape Access and Cape Gateway. Cape Access in particular deals with improving disadvantaged communities' access to ICTs. The Cape Gateway initiative has addressed this problem by providing the three channels of access mentioned previously.

- Challenges:

The case study notes the following challenges regarding implementation of online initiatives such as the Cape Gateway:

- Resistance:

- Many government departments resisted the innovative ICT enabled strategies and approaches to e-transparency. One of the biggest fears was that this new efficiency would disempower them. In addition departments felt threatened as they lacked confidence in their abilities. Managers were concerned they would "lose control" of what they had worked so hard to build up. A source of much resistance was the lack of technical skills presented by business managers and the lack of business knowledge presented by IT departments.

- Implementation gaps:

- Despite broad consultation and open and representative decision-making teams, decisions within teams were not fully implemented or communicated effectively at the lower levels within departments.



- Technology and content issues:
 - Lack of uniformity has been a consistent problem in the PGWC. In addition a large amount of the information was written in “government speak.” This information therefore needed to be rewritten in English in simple language and then translated into Afrikaans and Xhosa. The complexity of the content needed to be reduced to make it more user-friendly.

- Stakeholders:

According to the case study the following organisations were stakeholders in the Cape Gateway initiative: representatives from all the departments and Ministries of the PGWC; City of Cape Town; National Department of Public Service and Administration, State IT Agency (SITA).

The intended target audience of the Cape Gateway is the population of the Western Province. For the purposes of the portal, the population of the Western Cape is comprised of all citizens and residents of the Western Cape, all businesses and organisations in the province or active in the province, parties and individuals interested in the Western Cape, potential traders, investors, tourists, researchers and others seeking government information or services about the province (PGWC, 2003:5).

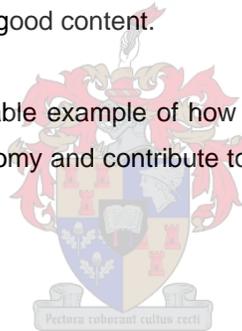
The Cape Gateway portal is used to disseminate information about all the government departments and services offered by the PGWC. There is, however, also information available about National, Municipal and the City of Cape Town Government. An important consideration to be taken into account in implementation of the portal was language requirements. In order to address this issue in a democratic and unbiased manner, a needs assessment market research project was undertaken at the Klein Karoo Kunstefees in 2002 and 2003. The results of this research were included in the overall framework contributing to the development of the portal.

Having been established in 2001, and completed and launched in 2004, the development of the Cape Gateway portal has been very rapid. It is now a fully operational, easily accessible website that offers access to a variety of government information and services. “Information is provided using a standardised data structure on all the vertical market segments; for example, health, housing, licencing, transport and education. Various views on information are provided. A citizen or business can have a view according to life event/stage (e.g. marriage, home, ownership, pensioner) and topic (e.g. agriculture)” (Levin & Dingley, 2003:1).

Since being launched in 2004, the Cape Gateway has contributed towards promoting the appropriate use of ICTs for development, internal efficiency and citizen participation in government processes. To date, some of the most important deliverables of this initiative include:

- A communication strategy has been drawn up that details priorities and actions and guides all further communications and marketing activities;
- In February and March 2003 the team undertook a high-level road show within the PGWC to actively canvass support and ensure buy-in from top level management;
- The knowledge centre was launched internally on 31 January 2003. It was also serving the public despite having not yet been launched publicly;
- The Contact (call) Centre has been launched (July 2003);
- The portal has been launched and is fully operational;
- An e-newsletter has been launched (2003) about KEEG and is now published bi-monthly.
- Despite initial “resistance” challenges the content issue has been overcome and now all departments are contributing good content.

The Cape Gateway project is a valuable example of how a small province such as the Western Cape can become a knowledge economy and contribute to the growth and development of South Africa as a global knowledge partner.



6.4 Summary

For a developing country such as South Africa to adopt the e-government approach is one issue, but for a small province such as the Western Cape to undertake the flagship role of an all encompassing online initiative such as the Cape Online Strategy is a huge commitment and responsibility. It is questionable whether the Western Cape has the financial resources and skills to sustain such a programme. So far, the Cape Gateway does seem to have established its place in the province both as an emotional and physical presence. Having set an example, it is now the responsibility of the PGWC to maintain this initiative and commitment to the appropriate use of ICTs for development and improved citizen participation in government activities.

In addition to upholding this online initiative, it is also the responsibility of the PGWC to provide support and expertise to other spheres of government, in particular, local government. The PGWC has already made headway in this regard by involving the City of Cape Town in the development of the Cape Gateway. It is only through the participation of local government that this project can become truly citizen-centric and government can become more responsive to the

needs and disadvantages facing many communities across South Africa. “The responsiveness of government to the most disadvantaged communities is only ensured if the provincial (and local) spheres of government honour their obligation to enlist the maximum amount of citizen participation in the public policy design and delivery process” (Besdziek, 2001:198). This quote emphasises the need for more comprehensive citizen participation strategies, a point which Theron (2005a:119) confirms. The Cape Gateway initiative is one such strategy and through the provision of three channels of access is evident the PGWC is making a conscientious effort to promote citizen participation.

Has the implementation of the Cape Gateway been a success or a failure? Definitely a success in the short term, whether this initial success can be maintained at the present level of commitment remains to be seen – salaries and services have to be paid and the Western Cape coffers are not bottomless. Research shows (PGWC, 2003) the project has consistently tried to adopt best practices while remaining fully aware of the needs of the citizens of the Western Cape in providing access to government information online. In terms of the actual portal it seems to follow a logical format that is user-friendly. The content and operability of the portal will be discussed in the next chapter in conjunction with the international case study examples.

For the Cape Gateway to be an ongoing true success, there are three critical success factors that should be noted. These include the following:

- Top level of support:

In order to achieve start-up, the Cape Online Programme, of which the Cape Gateway is a part, received support from the Minister of Finance and Economic Development and the Premier of the Western Cape. Without their encouragement and backing, this project would probably never have left the “starting stalls.”

- Stakeholder participation:

Another very important area of participation includes senior management in various business organisations as well as government departments. A key function was the establishment of a task team to include all these representatives in the decision-making process.

- Competent hybrid project team:

This project team needed to be experienced in various “hybrid” skills such as leadership, business knowledge, ICT’s usability and web content. They were then able to bridge the divide between technical and business knowledge.

The above points illustrate just how much of an integrated and combined effort the Cape Gateway initiative has been and will remain. Any such online initiative will require the continued support and co-operation of all stakeholders at all levels to maintain these early systems and also keep them constantly updated by continually improving the already established links with other providers of information and knowledge.

If the Western Cape Provincial Administration can achieve the level of integration indicated in the above paragraph then they will be well on their way towards achieving the following envisaged benefits in relation to the development of the Cape Gateway:

- It will be convenient – each channel will provide a single point of access to government information in the Western Cape.
- It will be simple to use – it will be staffed by friendly, knowledgeable, trained facilitators. Information will be provided in user-friendly language, organised from a user perspective.
- It will be empowering – It will enable anyone to access and use government services more efficiently with the least amount of effort.

