

## **CHAPTER ONE**

### **INTRODUCTION**

*A new civilization is emerging in our lives, and blind men everywhere are trying to suppress it. This new civilization brings with it new family styles; changed ways of working, loving, and living; a new economy; new political conflicts; and beyond all this, an altered consciousness as well (Toffler, 1981:23).*

#### **1.1 INTRODUCTION**

The universal public service has traditionally been viewed as being bureaucratic, unresponsive, cumbersome and inefficient. For this negative image to be dispelled, the universal public service needs to embark on radical change. Change is one of the inevitabilities of the modern age. Change is evident in the way individuals interact, in the manner in which business is conducted (e-business, for example), in the way new virtual communities evolve and indeed, in the way in which governments transact, the most notable example being e-government. E-government can simplistically be viewed as the delivery of public services and information by employing electronic means.

Various metaphors have been used to describe the phenomenon of change. These range from network to global village to information super highway to systems.

What, however, is important is that these fore-going metaphors relate to the development and maintenance of systems of communication to enhance the flow of information. Governments consume large volumes of information on which to base policy and strategic decisions. Because of the vast extent of existing information, much of it needs to be filtered and presented in a manner that can easily be assimilated by the end user. Herein lies the role of e-government. Backus (2001:59) notes that e-government refers to the processes and structures needed to deliver electronic services and to conduct electronic transactions. Backus (2001:59) further notes that the external strategic objective of e-government is to fulfil the public's needs on the front-office side by providing electronic touch points. The internal strategic objective of e-government is to improve back-office operations so as to facilitate speedy, transparent, accountable and efficient processes in performing government administrative operations.

In South African organisations change manifests itself in various transformative initiatives. Transformative initiatives in South Africa, in their turn, manifest themselves in the various policy initiatives that the South African Government has embarked upon. These policy initiatives revolve around e-government, human resources development, organisational development, financial reform, client-centredness and sustainability, all of which need to integrate in order to establish a successful e-government environment.

The succeeding sections of the chapter provide some general background to the irreversible demands and challenges that the advent of information and communications technologies makes. The consideration of information and communications technologies from a global to an African to a national level will provide some valuable insight into the current positioning of South Africa's attempt to achieve successful e-government. The challenges highlight how governments should harness the power of information and communications technologies to improve service delivery offerings to their clients.

## **1.2 CONTEXT OF THE STUDY**

Whilst the concept of e-government is not new, its application within the context of the Government Employees Pension Fund of South Africa is indeed novel. The concept and practice of e-government is in a continuous state of flux, hence researchers and practitioners are constantly generating new ideas and resources. These resources, whilst they may not be included in the literature survey, will be used to enhance the discourse contained in the thesis. The literature survey concentrates on written material - dissertations, books, policy documents - and electronic options. A survey of the literature reveals that e-government is a much discussed and researched concept. The idea of e-government as a tool for service delivery is also a concept that has been developed and refined in many countries around the world. E-government can therefore be seen to be in a constant state of flux.

Several of the readings that were conducted on e-government for the purposes of this thesis have indicated that e-government will enhance service delivery. E-government provides easy, remote, extensive and convenient access to government services. It is in this afore-mentioned context that e-government provides convenient – no queues, anytime, anywhere – access to government services, provided that there is a critical mass of users that can make the maintenance of the system viable.

Given that the Government Employees Pension Fund is a services department, and given that no research (thesis or dissertation) relating to service delivery in this context had been conducted, it was thought prudent that a contribution would be made to the already existing body of knowledge. A dissertation or a thesis that has been written specifically on electronic service delivery relating to pension fund administration in South Africa, has yet to be found. In the light of the afore-mentioned, it was determined to identify, discuss, research and survey the principles of e-government and then to provide practical, applied scenarios within the context of the Government Employees Pension Fund of South Africa.

To further contextualise the thesis, Korsten's (2001) dissertation on strategies for online dissemination of information, service delivery and business operations for government, is of particular interest. Korsten's (2001) research indicates that an e-government strategy presupposes a radical re-engineering of the way in which government provides services. Korsten (2001) notes that e-services should be

customer-centric, in their focus. Korsten (2001) argues that building both internal and external partnerships is vital to delivering e-services to clients. Korsten (2001) notes that whilst South Africa has done much to build an e-government strategy, much more still needs to happen in the field of e-government systems development. Current policies in South Africa provide a stable foundation from which to launch a comprehensive and effective model for e-government services. Korsten (2001) deduces that the South African Government has sent a clear message about the seriousness of its e-government strategy. Korsten (2001) concludes that a regulatory framework needs to be developed in terms of which e-government strategies are to be regulated. The digital divide is also cause for concern and needs to be addressed as far as is possible.

### **1.3 CONCEPTUALISATION**

Having contextualised e-government and further having linked it to the case of the Government Employees Pension Fund, it is necessary to provide a conceptual framework of the more pertinent terms to be used in the thesis. Providing the conceptual framework will ensure a better understanding of the important concepts that are used in the course of the thesis.

### 1.3.1 E-governance

McLennan (1995:118) defines governance as the exercise of political power to manage a nation's affairs. Governance is therefore an all-encompassing concept that sets the broad parameters in terms of which public service delivery should take place. It therefore follows that if e-governance is the all-encompassing concept, that e-government and e-administration, for example, are pillars on which e-governance is built.

The International Trade Centre Executive Forum web site (2000) reinforces the idea that there is a distinction between the concepts of e-governance and e-government. The International Trade Centre Executive Forum web site (2000) proffers that e-government includes definitions such as digital information, online transaction services to citizens and Internet applications, amongst others. The International Trade Centre Executive Forum web site (2000) views e-governance as a much broader concept in that it does not simply refer to the transferring of existing procedures to an electronic medium, it instead implies a new definition of and approach to public governance. E-governance consequently represents a paradigm shift to the new information age (International Trade Centre Executive Forum, 2000). The paradigm shift could be said to include:

- the promotion of information and communications technologies; and

- the adoption of these technologies to promote the business of government on the one hand, and development on the other (International Trade Centre Executive Forum, 2000).

E-governance is more than simply a computerisation of certain office functions, it is instead a fundamental shift from how government operates and it requires new roles and responsibilities for the service delivery agency as well as the client who is receiving the service. E-governance should bring about a social catharsis which needs to be orchestrated in a comprehensive, co-ordinated manner (What is E-governance?, 2003).

The Inter-American Development Bank (2001) notes that e-governance goes beyond the scope of e-government. Whilst e-government relates to the delivery of services and information to citizens by using electronic means, e-governance allows direct participation of constituents in government activities. The Inter-American Development Bank (2001) notes that e-governance is just not about web sites and e-mail, it is not about service delivery over the Internet and it is not about digital access to government information and electronic payments. E-governance will, however, fundamentally alter how citizens relate to government as much as it changes the way in which citizens relate to each other. E-governance allows citizens to participate in governments' decision-making and policy-making processes. The idea of citizen participation in government is particularly important in the South African context. Citizen participation is taken a step further in an e-

governance environment in that electronic means are used to acquire citizen input into policy-related matters.

### **1.3.2 E-government**

Various authors define e-government differently and in accordance with their specific applications. West (2000) defines e-government in terms of the delivery of information and services online through the Internet or through other digital means. West (2000) further asserts that e-government offers the potential to reshape the public sector and remake the relationship between citizens and government. The Cisco Systems web site (2001) asserts that e-government is the use of Internet technology to enhance the access to and delivery of government services to the benefit of citizens, business partners and employees. The further assertion is that an e-government system would fundamentally change the way that citizens view government. The Intracen web site (2000) views e-government as the application of information and communications technology to the processes of government, that is, the extension of digital information and online transaction services to citizens.

Deloitte Research (2000:4) proffers that e-government is not just another way of conducting business; instead, it is a transformation on a scale that will fundamentally alter the manner in which public services are delivered and managed. The adoption of e-government is evolutionary and it has the potential to



create a no gap relationship where public organisations deliver modernised, seamless services to their citizens. E-government is therefore about building integrated partnerships between governments, citizens (clients) and other entities.

Worthington-Smith (ed.)(2001:215) asserts that e-government is to the state what e-business is to the private sector. E-government has led to streamlined work processes both within (internal to) organisations and between (external to) government departments and other organisations. Further internal uses of e-government should extend to procurement and even recruitment. E-government leads to the building of systems that provide for and service the needs of citizens and business partners alike (Worthington-Smith (ed.) 2001:215). E-government is not merely a website with a collection of pages (i.e. static), it is indeed an integral (interactive) set of service components which provides information and a full array of services to citizens and business partners when and where such services may be needed. E-government is furthermore about providing direct (electronic) links between clients (citizens) and service providers (government departments).

Steins (2002:18) asserts that there are 4 different and often overlapping types of e-government. They are:

- G2C – Government to Citizen: this is the best known and fastest growing type of e-government;
- G2B – Government to Business: this is to facilitate the interaction of business with Government;

- G2G – Government to Government: this aims to improve the interaction between the various spheres of government; and
- IEE – Internal Efficiency and Effectiveness: government adopting technology best practices from the private sector.

From the fore-going definitions of e-government, it seems clear that it has the potential to transform the way in which government provides services and information to people. E-government is about efficiencies – time, accuracy, convenience of access, interactive, responsive and transformative. All these are so provided that clients have access to and are able to make use of the technologies that facilitate e-government. This thesis will show that there are challenges that need to be met in order to provide ideal e-government services to all in South Africa.

### **1.3.3 E-Administration**

The United Nations Division for Public Economics and Public Administration (2002) identifies a framework for e-governance that consists of three pillars. These pillars are (a) e-government – inter-organisational relationships, (b) e-administration – intra-organisational relationships and (c) e-governance – electronic interaction between citizens, government organisations, public and elected officials. Heese (2003) notes that e-administration is the transaction of user-oriented services offered by public institutions that are based on information and communications

technologies. Priya (2004:101) concurs by noting that e-administration deals particularly with improving the internal workings of the public sector. Priya (2004:101) identifies three areas of e-administration that are extremely important. They are, cutting process costs, managing process performance and making strategic connections within government. Just as the traditional theories of administration and management sought to improve processes, electronic administration seeks to improve electronic processes in an effort to provide services quickly and more efficiently. The challenge for electronic processes to succeed is to ensure that electronic systems can communicate with each other across various barriers.

#### **1.3.4 Interoperability**

As has been intimated, one of the pillars of e-administration is making strategic connections within government (The United Nations Division for Public Economics and Public Administration (2002)). The principle of interoperability seeks to ensure that the electronic systems of public entities are compatible. Without such compatibility the ability for institutions to cooperate, interact and share information is severely compromised. Within an e-government process it would be necessary for clients to access different archives through a single portal for common data services.

Interoperability is consequently about being able to communicate. Successful communication relies on three principles. They are (a) a common syntax - structure of the message, (b) common mechanisms and (c) a common meaning (Dodd, **et al**, 2003:205). Interoperable systems for government work in a way that is coherent across public sector departments in order to provide uninterrupted services to clients. Worthington-Smith (ed) (2001) mentions that integrating the internal processes of the various departments or islands of expertise could prove to be a daunting task. Apart from the technical changes that are required for the integration of technological and administrative systems, public officials need to display the necessary willingness and commitment to the process.

John Locke, in his 1689 *Essay Concerning Human Understanding* (Dunn, 1984:1) argued that there are three elements to understanding humans and their behaviours. The first and second of these elements pertain to the physicality (nature) and practicality (rationale) of human activity. The third element relates to communication (semiology). Semiology is the doctrine of signs, the most common thereof being words. Words convey ideas. The assumption is that the more extensive a person's vocabulary, the more extensive the ideas that can be conveyed. The more extensive the integration of technological and social systems (socio-technological systems), that incorporate the special needs of societies, the greater likelihood of successful e-government (Dunn, 1984:1).

Habermas (Goodin and Pettit, 1995:49) interprets communications in respect of consensual norms. This approach assumes that communications corresponds to interaction in the context of interpersonal relations, that is, between two subjects seeking mutual understanding. Habermas (Goodin and Pettit, 1995:552) further suggests that communications is what creates communities and communications is what keeps them together. In this regard one could argue that new communities such as the Internet and web communities, amongst others, have been created. These communities come with their own set of socio-cultural and socio-economic values. The establishment of new communities is corroborated by the **Green Paper on E-Commerce** (2000:9), which asserts that technological innovations such as the Internet and other telecommunications-based activities have altered the manner in which business is conducted thereby contributing to the creation of what is often referred to as the 'borderless world'.

Roux, **et al**, (1997:86) assert that communications should be integral to any organisation, since it can be regarded as the factor that binds various separate tasks together in such a manner that contributes to success within the organisation. Roux, **et al**, (1997:86) also proffer that a proverbial golden thread links communications to information processing to decision-making. Good communications, good information processing and good decision-making are, however, arbitrary concepts and they consequently have to be assessed within the context of a particular environment.

Electronic administration systems are interoperable when they can communicate effectively at the technical, procedural and institutional levels. At a technical level, the ability of the equipment to communicate is critical. The hardware and software need to be able to send and receive messages in a manner that is decipherable by the systems involved. 'Procedure' refers to the exchange of meaningful information, that is, interpreting and understanding the information. 'Institutional' relates to the kind of information that is being transmitted as well as the kinds of transactions that are being performed (UK Online, 2003). The Office of the E-Envoy (UK Online, 2003) defines interoperability as joined-up government with joined-up systems working in a seamless and coherent way across the public sector.

Roux, **et al** (1997:87), identify a number of factors that negatively affect the communications process. The first of these is humankind's intransigence toward the process of communications. This really stems from the perception that people will automatically know or discover the facts. The second of the reasons that affects good communications is the semantic or terminological questions. Given that new sciences and disciplines are constantly evolving by means of research, communicating these to others is not evolving concomitantly. The third of the possible impediments to good communications, is technical. This relates to having insufficient or defective means of communicating. The fourth impediment relates to the heterogeneous nature of a particular society. In this case many, if not most South Africans, have to communicate in English which could be their second or

even third language. In an electronic service delivery environment the idea of e-citizen is central. If e-government in South Africa were to be successful, it would be necessary to take cognisance of the establishment of a critical mass of e-citizens – those citizens who are going to make the e-government system viable.

Further examples that may negatively affect the communications process could be lack of access to communications media for numerous reasons ranging from affordability to infrastructure. According to a World Bank report (2000:156), Africa's greatest challenge is not access to the Internet it is rather a lack of African content. Africa generates approximately 0,4% of global content on the Internet. If South Africa is excluded then Africa generates 0,02%.

The Handbook on Minimum Information Interoperability Standards for South Africa (Department of Public Service and Administration, undated) proffers that information systems have the potential to transform government and, by implication, the nature of the services government provides to the public. However, without consistent policies and standards to underpin those systems it would not be possible to work together to deliver collaborative services. The policy document on interoperability standards puts forward the minimum technical standards and policies that will act as the foundation of South Africa's e-government strategy. The minimum standards espoused in the handbook envisages the free flow of information across the public sector, that is, between national, provincial and local spheres, and will provide stakeholders – for example, civil society – unfettered access to government services.

