



KWAZULU NATAL PROVINCIAL ICT AND ELECTRONICS (ICTE) SMME STRATEGY



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<p style="text-align: center;"><u>GLOSSARY :</u></p>

ASGISA:	Accelerated and Shared Growth Initiative of South Africa
Bandwidth:	The amount of data that can be transmitted in a fixed amount of time.
BBBEE:	Broad-Based Black Economic Empowerment
Benchmark:	A standard by which something is evaluated or measured.
Broadband:	Describes a communications medium capable of transmitting a relatively large amount of data over a given period of time. A communications channel of high bandwidth.
BEE:	Black Economic Empowerment
BPO:	Business Processes Outsourcing
Call Centre:	A call centre is a centralized office used for the purpose of receiving and transmitting a large volume of requests by telephone.
DED:	Department of Economic Development
DTI:	Department of Trade and Industry
Economy:	A system of producing, distributing, and consuming wealth
EPWP:	Extended Public Works Programme
Exports -	Goods and services produced in one country and sent to another country to be sold.
Fibre optic cable:	A cable made of optical fibres that can transmit large amounts of information at the speed of light
GDP:	Growth Domestic Product

Hub:	A focal point around which events revolve
ICTE:	Information and Communication Technologies & Electronics
Incubator:	A facility designed to encourage entrepreneurship and minimize obstacles to new business formation and development, particularly for high technology firms, by housing a number of budding enterprises that share an array of services, such as rent, secretarial services, and business counselling
Infrastructure:	The underlying foundation or basic framework of a system.
Internet:	A computer network consisting of a worldwide network of computer networks that use the TCP/IP network protocols to facilitate data transmission.
MNC:	Multi-National Corporations
Municipality:	A municipality is an administrative entity composed of a clearly defined territory and its population and commonly denotes a city, town, or village, or a small grouping of them. A municipality is typically governed by a mayor and a city council or municipal council.
OECD:	Organisation for Economic Corporation and Development
Sector:	A distinct subset of a market, society, industry, or economy, whose components share similar characteristics.
SME:	Small Medium-sized Enterprise
SMME:	Small Medium and Micro-Enterprises
Software:	The programs, data, or routines used by a computer, distinguished from the physical components (eg, hardware).
Sustainable development:	Achieving economic and social goals in ways that can be supported for the long term by conserving resources, protecting the environment, and ensuring human health and welfare.
SWOT:	Strengths, Weaknesses, Opportunities and Threats

CHAPTER 1: GLOBAL FACTORS IMPACTING THE SMME ICTE ENVIRONMENT

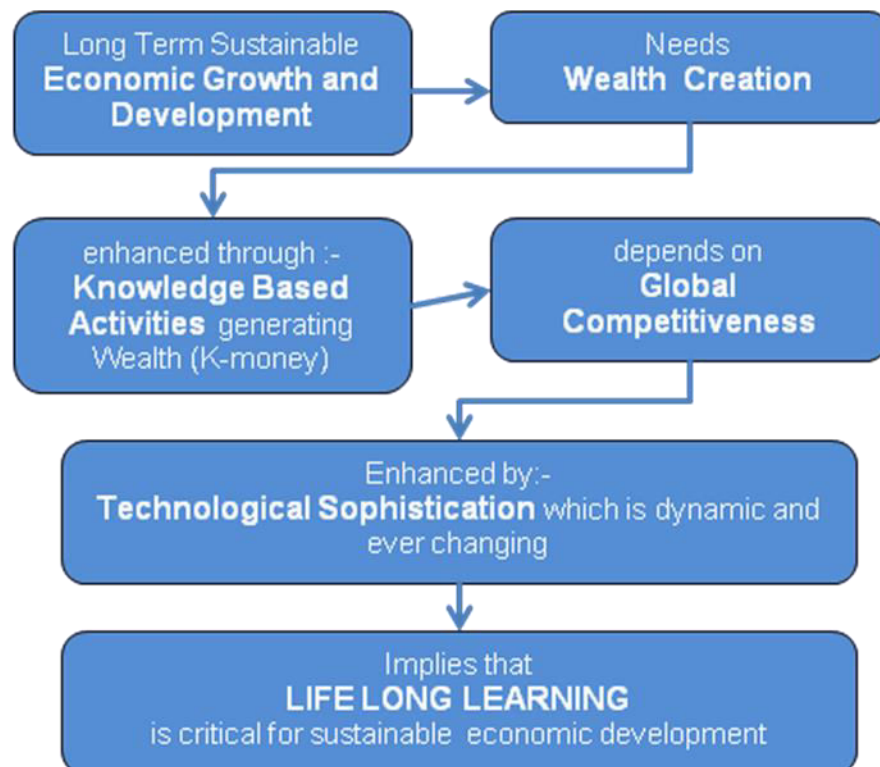
1. INTRODUCTION

KwaZulu-Natal is one of the nine provinces in South Africa. In order to address the needs of the SMME ICTE sector in the province of KwaZulu Natal (KZN), it is important to understand the environment in which they currently operate as well as the forces that impact on this environment. Therefore this Chapter provides a snapshot of two priority trends that are changing the KZN SMME landscape.

1.1 MOVING TOWARDS A KNOWLEDGE BASED ECONOMY

Globalization and ICTE are two major forces that are shaping the future of the world, reducing geographic boundaries and bridging cultural divides. ICTEs are the enabler of globalization and determine the level and pace of global flows. In this global economic climate, the economy needs to be redirected towards higher value, knowledge intensive products and services, as depicted in the flowchart below.

Diagram1: Moving towards a Knowledge Based Economy [KBE]



Globalization

fosters rapid

Chapter 1: Global Factors Impacting the SMME ICTE Environment

technological changes which results in global competition for the global economic sectors. The ongoing technological changes are transforming economies from industrial into knowledge based economies which in turn demand a higher level of technology skills at all societal strata. Therefore, what is being experienced by all the sectors, but is particularly evident in the ICTE sector, is the “learning age.”

The implication of the knowledge based economy is that the way to prosperity is to make learning and knowledge-creation of prime importance, since in the "learning economy" individuals, firms, and countries will be able to create wealth in proportion to their capacity to learn and share innovation (Foray and Lundvall, 1996; Lundvall and Johnson, 1994). The learning age in turn increases the demand for the ICTE sector.