The provision of the Cape Gateway and its associated online initiatives is one of the strategies that will hopefully assist in preparing the Western Cape for becoming a knowledge economy. In addition, it is such strategies, with their ambitious and innovative nature that will help lay the foundations for this province to become: (DEAAT, 2001:1)

- A leading learning region which successfully equips its people and businesses to acquire and apply knowledge effectively in a rapidly changing world;
- An outward looking region, linked effectively to the rest of South Africa, Africa and the world, and capable of competing successfully in the global knowledge economy and;
- A leading centre for entrepreneurship and innovation: a Cape of Good Hope for All, capable of promoting sustainable growth, equitable development, economic empowerment and an improved quality of life for all.

This chapter shows that the growth and development of the ICT industry has had a profound impact on sectors of society. These impacts may be felt at national, provincial and local level. Although there is concern that Cape Gateway may increase the digital divide, it is important to remember that there are three channels of access affording everyone the opportunity to participate in government. Ultimately it is the local citizens and their perception of this initiative that will determine whether or not this impact is positive or negative.

CHAPTER SEVEN: ANALYSIS AND INTERPRETATION OF RESULTS

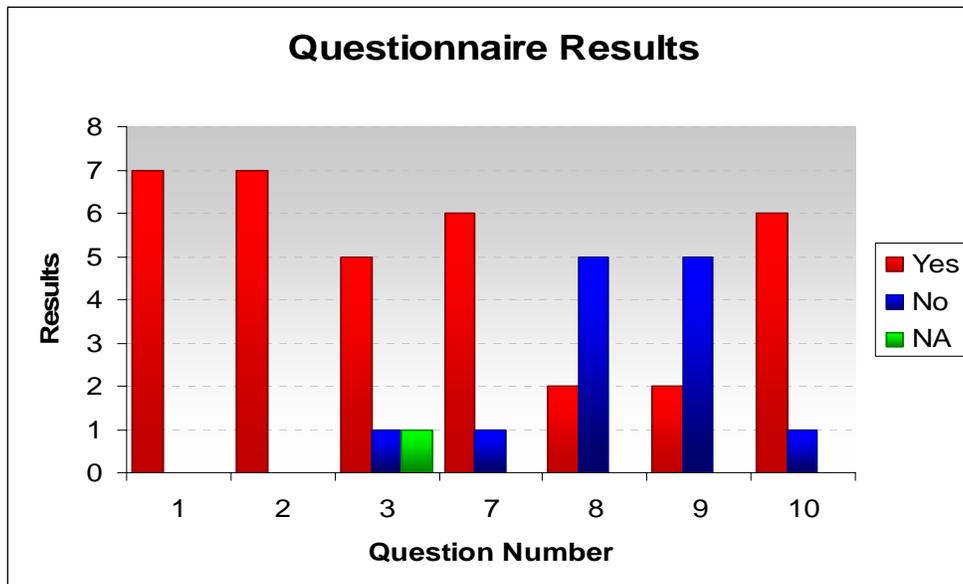
7.1 Introduction

This chapter will discuss the opinions expressed in the unstructured interview, the results of the questionnaire as well as the researcher's interpretation of these results. In addition to these methodologies the researcher will also include views expressed in e-mails from two respondents, one local and one international, who have considerable experience in the e-government field. In addition to a discussion, the results of the questionnaire will also be presented in the form of a graphic illustration. The purpose of this chapter is to provide greater insight into the realistic world of e-government.

7.2 Presentation of questionnaire results

As discussed in Chapter two, on Research Design and Methodology, the questionnaire, was e-mailed to all 30 local municipalities in the Western Cape. A total of 7 questionnaires were completed and returned via e-mail. Although there was only a 23% level of response, respondents' answers were very similar and provided some interesting views on e-government at local level. A copy of the questionnaire can be seen in Annexure 3 and a graphic illustration of the results below:

Figure 7.1: Questionnaire results



From the diagram above it is evident that only the results of questions 1,2,3,7,8,9 and 10 are included. The reason for this is that these questions required simple YES/NO answers. The graph shows the following results: (Q indicates "question")

- **Q1:** All 7 respondents think e-government is the way of the future.
- **Q2:** All 7 respondents think there is a need for online service delivery in the Western Cape.
- **Q3:** 5 of the 7 respondents have websites; 1 does not and 1 is in progress.
- **Q7:** 6 of the 7 respondents think that the e-government strategy can be used to promote citizen participation; 1 respondent does not.
- **Q8:** 2 of the 7 respondents do have community development projects in place that relate to the e-government strategy; 5 of the 7 respondents do not.
- **Q9:** 2 of the 7 respondents do have centres for the general public to access online information; 5 of the 7 respondents do not.
- **Q10:** 6 of the 7 respondents do think that the pursuit of the e-government initiative will help close the digital divide; 1 of the 7 respondents does not.

7.3 Interpretation of the results

The questionnaire results and opinions expressed in the unstructured interview with Cloete (2005) (See Annexure 2) support the objectives of this study as indicated in Chapter one. The questionnaire results support the e-government objectives and the interview with Cloete provides valuable insight into the importance of ICTs for development.

The results from the above section show that there is appreciation for the e-government approach and its envisaged benefits at local level in the Western Cape. Local municipalities in the Western Cape have an understanding of the e-government approach and what it entails. This is supported by some of the following answers provided for Question 6 of the questionnaire:

- The municipality understands this issue to be one of bringing government closer to the people and making it electronically accessible to the people who have the necessary skills and equipment.
- One of the primary aims of e-governance is the provision of access to information for the community. E-government would assist a certain portion of a local community in participating in decision-making and policy establishment and implementation. Community upliftment and development will be promoted

through e-governance but will unfortunately be restricted to only a fraction of the community who have the facilities to actively participate in e-governance. Community development workers will still perform an enormous role in making information available to those levels of the community who do not have the facilities.

- Speedy availability of documents and information; accurately updated documents on a regular basis; integration of systems; alleviation of duplication; accountability; easily traceable documentation; speed of archiving documents and attending thereto; continuous flow of documents; searching for misplaced documents; availability after hours and cost saving on paper.

The majority of the questionnaire respondents agreed that the e-government approach is a promoter of citizen participation. Their reasons include the following:

- Easy accessibility of documents and information 24 hours a day;
- It will enhance the speed of making information available and receiving feedback;
- It will assist local authorities in reaching certain portions of the community, especially business people, who do not usually have the time to utilise conventional methods of participation such as the attendance of community meetings.
- It seems there is a worldwide trend today that more and more people are using the Internet to do shopping, submit tax returns etc. It makes sense that the same people will also use this medium to communicate with government.
- It is convenient, can be used anytime during the day or night, in the comfort of your home, office or anywhere depending on the type of equipment used.

It is interesting to note that not all respondents are convinced that the e-government approach is a promoter of citizen participation, a point confirmed by Mbhele (2005). One respondent felt that too few people have access to information systems and that the costs of services, such as e-government access, are not affordable to the majority of communities because of high Telkom tariffs. Cloete (2005) also made an important point stating that e-government is only likely to promote citizen participation if the target group is computer literate.

The digital divide is another important issue investigated in the questionnaire and interviews. Throughout this study the researcher has promoted the e-government strategy as one that, if implemented under the correct circumstances can help close the digital divide in South Africa. Results from the questionnaire support this view with the majority of respondents agreeing that

the pursuit of the e-government approach will help close the gap of the digital divide. The digital divide is concerned primarily with information access of the poorer more disadvantaged communities. Cloete (2005) provides insight into this thought by looking beyond the poor communities. His comments show that the digital divide exists within several sectors of society, not just the poor, e.g. the rural agricultural sector, the illiterate population, aged people etc.