A secondary aim of the document on interoperability standards is to provide uniform tools for government departments to be able to interact, by means of technology, regionally and beyond, hence its thrust to adopt the Internet and World Wide Web standards for all government systems. This afore-mentioned initiative is in line with international best practice. The Minimum Interoperability Standards document (undated) also envisages that South Africans become innovators of systems and not merely purchasers thereof. The Interoperability Standards document can be viewed as being the nexus of South Africa's e-government strategy, only second to security issues. The standards include the use of e-business principles by using new and appropriate technologies in order to foster good government.

The success of e-government in South Africa will depend on the success of the various spheres of Governments' distinctiveness, interdependency and interrelatedness as delineated in the **Constitution of the Republic of South Africa**, 1996. Section 41(1)(h)(i), (ii), (iii) and (iv) of the **Constitution**, 1996, sets the parameters for co-operative, supportive, consultative and co-ordinated action by the various spheres of government. The ideal of co-operative government in South Africa, as far as e-government is concerned, needs to be translated into tangible synergies of technological systems and administrative approaches across national, provincial and local departments.



Seamless government is a concept that is often used in relation to interoperability since it is descriptive of the kind of services that an e-government system sets out to achieve. Seamless government is developed around the needs of the customer. Seamless government is therefore outward looking since it is geared to providing a single point of entry to all the services offered by government. Gaining access to information and communications technologies is a challenge that many face.

### **1.3.5 Digital Divide**

The 'digital divide' refers to the gap between technology haves and have-nots. Narrow definitions of the digital divide focus on access to computers and the Internet, but access alone does not bridge the technology gap (Worthington-Smith (ed) (2002, 2003). There has always been a gap between those people and communities who can make effective use of information and communications technology and those who cannot. Now, more than ever, unequal adoption of technology excludes many from reaping the rewards of the convenience that it has to offer.

While consensus does not exist on the extent of the digital divide (and whether the digital divide is growing or narrowing), there is unanimity in acknowledging that some kind of divide exists. The digital divide is evident within and between continents, within and between regions, within and between countries and within and between organisations and individuals. Worthington-Smith (ed) (2002, 2003)

corroborates the fore-going assertion by noting that there are two divides. The first is the divide between countries and the second divide is the one within countries. Other forms of the digital divide manifest themselves in the extent of the bandwidth, the costs associated with access to computers and access to reliable telephony. Worthington-Smith (ed) (2002, 2003) notes that while connected users grapple with the quality of connectivity, there are multitudes that do not have access at all. Herein lies the digital divide since it does not seem imminent that the poor and illiterate will have access to the tools necessary to catapult them into the 21<sup>st</sup> century.

There seems to be a high level of incongruence in technological and administrative systems of the three spheres - national, provincial and local – of Government in South Africa. This incongruence in electronic systems – including access to information and communications technologies - and in administrative systems is patently observable at regional (the southern African context) and at continental (African) levels. The concept of the digital divide is as rampant in the sub-continent of Africa as it is in the rest of Africa.

### **1.3.6 Sustainable Development**

Sustainable development in a broad sense refers to people's basic needs being met whilst conserving the resource base in a situation where the population level is sustained and all aspects (not only economic), including human resources

development, are incorporated into the decision-making process (Munslow, Fitzgerald, 1995:3). A further definition of sustainable development describes it as being the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Munslow, Fitzgerald, 1995:3).

Byron and Gagliardi (1998:8) make the important link between information and communications technology and their sustainability, or rather their sustainable use. To this end the United Nations Development Programme (UNDP) initiated the Sustainable Development Networking Programme (SDNP) with the main aim of providing adequate information services for policy and decision-makers in developing countries. Sustainable development in this regard employs the following principles:

- participation by all sectors of society, government, non-government, business and the academia;
- complementarity, which identifies national partners with similar goals thereby striving to avoid duplication of efforts;
- catalytic funding which strives to limit funding in order to encourage self-sustainability;
- national ownership to ensure that the national interests of the project receive priority;
- round table which provides a meeting place for stakeholders to discuss relevant issues; and

- capacity building which aims to create the necessary skills to ensure continuity (Byron and Gagliardi, 1998:8).

The elements of the Sustainable Development Networking Programme (SDNP) of the United Nations Development Programme seem to embrace an inclusive approach to sustainability. The inclusive or integrated approach essentially identifies the key elements that need to be available in order for sustainability to thrive. The key elements for sustainable e-government include funding, human resources capacity, government ownership, building partnerships and accessibility (Byron and Gagliardi, 1998:8). Sustainable e-government in the context of this thesis therefore refers to providing services electronically while building the capacity of the service provider and the user. Sustainability further depends on systems that are compatible nationally, regionally and further afield, with national ownership being prioritised.

The sustainability of e-government is critical when considering the amorphous state of information and communications technologies. It was provisionally determined that the Government Employees Pension Fund, in its quest to implement its initial e-government programme, has not taken cognisance of the sustainability of the system. The crux of sustainability in the drive to implement e-systems is to ensure that there is a critical mass of potential users of such e-systems. Without such a critical mass the e-systems would not generate the positive spin-offs – improved service delivery - which they were expected to.

In the global scheme of things, the emergence of the concept of e-government (as a branch of e-governance) and how a system of e-government can be implemented and maintained in order to enhance service delivery is central to this study. If e-government is about improving service delivery, one could argue that in the South African context various paradoxes are evident in providing electronic services, the most noticeable of which is that the human face of government will fade. Given South Africa's political history, it could be argued that political personalities' promises (at election time) need to be given real faces and tangible delivery. Another paradox in delivering services electronically is that it would only benefit those who have access to and who can operate such electronic devices. The poor, who are invariably in most need of the services, do not have access to information and communications technology, let alone the ability to use such technology given especially the prevalence of high levels of illiteracy and computer illiteracy.

Having considered elements of both the contextual and conceptual nature of the thesis, the next chapter identifies the problem and related questions to be researched. The delineation of the problem relates directly to the literature survey that was conducted for the purpose of this thesis. The literature survey provided the parameters of the problem and the potential outcomes of the research. Chapter Two also presents discussions on the methodology pursued in the thesis. The chapter on the methodology is important since it presents the reasons as to why the research on e-government is deemed to be important.

## CHAPTER TWO

### RESEARCH METHODOLOGY

#### 2.1 INTRODUCTION

The impact of information and communications technologies in the global environment is ever increasing and pervasive. Nowhere is this impact more profound than in the government sector. Governments are striving to become more customer-centric in their approach to the delivery of services. The ideal of a seamless relationship between governments and their clients (the voting public, staff, other government departments and stakeholders) has become fundamental in the manner in which services are being rendered.

The Government Employees Pension Fund is an indispensable component of the civil service in South Africa since it administers pension receipts and payments on behalf of civil servants. Given that public service delivery is often perceived to be inherently unresponsive, inaccessible and inefficient, it is necessary to change this perception by, amongst other initiatives, implementing the principle of Batho Pele (People First)(Department of Public Service and Administration, 2003). A cursory examination of public service delivery in South Africa reveals shortcomings ranging from skills shortages to blatant incompetence, nonchalance and even indifference.

Government service delivery, despite the many initiatives to improve, continues to display significant shortcomings.

## **2.2 OVERVIEW OF THE PROPOSED RESEARCH**

Given that e-government forms the basis of the thesis, with the Government Employees Pension Fund being the case, Chapter Two presents the methodology that is to be followed in the effort to answer the pressing question of whether the implementation of e-government can improve service delivery in the South African context. This chapter will consider the various methodological approaches to the study on e-government as they relate to the case of the Government Employees Pension Fund.

### **2.2.1 The Case of the Government Employees Pension Fund of South Africa**

The theme of the proposed research is e-government. As has been intimated, e-government around the world and in South Africa is in a continuous state of evolution. New technologies are constantly being developed, whilst other technologies are becoming or are already obsolete. Research should make a difference. Research should be about answering questions, concerns and making relevant contributions to the body of knowledge. Research is about attracting attention to points of view pertaining to a particular theme or themes.

This research will consider how information and communications technologies can be used to enhance electronic service delivery from a public sector point of view. Effective, sustainable, efficient, successful and prompt service delivery has been the ideal espoused by the South African Government. This afore-mentioned ideal of efficient service delivery has found fruition (whether effective or not) in the South African Government's policy of Batho Pele (People First) (Department of Public Service and Administration, 2003). Delivering services electronically will seemingly benefit those who are literate, computer literate and who have access to information and communications technologies related, for example, to voice applications. This research aims to consider whether the electronic delivery of services enhances the quality, speed, accuracy and success rate of services provided by the Government Employees Pension Fund.

It is in the context of enhanced service delivery that the Government Employees Pension Fund will serve as a case study for this thesis. The Government Employees Pension Fund administers civil pensions in South Africa. There exists a distinct difference between the Government Employees Pension Fund, which administers civil pensions, as opposed to the Department of Social Development, which administers welfare/social pensions and grants. Given that the Government Employees Pension Fund is a department of government, makes the case especially relevant. Furthermore, the Government Employees Pension Fund is currently installing new pension administration software with a view to improving service delivery. The Government Employees Pension Fund is consequently an



appropriate case study when considering the migration from one pension administration software system (CivPen) to another, the Comprehensive Pension Administration Application Software (COMPASS) and the resultant implementation of e-service delivery mechanisms. An analysis of the old (legacy) versus the new Comprehensive Pension Administration Application Software (COMPASS) forms the basis for the study.

Another important aspect of the study is the electronic link between the Government Employees Pension Fund and the employer (government) departments. It is envisaged that the link between the departments will be electronic, thereby increasing the speed, security and accuracy with which services are provided to the client.

The thesis will consider electronic Public Administrative service delivery in the Government Employees Pension Fund and related government departments as they relate to civil pensions administration. The use of information and communications technologies in Public Administration service delivery, specifically with regard to pension administration, will be analysed. Information and communications technologies are increasingly being employed in a bid to improve services. It is within the context of the increased use of information and communications technologies that the effectiveness of electronic service delivery in South Africa will be analysed. The analysis would not be complete without an analysis of the historical forms of service delivery and indeed without considering

whether the Comprehensive Pension Administration Application Software (COMPASS) pension administration software package has been implemented successfully elsewhere.

The contribution of the research will therefore be concentrated on electronic service delivery (e-government), using the case of the Government Employees Pension Fund. The research will have as one of its outcomes, whether e-government improves service delivery. Furthermore, given that the Government Employees Pension Fund is a services department, and given that no research (thesis or dissertation) relating to service delivery in this context had been conducted, it was deemed prudent that an original contribution would be made to the implementation of e-government in South Africa. The research is therefore important in that it is an attempt to document current e-government initiatives and it aims to provide analysis of the successes and failures of the process that the Government Employees Pension Fund of South Africa had initiated.

This study would further make a contribution to the understanding of electronic relationships between and within organisations. It is envisaged that a better understanding of electronic relationships would contribute to the improvement of service delivery to clients. Such an improvement in electronic service delivery mechanisms should find fruition in the levels of morale amongst employers and productivity in the organisation.

## **2.3 RESEARCH DESIGN**

Given global demands, with large information flows and the extensive use of information and communications technologies, it is important that governments, religious groups, green groups, civil society (in general) and individuals are e-enabled. For services to be delivered electronically, there needs to be e-citizens, e-clients, an e-administration and e-ability (where e-ability refers to computer literacy, access to computers and/or e-centrism).

### **2.3.1 Context of the Study**

South Africa presents an apposite case for e-government. The e-government regime in South Africa is still in its infant stages. Since e-government in South Africa is in its infancy, an opportunity to document its development exists. Various e-government initiatives are currently afoot in South Africa. Many of these e-government initiatives are taking place under the auspices of the Department of Public Service and Administration. The Department of Communications also plays a significant role in the development of a sustainable e-government policy regime in South Africa. This research is important in that it is an attempt to document the current initiatives and it aims to provide analysis of the successes and/or failures of e-government initiatives undertaken. The methods to be followed when gleaning for data are to be elucidated in the succeeding section.

### **2.3.2 The Objectives of the Study**

The objective of the study is to test whether the causal relationship between e-government and service delivery will lead to an improvement in the levels of services provided by the government to its clients, the citizens. The Government Employees Pension Fund will serve as a case in point.

This study on e-government intends to build on the work that has already been done on the concept and practice of e-government and the efforts around defining its role in South African government departments. It is important to note that the study intends to apply the principles of e-government to the Government Employees Pension Fund in an effort to determine whether e-government - that is, electronic service delivery - can improve the efficiency, accuracy and accessibility of government services. It is therefore important to ensure that clients have access to the mechanisms that enhance e-government. The reasons for any improvement in service levels subsequent to the implementation of e-government would be analysed and presented as the basis of the research. The study will therefore determine whether, given a confluence of the causal relationships between e-government and the levels of service delivery, the implementation of e-government structures will improve the levels, accuracy and accessibility of services offered by the Government Employees Pension Fund to its clients.

Given that it is the objective of the study is to test whether the causal relationship between the implementation of e-government and service delivery, improves the levels of service to clients, it would be necessary to develop, ascertain and assess information to prove or disprove the thesis. The research design will take into consideration the location in which most of the primary material is to be collected. Most of the material for the purpose of this study will be collected on the site housing the Government Employees Pension Fund. When it comes to assessing e-government across government departments, information will be sourced from a cross-section of departments.

The purpose of the study is to test whether the causal relationship between the implementation of e-government and service delivery on the one hand, improves the levels of services being provided to clients, on the other. Tellis (1997) notes that there are at least four applications for the case study. The application of the case study that is of particular interest for this thesis is the proposition that case studies explain complex causal links in real-life interventions. The causal links between the implementation of an e-government system at the Government Employees Pension Fund and the (improved) levels of service delivery, has particular significance.

## **2.4 DELINEATION OF THE PROBLEM**

Any research document has boundaries or parameters in terms of which the outcomes will be assessed. The section on identifying the problem presents such boundaries and extent to which the research will be limited. The delineation of the problem relates directly to the literature survey that was conducted for the purpose of this thesis. The literature survey provided the parameters of the problem and the potential outcomes of the research.

### **2.4.1 The Statement of the Problem**

The perception that service delivery in the South African public sector is inherently unresponsive, inaccessible and inefficient, can be dispelled by the implementation of a fully functional e-government system. The Government Employees Pension Fund will serve as a case in point. The questions for consideration are:

- what is e-government?
- can e-government improve public service delivery?
- can an effective customer relationship management system add value to electronic public service delivery? and
- how can e-government be made accessible?

Against the afore-mentioned back-drop the thesis proposes to investigate the implementation of e-government in South Africa by considering, evaluating and

critiquing the initiatives that have been taken by the Government Employees Pension Fund in this regard.

#### **2.4.2 Significance of the Research**

The contribution of the research will be concentrated on electronic service delivery (e-government), using the case of the Government Employees Pension Fund and its links to other government departments and stakeholders. The research will have as one of its outcomes, whether e-government improves service delivery. Since e-government in South Africa is in its infancy, this serves as an opportunity to document its development and indeed to add value to how the Government Employees Pension Fund delivers services to its clients.

