

Making the Connection: the inclusion of Information and Communication Technology in Western Cape municipal Integrated Development Plans

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Declaration

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

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Abstract

The study examines the Western Cape municipal Integrated Development Plans (IDPs) and questions whether these IDPs include Information and Communication Technology (ICT) initiatives that promote development.

IDPs are used by municipalities as multi-sectoral plans that provide situation analyses of municipal areas and determine development priorities in municipal areas. These development priorities must be met within certain budget and time constraints. Globalisation and the technological revolution have led to the rapid development and convergence of technology. Technology, such as the Internet and cellular telephones, has had various influences on society. One of these influences includes the possible application of ICT for the purpose of development. Therefore both IDPs and ICT can be applied for developmental purposes. The study thus brings together two seemingly unrelated concepts, namely Integrated Development Plans and Information and Communication Technology and aligns them with one another through the concept of development.

The study includes three main objectives. Firstly, the Integrated Development Plans of the municipalities in the Western Cape were examined to ascertain whether these municipalities address ICT in their IDPs. Secondly, the nature of the ICT initiatives was determined. This refers to whether the ICT initiatives are for use in the community or for use in the municipality. Finally, a framework was developed, which includes the classification of the different types of municipalities, together with the different types of ICT initiatives. Recommendations were made based on this framework. The various theoretical issues discussed in this study include the transformation of local government in South Africa and the establishment of developmental local government. Various issues concerning the use of ICT for development are also discussed and they include the 'Information Society', the 'Digital Divide' and ICT for development. This discussion emphasises that success of ICT initiatives for development depends on the nature of the underlying policy agenda; this agenda must be demand-driven and pro-poor.

Opsomming

Hierdie studie ondersoek die Wes-Kaap munisipale Geïntegreerde Ontwikkelingsplanne (GOP's) en bevraagteken of dié GOP's Inligting en Kommunikasie Tegnologie (IKT) inisiatiewe wat ontwikkeling bevorder, insluit.

GOP's word deur munisipaliteite as multi-sektorale planne gebruik wat toestandsontledings van munisipale gebiede voorsien en die ontwikkelingsprioriteite in munisipale gebiede bepaal. Hierdie ontwikkelingsprioriteite moet binne sekere begrotings- en tydsbeperkings bevredig word. Globalisering en die tegnologiese revolusie het tot die spoedige ontwikkeling en samevoeging van tegnologie gelei. Tegnologie, soos die Internet en selulêre telefone, het verskeie uitwerkings op die samelewing teweeggebring. Een van die uitwerkings sluit die moontlike aanwending van IKT vir ontwikkelingsdoeleindes in. Beide GOP's en IKT kan dus vir ontwikkelingsdoeleindes aangewend word. Die studie bring daarom twee oënskynlik onverwante onderwerpe, naamlik Geïntegreerde Ontwikkelingsplanne en Informasie en Kommunikasie Tegnologie deur die konsep van ontwikkeling by mekaar uit.

Die studie bevat drie hoof doelwitte. Eerstens om die Geïntegreerde Ontwikkelingsplanne van die munisipaliteite in die Wes-Kaap te ondersoek om vas te stel of hierdie munisipaliteite IKT in hul GOP's aanspreek. Tweedens is die aard van die IKT inisiatiewe vasgestel. Dit verwys na IKT inisiatiewe wat binne die gemeenskap óf binne die munisipaliteit plaasvind. Laastens is 'n raamwerk ontwikkel. Dit sluit 'n klassifikasie van die verskillende soorte munisipaliteite, asook die verskillende soorte IKT inisiatiewe in. Aanbevelings wat gemaak word, word op hierdie raamwerk gegrond. Verskeie teoretiese kwessies word ook verder in hierdie studie bespreek. Dit sluit die transformasie van plaaslike regering in Suid-Afrika en die totstandkoming van ontwikkelingsgerigte plaaslike regering in. Verskeie kwessies wat die gebruik van IKT vir ontwikkeling betref, word ook bespreek. Dit sluit die 'Inligting-gedrewe Samelewing', die 'Digitale Gaping' en IKT vir ontwikkeling, in. Hierdie bespreking beklemtoon dat die geslaagdheid van IKT inisiatiewe vir ontwikkeling van die aard van die onderliggende beleidsagenda afhang; dié agenda moet aanvraag-gedrewe en ten gunste van armes wees.

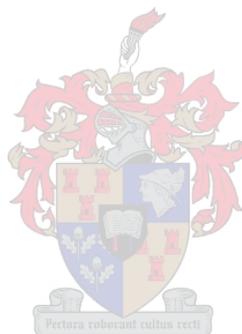
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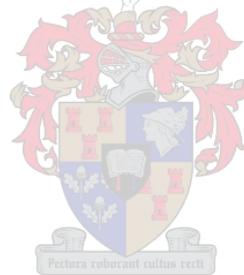
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Chapter 1

Introduction and Context

The interest in this research study is driven by a passion for finding developmental solutions to poverty in South Africa. Poverty causes many problems in communities, from the physical manifestations, such as hunger or lack of electricity, to more ideological ones that include poverty's encroachment on human dignity. One can even go as far as to say poverty prevents people from exercising their human rights by disenfranchising them because poverty makes people powerless.

It is hoped this study will contribute to wider debates surrounding the applications of Information and Communication Technology in development, as well as developmental local government in South Africa. Therefore, the two components in this study are: Information and Communication Technology (ICT) as a possible developmental solution to poverty; and developmental local government, specifically focusing on Integrated Development Plans (IDPs).

Before embarking with the research study, it is important to briefly explore the predominant theories and discourse that exist on both components of this study, namely, ICT and developmental local government. The following section is therefore dedicated to contextualising this study in terms of broader conceptual themes.

1.1 Predominant Discourse

This section begins with a discussion of the decentralisation of local government and the implications of this for the government in South Africa. The discussion then turns to ICT and the debates surrounding the application of ICT in development.

1.1.1 Decentralisation and Local Government

The devolution of power took place in South Africa in an attempt to take democracy to the people (Levy & Tapscott, 2001: 5). The nature of the South African state is described by Murray and Watts, respectively (as cited in Levy and Tapscott, 2001) as being 'hybrid'. This refers to the description in Section 1 of the Constitution (1996) that the South African state is "...one, sovereign, democratic state", which implies the unitary nature of the state (Levy & Tapscott, 2001: 5). Yet, the South African state contains many aspects of a federal state and, according to Levy and Tapscott, "the relations between the centre and periphery are, in some instances, no different from those in many federations" (Levy & Tapscott, 2001: 5). Although, they further state that the important idea is that South Africa's national sphere of government takes the leading role in all aspects of governance (Levy & Tapscott, 2001: 5).

Fundamental changes were brought about to the laws that control the operations of the municipalities since the establishment of the new Constitution in 1996 and the White Paper on Local Government of 1998 (Parnell & Pieterse, 2002: 83). These include defining the role of traditional leaders; reducing the number of municipalities; and, the introduction of the idea of financial accountability. Even more important was the extension of local government functions to include poverty eradication, local economic development and the sustainable management of the environment (Parnell & Pieterse, 2002: 83-84). These new developmental dimensions were to be addressed through an institutionalised planning tool called integrated development planning (Parnell & Pieterse, 2002: 84). This planning process was to result in a planning document, known as the Integrated Development Plan (IDP). The IDP is a mechanism used by

municipalities to coordinate and integrate the various aspects of municipal responsibilities (Parnell & Pieterse, 2002: 84).

This new developmental aspect of local government that has been implemented in South Africa is based on global and local ideas on democracy and development. The restructuring of the local sphere of government has also come about to complement the Growth, Employment and Redistribution (GEAR) economic strategy (Pycroft, 2002: 113). This is the neo-liberal macro-economic policy framework that “...advocates a reduced budget deficit, market-oriented growth, fiscal discipline, labour market flexibility and a reduced role for the state (including the local state)” (Pycroft, 2002: 113).

As in South Africa, there has been a shift in many countries in terms of how local government is regarded. Two shifts in the thinking about local government have been identified by Stoker: first is a change from a narrow conception of service delivery at local level to broader considerations of community leadership and citizenship. Secondly, there has been a change in focus on electoral and representative politics to include more inputs from local actors in a democratic way (2002: 31).

In order to maximise political benefits, local governance systems require the capacity for openness, a customer orientation, deliberation and integrated action. According to Stoker, these are necessary for “...the establishment of a system of good local governance” (2002: 33). Stoker also states that a new role is emerging for local government (2002: 38). This new role is taking different shapes and forms in different countries, but remains rooted in the idea of community participation and leadership (Stoker, 2002: 38).

1.1.2 Information and Communication Technology

When first reading about the use of ICT in development, on the surface, it seemed like a convenient answer to many developmental problems. For instance, providing the poor with access to information is a huge developmental challenge due to various factors. With the use of ICT, access to information could become quicker, cheaper and simpler.

Another example is the use of ICT to enhance the public service in terms of information management and communications. In this way ICT can improve service delivery to the poor although, as will be discussed below, this is not necessarily the case.

There is much ‘hype’ surrounding the use of ICT for development purposes and this examination aims to show the different theoretical positions on ICT for development that currently exist. There seems to be two main positions emerging from the literature on ICT for development. The one position argues that the ‘Information Age’ has brought with it many advantages in terms of information gathering and knowledge acquisition. In this new information age, it is believed those without access to information will be left behind and the divisions already existing between developed and developing communities will become deeper. By enabling poor communities to gain access to ICT, these people especially, will be able to acquire information and this has the ability to empower these poor people.

The other position on ICT for development, argues that although Information and Communication Technology has resulted in many new ways of acquiring information, there is still a big problem regarding access to these ICTs among the less privileged communities. In a country like South Africa where there exist so many levels of inequality, it is becoming clearer that information is still only available to the more privileged of our society. If the application of ICT for development purposes is to be successful, the existing inequalities must first be addressed otherwise ICT will only be distributed along these inequalities. Thus, it is argued that ICT applications will still only reach the more affluent, skilled and educated among the population.

Although this may be the case, the onset of the technological revolution has led to many changes worldwide and these changes have to be acknowledged. For instance, the acquisition, storage and processing of information has changed dramatically. These changes have an effect on a variety of fronts. The employment sector, for instance, must be transformed to meet the requirements of a changing society. Therefore skills development has to be aligned with the changing nature of work opportunities otherwise

there could be an over-supply of unskilled labour and an under-supply of skilled workers. Various development priorities with ICT applications have to be determined. In order to be achieved, these development priorities must be included in municipal integrated development planning. To show that this development is part of the municipality's development agenda, the Integrated Development Plans (IDPs) must include these ICT-related initiatives. In order to ensure ICT strategies for development is successful, the formulation of any ICT policy must have at its core a development agenda. ICT development initiatives must also be demand-driven and not technology-driven. The title of the thesis, *Making the Connection: the inclusion of Information and Communication Technology in Western Cape municipal Integrated Development Plans*, therefore refers to the connection made between ICT and IDPs. This connection is a developmental one.

1.2 Research Question and Objectives

The research examines the extent to which municipalities in the Western Cape include Information and Communication Technology in their Integrated Development Plans (IDPs). The question is thus: To what extent do municipalities in the Western Cape include Information and Communication Technology (ICT)-related initiatives in their Integrated Development Plans (IDPs)?



The research objectives consist of three main parts: first, to examine the Integrated Development Plans of the municipalities in the Western Cape in order to ascertain whether these municipalities address Information and Communication Technology in their IDPs. Secondly, to look at what these ICT-related initiatives involve. Finally, it is hoped to develop a framework from which recommendations can be made.

In order to answer the research question and meet the research objectives, the method of policy analysis was used and the 2004 Municipal IDPs of the Western Cape were examined. IDPs from 17 of the 30 Western Cape municipalities were obtained and used in this study.

1.3 Structure of Thesis

Chapter two is concerned with situating the research within the predominant discourse. In this chapter, the transformation of local government is discussed, as well as the establishment of developmental local government in South Africa. This is in answer to the need for development in many impoverished communities. A discussion of Integrated Development Plans as a mechanism for addressing these development needs is also discussed. Then ICT as a development tool is discussed. This discussion includes the use of ICT in governance, the evolution of ICT and the emergence of the information society. Various issues emerging from the information society are discussed including the digital divide, skills development and employment. The chapter concludes with a section on recommendations for pro-poor policies in South Africa.

Chapter three contains the Research design of the study and in this chapter policy analysis is the main method of analysis discussed. Other issues discussed also include the selection of cases, data collection and analysis, as well as, issues of reliability and validity.

In chapter four the research results are discussed. Before this takes place a brief overview of the Western Cape Province is given. This section includes general information about the province as well as a discussion of the White Paper on preparing the Western Cape for the Knowledge Economy. Then the research results are discussed, starting with the Metro municipal IDP, followed by the District and Local Municipal IDPs. The research results are summarised and presented in tables, which is followed by identifying the main trends emerging from the research results.

Chapter five discusses the research conclusions in light of broader, overarching themes in the research and, finally, recommendations are made at research, policy and municipal level.

Chapter 2

IDPs and ICT for Development

2.1 Introduction

There have been eleven years of democracy in South Africa and the political landscape is much changed since 1994. The new democratic government has been faced with many challenges over the past eleven years and these challenges will remain for many years to come. South Africa's colonialist and apartheid legacy has resulted in large-scale poverty among the majority of the population. These policies have resulted in land dispossessions, the establishment of overcrowded homelands and the migrant labour system (Aliber, 2002: 6). Drastic measures have had to be taken by the new democratic government that came to power in 1994 in order to address this extreme inequality and poverty.

One of these drastic measures resulted in the transformation of government structures, with a specific focus on local government. Local government did not address the needs of black, coloured and Indian communities during apartheid and this had to be changed in order to begin tackling the development issues in these communities. During this restructuring of local government, more than just the physical structures and demarcations of local government changed; the inherent nature of the local government system in South Africa started being transformed. Local government was entrusted with the responsibility of local development in its area of jurisdiction. Through the process of integrated development planning, which aims to recognise unique strengths and challenges that exist within each separate area, development goals were established. Due to various factors, however, many of these development goals have not been met. If municipalities have adequate capacity and community organisation, the integrated development planning process "...can provide a potent vehicle for the pursuit of sustainable development" (Aliber, 2002: 37).

At the same time, global transformations have resulted in revolutionary changes in technology and thus also in the way people relate to each other. Technological innovation has played, and still does play, an essential role in human progress. Today, technological developments together with globalisation have resulted in the network age (UNDP, 2001: 40). The global landscape with regard to how and by whom technology is created and owned is also changing. This changing landscape cannot be ignored by governments and public policies need to be changed accordingly in order to recognise these technological changes as tools for human development (UNDP, 2001: 27).

Technology can affect human development in two ways: Firstly, it can directly improve human capabilities through applications such as internet access or drought-tolerant plants. Secondly, technology can act as an enabler for human development due to its impact on economic growth through improved productivity, such as higher crop yields for farmers. It could also create new industries, which leads to employment creation. (UNDP, 2001: 28). At the same time, human development is a very important prerequisite for creating technological development. There is thus a circular relationship between human development and technological advances (UNDP, 2001: 28).

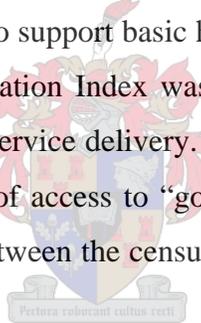
Through this discussion, two seemingly different concepts are brought together, namely Integrated Development Plans and Information and Communication Technology. Their similarities reside in their relationship with development. This relationship with development will be examined in the context of various other concepts.

2.2. Current reality in South Africa

According to the United Nations Development Programme's South African Human Development (UNDP SAHD) Report of 2003, there are five main challenges to sustainable development in South Africa (2003: 5). These are: eradicating poverty and income and wealth inequality; providing access to good quality, affordable basic services; promoting environmental sustainability; reducing the unemployment rate; and attaining high growth rates (UNPD, 2003: 5).

This Report further highlights the current state of poverty and unemployment in South Africa. It states that the Human Development Index (HDI) has moved from 0.72 in 1990 to 0.73 in 1995 but then it declined to 0.67 in 2003 (2003: 5). Approximately 48.5% of the South African population (about 21.9 million people) are currently living below the national poverty line (UNDP, 2003: 5), which is R352 a month. In other words, almost 50% of the South African population are living on less than R352 a month. Due to this high percentage, the social assistance system of grants in South Africa becomes very important in addressing income poverty. In 2002, only approximately 30% of poor people qualified for receiving government grants, excluding more than 15 million people from the social security support system (UNDP, 2003: 7). Therefore this current system of social assistance is not sufficient in removing people from poverty.

A further, more indirect, measure of human poverty is the lack of access to basic services as well as the lack of infrastructure to support basic human activities. Through the SAHD Report of 2003, the Service Deprivation Index was developed to measure the backlog existing in various aspects of basic service delivery. According to this Index, the number of households considered deprived of access to “good” quality basic services increased from 5.68 million to 7.24 million between the censuses of 1996 and 2001 (UNDP, 2003: 8).



Poverty eradication strategies are increasingly focusing on access to services, from life-sustaining services to life-enhancing and communication services (Hemson, 2004: 4). Social spending on health, education, welfare, housing and other social services has risen from 52.9% eleven years ago to 58.3% currently but additional social spending is required to meet the backlog in services and to provide access to these services (Hemson, 2004: 4). At the end of 1993, over 40% of the total population (approximately 4.5 million households) had no access to electricity. By 1997, almost 1.15 million households had been connected by ESKOM and, together with municipalities, resulted in about half a million connections a year (Hemson, 2004: 7). One of the problems involved in the delivery of electricity is the low consumption of newly connected households and problems in meeting operating costs, especially in rural communities (Hemson, 2004: 8).

The most rural province in South Africa is Limpopo but it has a higher level of electrification than the Eastern Cape (Hemson, 2004: 8). The most urbanised province is the Western Cape. It also has the highest level of electrification, followed by Gauteng (Hemson, 2004: 8).

The real challenge for government with regard to service delivery is sustainable delivery. The delivery of infrastructure is also an integral part of poverty alleviation because it provides poor people with improved health and livelihoods (Hemson, 2004: 18). In order to achieve sustainability of service delivery, three factors are required. First is the provision of sufficient supporting funds for the operation and maintenance of projects. The second factor is training and support to attain the best public management and, thirdly, sufficient public participation in projects is required (Hemson, 2004: 18-19). Hemson argues the “sustainability of projects is ultimately dependent on the growth of employment and rising incomes among the poor...” (Hemson, 2004: 19). Key constraints in service delivery include insufficient capacity and uncertainty in funding (Hemson, 2004: 19).

Employment is the key to economic growth, poverty eradication and human development. If there is no sustained economic growth, sustained poverty reduction cannot take place (UNDP, 2003: 6). Poverty reduction and growth are connected to each other by two channels: the social provisioning channel and the personal income channel. The social provisioning channel refers to resources originating from growth, for example from taxes, which can be used to provide services to the poor. The personal income channel refers to the growth of the economy through employment, which may lead to increased personal income amongst poor people (UNDP, 2003: 6). According to the UNDP, faster economic growth will not translate into a faster rate of poverty reduction without these two channels (2003: 6).

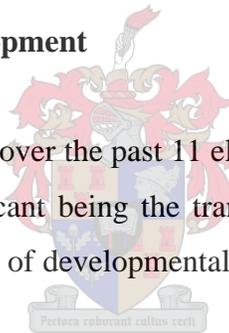
Unemployment rates continue to rise in South Africa. In March 2003, the economy was only able to provide 11.56 million jobs for the 16.81 million economically active population. This resulted in 5.25 million, or 31.2%, people being unemployed. This

figure is much higher than the 19.3% unemployment rate in 1996 (UNDP, 2003: 10). This seems to indicate an increase in the unemployment rate. It is believed that in order to produce a gradual, yet substantial decline in the unemployment rate, South Africa must have an employment policy at the centre of its development strategy (UNDP, 2003: 11).

But merely creating more job opportunities does not necessarily mean increased opportunities for poor workers or the unemployed. The nature of job opportunities is important and there must be a correlation between the structure of job opportunities and the structure of skills of the unemployed (UNDP, 2003: 11). In order to avoid skills shortages in the labour supply, institutional and policy support is required to strengthen the relationship between technology, human resource development and employment (UNDP, 2003: 11).

2.3 Local Government for Development

Various measures have been taken over the past 11 eleven years to facilitate development in South Africa. The most significant being the transformation of local government in South Africa and the establishment of developmental local government. This will now be discussed.