7.4 Summary

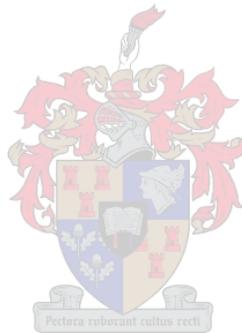
From the data gathered in the interviews and questionnaire, the researcher can conclude that there is a definite trend developing in terms of e-government thinking in South Africa and more specifically the Western Cape. This trend can be understood as follows: awareness and motivation for the e-government approach is strong and it is generally recognised as a strategy that does promote citizen participation at local level. The decision to implement e-government is multi-dimensional. It requires technology, human resources and skills. In addition to this, an important consideration is the specific conditions of the community which is the intended target group of implementation. Different communities have different needs or requirements in terms of hardware equipment, electrical requirements and training. In his interview Cloete (2005) suggested a number of ways in which local government should target areas that currently do not have access to information: "In those areas that lack access to information, local governments need to migrate their developmental approach from the traditional paper based approach to a knowledge management and empowerment approach. Logical consequences will follow from this migration.



Local government can prepare their communities to migrate by doing the following:

- Implementing hardware requirements:
 - Installing computers
 - Upgrading electricity networks and ensuring that a back up is in place (e.g. solar electricity)
- Ensure they have the appropriate software packages that will enable local government to provide information that is customised to the needs of the user. In addition there must be a method of obtaining feedback in place
- Computer literacy for the target group
- Make the facilities available. Such facilities should be available to the areas that require it most
- Training programmes for the target group, e.g. the youth. However, the rest of the population should not be forgotten about. Trained assistants should be available at the locations to help those who are not computer literate or e-literate" (Cloete, 2005).

If communities are properly prepared for the e-government approach then there is a greater chance of acceptance and success of this strategy. Roy (2001) as cited in Oliver and Saunders (2004:15) argues that: “governments – and governance – must become more ‘deliberative’ to enhance the capacity to learn and adapt. According to Roy, a ‘deliberative’ government is one that engages its citizenry in defining the future”. This implies that citizens must become more active participants in government processes. By participating they will become the masters of their own development and the knowledge and skills gained will improve their capacity to live a sustainable lifestyle. A process in which the building blocks of development, i.e. citizen participation; a social learning approach; capacity building; self-reliance and empowerment is accommodated to construct a sustainable development process (Theron, 2005a: 121).



CHAPTER EIGHT: CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusion

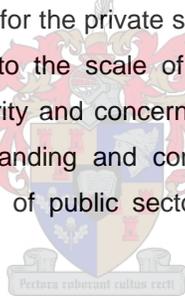
“E-government is about transforming the way government interacts with the governed. The process is neither quick nor simple. It requires a coherent strategy, beginning with an examination of the nation’s political will, resources, regulatory environment, and ability of the population to make use of planned technologies” (World Bank, 2002:12).

The major driver for the use of ICTs in government is the continued search for efficiency gains. Governments all over the world strive to reduce the call on their resources either to reduce overall spending or to allocate funds to higher priority areas. The introduction of ICTs into government has the potential to support this objective by streamlining administrative activities and improving efficiency. New Internet based applications have reduced the cost of repetitive tasks such as data entry and filing. Paper based applications are becoming a thing of the past as ICTs take over producing more integrated and timely results.

The chapters presented in this study illustrate that the potential of ICTs is not limited to public administration. In the literature study (Chapter three) the researcher discussed “development” and its building blocks, emphasizing the importance of a holistic approach to development. Two important elements of this holistic approach are citizen participation and communication. At present the digital divide is a challenge facing the South African Government. Having adopted the e-government approach it is now crucial that this strategy is successful in order to avoid the digital divide growing. From this study it is evident that the e-government approach is based on ICTs, therefore, if the South African government is going to address the digital divide challenge, it needs to go back into the field of development and introduce ICTs to the most deprived of the local communities. Particular emphasis needs to be placed on the more disadvantaged sectors of society (See Annexure 2). More MPPCs (See Annexure 12) must be established with trained staff available to assist the local communities in learning to use new technology. The approach to ICTs should be scaled down and brought back to basics so that it can help those citizens at grass roots level. Local government needs to get into the field of poverty and identify what the people really want without scaring them off completely using words like “Information Society.” Rather encourage people to actively participate in the process so that they feel empowered. Such empowerment will then enable community members to become the “masters” of their own development and develop the capacity and skills they need to live in an acceptable sustainable manner.

There are some spheres of government in South Africa that have made considerable progress in making information and government services more accessible online. At provincial level the Western Cape “Cape Gateway” is one such example (Chapter 6). A visit to the Cape Gateway walk in centre in Cape Town left the researcher pleasantly surprised! A magnificent colonial building, helpful staff, free Internet access and consultation services made this centre very impressive. The atmosphere was open and transparent supported by a user friendly environment. Within walking distance from Cape Town Station this is the type of infrastructure needed to support the e-government initiative. With the establishment of such infrastructure, e-government is an application that clearly demonstrates real benefit. As such, e-government is an important enabler of the “Information Society” and consequently South Africa’s development.

This study shows that development efforts can be better communicated through the use of ICTs, in particular the e-government strategy, and that the correct implementation of e –government will enable South Africa to close the digital divide. Correct implementation means more than just the provision of a few computers. It is important to note that ICT is not an end in itself but a means to achieving development objectives, if applied wisely. “Barriers do exist that slow the adoption of ICT by the public sector just as they do for the private sector in certain countries. These include: higher costs of ICT introduction due to the scale of public organisations; paper documents required for approval processing; security and concerns; confidentiality of information; obsolete regulations and laws; lack of understanding and computer skills; difficulties in carrying out organisational change; and the nature of public sector financing and procurement practices” (WITSA, 2003:1).



Despite the barriers to ICT adoption listed above, the e-government initiative will continue to change the public administration for many years to come. Accenture (2004) points out some emerging trends that shape the future of e-government:

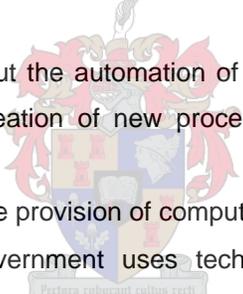
- E-government advances are diminishing;
- Leaders in e-government are reaping tangible savings;
- Promoting take-up of e-government is becoming a priority;
- The nature of governments’ integration challenge is changing;
- Personalisation is emerging

These trends represent further development in two directions: stimulating the use of transactional services and working towards service transformation. It is expected that countries future and priorities should be to develop and promote the convenience and security of e-government services. In addition, governments that transform their services will not think in terms of

horizontal and vertical integration, but will envision and create entirely new services enabled by seamless integration (Accenture, 2004). South Africa is a long way off achieving such a high level of service delivery and transformation. Developed countries, such as the United Kingdom discussed in Chapter 4, are closer to achieving this level of integration.

Realisation of the benefits of e-government is one of the first steps in accepting this approach as a development strategy. The researcher does not proclaim that this is the single or the best strategy available for development. The e-government strategy is one approach to development that in the researcher's opinion acknowledges and includes those forces shaping society today, i.e. globalisation, digitalisation. This strategy cannot operate in isolation and is not the miracle cure for other development challenges such as poverty and lack of funding. It requires expertise, skills and finance. In addition, it is a slow process that will take time to filter down to the smaller disadvantaged communities. The role of local government therefore is crucial in making this strategy a success.