This research is important in that it is an attempt to document current e-government initiatives and it aims to provide analysis of the successes and/or failures of e-government initiatives undertaken. An applied approach will be followed as per the case of the Government Employees Pension Fund. Once the analysis has been done, conclusions will be drawn on how to roll an e-government strategy out so that all South Africans can benefit.

In attempting to conduct targeted research it is important to present the results in a logical, coherent order. The delineation of the chapters for the thesis provides valuable insight into the direction that the thesis will go.

## **2.5 CHAPTER DELINEATION**

In addition to the introductory chapter, the thesis is organised into five chapters. An outline of the parameters of the research will be provided during the first chapter. Introductory statements, definitions, intentions and processes are explained briefly in this introductory chapter. Chapter One will also serve as the platform in which to introduce the precepts of the proposal in line with a synoptic view of the literature search. Brief explanations of the important concepts to be used will be included in the introductory chapter.

Chapter Two presents the methodology that is to be followed in the effort to answer the pressing question of whether the implementation of e-government can improve service delivery in the South African context. This chapter will consider the various methodological approaches to the study on e-government as they relate to the case of the Government Employees Pension Fund. The research methodology includes presenting the nature of the study, the typical sources and the possible shortcomings.

Chapter Three provides an overview of the literature pertaining to the development of e-government in South Africa since the early 1990s. Brief statistical data on the proliferation of telecommunications in South Africa will provide a basis from which the discussion on e-government accessibility is based. Successful e-government initiatives by the Government Employees Pension Fund of South Africa will depend



on whether there is a critical mass of clients who have access to information and communications technology. The extent of the historical disparities in access to information and communications technologies in South Africa and the impact that these disparities may have on the delivery of services by electronic means, will be traced.

Chapter Three also provides a review of the theoretical aspects of the traditional public administrative models in order to determine whether e-administrative models can be more effective. An analysis of any Public Administration system would be inadequate without considering some of the theories of Public Administration. The main theories pertaining to Public Administrative and electronic systems, specifically how these interact to provide services to clients, are to be introduced. The applied analysis pertaining to the theories follows in Chapter Five.

The relevant theories of Public Administration, identified during the course of Chapter Four, will be applied to the Government Employees Pension Fund of South Africa. The current link between the Government Employees Pension Fund and its clients will consequently be assessed. The concept and principle of seamless government are integral in the development of a system that will enhance effective and efficient service delivery. The assumption is that e-government is a form of e-administration, hence theoretical aspects such as interoperability, seamlessness and digital divide.

Chapter Four furthermore pursues the principle of a paperless workplace as key to the submission of electronic documents. The principle of the paperless workplace also applies to procurement, invoicing and payment processes. The paperless workplace is also relevant to basic human resources administrative applications such as the submission of leave forms, housing subsidy forms, staff assessment documentation, inter alia. Seamless government, which includes electronic links with the Department of Home Affairs for verifying identity documents and for verifying the life status of pensioners, amongst others, is important. The concept of seamless government is linked to the idea of a portal for government departments so that clients could access government information and services irrespective of the department involved.

The web site of the Government Employees Pension Fund is currently static since it provides information to clients, without an interactive capability (Interview, Manager: Government Employees Pension Fund Call Centre, 3 September 2004). The information relates to the rules of the Government Employees Pension Fund, the Government Employees Pension Law, Members' Booklet, newsletters, frequently asked questions and answers to these, inter alia. An interactive web site would allow clients of the Government Employees Pension Fund to access more service offerings. Amongst these could be change of address details, banking details, general member and pensioner details update. The government departments, as clients of the Government Employees Pension Fund, can also access the web site to request quotations and admit new members.

Chapter Four also serves as the platform on which comparative lessons are drawn from a systems perspective. Drawing comparative lessons for the Government Employees Pension Fund is very difficult given that there is no other government pension fund in South Africa. Given that the thesis is about e-government and government service delivery, private pension funds in South Africa will not necessarily provide for adequate comparison.

Furthermore, comparing a private pension fund like Old Mutual with a government pension fund like the Government Employees Pension Fund, is not necessarily a fair comparison. Chapter Four will, therefore, have to compare whether the administration and service delivery of the private fund had improved after the implementation/partial implementation of the Comprehensive Pension Administration Application Software (COMPASS) pension administration software.

As Chapter Four had introduced the theories of Public Administration, Chapter Five analyses the said theories of Public Administration in an applied form using the case of the Government Employees Pension Fund of South Africa. Chapter Five will therefore assess the current link between the Government Employees Pension Fund and its clients. The concept and principle of seamless government are integral to the development of a system that will enhance effective and efficient electronic service delivery.

The contribution on customer relationship management explores the Government Employees Pension Fund's attempts to deliver effective, efficient, proficient and successful electronic services. The drive to deliver services brings to the fore the additional access points that the Government Employees Pension Fund has provided to its clients as part of the e-government initiative to offer a high quality of service. Chapter Five will analyse the value that customer relationship management (CRM) solutions could add to an organisation. Customer relationship management systems, be they operational (manual), electronic and/or mobile, provide significant opportunity to enhance service delivery. The Government Employees Pension Fund of South Africa will provide a good case for the implementation of an electronic customer relationship management model. The model for a customer relationship management system will, whilst considering the integration of the front and back office systems, be employed as a tool to provide new service offerings, such as investment advice, to its clients. Furthermore, given that the Government Employees Pension Fund is implementing new technologies in an effort to deliver improved service, electronic customer relationship management is vital. This chapter will consider the relationship between the implementation of the new technologies at the Government Employees Pension Fund and a customer relationship management model. The concept of mobile customer relationship management, given especially that workers (clients) have become more mobile, is an important initiative that needs to be implemented by the Government Employees Pension Fund. The idea and concept of mobile

customer relationship within the Government Employees Pension Fund will be pursued and assessed.

The Government Employees Pension Fund has a human element in that the human resources represent the face of the organisation. In this respect the Government Employees Pension Fund has had to train and retrain its staff to enable them to use the new information and communications technology system so as to ensure optimal service delivery. No thesis on government service delivery would be complete without considering the human resources element that is to provide the service. Human resources in the employ of government are often said to be inefficient, devoid of skills and nonchalant. Human resources needs within the context of the Government Employees Pension Fund and e-government initiatives demand special attention in this, the fifth chapter of the thesis (Interview, Assistant Manager: Human Resources, Government Employees Pension Fund, 3 September 2004).

The idea that clients need to be empowered to use information and communications technologies is an important one that will be explored in this chapter. The clients of the Government Employees Pension Fund should not be alienated by the implementation of technological advancements. Training is needed in this regard. Chapter Five will explore the initiatives taken by the Government Employees Pension Fund in order to enhance human resources capacity. The research will concentrate on the success of initiatives around

training, change management, focus groups and conditions of service, amongst others.

Chapter Six of the thesis will act as the dénouement where the loose ends will be drawn together in the form of conclusions and the identification of further opportunities for research. It is during the course of this chapter that the final analysis and conclusions will be drawn. Chapter Six of the thesis will deal with issues that could, in the future, improve electronic service delivery to the clients of the Government Employees Pension Fund. Given that this study is based on the case study methodology, it is prudent to provide some theoretical background as to what makes the case study effective and what does not.

## **2.6 RESEARCH METHODS**

A whole range of research methods extending from empirical research to literature studies to case studies, are available. Babbie (1998:36) and Bailey (1987:60) proffer that in its simplest form, the distinction between qualitative and quantitative data in social research is the distinction between non-numerical and numerical data. Hussey and Hussey (1997:55) prefer to use the term positivistic rather than quantitative and phenomenological rather than qualitative. The reason for this distinction is that it is possible for a positivistic paradigm to produce qualitative data and vice versa (Hussey and Hussey, 1997:55; Neuman, 1997:14).

Neuman (1997:294) notes that a quantitative researcher would most likely use quantitative data such as charts, graphs and tables. These charts and tables allow others to see the evidence collected by the researcher enabling them to make their own deductions from the data collected. Quantitative research relies mainly on assumptions from the positivistic approach to science. The positivistic paradigm is based on the approach used in the natural sciences, such as biology, botany and physical science. Positivism is premised on the belief that the study of human behaviour should be conducted in the same way as studies conducted in the natural sciences. Logical reasoning is therefore applied to the research so that precision, objectivity and rigour replace intuition and experience as the means of investigating research problems (Hussey and Hussey, 1997:52).

According to positivists, laws provide the basis for explanation, permit the explanation of phenomena, predict their occurrence and therefore allow them to be controlled (Hussey and Hussey, 1997:52). Explanation therefore consists of the establishment of causal relationships between variables by establishing causal laws and linking them to a deductive or integrative theory (Hussey and Hussey, 1997:52).

The difference between qualitative and quantitative research is the nature of the data and what researchers take to be data (Neuman, 1997:327). Researchers have used different research strategies when data is captured in the form of words, sentences and paragraphs, as opposed to numbers, graphs, charts and tables.

Neuman (1997:328) asserts that qualitative data is empirical since it involves documenting real events, recording what people say, observing specific behaviours, studying written documents and/or examining visual images. For qualitative researchers the central issues are not how to convert qualitative data into reliable, objective numbers; they rather concern the accessibility of other cultures, the relativity of people's accounts of their social worlds and the relation between sociological descriptions and people's conceptions of their actions (Neuman, 1997:328). Qualitative social research relies largely on the interpretive and critical approaches to social science. The qualitative paradigm is concerned with an understanding of human behaviour from the participant's own frame of reference. The qualitative approach stresses the subjective aspects of human activity by focussing on the meaning rather than the measurement of social phenomena (Hussey and Hussey, 1997:53). The research methods used under this approach seek to describe, translate and come to terms with the meaning and not the frequency of certain more or less naturally occurring phenomena in the social world.

Irrespective of the style of social research adopted, researchers try to avoid the pitfalls in the process by systematically gathering data and by comparing, analysing and interpreting that data. If a researcher understands both styles, i.e. the quantitative (positivistic) paradigm and the qualitative (phenomenological) paradigm, it can only enhance the range of the research since the two paradigms



can complement each other. Given, however, that people conduct research for various reasons, researchers may want to favour one approach over the other.

The study on e-government, the case of the Government Employees Pension Fund, will mainly adopt a qualitative approach. The qualitative approach will be of relevance in the assessment of the reasons why e-government may or may not improve the levels of service delivery. Important to note is that the quantitative aspect would not be ignored in this study.

### **2.6.1 The Case Study**

Soy (1997) defines the case study as the research that brings people to an understanding of a complex issue or object. The case study approach to research can corroborate experiential knowledge by further adding to what is already known. The case of the Government Employees Pension Fund falls squarely into this definition in that it will provide experiential knowledge of the inner operations of the Fund, whilst at the same time providing additional analysis of the advent of e-government in South Africa.

The case study is a qualitative approach which examines real-life situations to provide additional knowledge to the context that is being researched. Case studies by their very nature adopt multi-pronged approaches to analysis. In this regard, the researcher considers the views of various actors and groups of actors in an effort

to corroborate data (Tellis, 1997). Tellis (1997) identifies six possible sources for the case study, each requiring a different skill on the part of the researcher. The six sources are documentation, archival records, interviews, direct observation, participant observation and physical artefacts. No single source takes preference over another.

**a. Documents**

In the case of the Government Employees Pension Fund, the documents that are to be used are letters, internal memoranda, agendas and minutes, reports and planning documentation.

Documents and archival records tend to be stable, unobtrusive, exact and they cover a broad array of subjects. Some of the weaknesses that documents could display are that they may be difficult to retrieve, they display author bias and access may be blocked or limited, thus a skewed picture may emerge (Trellis, 1997).

**b. Interviews**

Interviews are one of the most important, significant and telling sources of the case study. The interview could adopt a number of different approaches, depending on the context. They could be open-ended, structured or focussed (Watson, 1989). In

the open-ended interview the researcher basically elicits the interviewee's opinion on events and facts. This approach could serve to confirm previously gathered information. The focussed interview is limited to a particular event or action. The focussed interview is normally short and goal-directed. The structured interview, an example of which is the survey, is particularly important in the case study.

The survey is a positivistic method in terms of which a sample of subjects is drawn from a population and inferences are made on the whole population. It is necessary to determine the manner in which the survey questions are to be asked. The alternatives are face-to-face, telephonic interviews or questionnaires. The participants will, as far as possible, be asked the same questions in the same circumstances. The descriptive method of surveying is best suited to determine the attitudes of the people on the subject of e-government, whilst the analytical survey would determine whether there is a relationship between the variables (Watson, 1989). The study on e-government, the case of the Government Employees Pension Fund will therefore use a multi-pronged approach in this regard.

### **c. Direct and Participant Observation**

The prevalence of direct observation in a case study is evident when the researcher visits the actual site of the case in question to gather data. The data collection process could be formal or informal. The important issue, however, is that the reliability of the data which could be corroborated by employing a number

of observers. Participant observation is where the researcher actually participates in the events that are being researched. Participant observation is often used when studying organisations. Participant observation will be used extensively in the study on e-government as it relates to the case of the Government Employees Pension Fund. The main flaw with participant observation is the researcher's close proximity to the subject, hence the distinct possibility of bias. The information being sought on the case of the Government Employees Pension Fund will, however, not necessarily be available without such participant observation.

**d. Physical Artefacts**

Physical artefacts could be any piece of physical evidence that can be used by the researcher to corroborate facts and present arguments. In the case study on the Government Employees Pension Fund as it relates to e-government, physical artefacts refer to obsolete computers and computer programmes, the old note (recording) books, obsolete calculators and telephone systems.

Soy (1997) notes that case studies are likely to be far more reliable if several different sources are used. Soy (1997) argues that multiple sources allow for a cross-checking functionality that includes checking, verification, testing, probing and confirmation. This principle of cross-checking is probably the key strength of the case study approach. An additional component of the research methodology is

to determine the sample sizes for the interviews and direct observation so as to ensure optimal verification of the source material.

### **2.6.2 Target Population and Sample Sizes**

The target population and sample size for the research, for it to be representative, will include a cross-section of individuals ranging from the management component of the Government Employees Pension Fund, to the drivers of the e-government project, to the clients. A skewed picture may emerge if an all-inclusive approach is not pursued.

When it comes to assessing e-government, e-service delivery and customer relationship management, there are a number of role-players to consider. The first of the role-players is the client, the generic term for pensioners, contributing members, government (employer) departments, trade unions and service providers (suppliers of goods and services). There are internal clients, that is the staff and processes that need to complement each other in a manner that is beneficial to the external client, the pensioner and member of the Government Employees Pension Fund.

Sample sizes for assessments within (internal to) the Government Employees Pension Fund would necessarily range from 30 to 150, depending on the number of staff working in a particular area that is being assessed and depending on the

need to corroborate the information. The sample for members of the Government Employees Pension Fund – all permanently employed civil servants – could be very extensive, given that there are approximately 1,2 million members. The sample for members of the Fund need to be limited in order to make the numbers practical to work with.