2.3.1 The Transformation of Local Government in South Africa

Local government under the apartheid government was dislocated from many communities. After the new democratically elected government came to power in 1994, it has been following the international trend of decentralisation. In South Africa, this was a process of “democratic decentralisation”. Democratic decentralisation is a term used by Olowu and Wunsch to describe the process of transferring authority, service delivery, financial and human resources to local governments (2004: 1). In order for this transition to democracy to be achieved in South Africa, the decentralisation of power led to the creation of a tripartite (national, provincial and local) system of government (Groenewald & Smith, 2002: 36). Certain provisions were contained in the 1993 interim Constitution

Act, which provided the foundation of the final Constitution in 1996, to ensure local government as a separate and distinct sphere of government (Olowu & Wunsch, 2004: 82).

The transition to democratic government in 1994 has resulted in redefining the responsibilities of the different spheres (formerly known as ‘tiers’) of government (Levy & Tapscott, 2001: 1). The final Constitution of 1996 stipulates that there be “...national, provincial and local spheres of government...” and that they are “distinctive, interdependent and interrelated” (Levy & Tapscott, 2001: 4). The Constitution of 1996 also prescribes how the three spheres of government will interrelate with each other (Groenewald & Smith, 2002: 36). The renaming of the different levels of government from ‘tiers’ to ‘spheres’ aimed to establish the idea of equality between the different levels of government (Levy & Tapscott, 2001: 5). The restructuring of the local sphere of government was to be done with the use of three interrelated pieces of legislation: the Municipal Demarcation Act, Municipal Structures Act and the Municipal Systems Act (Pycroft, 2002: 113). This will be discussed later. First, the process of local government transformation in South Africa will be discussed.

The process of transformation of local government in South Africa consisted of three phases. The first phase, or pre-interim phase, began with the establishment of the Local Government Transition Act of 1993 (Groenewald & Smith, 2002: 39). It was introduced to address the issue of transformation at local government level. Local Government Negotiating Forums were established under this Act in order to bring together people previously excluded from local government so that they could discuss the pre-interim structures of local government. The Development Facilitation Act was passed in 1995 in order to implement the Reconstruction and Development Programme (RDP) and land projects. One of the responsibilities of the RDP was to develop strong and stable democratic institutions that would promote representativeness and participation (Groenewald & Smith, 2002: 36). Land reform was (and still is) a very important issue at the centre of the transition process (Groenewald & Smith, 2002: 37). The Development

Facilitation Act was thus instituted in order to hasten the RDP and land projects by creating a new land-use planning system (Groenewald & Smith, 2002: 37).

The second, or interim, phase of decentralisation was characterised by the local government elections that were held in 1995/1996, whereby interim local government structures were elected (Pycroft, 1998: 154). In 1998 the final phase of the transition to local government resulted in the White Paper on Local Government, which introduced the final form of local government in South Africa (Groenewald & Smith, 2002: 39). This White Paper not only prescribed how democratic decentralisation would be achieved but also introduced the idea of Developmental Local Government as a means of tackling developmental challenges in South Africa.

As mentioned earlier, in order to implement the White Paper on Local Government, a number of legislative Acts were required. Each piece of legislation addresses a different aspect of local government. Firstly, the Local Government Municipal Structures Act of 1998 and the Local Government Municipal Systems Act of 2000 were instituted in order to commence with the implementation of the new, transformed Local Government. The Local Government Demarcation Act of 1998 was implemented in order to demarcate the municipalities from the old apartheid demarcations into new demarcations that would be able to improve the functioning of local government in South Africa.

The Demarcation Board was established under the Demarcation Act. All municipal boundaries in South Africa were re-evaluated under this Board and it also provided criteria according to which municipalities were divided into three categories, namely, Category A (Metropolitan), Category B (Local) and Category C (District) municipalities. The Demarcation Board was also to decide how the powers and functions should be divided between the primary (or local) and secondary (or district) municipalities (Pycroft, 2002: 115). Category A municipalities can only be established in metropolitan areas. Metropolitan Municipalities have exclusive executive and legislative authority in its area. Local Municipalities share municipal executive and legislative authority in an area with a category C municipality. A District, or Category C Municipality has municipal executive

and legislative authority in an area that includes more than one local municipality and they are referred to as District Management Areas (DMAs). The demarcation process resulted in establishing 232 local, 46 district and 6 metropolitan municipalities (Local Government Fact Book, 2002/2003: 30).

The outcome of this demarcation process determined that local municipalities in rural areas, where local municipal resources and capabilities are limited, would have fewer direct powers and functions. Smaller, rural local councils would provide representation for their communities and relay all the development priorities of their constituencies to the district municipality (Pycroft, 2002: 115). The district municipality would then be responsible for designing and implementing programmes to address these development priorities of the district area. Therefore the district municipality is the main agent for implementation for rural development in South Africa (Pycroft, 2002: 116). Furthermore, the district municipality would assume responsibility for service delivery and infrastructure development, as well as coordinating the development activities of all municipalities within its area of jurisdiction through the IDP provisions of the Municipal Systems legislation (Pycroft, 2002: 116). The Municipal Systems Act also aims to place the district municipalities at the centre of the new municipal sphere of governance. This has increased their power and responsibilities in rural areas (Pycroft, 2002: 114).). Furthermore, these two Acts also “refine the relationship between the local and district municipalities” (Pycroft, 2002: 116).

The Municipal Structures and the Municipal Systems Acts both work together to “...provide a legislative framework for political decision-making, define the powers and duties of the Executive Mayors/Committees, define the role of the Municipal Manager, enable municipalities to define the roles of all the players involved in municipal affairs, regulate the delegation of powers and functions and serve as codes of conduct for councillors and officials” (Local Government Fact Book, 2002/2003: 21).

The use of Land Development Objectives (LDOs) is another mechanism used by local government and focus on land-use plans within the municipality’s area of jurisdiction. It

considers factors such as the impact and cost of land-use as well as the pace at which development will take place. The LDOs will also measure the performance of the municipalities in terms of agricultural service delivery to the community. Therefore the LDOs can be seen as the stated aims of the municipality as well as a mechanism for evaluating the municipality's delivery record. LDOs are also legally enforceable and bind the development activities of all three spheres of government and private developers (Pycroft, 1998: 157). Finally, Integrated Development Plans (IDPs), include a variety of factors that form part of municipal responsibilities, such as service delivery and development. They require municipalities to work out a framework for achieving certain objectives, which are included in the financial plan of the municipality. The IDPs therefore show what the priorities of a certain municipality are and also how the municipality will go about meeting these priorities. The LDOs and IDPs are closely related and should be managed as one integrated process. The LDOs and IDPs form the legal basis for development within municipal areas and, as such, will also be used to evaluate all development issues within a municipality (Pycroft, 1998: 159).

Local government has thus undergone a major transformation and in terms of the new demarcation, 843 municipalities have been reduced to 284. Many of the newly demarcated municipalities are experiencing great problems with regard to their administrative, financial and information technology systems (Atkinson, 2002: 8). Administrative constraints include poorly trained and unmotivated municipal staff, shortages of skilled staff, together with the overstaffing in junior management, as well as the lack of performance management systems or disciplinary procedures (Pycroft, 2002: 112). "Structural weaknesses", especially within rural areas, refer to the structural challenges that involve the reincorporation of former homeland areas, as well as the extension of democratic local government into rural areas that have had no previous experience of municipal councils (Pycroft, 2002: 113). Furthermore two-thirds of municipalities have financial problems and one-third have serious financial problems with no hope of income generation. Approximately more than half of local authorities are sub-standard and these factors are obstructing the municipalities in terms of delivering services (Bernstein, 1998: 298). These problems are translating into service delivery

backlogs which are resulting in enormous frustration in the communities served by these municipalities.

Although local government has the ability to help with the problems that exist in communities, it can be seen from the above factors that many municipalities are struggling with this mandate of assisting their communities. They need capacity development before they can help with developing the communities they serve. Therefore a main component in devolving power to local government involves capacity building among local governments. This is facilitated by the development of Integrated Development Plans for municipalities. Another resource to be utilised by especially District Municipalities is the Planning, Implementation and Support Centres (or PIMS Centres) that have been established in 39 district municipalities in South Africa (Local Government Fact Book, 2003/2004: 6). Furthermore, the Municipal Performance Excellence Awards (or VUNA Awards) that were launched in 2003 are an incentive for municipalities to encourage performance and improvement in municipalities. The VUNA Awards, together with the Knowledge Sharing Facility and the Cities Support and Learning Network, are all mechanisms put in place to offer access for municipalities to best practice examples (Local Government Fact Book, 2003/2004: 8). These initiatives provide municipalities with access to information and resources that enable them to improve various aspects of municipal services and infrastructure.

Another important factor for the success of local government is the need for cohesive ties between the three spheres of government in South Africa. In this regard, a comprehensive diagnostic assessment was undertaken of the relationship between the three spheres of government. From this, it became clear that one of the areas that needs to be improved is the relations between Provincial Growth and Development Strategies (PGDs) and Municipal IDPs (Local Government Fact Book, 2003/2004: 9). The PGDs and IDPs have a reciprocal relationship and therefore more must be done to improve the provincial and local government's capacity for socio-economic planning. It is also hoped that the IDPs will begin to play a more central role in inter-sphere planning, budgeting and co-ordination (Local Government Fact Book, 2003/2004: 10).

2.3.2 Developmental Local Government

The 1996 Constitution mandates that local government provide democratic and accountable government for communities, ensure the sustainable provision of services, promote social and economic development as well as a safe and healthy environment and encourage community involvement in local government (Constitution, 1996: Section 153). Local government is thus not only concerned with administering services to communities but also with promoting local social and economic development (Groenewald & Smith, 2002: 39).

The move toward decentralisation as well as the development imperatives regarding local communities is clear in the White Paper on Local Government. This developmental role of local government is referred to as Developmental Local Government (DLG). According to the White Paper, municipalities will coordinate all development activities at national, provincial and local level, from private to public sectors (Pycroft, 1998: 151). Four duties of DLG have been identified by the White Paper on Local Government. First, municipal powers must be used in a way that increases their impact on social development and economic growth. Second, municipalities should play a role in integrating and coordinating partnerships between public and private investment. Third, municipalities must ensure that development is democratised and, fourth, it must be undertaken by municipalities to build social capital and empower marginalised groups within the community (White Paper, 1998: 18).

These four development priorities overlap with the four developmental approaches contained in the White Paper on Local Government: Integrated Development Planning (IDP), basic service delivery, Local Economic Development (LED) and democratisation (Cashdan, 2002: 162). First, in terms of the Integrated Development Plans, local government needs the support from the central and provincial spheres of government in order to ensure that municipalities have sufficient resources, power and capacity to implement the IDPs (Cashdan, 2002: 162). Second, local government is expected to provide basic services to “...enhance the quality of life of citizens, and increase their

social and economic opportunities by promoting health and safety, facilitating access (to work, education and recreation) and stimulating productive activities” (Cashdan, 2002: 164). Third, the White Paper on Local Government emphasises local competitiveness and municipal “...marketing and investment support...” in Local Economic Development (Cashdan, 2002: 166). Finally, active participation by citizens is mandated by the White Paper on Local Government. This participation by individuals in the communities should take place in four ways: as voters, citizens, consumers and partners (Cashdan, 2002: 169), which will be discussed in more detail below.

The process of integrated development planning is a process of participative planning with civil society, which is the link between development, delivery and democracy (Bekker & Leilde, 2003: 147). There is an ongoing process of conflict and cooperation in the local sphere of government between the state and civil society (Bekker & Leilde, 2003: 147). Participation in local government should thus take place in four ways: firstly, as voters to ensure democratic accountability; secondly, as citizens to ensure community priorities are reflected in policy; thirdly, as consumers to receive affordable, quality services; and finally, as partners in the mobilisation of resources for development in the community (Bekker & Leilde, 2003: 147). Developmental Local Government should therefore play the main role in integrated development planning, which should lead to the democratisation of local government and also to the transformation of local governance with a new focus on improving the standard of living and the quality of life of communities (Pycroft, 1998: 155).

According to the White Paper on Local Government, the effectiveness of a municipality is determined by its ability to develop at least three sets of capacities, namely the ability to assess, plan and develop innovative programmes to meet local needs, the ability to coordinate and integrate inputs from the administration to ensure developmental outcomes, and a community orientated structure with relevant and quality services offered to the community (Local Government Fact Book, 2003/2004: 37-38). Municipalities, therefore, are central in managing the horizontal dimensions (non-governmental organisations, community-based organisations, private and public sector)

and vertical dimensions (coordinating development activities undertaken by other spheres of provincial or national government) of integration between the various role players (Pycroft, 1998: 155).

2.3.3 The Importance of Developmental Local Government

The idea of developmental local government is enshrined in the Constitution of South Africa. Part of local government's task is to provide democratic and accountable government and to ensure the provision of services to communities. Furthermore, it is also tasked with promoting development, safety and community involvement (Local Government Fact Book, 2003/2004: 25). Therefore this role of developmental local government is very new and different to the old systems of local governance. Municipalities must focus on clearly defined developmental outcomes, which include the provision of infrastructure and services, local economic development, empowerment and redistribution (Local Government Fact Book, 2003/2004: 25). The requirements of the administrative systems of municipalities in its new developmental capacity must include Integrated Development Planning, Performance Measurement and Management, and structures and systems that enable active participation of citizens and communities in the municipality (Local Government Fact Book, 2003/2004: 26).

The importance of developmental local government is based on various factors. Firstly, the multi-sectoral nature of local government enables it to bring together many different sectoral issues within one developmental policy or programme (Atkinson, 2002: 3). Secondly, local government is the sphere of government (out of the three spheres) that has the closest connection to the population. This means that local government is geographically closer to residents of a community and the local councillors can truly concentrate on local issues that are community-specific. The fact that the ward system of representation is used (as opposed to the system of proportional representation at provincial and national levels) means that councillors who cannot deliver on their promises, can be removed by the voters (Atkinson, 2002: 3). Thirdly, the spatial aspect of local government is important as it is increasingly realised that development is labour-

intensive. It is much more effective if development activities are run by the people who are physically accessible to residents (Atkinson, 2002: 3). The South African local government legislation encourages societal participation in matters regarding governance because it is believed that this participation will encourage development to take place (Local Government Fact Book, 2003/2004: 7).

The decentralisation process aims to ensure improved interaction among different role players within a specific area. This process involves the interaction between established institutions such as local government structures, civil society and private business organisations. Local government has an interrelationship with sustainable development, which makes use of interdisciplinary approaches to development. There are three ways in which communities can respond to local government. These three ways have been described by Hirschman (as cited in Bekker & Leilde, 2003) as “Exit, Voice and Loyalty”. This basic model of responses to unfavourable situations or conditions can be applied to private business and public institutions, such as local government (Bekker & Leilde, 2003: 149). Exit takes place when individuals leave an organisation and look for another one. Voice refers to individuals expressing dissatisfaction in order to improve their situation, and loyalty refers to situations where people do nothing about their situations; they “grin and bear it” (Bekker & Leilde, 2003: 149). The least desired response is that of exit because this causes communities to disengage from the processes, which means there is no participation.

2.3.4 Integrated Development Plans (IDPs)

Integrated Development Plans (IDPs) include a variety of factors that form part of municipal responsibilities, such as service delivery and development. They require municipalities to work out a framework for achieving certain objectives, which are included in the financial plan of the municipality. The IDPs therefore show what the priorities of a certain municipality are and also how the municipality will go about meeting these priorities. “The IDP is a tool to improve the quality of governance. It

should therefore be evaluated in terms of its usefulness in achieving the objectives of developmental local governance” (Draft Policy on IDP, 2000: 10).

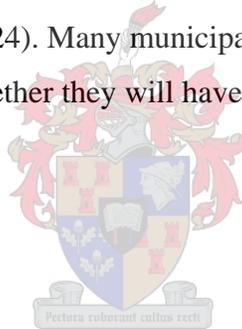
The IDPs form the legal basis for development within municipal areas and, as such, will also be used to evaluate all development issues within a municipality (Pycroft, 1998: 159). According to Parnell and Pieterse, Integrated development planning “...embodies the core purpose of local government and guides all aspects of revenue-raising and service delivery, interaction with the citizenry and institutional organisation. It is also the primary tool to ensure the integration of local government activities with other [spheres] of development planning at provincial, national and international levels” (2002: 84).

Integrated Development Plans are intended to be multi-sectoral programmes that include a range of development, from services (such as water, electricity, etc.) to human development activities (such as land reform, tourism, etc.). The idea is to create a single integrated planning framework, which not only incorporates the Land Development Objectives of the municipality but also includes an institutional, financial and communications plan (Pycroft, 1998: 158). A municipality can thus create a development plan for the short, medium and long term and this development plan should be viewed as an ‘incremental plan’ (White Paper, 1998: 28). This allows the municipality to establish the current situation with regard to economic, social and environmental needs, available resources, skills and capacity within the municipal area. It also allows the municipality to evaluate and prioritise needs in the community, as well as formulating goals and frameworks in terms of time and budgetary constraints for meeting these needs. Furthermore the integrated development process enables municipalities to monitor and adapt the IDP based on the underlying framework and development indicators of the community (Parnell & Pieterse, 2002: 84).

Characteristics of integrated development planning include: community participation; strategic focus to make the most of limited resources; integration between sectors; and, to have an outcomes and delivery orientation (Draft Policy on IDP, 2000: 14-17). Therefore the IDPs acknowledge the need for an integrated approach between the different

dimensions of development, such as political, social, economic, environmental, ethical, infrastructural and spatial (Parnell & Pieterse, 2001: 84). According to Parnell and Pieterse, any sustainable and successful strategy should incorporate all these dimensions in a coordinated way (2002: 84). The municipalities must prepare five-year IDPs that are accompanied by a financial plan. Every year, the IDPs are also subject to a review process.

The core components of the IDP documents include the following sections: a vision, assessment of the existing level of development, development priorities and objectives for its elected term, development strategies, spatial development frameworks, operational strategies, disaster management plans, financial plans, key performance indicators and performance targets. In addition, a framework for the preparation of IDPs for local municipalities must also be included in order to align the local and district municipal IDPs (Draft Policy on IDP, 2000: 24). Many municipalities completed these IDPs early in 2002 and it remains to be seen whether they will have the capacity to implement the IDPs (Atkinson, 2002: 4).



2.4 ICT for development

New perspectives on development, based on earlier theories, emerged in the 1970s to the 1990s. These new perspectives of development have included concepts such as ‘human’ development, ‘gender’ aspects, institutional theories and ‘sustainability’ in development discourse (Moodley, 2003: 42-48). A broad definition of development, particularly relevant to this discussion, defines development “...as the fulfilment of the necessary conditions for the realisation of the potential of human personality, which translates into reductions in poverty, inequality, and unemployment. (It is also) the increasing satisfaction of basic needs such as food” (Akpan, 2003: 262). This broader definition of development implies that there is a relationship between economic growth and the equal distribution of resources (Akpan, 2003: 262). This definition also alludes to the consequences of the processes of globalisation and ICT diffusion for people in

developing countries by referring to the development of human potential, possibly, through the use of technology (Akpan, 2003: 262).

Ballantyne identifies a new trend in development, namely development cooperation (2002: 368). There is a move in developing countries to more transparent and democratic governance. Development is seen more as being the joint responsibility of government, communities, civil society and the private sector (Ballantyne, 2002: 368). New ways of fighting poverty are emerging, which include participation, empowerment, public-private partnerships and joint action (Ballantyne, 2002: 368). Development agencies are also changing their development strategies in terms of focusing more on processes, developing local expertise instead of merely providing technical assistance, focusing on qualitative rather than quantitative results and also reforming their approaches in the way they work and also who they work with (Ballantyne, 2002: 369). The idea of “partnership” is crucial here because development agencies must undertake to listen to each other and include civil society, the private sector and local governments in partnerships (Ballantyne, 2002: 369). Furthermore, this new approach includes notions like decentralised cooperation, good governance, capacity building and also ensuring that initiatives are demand-responsive (Ballantyne, 2002: 369). Local ownership and local programming (ensuring relevance of initiatives) are essential for successful development to take place (Ballantyne, 2002: 369). Learning and sharing lessons and experiences are also very important factors to be considered (Ballantyne, 2002: 370).

In light of the above development strategies that include the idea of partnerships, ICT has the potential to make a huge contribution to human development but this can only take place for those who have access to ICT. According to the United Nations Development Programme, technological innovation can affect human development in two ways (Kozma, McGhee, Quellmalz & Zalles, 2004: 361). First, by directly affecting human capabilities in increasing people’s ability to participate more actively in social, educational, economic and political life of a community (Kozma *et al*, 2004: 361). Second, it can also encourage economic growth through the increase in productivity it creates. At the same time, human development, in terms of a highly skilled workforce can

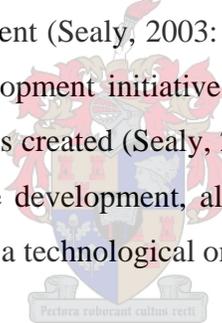
contribute to the development of technology (Kozma *et al*, 2004: 361). In this way, these two factors create a circular process where poverty is reduced and human conditions are improved (Kozma *et al*, 2004: 361). But with no access (or limited access) to technology, citizens of developing countries have less chance to participate in the growing global economy (Kozma *et al*, 2004: 362). It also decreases the potential of technology to improve health, educational, governmental and cultural institutions (Kozma *et al*, 2004: 362).