High level political commitment is one of the determining factors for rapid development of ICTE SMME sector, through enabling legislation. Government strategy needs to be fully geared to create a conducive environment to ensure this development. ICTEs can be leveraged by individuals, businesses, and government. It is also necessary to build broad-based support and collaboration among major stakeholders such as government, business and civil society. In developing countries communication and training is critical to ensure that ICT infrastructure is used effectively to gear its citizens for participation in a knowledge society.

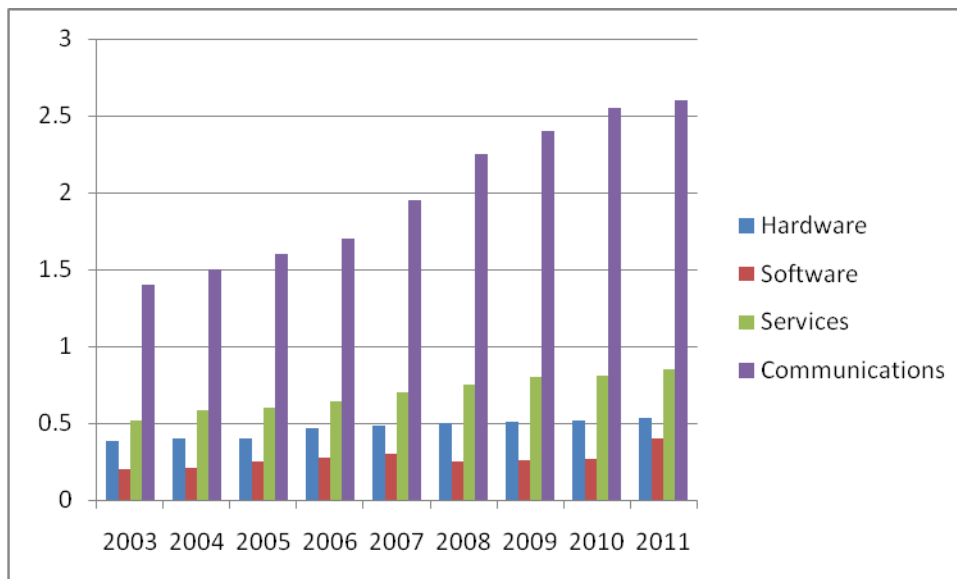
However, whilst ICTEs are the enabler of the knowledge economy, cognisance must be taken of the fact that they also have the power to further polarise society. Unless one has computer literate access to the knowledge required to be a productive part of the economy will be impossible. Thus the move from an industrial to a knowledge economy raises the priority that should be given to Digital Literacy programmes.

Thus SMMEs need assistance to enable their participation in a knowledge-based economy that demands a high level of ICTE skills as well as the ability to create knowledge products and services. The benefit of building an SMME strategy for KwaZulu Natal is that SMMEs, unlike corporate companies, draw their client base from all sectors of society and therefore can play a vital role in educating citizens, bridging the digital divide and disseminating access to ICTEs. Fostering the growth and sustainability of small businesses in turn creates employment and alleviates poverty.

1.2 GLOBAL AND NATIONAL TRENDS IN THE ICT SECTOR:

The World Information Technology and Services Association (WITSA)'s recent Digital Planet 2008 Report concisely sums up predicted trends in spending in the ICT sector. This report takes into account the impact of the Global Financial Crisis and estimates an overall growth of the ICT sector of 7.7% in 2009 falling to 3.6% by 2011. The graph below depicts WITSA's predictions for Global ICT spend.

Diagram 2: Global ICT Spending by Technology (\$US Trillions)



Source: WITSA Digital Planet 2008

South Africa is rated 20th in the world's market for ICT products and services, accounting for 0.6% of worldwide revenues. However, its global business competitive rating is poor. With the start of a recession in the developed countries, small businesses in South Africa can expect increased competition for market share. Hence interventions to improve the competitiveness of SMMEs are vital.

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The table below gives a comparative understanding of the South African ICT sector versus the international trends.

Table 1: Comparative Understanding of Global and South African ICTE Sector

South African ICTE	International ICTE
1) ICTE is an emerging sector which is struggling to respond to rapid global changes whilst it is integrating itself in the global market.	1) Rapid changes imposed by globalisation which force rapid changes in the ICTE networks, activities and components.
2) Expensive telecommunications infrastructure which inhibits use of ICTs in business, and stifles effective growth of ICTE SMMEs	2) Well established ICTE with extremely low telecommunication costs found in most of the global nations
3) A male dominated sector, particularly at the high end knowledge professional and management level.	3) A widely spread ICT sector that allows open participation.
4) Shortage of top IT professionals since the institutions of higher education are failing to produce industry ready graduates.	4) A growing demand of top IT professional in the global nations since the ICTE sector is becoming a dominant sector recognised as an enabler for other sectors.
5) Gearing towards developing regional ICTE Hubs in order to become a global player.	5) A growing number of ICTE regional hubs and Smart Cities
6) Developing broadband infrastructure.	6) Wide spread of adequate broadband infrastructures
7) Current spending on ICTE likely to remain on track largely due to the FIFA 2010 requirements. Future spend will depend upon Government's decision to employ ICTEs to increase effectiveness of delivery in all service areas. The opportunities in Education are enormous and could assist in radically lowering the rate of illiteracy and providing the skills the country needs to experience economic growth in a knowledge based economy.	7) An overall slowing of growth in this sector due to the current global financial crisis, however, predications are that global growth for this sector will be moderate (7.7% for 2009 and slowing to 3.6% by 2011) (WITSA Digital Planet 2008).