The research would not be complete without having assessed the needs of the pensioners as far as e-service delivery is concerned. This component will be of particular interest given that pensioners would not necessarily have access to or have the inclination to access services by electronic means. This assertion would have to be tested during the course of the research. There are two ways in which this can be achieved. The first is to include a questionnaire with the quarterly newsletters that are sent to pensioners. A similar exercise can be conducted when members' newsletters are sent. The members and the pensioners would be requested to return the survey forms in a reply envelope. The sample would include persons selected randomly from all the provinces in South Africa, taking into consideration the possible levels of literacy, an adequate rural sample and an adequate urban sample and age. Pensioners and members who visit the Government Employees Pension Fund's Walk-in Centre will be asked to fill out a questionnaire as to the desired services that they require.

As far as employers – government departments – are concerned, the researcher believes that a distinction needs to be made between provincial departments and

national departments. The emphasis would have to be determining whether there are disparities between the levels of e-government at national and provincial levels of government. One also needs to consider local government, especially as far as interoperability of systems between the various spheres of the South African Government is concerned.

Having decided on the target population and the sample sizes, it is necessary to determine the manner in which the data that is to be analysed and presented in a logical manner. This is also the reason why the results of the exit interviews conducted by these departments would be a valuable source of information.

### **2.6.3 Data Analysis**

After the data has been collected the next step in the research process is to interpret such information in congruence with the parameters delineated by the research proposal and the related research questions. Data analysis comprises scrutiny, classification, tabulation and integration of information in such a way that it addresses the initial propositions of the study. The researcher, therefore, relies on a combination of literature, statistics, information garnered from interviews, information from direct and participant observation on which to base conclusions, interpretations and deductions.

Brynard and Hanekom (1997) suggest that the researcher has to analyse the available data during the collection process in order to determine its relevance to the proposed direction of the research. Brynard and Hanekom (1997) appropriately refer to the discarding of irrelevant data as filtration. What is left after the filtration process is what would be used during the analysis and argumentation.

Soy (1997) points out that the researcher uses the raw data, coupled with interpretation, evaluation and deductive thinking, to determine associations with reference to the original set of research questions. Importantly, Soy (1997) notes that the researcher should throughout remain open to the possibility of new opportunities and insights. The cross checking of data allows for corroboration of data. To this end, it may be necessary to conduct short, focussed, follow-up interviews to gather additional information. Soy (1997) notes that it is not uncommon for case study researchers to use reliable quantitative data to support qualitative data.

In the research relating to the case of the Government Employees Pension Fund, participant observation plays a prominent role, hence there is a risk of the data being common knowledge, as it were. The risk of bias is very real. The way in which to mitigate the afore-mentioned risk, is to ensure that multiple sources are corroborated by multiple role-players. Interviews will form a vital part of the verification process. Much of the primary written data are planning documents and these need to be verified.



## **2.7 CONCLUSION**

Chapter Two has provided some insight into the methodological approach that is to be followed in pursuit of the finalisation of the objectives of the thesis. To this end, the chapter has entrenched the concept of e-administration as it relates to e-government. The global nature of the study is predicated upon the global reach of information and communications technologies. The chapter briefly expounds on the approach to the research on e-government in South Africa by exploring the case of the Government Employees Pension Fund.

Research methods, most notably that of the case study, are analysed during the course of Chapter Two. The typical sources employed during the course of the case study methodology are explored in terms of their effectiveness. The chapter finally presents how the data are to be assimilated and presented.

The succeeding Chapter Three provides a review of selected readings on e-government. The readings serve to further present and delineate the parameters of e-government and its progress in the South African context.

## CHAPTER THREE

### REVIEW OF SELECTED READINGS ON E-GOVERNMENT

*Society not only continues to exist ...by communication, but it may be fairly said to exist in...communication. There is more than a verbal tie between the words common, community and communication. Men (sic) live in a community by virtue of the things which they have in common; and communication is the way in which they come to possess things in common (Dewey, in Goodin and Pettit, 1995:555).*

#### 3.1 INTRODUCTION

The literature review that was conducted for the purposes of the thesis is not exhaustive in extent and analysis. The literature review has, however, precipitated a flow of ideas that has resulted in the delineation of the problem to be investigated. Nowhere in the literature that was reviewed was there any reference to electronic service delivery within the ambit of the Government Employees Pension Fund of South Africa.

Emanating from the literature review are concepts that are central to a clear understanding of the analysis that is to be presented during the course of the thesis. The following section presents discussions on the theoretical understanding of the pertinent concepts so as to underpin their importance in the thesis.

Chapter Three traces the development of e-government in South Africa. In so doing Chapter Three will present some statistical data on the proliferation of

telecommunications in South Africa. The purpose of this analysis would be to determine the levels of access to information and communications technologies hence to determine the viability of e-government initiatives in South Africa.

As the World becomes increasingly interconnected it is necessary for governments and their related institutions to follow suit to be able to provide better levels of public services. Therefore there exists a synergy between the rollout of electronic systems for government, ever-increasing interconnectedness (locally and internationally) and service delivery. Despite the thrust toward interconnectedness several South African government departments possess systems that do not correspond with the specifications of yet other government departments. The systems are said to be incompatible if they cannot communicate with each other. The incompatibility of electronic systems between government departments has a negative impact on clients who may wish to have electronic access to the services offered by government.

An analysis of any Public Administrative system would be inadequate without considering some of the theories of Public Administration. This chapter will briefly analyse some of the main theories pertaining to Public Administrative and electronic systems, specifically how these interact to provide services to clients. Disjointed administrative systems, be they hard file-based or electronic, lend themselves to disjointed service delivery. Disjointed systems often lead to duplication, time and money wasting, hence inefficiencies. An analysis of the

traditional theories of Public Administration will provide impetus to the discussion on the disposition of the Government Employees Pension Fund.

The chapter starts by considering the global picture as far as interconnectedness is concerned. The chapter proceeds to consider the African disposition after which a review of the South African landscape pertaining to e-government, will be considered. The work of the Presidential Review Commission is but one example of the South African Government's resolve to pursue the adoption of information and communications technologies in the public sector environment.

### **3.2 GLOBALISATION AND ITS CHALLENGES FOR GOVERNMENTS**

As global forces increasingly determine the future, the roles of governments, government agencies and business have become clouded in many respects. Globalisation, with its concomitant effects has permeated every vestige of society, from government to business to the individual in the most remote reaches. As globalisation presents new challenges to the business of business, it also presents new challenges and opportunities for governments across the world. The sovereignty of the state and the state's right to make decisions are being challenged to the very foundation as globalisation spreads its influence. The interaction between states, as self-sufficient entities with exclusive power, is what dominated global politics (Washington, 1995:2). The advent of globalisation has, however, cast aspersions on the very foundations of the state as an independent entity.

Globalisation is changing the context in which governments, institutions and individuals operate. The globalisation of financial markets is but one example of the change. Other aspects of globalisation include the internationalisation of crime, information and communications technologies, population movements and product and service markets (Washington, 1995:1). Even traditional domestic issues are increasingly being influenced by global trends. Globalisation of world economies is limiting the independence of action of the nation state (Fraser, 1999:33). Many traditional government activities have been privatised and economies have become increasingly liberalised in order for the market forces to determine economic outcomes thereby limiting government intervention.

Whilst nation states are losing independence, the market is gaining prominence in determining future trends. Multinational corporations are increasingly wielding extensive economic power. Globalisation and its concomitant spin-offs means that borders - of all sorts - are becoming increasingly difficult for governments to define, and maintain. National governments are being forced to redefine their roles and responsibilities.

Globalisation is an irreversible process and governments, institutions and individuals have to develop strategies to deal with its effects. Globalisation is not a policy option, an ideology or a theory written by rich men. Grawitzky (Business Day, 30 March 2000) asserts that the integration of the world economy is inevitable. An isolationist approach by governments, institutions and individuals will

be tantamount to self-destruction. By the same token, monetary and fiscal decisions can no longer be divorced from the international context. According to Washington (1995:3), there remain few purely domestic issues.

South Africa has warmed to the task of globalisation by liberalising many of its state-owned enterprises such as Telkom, Spoornet, Denel and Iscor. The Growth, Employment and Redistribution Strategy (Gear) was seen as the manifestation of a neo-liberal, capitalist shift in South African economic policy after 1994. The South African Government was merely responding to the prescriptive power of globalisation (Daily Mail and Guardian, 27 July 1999). Grawitzky (Business Day, 30 March 2000) asserts that the integration of the world economy is inevitable. An isolationist approach by governments in this regard is therefore not an option.

There are some areas of global interaction over which leaders within governments have little or no control. Information and communications technology, one example of interaction over which governments has little or no control, has effectively negated the capacity of countries to adopt an isolationist stance. Information and communications technology has progressed so significantly that access to information by individuals and groups is virtually limitless. In this context, it is evident that governments cannot control information flows. The manner in which entities respond to the forces of the information flows will determine how effective they are in the global arena. Having sketched the features of a global environment,

it is necessary to identify how these features impact on the development of information and communications technologies in Africa.

### **3.3 INFORMATION AND COMMUNICATIONS TECHNOLOGIES FOR AFRICAN DEVELOPMENT**

Heeks (2002:98) notes that African countries have been using information technologies for more than 40 years. Heeks (2002:98), however, draws a distinction between an old model – that is, information technology automating the internal workings of government - and a new model – that is, information and communications technologies supporting and transforming the internal workings of government. E-government encompasses all information and communications technologies and pervades all public sector activities (Heeks, 2002:99). New communities are being formed, new innovations result and new forms of information gathering and dissemination are being developed. Heeks (2002:99-101) suggests three areas or domains where e-government is most influential. These domains relate to improving processes (e-administration), connecting citizens (e-citizens and e-services) and building external interactions (e-society). The discussions on these afore-mentioned domains will form the basis for the discussion on service delivery by the Government Employees Pension Fund.

Soltane and Adam (1999:331) point out that industrial and economic development cannot be achieved without the successful application of science and information

technology and communications technology. Soltane and Adam (1999:331) further assert that scientific and technological advances the world over are transcending national and regional boundaries and that these developments are undermining social, political and economic institutions.

Though several African countries have implemented information and communications technologies to fluctuating levels of success, access is still limited to a select group. Access to information and communications technologies seems to be easier in certain focal areas in Africa where a telephony infrastructure exists. It has been suggested that Southern African Development Community (SADC) countries establish a regional information network to promote optimal development and use of information resources, for example (Ngubane, Naspers, 1 November 2000).

The establishment of regional nodes of information and communications technologies throughout Africa would be beneficial to all Africans given that information can be accessed and disseminated with relative ease. Kgaphola and Magau (1999:344) point out that the underdevelopment of science, information and communications technology in Africa has historical roots, hence the assertion that African leaders have not as yet embraced the critical role that science, information and communications technology could play in development. Having considered information and communications technologies at a global and at an African level, the national, South African, level will be considered.



### **3.4 E-GOVERNMENT IN SOUTH AFRICA: AN OVERVIEW**

As a prelude to assessing e-government in South Africa, it is necessary to trace the historical roots of the levels of accessibility to information and communications technologies. South Africa, as compared to other African countries, seems to have achieved much more with regards to infrastructural development and accessibility to information and communications technologies. The assessment on South Africa considers the historical disparities and comparative realities of accessibility to information and communications technologies.

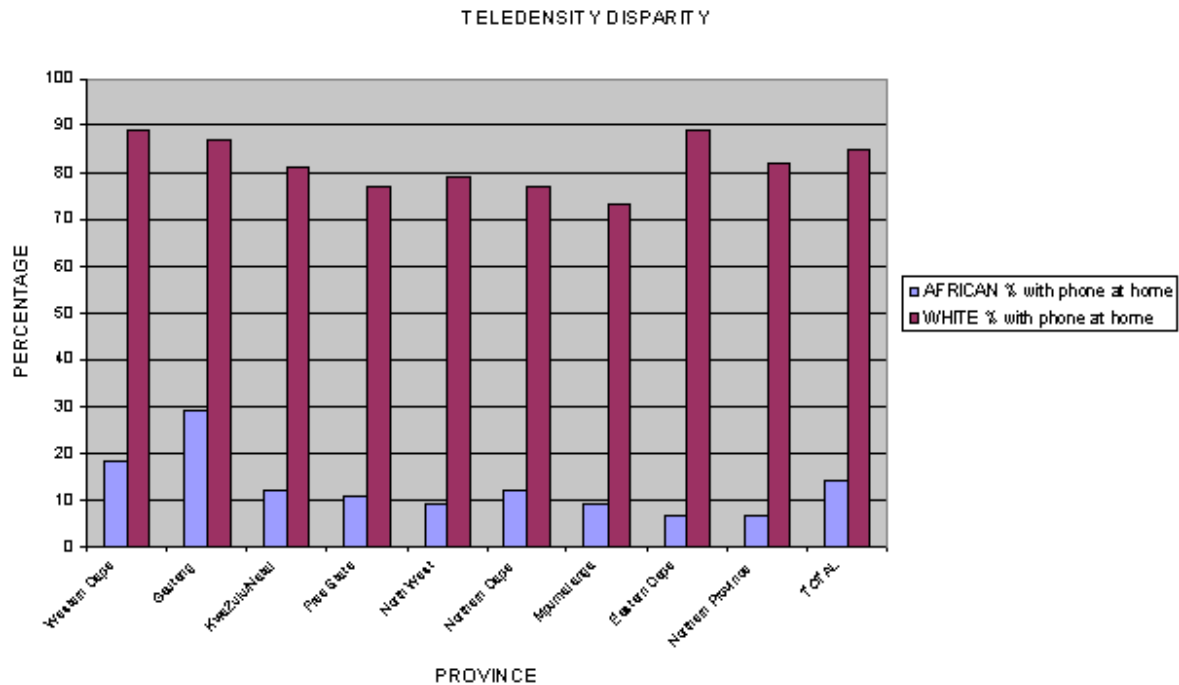
#### **3.4.1 Historical Overview of the Telecommunications Infrastructure in South Africa**

Whilst South Africa has the most advanced telecommunications infrastructure in Africa and whilst South Africa has the highest tele-density in Africa, such access to telecommunications is extremely skewed. A brief historical picture reveals the extent of the disparities in access to information and telecommunications in South Africa. Horwitz (1997:3) notes that the historical disparities in access to telecommunications are as a result of the policy of separate development (Apartheid) in South Africa. The 1989 telecommunications penetration figures indicate that 2,4 out of every 100 blacks, while 25 out of every 100 whites had access to telecommunications (Horwitz, 1997:4). Horwitz (1997:4) also notes that reliable data on telephone penetration by race are difficult to obtain since such