The question thus remains: how can the use of information and knowledge be supported so that they promote sustainable development and alleviate poverty (Ballantyne, 2002: 366)? What also needs to be taken into account are the roles and responsibilities of different actors (local, national, and international) that should be defined so that they respond to the demands of poor communities, promote local ownership and strengthen local capacities (Ballantyne, 2002: 366). Ballantyne emphasises some important lessons learnt using ICTs for development. These say that ICT initiatives should be explicit about their developmental goals; initiatives should be demand-driven (not technology-driven), ICT solutions should be long-lasting, they should be sensitive to local conditions and limitations and the interest of the key stakeholders should be aligned with the goals of the intervention (Ballantyne, 2002: 366). Furthermore, the necessity is identified for holistic approaches with multi-stakeholder involvement, links and partnerships with the global economy is required, national ICT strategies should also allow bottom-up approaches to take place, advantage should be taken of new and emerging technology and new approaches to development assistance is also needed (Ballantyne, 2002: 366).

Heeks and Davies (as cited in Moodley, 2003), have concluded that the majority of ICT-based initiatives in developing countries have failed (2003: 123). This is largely due to not following the above recipe for ICT in development. Furthermore, Moodley points out that although there is this high failure rate, there remains "...a great deal of hype about ICTs in general (2003: 123). This 'hype' may cause many governments and agencies to ignore the difficulties arising from ICT applications in development. In this regard, government plays a crucial role in creating an environment conducive to applying ICT

for development (Moodley, 2003: 125). Developing countries must develop their own applications, which draw on local knowledge. ICT policy can thus play a role in advancing development but only when it is coherently tied to national priorities and a pro-poor agenda (Moodley, 2003: 125).

A variety of ways can be used to ensure the provision of ICT in developing countries. For example, Community Access Centres (CACs) or telecentres (in the form of mall kiosks, libraries, police stations, post offices, tourist information centres, etc.) can be used for e-governance initiatives as a grassroots way to bridge the digital divide and to bring excluded rural communities to the center (Sealy, 2003: 337). Innovation and the application of knowledge are considered to be the driving forces behind economic and social development (Sealy, 2003: 338). These are the most important factors that create knowledge societies, which are formed by knowledge economies that are grounded in innovation, research and development (Sealy, 2003: 338). If these are used in the correct way in terms of prioritising development initiatives, a continuous cycle of sustainable social and economic development is created (Sealy, 2003: 338). It should be remembered that in order to ensure sustainable development, all stakeholders should agree that the process is a developmental and not a technological one (Sealy, 2003: 338).

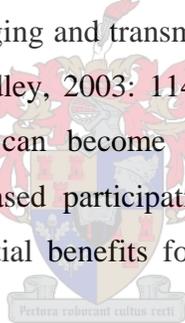


2.4.1 ICT in governance

In terms of governance, the provision of ICT has an impact on and huge potential for achieving good governance in developing countries (Sealy, 2003: 336). “E-governance” refers to the ability of government agencies to interact with the public on-line in the delivery of services and in fulfilling their mandates to the communities they serve (Odendaal, 2003: 586). The World Bank defines e-governance as “...the use by government agencies of information technologies that have the ability to transform relationships with citizens, businesses, and other arms of government” (Odendaal, 2003: 586). The relationship between ICT and local governance is affected not only by issues of technology and capacity but also by elements such as social pressures, community activism and capacity within the local government area (Odendaal, 2003: 587). Therefore

the impact of ICT is ambiguous; it could overcome inequalities but also widen inequalities. ICT, according to Odendaal, must address the Digital Divide if it is to facilitate democratic and inclusive governance (2003: 587). Local government is thus in an interesting position with regard to this. On the one hand, local government is best suited to meet the local needs, while, on the other hand, it is not clear how well local government is placed to deal with digital inequalities (Odendaal, 2003: 587).

Many processes of governance require the management of data, processing of information and efficient communication and ICT has the potential to improve these procedures (Odendaal, 2003: 589). Economic development, policy priorities and technological development will definitely determine the capacity of municipalities to incorporate ICT into governance processes (Odendaal, 2003: 589). In this regard, it is believed ICT can improve governance in three overlapping ways: First, ICT can assist decision-makers in acquiring, managing and transmitting information and data, therefore creating increased efficiency (Moodley, 2003: 114). Second, ICT can assist in service delivery and, third, civil society can become empowered by increased access to government information and increased participation in government. Therefore, these three factors combined have potential benefits for education, health and environment (Moodley, 2003: 114).



There is a huge increase in urban migration to cities in developing countries as poor populations continue to grow. The cities are already overcrowded and demands for housing, water, sanitation, schooling, health services and jobs continue to grow (Sealy, 2003: 339). This not only leads to increased urban crime, the spread of HIV/AIDS and other diseases but also to negative impacts on the environment, such as the depletion of natural resources (Sealy, 2003: 339). It has become clear from developed countries that ICT applications can solve many of these problems but the challenge for developing countries remains how to balance the benefits of investing in new ICTs against the need of building human resource capacity, a highly skilled ICT workforce and a literate public who would be able to apply their knowledge to local needs (Sealy, 2003: 340).

Although ICT has huge development potential, it must be recognised that there are certain basic needs, such as food and access to water, that simply cannot be addressed by ICT (Moodley, 2003: 115). The application of ICT for development purposes can only really take place if a huge amount of financial resources within a country is assigned to the development of the ICT sector (Sealy, 2003: 340). But this is not always possible, especially when one considers that most financial resources are assigned to meeting basic needs.

2.4.2 The Evolution of ICT and the Emergence of the Information Society

A definition of ICT that is useful for this discussion states that ICTs “...are a diverse set of technological tools and resources [used] to create, disseminate, store, bring value-addition and manage information” (Nath, 2001: 318). The development of new technologies has led to the formation of a new type of society – a knowledge society. Knowledge has become the fundamental resource for all economic and developmental activities (Nath, 2001: 318). In this new society, it is believed that the one resource that can free people from poverty and empower them is knowledge (Nath, 2001: 319). The concept of the information society includes the evolution and synthesis of high-speed communication networks, as well as associated services and applications connected to global networks. These networks have the potential to provide access to services within countries and across country borders, which could be beneficial to economic growth and productivity, as well as creating new economic activities and jobs and also improving the quality of life for societies (Moodley, 2003: 67).

ICT includes a variety of tools (not only the Internet), which could be used individually or in conjunction with each other (known as convergence technologies) to speed up the process of transformation to the knowledge economy (Nath, 2001: 320). Convergence technologies include community radios, Internet radio, local area networks, telecentres, information kiosks, mobile phones, WAP applications, etc. They improve the reach and penetration of ICT (Nath, 2001: 320).

According to Quibria, Ahmed, Tschang and Reyes-Macasaquit, ICT can be roughly divided into three broad categories (2003: 812). The first category includes ICT for computing. The second category is ICT for communication and the third category refers to ICT for Internet-enabled communication and computing. These three categories will be discussed in more detail. Firstly, computers generally improve the thinking capabilities of individuals and organisations. They also improve efficiency (Quibria *et al*, 2003: 812). Secondly, in the category of ICT for communication, there are two further categories, namely, one-way communication and two-way communication (Quibria *et al*, 2003: 813). The most common of these is one-way communication, including broadcast media, such as radio and television. Two-way communication includes faxes, telephones, telegraphs and pagers (Quibria *et al*, 2003: 813). These have undergone major improvements over the last two decades. For instance, the growth of the Internet has taken place as a result of the convergence of telephone lines and computers (Quibria *et al*, 2003: 813). Thirdly, the Internet, including the World Wide Web, is one of the most important technologies to affect communication technology (Quibria *et al*, 2003: 813). Through the Internet, new ways of communicating have come about, including e-mail, chat lists and video conferencing for group communication.

The information revolution that has taken place over the last two decades has resulted in significant technological and institutional changes in the information and communication sectors. As mentioned earlier, a variety of technologies and industries are now rapidly converging to form new “multimedia” (Wilson & Wong, 2003: 156). It has caused the transformation of many industries into local and global networks that facilitate health, education, commerce, government, leisure and other activities through cheaper, more powerful information processing and communication (Wilson & Wong, 2003: 156). A brief history will follow, describing how these information and communication technologies have developed over the years, eventually resulting in the types of technologies we recognise today.

A converging set of innovations led to the transition of the global economy to a digital economy (Ayres & Williams, 2004: 315). In terms of information technology, the first

transistor was developed in 1947 and the first transistorised computer appeared in 1956. In the early 1960s, a new industry of computer manufacturing emerged (Ayres & Williams, 2004: 317). Intel, one of the leaders in processors for computers, was founded in 1968 and in 1971 the microprocessor was invented by Intel. This caused a shift in the design function from computer manufacturers to chip manufacturers (Ayres & Williams, 2004: 318). The first non-military government user of computers was the United States of America Census Bureau in 1951 and the first business applications took place in 1958 in the insurance and banking industry (Ayres & Williams, 2004: 318). In the 1980s, the impact of computers on manufacturing was still very limited. Computer-integrated manufacturing, which combined software and hardware systems, was the next stage of development of computer-use in factories (Ayres & Williams, 2004: 319). The types of sophisticated management software systems we see today only became reliable and widely available in the 1990s (Ayres & Williams, 2004: 319).

By 1976, a new market was created for personal computers when the first Apple desktop computers were built using third-generation Intel microprocessors (Ayres & Williams, 2004: 320). In the late 1970s, the first mass-produced software applications were developed for personal computers (Ayres & Williams, 2004: 320). Windows, developed by Microsoft, was introduced in the early 1990s (Ayres & Williams, 2004: 321). Microsoft started as a small company and today more than 90% of the 500 million computers in use worldwide use Intel microprocessors and Microsoft Windows operating systems, as well as applications software (Ayres & Williams, 2004: 321).

Innovations in communications technology also took place. The first communications satellite, Telstar, was launched by AT&T Bell Labs in the early 1960s (Ayres & Williams, 2004: 321). The first practical hand-held cellular telephone was patented in 1973 by Motorola (Ayres & Williams, 2004: 322). The first cellular telephones were all based on analogue technology but by 1991, digital technology became available and this was used for the second-generation cellular telephones (Ayres & Williams, 2004: 322). Cellular telephone usage has increased much faster than fixed line usage in the past few years. In 1995, the number of cellular telephone subscribers in the world was around 50

million (Ayres & Williams, 2004: 322). By the end of 2001, there was close to one billion subscribers. Therefore the number of cellular telephones being used worldwide is now the same as or greater than the number of fixed line telephone usage (Ayres & Williams, 2004: 322). This is especially true in South Africa, where fixed line telephone services are more expensive due to the monopoly of the national service provider, Telkom. This will be discussed shortly.

Since the beginning of the computer era in the 1990s, it was predicted that the convergence of computer technologies with communications technologies would take place (Ayres & Williams, 2004: 322). The development of the internet resulted from the convergence of computer and telephone technologies (Ayres & Williams, 2004: 324). E-mail originated accidentally as a by-product and the first real e-mail started in 1982/1983 (Ayres & Williams, 2004: 324). The World Wide Web was invented in 1989 and the first website was created in 1990 (Ayres & Williams, 2004: 325). Websites are places on the internet where information can be stored, read or downloaded by any user. At the moment, three quarters of all internet traffic is Web traffic, to and from websites (Ayres & Williams, 2004: 325). The introduction of the World Wide Web resulted in many new information services being created in the early 1990s, which led to terms such as “browsers”, “search engines” and “portals” in order to enable the internet users to be able to find relevant information (Ayres & Williams, 2004: 325). Present innovations include the Internet coupling with cellular telephones and personal digital assistants.

The technological innovations outlined above have therefore had a revolutionary effect on the way people can obtain, store and manage information. These technological innovations have also had a major effect on how people communicate today. The Information and Communication Technologies (ICTs) have led to what is commonly known today as the ‘information society’ or the ‘digital economy’.

2.4.3 The Information Society

Globalisation has brought about many changes in the world. The changes have not only been limited to technology but shifts have taken place in occupations, culture and the economy. These shifts centre on information and knowledge and it is due to these changes in our society that we also refer to this as the 'information age' (Burkett, 2000: 680). The process of globalisation has played a role in how the information society has become accepted across the world. ICT and globalisation are linked to each other because Information Technology has helped reduce the cost of communication and thereby has helped to globalise production and financial markets (Akpan, 2003: 267). At the same time, technology is advanced by globalisation because competition is intensified and the process of diffusion of technology through foreign direct investment becomes faster (Akpan, 2003: 267).

According to Webster (as cited in Moodley, 2003), the information society has five dimensions. They include technological, spatial, economic, occupational and cultural (2003: 68). First, the technological dimension is obviously concerned with the advances of technology and the potential these advances possess for human activities. Second, the spatial dimension refers to the interconnectedness of national and international borders through ICT networks, which have changed the organisation of time and space (Moodley, 2003: 68). Third and fourth refers to how the dominance of the ICT sector in the areas of employment and production has changed economic and occupational structures (Moodley, 2003: 68). Finally, culture today has become inundated by more information than at any previous time in history (Moodley, 2003: 68).

The globalisation of markets has only taken place in the late twentieth century as a result of the dramatic changes in transportation and communication technologies for information, people, goods and services (Castells, 1996: 96). This has resulted in new sources of competitiveness in the global economy. Castells argues there are four main processes in determining the form and outcome of competition in the global market. They are technological capacity, access to large affluent markets, production costs and prices at

market destinations and political capacity of national and supranational institutions (Castells, 1996: 103-105).

Castells also argues that if technology is utilised by states, it has the potential of changing economies, military power and social well-being. He maintains the ability or inability of societies to use technology will ultimately determine the fate of that society (1996: 7). Technology itself does not have the ability to bring about social change; “technology, (or the lack of it) embodies the capacity of societies to transform themselves, as well as the uses to which societies, always in a conflictive process, decide to put their knowledge to the test” (Castells, 1996: 7). It can be said the technological revolution originated in the time of the global restructuring of capitalism. The new society that has emerged from this technological revolution is capitalist and informational, therefore named ‘informational capitalist’ (Castells, 1996: 13).

Historically, there have been different modes of development (such as the agrarian and industrial modes of development). Modes of development are characterised by the technological organisation through which labour is used to create a product. This determines the quantity and quality of surplus produced (Castells, 1996: 16). For instance, the previous mode of development was industrial and it was concerned with energy use and growth. Castells believes the current mode of development is informational (1996: 17). In this new mode of development, the source of productivity is in the “technology of knowledge generation, information processing, and symbol communication” (Castells, 1996: 17). According to Castells, a unique aspect of the informational mode of development is the circular interaction between knowledge sources and the application of technology in order to improve knowledge production and information processing (1996: 17). Therefore, the main source of productivity of the informational mode of development is the action of knowledge upon knowledge itself.

This mode of development is concerned with technological development and further knowledge generation. Technology and technical relationships spread through social relationships and structures, thus penetrating and transforming power and experience.

ICT networks serve as the foundation for the information society and networks are therefore the major structure through which social power is created and used. Modes of development therefore shape social behaviour, which could ultimately lead to new types of social interaction, social control and social change in the informational mode of development (Castells, 1996: 18). Therefore it can be said that technological systems are socially produced and this social production is culturally informed. Technology existing today, such as the Internet, is produced socially on the basis of certain cultural beliefs (Castells, 2001: 36). People or nations lacking the skills or education for adapting to this new mode of “informational capitalism” are excluded and have no power to enter the networks (Moodley, 2003: 162). The power is with those who can exploit the ICT networks. This is usually the case in developed countries.

Moodley describes Castells’s analysis of the information society as ‘technologically deterministic’ in that “technology determines the mode of production, which, in turn, determines social relations” (Moodley, 2003: 81). The theory of Castells implies that technological development occurs independently of society. It postulates that technology may shape society but that there is no reciprocal influence on technology from society (Moodley, 2003: 82). Moodley agrees that it should be recognised that technology is not neutral, nor does it stand ‘outside’ of society (2003: 83). There is indeed a reciprocal relationship between technology and society.

Not all parts of the world have been affected by this information and technological revolution in the same way. In some parts of the world like Africa, the information society has no relevance to most of the population. Many, such as the South African government and the UNDP (2001), feel the exclusion of these populations from the information society can have very detrimental implications for the people in these areas, especially regarding the socio-economic development potential of ICTs. But, at the same time others, such as Castells (1996), Moodley (2003) and Fourie (2001), feel the development potential of ICTs is being overestimated and that ICTs in vastly unequal societies can prove to do more harm than good. The information society could emphasise uneven development due to some societies not having access to technologies that will

enable them to generate and disseminate information and knowledge (Burkett, 2000: 680).

2.4.4 The Digital Divide and ICT in Africa

ICT has the potential of making many positive contributions to economic and social development but if it is not managed effectively, there is a danger of widening the gap between the developed and developing countries as well as the rich and poor (Fourie, 2001: 593). The process of globalisation has resulted in a vast reliance on knowledge and information. People (as well as poor or small nations) who do not have access to this knowledge and information feel excluded and threatened (Fourie, 2001: 598). This exclusion from the Information society has been named the “Digital Divide”.

Many developing countries in Sub-Saharan Africa include globalisation and the inherent potential of ICT to assist in socio-economic development as part of their development agendas (Akpan, 2003: 261). This seems to be problematic when taking into account that most of these countries have yet to provide basic needs to their populations (Akpan, 2003: 262). Furthermore, many people are in danger of being left behind if Sub-Saharan countries have a development strategy that favours competition in the global economy, especially when 80% of populations live in rural areas (Akpan, 2003: 262). It is necessary to explore the issue of what role ICT could play in a development strategy of developing countries in order to ascertain whether it could be beneficial to the majority of people living in these countries (Akpan, 2003: 262).

The Digital Divide refers to access, or lack of access, to telecommunications infrastructures and, specifically, the Internet (Molina, 2003: 138). The Internet is perceived to be the central component for participating in emerging electronic commerce and, generally, participating in the knowledge economy, which is at the centre of the Information Society (Molina, 2003: 138). The openness of the Internet’s design was the source of its main strength. Castells refers to the Internet’s “self-evolving development”, which refers to the fact that users of technology are becoming the producers of

technology and thus the ‘shapers’ of the network (2001: 27), and by extension, the shapers of the network society. This rapidly evolving technology has had very negative impacts on many fields of employment, especially for unskilled and semiskilled workers (Hull, 2003: 131). The digital divide is a reality, not only in developed economies but specifically in developing economies. Social class and wealth are frequently used as indicators for the use of digital technologies (Hull, 2003: 132). Furthermore, the gap between the Information rich and Information poor is widening with the division between these two groups based on education, income and ethnicity (Hull, 2003: 132).

As a result of these new developments in information and technology, the social exclusion of Africa becomes emphasised. According to Castells, the inclusion/exclusion takes place in terms of the processes of production, circulation and consumption, which have been globalised as well as “informationalised” (1996: 133). It has thus created a new type of division of labour. The new global economy does not accommodate the majority of the African population in this new division of labour. Where Africa is included, it is usually in exchange for their valuable natural resources and Castells describes Africa’s transition to the new global economy as “structured irrelevance” (1996: 135). This, according to him, is a more threatening state than Africa’s state of dependency. The dangers posed by the digital divide to Africa are, by extension, also applicable to South Africa.

Although referring to a divide between those with access to ICT and those without, Moodley cautions that the notion of a digital divide may be focusing too much on the technological aspect (2003: 94). The idea of a digital divide draws the focus away from the serious development divides that exist, even with no technological element. The point is emphasised once again that ICT itself cannot overcome these divides but must be used to improve equality; otherwise ICT can lead to more, instead of less, problems (Moodley, 2003: 95).

In 1996, South Africa hosted the Information Society and Development Conference of the G7 countries. A number of infrastructure goals were proposed for South Africa at this

conference. The broad goals were to develop integrated information systems in order to meet people's needs, improved universal access, development of appropriate applications and content (with regard to excellence, expertise and resources), human resource development, support for business, support for good governance, cultural heritage, building ICT infrastructure and reach-out services to regional countries with special circumstances (Fourie, 2001: 605-606). Fourie (2001: 606), however, believes a real danger exists in terms of development and economic growth because few ordinary people have gained from ICT. This is especially true when basic needs such as housing, electricity, running water in houses, basic health care, basic telephone services and basic educational needs have not been met (Fourie, 2001: 606).