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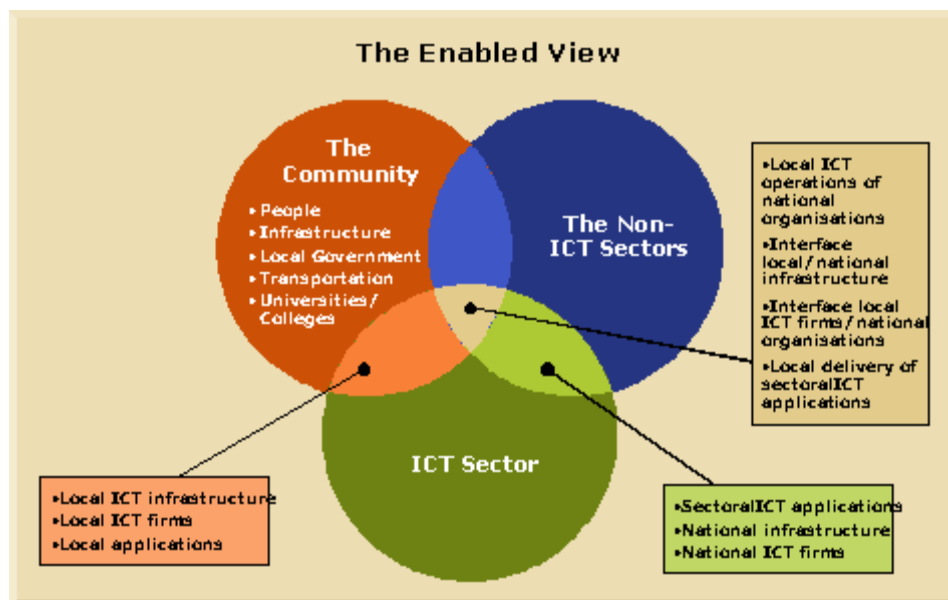
Most African countries are unable to produce, manufacture and export goods and commodities that are on demand globally. They rely heavily on foreign Multi National Corporation's (MNC) for investments and exports. Their inability to attract sufficient MNC's slows down the development in their ICTE sector with the consequence that they fail to generate sufficient economic activity to improve the sector.

1.3 ROLE OF ICTE IN ECONOMIC DEVELOPMENT:

The ICTE sector is viewed with a dual perspective as shown in the Diagram 2 below:-

- i) As a sector on its own
- ii) As an enabler of other sectors
- iii) As a tool for effectiveness of community and government initiatives

Diagram 3: ICTE Enabled Economy



This relationship of the ICTE sectors with the economy is briefly explained below.

A. ICTE and General Economic Development: -

- ✓ **Education:-** The ICTE sector has potential to impact heavily on the education system by creating virtual links to industry and international partners thereby raising the level of education available to scholars and students. It can also be used effectively to create

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learning pathways that penetrate rural areas thus increasing the reach and efficiency of teaching and learning.

- ✓ *Health:* - The ICTE sector can improve access to medical records and improve the use of high tech equipment. They can also be used to provide a host of medical services to underserved rural areas.
- ✓ *SMME Trade:* - The ICTE sector can help unlock global trade opportunities for SMMEs in all sectors through portals, e-business, local representation and international collaborations.
- ✓ *Government:-* Use of ICTEs in e governance can create transparency in government services allowing integrated community participation as well as extending the efficiency and reach of these services.

B. ICTE as an Enabler for Other Sectors: -

ICTEs are a predominant enabler of other sectors such as:-

- ✓ *Financial sector:-* Banking is heavily reliant on ICTEs for networked branches, integrated transactions, internet banking and a host of other financial services.
- ✓ *Retail Sector:* - global logistics, distributions, and inventory control systems are available to improve productivity within the sector. The sector is also experiencing a shift in its market level logistics and distribution due to massive development on the global markets. This provides an opportunity for SMMEs to enter into the field of logistic management.
- ✓ *Manufacturing:-* ICTE usage in the manufacturing sector has increased due to the growing demand to improve productivity and reduce costs through mechanized components and the need to expand markets.
- ✓ *Consumers:-* Internet access and usage for communications, research and networking is on the rise. To enable citizens to make effective use of this knowledge a high priority needs to be given to the accessibility of ICTEs.

C. ICTE and Entrepreneurship: -

Emerging entrepreneurs will continue to remain disadvantaged without good ICT infrastructure and information systems. Access to affordable ICTEs helps them provide efficient and economical services and thereby enhances their effectiveness and competitive edge.

ICTEs help stimulate SMME development by enabling their internet presence, providing efficient and fast communications and enabling remote delivery of services.

D. ICTE and Poverty: -

Poverty destroys people's ability to utilise the available resources which in turn hinders social development. Lack of access to ICTEs and training increases the inequality of access to information resulting in an increase of the digital divide. Most countries view the ICTE sector as a potential instrument to alleviate poverty by equipping society with relevant ICTE skills through formal education

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which will enable people to be a part of the knowledge based economy. This enhances their opportunities of starting their own businesses.

E. Broadband and Economic Development: -

Adequate and reliable broadband infrastructure increases the interaction between companies, attracts international players, increases presence of corporate head offices, and transforms a region into an ICTE hub thereby impacting on economic development. The high cost of telecommunications in South Africa and its lack of spread is a major inhibitor of the growth of SMMEs.

F. BPO Services:-

ICTEs facilitate the growth of the business process outsourcing industry which is among the fastest growing global industries with an estimated growth of US\$130-billion annually. In South Africa, the industry has been experiencing an eight percent growth per year since 2003 and is one of the biggest employers in South Africa with approximately 54000 people on the payroll.

1.4 THE ICTE SMME SECTOR:

With real jobs and prospects young people and, in particular, women, can be a great driver of entrepreneurship and economic growth. There is a need to create a climate for vibrant private enterprise that can absorb the large cohorts' of young people, along with the investments in education and training that enable them to seize opportunities as they arise. The greatest opportunities lie in the development of Small Medium Micro-Enterprises which are highly recognized for job creation and stimulating economic and social upliftment. However, the under development of entrepreneurial skills, absence of coordination between the institutions of higher education and the private sector, lack of market access both national and international, high cost of telecommunications, poor levels of competitiveness and lack of access to finance remain as major challenges.

Entrepreneurship is not rewarded and encouraged, nor are the successes and innovations of SMMEs celebrated. There is a need to nurture a culture in which creating jobs is encouraged more than getting a job and a great urgency to create a culture of belief in local excellence.

1.5 CONCLUSION

South Africa is part of the global economy and therefore global trends impact on the ICTE SMMEs in KZN. Small businesses in KZN need to be enabled to participate in the knowledge based economy. Providing affordable access to broadband and deploying ICTE solutions to improve efficiencies and extend the reach of Provincial Government services, would go a long way to stimulating this sector.