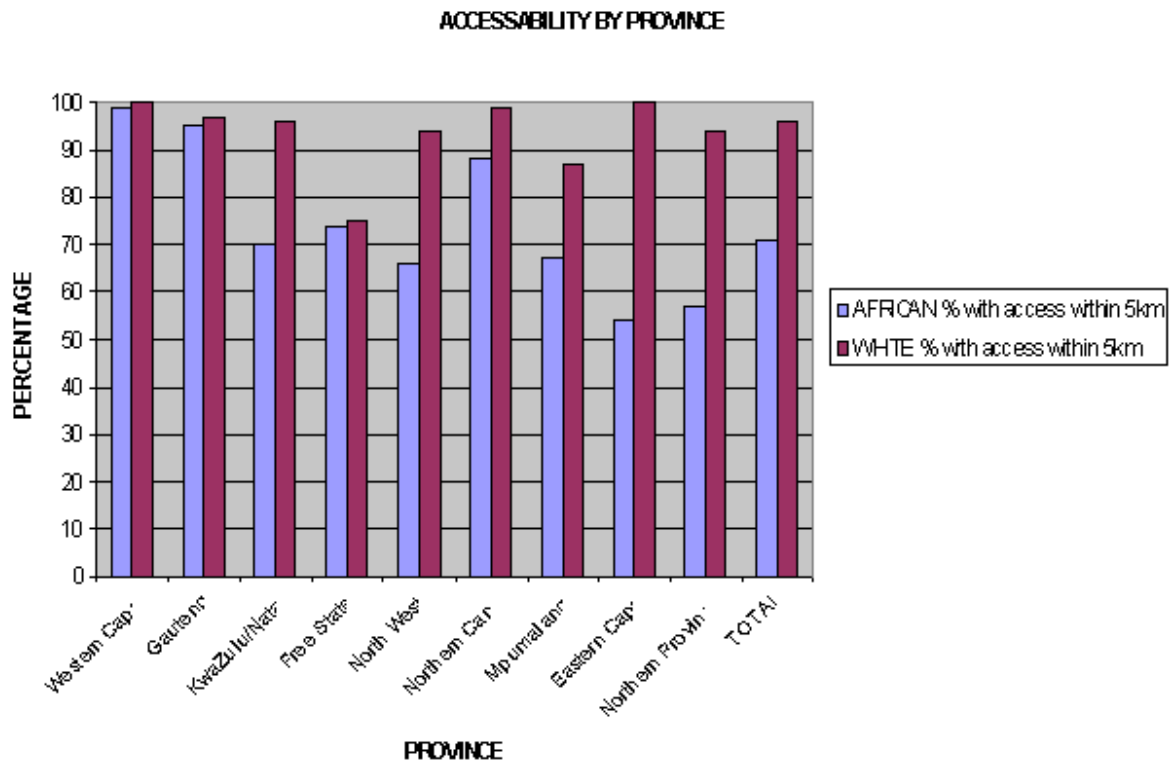
data are no longer collected. South Africa, as the telecommunications leader in Africa, had 5,3 million installed telephones which represents 39% of the total lines installed in Africa and further represents almost 90 lines for every 1000 citizens (Klimpacher, 1998).

There were 8,7 million households in South Africa according to 1998 figures, 2,8 million of which had a fixed-line telephone (The Discussion Paper on Definition of Universal Service and Universal Access in Telecommunications in South Africa, October 1998). The 1998 tele-density figures confirm that huge disparities in access to telephony existed between the various population groups in South Africa (The Discussion Paper on Definition of Universal Service and Universal Access in Telecommunications in South Africa, October 1998). In 1998 whites had an accessibility rate that exceeded 85%, Asians had an accessibility rate of approximately 74%, coloureds 34% and blacks 14%. Figures 3.1 and 3.2 below reflect the huge disparities in accessibility to telecommunications between whites and blacks. By 2000 the disparity between white and black access to telecommunications in their homes seem to have exacerbated in that virtually 90% of whites had access, while 12% of blacks had access (Feyt and Edelmuller, 2000).

**FIGURE 3.1: Tele-density Disparity in South Africa**



**Source: The Discussion Paper on Definition of Universal Service and Universal Access in Telecommunications in South Africa, October 1998**

**FIGURE 3.2: Accessibility to Telephone Lines by Province**

**Source: The Discussion Paper on Definition of Universal Service and Universal Access in Telecommunications in South Africa, October 1998**

Hodge and Miller (1997) note that the quality of telecommunications services in South Africa is significantly better than those in the rest of Africa, yet it still lacks the quality of service associated with telecommunications in industrial countries. Hodge and Miller (1997) suggest that whilst the disparities in access to telecommunications continue to exist, there are also disparities in the levels of service provision in maintaining existing telecommunications networks. If Hodge and Miller's assertion that there are disparate levels of service provision is correct,

then it can be deduced that access to Internet services will be concomitantly disparate.

The national Census results as conducted by Statistics South Africa in 1996 and 2001 reveal rather stark contrasts in terms of telephone connectivity. There were approximately 9,06 and 11,2 million households in South Africa in 1996 and 2001, respectively. Of the 9,06 million households approximately 1,6 million black households, 42 000 coloured households, 3200 Asian households and 12 200 white households had no access to telephones (whether fixed-line or cellular). The 2001 Census figures reveal that there were almost double (2,02 million) the number of cellular phones as what there were landlines (1,1 million). Significantly, 1,65 million black households had only cellular phones, while 560 000 black households had fixed-line telephones. From the afore-mentioned statistics it can be deduced that fixed-line connectivity in black, coloured and Asian areas are not as common proportionately and that cellular technology seems to be more popular. If it is assumed that cellular phone technology is predominantly acquired on the pay-per-use system, then accessibility to the Internet via this means will most likely be unaffordable to many people. Tables 3.3 and 3.4 below (Statistics South Africa, 1996 and 2001) reflect a more detailed picture of the nature of access to telephony in South Africa.

**TABLE 3.3: Telephone facilities by population group, in 1996**

	African/Black	Coloured	Asian/Asian	White	Unspecified/Other	Total
Telephone in dwelling/cellular phone	740 783	321 849	187 433	1 312 267	28 917	2 591 249
Telephone at a neighbour nearby	342 015	109 544	21 792	18 851	3 460	495 662
A public telephone nearby	291 622	194 306	24 753	96 622	13 526	3 245 433
At another location nearby, e.g. work	390 616	57 987	4 398	31 434	2 303	486 736
At another location not nearby	511 573	12 128	1 194	3 142	1 748	529 785
No access to a telephone	1 592 049	42 220	3 269	12 211	5 993	1 655 743
Not stated	40 736	3 171	801	7 965	2 290	54 963
Total	6 533 998	741 206	243 639	1 482 492	58 237	9 059 571

\* Excluding institutions and hostels

**Source: Statistics South Africa, 1996**

**TABLE 3.4: Telephone facilities by population group, in 2001**

Telephone Facilities	Black African	Coloured	Asian or Asian	White	Total
Telephone in dwelling and cell-phone	469 966	175 993	131 671	617 555	1 595 187
Telephone in dwelling only	561 674	207 981	79 891	290 103	1 139 649
Cell-phone only	1 651 309	99 561	34 893	234 291	2 020 054
At a neighbour nearby	620 164	93 540	9 552	12 665	735 920
At a public telephone nearby	3 985 483	254 506	24 538	45 959	4 310 485
At another location nearby	329 189	22 897	783	3 126	355 995
At another location, not nearby	364 122	12 604	412	1 911	379 048
No access to a telephone	643 143	20 954	1 191	4 079	669 367
Total	8 625 050	888 036	282 930	1 409 689	11 205 705

**Source: Statistics South Africa, 2001**

In 1997 the prevalence of personal computers in South African households was 2,4%, whilst the country-wide Internet connectivity was at an approximate 420 000 users (Hodge and Miller, 1997). Whilst Limb (2001:7) reiterates that South Africa has the highest levels of connectivity in Africa, he further notes that in mid-2001 there were an estimated 2,5 million Internet users in South Africa. Limb (2001:7) notes that there were an estimated 3.8 computers per 100 inhabitants in South Africa and 83 Internet subscribers per 1000 inhabitants in 1998. Feyt and Edelmuller (2000) note that Africa is home to 12% of the world's population and has only 2% of the world's telephone lines. South Africa has approximately 10 fixed-telephone lines per 100 people. This afore-mentioned statistic represents a tele-density figure of approximately 20 times higher than the rest of sub-Saharan Africa (Feyt and Edelmuller, 2000). Feyt and Edelmuller (2000) further point out that Internet usage in South Africa has grown at a steady rate. Between 1997 and 1998 there were 266 000 Internet users in South Africa. By August 1999 there were 1,62 million Internet users and trends indicated that 1,8 million people would have been connected by 2000 (Feyt and Edelmuller, 2000). Feyt and Edelmuller (2000) note that there are essentially three categories of Internet users in South Africa. They are the academics, dial-up users accessing the Internet through modems, and corporate users. Worthington-Smith (ed.) (2001) asserts that whilst Internet usage in South Africa has grown sharply, there was still a huge lag in comparison to the rest of the world. Worthington-Smith (ed.) (2001) confirms average Internet connectivity figures in South Africa of around 2 million in 2001.

Table 3.5 (below) indicates the findings of three different attempts to determine the levels of Internet connectivity in South Africa. The various surveys indicate that there was an Internet connectivity rate of between 1 million and 1,5 million for home users and a similar number for corporate users between 2000 and 2001 (Worthington-Smith (ed.), 2001). There, however, seems to be a discrepancy in determining the overlap between home users, corporate users and students who may have dual (or even multiple) Internet access points.

**TABLE 3.5: Internet Connectivity In South Africa**

Source	Date	Key findings	Comment/ Assumption
Nielsen/NetRatings	June 2001	Home 1,5 million Work 1 million	Overlap not specified
The 4th South African Internet Services Survey	Undertaken in 2000, Forecast for 2001	Dial-up 1 million Corporate 1, 5 million Academic 425 000	Home / work overlap balanced by multiple home access
Webchek	2000	1,205 million	Home/work overlap of 27% and only age 18+ in major metropolitan areas

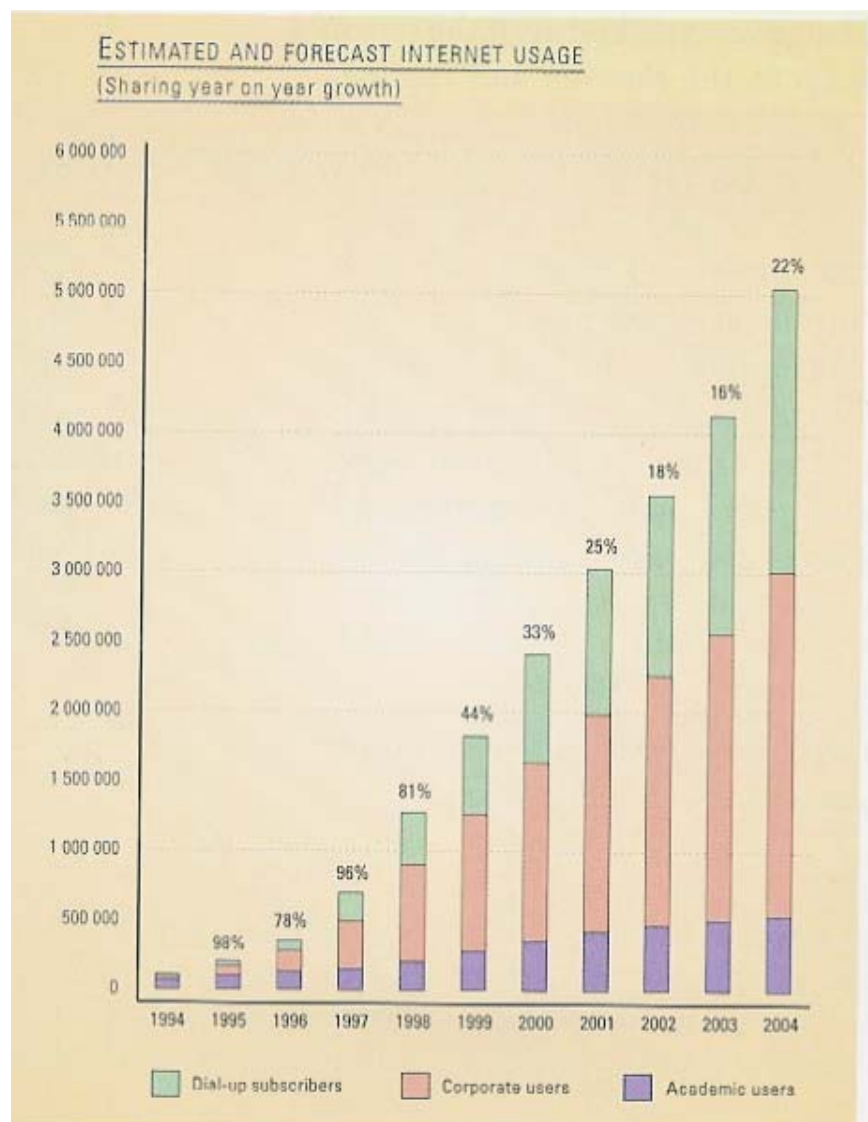
**Source: Worthington-Smith (ed.) 2001**

Figure 3.6 (below) projects that there would be an approximate 5 million Internet users in South Africa by 2004. Worthington-Smith (2002:2), however, points out that whilst Internet connectivity in South Africa is growing, the growth seems to be slowing. One of the problems with connectivity is that the local telephony environment is not conducive. First, more telephone lines need to be installed and



telephone services need to be made less expensive, amongst others, for people, especially for those who previously had no or limited access. Figure 3.5 comprises home, corporate and student Internet connectivity in South Africa. It does, however, not indicate whether the survey includes rural as opposed to urban connectivity figures, which would most likely show vast disparities.

**FIGURE 3.6: Estimated and Forecast Internet Usage in South Africa**



Source: Worthington-Smith (ed.) 2001

Disparities in access to telephony and the Internet are not limited to private households. There are disparities between the use of information and communications technologies in the various sectors – business and government – in South Africa. Hodge and Miller (1999:22) note that the manufacturing sector had upped its investment in information technology drastically to levels of 17 personal computers to every 100 employees. The financial services sector, according to Hodge and Miller (1999:22), has the most significant investment in resources relating to information and communications technologies. The financial services sector has a personal computer accessibility rate in excess of 74 per 100 employees. The wholesaling and retailing sectors display personal computer accessibility figures that vary greatly between the top end and the bottom end of the market. The leading top end retailers have, for example, established direct links with banks, whilst the smaller retailing enterprises have generally not migrated to such electronic connectivity. The wholesaling and retailing sector displays accessibility figures of 24 personal computers per 100 employees.

Compared to the private sector, the public sector displays accessibility figures of 7 personal computers per 100 employees. Hodge and Miller (1999:37) further note that governments continue to rely on antiquated mainframes and time-consuming administrative systems that complement the personal computers. The antiquated systems is a clear example of what Heeks (2002:98) refers to as the old model – that is, information technology automating the internal workings of government, as opposed to the new model of information and communications technologies that

support and transform the internal workings of government. There are extensive disparities between information technology systems of government hence electronic compatibility between departments is virtually non-existent. Whilst there may be a high degree of disparity between government departments as far as information technology systems are concerned, the South African Government has initiated a number of e-government projects in an effort to make information and communications technologies accessible to as many citizens as possible (Department of Communications, Online, 4 February 2005).