If technology is controlled by those whose primary goal is to make money, this will not necessarily lead to the social good of ICT. This use of technology for the sake of technology, not for the sake of development, can become dangerous as precious resources are wasted on ICT-initiatives that are doomed from the start. Access in terms of availability of basic communication services at affordable prices is important, but the ability to use communication services, content and ICT is also important and thus training is necessary (Fourie, 2001: 608-609). Quality of information with regard to development needs must also be considered. There is a popular notion that information is power. But information can only be a source of power if there is the necessary infrastructure for its production, processing, storage, retrieval, transportation and if it is accessible to the people with the skills to apply this information into social practice. This must allow people to participate in social networks that enable them to further their own interests (Moodley, 2003: 203). The notion that knowledge is power implies that poor people have never used their power because they lacked information and were ignorant. This is not necessarily true according to Moodley; instead, poor people lack the material and strategic means for attaining power (2003: 203).

Participation from communities is vital in developing ICT services to ensure the process has input from below so that ICT services are relevant to the people who use them (Fourie, 2001: 610-611). Thus any policy regarding ICT should take note of grassroots

needs and uses, keeping in mind that information-seeking and handling of information may vary among ethnic groups (Fourie, 2001: 614). Developing countries should have sustainable development as their goal with regard to ICT. The strategies of national ICT planners should not begin by focusing on the most sophisticated users but they should be designed for the marginalised people in urban areas and rural villages (Fourie, 2001: 615).

2.4.5 Inequalities of the Information Society

South Africa is one of the most unequal societies in the world and stratified according to four main streams of inequality: class, gender, race and spatially (Moodley, 2003: 177). In societies that are highly unequal, it is likely that the distribution of ICT among the population will also be highly unequal (Moodley, 2003: 121). It is therefore uncertain whether the poor in developing countries will benefit from ICT. It is more likely that the distribution of ICT in developing countries with lower levels of human capital will still only benefit those with more resources than others (Moodley, 2003: 121). This alludes to Castells's claim that the new information society is 'informational capitalist'. In other words, in terms of information, the rich become richer and the poor remain poor, or even become poorer. According to Moodley, the most important challenge is to examine how ICT can be distributed in order to promote human development, equally and sustainably (2003: 122).

The South African government's ICT strategy has involved attempts to address the issues brought about by the digital divide and the information society (Moodley, 2003: 133). Currently, the South African government has no overarching strategy for creating the information society in South Africa, although a National Commission on the Information Society and Development was recently appointed by President Thabo Mbeki (Moodley, 2003: 137). The most notable initiative for the promotion of growth in the ICT sector is the Department of Trade and Industry's South African Information Technology Industrial Strategy (SAITIS) project of 2000 (Moodley, 2003: 146). The most important output of

this strategy was the detailed policy framework outlining the development of South Africa's ICT sector.

The two most important components of this framework included the development of the ICT sector and the utilisation of the potential of ICTs in order to develop other sectors of the economy (Moodley, 2003: 147). However, these policies fail to address the social problems associated with ICT. Moodley suggests one of the largest challenges to South Africa's efforts to utilise ICT is the lack of human capacity (Moodley, 2003: 147). ICT initiatives can be grouped into two categories at national level: the first includes various programmes that enhance human resource or skills for the ICT sector, and the second includes programmes that support the development of an information society, which includes infrastructure and the incorporation of the marginalised (Moodley, 2003: 175). However, the problem, according to Moodley, is that there is no "coherent and coordinated response by government that cuts across both traditional departmental boundaries and areas of responsibility within departments, is lacking" (2003: 175). Moodley believes a measure of good policy is that it takes into account the capacity of government to implement decisions (2003: 182).

As already mentioned, there are many who believe that the information society will perpetuate existing inequalities. According to Burkett this belief, although it may be true, has been over-simplified by many and is based on erroneous assumptions, which exclude other very important issues relating to inequality in the information society.

Burkett has identified five such erroneous assumptions regarding the inequalities in the information society (2000: 680). The first erroneous assumption advocates that if the poor are given computers, they will become information rich. Through this assumption, it is believed access to computer technology is central in determining inequality in the information society (Burkett, 2000: 681). But this is a very simplified way of looking at this issue because it is not always as easy as giving everyone a computer. Societies need the physical and social infrastructure for these technologies in order to be able to participate in the global economy. Furthermore, these less developed societies not only

need infrastructure but the political environment must also be considered and the society also needs certain levels of national and personal wealth (Burkett, 2000: 681). Linked to this is the issue of the relatively high levels of literacy needed to make use of the internet. It is estimated that 90% of the information on the internet is in English, which excludes the rest of the world's 6000 languages (Burkett, 2000: 682). It becomes clear that by merely providing less developed societies with access to technology will not necessarily solve the problem of inequality in the information society. Access, including infrastructure and socio-political structures, must be taken into account as well as the ongoing maintenance and improvements of connections to the internet (Burkett, 2000: 683).

The second erroneous assumption is an extension of the first one and is based on the inequalities that exist between North/South and Developed/Developing World on a global level, which will be perpetuated by lack of access to ICTs (Burkett, 2000: 683). It is once again over-simplifying the issue when focusing only on the North/South debate on inequalities because within the North there are areas that remain uneven in relation to other areas (Burkett, 2000: 684). It is not only lack of access to technologies that maintain inequalities but also the availability of people's skills and cultural and social resources. It is pointless to train people to use technology when there is no identified need or desire for them to use such technologies (Burkett, 2000: 685).

Third, the assumption that more access to more information will enrich people's lives is also erroneous (Burkett, 2000: 686). Here it is important to distinguish between information and knowledge. There is a lot of information on the internet but the quality of this information needs closer examination. In other words, it needs to be looked at how this information can be used by poor people to enrich their daily lives. The information on the internet is purely information, meaning that it is an accumulation of information with the possibility of transmitting facts and figures (Burkett, 2000: 686). Information is not the same as knowledge. Knowledge is the meanings people assign to the information they acquire and the way in which people make their own sense of information (Burkett, 2000: 686-687). Therefore, "whereas knowledge is qualitative, local and contextual,

information is often imported and decontextualised and universalised” (Burkett, 2000: 687). It is erroneous to assume that increased access to information will necessarily lead to increased knowledge. The meaning, or quality, of information is important and not solely the quantity of information, as emphasised by most literature on this issue (Burkett, 2000: 688).

The fourth erroneous assumption is the assertion that the information society will be more democratic and participatory (Burkett, 2000: 688). This assumption deals with the contexts in which information is developed, stored and used and not with the meanings of information, as in assumption three above (Burkett, 2000: 688). There exist power relationships which connect the origins of information to its purposes and consequences in developing an understanding of inequality in an information society (Burkett, 2000: 689). Therefore the roles, purposes and consequences of information must be taken into account as well as the cultural, political and ideological nature of information. As already mentioned, information is not a neutral commodity. On the contrary, it is filled with cultural, social and political messages, which means both the medium and the message are socially constructed (Burkett, 2000: 689). Information on the internet mainly conforms to Western scientific standards and indigenous knowledge is not represented on the internet (Burkett, 2000: 690). Yet, indigenous knowledge is the type of information that is useful from a developmental perspective. It becomes clear that the information society will not necessarily be more democratic and participatory because the existing power relations are merely replicated and not reduced through ICT (Burkett, 2000: 690). The underlying values perpetuated by the internet are Western values and therefore, more information of this nature may very well inhibit democracy and participation (Burkett, 2000: 690).

Finally, it has often been said that the world’s problems could be solved if provided with enough information (Burkett, 2000: 690). But this is not the case. What is needed to solve the world’s problems, according to Burkett, is not necessarily more information but things like political will, recognition of personal and social responsibility and action by governments and civil society (2000: 691).

2.4.6 The Development of the ICT Sector and Skills in South Africa

The ability of an economy to adopt ICT is an indicator of the potential ability of that economy to exploit the economic opportunities provided by the new technologies (Quibria *et al*, 2003: 814). Indicators of ICT diffusion in an economy include the usage of personal computers, televisions, fixed line telephones, mobile telephones, fax machines and the Internet (Quibria *et al*, 2003: 815). In light of these indicators it is useful to look at South Africa's ICT Sector Performance over the last few years.

The telecommunications sector has grown immensely over the last few years. In the early 1990s, it contributed 2% to the Gross Domestic Product (GDP) and grew to just under 6% in 2003 (Gillwald, 2004: 19). In 2002, there were 4.9 million fixed lines in operation in South Africa, resulting in a fixed-line teledensity of 11% (Gillwald, 2004: 20). Fixed-line household penetration is estimated at 31% and, while fixed-line growth is slowing internationally, South Africa is now one of few countries world wide with a declining fixed-line teledensity (Gillwald, 2004: 20-21). There has been an unexpected exponential growth in the mobile telephone sector. It has increased from just under one million subscribers in 1996 to the current level of 14.4 million users, of which 80% are estimated to be active (Gillwald, 2004: 21). According to the information in the Pocket Guide to South Africa, South Africa is the fourth fastest growing cellular communications market (2004: 95). At the end of 2001, 2.89 million South Africans had access to the internet (Gillwald, 2004: 22). This figure was expected to grow to about 3.1 million by the end of 2002. This growth rate is less than 10%, which is the lowest growth rate since the internet was first introduced to South Africa in 1994 (Gillwald, 2004: 22). This is largely due to Telkom's monopoly of telephone call charges. Due to this monopoly, there has been a 45% increase in Telkom's costs during the past five years, in contrast to an international decrease of 65% in internet costs (Gillwald, 2004: 22). As long as these costs remain high, internet penetration will not increase.

Access to information technology has become an important requirement for expanding employment opportunities and promoting development (Benner, 2003: 1-2). Due to the

relatively high levels of skills required for the digital economy, existing employment opportunities could become endangered by information technology and lead to furthering inequality, which could lead to social conflict (Benner, 2003: 2). Therefore the role of public policy is to ensure that not only access to information technology is provided but that inequalities associated with information technology are also addressed (Benner, 2003: 2).

It is thus very important to prepare South Africa's workforce for the ICT sector. As already mentioned, employment in the ICT sector requires workers to be highly skilled. If the government does not provide effective skills development strategies in South Africa, it could lead to more and more people who will not be able to compete for jobs in this new ICT industry.

Tikly suggests a skills formation approach to skills development (2003: 549). He believes the development of skills is fundamentally a social rather than a technical issue. Skills formation is defined as the "social capacity for learning, innovation and productivity" (Tikly, 2003: 549). This definition takes into account the wider social context of skills development. It is also important to consider skills formation in relation to differing conceptions of development (Tikly, 2003: 550). In order for skills formation to take place, social capacity must also be developed (Tikly, 2003: 552). Developing skills for global competitiveness as opposed to skills for poverty eradication and gender equity is also necessary (Tikly, 2003: 556). The relationship between cultural norms and values and skills formation must also be considered (Tikly, 2003: 559). These factors involved in the skills formation process draws attention to the need to understand skills formation as an aspect of the development of democracy and of the social capacity for learning and innovation within the state and civil society (Tikly, 2003: 561).

The South African government has developed various policies in order to promote growth in the information technology industry. As already mentioned, the South African Information Technology Industry Strategy (SAITIS) Project, which is a policy development process that has resulted in an integrated strategic framework for the ICT

sector (Benner, 2003: 2). The second policy is South Africa's National Skills Development Strategy and its implications for skills development in ICT occupations (Benner, 2003: 2). According to Benner, both these strategies are inadequate in addressing the negative impacts of these technologies on other industry sectors and the rapidly changing levels of skill requirements (Benner, 2003: 2). If these shortcomings are not addressed, it could lead to the disruption of existing employment opportunities and contribute to the growing inequality in South Africa (Benner, 2003: 3).

The relationship between information technology, job creation and job destruction and skills development are central to the transformative capacity of information technology in all forms of economic activity (Benner, 2003: 3-4). What is important in the transformation of both jobs and skill requirements is the concept of "creative destruction" (Benner, 2003: 4). This is an occurrence where jobs and skills both develop and end much more quickly than in the past and this makes workers very vulnerable to these rapid changes taking place in the economy, especially in an unequal economic context such as South Africa (Benner, 2003: 4).

Over the last few years, there has been a marked decline of employment in labour-intensive industries, with a move from low-skilled to higher-skilled occupations (Benner, 2003: 5-6). The SAITIS helped in creating an ICT Sector Development Framework, which was released in 2000. It aimed at gaining a greater understanding of development in the ICT sector (Benner, 2003: 17). One of the strengths of the project focused on building collaborative relations between a range of stakeholders (Benner, 2003: 17). But little attention was given to the potentially disruptive impacts of information technology on employment in South Africa (Benner, 2003: 18).

The Skills Development Plan requires employers to pay a "skills levy" every month. Employers pay 0,5% in the first year and 1% in subsequent years. These funds go to the National Skills Fund (NSF), which aims to develop training programmes that target youth, the unemployed, retrenched and other communities (Benner, 2003: 19). The remaining funds go to the Sector Education and Training Authorities (SETAS), which are

responsible for promoting training within their specific sector of the economy (Benner, 2003: 19). But there is a problem with the complexity of the system because there is not sufficient capacity to implement the Skills Development Plan efficiently (Benner, 2003: 20). This Plan also neglects the small business sector, as well as the creation of social networks (Benner, 2003: 20).

2.4.7 Recommendations for Formulating Pro-poor ICT strategies in South Africa

According to Moodley, “the key to integrating ICTs in the fight against poverty, then, is not to begin with ICTs, nor to posit them as an essential need” (2003: 218). He suggests that an assessment should rather be made of the major obstacles to poverty alleviation and the combating of inequality in society. Only once this has been completed, can the role of information, communication and knowledge in removing the above-mentioned obstacles be determined (Moodley, 2003: 218).

Moodley claims a consensus regarding the steps needed to utilise the positive impact of ICT is emerging (2003: 233). This includes: to determine the demand for sustainable ICT services in poor communities; policy and regulation reform; investment in education and training; the introduction of regulated competition to increase infrastructure roll-out, services and bandwidth and to reduce costs; and, to pursue ICT for development purposes in an integrated way within a national policy framework (Moodley, 2003: 233). Government departments must cooperate to avoid competing and overlapping ICT projects. A national ICT strategy is required that reflects South Africa’s development needs and which also monitors implementations (Moodley, 2003: 237).

Moodley recommends the following principles in formulating a pro-poor ICT strategy by the South African government: First, the focus should be on applying information and communication dimensions to poverty and the appropriate use of ICT in development (2003: 238). Second, information and communication aspects should be addressed in national poverty reduction strategies. Third, national ICT strategies should be integrated into national poverty reduction strategies. Fourth, ICT policy should enable the poorest

communities to address their information and communication needs. Fifth is to develop the capacity within communities and government to enable substantial contributions on ICT-related issues in order to form part of a national poverty reduction strategy. Finally, the monitoring and evaluation of successful and unsuccessful ICT applications in order to acquire a database of best practice models (Moodley, 2003: 238).

2.5 Summary

In this chapter, the main themes of developmental local government and ICT for development were discussed. This chapter started with a section on the various development challenges facing South Africa. Then the transformation of local government in South Africa was discussed, with a specific focus on the establishment of developmental local government in an attempt to address the development challenges facing South Africa. The integrated development planning process used by municipalities to determine the development imperatives and resources existing within a specific municipal area was also discussed. These IDPs are the blueprint for the municipality's development activities.

The second part of the chapter was concerned with discussing ICT for development. An important theme emerging from this discussion is that although ICT can be used to address development priorities at many levels, from providing access to information to enhancing government services, the application of ICT for development is a complex issue. If ICT is diffused among unequal societies, the ICT will also be distributed unequally among the population. However, there is a need for governments to address ICT in their policies because of changes taking place in the employment sector and the changing nature of skills. It is concluded that for ICT-initiatives to be successfully implemented for addressing development needs, they must be pro-poor and demand-driven, as well as integrated with poverty alleviation strategies.

Chapter 3

Research Design

3.1 Introduction

This chapter begins with a discussion of the research aims and objectives, as well as the research question. Secondly, the research methodology is discussed. The specific strategy, namely policy analysis is discussed, as well as the theoretical issues surrounding policy analysis. This section also discusses the selection of cases and the data collection and analysis. The section ends with considerations regarding reliability and validity.

3.2. Research Aims and Objectives

The aim of this research is to find out whether municipalities in the Western Cape have included Information and Communication Technology (ICT) initiatives in their Integrated Development Plans (IDPs). Therefore the unit of analysis is Integrated Development Plans, which are policy documents of the municipalities. It is important to mention that this study is not concerned with policy implementation but with policy formulation.

The research objectives consist of three main facets, namely, to firstly examine the Integrated Development Plans (IDPs) of the municipalities in the Western Cape in order to ascertain whether these municipalities address Information and Communication Technology (ICT) in their IDPs. Secondly, if these IDPs include ICT-related issues, to look at what these ICT-related issues involve. Finally, it is hoped to develop a framework from which recommendations can be made.

The study is therefore descriptive because it is hoped to develop a framework that describes the ICT component in terms of the nature of ICT initiatives found in which type of municipality, as described in the municipal IDPs. In order to formulate such a framework relevant information was gathered by means of Policy Analysis.

3.3 Research Methodology

The research is qualitative in nature and the research method used is Policy Research, which includes Policy Analysis, due to the nature of the documents being studied. This is in conjunction with Content Analysis, which can be applied to any type of communication including government policies (Babbie *et al*, 2001: 383). In following this method, two of the most important research design considerations are, first, to follow an open and flexible research strategy and, second, to use literature reviews and other documents in order to gain insight and comprehension of the phenomena under investigation (Babbie *et al*, 2001: 80). Some may argue that the IDP is not a policy document but for the purposes of this research, it is maintained that IDPs can indeed be considered to be policy. In order to explicate this argument, a brief discussion on public policies, policy research and policy analysis will follow.

3.3.1 Policy Analysis



Before embarking on a discussion of policy research it is important to start with an examination of what constitutes public policy. There are a variety of ideas and elements that permeate the major discussions on what constitutes public policy. Theodoulou identifies five such ideas and elements (1995: 2). First, public policy should differentiate between what the intentions of governments are and what is actually done (Theodoulou, 1995: 2). Second, public policy is not only limited to formal actors but includes all government levels, nor is it limited to legislation, executive orders, rules and regulations, which is the third element (Theodoulou, 1995: 2). Fourth, public policy should be seen as an intentional process with a particular end goal, and finally, it should be viewed as both long and short term. It is a continuous process that involves enacting a law by means of implementation, enforcement and evaluation (Theodoulou, 1995: 2). Another way of referring to policy is that political behaviour is “goal-oriented or purposive”, therefore it is referring to the calculated actions of achieving a goal (Salisbury, 1995: 34). Policy should also be viewed as “patterns of behaviour rather than separate, discrete acts” (Salisbury, 1995: 35).

In this study it is argued that the IDP document is a policy. The IDP is formulated through an intentional process and it contains certain goals that have to be reached within a certain timeframe. Therefore it is considered to be a policy document because it stipulates the intentions of the local municipality in terms of development goals that have to be reached within certain time and budgetary constraints.

Public policy is always made within a certain political climate and “it reconciles conflicting claims on scarce resources; it establishes incentives for cooperation and collective action that would be irrational without government influence; it prohibits morally unacceptable behaviour; it protects the activity of a group or an individual, promoting activities that are essential or important to government. Finally policy provides direct benefits to citizens” (Theodoulou, 1995: 2). It is important to study public policy because an overview is obtained of how the political system works, including formal institutions, as well as how informal actors such as the public are involved (Theodoulou, 1995: 2).

Three cycle-process approaches to the study of public policy are identified by Theodoulou (1995: 3). The cycle-process approach refers to when policy makers are responding to demands and focus on the process of policy making (Theodoulou, 1995: 3). Systems Theory is the first approach. It is mainly based on David Easton’s work which views public policy as the political system’s response to the surrounding environment’s demands. This process is concerned with maintaining stability. However, this theory does not discuss how decisions are arrived at (Theodoulou, 1995: 4). The second approach is Structural Functionalism which attempts to compare both the structures and operations of all social systems in order to find the necessary elements present in all stable social systems (Theodoulou, 1995: 4). Although it is helpful to examine the institutional role, this may become too fragmented due to the focus on specific parts and not the whole (Theodoulou, 1995: 5). The final approach is the Policy Cycle approach, where the policy process is seen as a deliberative, staged, recursive and administrative cycle. Policies are described in terms of how they are made and how they can be improved (Theodoulou, 1995: 5).