Global trends indicate a general slowing of growth in this sector, but by comparison with other sectors, growth is still good. Therefore, the opportunities for growth of small businesses in the ICTE sector are presently healthy despite the impact of the global financial crisis.

The present gloomy economic climate means that whilst many opportunities exist for deployment of ICTEs in the private sector, spending is likely to be conservative. Cognisance must be taken of the fact that within South Africa, the largest consumer of ICTE products and services is the Government. Therefore, growth of the ICTE SMME sector is largely dependent upon Government strategies to deploy ICTEs at all government layers and across all service delivery departments.

The following chapter discusses the South African ICTE SMME landscape.

CHAPTER 2 : NATIONAL AND PROVINCIAL ICTE SMME LANDSCAPE

2. INTRODUCTION

This Chapter provides an overview of the South African ICTE landscape with a specific focus on the KZN Provincial SMME environment.

2.1 SOUTH AFRICAN ICTE SMME LANDSCAPE:

2.1.1. Socio-Economic Overview:-

The South African ICT sector is an emerging sector, still in its development stages, that has the potential to become the most significant and relevant sector in the country. A number of interventions have been put into place in an attempt to grow the sector but ongoing challenges continue to restrict growth progress. Many of these interventions emanate from the South African Information Technology Industry Strategy (SAITIS) amongst others. However, because of the urgent need to stimulate local economic growth, a number of policy and strategic frameworks were put into place which shifted the attention from SAITIS. Secondly, SAITIS is a national strategic framework and it is too broad and inadequate to address the grass root challenges of the different provinces. Therefore it remains crucial to develop a more focused, feasible and a vibrant policy framework that recognizes the importance of the sector on a provincial level and one which addresses the challenges resulting from the rapid changes in the global informational technologies.

Stimulating sustainable economic and social growth through job creation is the primary focus of the provincial strategy. This objective is particularly possible through the development of Small Medium Micro Enterprises that contributes to increasing levels of employment and fostering entrepreneurship within the South African citizenship whilst playing a significant role in the alleviation of poverty.

Creating institutional linkages and increasing the sector competitiveness by integrating it into the global market provides a meaningful way of increasing the sector capacity. One approach to achieving sector growth is to encourage its transformation into an export-orientated sector as this will stimulate links

Chapter 2: National and Provincial ICTE SMME Landscape

with global players. However, exporting in the traditional manner of simply selling existing products into another country is fast reaching its climax and new models of international collaboration that seek to build lasting and sustainable co-dependencies to generate innovative products need to be explored. This is especially relevant now as the Global Financial Crisis has seen a sharp reduction in the demand for traditional SA exports.

Developing good leadership skills is critical to enabling the sector to harness available access and support from relevant institutions. Effective management will further enhance the sector by attracting the relevant and competent participants as well as potential investors. Stimulating innovation also remains a vital growth ingredient and this emphasises the need to develop knowledge management strategies. As long as South Africa continues to under invest in Research and Development, it will always be dependent upon imported skills when new technologies are introduced.

Fostering a more proactive participation of the higher education institutions in sector development is essential since they are responsible for developing the future ICTE professionals with the necessary skills. However, it must be recognised that this is one sector where additional technical training will always be required as it is impossible for higher education to keep up with the rapid pace of ICTE innovations. Thus, higher education and industry need to form partnerships to ensure that each plays their role in equipping new ICTE professionals. If the sector is well maintained and developed in the above areas (leadership, skills, research and knowledge management), it will be better prepared to exploit existing and future opportunities in the local and global market place. Lastly, re-establishing a legal framework that eliminates the barriers to entry and enhances access to the sector is important.

The focus of this framework is on KwaZulu-Natal and it draws much of its evidence from the effective strategic frameworks that have been implemented at the national level. Since ICTE is a business enabler that cuts across industry sectors, the analysis below touches on other relevant sectors that rely heavily on ICTs for their business processes.

2.1.2 Situational Analysis of the South African ICTE SMME sector: -

The South African ICTE sector has established itself through small indigenous companies which are still blooming and have managed to acquire international status; a few state owned enterprises which dominate the ICT industry e.g. Telkom and SITA; a growing pool of ICTE SMME's and a number of foreign Multinational Corporations (MNC's) with their co-functions such as manufacturing and BPO's. The global ICT sector has experienced rapid growth; however, the South African sector is facing a challenge of responding to the rapid challenges imposed by globalization and the growing demand of the

Chapter 2: National and Provincial ICTE SMME Landscape

technological innovations. Local SMME growth is severely hampered by the high cost of telecommunications, lack of extensive access to affordable broadband and lack of access to finance and entrepreneurial skills. Therefore, this strategy must work closely with the KZN Provincial Broadband Strategy and the KZN Provincial Skills Development Strategy to ensure that small businesses have the tools to work effectively.

The South African government and development institutions have implemented some initiatives for aligning entrepreneurship with ICT with an aim of producing competitive entrepreneurs. The Department of Trade and Industry established SEDA which saw the development of nine ICT incubators throughout South Africa. However, the model of funding (maximum of three years funding which decreases each year) means that few have survived. There are also other ICT incubators funded by local or provincial governments that have proved successful. Most notable of these are Bandwidth Barn in Cape Town and SmartXchange in Durban.

2.1.3 Regulatory and Policy Environment for SMMEs in ICTE

2.1.3.1 DTI SMME Strategy:-

The development of SMMEs is one of the significant interventions to address challenges such as job creation, unemployment and poverty. After 1994 the South African government recognized the need to facilitate the development of SMME's by prioritizing the policy focus on SMME's. The current National SMME strategy recognizes that although progress has been made in developing SMME's and the provision of institutions responsible for providing the necessary support and facilitating the process, there are still gaps and ongoing challenges. A few major goals have been prioritized to address the ongoing challenges i.e.

- Improving the quality of services provided to SMME's
- Enhancing support provided by governmental departments and institutions.
- Forging partnerships to increase stakeholder involvement.