#### **3.4.2 Access To Communications Technology In South Africa**

The success of any information and communications system requires that access to such systems be assured. Given the historically disparate levels of access to the various technologies required to access government services, it was imperative to redress the situation. A brief analysis of the development of telecommunications policy in South Africa will reveal the extent of the historical disparities. Matsepe-Casaburri (2001) opined that the telecommunications sector is a major driver of the economy. Whilst telecommunications are important to South Africa, there has been a convergence between information and communications technologies that have realised new challenges. Klimpacher (1998) intimates that the extent of the political changes in South Africa precipitated a concomitant change in the communications sector. Various initiatives, including an overhaul of the telecommunications industry

in South Africa, have been initiated in an attempt to make telecommunications more accessible.

The final report of the task group on communications, *Communications 2000: A Vision for Government Communications in South Africa (2000)*, is an overview of the effectiveness of communications with respect to a vision for Government communications in South Africa. The task group consulted various role-players in professional bodies and within government institutions. The findings of the task group were contextualised within the new Constitutional parameters, taking cognisance of the political imperatives of social and economic development in South Africa. The task group sought to contextualise its findings in terms of the pre-eminent practices in developed and developing democracies. Many South African citizens were excluded from communications systems and there was a resultant need to open channels of communications to all so as to facilitate, amongst others, the link between government and the citizenry. A new communications system is an economic and political imperative for South Africa to play its part in the global marketplace (*The Communications 2000 Report, 2000*). Communications must provide a network through which every citizen can access the requisite government information and services. Providing access to more people, especially those who were previously excluded from access to information and communications technology is a daunting task that is going to demand commitment from a diverse set of role-players.

The new South African Government information and communications technology system needs to be coordinated both internally and in the manner in which it addresses citizens from all walks of life. Effective communications can strengthen the hand of government in its ability to disseminate policies and to expound on the reasons why particular policy options are necessary. Furthermore, an effective and accessible information and communications technology regime, will give citizens access to basic services ceaselessly. Sustainable e-government in South Africa should be viewed as an integrated effort, since information and communications technologies require innovative, progressive thinkers (Risana, February 2001). A vision of e-government should realise a seamless operation of the organs of state, with services being offered in a more effective and efficient manner (*Risana*, February 2001). A sustainable e-government strategy will require a sustained government-wide effort in collaboration with provinces, municipalities and other stakeholders. Government departments would have to re-engineer programmes and processes while maintaining all the deliverables.

Worthington-Smith (ed) (2001:217) asserts that the electronic process will break down without a common platform across the South African Government. Worthington-Smith (ed) (2001:217) further points out that there exist few compatible technological solutions across national, provincial and local government departments in South Africa. This incompatibility stems from various departments having built islands of technology to serve their specific needs (Worthington-Smith (ed) 2001:216-217; Hodge and Miller, 1997:5). The 'islands of

expertise' scenario is in direct contradiction to e-government initiatives since it engenders individualism, isolation, separation and duplication.

The drive to effective information and communications technologies should emanate from the very highest levels of government and should in turn be cascaded to all other levels of government and civil society (The Communications 2000 Report, 2000). This afore-mentioned point is emphasised in a discussion on the key factors on the development of effective e-government infrastructures (The United Nations Division for Public Economics and Public Administration, 2002). These key elements are good telecommunications, human capital, the political will and commitment of leaders (The United Nations Division for Public Economics and Public Administration, 2002). In their efforts to achieve good telecommunications, governments need to engage more effectively with civil society. Government engaging with civil society should include opening multiple communications channels thereby creating the opportunity for interactive dialogue with civil society. To this end, the President noted the South African Government's intention to apply modern information and communications technology in the fields of education, health and commerce (Mbeki, 2001). Mbeki (2001) also identified the digital divide as an area of development and that government would be initiating programmes to bridge the gap, including the establishment of task forces and the initiation of public-private partnerships in an attempt to improve the quality of service delivery.

Significantly, the lead in determining a strategic framework for information and communications technologies has been taken up by the Presidency of the Republic of South Africa. The responsibility for drafting various framework documents on e-government in South Africa has been taken up by the Department of Public Service and Administration. The documents drafted by the Department of Public Service and Administration include the framework for interoperability, a government-wide inventory on information and communications technology and various other white papers and policies. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) country profile on South Africa (Online, 2 February 2004) identifies four South African government departments that are intimately involved with the development of information and communications technology policy. It is reflected that the Department of Communications deals with infrastructure, access and connectivity, and the Department of Public Service and Administration deals with accessibility and efficient and equitable service delivery. Language-related issues are dealt with by the Department of Arts, Culture, Science and Technology, in its attempts to foster access to the Internet in the language of choice of the individual user. Access to information and communications technology through research and development initiatives in the information and communications technology sector is being spear-headed by the Department of Arts, Culture Science and Technology. International trade and commerce are the domain of the Department of Trade and Industry. It is also expected that the implementation of information and communications technologies be decentralised

to ministries, departments, provincial and local government (United Nations Educational, Scientific and Cultural Organisation, Online, 2 February 2004).

If information and communications technology initiatives are to be successful, a more professional cadre of communicators is required. The South African Government has identified and initiated several programmes to deal with skills development and access to information and communications technologies for its public servants. The Minister for Public Service and Administration (Fraser-Moleketi, 2002) noted that the level of computer literacy amongst public servants was rather low. The Minister also noted that access to such technology beyond the place of work needed to be increased in order to provide connectivity for public servants. At a comparative level, the number of households that had access to the Internet in the United Kingdom trebled between 1999 and 2002. The rate of access to the Internet in the United Kingdom was 94% for the 16 – 24 age group and 17% for the over 65 age group (National Audit Office, United Kingdom, 2003).

The critical constraints with regard to the implementation of a user-friendly, accessible information and communications technology system are highlighted in the Communications 2000 Report (2000). These constraints include the low status of government communicators, a tradition of inflexible and inward-looking bureaucracy, a high level of concentration of media ownership and the reality of severe resource constraints. The resource constraints need to be addressed if an e-government system is to be successful in South Africa. There are vast disparities



in communications standards between the various South African government departments (Communications Report, 2000). The disparities are also evident in the disparate levels of resources allocated to information and communications technologies in government departments.

It is critical for government communications to reach the majority of the population, especially since the majority had been deprived of any access to information and communications technologies (The Communications 2000 Report, 2000). Current infrastructure is inadequate to address accessibility. A closely coordinated strategy to extend this infrastructure is required. The formulation of such a strategy is not the sole preserve of government. Collaborative partnerships need to be fostered, hence the suggestion that existing public infrastructure such as post offices and libraries need to be used. The suggestion of multi-purpose information centres as a good way to facilitate access to information and communications technologies is also made in the Report (The Communications 2000 Report, 2000). The experiences of 19 countries - ten of which are developing countries – are drawn together in order to determine areas of strength and weakness and to draw valuable lessons (The Communications 2000 Report, 2000). Based on the comparative lessons, the Report advanced 83 recommendations, the most important of which are based on the premise that a modern, effective communications system will result in efficiency and savings to the benefit of the citizenry and government (The Communications 2000 Report, 2000).

The Constitutional principle of access to information is pivotal to providing access to information and communications technologies in South Africa. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) country profile on South Africa (Online, 2 February 2004) confirms that the South African Government's commitment to information and communications technologies is enshrined in its **Constitution**, 1996. Section 32 of the **Constitution**, 1996 makes reference to unfettered access to information held by the state or by others. The **Promotion of Access to Information Act**, 2000 (Act 2 of 2000), gives effect to the Constitutional right of access to information being held by the state or by any other entity. In so doing, the **Promotion of Access to Information Act**, 2000 (Act 2 of 2000), aims to promote transparency and accountability in public and private bodies.

Additional pieces of legislation that give fruition to the Constitutional principle of access to information are the **Independent Broadcasting Authority Act**, 1996 (Act 4 of 1996), which makes provision for the regulation of broadcasting activities in the public interest and the **Broadcasting Act**, 1999 (Act 4 of 1999), which delineates the levels of authority between the Independent Broadcasting Authority and the Minister of Communications. The **Independent Communications Authority of South Africa Act**, 2000 (Act 13 of 2000), whose duty it is to regulate broadcasting and telecommunications fairly and in the interests of all South Africans, also provides an important impetus to the transformation of the telecommunications industry in South Africa. The establishment of the Independent

Broadcasting Authority is a clear attempt by the South African Government to broaden access to telecommunications to those who were previously denied such access. Access to telecommunications would in its turn allow access to other dependent technologies such as the Internet. The intention of the **White Paper on Telecommunications Policy**, 1996 (Department of Communications), is to bring all South Africans into the loop so that there could be improved and sustained quality of life and participation in a competitive economy. Limb (2001:7) indicates that the incidence of democratisation efforts subsequent to 1994, by using information and communications technologies, has gained momentum in South Africa.

### **3.5 THE STAGES OF DEVELOPMENT OF E-GOVERNMENT**

An exposition of the typical phases of the implementation of an e-government regime is central to an assessment of an e-government system for the Government Employees Pension Fund. Whilst the requirements for the successful implementation of an e-government system are different to the stages for the successful implementation of e-government, the discussion on the distinction between them serves as a useful point of departure. Lenk (2002:93) highlights that identifying and addressing the needs of the target group, ensuring multi-channel and single-window access, system security and reliability as being critical requirements for e-government. It is, therefore, important that the Government Employees Pension Fund identifies the needs of its target group, the pensioners

and contributing members, so as to ensure that e-services are delivered in congruence with such needs. These needs include access to information and communications technologies, the ability to use such technologies and a user-friendly environment to these service offerings. Single window access allows the client to use a single point of entry to access services to perform transactions that may cut across various government departments. The single point of entry allows easy access for clients. Multi-channel access allows the client to access services by means of a number of access points, any one of which is convenient to the client. Examples of multi-channel access points include a Call Centre and voice response systems, a web site, a Walk-in Centre and kiosks. Security and data integrity are perennial concerns that demand constant scrutiny so as to protect the client and the supplier of the electronic services from unsolicited access.

Heeks (2002) adds that a successful e-government requires a legal framework, an institutional infrastructure, skilled human resources and data systems. The legal framework that is needed to ensure effective e-government service delivery must take cognisance of the integrity of the transactions. No e-government provision will be successful without the necessary infrastructure and the necessary human and financial resources to facilitate delivery. In order to achieve e-government success, e-government initiatives have to be customer focussed, government agency borders must be permeable, government must address privacy issues, government agencies must be open to collaboration and governments must ensure that

communities have broadband access (Andersen Consulting, Online, 6 November 2001).

Carrow (2001) identifies 5 keys to e-government. The first of the keys to e-government implementation is strong, visionary leadership. Without such leadership e-government success would be difficult to achieve. The second key to successful e-government implementation is enterprise vision. Without full enterprise buy-in, an e-government initiative will have scant success, if at all. The third key, the provision of adequate resources for implementation, is imperative. Financial and human resources need to be aligned to project plans to ensure that diversionary elements do not cloud the implementation process. E-government, Carrow (2001) emphasises, is about change. Processes change, habits change, organisation structures change and new learning has to happen. It is in anticipation of resistance to these afore-mentioned changes that the fourth key element to successful e-government implementation, support for the necessity for change, needs to be elicited. The execution or fulfilment of an e-government project needs to happen with purpose. Prolonging the implementation will invariably have a negative impact on the envisaged project outcomes.

Worthington-Smith (ed.) (2002) and Deloitte Research (2000) view e-government engineering as a six-phase process. Firstly, e-government engineering starts within a conceptual framework. This conceptual framework – or visionary – phase is where ideas evolve and where formal planning takes place. The information

publishing stage is a very individualistic phase. This phase is described as being individualistic in that each government department publishes information that is unique to its requirements at the time. The individualism extends to each government department developing its own web site around whatever information it needs to disseminate. This information could include the publishing of reports, tender documentation and policy issues. The web sites are normally static in nature, hence they provide no interactive capability. Given that the web sites are not interactive, they do not provide citizens with the opportunity to conduct electronic transactions. The third phase of a typical model of e-government implementation is when there is a distinct tendency toward the realisation of multi-purpose portals. This allows the client to use a single point of entry to access the services of all government and government-related entities. Often clients need to perform transactions that cut across various government departments and the single point of entry allows easy access. Two-way transactions mainly pertain to paying bills, facilitating information transfers and submitting forms. The fourth step in the implementation process is much more personalised in that it aims to build relationships around the needs of the client. Clients are profiled in categories with the express aim of minimising duplication, personalising offerings and predicting citizens' future needs. The fifth phase of implementation of e-government clusters is related to transactions so that the client has a packaged approach to services being offered by government departments. Packaged service offerings shift clients' focus from the fragmented yet related service to a more interrelated process which results in the blurring of departmental boundaries. The sixth and final phase of e-

government implementation is full integration. What starts as a static information sharing facility should finally offer a fully integrated, boundryless, interactive, personalised and electronic service. At its most mature level, e-government offers a full array of services at the click of a mouse from anywhere and at any time.

The development of e-government systems at the Government Employees Pension Fund will be assessed in line with the steps relating to the implementation of e-government processes as elucidated. A cursory assessment, however, reveals that much of what is being done at the Government Employees Pension Fund in terms of implementing an e-government system, is congruent to the stages of implementation as outlined.