There is a variety of typologies to categorise the various types of public policy that exists. First is Theodore Lowi's classic typology where policies are classified according to whether they are regulatory, distributive or redistributive (Theodoulou, 1995: 7). Second, Murray Edelman sees policy as either material or symbolic. Material policies provide material impacts on beneficiaries, whereas symbolic policy does not. They are more in reference to the common values of the society (Theodoulou, 1995: 7). Third, James Anderson argues that policies could also be either substantive or procedural. Substantive refers to intentions of government, while procedural refers to how, or by whom, something will be done (Theodoulou, 1995: 7). The fourth typology distinguishes between whether policy refers to collective goods or private goods. Collective policy functions on the principle that what is given to one, is given to all. Private policy, on the other hand, is considered on an individual beneficiary basis (Theodoulou, 1995: 7). The final typology states that policies are either liberal or conservative. According to Theodoulou, Liberal policies require government intervention to effect social change, while conservative policies oppose government intervention (1995: 7).

In a discussion concerning a particular approach to conducting research, it is always most useful to begin the discussion with describing what this research method is. Policy research, according to Haas and Springer, is “a catch-all term embracing the many information-gathering and processing activities that public agencies engage in to facilitate decision making” (1998: 4). A further discussion describes policy research as policy analysis, programme analysis or programme evaluation (Haas & Springer, 1998: 4). Two types of policy research are distinguished by Haas and Springer, namely, Analysis for policy and Analysis of policy. Analysis for policy is conducted with the purpose of informing decision makers in order to improve policies or programmes and Analysis of policy is not conducted for the purpose of influencing policy decisions but are rather more academic (Haas & Springer, 1998: 5). It is thus clear that the latter approach is used in this study because the purpose of this study is not to impact policy but to contribute academically to the body of scientific knowledge that exists in this field of study.

Various research methods can be used in policy research. Some of the most frequently used methods include interviews, surveys, case studies, secondary data analysis, sampling and quasi-experimental research (Haas & Springer, 1998: 6). There is no set of universal rules prescribing how policy analysis should take place and, as in other research techniques the nature of the research project should guide which methods to use. Policy analyses are concerned with developing explanations or models of what is going on (Weimar & Vining, 2005: 309). Policy analysis makes use of two broad categories of information gathering, document research and field research (Weimar & Vining, 2005: 310). In this study document research has been used.

Document research consists of literature reviews, which consists of four general categories. First are journal articles, books and dissertations (Weimar & Vining, 2005: 311). The second category consists of publications and reports of interest groups, consultants and think tanks. The third category consists of government publications and research documents and, the final category consists of the popular press (Weimar & Vining, 2005: 311). There are also two broad categories of analysts, namely, linear and non-linear analysts (Weimar & Vining, 2005: 325). Linear analysts follow a rationalist approach, where problem solving takes place by means of systematically moving through a logical set of steps to answer the questions (Weimar & Vining, 2005: 325). Non-linear analysts are quite the opposite. They move back and forth until answers start becoming apparent (Weimar & Vining, 2005: 325).

According to Haas and Springer, there are various strategies that can be used in policy research. First, the policy analysis approach makes use of six steps which are very similar to the basic steps of scientific research. They include defining the problem, establishing the evaluation criteria, identifying and evaluating alternative policies, selecting among the alternative policies and monitoring the policy outcomes (Haas & Springer, 1998: 18). A second strategy used in policy research is referred to as the Programme Evaluation Approach. A typical outline of such a strategy includes identification of the objectives of the policy, construction of an impact model, development of a research design that accommodates these suggested impacts, measuring the phenomena and collecting the

data and analysing the results (Haas & Springer, 1998: 20). A variation on this method is also outcomes measurement in order to measure the performance of any given programme or policy (Haas & Springer, 1998: 21). The third strategy is hypothesis testing or the statistical analysis approach (Haas & Springer, 1998: 22). Specific hypotheses are generated by this research model in order to develop theories about how the research elements are related (Haas & Springer, 1998: 22). A final strategy used in policy research is Situation-Based Policy Research. Unlike the three previous strategies, this strategy takes into account the needs of the person or entity requesting the information (Haas & Springer, 1998: 25). This strategy requires that the types of information needs that exist, be examined. Haas and Springer maintain “the ability to respond to the information needs of others is a central skill in policy research” (1998: 25).

Elements from all four strategies will be used to form the foundation for the method of policy analysis used for this study.

In considering the methodology of Policy analysis, as well as the nature of this study, Hajer and Wagenaar have alerted policy analysts to five challenges that exist in the network society for policy analysis (2003: 8). The first challenge acknowledges the new spaces for politics that have been created and the emergence of “life politics”, where people find new ways of becoming politically involved (Hajer & Wagenaar, 2003: 9). Secondly, politics and policy are also being conducted and formulated in a time of uncertainty, with no more absolute knowledge and requiring new strategies to acquire knowledge (Hajer & Wagenaar, 2003: 10). Thirdly, there is an increased appearance of difference as societies have become more culturally diverse and complex, which gives rise to problems with the existence of different languages and also different discourses (Hajer & Wagenaar, 2003: 11). The fourth challenge to policy analysis in the network society is that as a result of increased problems due to more diverse societies, increased interdependence is seen as a solution to these problems. This means that more collaboration from different sources is required to solve problems for the policy analyst (Hajer & Wagenaar, 2003: 11). Finally, in the network society and the “new politics”, it cannot be assumed that trust exists. Policy analysis is therefore no longer only involved

in finding solutions to problems but also in developing structures that generate trust among groups of interdependent people (Hajer & Wagenaar, 2003: 12). This interactive process of policy making can result in people generating new identities.

Hajer and Wagenaar suggest that just as society has changed with the new information age, policy analysis has to change as well (2003: 15). They suggest a policy analysis approach that corresponds with the five challenges discussed above. It is based on three pillars, interpretation, practice and deliberation (Hajer & Wagenaar, 2003: 16). This is the deliberative policy analysis approach. This approach requires radically transformed ideas of citizenship, politics and the state (Hajer & Wagenaar, 2003: 24). It acknowledges that the nature of politics and problem solving has changed and therefore new ways are required to conduct politics and policy making (Hajer & Wagenaar, 2003: 24).

3.3.2 Selection of Cases



In November 2004, an interview was conducted with an official from the Western Cape Provincial Government. The purpose of the interview was to find out more about the IDP process. The official interviewed, Mr Japie Kritzinger, is the Assistant to the IDP Co-ordinator in the Western Cape. He is tasked with checking and managing the IDPs once they have been completed and sent to the Western Cape Provincial Government. During this interview, Mr Kritzinger explained how the IDP review process works.

Theoretically, the IDP of each municipality is reviewed by that municipality every year in order to update the information in the IDP to ensure that it is aligned with what is happening in practice. This review process takes place every year for five years. For instance, the first IDPs were formulated in 2001/2002 (Kritzinger, November 2004). The municipal budget runs from July to June and therefore the first IDP budgets were from 1 July 2001 to 30 June 2002, although the provincial and national government budgets run from 1 April to 31 March (Kritzinger, November 2004). The first review of the IDPs was thus for the 2002/2003 IDPs (Kritzinger, November 2004). The second review was the 2003/2004 IDPs, the third review the 2004/2005 IDPs, the fourth review the 2005/2006

IDPs and the final review of the first five year phase will be the 2006/2007 IDPs. Every five years, the entire IDP of every municipality is re-evaluated and may involve dramatic changes or only minor adjustments (Kritzinger, November 2004).

During the interview it was suggested that the best IDP year to examine would be the 2004/2005 IDPs. This is due to various reasons. First, the 2004/2005 IDPs are already in the third year of the review process, which means their information, structure and formulation have been checked, so as to facilitate the analysis (Kritzinger, November 2004). Second, previous review years did not have as many IDPs handed in to the IDP coordinator as the 2004/2005 IDPs and, finally, due to the nature of the field being investigated, it was felt that the most recent IDPs be used because this would increase their chances of including ICT-activities. The original idea was to compare two specific IDP review years with each other because this could surface interesting findings concerning the development of the formulation of IDP strategies and development imperatives from one year to the next. The intention was to compare the 2002/2003 IDPs with the 2004/2005 IDPs. When this was suggested during the interview with Mr Kritzinger, various problems were pointed out by him. These included the incomplete submissions of that specific year as well as the questionable quality of the 2002/2003 IDPs (Kritzinger, November 2004). It was therefore decided not to embark on a comparative study and to examine only the 2004/2005 IDPs of the Western Cape.

The Western Cape Province consists of 30 municipalities. These municipalities vary in type and consist of one Metropolitan municipality, five District Municipalities and 24 Local Municipalities. As mentioned, the original intention was to examine all 30 municipalities in the Western Cape but, in the end, this did not materialise. Mr Kritzinger could only provide 18 IDPs because this was the sum total IDPs that had been submitted to him for the 2004/2005 review year, although, as mentioned, there are 30 municipalities in the Western Cape. Unfortunately, there was a problem with one of the documents and therefore, a total of 17 municipalities were examined in the end, consisting of: one Metropolitan, two District and 14 Local Municipalities. These include: Cape Town City Municipality, Boland/Cape Winelands District Municipality, Eden District Municipality,

Breede Valley, Stellenbosch, Witzenberg, Kannaland, Langeberg, Mossel Bay, Cape Agulhas, Overstrand, Drakenstein, Bitou, Theewaterskloof, Bergrivier, Matzikama and Knysna Municipalities. Please refer to Appendix 1 for a table with a complete list of the IDPs used in this study, as well as their classification type.

The reason for choosing the Western Cape Province for this study is due to two main reasons. First, in terms of easy access to the Provincial government, the Western Cape was easily accessible for undertaking the research study. Second, the Western Cape Province is one of the most developed provinces in South Africa and therefore it was anticipated that more reference would be made to ICT than some of the other provinces.

3.3.3 Data Collection and Analysis

In order to collect the necessary data, a preliminary reading of the 17 IDPs was undertaken in order to establish whether the IDPs followed a specific structure so that a data collection method could be formulated. During this preliminary reading process, detailed notes were made regarding which sections of the IDPs were the most relevant in terms of describing ICT-related initiatives and strategies. The IDP documents are extremely lengthy documents and therefore much time was needed in order to ascertain which sections of the IDPs were relevant for the study. Through this preliminary reading, it was discovered that most of the 17 IDPs followed roughly the same structure and as a result, a conceptual framework, based on the preliminary research notes, was developed in order to collect the relevant data.

The sections in the IDP deemed to contain the most relevant information for this study are the Strategies and Development Priorities and Project Identification Sections. Therefore these two sections of the IDPs were examined. In order to identify the relevant information within each of these sections, the conceptual framework was further developed to include “Areas of Interest”. These Areas of Interest were identified and cross-referenced with the two identified sections. As mentioned before, this study is concerned with the formulation of the IDP policy and not implementation. In certain

IDPs, information regarding budgets and projects were available and in others there was no such information available.

The Areas of Interest include the following key words and concepts: skills development, poverty alleviations, job creation, computer training, computer systems (networks and hardware/software), capacity building, Local Economic Development, entrepreneurship, SMME, service delivery, infrastructure development (specifically electricity), Internet, telephone, information systems (such as Geographic Information Systems or GIS), communication networks and systems.

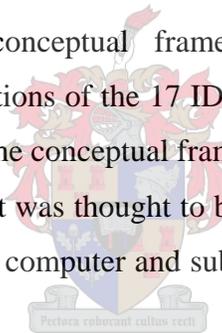
A further distinction was made between ICT-related initiatives that were focused on the municipality and initiatives that were focused on the community. This distinction between the various ICT initiatives was deemed important for the research because this would enable more detailed descriptions of the type of ICT initiatives contained in the IDPs. One of the research objectives is to ascertain the nature of ICT-related initiatives and this distinction classifies the ICT initiatives in terms of initiatives focused on the community, such as developing capacities for people in the community, or initiatives focused on the municipality, which aims to develop the capacity of municipal staff and infrastructure to improve service delivery. Please refer to the table below:

Table 3.1 Areas of Interest for Analysis

Areas of Interest	
Focus on Municipality:	Focus on Community:
Training: institutional and capacity building	Skills development/development initiatives: computer & Internet skills, business skills, entrepreneurship, job creation, tourism, poverty alleviation, LED
Communications: improving internal and external communications systems	Facilities: Community centres, business advice centres, SMME support services, information kiosks
Information: GIS, information between agencies and municipalities	Communications: telephones, dissemination of information
Maintenance: of computer systems-hardware, software, networks	Service delivery/infrastructure: electricity, telephones, libraries

In this way, all information related to ICT-initiatives was obtained and a distinction was also made between these initiatives in order to ascertain the nature of the initiatives. This distinction is important because it shows what the initiatives consist of so that it can be discovered what the main types of ICT-initiatives are (if indeed there are predominant types) being used by the municipalities. Another distinction that was used in the analysis of the data is the difference in the municipal categories, for instance, Metro, District or Local Municipalities. This distinction is of importance due to the differences that exist between areas in terms of resources, challenges and population densities. Therefore the research findings are contained in tables, where each municipality (and its category) is indicated with its separate description of ICT-initiatives, as well as the distinction between the ICT-initiatives within the municipality or in the community. This conceptual framework is described and discussed in detail in Chapter 4.

After having formulated this conceptual framework for obtaining the relevant information, the two identified sections of the 17 IDPs were carefully examined in detail and the findings were recorded in the conceptual framework. All the IDP documents were in electronic PDF format because it was thought to be unnecessary to obtain hard copies. Therefore the IDPs were read on a computer and subsequent notes were written down as the analysis continued.



3.3.4 Reliability and Validity

The data obtained is considered reliable and valid. With regard to reliability, firstly, the source of the data (that is the municipal IDPs) is reliable because it was obtained from a reliable source, namely from the Assistant to the IDP Coordinator in the Western Cape. Secondly, by first conducting a preliminary reading that included research notes and descriptions, it was possible to develop a conceptual framework that is focused and reliable in obtaining the relevant information. This preliminary research process of the IDPs also identified selected areas of focus within the IDP, which resulted in a detailed study of only the relevant sections of the IDPs. This saved much time and energy and allowed for more time to be spent on checking the data obtained. The third reliability

measure involved examining all the identified data and checking this with the IDP documents. In this way, it was ensured that the collected data was factually correct and correctly classified.

With regard to validity, the data obtained from the IDPs is valid because with this data, an analysis can follow that would answer the research aims and objectives. With the development of the conceptual framework, the extent to which municipalities include ICTs in their IDPs will become evident, as well as the nature of these ICT-initiatives.

Possible sources of error could include omissions. This could be as a result of missing pertinent data or due to incorrectly comprehending certain formulations within the IDP. Although errors are always a possibility, all measures have been taken to ensure the reliability of the data and analysis. Some of these measures were discussed earlier, such as the preliminary reading of the IDPs and the factual checking of the findings.

3.4 Summary

In this chapter, policy analysis was discussed as the method of analysis used in this study. Various theoretical issues regarding the nature of policy and policy research were discussed. Policy analysis in the network society was also discussed, which advocates for a deliberative approach to policy analysis. This discussion was followed by the section describing the selection of cases, which led to the section on data collection and analysis. In this section, a conceptual framework was developed in order to distinguish between the nature of ICT-initiatives in the IDPs. This framework contains information about the type of municipality as well as the nature of ICT initiatives identified in the municipality. This framework was used for the collection and analysis of the data. Finally, issues of reliability and validity were discussed.

Chapter 4

Research Results

4.1 Introduction

This chapter contains the results of the research. The chapter begins with a brief overview of the research objectives as well as the classification method used to distinguish between the types of ICT initiatives in the IDPs. After this overview, a section on the Western Cape Province is included in order to provide some background information on this Province. This section also contains a discussion of The White Paper on Preparing the Western Cape for the Knowledge Economy. This is important to discuss due to the nature of the study. Through the research results, it will become clear whether this White Paper has any relevance. The research results will follow this section, starting with Cape Town Metro Municipality, followed by the District Municipalities and the Local Municipalities.

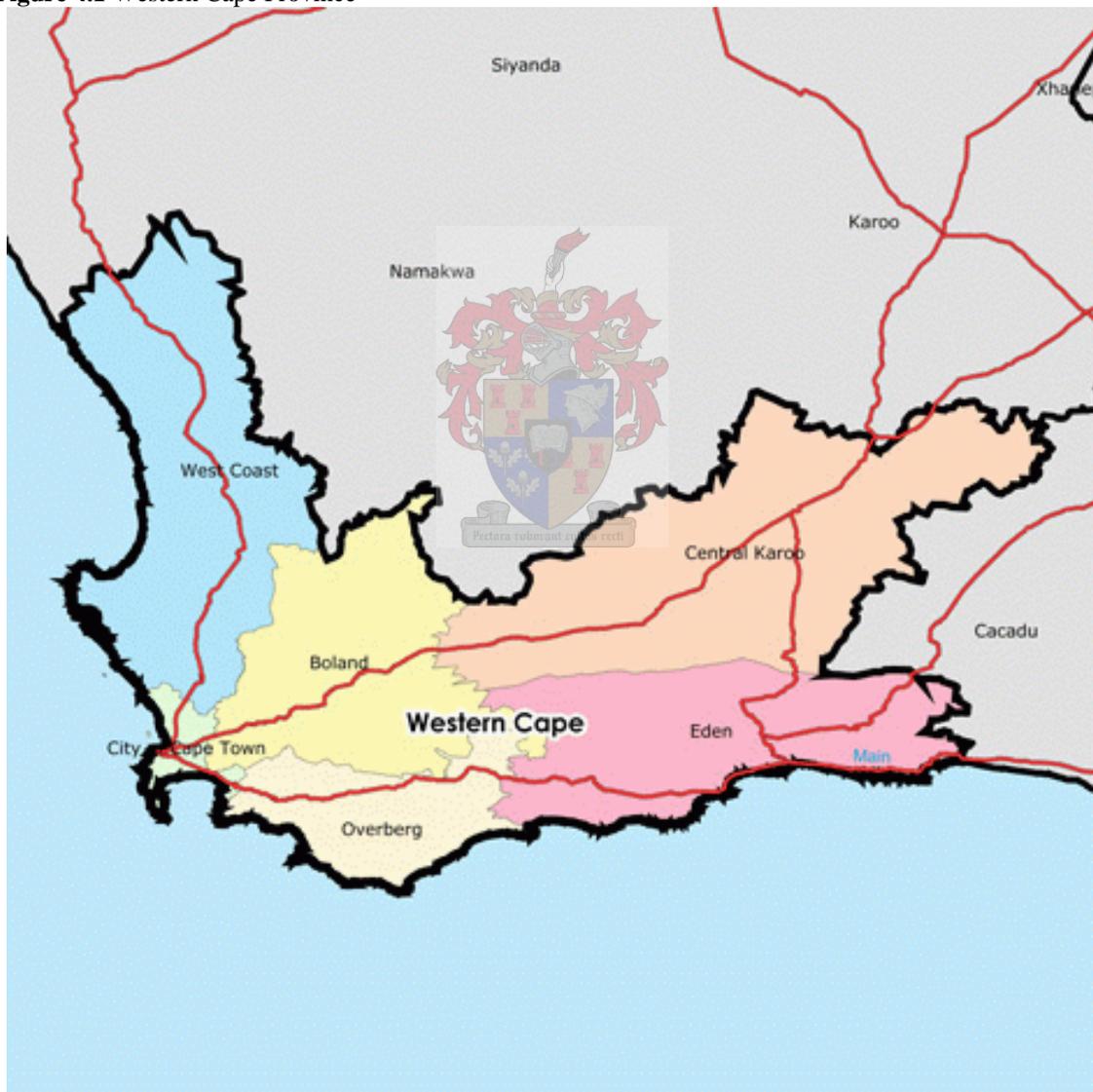
The third section of this chapter is the Presentation of Results. In this section the research results are summarised in a table indicating the municipality and the ICT-related initiatives within that municipality, as well as the distinction made between the types of ICT initiatives. The fourth section discusses the main trends in the research results and conclusions are drawn with regard to answering the research question and meeting the objectives of the study.

The objectives of the study are to examine the Integrated Development Plans (IDPs) of the municipalities in the Western Cape to find out whether they address Information and Communication Technology (ICTs) in their IDPs. Furthermore, the nature of these ICT-related initiatives will also be explored. This will be done according to the theoretical distinction of initiatives in and for the community and, on the other hand, initiatives in and for the personnel and functioning of the municipality. Finally, it will also be illustrated in which municipalities ICT initiatives are mentioned more frequently.