Finally, the researcher has identified points that highlight the central arguments of this study:

- 
- E-government is not just about the automation of existing processes and inefficiencies. Moreover, it is about the creation of new processes and new relationships between government and society.
 - E-government is not simply the provision of computers for public officials.
 - Implemented correctly, e-government uses technology to accomplish public reform fostering transparency, eliminating divides in society and promoting citizen participation.
 - In order to realise efficiencies, governments must develop a citizen-centric model that involves key stakeholders outside of government – businesses, trade associations, scientists, academics, and NGOs. Without their input, e-government projects are unlikely to succeed, because citizens will not use a system that does not respond to their needs (World Bank, 2002).
 - The success of e-government is largely dependent on engaged citizen participation, therefore, efforts to create and sustain such participation are critical.
 - All countries, regardless of their economic status have battled at some point with the e-government initiative.
 - Governments must serve all members of society irrespective of their physical capabilities. Online services will have to be designed with appropriate interfaces – this may have significant cost implications (World Bank, 2002).
 - To be truly successful, e-government projects must create a sense of trust among all those concerned.

8.2 Recommendations

The researcher makes the following recommendations regarding implementation of the e-government initiative:

- **Administrative:**
 - Careful planning – be aware of your needs and expectations. Do not use the e-government strategy as a solution to existing problems. Streamline processes offline before putting them online.
 - Set clear and realistic targets – don't try to achieve the impossible to quickly.
 - Focus projects from a user perspective – this will help ensure that local needs are met and that the project is simple and accessible.
 - Import knowledge – use best practice models as a starting point. Make notes of key points and information that may assist you in implementation. Do not copy another countries model exactly.
 - Management Team – ensure that there is a knowledgeable team of people in place who will be responsible for managing the project from start to finish.
 - Policy – create a policy framework that will support implementation.
 - Trust and Commitment – this strategy cannot work in isolation and requires a team effort.
 - Resources – develop projects that are achievable with the resources you have available. Be aware of your existing and available resources ranging from funding to personnel.
 - Encourage co-operation and integration between all departments and spheres of government.
 - Set performance criteria and measure progress on a regular basis.
 - Use common standards throughout government to ensure compatibility.

- **Technological:**
 - Infrastructure – develop the e-government project in consultation with your nation's telecom company.
 - Content – be sure that content is appropriate and helpful to the needs of citizens.
 - Hardware – introduce the hardware requirements as early as possible in the project.
 - Provide incentives for private sector companies to invest in technology thus thereby assisting with funding.

- Emphasize local language and content to create better acceptance of new technology.
- Combine access and training.

- **Educational:**
 - Prioritise – decide which sectors of society or targets groups require the most training.
 - Develop training campaigns that will engage the public in the e-government project.
 - Training – provide training to those who are least familiar with and resistant to a new approach.
 - Schools – introduce basic computer training to all levels of schooling. This is the best way to target the youth.

- **Societal**
 - Respond to local needs – Involve those people who will use the system in the decision making. Ensure that “citizens needs” remain a top priority. The best e-government models are citizen-centric and involve stakeholders from all sectors of society.
 - Local knowledge – beware of cultural differences amongst different communities.
 - Consultation – consult with local communities to avoid resistance and ensure that they receive the intended benefits.



From the recommendations provided above the researcher can conclude that the e-government approach requires a strong commitment of political will and engagement of the public and private sector as well as Government. It is an all encompassing project that focuses on improving the relationship between citizens and government. By creating a citizen – centric and more responsive form of government through the use of ICTs, e-government can become a influential tool in shaping a country's future and quality of life.

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ANNEXURE 1

Millennium Development Goals, Targets and Indicators for South Africa

Goals and targets	Indicators
Goal 1: Eradicate extreme poverty and hunger	
<i>Target 1:</i> Halve between 1990 and 2015, the proportion of people whose income is less than US\$1 a day	<ul style="list-style-type: none"> • Proportion of the population below US\$1 a day • Poverty gap ratio (incidence, times, depth of poverty) • Share of poorest quintile in national consumption
<i>Target 2:</i> Halve between 1990 and 2015, the proportion of people who suffer from hunger	<ul style="list-style-type: none"> • Prevalence of underweight children (under five years) • Proportion of the population below minimum level of dietary consumption
Goal 2: Achieve universal primary education	
<i>Target 3:</i> Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	<ul style="list-style-type: none"> • Net enrolment rate in primary education • Proportion of pupils starting Grade 1 who reach Grade 7 • Literacy rates of 15 to 24 year olds
Goal 3: Promote gender equality and empower women	
<i>Target 4:</i> Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015.	<ul style="list-style-type: none"> • Ratio of boys to girls in primary, secondary and tertiary education • Ratio of literate females to males among 15 to 24 year olds • Share of women in wage employment in the non-agricultural sector • Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
<i>Target 5:</i> Reduce by two-thirds, between 1990 and 2015, the under-five mortality rates	<ul style="list-style-type: none"> • Under-five mortality rates • Infant mortality rate • Proportion of one-year old children immunized against measles
Goal 5: Improve maternal health	
<i>Target 6:</i> Reduce by three-quarters, between 1990 and 2015, the maternal mortality rate	<ul style="list-style-type: none"> • Maternal mortality ratio • Proportion of births attended by skilled health personnel
Goal 6: Combat HIV and AIDS, malaria and other diseases	
<i>Target 7:</i> Have halted by 2015 and begin to reverse the spread of HIV and AIDS	<ul style="list-style-type: none"> • HIV prevalence among 15 to 24 year old pregnant women • Contraceptive prevalence rate • No. of children orphaned by HIV and AIDS
<i>Target 8:</i> Have halted by 2015 and begin to reverse the incidence of malaria and other major diseases.	<ul style="list-style-type: none"> • Prevalence and death rates associated with malaria. • Proportion of the population in malaria-risk areas using effective malaria prevention and treatment measures. • Prevalence and death rates associated with tuberculosis.

	<ul style="list-style-type: none"> • Proportion of tuberculosis cases detected and cured under directly observed treatment, short-course (DOTS).
Goal 7: Ensure environmental sustainability	
<i>Target 9:</i> Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.	<ul style="list-style-type: none"> • Change in land area covered by forest • Land area protected to maintain biological diversity. • GDP per unit of energy use. • Carbon dioxide emissions (per capita)
<i>Target 10:</i> Halve, by 2015, the proportion of people without sustainable access to safe drinking water.	<ul style="list-style-type: none"> • Proportion of the population with sustainable access to an improved water source.
<i>Target 11:</i> Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers.	<ul style="list-style-type: none"> • Proportion of the population with access to improved sanitation. • Proportion of the population with access to secure tenure.
Goal 8: Develop a global partnership for development	
<i>Target 12:</i> Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (includes commitment to good governance, development and poverty reduction – both nationally and internationally).	<ul style="list-style-type: none"> • Target and indicators are not presently being measured in South Africa.
<i>Target 13:</i> Address the special needs of the least developed countries	<ul style="list-style-type: none"> • Official development assistance (ODA)
<i>Target 14:</i> Address the special needs of landlocked countries and small island developing states.	<ul style="list-style-type: none"> • Target and indicators do not apply to South Africa.
<i>Target 15:</i> Deal comprehensively with debt problems of developing countries through national and international measures in order to make debt sustainable in the long run.	<ul style="list-style-type: none"> • Debt services as a percentage of exports of goods and services.
<i>Target 16:</i> In co-operation with developing countries, develop and implement strategies for decent and productive work for youth.	<ul style="list-style-type: none"> • Unemployment rate of 15 to 24 year olds, by each sex and in total.
<i>Target 17:</i> In co-operation with pharmaceutical companies, provide access to affordable drugs in developing countries.	<ul style="list-style-type: none"> • Measurement of target not available for South Africa (free primary health care for all)
<i>Target 18:</i> In co-operation with the private sector, make available the benefits of new technologies, especially information and communications.	<ul style="list-style-type: none"> • Telephone lines and cellular subscribers • Personal computers in use per 100 of the population.