### **3.5.1 Four Pillars Of E-Government In South Africa**

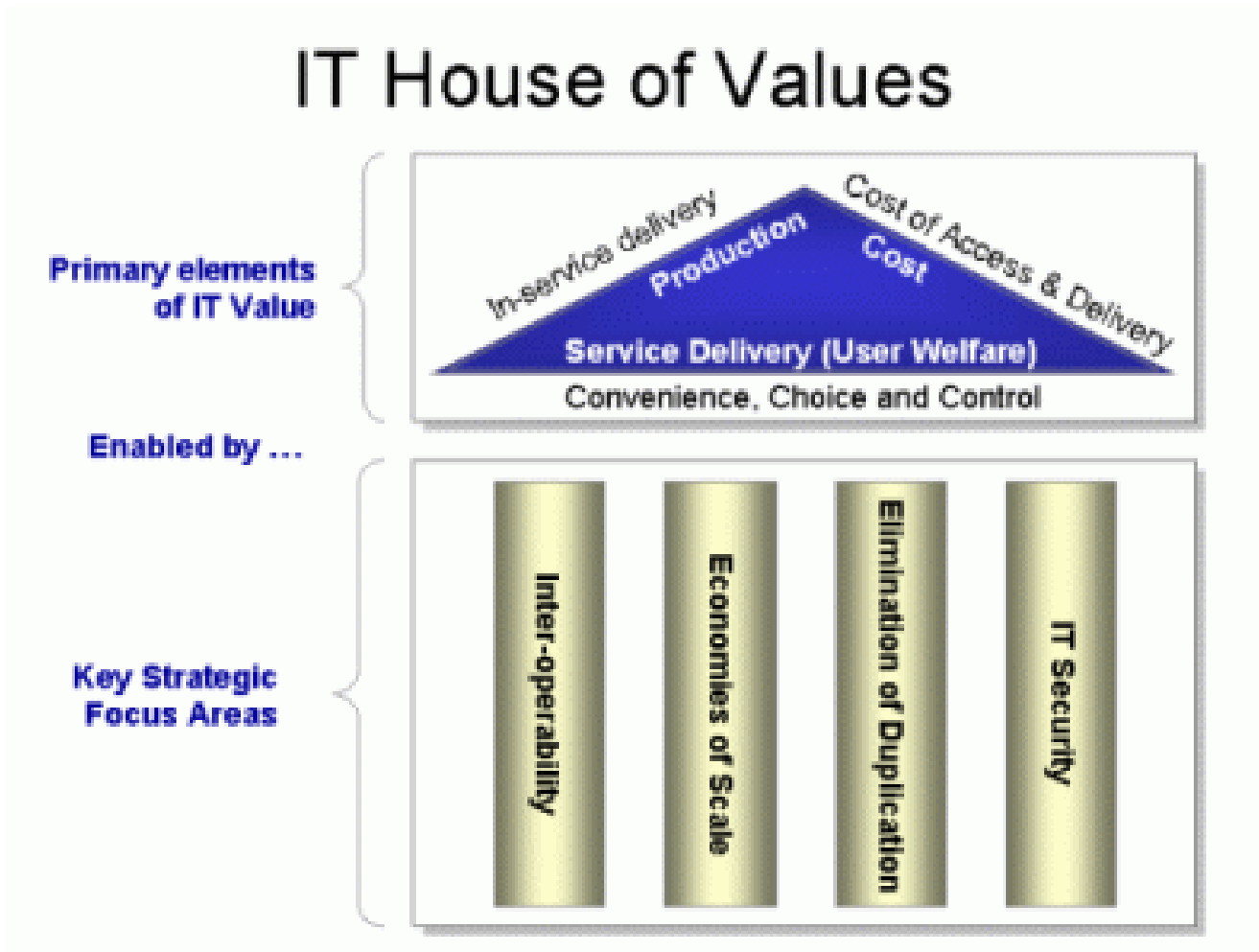
Worthington-Smith (ed.) (2001, 2002) observes that the e-government process in South Africa is encompassed in a project entitled Information Communication Year 2025. The project aims to ensure that all South African Government information will be online by 2025. There is therefore a clear vision as to the necessity for the implementation of e-government systems in order to expedite service delivery initiatives in South Africa.

The Department of Public Service and Administration was identified as being the custodian of the e-government process in South Africa. To this end, the State

Information Technology Agency (SITA) was established to ensure consistency in the South African Government's efforts to provide electronic services. The State Information Technology Agency was set up in April 2000 to implement an e-government policy that is based on four pillars (Worthington-Smith (ed.), 2001; 2002). The State Information Technology Agency's founding principles are based on offering the best products and services, maintaining the public's trust by means of the e-government House of Values to achieve increased productivity, whilst ensuring cost effectiveness (State Information Technology Agency, Online, 2 March 2004). Figure 3.7 is a graphic illustration of the Information Technology House of Values as envisaged for implementation across South African government departments.



FIGURE 3.7: Information Technology House of Values



Source: State Information Technology Agency - Online, 2 March 2004

At the pinnacle of the Information Technology House of Values are the triple principles of increased productivity, lowered costs and citizen convenience. If one were to place these fore-going principles within the context of the Government Employees Pension Fund one would argue that increased productivity, increased

accuracy (calculations and payments) at lower costs, should lead to increased convenience for clients. Whilst the pinnacle of the Information Technology House of Values is premised on lowering costs, improved customer satisfaction and increased productivity, its supporting pillars – information security, interoperability, economies of scale and the elimination of duplication – constitute the very foundations on which the South African e-government philosophy is built.

The first supporting pillar of the Information Technology House of Values, that of information security, is of vital importance to the Government Employees Pension Fund. Information security is about protecting the assets of the Fund as well as protecting the personal and financial interests of the clients, that is, the pensioners and the members of the Fund. The second pillar, that of interoperability, is crucial if information is to be accessible. Interoperability promotes seamless communications between compatible information and communications systems as well as promoting information-sharing channels between national, provincial and local governments. The Government Employees Pension Fund, in building its seamless links with government departments, will rely heavily on systems that are compatible across government. The third pillar, economies of scale, allows government departments to procure information technology equipment at more competitive rates. Competitive rates apply to the procurement of both software applications and hardware. The Government Employees Pension Fund has *de facto* not benefited from economies of scale since it is procuring software and hardware privately, that is, outside the framework offered by the State Information

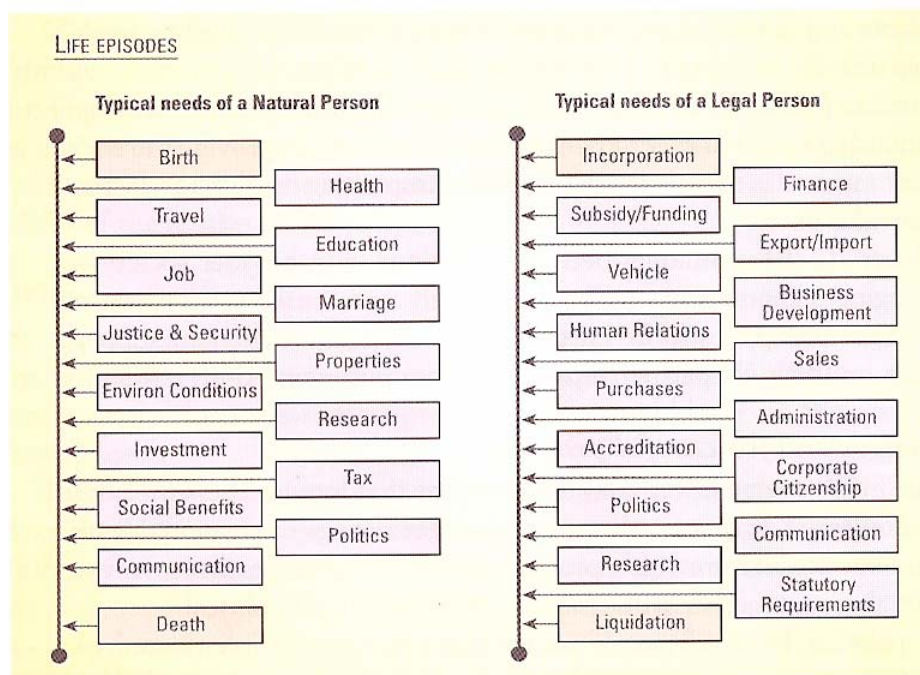
Technology Agency. Whilst the hardware and Microsoft software applications procured by the Government Employees Pension Fund are generally compatible with what government departments have migrated to or are intending to migrate to, the Government Employees Pension Fund, given the nature of its business, is the only public entity that has procured the Comprehensive Pension Administration Application Software (COMPASS) and Workflow Software, the compatibility of which will be assessed during the course of Chapter Five (Interview, Manager of the Project Support Office of the Government Employees Pension Fund, 3 November 2004). The fourth pillar, that of the elimination of duplication, is based on government developing a common platform across all government structures so as to ensure a cost effective, efficient, one-stop point of access for clients. The Government Employees Pension Fund is in the process of migrating its paper-based files into electronic ones, but the tendency is still to depend on hardcopies. This duplication, that is, of using the hardcopy and the electronic file, is time-consuming and cumbersome. The pillars of e-government as espoused by the Information Technology House of Values in South Africa are premised on the stages of development of a typical e-government process.

### **3.5.2 Provincial E-Government Initiatives In South Africa**

For e-government to be successful (or even partially successful) such e-government initiatives should pervade all levels of government. Provincial government is an important cog in the public service delivery machinery in South

Africa. Provincial government, it could be argued, is closer to the clients than is national government, hence its strategic necessity to provide high levels of service quality. Worthington-Smith (ed.)(2003) notes that e-government services should be developed around significant life events or episodes such as birth, work, and death for natural persons and funding, sales/purchases and liquidation for legal persons. Figure 3.8 (below) provides further detail pertaining to significant life episodes/events.

**FIGURE 3.8: Typical Life Episodes**



**Source: Worthington-Smith (ed.), 2003**

The Western Cape and Gauteng Provinces are the two provinces that have taken the lead in developing e-government projects. The e-government project in the Western Cape - Cape Online - incorporates the Cape Gateway which enables citizens to access services at a single point and the Cape View which affords citizens the opportunity to provide feedback to the provincial government on performance-related matters (Online, 27 September 2004).

Whilst the Blue IQ Plan of the Gauteng Provincial Government is strictly speaking, not an e-government project, it incorporates elements of e-government in its drive to ensure economic infrastructure development. The Blue IQ Plan incorporates public and private initiatives in order to drive economic development in Gauteng (Online, 27 September 2004). The electronic link between the spheres of government is therefore of critical importance for service delivery. E-government systems can enhance the links between national, provincial and local government in South Africa.

### **3.5.3 Communications Between Government Departments In South Africa**

Communications between government departments in South Africa is premised on a system of intergovernmental relations, as stipulated in Section 41 of the **Constitution**, 1996. Various sections of the **Constitution**, 1996, guarantee certain powers for the three respective spheres of government, national, provincial and local. Much of what is contained in the relevant sections of the **Constitution**, 1996,

relates to maintaining and regulating the relations between the three spheres, hence they have exclusive and concurrent powers.

Williams (2001) asserts that the co-operative relations between the spheres are intended to co-ordinate activities to avoid competition and wasteful duplication of resources, to resolve disputes amicably, to define the roles and responsibilities of the spheres, to utilise human and other resources effectively and to construct a cohesive multi-sectoral perspective to enhance national goals. It is therefore clear that the concept of intergovernmental relations entails partnerships as realised in multiple formal and informal processes, channels, structures and institutional arrangements for bilateral and multilateral interaction within and between spheres of government in South Africa. A system of intergovernmental relations should observe the promotion and facilitation of co-operative decision-making, the co-ordination and alignment of priorities, budgets, policies and activities across interrelated functions and sectors, the smooth flow of information within government and between government and communities with a view to enhancing the implementation of policies and programmes and the prevention and resolution of disputes (**White Paper on Local Government**, 1998).

Makhanya (1999) concurs that the central theme of intergovernmental relations is to create a basis for synergising a fragmented system of government administration. Whilst propagating a synergy of government administration, intergovernmental relations also propagate interdependence between the spheres.

This ultimately requires that the three spheres of government in South Africa must establish a working relationship that encourages consultation, debate and negotiation. The opposing view is that if such cooperative arrangements are not implemented, the various spheres (and government agencies and departments) will become increasingly isolated. There would be competition, duplication and the overall goals and policies of government would not necessarily come to fruition. Consequently to achieve the ideal of co-operation that the South African Government has embarked upon several e-government projects, examples of which are presented next.

#### **3.5.4 Examples of E-government Projects in South Africa**

Several e-government projects were launched in South Africa in an attempt by Government to give citizens access to information and communications technologies. This approach by Government was premised on the idea that if such information and communications technologies were not accessible to citizens, then providing services electronically would be futile. The historical disparities in access to information and communications technologies are apparent in the information gleaned under the heading “Access to Information And Communications Technology in South Africa”. The South African Government, in an attempt to bridge the gap between those who have access to information and communications technologies and those who do not have such access, initiated the following projects.

**a. The Public Information Terminal Project (PIT)**

The Public Information Terminal Project was initiated to provide Internet and e-mail access to people who would ordinarily not have such access. Given the vast geographical and rural areas in South Africa it is envisaged that rural and semi-rural areas would receive priority as far as installation is concerned.

In terms of the project it is envisaged that e-mail addresses would be made available to potential users in the form of an encoded card with a personal identification number (Department of Communications, Online, 4 February 2005). The final step is to develop an infrastructure of public information terminals which will be menu-driven and which will allow the user to send and retrieve electronic messages.

Since the South African Post Office already has an established network, it is envisaged that at least one public information terminal be installed at each post office, with further expansion to be investigated. To encourage the use of such facilities, it was envisaged that telecommunications, printing, paper and related costs would be borne by the funders and that card holders would be billed a nominal amount, not exceeding the cost of a local telephone call (Department of Communications, Online, 4 February 2005).



**b. Internet 2000**

The Department of Communications of South Africa initiated a project called Internet 2000 in order to provide electronic education to as broad a base as possible. Internet 2000 is further aimed at promoting a knowledge-based society in South Africa by using the Internet and other information and communications technologies (Department of Communications, Online, 4 February 2005). A further objective of the project is to provide 2000 Internet linkages to priority customers, with educational institutions such as schools being targeted. The project will run for a period of three to five years and it is envisaged that the programme would also be extended to kindergarten level.

**c. Tele-democracy**

The purpose of the project is to create access to the South African Parliamentary system. The tele-democracy initiative aims to promote e-mail contact with and between Members of Parliament. The tele-democracy initiative also has as its aim to create an opportunity for citizens to access daily Parliamentary information and in so doing, the programme closes the gap between citizens and their political representatives (Department of Communications, Online, 4 February 2005).

**d. Community Information Centres**

The project is aimed at developing community information centres in previously disadvantaged areas in order to increase the various communities' understanding of the knowledge-based society. These centres, whilst providing direct and instant access to the Internet, will provide access to government and private databases (Department of Communications, Online, 4 February 2005).

**e. Government Information Technology Officers Council**

The Government Information Technology Officers Council was formed with a view to ensuring that there is co-ordination and dissemination of information between the various sectors of government (e-Gov News, October/November 2002). Democracy can only be successful in South Africa if government-wide synergies are found, hence the Government Information Technology Officers Council proposes to find government-wide solutions for e-government strategies. The Government Information Technology Officers Council comprises of the individual, Departmental Information Technology Officers (Department of Communications, Online, 4 February 2005).

**f. The Golaganang Project**

The Golaganang Project was announced in Parliament by the Minister of Public Service and Administration, Geraldine Fraser-Moleketi, in her Budget Vote Speech (2002). Golaganang is a project that aims to make personal computers available to public servants at an affordable rate, thereby enabling and encouraging public servants to use information and communications technology beyond the confines of their offices. In so doing, it was hoped that computer literacy amongst public servants and their families would be enhanced. It was hoped that there would be a knock-on effect to public servants becoming more computer literate; hence the use of information and communications technologies in the workplace would be enhanced. The project was to be embarked upon on a public-private partnership basis between the Department for Public Service and Administration and Hewlett Packard (Fraser-Moleketi, 2002).

Given that e-government forms part of the broader concept and practice of e-administration, a thesis on e-government would not be complete without having traced some of the theoretical aspects of traditional Public Administration and management praxis.

### **3.6 A REVIEW OF THEORETICAL PERSPECTIVES ON ELECTRONIC ADMINISTRATION, PUBLIC ADMINISTRATION AND MANAGEMENT**

The section on theoretical perspectives is particularly important given that it provides the basis of the analysis that is to follow. The theoretical perspectives in this section of the chapter provide significant insight into the convergence between the traditional theories and the emerging electronic theories. Initially, and more importantly, the review of the Presidential Commission Report provides significant theoretical basis on which the South African e-government perspectives are based.

#### **3.6.1 The Presidential Review Commission**

The idea of a presidential review commission was first mooted in the **White Paper on the Transformation of the Public Service**, 1995 (Government Gazette No. 16838). **The White Paper on the Transformation of the Public Service**, 1995 (Government Gazette No. 16838) outlines that a public service commission should review the structures, functions, systems objectives, procedures and levels of accountability of the South African public service.