4.2 The Western Cape Province

The Western Cape Province consists of 30 municipalities. These municipalities vary in type and consist of one Metropolitan municipality, five District Municipalities and 24 Local Municipalities. The map below shows the Western Cape Province and the five District Municipalities, namely Boland/Cape Winelands, Eden, Overberg, Central Karoo and West Coast District Municipalities:

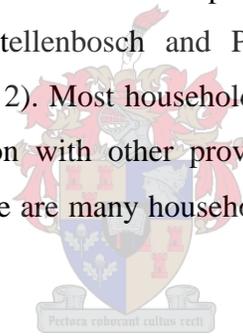
Figure 4.1 Western Cape Province



4.2.1 Background Information on the Western Cape

The capital of the Western Cape is Cape Town, which is also the legislative capital of South Africa. The main languages spoken in the Province is firstly, Afrikaans (55,3%), secondly, isiXhosa (23,7%) and thirdly, English (19,3%). The population of the Western Cape consists of approximately 4 740 981 (mid-year estimates, 2003) people (Pocket Guide to South Africa, 2004: 39). The agricultural sector of the Western Cape contributes over 55% of South Africa's agricultural exports. The Western Cape's share of the national economy grew to 14,2% in 2002. Financial and business services are large contributors to the provincial economy and Information Technology is expected to become an important source of growth (Pocket Guide to South Africa, 2004: 40).

The largest District population is the Boland/Cape Winelands municipal area (DC2), which includes the towns of Stellenbosch and Paarl (Western Cape Municipality Capacity Assessment, 2003/2004: 2). Most households in the Western Cape are situated in urban areas and in comparison with other provinces, access to services is good. However, within each district there are many households still without adequate access to basic services.



The table below shows the population size, number of rural and urban households in each District Municipality of the Western Cape. In addition, services such as water, sanitation, refuse removal and electricity are also included (Western Cape Municipality Capacity Assessment, 2003/2004: 2).

Table 4.1 Western Cape District Municipalities according to population size and households

DC Code	Population	Urban Households (n)	Rural Households (n)	Piped Water (%)	Sanitation (%)	Refuse Removal (%)	Electricity (%)
DC5	60484	11253	3763	98.89	88.57	78.58	83.88
DC4	454923	99555	19758	95.70	83.02	82.92	85.51
DC3	203519	42888	13766	98.80	87.25	80.63	83.74
DC2	629491	104819	44313	98.01	88.11	72.13	87.99
DC1	282672	51329	22115	97.99	87.91	71.31	87.85

Source: Western Cape Municipality Capacity Assessment, 2003/2004: 2

4.2.2 The Western Cape White Paper on the Knowledge Economy

The Western Cape Provincial Government (Department of Economic Affairs, Agriculture and Tourism) published its White Paper on the Western Cape Knowledge Economy in May 2001. The Foreword by Leon Markovitz (Provincial Minister for Finance, Business Promotion and Tourism) stated that "...the time is now right for us to focus our attention on sustained economic development and therefore ultimately on job creation." It is noted in this White Paper that Government is unable to create jobs but that Government can help by creating an environment, in collaboration with the private sector that facilitates job creation and skills development. This will be the task of the Department of Economic Affairs, Agriculture and Tourism.

The White Paper sets out a broad ten-year strategic framework in order to ensure that the Western Cape will be able to compete successfully in the global knowledge economy of the 21st Century. Specific objectives for the province include, firstly, becoming a learning region – effectively acquiring and applying knowledge. Secondly, the ability to successfully compete in the global knowledge economy as well as being effectively linked to South Africa, Africa and the world. Thirdly, the creation of the Western Cape as a leading centre for entrepreneurship and innovation. Finally, establish a "Cape of Good Hope for All," which represents sustainable growth, equitable development, economic empowerment and improved quality of life (White Paper on Knowledge Economy, 2001: vii).

In the context of globalisation, businesses have to be increasingly innovative in terms of gathering and applying knowledge in order to remain competitive. National economic policy frameworks in different countries are becoming more and more similar due to various reasons. As a result of this, regions are becoming more important as centres of economic growth, competitiveness and development. There is much to be learnt from other regions in the world that have entered successfully into the global knowledge economy. The vision of this White Paper is to make the Western Cape "the most successful, innovative and competitive economic region in South Africa, with an enhanced quality of life for all its inhabitants" (White Paper on Knowledge Economy, 2001: x). This vision consists of four related pillars: the Learning Cape, the International Cape, the Enterprising Cape and the Cape of Good Hope for All.

There are a number of provincial policies and initiatives that focus on Knowledge economy and they include the Cape IT Initiative (or CITI), which focuses on marketing and networking, new IT business development, IT skills development and influencing IT policy. The White Paper on the Knowledge Economy is another of the Western Cape's policy and argues that the most important factor in determining competitiveness of countries now is to maximise the use of knowledge. One of the projects resulting from this is the Cape Online Project. The Cape Online Project was launched in order to realise the vision of the province that provides an innovative environment for the development of a knowledge-based economy that promotes growth and quality of life. Finally, Calling the Cape was established to develop and promote Cape Town as South Africa's main world-class place for establishing international and national call centres. Local Policies and Initiatives include Smart City, which is not only concerned with implementing e-government initiatives but also to develop the city, improve democracy and begin to close the digital divide.

4.3 Research Results

This section begins with the results of Cape Town Metro Municipality, followed by the District Municipalities of Boland/Cape Winelands and Eden. The section will end with the Local Municipalities of Witzenberg, Drakenstein, Stellenbosch, Breede Valley, Kannaland, Langeberg, Mossel Bay, Bitou, Knysna, Theewaterskloof, Overstrand, Cape Agulhas, Matzikama and Bergrivier. Maps have been included for the Boland/Cape Winelands and Eden District Municipalities because these are the only District Municipalities examined (for maps of the other three District Municipalities and their Local municipalities, please refer to Appendices 2-4).

4.3.1 Metro Municipality: Cape Town (CT) IDP 2004

The map below shows where this municipality is situated, as well as the areas included in this municipal area. In the Cape Town Metro Municipality, three main strategies, as well as some auxiliary strategies have been identified as being related to ICTs.

Figure 4.2 Cape Town Metro Municipality



The first strategy deals with building competitive advantage (CT IDP, 2004: 25). This strategy aims to ensure that Cape Town retains current business and investment and also develops the ability to attract new investment, skills and wealth generators. The expected

outcome of this strategy includes sustained growth and empowerment in the new strategic knowledge economy sectors (CT IDP, 2004: 25). The growth sectors in which Cape Town already has competitive advantage and also doing well, includes finance, information and communication technology and the tourism sector (CT IDP, 2004: 25). Other sectors that have competitive advantage and need to grow include the oil and gas supply industry, the provision of staff, services and facilities for world-class call centres, as well as medical services and products sector (CT IDP, 2004: 25). The key focus area for this strategy should be strategic investments and skills development to support growth and potential growth sectors (such as ICT and call centres). Implementation of the strategy includes skills development, among other things (CT IDP, 2004: 26). Immediate initiatives refer to ongoing support for existing and new tourism initiatives, as well as the implementation of key sector support initiatives for ICT (CT IDP, 2002: 26).

The second strategy deals with facilitating sustainable job creation for all (CT IDP, 2004: 28). This strategy attempts to integrate sustainable job creation by linking potential growth sectors such as skills development and public works initiatives. One of the main obstacles to economic growth is the discrepancy between skills demand (skilled) and skills supply (unskilled). In order to address this discrepancy, learnerships and internships are considered as an option through employers creating opportunities for workers to acquire work experience (CT IDP, 2004: 28). The successful implementation of this strategy would lead to decreasing levels of unemployment and rising income as workers have improved skills in key economic sectors. Key focus areas are on promoting entrepreneurship and skills partnerships to align secondary, tertiary and vocational training to job needs (CT IDP, 2004: 28). Implementation mechanisms include training with SETAs, learnerships and retention strategies, as well as incentives for skills-linked investment. Immediate initiatives include the development of a city-wide skills and jobs strategy together with the private sector and the City's educational institutions (CT IDP, 2004: 29).

The third strategy involves building cohesive, self-reliant communities (CT IDP, 2004: 30). Implementation mechanisms include a range of inter-agency, multi-pronged

approaches that are coordinated at local level with a focus on major problem areas. Furthermore, support of organisational networks and knowledge-sharing is encouraged. Immediate initiatives include making information accessible through libraries, community centres and digital business centres (CT IDP, 2004: 31).

Other, auxiliary strategies include the City's corporate strategy, as well as job creation, investment, the establishment of contact centres, skills development and the Enterprise Resource Planning Programme (ERP). First, innovation and learning by the municipality aims to ensure that all staff are equipped to implement the new developmental strategy through increased training, enhanced management systems and improved internal communication (CT IDP, 2004: 40).

Second, the City aims to create 100 000 jobs by 2008 in the priority sectors and, by 2014, to halve the level of unemployment. Priority sectors include tourism, call centres and foreign business process outsourcing centres, as well as, ICT (CT IDP, 2004: 47).

Third, by 2008, the City's objective is to increase investment in infrastructure to 2.5% of the Gross Regional Product (GRP), as well as attracting R5 billion in new investment into the priority economic sectors by 2006 (CT IDP, 2004: 48).

Fourth, the establishment of contact centres, which aims to integrate coordination and management of services into a "one-stop" access point, where 80% of day-to-day user needs can be addressed (CT IDP, 2004: 61). The service interface, provisionally named Cape Town Connect aims to make it simple and easy to do business with the City of Cape Town and therefore 40 of these contact centres across the City is planned (CT IDP, 2004: 61).

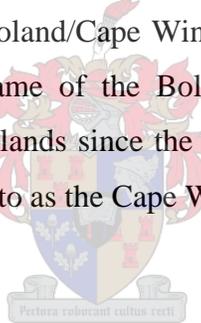
Fifth, human resource development, skills development and education are essential to the attainment of the new growth and development being aimed at (CT IDP, 2004: 48). The skills development strategy is integrated with the national skills development strategy and twelve areas of training have been prioritised within the Skills Development Plan for

2003/2004 (CT IDP, 2004: 64). Information Technology has been identified as one of these priority areas.

Finally, the City of Cape Town is the first local authority in Africa to implement a full-scale Enterprise Resource Planning Programme (ERP) solution and had established the largest local government-sector SAP installation in the world by September 2003 (CT IDP, 2004: 62). An ERP system allows organisations to have a comprehensive and integrated solution to managing financial, revenue, human resources, operations and other services on a single integrated IT system (CT IDP, 2004: 62).

4.3.2 District Municipalities

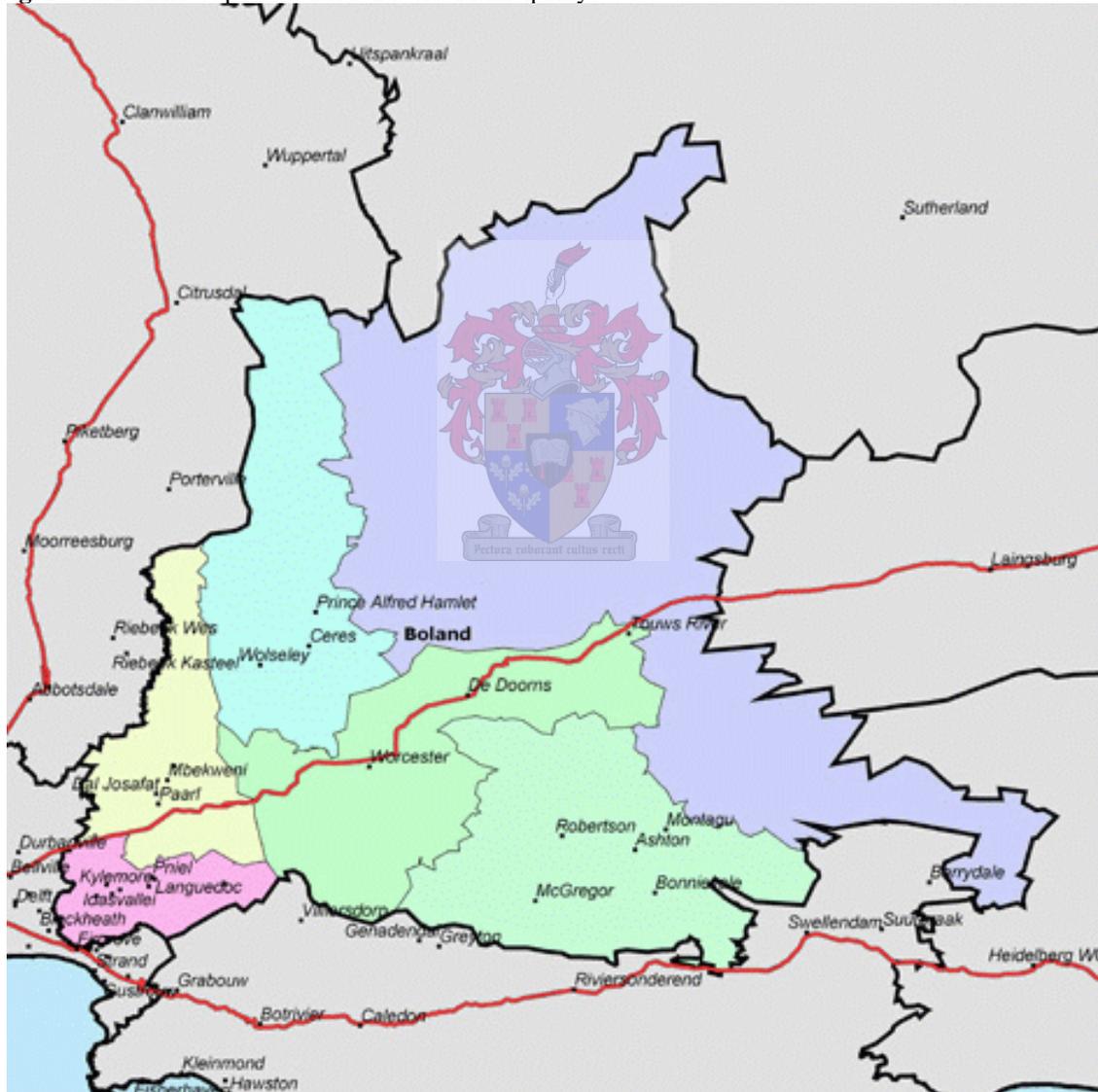
As discussed in Chapter 3 only two of the five district municipalities were studied. These two district municipalities are the Boland/Cape Winelands District Municipality and the Eden District Municipality. The name of the Boland District Municipality has been changed from Boland to Cape Winelands since the 2002 IDP process and therefore this district municipality will be referred to as the Cape Winelands District Municipality.



4.3.2.1 Cape Winelands District Municipality (B/CWDM) 2004 IDP

The Cape Winelands District Municipality refers to its strategies in terms of Action plans. A number of these action plans have to do with ICT, either directly or indirectly. The following map shows the District Management Area, which includes the Local Municipalities of Witzenberg, Drakenstein, Stellenbosch, Breede Valley (all included in the study) and Breede River/Winlands (not included) Local Municipalities.

Figure 4.3 Boland/Cape Winelands District Municipality



In terms of Local Economic Development (LED) there are two Action Plans related to ICTs (B/CWDM IDP, 2004: 15). Firstly, Action Plan 1.3 is Economic Intelligence Management and aims to develop, update and maintain the LED information management system to assist in monitoring performance and trends of firms and sectors in order to inform strategies and interventions (B/CWDM IDP, 2004: 17). The expected output is to have an Annual Business Perception Survey. Secondly, Action Plan 1.5 is Institutional Linkages, which aims to establish the necessary institutional mechanisms and participatory processes to implement the B/CWDM sector strategies within the area (B/CWDM IDP, 2004: 17). The expected output is to establish a Tourism Advisory Council and Business Council.

In terms of Land, Housing and Infrastructure there are two Action Plans related to ICTs, Technical Support Services and GIS, and Infrastructure Projects (B/CWDM IDP, 2004: 18-19). The goal of the Technical Support Services and GIS Action Plan is to provide technical support services to the Department and to the public. The Infrastructure Projects Action Plan aims to ensure that all people in the B/CWDM have access to engineering infrastructure (B/CWDM IDP, 2004: 19).

An Action Plan dealing with Human Resource Management has also been identified. This Plan aims to build a skills base of health staff, health committees, project participants, staff and farm lay health workers within the B/CWDM (B/CWDM IDP, 2004: 23). Therefore this Action Plan focuses on skills development and capacity building within the municipality.

In terms of Public Safety and Protection an Action Plan was identified for compiling a maintenance programme in order to ensure a reliable and effective communication system (B/CWDM IDP, 2004: 24-25).

The Institutional Transformation and Financial Management section contains eleven relevant Action Plans. Firstly, Action Plan 6.4, PIMS (Planning, Implementation and Management Centre), is concerned with developing, updating, maintaining,

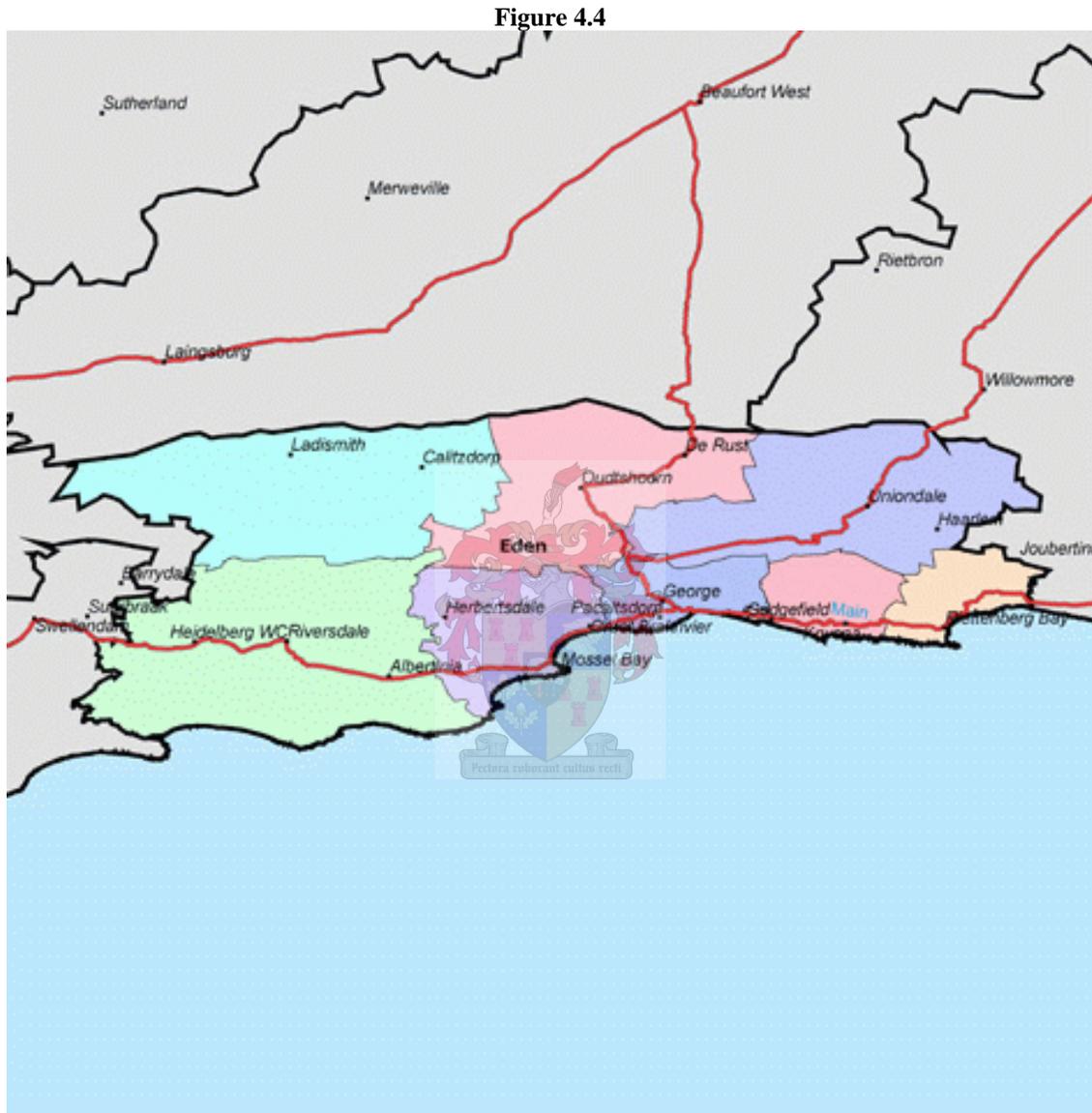
implementing and monitoring PIMS capacity building programmes, as well as coordinating district wide approaches within the IDP and Performance Management Systems (B/CWDM IDP, 2004: 28-29). The expected outcome of this is research, data and IT infrastructure.