(Source: Department of Health, 2005:1)

ANNEXURE 2

Interview Notes

Interviewee: Prof F. Cloete

Post: Lecturer at Stellenbosch University

Date: 25 October 2005

1. How would you describe the link between communication and development?

Citizen participation is the key to communication and without communication development cannot be successful. Local government should focus on improving participation in the target areas through negotiations and allowing the public to express their views. Top down approaches have often been accused of not encouraging or promoting participation. Local government should therefore avoid such approaches because they are often difficult to sustain.

2. How would citizen participation influence the process of communicating development?

Participation is the answer to creating effective communication. Development requires both aspects. Local government must understand that communication is a two-way process. The communication language needs to be simple and easy to follow. The information being communicated must be concise and clear. Effective communication necessitates feedback processes or a response in some form. This feedback is important in the creation of opportunities.

In South Africa a large portion of our population is illiterate. This places a huge burden on development agents. Local governments must take care when implementing new information systems and technology into the poorer communities. The last thing local governments want to do is frighten members of the community, rather they should try and integrate the technology into society and promote participation and feedback from the local community.

3. Would you consider information access an important aspect of development?

Yes. Information access is the starting point of development. In recent years development thinking has changed dramatically. Today, the new conceptualisation of the term "development" is very closely linked to the notion of information. The focus of development thinking has shifted from improving quality of life to empowerment. Empowerment is also an objective of development but it encompasses many more aspects than quality of life.

Beneficiaries need to be empowered to use the information. In order for this to happen, government must be at the transactional stage of e-government. Only at this stage can communities become truly empowered.

4. How would you suggest that local government should target areas that currently do not have access to information?

In those areas that lack access to information, local governments need to migrate their developmental approach from the traditional paper-based approach to a knowledge management and empowerment approach. Logical consequences will follow from this migration. Local government can prepare their communities to migrate by doing the following:

- Implementing hardware requirements:
 - Installing computers
 - Upgrading electricity networks and ensuring that a back up is in place (e.g. Solar electricity)

- Ensure that they have the appropriate software packages that will enable local government to provide information that is customised to the needs of the user. In addition there must be a method of obtaining feedback in place.
- Computer literacy for the target group
- Make the facilities available. Such facilities should be available to the areas that require it most.
- Training programs for the target group e.g. the youth. However, the rest of the population should not be forgotten. Trained assistants should be available at the locations to help those who are not computer literate or e-literate!

It is important that local governments prioritise their efforts in order to have maximum impact. In addition, education is an important part of any development effort and no local government can ever overspend on education.

5. Which sector of society do you regard as the most disadvantaged in terms of information access in South Africa?

One can look at this from different perspectives. The following groups provide a guideline:

- Rural agricultural sector
- South Africa's illiterate members of the population – in particular those who are electronically illiterate.
- Aged people (even those above the age of 20 have different technological knowledge to those younger than 20)
- Race: The black and coloured communities are somewhat disadvantaged

6. Do you believe that South Africa has implemented and can sustain the e-government strategy successfully?

I believe that no country has any real choice in the decision to follow the e-government approach or not. Because of forces such as globalisation and decisions made by the UNDP and the World Bank, both developed and developing countries have to implement e-government, otherwise they will get severely left behind. Government must simply decide on the most appropriate strategy. South Africa is in fact quite advanced in terms of the e-government approach. Many surveys show that South Africa is regarded as one of the leading e-government providers in the 3rd world. South Africa ranks in the fourth against Malaysia, Mexico and Brazil. If the South African government is not careful however, they will lose their e-government ranking and this is already starting to happen for the following reasons:

- Policies and priorities are incorrect
- The problem comes in the implementation phase
- Government is not dedicated to the e-government approach
- E-government is becoming neglected in South Africa
- SITA is not doing a good enough job in supporting and sustaining the e-government approach.
- Policy is over ambitious

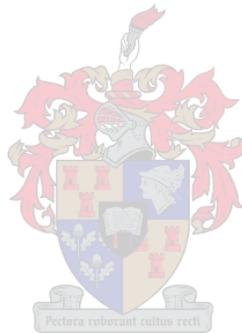
The reality I fear is that the image that South Africa has been given in terms of being a 3rd world leader in e-government is starting to flatten.

7. Do you regard the e-government approach as a strategy that will enhance citizen participation?

Yes, if the target group is computer literate, then it does. If you are computer literate then e-government offers a convenient way to access information and services. The trick is to educate people and have the information accessible.

8. In your opinion what is the status of communications and telecommunications infrastructure in South Africa?

Our communications infrastructure is good in terms of Africa and the developing world. But it is not so good in comparison to developed nations. Statistics from the World Bank support this.



ANNEXURE 3

Questionnaire

E – GOVERNMENT QUESTIONNAIRE FOR MASTERS RESEARCH

This questionnaire serves as part of a research study for my Masters thesis entitled: "Development through e-government. Strategic options for South African application"

My name is Melanie Heginbotham and I am a 23 year old Masters student from Stellenbosch University. I am currently completing my thesis on e-government in the Western Cape with particular emphasis on using the e-government strategy to enhance community development and citizen participation.

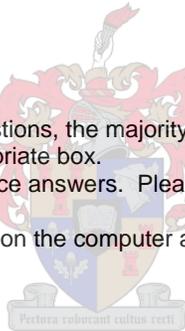
The aim of this questionnaire is to investigate to what extent e-government exists at local level in the Western Cape and whether or not there is a perceived demand for online service delivery and interactive websites.

The results of this questionnaire are confidential. No names of public sector officials or municipalities will be published with regards to specific answers. A list of the respondents (as seen on the email address section) may be published for research methodology purposes.

You are under no obligation to answer all the questions. Any response given will be much appreciated and of great value to my study.

INSTRUCTIONS:

1. The questionnaire contains 10 questions, the majority of which are YES/NO answers. Please mark your answer with an X in the appropriate box.
2. Questions 6,7 and 8 require sentence answers. Please feel free to add any additional information that you feel may be relevant.
3. Please complete this questionnaire on the computer and email it back to the address from which it was sent: fredheg@global.co.za



Thank you

QUESTIONS:

1. Do you think electronic government is the way of the future?

YES		NO	
-----	--	----	--

2. Is there a need for online service delivery in the Western Cape?

YES		NO	
-----	--	----	--

3. Does your municipality have its own website?

(If yes then please provide the full website address in the space below)

YES		NO	
-----	--	----	--

URL:

If your answer to this question is "yes" please proceed to question 4. If your answer is "no" then please proceed to question 5.