The focus of the national strategy is on the promotion of SMME's and fostering entrepreneurship over a period of ten years. The main institution targeted is Small Enterprise Development Agency (SEDA). The national strategy aims at ensuring that SEDA provides the necessary support to small businesses, establish the relevant networks and implement its strategies which include;

- Making Khula Enterprise more transparent and accessible to Small Medium Sized Enterprises (SME) especially to black-owned businesses and start-ups.
- Localizing access to micro finance by developing South African Micro-finance Apex Fund (Samaf)
- Creating a countrywide network of access points

The success of these objectives hinge on;

1. Creating an enabling environment for start-ups and existing businesses by re-establishing the regulatory framework to reduce constraints and develop a mechanism for business monitoring.
2. Strengthening the current investment measures by increasing the number of investors and the number of financial support services. This includes establishing institutions and redeveloping the existing institutions which provide the non-financial support to ensure that the overall support element is there.
3. Formulating a policy framework that creates the demand for local products. This is particularly important as local products and solutions are NOT highly valued. This is evident when one analyses the product/service set of large ICTE companies. Few, if any, use local products or solutions.

2.1.3.2 South African ICT Sector Development Process and Framework: -

The South African ICT Sector Development Process and Framework as developed nationally, seeks to address the key challenges within the sector to make it more competitive and responsive to the global ICTE market. It is based on three key main objectives: namely.

- ✓ Economic Growth
- ✓ Social upliftment
- ✓ Empowerment and overall prosperity goals.

It recognized the need for utilizing the ICTE opportunities made available through developing the SMMEs into sustainable businesses capable of generating major economic activity within the country. It also recognises that the South African ICTE sector is not just a single industry but it is a range of industries which therefore, grants the sector the advantage of establishing itself as a single largest employer in South Africa. It further recognises the global and local development gaps in the usage of information technologies, thus the objectives of this strategy are also directed towards bridging that gap, transforming South Africa into a digital society.

Chapter 2: National and Provincial ICTE SMME Landscape

The South African ICTE Sector Development Process and Framework therefore needs to take into account the current challenges that drive the development process towards:

- Identifying the available opportunities, both locally and globally.
- Providing a platform for the development of comprehensive industrial strategies.
- Providing a focus for research and development directed towards the ICTE sector.
- Providing the mechanisms for skills development, job creation, social upliftment, empowerment and sustainable economic growth.

2.1.3.3 Issues in Funding: -

There is a variety of funding available for the SMME's both nationally and provincially but the challenge remains the lack of access. There is no clear platform that specifies the criteria and the requirements for qualification. The table below shows some of the major SMME funding institutions:-

Table 3: Examples of Major SMME Funding Institutions

Institution	Business and Marketing Plans	Seed Capital	Capital Expansion
Business Partners (Venture & Franchise Capital)	✓	✓	✓
Umsobomvu Youth Trust	✓		
Khula Finance Enterprise		✓	
Ukwaka Business Support Services		✓	
Ithala Bank		✓	
National Empowerment Fund		✓	✓
IDC Venture Capital Fund		✓	✓

Note: Full details of each fund are available in the appendix

However, access to funds is difficult due to the lack of collateral from prospective entrepreneurs and the untimely delays in processing applications from many of the government supported financing institutions.

The Global Financial Crisis has also impacted on the risk appetite of private banks who are even more risk averse than before. Therefore institutions such as Ithala Bank, Ukwaka Business Support Services and Khula Finance Enterprises who rely heavily on their private bank partnerships, may experience

further constraints. This provides the KZN Provincial Government with the opportunity to create an innovative strategy for small business funding that couples funds with mandatory mentoring and skills development to reduce the risks inherent in funding small businesses.

2.1.3.4 Ensuring a supportive environment: -

- Telecommunications infrastructure:-

South Africa is the largest communications leader in Africa with approximately 95% of cell-phone users and ¾ of fixed lines users. The cell-phone industry has experienced a significant growth over the years and it has the largest Global Systems for Mobile Communications (GSM) market outside Europe.

Telecommunications maximise the available opportunities with the society since it makes interaction fast, effective and reliable. However, the telecommunications services in South Africa has carried an exceptionally high cost (125% more expensive than that in developing countries) which inhibits SMME growth. This results in further inequalities as only the wealthy can afford the more sophisticated options such as cell phone to internet connectivity. The telephony market is increasingly becoming complex and regulated by the global policies and competition.

Fixed line usage dropped in the 2000's due to the increased costs imposed by Telkom SA and the readily available pay as you go option offered by mobile technology. This meant that most subscribers moved to the cell-phone telecommunication. It is interesting to note that South African pay as you go rates are extremely high, however, they provide a flexibility of payment (only pay for what you use) that fixed line technologies do not and therefore this is the telephony of choice for the majority of South Africans. The uptake of mobile technology by the rural population meant that fixed line infrastructure has not been rolled out in these areas. Cell phone operators have however, extended their network to provide a wider and better coverage within the rural areas. The mobile industry further enhanced the usage of cell-phones to the poor users by providing free services like "please call me" and "free sms's" which enhanced telecommunications. Programmes such as Mixt and mobile Facebook have further enhanced the growth in the internet usage amongst the youth. Given the widespread usage of cell phones in South Africa, opportunities exist for SMMEs to address mobile software solutions for a variety of industry sectors.

Durban is one of the few cities in Africa that have rolled out a carrier class fibre optic network that spans 98% of the eThekweni Municipality. The City is currently launching the Quantum City project that is led by the Centre for Quantum Technology and the Innovation Company of the University of KwaZulu-Natal

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in partnership with idQuantique and Senetas Corporation, leading companies in quantum and classical encryption. The Quantum City project is designed to provide a more secure telecommunications infrastructure. The uniqueness of this security network lies in its use of Quantum physics methodology to generate unique security keys and is the first in the world to be operating. In line with the eThekweni Municipality's commitment to developing ICT SMMEs, it now provides free broadband access to the SMMEs in its SmartXchange incubator.

2.2 PROVINCIAL [KZN] ICTE LANDSCAPE:

2.2.1 Socio-economic overview of KZN: -

KwaZulu-Natal is one of the biggest provinces in South Africa contributing surpluses to the South African economy. In 2004 it contributed about 17, 54% to the South African GDP.

KZN is made up of eleven district municipalities which contribute to the provincial economy. However, the economic activities are concentrated in the 3 core metropolises which are the eThekweni Municipality (Durban), uMgungundlovu (Pietermaritzburg) and Umhlathuze (Richards Bay-Empangeni) Municipalities.