Secondly, Action Plan 6.6 is concerned with Administrative and Logistical Support Management. It aims to provide, among other things, operational infrastructure and IT infrastructure (B/CWDM IDP, 2004: 29). Action Plan 6.7 relates to Income and how to maximize income. The expected outcomes are to provide Operational Infrastructure, IT infrastructure, and reliable and accurate information (B/CWDM IDP, 2004: 30). Fourthly, Action Plan 6.8 is concerned with Budgetary Control and Expenditure and, fifthly, Action Plan 6.9 has to do with Budget and Financial Management and Control. Both of these Action plans aim to maintain and operate all expenditure systems effectively and efficiently (B/CWDM IDP, 2004: 30). Action Plan 6.10 is concerned with Administration and Support by developing skills in order to provide administrative support to the Financial Department (B/CWDM IDP, 2004: 31).

Action Plans 6.11 (Information Technology) and 6.12 (Statutory Compliance Management) are both concerned with monitoring computer hardware and software, equipment and legal software and reference resources (B/CWDM IDP, 2004: 31). Action Plan 6.13 has to do with the Internal Auditing and aims to examine and evaluate the economy, effectiveness and efficiency of its activities (B/CWDM IDP, 2004: 31). Finally, Action Plans 6.14 (Intergovernmental and Public Relations) and 6.15 (Monitoring of IDP Delivery) are both concerned with operational infrastructure, media resources and capacity (B/CWDM IDP, 2004: 32).

4.3.2.2 Eden District Municipality (EDM) 2004 IDP

The map below shows the Eden District Municipality, with its eight local municipalities.



Eden DM

In the Eden District Municipality 2002 IDP, eight strategies referred to as “Key Performance Areas” were identified (EDM IDP, 2004: 26). These are: health, welfare, basic services, housing, tourism, economy, infrastructure and sport. For the 2004 IDP

revision process, some issues were added as priority issues. These new priority issues fall under Eden DMA – regional (EDM IDP, 2004: 30).

The strategies relating to ICTs will now be discussed. Firstly, effective services (falling under the Key Performance Area of basic services), which refers to electricity, water and communication (telephones), as well as the investigation into emergency radios for farm labourers (EDM IDP, 2004: 28). Secondly, infrastructure development (under the Key Performance Area of infrastructure) by providing electricity to about 200 farm labourer's houses (EDM IDP, 2004: 29-30). Finally, the improvement of communication structures within the DMA and for communicating information to the broader public on the ground, which forms part of the Eden DMA-Regional Key Performance Area, (EDM IDP, 2004: 30-31).

4.3.3 Local Municipalities

Fourteen Local Municipalities were studied: Witzenberg, Drakenstein, Stellenbosch, Breede Valley, Kannaland, Langeberg, Mossel Bay, Bitou, Knysna, Theewaterskloof, Overstrand, Cape Agulhas, Matzikama and Bergrivier. Each Local Municipality belongs to a larger District Municipality. It will also be indicated to which District Municipality each Local Municipality belongs to. Please refer to Appendices 2-4 for maps of the Local Municipalities within the District Municipal Area Maps that were not included in the above section.

4.3.3.1 Witzenberg IDP 2004

Witzenberg Local Municipality is part of the Cape Winelands District Municipality and the following strategies were identified in the Witzenberg Municipal IDP, namely, housing, land reform and spatial planning, economic development, sustainable services, safety, poverty relief, social upliftment and health, financial stability, a clean environment and heritage, institutional transformation and governance (Witzenberg IDP, 2004: 12). Input from the community also included economic development and job

creation as most important performance objectives. The issues vary from developing industries and business to empowerment. Furthermore, key sectors such as tourism and the SMME sector must be supported (Witzenberg IDP, 2004: 30).

Firstly, a LED Strategy was identified for economic development. Funds budgeted for this strategy amount to R369 000 and the project was to be finalised by January 2005 (Witzenberg IDP, 2004: 30). It is not clear whether this project is related to ICT but it was nevertheless included. A second project that could have bearing on ICT is tourism support, where R220 000 has been budgeted for the 2004/2005 financial year (Witzenberg IDP, 2004: 30).

4.3.3.2 Drakenstein IDP 2004

This Local Municipality is also part of the Cape Winelands District Municipality. The areas identified as priorities for the Drakenstein Municipality include housing, economic development and job creation, social infrastructure and basic services, and community safety (Drakenstein IDP, 2004: 42). Furthermore, institutional development is also considered a priority, including routine services such as governance, financial services, human resources and information technology (Drakenstein IDP, 2004: 43). Other key issues include addressing poverty, unemployment, skills development and partnerships in tourism and marketing (Drakenstein IDP Annexure C, 2004: 6).

The first development strategy includes Local Economic Development (LED), with certain specific projects to be undertaken, for example, development of an industrial park, business hives for SMMEs, communication strategy, a LED help desk, and a Drakenstein municipality website with links to the town and businesses (Drakenstein IDP, 2004: 46). Secondly, there is a need to provide community facilities and infrastructure, such as multi-purpose centres that include arts and craft manufacturing and outlet, as well as skills training (Drakenstein IDP, 2004: 46). Thirdly, ABET and skills training are essential, as well as learnerships. Access to these services is necessary, especially by the rural communities, including the farm labourers and youth (Drakenstein IDP, 2004: 51).

Finally, community communication and public relations are required in order to coordinate and facilitate effective communication and awareness campaigns (Drakenstein IDP, 2004: 55).

4.3.3.3 Stellenbosch IDP 2004

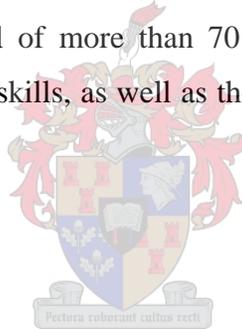
Stellenbosch Local Municipality is also found in the Cape Winelands District Municipality. The focus areas identified as important in the Stellenbosch municipal area include skills development and job creation, poverty eradication and economic empowerment, housing, social development, health care, basic services, optimum use of infrastructure, public safety with the focus on the community, institutional support, and sound financial management (Stellenbosch IDP, 2004: 93).

The first strategy involves library services and the upgrading of the library in one of the municipal areas, Cloetesville (Stellenbosch IDP, 2004: 98). This strategy falls under the broader category of “Community Services” and will require an operating budget of R10 000 for the 2004/2005 financial year. Secondly, communication services (falling under the broader category of “Corporate Services”) involve developing an effective communication system with the community, as well as developing a film office. The total budget for this strategy is R55 000 for the 2004/2005 financial year (Stellenbosch IDP, 2004: 99). Finally, as part of the “Financial Services” department of the municipality, a project involving the purchase, maintenance and replacement of computer systems was identified, with a budget of R1.2 million for the 2004/2005 financial year (Stellenbosch IDP, 2004: 107).

4.3.3.4 Breede Valley IDP 2004

The Breede Valley is also part of the Cape Winelands District Municipality. Strategies identified include organisational communication, an integrated information system, as well as increased training programmes, community development and human resource development (Breede Valley IDP, 2004: 41-42)

Four main initiatives relating to ICT were identified. The first has to do with the tourism sector and involves various tourism-related strategies. What is of importance for this study is the development and maintenance of a Breede Valley Tourism website. A total of R40 000 has been budgeted for this website, for the 2004-2005/2006 financial period (Breede Valley IDP, 2004: 63). The second strategy is entrepreneurship and training for SMME and falls under the “Library” section. R2500 has been budgeted for this project (Breede Valley IDP, 2004: 66). Thirdly, the Walala Wasala Project involves the capacity building of women and unemployed youth. It is administered by the Economic and Social Development section of the Breede Valley Municipality (Breede Valley IDP, 2004: 81). Candidates were trained in computer and business skills. The total duration of the project was three months, ending in September 2002. During this time, 80 people were trained in computer skills and 200 were trained in business skills. Finally, the rural computer skills project dealt with capacity building for the municipal workers (Breede Valley IDP, 2004: 82). Through this strategy a total of more than 70 people were trained in computer, business and project management skills, as well as the provision of individual mentoring and support.



4.3.3.5 Kannaland IDP 2004

Kannaland Local Municipality is part of Eden District Municipality and two main goals were identified. Firstly, to establish a self-supporting and growing economy in order to provide sustainable job opportunities (Kannaland IDP, 2004: 51). This involves the creation of job opportunities, the support, development and extension of the agricultural sector, the support and facilitation of industrial development in the agricultural sector, development and support of small business entrepreneurs, and the development and support of the tourism industry (Kannaland IDP, 2004: 51). Second, is to develop and empower existing human resources within a safe society (Kannaland IDP, 2004: 56). This includes the availability and accessibility of school education, increase literacy levels; develop skills and entrepreneurship, as well as optimising the institutional capacity of personnel at the municipality (Kannaland IDP, 2004: 56).

One strategy relating to ICT was identified. This is a life and business skills training programme. It aims to build capacity and develop local human resources by introducing training programmes in urban as well as rural areas (Kannaland IDP, 2004: 80). The project is initially expected to run for six months and the capital and operational costs are described as “minimal, if any” (Kannaland IDP, 2004: 80).

4.3.3.6 Langeberg IDP 2004

The Langeberg Local Municipality is also part of the Eden District Municipality. The development strategies for the Langeberg municipality includes basic services and infrastructure, economic development, institutional capacity development, environment, social welfare, health and safety, transport, spatial development, as well as land and housing (Langeberg IDP, 2004: 16). What is of importance here is the emphasis placed on the tourism sector and job creation in order to bring about economic development (Langeberg IDP, 2004: 44).



4.3.3.7 Mossel Bay IDP 2004

Mossel Bay Local Municipality also belongs to Eden District Municipality and the key development principles underlying the Mossel Bay IDP include prioritising basic needs, community participation, creating liveable and compact urban settlements, affordability and sustainability in service provision, poverty alleviation, gender equity, environmental sustainability and economic growth, as well as job creation (Mossel Bay IDP, 2004: 13). Key strategies involve service delivery and community participation.

4.3.3.8 Bitou IDP 2004

Bitou, formerly known as Plettenberg Bay Local Municipality is part of Eden District Municipality. The strategies for the Bitou Municipality are the implementation of participative and accountable developmental local governance, ensuring sustainability in terms of development and the environment, identification of suitable land for settlement,

as well as facilitating housing delivery (Bitou IDP Annexure A, 2004: 1). Other key issues identified are the upgrading of community and educational facilities, and services in order to focus on community development through educational centres, such as Adult-Based Education and Training (ABET) centres and skills development centres for the youth (Bitou IDP Annexure C, 2004: 7). Furthermore, the maintenance of existing telephone services as well as the development of a satellite broadcasting station, are key components of basic services to residents (Bitou IDP Annexure C, 2004: 3).

4.3.3.9 Knysna IDP 2004

Knysna Local Municipality belongs to Eden District Municipality and seven strategic objectives were identified. First, Knysna strives to create a community based on inclusiveness. Second, a sound economy is very important with strong tourism and development sectors (Knysna IDP, 2004: 26). Third, to protect and use natural resources sustainably, as the environment is Knysna's biggest asset. Fourth, good municipal services, such as roads, water, sanitation and electricity are very important for retaining investors and offering a good quality of life for residents and visitors (Knysna IDP, 2004: 26). Fifth is the investment of public funds and good management of expenditure to encourage financial support from the private sector. Sixth is the recognition of the importance of people and of putting people first (Knysna IDP, 2004: 26). Finally, a common plan and commitment is needed by the whole community in order to build a good foundation for the future.

4.3.3.10 Theewaterskloof IDP 2004

Theewaterskloof Local Municipality is part of the Overberg District Municipality. Four main categories of key strategies were identified by the Theewaterskloof municipality. The first issue is concerned with human and social development and, secondly, basic services and infrastructure development (Theewaterskloof IDP, 2004: 54). Third is economic development and, finally, environmental conservation.

Two additional strategies were identified. They both relate to ICT, namely effective communication and information strategies. Communication is an essential part in the functioning of a healthy municipality (Theewaterskloof IDP, 2004: 50). The Theewaterskloof Municipality is therefore in need of developing an effective communication strategy in order to facilitate in improving internal and external communications. Secondly, or in conjunction with the communication strategy, is an effective information strategy. This strategy will focus more on disseminating information internally as well as externally to various role players (Theewaterskloof IDP, 2004: 52). Adult literacy programmes are also very important, especially because a large number of illiterate people live in rural areas (Theewaterskloof IDP, 2004: 56). ABET programmes must be extended to these people living in remote rural areas.

First is the training of staff, which consists of conducting a training needs analysis, appointing trainers and conducting the actual training (Theewaterskloof IDP, 2004: 56). Secondly, the upgrading of the two-way radio network has also been identified as a project. It will involve conducting a proper investigation and evaluation of options, testing the chosen system and implementing an effective two-way communication system (Theewaterskloof IDP, 2004: 56). Furthermore, in terms of community services, R20 000 and R450 000, respectively, have been set aside for libraries (Theewaterskloof IDP Budgetary Annexure, 2004).

4.3.3.11 Overstrand IDP 2004

Overstrand Local Municipality also belongs to the Overberg District Municipality. Firstly, the communication strategy of the municipality must be improved. According to the IDP, the current strategy is too fragmented internally and therefore the municipality is in need of a comprehensive communication strategy (Overstrand IDP, 2004: 27). Functional strategies with regard to communication involve empowering the frontline staff, facilitating formal and informal communication processes and the formation of partnerships with stakeholders. Secondly, the library services of the municipality also need attention. The main priority is to provide residents and students of the municipality

with suitable leisure as well as educational reading material (Overstrand IDP, 2004: 37). Functional strategies include assisting learners in developing research skills, increase literacy levels in the community, act as an educational resource centre, and extend the library service to include a library business corner which is popular among students and emerging entrepreneurs (Overstrand IDP, 2004: 37).

The most relevant strategy includes the upgrading of library services. This involves providing relevant information, relevant reference books, promotion of reading, accessibility of libraries cultural activities and reading circles in the library (Overstrand IDP, 2004: 78).

4.3.3.12 Cape Agulhas IDP 2004

Cape Agulhas Local Municipality also forms part of the Overberg District Municipality. These include four main focus areas, namely, basic services, economic development, financial management and institutional development. One of the emphasised strategies includes human development and the promotion of human wellbeing. This involves the education of the community in terms of training, life skills training, HIV/AIDS awareness and role of local authorities (Cape Agulhas IDP, 2004: 13). This should be complemented with the implementation of an effective communication system, both internally and externally (Cape Agulhas IDP, 2004: 13).

Three strategies relating to ICT were identified. Firstly, the expansion of their computer room in order to upgrade the computer network will take place. This will lead to the improved functioning of the computer network and thus also the improvement of basic services (Cape Agulhas IDP, 2004: 17). A total of R150 000 was budgeted for this project for the 2004 financial year. The second strategy is the upgrading of radio networks in order to improve radio communication between departments of the municipality. This will lead to improved communication and thus also the improvement of basic services (Cape Agulhas IDP, 2004: 36). The budget for this project amounts to R20 000 in total. Finally, the development of a public participation policy is a strategy

aimed at institutional development, whereby by transparency and accountability is increased, was well as public participation and access to information (Cape Agulhas IDP, 2004: 43). The total budget for this project is R300 000 and it is expected to be completed in the second half of 2005.

4.3.3.13 Matzikama IDP 2004

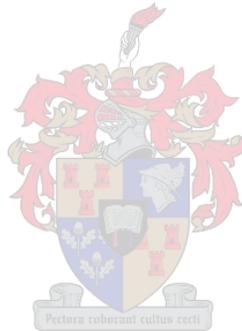
The Matzikama Local Municipality is part of the West Coast District Municipality and the first strategy deals with cooperative government, which includes institutional capacity, expansion of community involvement, identification of alternative sources of income, and making use of technology as a means to enable more effective service delivery and good governance (Matzikama IDP, 2004: 42-43). The second strategy is concerned with human well-being, which includes poverty reduction and job creation, housing, health care and sport facilities (Matzikama IDP, 2004: 44-46). The third strategy involves human resource development, which includes training facilities and the development of youth (Matzikama IDP, 2004: 46). Fourth, the economy, which includes strategies such as understanding and reinforcing the district economy, LED, marketing of Matzikama tourism and investment (Matzikama IDP, 2004: 46-47). Other priority areas include infrastructure, urban areas and environment, as well as general safety (Matzikama IDP, 2004: 47-48).

The Municipality recognises that, firstly, information management is very important due to good strategies being grounded in good information. Therefore technology such as GIS is very important in order to obtain information on the number of erven, provision of services and housing and, also, payment of accounts (Matzikama IDP, 2004: 56). It is also suggested that a study be undertaken to ascertain how cost-effective the application of GIS with regard to gathering meaningful IDP-related information is. The second project description is about developing a website for the Matzikama Municipality. An amount of R20 000 has been budgeted for this project (Matzikama IDP, 2004: 60).

4.3.3.14 Bergrivier IDP 2004

The Bergrivier Local Municipality is also part of the West Coast District Municipality. Four main objectives have been formulated for the Bergrivier Municipality. They include economic development, social development, the balanced development of natural and built environment, and the promotion of institutional development (Bergrivier IDP, 2004: 42).

Strategies with the most relevance to ICT are concerned with economic development. This strategy involves capacity building within the municipality and the promotion of entrepreneurship, as well as the identification of potential niche markets (Bergrivier IDP, 2004: 44).



4.4 Presentation of Results

The following tables are summaries of the above research results. Each table consists of the particular municipality and the identified ICT-related initiatives, differentiating between initiatives within the community and within the municipality.

Table 4.2 Cape Town Metro City

Cape Town Metro City	ICT-related initiatives	
	In Municipality	In Community
	1. Corporate Strategy: capacity building – ensure all staff are trained to improve management and internal communications	1. Competitive Advantage: investments, skills development in new knowledge economy sectors
	2. ERP: Enterprise, Resource and Planning programme – to integrate different services into one	2. Facilitating sustainable job creation: linking potential growth sectors – skills demand and supply and entrepreneurship
		3. Cohesive, self-reliant communities: knowledge sharing through libraries, community and business centres
		4. Create 100 000 jobs in priority sectors, e.g. tourism, call centres and ICT by 2008
		5. Increase investment in infrastructure to 2.5% of GRP by 2008 and attract R5 billion in new investment into the priority sectors
		6. Establish contact centres – “one-stop” access points – for service delivery
		7. Human resource development, skills development and education essential to attaining new growth and development, information technology, especially, has been identified as a priority area for skills development

Table 4.3 Boland/Cape Winelands District Municipality

Boland/Cape Winelands District Municipality (DC2)	ICT-related initiatives	
	In Municipality	In Community
	1. Economic Intelligence Management: information management system on LED – Annual Business Perception Survey	1. Infrastructure Projects: ensure access to infrastructure for community
2. Institutional Links: to implement development strategies – establish a Tourism Advisory Council and Business Council	2. Tourism Advisory Council and Business Council	
3. Technical support services and GIS	3. Create 325 permanent jobs, 667 short-term jobs, 50 SMMEs, 25 LED learnerships	
4. Human Resource Development of health staff: skills development and capacity building of municipal workers		
5. Maintenance programme: ensure reliable and effective communication system		
6. PIMS: Planning, Implementation and Management Centre for research, data and IT infrastructure		
7. Administrative and logistical support management: operational and IT infrastructure		
8. Budgetary Control and Expenditure, and Budget and Financial management		
9. Administration and support: skills development for administrative support to Financial department		
10. IT and statutory compliance: computer hardware and software		
11. Internal auditing		
12. Intergovernmental and public relations and monitoring of IDP delivery: concerned with operational infrastructure, media resources and capacity		

Table 4.4 Eden District Municipality

Eden District Municipality (DC4)	ICT-related initiatives	
	In Municipality	In Community
	1. Improve communication structures within the DM	1. Effective services: electricity and communications (telephones)
		2. Infrastructure development: electricity to 200 farm labourer's houses
		3. Improve for communication with the community
		4. Uniondale Integrated Empowerment Projects: empowerment through provision of training, administrative skills, infrastructure and mentorship. Employment created for 58-60 permanent positions, 45 temporary and 144 apprenticeships at Belhar Community College

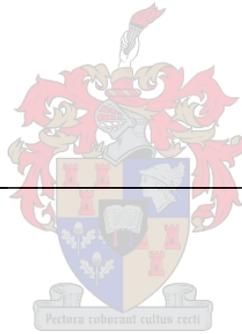


Table 4.5 Boland/Cape Winelands District Municipality: Local Municipalities

District Municipality	Local Municipality	ICT-related initiatives	
		In Municipality	In Community
Boland/Cape Winelands	1. Witzenberg (WCO22)		1. Tourism Support: economic development and job creation
	2. Drakenstein (WCO23)	1. Communication strategy and municipal website with links to the town and businesses	1. LED: development of industrial park and business hives for SMME, LED help desk
			2. Provision of facilities and infrastructure: multipurpose centres
			3. Skills training, ABET and learnerships are essential – access to these services are necessary, especially for the rural communities
			4. Communication with community – coordinate and facilitate effective communication and awareness campaigns
	3. Stellenbosch (WCO24)	1. Corporate services: developing effective communication systems within municipality	1. Developing a communications system with community – developing a film office
		2. Financial services: purchase, maintenance and replacement of computer systems	2. Skills development and job creation, basic services
			3. Upgrading the library services
	4. Breede Valley (WCO25)	1. Organisational communications: integrated information system	1. Community development
		2. Human resource development and training	2. Tourism-related strategies
		3. Tourism: maintenance of a website	3. Library services: entrepreneurship and training for SMME
			4. Walala Wasala Project: capacity building through training in computer and business skills