The main findings and recommendations of the Presidential Review Commission (PRC) are contained in the Presidential Review Commission Report on the Reform of the Public Service in South Africa (1998). Chapter Six of the Presidential Review Commission Report (1998) deals specifically with information management,

systems and technology. It was identified that the South African Government has a significant role to play in developing and managing information systems as part of service delivery and that information is a fundamental resource of government, along with people, money and organisations (The Presidential Review Commission, 1998). At a macro level, the state has a major role to play in fostering the drive to an information society by determining how systems and technology could optimally be used to manage information in the public service (The Presidential Review Commission, 1998).

It was further noted that the utilisation of technology should support the business objectives of government and that, whilst technology would radically transform the manner in which the public service conducts business, the public service's operational and strategic requirements should take precedence (The Presidential Review Commission, 1998). In the absence of definitive, international examples on the implementation of an e-government model, two examples in particular were deemed to serve as precedents for e-government developments in South Africa (The Presidential Review Commission, 1998). The two examples - Australia and Malaysia - were assessed by the Presidential Review Commission in some detail.

The Australian approach to policy formulation has seen a progressive development of an overall information and communications framework over a period of three years. Central to the Australian approach is the establishment of a number of institutions and offices to ensure that the policy process is coordinated and ultimately integrated into a government-wide Information Management Strategy

(The Presidential Review Commission, 1998). The Report cites that the 1995 document, *Clients First: The Challenge for Government Information Technology* proposed an Office of Government Information Technology (OGIT), a Chief Government Information Officer (CGIO) and the creation of a Government Information Services Policy Board (GISPB) all tasked to contribute to the development of an overall information management strategy. During the course of the thesis it will become clear that the Client First approach adopted by Australia could be equated to the Batho Pele (People First) approach of the South African Government (The Presidential Review Commission, 1998).

The Malaysian strategy defines e-government as being a multi-media networked, paperless administration linking [central] government agencies with government centres around the country to facilitate a collaborative government environment and efficient service to businesses and citizens. The objectives of the Malaysian e-government strategy include offering efficient, high-quality administrative on-line services to citizens and business, streamlining government's internal processes to improve quality, reduce costs and increase productivity, strengthening data security and protecting privacy, increasing citizen participation in government and creating transparency through good documentation, effective communication and traceability (Presidential Review Commission Report, 1998).

The Australian and Malaysian strategies are similar in as far as the objectives that they seek to achieve (The Presidential Review Commission, 1998). The Report of

the Presidential Review Commission on e-government strategies is probably one of the first attempts in the post-democratic South Africa to document, amongst others, the pivotal role that information and communications technologies should play in service delivery initiatives. It is therefore congruent to the ideal of improved service delivery initiatives that the Presidential Review Commission Report (1998) reflects a number of shortcomings in e-government systems and made recommendations as to how to improve the electronic delivery of services in South Africa. The salient recommendations include centralised procurement, a national information technology plan, the appointment of a chief information officer for government and the implementation of a lead agency concept. The link between the traditional theories of Public Administration and e-government is elucidated next.

### **3.6.2 Theories of Public Administration and Management**

The foundation of current theories of Public Administration can be traced back to the late 19<sup>th</sup> and the early 20<sup>th</sup> century – a period often referred to as the industrialisation period. During this period of industrialisation there was a significant move toward an elaborate division of labour. Whilst there were management theorists prior to and after, Frederick Taylor and Henry Ford, are deemed to be the main proponents of Scientific Management and mass production. Taylor's concept of Scientific Management was based on the minute sequencing of tasks into specialised components. Each of the specialised

components of labour contributed to the creation of additional layers of hierarchy in the factory, all which had to perform individual tasks in a sequenced and rote manner (Young, Online, 16 September 2003).

**a. Taylorism and Fordism**

Ford's theory of Management was based on the development of the assembly line and mass production principles. The division of labour in Ford's Management Theory is similar to that proposed by Taylor. Fordism determines that individuals on the assembly line should not have to move to the work, instead, the work moves (along an assembly line) to the worker. As the work moves along the assembly line to the worker, Ford hypothesised, the time taken to perform the task is reduced. Ford propounds that tasks be fragmented into specialised functions that ostensibly results in saving time and money and increasing productivity. Young (Online, 16 September 2003) notes that the need for strategising, thought and planning on the part of the worker is negated. These foregoing, coupled with the enforced reduction of workers' movements, ensure that maximum time is devoted to the production process. Young (Online, 16 September 2003) notes that the worker performs, as far as is possible, one task with as little movement as is necessary.

Linden (1994:28) notes that Fordism, given its tendency toward fragmented roles for individuals, had contributed to the de-skilling of the worker. When workers



become specialists as opposed to generalists, they tend to be limited to the function that they perform. At about the same time that Taylor and Ford were developing Scientific and Assembly Line Management principles in their efforts to increase productivity, Max Weber was developing his principles of Bureaucratic Management.

**b. Bureaucratic Management**

Breiner (1996:15), in an analysis of Weber's theory on Modern Politics, defines Bureaucratic Administration as the central phenomenon of modern society. As the central phenomenon of modern society, Bureaucratic Administration espouses principles of control and dominance.

Weber proffers that bureaucratic forms of organisation are the most efficient mode of organisation because they are technically superior in achieving collective goals. Weber points out that modern organisations are mass organisations which are inherently bureaucratic. The bureaucracy - whether public or private - is dominant, uniform, formal and rational (Breiner, 1996:138). The bureaucracy is the means to successful implementation of the goals of the organisation. McMillan (2002) defines the classical bureaucracy as being structured on principles of hierarchy, authority and control. McMillan (2002) also suggests that bureaucracies apply rational approaches and long-term planning processes. Bureaucracies furthermore display compartmentalised layers. Typical criteria such as power, power relations

and management styles are evident in bureaucracies. Weber's concept of the bureaucratic organisation includes that specialist roles be prevalent in the division of labour, that there is a clear hierarchical system and a strict regime of controlled behaviour to ensure order and supervision. These fore-going criteria bare a close resemblance to those of Taylor's Scientific and Ford's Assembly Line management principles.

Breiner (1996:132) asserts that by their very nature bureaucracies dominate, legitimate and command. The bureaucracy exercises control through formal rules and processes. Breiner (1996:132), however, also notes that bureaucrats have no control over the written rules and procedures that they implement. The rules and procedures are established at a different level of the hierarchy of the bureaucracy and the bureaucrat has to implement without questioning the principles governing the rules and procedures. Just as the bureaucrat has no control over the formulation of the rules and procedures, so the client has no control over the bureaucratic implementation of the applicable rules and procedures. The rules consequently become impersonal, deductible and devoid of personal judgement (Breiner, 1996:132).

Excessive bureaucratic control could lead to bureaucratic domination and to an abuse of bureaucratic power. In this respect bureaucratic dominance is based on the belief that order is being created. It is thus the belief of Max Weber that bureaucracy functions like an efficient machine that enforces the compliance of

both the bureaucrat and the client. It therefore seems clear that bureaucracy is based on a power relation, which is realised through various hierarchical levels and by means of a set of rigid rules and procedures.

State administration is an embodiment of the typical bureaucracy. The administrative state relies on typical bureaucratic structures, with its administrative machinery, its intricate command level and impersonal nature to exercise control and domination to ensure that order prevails. As Ford and Taylor's management principles espouse increased production through higher levels of control and the specialisation of tasks, Weber developed his ideas of bureaucracy based on a strict regime of rules and specialised roles. Breiner (1996:137) notes that:

“Once fully established, bureaucracy belongs among those social structures that are hardest to destroy. Bureaucracy is the specific means of transforming common action into rationally ordered social action. As an instrument for the societalisation of relations of domination bureaucracy was and is a means of power of the first rank for the one who controls the bureaucratic apparatus. For under otherwise equal conditions, systematically ordered and directed social action is superior to every resistance through mass action or communal action. Where bureaucratisation of administration has been completely introduced, there has been created practically an indestructible form of relations of domination”.

Classical bureaucracies are therefore structured on principles of hierarchy, authority and rigid notions of control. Classical bureaucracies are neatly structured into compartmentalised layers where the worker is expected to apply his skill in the optimisation of the job, leaving the supervising and managing to the supervisors and managers.

**c. Weber's Ideal Type**

An ideal type is an analytical construct that serves as a tool to an investigator to measure similarities and deviations in real cases. Ideal types enable one to construct hypotheses which could then be tested (Croser, 1977). An ideal type is therefore an abstract concept about an observable entity.

Gero (Online, 16 September 2003) identifies the following six characteristics of the ideal type of bureaucracy. The first of the characteristics in the ideal type of bureaucracy is a formal division of labour. The actions assigned to an individual in a bureaucracy become the official duties of that individual. The actions are separate but complementary and the actions are coordinated to accomplish the organisation's goals. Bureaucratic actions are specialised with each person being limited to knowing as much about his function as is possible. The second characteristic is hierarchy. Positions in a bureaucracy are organised in a hierarchical manner, something resembling a pyramid. The flow of command is from the top to the bottom. Abstract rules is the third characteristic that typifies a

bureaucracy. These rules exist in writing and they legitimate the procedures that are relevant to the achievement of the organisational goals. The written rules ensure uniformity of action and coordinate the input of each individual in the organisation. Consistency is ensured from one generation of public servant to another when rules are formalised into written form. Herein also lies their abstract form in that these rules exist beyond the presence of people. The fourth characteristic of an ideal type of organisation relates to impersonal conduct where the bureaucrat should act in a manner that is devoid of extremes such as hatred and affection. The bureaucrat is in charge at all times, exercising even-handedness and fairness. The ideal type of bureaucracy rewards employees purely on the basis of meritorious achievement, rather than on personal considerations. This, the fifth characteristic of an ideal type of organisation, rewards loyalty, best performances and competence. The achievement of the sixth goal, efficiency, is dependent on whether the others can consistently be achieved (Gero, Online, 16 September 2003).

The increasing use of e-government related systems has resulted in the erosion of the classical Weberian model. The Weberian model advocates a strong division of labour with individuals becoming specialists. The Weberian model further advocates a clear hierarchy, is rules-based, is impersonal and efficient. E-government presents a break from the classical Weberian model in that e-service delivery mechanisms such as e-mails, do not need to satisfy the characteristics of the Weberian model to be successful. E-mails do not need specialists to respond.

In many cases the client may even access information without having to interact with anyone. Hierarchies in an e-government system essentially become obsolete. Rules are built into the electronic system. It is therefore evident that elements of the Weberian model still remain. E-mails, as with the Weberian model, are impersonal, yet efficient in that they allow the client to interact with the service provider in a manner that is convenient.

#### **d. The Evolution of the Discipline of Public Administration**

Public Administration as a discipline began around the eighteenth century, but only received official university recognition after the First World War (Caiden, 1971). The discipline of Public Administration evolved as a result of the enlargement of government services. The discipline of Public Administration evolved differently in Britain as it did in the United States. The British model seemed to display a bias for a free, almost unstructured, interpretation of the discipline of Public Administration, while the American model seemed to display a more rigid, rules-based approach (Caiden, 1971).

Whilst there were discussions around the discipline of Public Administration before, Woodrow Wilson's writings seem to have been significant in establishing Public Administration as a discipline. After Wilson, it was Frank Goodnow who should be credited for establishing Public Administration as a discipline. Miewald (1978) notes that it is Wilson and Goodnow that developed the premise that politics and

administration are two separate elements of government. Miewald (1978) notes that it is the role of politics to decide and it is the role of administration to implement. The discipline of Public Administration seems to have had its challenges, most notably that of having to define its parameters. Even as late as the twentieth century, Public Administration failed to coherently define its scope and substance (Stillman, 1991).

Public Administration seemingly stands at the crossroads of another challenge, that of electronic service delivery – e-administration. The challenge for Public Administration is to transcend the traditional boundaries and create new infinite boundaries with the advent of information and communications technologies.

### **3.7 CONCLUSION**

This third chapter has conducted an assessment of general accessibility to telecommunications in South Africa. Accessibility to telecommunications and, by implication, accessibility to information and communications technologies, is critical to the successful implementation of an e-government regime. This chapter has shown that there are vast disparities in access to information and communications technology in South Africa. These disparities are not only evident at individual, household levels, but also at sectoral levels.

An assessment of the accessibility to information and communications technologies at a sectoral level in South Africa, revealed that the financial sector has the highest personal computer accessibility rate of 74%, while the public sector displayed the lowest personal computer accessibility rate of 7%. The personal computer accessibility rate and the rate of access to the Internet in private households showed a steady increase. Research, however, revealed that there is retardation in the rate of access to the Internet in private households, corporate and academic entities in South Africa.

A cursory assessment of e-government initiatives in South Africa was conducted in order to indicate that there are concerted attempts to use information and communications technologies to advance public service delivery in South Africa. The Department of Public Service and Administration is the government department that is tasked to drive the process of e-government in South Africa. The Department of Public Service and Administration established a lead agency, the State Information Technology Agency, in order to drive the e-government process in South Africa. The State Information Technology Agency's approach to e-government in South Africa is based on what it refers to as the Information Technology House of Values. The Information Technology House of Values is premised on four pillars – interoperability, economies of scale, the elimination of duplication and information security.



The typical stages in the development and implementation of an e-government system were presented and briefly discussed. The stages of implementation typically range from the conceptual, complemented by an incremental process, to full integration, that is, once all systems are fully operational and clients can access and conduct business transactions electronically.

Public Administrative systems across government departments, whilst similar in many respects, adopt a culture of their own. These often disparate public administrative systems across government departments are invariably less compatible than what they are expected to be. The initial part of this chapter set out to review the levels of access to information and communications technologies in South Africa. The latter part of the chapter provides a brief review of the information and communications technology projects that have been embarked upon in South Africa.

A thesis on e-administration would not be complete without having provided a brief theoretical grounding of the classical theories of Public Administration, Public Management and Bureaucracy. To this end, a brief analysis of Taylor's Theory of Scientific Management and Ford's Assembly Line (mass production) theory ensued. The analysis reveals that Taylor and Ford's theories are geared towards increasing the levels of production of workers. The worker becomes a unit of production whose success is measured in terms of pre-determined levels of output.

Weber's Theory of Bureaucratic Management is based on hierarchy, authority and control. These fore-going dimensions relate the layers of a classical bureaucracy, which are in Weber's view, necessarily authoritative, compartmentalised and dominant. This chapter has further considered the analytical construct that Weber refers to as an Ideal Type. The characteristics of an ideal type are presented. These will be analysed in an applied form in Chapter Five of the thesis.

The succeeding chapter presents some theoretical perspectives pertaining to traditional Public Administrative systems. The aim of the theoretical analysis is to draw a thread from the traditional models of Public Administration through to the electronic models (e-government) and then to analyse the case of the Government Employees Pension Fund accordingly. Chapter Four provides a comprehensive introduction to the business of the Government Employees Pension Fund. Chapter Four furthermore introduces the electronic administrative system that is being implemented by the Government Employees Pension Fund.