Within the KwaZulu-Natal province four major economic sectors are found i.e. primary, secondary, tertiary and government. Manufacturing has stabilised in the previous years, with motor vehicle manufacturing increasing with an annual growth rate of 7%. The service sector has a variety of sub-sectors that have enjoyed good growth and have a potential to generate a large scale of revenues during the 2010 Soccer World Cup tournament. These include the tourism industry which is a fastest growing sub-sector nationwide, transport and logistics etc. The Agricultural sector has the least contribution to the provincial and national economy. In KZN 72% of this sector concentrates on forestry and the remaining percentage includes livestock, banana plantation in the Ugu (Port Shepstone) region.

KwaZulu-Natal is a significant contributor to the exports industry in South Africa contributing approximately 15% of the country's total exports annually over the past decade. There is also a variety of projects in progress within the province which are scheduled for completion before the 2010 World Cup. They contribute to stimulating economic growth..

The informal economy has become one of the major contributors to the survivalist employment and it is becoming a significant pillar in the economy but it has many challenges.

The overall KZN economy has encountered a lot of challenges within the past few years which include food price inflation, electricity and energy shocks. The impact of the Global Financial Crisis is evident in the now struggling automotive industry and a dramatic decrease in exports.

2.2.2 Situational Analysis of KZN ICTE Sector: -

As discussed previously the ICTE sector is an emerging sector in South Africa and due to the current restraints within the country, the sector is having difficulty in establishing itself within the different provinces. However, the rapid changes in the global informational technologies conversely indicate that the sector is beginning to dominate every aspect of production organisation. In KZN, ICTE can play a significant role in transforming the provincial economy. This is particularly true in the manufacturing and services sectors (including exports and imports which contribute significantly to the economy) where the potential to use ICTEs to improve productivity is huge. KZN is currently improving the sector through projects such as the Edendale ICT hub which aims to build the ICT sector capacity within the province. It should also be noted that the Province has established the KZN ICTE Cluster and has now also prepared a number of Cluster Strategies.

The province is also gearing towards achieving an ultimate goal of being a leading province in South Africa through steady and sustained economic growth thus contributing significantly to the national economy. The ICTE sector is the driver of that vision providing the necessary infrastructure and software solutions. KZN is in the fortunate position of having many ICTE institutions to develop the necessary skills. A second advantage is that there is a pool of SMME's at various stages of development operating in the ICTE Sector. These small businesses focus on providing infrastructure, software development, hosted systems, mobile technologies as well as the traditional sales of various technologies. SmartXchange, Durban's ICT Hub, has an incubation center for ICT SMME's that currently houses 47 SMMEs employing a total of 266 people.

SmartXchange was established in partnership with the eThekweni Municipality and deploys a development model concentrating on building SMMEs from the previously disadvantaged population. The incubator has been identified by recent World Bank Research as a role model for incubation in developing countries. Durban University of Technology has recently established an ICT incubator in partnership with SEDA. It currently houses start-ups. This incubator functions both as a physical and virtual entity thus serving SMME start-ups from different locations while breaking down geographic barriers.

2.3 CONCLUSION

Chapters 1 and 2 have shown that there are a number of SMME support agencies and supportive national policies. However, the fragmented implementation of these policies has limited its growth potential. In order to make use of their potential, SMMEs need an enabling environment, including a stable micro economic environment and improved physical and social infrastructure. However, the major challenge for SMMEs is access to finance and skills (entrepreneurial and technical). If access to capital is constrained, profitable ventures cannot be undertaken and economic ventures can stagnate. In particular, as commercial banks represent the main source of external finance for small businesses, it is essential that the banking system is prepared to provide credit to the SMME sector. The opportunity exists for the province to create a funding framework that links access to finance with entrepreneurial training and business mentoring and competitive training, thus decreasing the risk of lending capital.

There is a need for Government to re-evaluate policy implementation to ensure that it provides the supportive environment required to build small businesses: this should include promoting small business excellence, rewarding small business innovation and creating a culture of entrepreneurship as well as providing ongoing skills development, access to research, assistance with company legislation and access to finance.

However, the most critical need in KZN is to facilitate links between the various SMME support agencies and promote and extend access to these services. Therefore, this strategy will, wherever possible, seek to provide solutions that build upon existing centres of excellence in all areas of SMME development and growth to ensure that their capacity and services are strengthened and access to their services facilitated to include a wider catchment pool.

CHAPTER 3: STRATEGIC VISION, MISSION AND GOALS of the KZN PROVINCIAL ICTE SMME STRATEGY

3 INTRODUCTION

For the successful implementation of a Provincial ICTE SMME Strategy it is critical that a clear vision, mission and strategies aims and goals are unpacked. This chapter focuses on providing this information.

3.1 STRATEGIC VISION OF THE KZN ICT SMME SECTOR:

3.2.1 Vision Statement:-

To provide a conducive environment for the growth of the ICTE SMME sector that enables KZN to become a globally competitive ICTE Provincial Hub .

An ICTE Hub provides a central location and coordination point for events and activities. A further role is to provide shared high end ICTE infrastructure to maximise economies of scale. For example, a business hub is where most of the businesses are located in order to enhance the economic activities generated by the businesses. The primary aim of Hubs is to attract opportunities to that business area and it also serves the function of linking sector participants and other related stakeholders. Location of the Hubs is therefore critical to their development.

Given the ICT infrastructure that eThekweni Municipality has already put in place, it has positioned itself as the location of choice for the first major ICT Hub. As the second largest contributor to the national GDP, KwaZulu-Natal qualifies as a potential province which can serve as a regional hub for South Africa. Furthermore, KZN has initiated a number of projects aimed at stimulating economic development and growth, and most importantly aimed at driving development of the ICTE industry. These projects include ICTE Strategies which focus on the eThekweni and Umzundusi regions, and include ICT Edendale Hub,

located in Umsunduzi and SmartXchange located in Ethekeini. A Science and Technology Institute called Moses Kotane has been established. This institute deals directly with the development of multi-level ICTE skills through dedicated specialized programmes.