Table 4.6 Eden and Overberg District Municipality: Local Municipalities

District Municipality	Local Municipality	ICT-related initiatives	
		In Municipality	In Community
Eden	5. Kannaland (WCO41)	1. Optimising institutional capacity of personnel	1. Development and support of small business entrepreneurs and tourism industry
			2. Development and empowerment of human resources: education, increase literacy levels, develop skills and entrepreneurship
			3. Life and business skills training
	6. Langeberg (WCO42)	1. Institutional capacity development	1. Economic development: tourism sector and job creation
			2. Basic services and infrastructure
	7. Mossel Bay (WCO43)		1. Affordable and sustainable service provision, job creation
	8. Bitou (WCO47)	1. Implementation of participative and accountable developmental local governance	1. Upgrading of community and educational facilities, as well as upgrading of services in order to focus on community development through educational centres, Adult-Based Education and Training (ABET) centres, and skills development centres for the youth
			2. Maintenance of existing telephone services and development of a satellite broadcasting stations: basic service delivery
	9. Knysna (WCO48)	1. Good municipal services, such as electricity is important for retaining investors and good quality of life for residents	1. Create sound economy with strong tourism and development sectors
2. Putting people first			
2. Training municipal staff	2. Training municipal staff	2. Adult literacy programmes, extend ABET programmes to people in remote rural areas	
Overberg	10. Theewaterskloof (WCO31)	1. Effective Communication and Information strategies, improve internal/ external communication	
		1. Dissemination of information internally and externally	

Table 4.7 Overberg District Municipality: Local Municipalities

District Municipality	Local Municipality	ICT-related initiatives	
		In Municipality	In Community
Overberg	11. Overstrand (WCO32)	1. Improvement of communication strategy of municipality: empowering frontline staff, facilitation of formal and informal communications processes	1. Library services need attention: provision of sustainable leisure and educational reading material. Functional strategies: assisting learners in developing research skills, increase literacy levels, act as an educational resource centre, extend library services to include a library business corner for students and entrepreneurs
	12. Cape Agulhas (WCO33)	1. Effective communication system – externally and internally	1. Human development and promotion of human wellbeing – educating the community through training, life skills, HIV/AIDS awareness and the role of local authorities
		2. Expansion of computer room – upgrading computer network	2. Improved computer networks lead to improved basic services
		3. Upgrading radio networks for improved radio communication between departments	
	4. Public participation policy – institutional development to increase transparency and accountability		
West Coast	13. Matzikama (WCO11)	1. Cooperating government: institutional capacity, extension of community involvement, identification of alternative sources of income and using technology for more effective service delivery and governance	1. Human wellbeing: poverty reduction and job creation
		2. The Economy: LED, marketing the Matzikama for tourism and investment	2. Human Resource development: training and development of youth
		3. Information management – good strategies grounded in good information, GIS	
		4. Development of a website	
	14. Bergrivier (WCO13)	1. Capacity building	1. Promotion of entrepreneurship and identifying niche markets

4.5 Main trends emerging from the research results

In the Cape Town Metro Municipality, the main ICT initiatives are focused more in the community than in the municipality. In the Metro Municipality's IDP, the onset of the "Knowledge Economy" is acknowledged. The City of Cape Town has also recognised the importance of formulating strategies that facilitate the changes that this knowledge economy will bring. For instance, mention is made of "competitive advantage". This recognises the need to establish the City of Cape Town as a hub of development for investments and skills relevant to the knowledge economy sectors.

The City's IDP also emphasises the importance of skills development in specific sectors. There is a higher demand for skilled labour than for unskilled labour and if workers become more skilled, this improves their competitive advantage over others. What is important is that skills should be developed in line with the sectors that are currently the faster expanding sectors because this is where the job opportunities will be found. These expanding sectors include tourism, call centres, financial sectors and the ICT sectors. Cape Town is an emerging leader in South Africa in the knowledge economy and associated sectors, therefore people need to be trained in appropriate skills.



It seems there is awareness in the IDP of the changing global market and that Cape Town is attempting to address this as a priority issue. The promotion of entrepreneurship and knowledge sharing in communities, as well as accessibility to information through libraries, community centres and business centres are a few of the themes that are also included in the City's IDP. The need for investment in infrastructure is also recognised, as well as the need for "one-stop" access points for the improvement of service delivery.

Strategies focusing on the municipality include institutional development and capacity building among personnel to improve management and internal communications. Furthermore, the Enterprise, Resource and Planning programme has also been adopted by the City in order to integrate different services into one. This leads to improved coordination between departments within the municipality.

It seems the City's IDP has embraced the idea of the knowledge economy and formulated explicit strategies accordingly. The two District Municipalities, on the other hand, seem mixed in their approaches to the knowledge economy. The Cape Winelands District Municipality incorporates the idea of ICTs insofar as they add value to the day-to-day running of the Municipality. These strategies are thus more focused within the municipality. However the Eden District Municipality has more focus within the community.

Most of the strategies in the Cape Winelands District Municipal IDPs are concerned with building institutional capacity. Strategies such as Economic Intelligence Management, which will enable the Municipality to conduct an annual business survey is one of the information management strategies on Local Economic Development used to advise the Municipality on future directions to take. Creating institutional links is another strategy, which aims to implement development strategies by establishing a Tourism Advisory Council and Business Council. Other institutional strategies are concerned with using ICT as a tool to bring about increased capacity, which will lead to improved communication and information systems that can be used by the municipality to provide improved services and infrastructure to the communities. It is believed equipping municipalities with the capabilities to deliver efficient services will only benefit community development.

Strategies identified in the Cape Winelands IDP as focused within the community, include access to infrastructure for the community, the creation of Tourism Advisory and Business Councils and the creation of jobs and learnerships.

In the Eden District Municipal IDP, the focus is on effective services, such as electricity and telephones, and infrastructure development within the community. Furthermore, the Uniondale Integrated Empowerment Project aims to empower the community through providing, infrastructure, mentorships and training in administrative skills. The Eden District Municipal IDP contains one strategy aimed at improving communication structures within the District Municipality.

Neither of the two District Municipalities mentioned strategies that directly refer to the knowledge economy or the emerging ICT sector in South Africa. It appears developing institutional capacity is very important, as well as establishing information and communication systems that can facilitate communication and planning within the District Municipalities. Indirectly, these strategies are definitely related to ICTs but not with the explicit intention of becoming part of the emerging knowledge economy. They are rather necessary for institutional strengthening.

Much like the District Municipalities, the Local Municipalities have not explicitly discussed strategies for the knowledge economy. There are a few main themes that have emerged from the Local Municipal IDPs. These will now be discussed, beginning with the strategies focused within the community.

Firstly, tourism is a very widely used strategy for economic development. Tourism is mentioned in the Witzenberg, Breede Valley, Kannaland, Langeberg and Knysna IDPs. There seems to be a significant reliance on this industry to effect development in these regions. Second, there also seems to be a need for strategies facilitating communication between the municipality and the community. This strategy is included in the Stellenbosch, Drakenstein, Theewaterskloof and Cape Agulhas IDPs. Third, the Stellenbosch, Breede Valley, Overstrand and Theewaterskloof municipalities all include the upgrading of the library services in their IDPs. Fourth, Cape Agulhas, Stellenbosch, Langeberg, Mossel Bay and Bitou Local Municipalities include the provision of sustainable and affordable services to the community. Fifth, is training in computer and business skills which is included in the Overstrand and Bergrivier IDPs. Sixth, Kannaland, Overstrand and Stellenbosch municipalities include increasing education and literacy levels in their IDPs. Other strategies include the development and support of small businesses and entrepreneurs (Kannaland and Bergrivier), life skills training (Cape Agulhas and Kannaland), the establishment of multipurpose centres for education and training (Bitou and Matzikama) and, finally, providing access to ABET (Adult-Based Education and Training) and learnerships, especially to rural communities (Bitou and Theewaterskloof).

In terms of strategies focused within the municipality, the following broad themes were identified. The first strategy is to develop an effective communication system/strategy within the municipality. This is included in the Drakenstein, Stellenbosch, Breede Valley, Theewaterskloof, Overstrand and Cape Agulhas municipal IDPs. Secondly, human resource training and capacity building within the municipality is also included in many Local Municipal IDPs (Breede Valley, Kannaland, Langeberg, Theewaterskloof and Matzikama). Thirdly, improved public participation is included in the Bitou, Cape Agulhas, Matzikama and Bergrivier municipal IDPs. Fourthly, the maintenance of computer systems and networks is included in the IDPs of Stellenbosch and Cape Agulhas. The fifth identified strategy is included in the Drakenstein, Breede Valley and Matzikama IDPs and focused on the development and maintenance of a website. Finally, good municipal services and investment of public funds, together with information management, such as the use of Geographic Information Systems (or GIS) for obtaining accurate information about municipal areas is included in the Knysna and Matzikama IDPs.

It can be seen from the above discussion that the City of Cape Town Metro Municipality is the only municipality that explicitly refers to the knowledge economy and the potential growth sectors it brings about. The District Municipalities, much like the Local Municipalities, have included ICT-related initiatives much more indirectly in their IDPs.

In conclusion, municipalities have included ICT-related initiatives in their IDPs, although the extent to which this has taken place varies between the municipalities. For instance, The City of Cape Town has included ICT initiatives to a much larger extent than District or Local Municipalities. The nature of the ICT initiatives in the municipal IDPs is a mixture of strategies focusing on communities and strategies focusing on municipalities.

Chapter 5

Conclusions and Recommendations

5.1 Introduction

This chapter begins with a discussion of the three types of municipalities, namely, metro, district and local. The research results of the study are discussed in relation to broader themes, as discussed in the beginning of this study. It is apparent that the Metro municipality has included ICT initiatives to a much greater extent than the district and local municipalities. This occurrence is discussed in terms of a variety of factors, such as skills training, employment, e-governance, etc. Recommendations regarding the role of ICT in IDPs will follow at three levels: research level, policy level and local government level.

5.2 Situating the Results

It seems the Metropolitan Municipality has included ICT-related initiatives in its IDP to a large extent which is evident in the resulting strategies. Explicit strategies, such as Competitive Advantage, are direct in their purpose, which is to ensure the City of Cape Town develops into a competitive city in the knowledge economy. This strategy includes developing skills for specific emerging sectors. The City IDP has recognised the need to emphasise that it is not sufficient only to develop skills and capacity in communities but that the nature of these skills also needs to be addressed. In this IDP mention is also made of a skills demand and supply. In the new emerging sectors, such as the call centre industry, the need arises for specific skills. Therefore skills development approaches and strategies must recognise this change when considering training and educating communities. In other words, this municipality aims to anticipate the changing nature of employment sectors in order to align skills development programmes with this changing nature. This changing nature is relevant not only to the new emerging sectors but also to older, more established sectors such as agriculture. There are so many new technological developments in this field, such as drought-resistant crops, that can have a huge effect on the economy of a country. But governments, local government especially in the South

African context, have to anticipate these changes and plan to meet these changing development needs accordingly.

Another strategy that links up with the above is the creation of jobs that are in line with the potential growth sectors. The Metro Municipality has recognised the need to include this as a strategy. This will mean the jobs that are created have to be created within certain, growing sectors. Entrepreneurship becomes a very important concept because the new emerging sectors are very conducive to entrepreneurship. Thus skills development programmes must recognise the need for comprehensive entrepreneurship training, which may lead to increased job creation, not only by the government but also by the private sector. The District and Local Municipal IDPs also include job creation and entrepreneurship as important strategies. This is manifested in strategies such as training the community in business and computer skills, the development and support of small business and entrepreneurs and the establishment of multipurpose centres for education and training. In particular, the need for Adult-Based Education and Training and learnerships is identified in these IDPs.

Finally, the City IDP also recognised the need for creating cohesive and self-reliant communities. This relies on knowledge sharing systems that use existing infrastructure and some new infrastructure. Library services are also frequently included in the Local Municipal IDPs. A key here is the use of libraries. Libraries potentially play a pivotal role as access points in communities to information. Libraries also have the potential of becoming multifunctional centres, where computer skills training and business training can take place. The idea is to use the existing infrastructure to transform to the knowledge economy.

The City IDP also recognises the role ICTs can play in effective delivery of services. With the use of ICTs, 'one-stop' shops can be realised where various services can be delivered at one access point, whether this be a physical point or a cyber point. ICTs thus have the potential of playing a huge role in governance. E-governance can take place, and is already taking place through the use of technology. For instance, the creation of

government websites where information on government policies, services, speeches, news and so on is available to the public. The use of the new technologies is not only beneficial to the public but also for government. This technology has major implications for improving municipal functioning by employing various systems, such as the Enterprise, Resource and Planning programme used by the City Municipality, which aims to integrate various services to improve interdepartmental coordination. Another technological application is the Geographic Information System (GIS), which facilitates the municipality in providing relevant and accurate information about the municipal area. If utilised correctly, this information can be used to formulate successful strategies that are relevant to community needs.

Many of the ICT-related initiatives identified in the Local Municipalities were concerned with building institutional capacity. This emphasises the importance of developing relevant skills for the knowledge economy. Governments in this knowledge economy need highly skilled people who are equipped for delivering services in this new way. Without the necessary skills and knowledge, using ICT applications for service delivery and development is not possible. As mentioned before, the application of technology to gather important information must be utilised correctly by the municipalities in order for them to implement and evaluate strategies. If government officials do not have knowledge regarding the success or failure of strategies, it becomes impossible for them to bring about poverty alleviation, development and empowerment in poor communities.

With these new technological advances and applications of technology, highly proficient people are required in order to gain the most out of these ICTs. In municipalities this includes developing human resources, such as relevant skills for the municipal workers. In terms of the community, educational levels have to be increased as well as the literacy levels. The use of ICTs can be applied to many advanced functions but if the community is illiterate, these technologies mean nothing. This raises questions surrounding the successful adoption of ICTs for development purposes. Before ICTs can be applied for development purposes, communities and municipalities have to be prepared for this. A strong foundation in basic skills is required. As already mentioned, basic education

becomes important because the new emerging sectors rely on literate people to take full advantage of the opportunities available with the ICT sector.

A concerning observation is that in general neither the District Municipalities, nor the Local Municipalities have explicitly discussed the changing nature of the South African economy. Many of these municipalities are still relying on older industries such as manufacturing and agriculture. This is warranted in certain areas where agriculture, for instance, constitutes the main economic activity. This does not mean that the knowledge economy is lost to these regions. As mentioned before, the world wide use of biotechnology in agriculture has increased on a massive scale over the past few years. This becomes a problem in South Africa when producers can no longer compete with globally cheaper products due to higher levels of technological innovation. This needs to be addressed in the IDPs of these municipalities because it is a reality that is bearing down on South Africa.

Many of the local municipalities rely heavily on the tourism industry to effect economic development. Although this is justified due to the Western Cape's natural beauty and many tourist opportunities that exist but these municipalities must be careful of an over-reliance on the tourism industry. This simply means focussing too much on one aspect of local economic development could lead to missing many other opportunities that may arise in different sectors. At some point, if not already, the tourism sector will become saturated in terms of providing jobs and development opportunities for communities. These limitations must be recognised and included in planning and policy documents such as the IDPs. There exists a need, particularly, in the Local Municipalities to identify emerging sectors in their specific areas.

A significant difference exists between the Metro Municipality and the District and Local Municipalities. One explanation for this could be related to a rural-urban divide. The primary sectors in the Local Municipalities are still predominantly agricultural and therefore the need for identifying and addressing the knowledge economy is not as imminent as in the Metro Municipality. The economic nature of the Metro Municipality

has also transformed and new emerging sectors are being identified. These emerging sectors are in need of policy directives that will supply sufficiently qualified personnel and relevant infrastructure. This has not taken place on a broad scale in the Local Municipalities and therefore the knowledge economy has not been addressed in their IDPs to the extent of the Metro Municipal IDP. The danger exists of a digital divide forming between the urban and more rural municipalities. This further divide between rural and urban could result in even more increases in migration, as people move away from shrinking rural markets and a perceived expansion of job opportunities in the emerging sectors in the City.

In conclusion, whereas the Metro City IDP recognises the onset of the digital economy and its implications, the District and Local Municipalities have not.

5.3 Recommendations

Recommendations will be made at three levels, at research level, policy level and at local government level.

First, at a research level, more research is required on the optimal use of ICT in service delivery by local municipalities. There are many possible ICT applications for service delivery. These could prove very useful in delivering cheaper, accessible and effective services. This is a very worthy direction of study. Another possibility, related to the first, is effective e-governance in South Africa. This study would be interesting for exploring the possibilities for governance with the use of ICTs. This includes service delivery, as in the first possibility. Furthermore, the identification and examination of case studies relating to ICT initiatives in communities. This could lead to best practice examples where ICTs have successfully been used to bring about development in communities. Finally, a study could be undertaken to establish what types of existing infrastructure and services could be transformed to become more “ICT-friendly”, such as the library services.

Second, at a policy level, I recommend that ICT initiatives be featured more prominently in the municipal IDPs. For instance, a whole section needs to be included in every IDP, from Metro to Local, where possible applications of ICT for development are identified. This section should also include identifying specific emerging sectors that can be developed as ICT-related sectors, as well as a skills development plan that addresses the skills demand and supply aspects of that specific municipality. This should also be accompanied by a skills development strategy which sets out broad goals in terms of training and capacity building in the ICT-sector.

Finally, at municipal level, many municipalities, especially local municipalities, do not possess the capacity to formulate such policy. Although much has been done to encourage good local governance and provide support in formulation, implementation and evaluation of strategies, such as the PIMs Centres, the establishment of the South African Local Government Association, the VUNA Awards for service excellence among municipalities and various guidelines and implementation manuals, much still needs to be done to increase the impact of local government on communities. There are inherent problems in the municipal system and it is recommended that these be re-evaluated in order to find the core problems currently plaguing many municipalities in South Africa.



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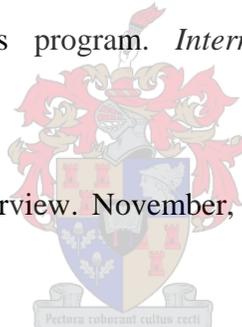
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Cape Town Metro Municipality Integrated Development Plan 2004

Cape Winelands District Municipality Integrated Development Plan 2004

Drakenstein Local Municipality Integrated Development Plan 2004

Eden District Municipality Integrated Development Plan 2004

Kannaland Local Municipality Integrated Development Plan 2004

Knysna Local Municipality Integrated Development Plan 2004

Langeberg Local Municipality Integrated Development Plan 2004

Matzikama Local Municipality Integrated Development Plan 2004

Mossel Bay Local Municipality Integrated Development Plan 2004

Overstrand Local Municipality Integrated Development Plan 2004

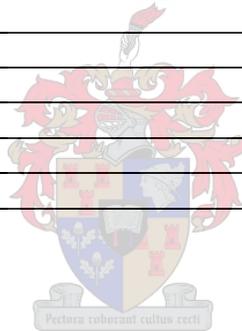
Stellenbosch Local Municipality Integrated Development Plan 2004

Theewaterskloof Local Municipality Integrated Development Plan 2004

Witzenberg Local Municipality Integrated Development Plan 2004

Appendix 1: Western Cape Municipalities Included in the Study

Number	Metro Municipality	District Municipalities	Local municipalities	District No.
1	Cape Town Metro Municipality			Cape Town
2		Boland/Cape Winelands District Municipality		DC2
3		Eden District Municipality		DC4
4			Witzenberg Municipality	WCO22
5			Drakenstein Municipality	WCO23
6			Stellenbosch Municipality	WCO24
7			Breede Valley Municipality	WCO25
8			Kannaland Municipality	WCO41
9			Langeberg Municipality	WCO42
10			Mossel Bay Municipality	WCO43
11			Bitou Municipality	WCO47
12			Knysna Municipality	WCO48
13			Theewaterskloof Municipality	WCO31
14			Overstrand Municipality	WCO32
15			Cape Agulhas Municipality	WCO33
16			Matzikama Municipality	WCO11
17			Bergrivier Municipality	WCO13



Appendix 2: Overberg DM



Appendix 3: West Coast DM