4. Does your website offer interactive features, static information (i.e documents) or both?

Interactive		Static		Both	
-------------	--	--------	--	------	--

If you answered this question please skip question 5 and go straight to question 6.

5. Is your municipality in the planning to set up a website?

YES		NO	
-----	--	----	--

6. Please state briefly your municipalities understanding of the e-government strategy for improved service delivery and increased efficiency within a public sector organisation.

Answer:

7. Do you think that the e-government strategy can be used to enhance citizen participation?

YES		NO	
-----	--	----	--

If yes then please state why you think so:

Answer:

8. Does your municipality have any community development projects in place that relate to the e-government strategy e.g. access to online information?

YES		NO	
-----	--	----	--

If "yes" please can you name one of the projects?

Answer:

9. Do you have centers for the general public to access online information (e.g. Multi Purpose Community Centers)

YES		NO	
-----	--	----	--

10. Do you feel that the pursuit of the e-government initiative will help close the gap of the Digital Divide?

YES		NO	
-----	--	----	--

Thank you for taking the time to help me with my research.

ANNEXURE 4

New Zealand Government Portal

The official New Zealand Government site: <http://www.govt.nz/>



This site offers the following features:

- Useful information and services on a variety of topics from education to employment to arts and culture.
- Allows you to participate in government
- Have your say on a government consultation document
- Request information from a minister or government organisation
- Stand for a community board

ANNEXURE 5

United Kingdom Government Portal

United Kingdom government website <http://www.direct.gov.uk> (formerly UK online)

Website of the UK government : Directgov - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.direct.gov.uk/Homepage/dfs/en>

Directgov
www.direct.gov.uk
Straight through to public services

Accessibility | Help | Site index | Contacts

Search this site

Home | Directories | Guide to Govt | Do it online | Newsroom

Tuesday, 23 August 2005

University challenge
Clearing: course vacancies

New road safety campaign for teenagers

Visit Parliament
Summer tours until October

Vaccine services
Immunisations for children

Straight to...

Education and learning
Early learning, Schools, Choices at 14 to 19, University and higher education, Adult learning...

Home and community
Home buying and selling, Planning, Environment, Recycling, Community safety, Flooding...

Money, tax and benefits
Guide to benefits, Taxes, Child benefit, Pensions, Inheritance Tax, Council tax...

Travel and transport
Planning your journey, Traffic information, Child passports, Crime abroad, The euro, Duty free...

Crime, justice and the law
Crime prevention, Prison and

Motoring
Licensing, Medical rules, Learner drivers, Practical tests, Buying and selling, Vehicle tax...

Employment
Looking for work, Flexible working, Health and safety, Redundancy, Jobseeker's Allowance...

Health and well-being
Healthy living, Local health services, First aid, Mental health, Resuscitation, NHS Direct...

Leisure and recreation
Green spaces, Museums and galleries, Cycling, Events in the UK, Gardening...

Rights and responsibilities
Births, deaths and marriages,

People

Parents
Having a baby, Childcare, Your money, Bullying, Maternity leave...

Disabled people
Disability Living Allowance, Rights, Work, Money...

Over 50s
Finding a job, Learning new skills, Money and pensions...

Britons living abroad
Working abroad, Healthcare overseas, Return to UK...

Caring for someone
Carer's Allowance, Support, Working and caring...

Popular now

- A level results
- Clearing
- Maternity
- Passports
- Car tax
- Stamp Duty
- Housing Benefit
- Tax credits
- Council tax bills

Top choices

- Find a job
- Find local health services
- Find a school
- Find a course
- Find childcare

Opening page <http://www.direct.gov.uk/Homepage/dfs/en...>

start International chapter... Document1 - Microsof... Governmentonthewe... Website of the UK go... 04:55 PM

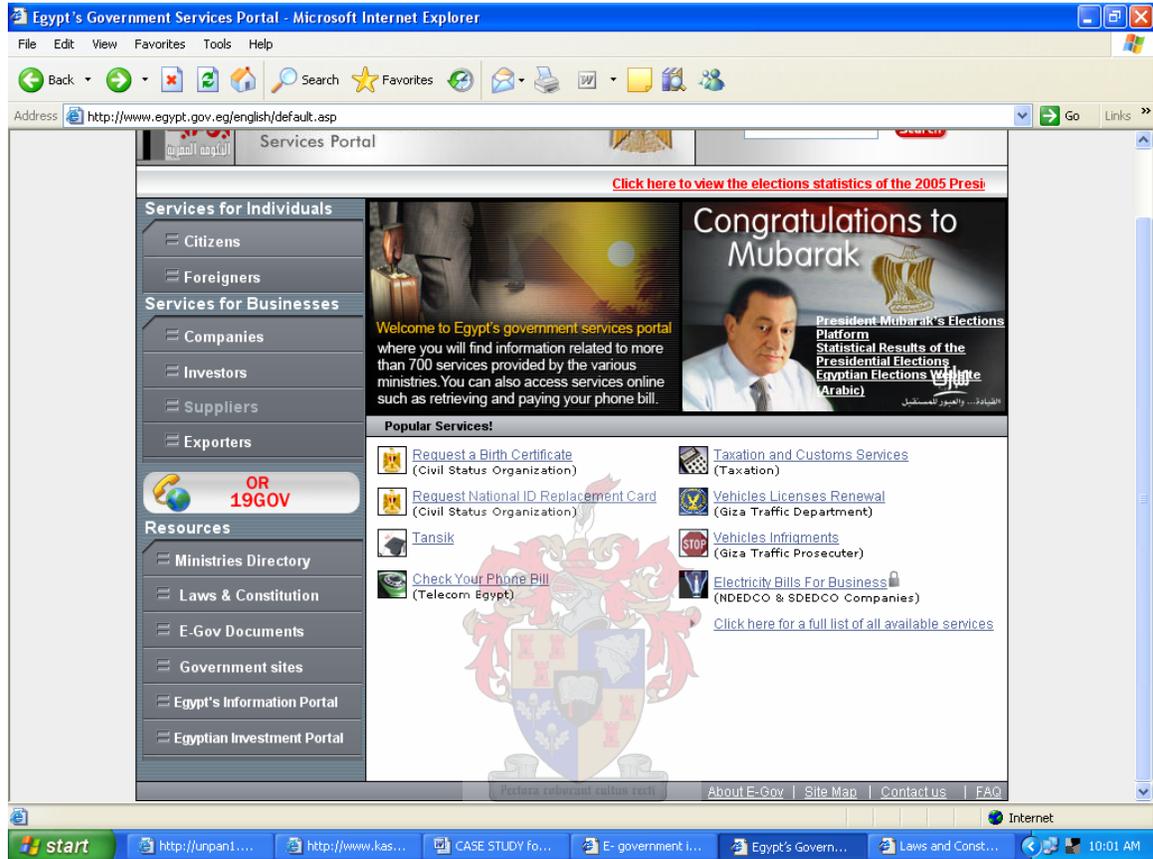
This site offers some of the following features:

- Find a job
- Find a school in your area
- Motor vehicle licensing online
- Advice on numerous topics (e.g. health)
- Do your tax returns online
- Register to vote
- Apply for British Nationality
- Housing information
- Social Welfare information

ANNEXURE 6

Egypt Government Portal

Egypt Government Services Portal <http://www.egypt.gov.eg/>



This site offers some of the following features:

- Request a birth certificate
- Exporter services
- Lost and Found
- Taxation services

ANNEXURE 7

Summary of the Egyptian EISI Government Program

Table 4.1. Summary of the Egyptian EISI Government Program

Objectives	Challenges	Projects	Components
<p>Enhancing Egyptian government readiness to accept a strong local program and to smoothly integrate in the global community.</p> 	<p>Legal and regulatory challenges:</p> <ul style="list-style-type: none"> - Remote authentication mechanism. - Security and privacy issues. <p>Technological challenges:</p> <ul style="list-style-type: none"> - Lack of unified standards - Multiple service providers - Isolated communication islands of government bodies. <p>Culture and economic challenges:</p> <ul style="list-style-type: none"> - Poor penetration of credit cards - Inexistence of suitable e-payment method. 		<ul style="list-style-type: none"> - e-signature and Public Key Infrastructure. - Document of standards. - Government gateway. - Government communication network. - Simple but comprehensive e-payment framework
<p>Providing timely, customized and quality measured government services to the citizens and investors through convenient delivery channels.</p> 	<ul style="list-style-type: none"> - Reputation of quality of services. - Inconvenience of delivery mechanisms - Overlap among service providers. - Computer illiteracy and low PC and internet penetration. 		<ul style="list-style-type: none"> - Reengineering services and availing them through the Networks (Internet, Telephone and Mobile) - Establishing service centers, everywhere (postal offices, IT clubs, and telecenters). - Establishing programs to distribute PCs for homes and SMEs.
<p>Increasing efficiency and reducing expenditure.</p> 	<ul style="list-style-type: none"> - Reluctance and mistrust of automation. - Inflexibility to modify workflows (wrongfully thinking its illegal) - Multiple auditing bodies. - Overlapping authority among government bodies. - Adopting new philosophies and practices of modern management. 		<ul style="list-style-type: none"> - EISI-Government ERP (Enterprise Resource Planning). - Document management and electronic archiving. - Business process automation.
<p>Providing accurate and updated information to serve investors and to support the decision making process.</p> 	<ul style="list-style-type: none"> - Reluctance of information sharing among government bodies. - Security and privacy issues. - Ownership and copyrights issues. - Lack of unified data dictionary and definitions. 		<ul style="list-style-type: none"> - Creation and update of databases. - Drafting standards and laws for information sharing, copyrights, and ownership.

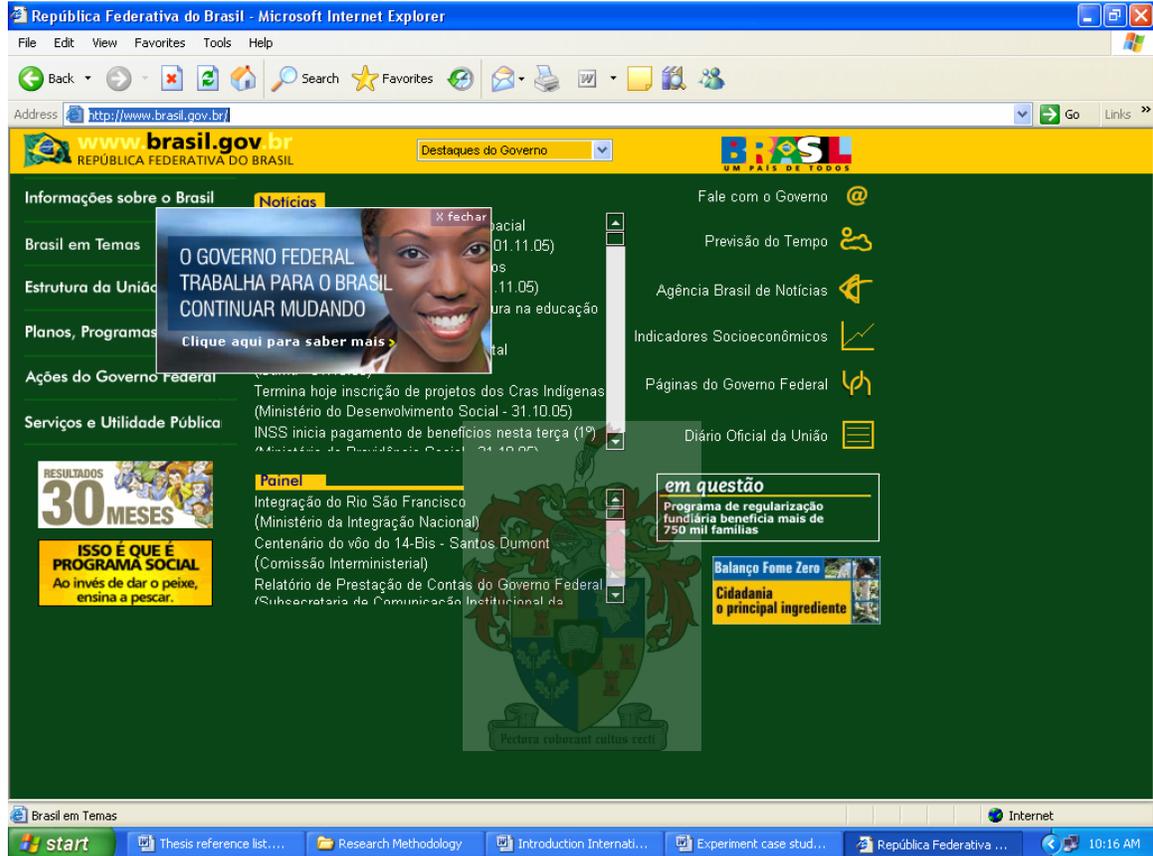
(Source: Egyptian Ministry of Communication and Information Technology, 2004:5)

ANNEXURE 8

Brazil Government Portal

Brazil Government Portal <http://www.brasil.gov.br/>

The majority of this site is in Portuguese therefore the researcher have not included features for this site.



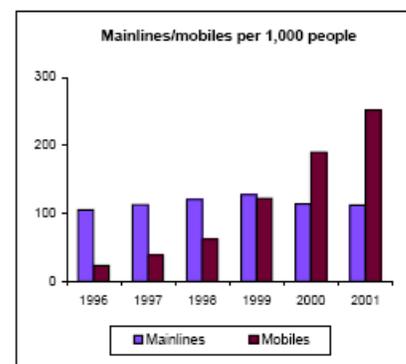
ANNEXURE 9

Graphs for South Africa

Graph 1

ICT infrastructure & access

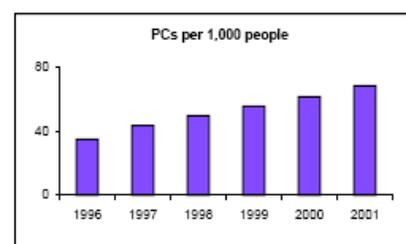
	1995	2001	2001	2001
Telephone mainlines				
Per 1,000 people	101	112	14	146
In largest city (per 1,000 people)	417	415	33	524
Waiting list (thousands)	137	50	1,295	27,675
Revenue per line (\$)	1,083	1,262	1,082	283
Cost of local call (\$ per 3 minutes)	0.06	0.07	0.06	0.04
Mobile phones (per 1,000 people)	14	252	27	110
International telecommunications				
Outgoing traffic (minutes per subscriber)	76	100	245	58
Cost of call to U.S. (\$ per 3 minutes)	..	0.58	5.15	4.50
Daily newspapers (per 1,000 people)	33	32	12	..
Radios (per 1,000 people)	335	338	198	346
Television sets (per 1,000 people)	132	152	60	292