In addition to the above initiatives, the Provincial Department of Economic Development has also;

- Implemented the BPO pilot project that has trained 1000 call centre agents in 2008 in response to the growth of the global call centre industry.
- Developed a partnership with the Confederation of Indian Industries and the National Institute of Information and Technology of India with an aim of capacitating more ICT skills to address the skills scarcity in the urban as well as rural areas.

In order for KZN to become a regional Hub it needs to develop support institutions to improve the infrastructure. More investment should be directed to the sector in order to create a world-class infrastructure that has an enabling environment for the establishment of SMMEs. There is a need to ensure that SMMEs have access to funding and relevant resources as well as an enabling environment for big businesses to invest in. The policy and legislative framework ideally should be more flexible to allow relevant players to easily participate in the economic activities.

3.2 MISSION STATEMENT:-

The KwaZulu-Natal Department of Economic Development aims at stimulating economic growth through job creation, prioritizing the development of ICTE SMMEs and encouraging a culture of learning with specific focus on managerial, business and technical skills. Therefore, the most important goal is to make ICTE the 5th pillar of the economy and KZN a regional ICTE hub through:

- Increased ICTE Human Resources through skills development programmes.
- Improving the infrastructure and telecommunications and access thereto.
- Taking advantage of emerging technologies, applications and standards.
- Prioritizing exports and domestic products.
- ICTE exploitation for sectoral growth, e-Governance and social development.
- Re-establishing the policy, regulatory and Institutional framework.

- Working closely with local municipalities and national government initiatives to avoid duplication and to maximize the reach and effectiveness of existing best practice ICT development projects and/or support agencies.

3.3 STRATEGIC GOALS, AIMS AND OBJECTIVES :

Table 4: Strategic Goals, Aims and Objectives and Programmes

Strategic Goals	Aims and Objectives	Actions and Programmes
Strengthen and improve financial and non-financial support for ICTE start-ups and existing businesses	<ul style="list-style-type: none"> • Create new ICTE SMMEs • Assist existing SMMEs to generate new products and services 	<ul style="list-style-type: none"> • ICTE SMME Skills Development Programme • ICTE SMME Incubation Programme • ICTE SMME Startup Programme • ICTE SMME Funding and Investment Programme
Prioritising demand for local products in order to ensure that South African ICTE businesses generate revenues and produce in tune with domestic needs	<ul style="list-style-type: none"> • Transform KZN into a regional ICTE hub • Stimulate research into ICTE solutions to specific business and government problems • Develop linkages between big and small businesses • Optimum utilisation and enhancement of ICT infrastructure 	<ul style="list-style-type: none"> • ICTE SMME Enhancement Programme • ICTE SMME Funding and Investment Programme • ICTE SMME Marketing & Advocacy Programme
Transforming the ICTE sector into an export oriented sector	<p>Stimulate economic growth through exports</p> <p>Attract FDI into the sector</p> <p>Adapt and align with global</p>	ICTE SMME Partnerships and Collaboration Programme

	technological changes	
CROSS CUTTING PROGRAMMES: Investment in Enabling Infrastructure; ICT as an Enabler Partnerships and Engagement; Research and Development Ongoing Monitoring and Evaluation		

3.4 A SWOT ANALYSIS OF ICTE IN KZN:

In assessing this,

- KZN has one of the largest harbours in South Africa and it has a viable transportation and logistics sector.
- Whilst the majority of major IT businesses have regional offices in KZN, they do not have their full functionality located in the province e.g. IBM, Intel, Microsoft, Dimension Data etc. If the province becomes a regional hub, these businesses can re-establish themselves in KZN and they can generate more revenues since they will be at the point where exporting and importing is much easier than any other province. This development is similar to growth of Bangalore as a major global hub.
- If KZN becomes a regional hub, it has the potential to become the ICT headquarters for the South African provinces and possibly for SADC countries since most businesses would relocate to where better ICT infrastructure is located. This could enable contracts with European and American firms and could lead to KZN becoming a hub of global standards, thus attracting other major businesses and investments.
- The Provincial Department of Economic Development has prioritized the development of ICTE small businesses to improve the current ICT infrastructure and furthering ICTE education. This will enable the hub to work closely with the infrastructural organizations, bring more support to SMME development initiatives from pre- to post incubation as well as address the unemployment challenge.
- An ICTE Hub would also enable SMME's to access the available resources in the sector, as well as promote links with the major players in the sector.
- The ICTE sector is the largest beneficiary from the ICTE hub, with increased activities in the following areas: Manufacturing, Telecommunications, Wholesale and Retail trade, Business information and Technical services, Transportation and Logistics.

The SWOT Analysis on the following page provides a snapshot overview of the KZN ICTE SMME environment.

Table 5: SWOT Analysis of the KZN ICTE Environment

Strengths	Weaknesses
<p>KZN is the trade, transportation and logistics hub for S.A. with a well developed exportation base</p> <p>A stable tourism sector.</p> <p>A stable manufacturing and service sector</p> <p>A large pool of stakeholders who are willing to participate</p> <p>The emergence of the 2nd national telecoms operator which will drive down the telecommunications costs</p>	<p>Lack of Access</p> <p>Inadequate infrastructure</p> <p>Lack of ICTE Skills</p> <p>Lack of funding</p> <p>Gender inequalities, boundaries and constraints.</p>
Opportunities	Threats
<ul style="list-style-type: none"> • A complete transformation of the sector • Increasing exports and attracting foreign investments • Becoming a global player • Becoming a knowledge society • Becoming the ICTE regional Hub • Development of a large scale of ICTE SMME's • Development of a large pool of ICTE entrepreneurs • Stabilising the national and provincial economy • Alleviation of poverty through creation of jobs • Decreasing the telecommunications costs • Establishing ICTE Incubators based on model of successful established ICTE incubator in KZN. 	<ul style="list-style-type: none"> • External Threat of Globalisation • External Threat of Global Economic Crisis • Internal threat of high crime rate • HIV/Aids • High Poverty rate requiring funds for basic necessities • Political changes • The necessary finance not been made available to implement this strategy.

3.5 CONCLUSION

The vision and mission identified and discussed in this chapter gives rise to identified focus areas for the growth of the ICTE SMME sector. These are discussed in the following chapter.