Graph 2

Computers & the Internet

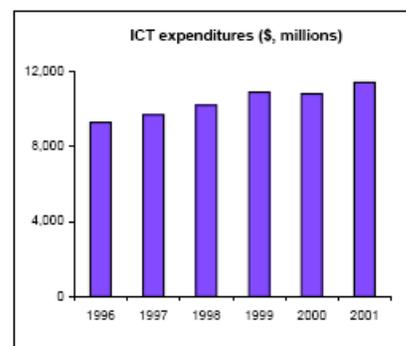
	1995	2001	2001	2001
Personal computers				
Per 1,000 people	27.9	68.5	9.9	28.1
Installed in education (thousands)	92.8	364.7
Internet				
Users (thousands)	460.0	3,068.0	5,299.9	68,936.9
Monthly off-peak access charges				
Service provider charge (\$)	..	29.6	35.6	16.7
Telephone usage charge (\$)	..	0.33	0.53	0.23



Graph 3

ICT expenditures

	1995	2001	2001	2001
Total ICT (\$, millions)	8,649.0	11,430.0
ICT as % of GDP	5.7	9.2
ICT per capita (\$)	209.7	268.7



ICT business & government environment

(ratings from 1 to 7; 7 is highest/best)	1995	2002	2002	2002
Broadband internet access availability	..	3.7	..	3.6
Local specialized IT services availability	..	5.4	..	4.3
Competition in ISPs	..	4.3	..	4.2
Government online services availability	..	3.6	..	3.1
Laws relating to ICT use	..	4.0	..	3.3
Government prioritization of ICT	..	4.5	..	4.0
Secure servers	..	521 ^a	552 ^a	2,769 ^a

(Source: World Bank, 2003)

Municipalities bridge the digital divide

The City of Cape Town is challenging the digital divide through its Smart City Strategy—reaching out to citizens without access to information technology and its opportunities.

By SHARIVAN MOODLEY

THE DIGITAL DIVIDE classifies people into those who are familiar with technology and use it daily, and those who have little or no knowledge of it due to their social and economic circumstances. The City of Cape Town stresses the importance of Information and Communications Technology (ICT) in meeting its service delivery objectives and has devised the Smart Cape Access Project to help bridge Cape Town's technology and communications divide by providing computers with Internet access free of charge, and basic training.

The aim is to reach those people who cannot afford private access to ICT or do not have an opportunity to make use of it at work.

From its pilot phase in 2002, five computers using open source software and with Internet access were installed in six public libraries.

These enable users to prepare useful documents such as letters, CVs, spreadsheets and presentations, search for information via the Internet, and print documents at a low cost. Additionally, users are issued a unique e-mail account from which they can send and receive mail.

All registered library members have access to these facilities for up to 45 minutes at no cost. Registration is possible



Free internet access in municipal libraries has changed their world.

in English, Afrikaans and Xhosa and the project now serves more than 7 000 registered users.

With a budget of R897 000 in its pilot phase, the project is set to expand to all municipal libraries with significant cost savings from using existing infrastructure and open source software. In 2003 the Smart Cape Access Project was awarded the coveted Bill and Melinda Gates Foundation 'Access to Learning Award' for bridging the digital divide, and the USD one million prize money has substantially contributed to rolling out the project in municipal libraries across the city. Smart City Program Manager, Mymoena Ismail, says all 107 municipal libraries will benefit by June 2005.

Municipal libraries prove an ideal location because they are established central points of information, well dispersed, and occupy public space already serviced with electricity and telephone connections. As

the Smart Cape Access Project expands clinics and other council-owned infrastructure will also be used.

Presently, all assistance to users comes from library staff and community volunteers who help with documents, applications and rudimentary hardware procedures. In appreciation of the service provided by volunteers, the City issues each with a certificate.

Feedback from the libraries shows increased confidence by new computer users, with libraries too feeling the impact as memberships increase, with more people using them—not just for the computers.

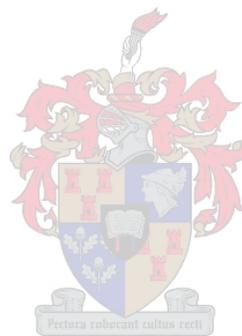
Other positive outcomes have been improved ability by users to search for employment, improved access to self-education opportunities, improved personal communication, access to official information, access to online banking, and opportunities for volunteerism. ●

ANNEXURE 12

Multi Purpose Community Centre Example

The Mamelodi Community Information Service (Macis) is a non-profit centre initiated in 1995 to serve the needs of a township community close to Pretoria. It is heavily used by the community (up to 50 people per day) and offers information and assistance mostly to young people and small-scale business owners. The services offered include typing, photocopying and access to e-mail/Internet. The centre also acts as an employment service, assisting in writing CVs and application letters, and as an advice centre. It charges minimal fees for services and is supported largely by donations. The centre gets many referrals from local community organisations as it has good local linkages and is trusted and well known in the township. The management of the centre is responsible to a board of local trustees, who are community leaders. Access to ICTs, within the centre, therefore, forms part of a wider community-based service. Local people without experience of accessing computer-mediated information can be assisted by local community workers who have detailed knowledge of the real information needs of individuals and groups within the community.

(Source: National Information Technology Forum, 1996)



ANNEXTURE 13

Interview Notes

Interviewee: Fidel Mbhele

Post: E-government Specialist for the Government of the Western Cape

Date: 24 November 2005

1. In your view, what is the aim/purpose of the Cape Gateway?

The initial aim is to become a citizen-centric, one-stop shop for information relating to Government issues, ranging from completing forms to job creation.

2. Do you believe that you are succeeding in achieving this aim/purpose?

At the moment, the Cape Gateway here in Long Street is really a service centre / multi purpose community centre for walk ins. Internet users are in a minority in the Western Cape – so this initiative is not actually reaching the public as it perhaps would in Gauteng where the majority of Internet users live. It is important to note that the Cape Gateway is not an isolated initiative. There are other strategies such as, Cape Access, that support the Cape Gateway.

3. Out of the three channels of access: telephone, portal, walk in centre, which one would you say is the most popular?

At present we are averaging the following:

Call centre – less than 2 000 calls per week

Portal – less than 4 000 surfers per week

Walk in – less than 200 people per week



At present these statistics illustrate an average usage of all three channels of access. We would like to see these statistics increasing in the future.

4. Who is the intended target group of the Cape Gateway project?

All citizens of the Western Cape.

5. Do you foresee any challenges that may hinder further development of the Gateway? e.g. resistance

- Availability of broadband Internet access;
- The cost associated with access;
- Connecting remote communities;
- Changing the culture of Government;
- Communication between the three spheres of government.

6. Would you consider the services you offer at the Cape Gateway Walk in Centre important for the promotion of community development?

Yes. Access to information does promote development. This walk-in-centre provides a central point for government for citizens to access government information. The ability to access this

information means that people gain new knowledge and participate in government. In addition they can share this knowledge which will promote development.

7. Has the Gateway been successful in engaging the public in government activities, i.e. citizen participation?

As a Government employee I would say 'yes' it has been successful but as a citizen I would say 'no'. Problems such as access, visibility and cost remain a constant problem for many citizens.