CHAPTER 4: A FOCUS ON ICTE SMME POTENTIAL GROWTH AREAS**4. INTRODUCTION**

As discussed in Chapter 2, there is the potential for ICTEs to be used in its cross cutting nature for other sectors to improve productivity, introduce new implementation methodologies as well as extend the reach and efficiency of existing initiatives. This chapter will explore these potential growth areas and link them to the relevant ICTE domain.

4.1 ICTE DOMAINS LINKED TO SECTOR OPPORTUNITIES

The table below identifies the ICTE Domains. The first six domains are taken directly from the SAQA ICT Framework. Whilst these have been thoroughly researched, it is evident that the rapid changes taking place in the ICTE sector have not been included in the SAQA framework. Hence two additional domains have been included to cover the Electronics Sector (no domains could be found on the SAQA website) and also to cover the rapid innovations taking place in the area of convergence technologies. This is particularly important as this is one of the larger potential growth areas. Areas of work that are viewed as high growth areas have been highlighted for ease of reading.

Table 6: Identification of ICTE Domains for Growth

Domain Name	Areas of work included in the Domain	Opportunity Rating	Industry Sector(s)
1. IT Strategy & Planning			
Informatics consultancy, Business Strategy, Technical infrastructure strategy, Future development research.	Security (includes Internet security and surveillance, Security & telemetry), Data protection & Integrity, system ergonomics, business continuity, business process improvement, technical specialism, software process improvement, systems architecture	Medium	Manufacturing Government
2. IT Systems Support			
IT Education and Training knowledge support, Infrastructure support, ICT Operations support, service level performance, Customer technical support, Client IT services and quality.	Education training delivery, management, content provision (includes e-learning, multimedia and ICT powered learning), security administration, network control, configuration management, capacity management, database administration, operations, network ops, client support, technical help desks	High	Education All sectors to upskill workforce or customers Government
3. IT Sales & Marketing			
ICT Account development, product and service marketing, IT Sales, Sales technical support.			

Domain Name	Areas of work included in the Domain	Opportunity Rating	Industry Sector(s)
4. IT in Business			
The Knowledge the Business User requires understanding, using, applying, improving, IT within the enterprise. Includes specialist application use, shared applications, personal user applications and information, as required to meet the demands of the enterprise and its Information workers. Covers informatics and the incremental improvements to systems efficiency. The Knowledge area embraces the use of a wide variety of specialized applications and technology fields and their integration into business as Total System solutions.	Call centres, end user applications and support, informatics, CAD/CAM, business IT alignment, CRM, Information & knowledge management, information systems including RFID, IS security systems, telecoms in business	High	All sectors – telecoms in business, CRM & call centres Education Wholesale & Retail Government
5. IT Systems Development & Implementation			
Systems development, software development, systems integration, software porting, IT infrastructure	Systems analysis, database analysis, system design, database design, system integration, software/hardware installation, software	High	Government Transport & Logistics

Domain Name	Areas of work included in the Domain	Opportunity Rating	Industry Sector(s)
commissioning.	porting, safety engineering		Tourism
6. IT Management & Administration			
Management of IT, Contracts, Supply, Projects, Quality, Resource.	Contract management and monitoring, procurement, programme and project management, project office includes BPO and shared services outsourcing	High	Government All sectors for BPO and shared services outsourcing
7. Convergence Technologies			
Broadcasting, telecommunications, digitisation, mobile technologies	Video conferencing technologies, virtual workforce, integrated mobile systems, paperless workplaces, multi-media technologies, digital films, creative digital content	High	Tourism Government Education Health Wholesale & Retail All sectors for CRM & information dissemination & new ways of reaching markets
8. Electronic Devices & Embedded Software			
Process Control, Electronic Design, Electronic Manufacture, Embedded Software Development	Customised automated solutions, GIS and tracking/security devices,	High	All (security) Transport & Logistics Manufacturing

Chapter 4: A Focus on ICTE SMME Potential Growth Areas

Domain Name	Areas of work included in the Domain	Opportunity Rating	Industry Sector(s)
			Government Tourism (Entertainment)

Chapter 4: A Focus on ICTE SMME Potential Growth Areas

Some of the above growth areas are fairly self-explanatory; however, others require unpacking in order to explore the potential ICTE opportunities. The paragraphs below briefly outline these opportunities.

It must also be realized that in South Africa, Government is the largest customer of ICT products and services and accounts for over 67% of the total ICTE spend. A further consideration is the fact that many of the challenges facing the Government can be resolved, or at least, considerably reduced, with the introduction of innovative ICTE solutions. This is particularly true in the area of service delivery for virtually all Government departments. However, whilst these opportunities definitely exist, cognizance needs to be taken of the current depressed economic climate which may lead to reduced Government spending. ICTE solutions, whilst effective, particularly in the long term, require intensive capital investment in infrastructure, development, transition and training. The cost of the latter is higher in a developing country where the majority of people are working from a much lower technological knowledge base.

With competitively priced telecommunication shortly to be a reality in South Africa, using ICTEs to extend market reach and reduce the cost of doing business are the biggest growth areas. This applies across the board for the larger companies who are in a position to leverage economies of scale. However, if the SMME market is to be nurtured and grown, these technologies also need to be readily available to them at subsidized rates. Incubators are the ideal location to provide a common set of technology facilities and solutions for SMMEs, thereby enabling them to leverage the lower costs of building their businesses.

4.2 MOTIVATION FOR FOCUS AREAS

The table below lists some of the major economic sectors in KZN and shows ideas of how ICTEs may be implemented to improve service delivery, business process and enhance customer relationships and participation. Some may seem futuristic, others may require intensive research, yet others are simply examples that have already been implemented elsewhere. All in all, the technologies exist to make these opportunities happen, but it needs to be recognized that implementation can only happen once affordable broadband, improved infrastructure and research capital is available on a large scale.

Table 7: Explanation of potential Growth Areas

Domain Name	Industry Sector	Motivation
1. IT Strategy & Planning		
Security, Data protection & Integrity, business process improvement, technical specialism, software process improvement, systems architecture	Manufacturing	Build cost-effective solutions to automate manufacturing processes and to streamline efficiencies in business processes. In the case of Government this also involves eradicating data duplication between departments. In the case of SMMEs, opportunities exist for SMMEs to develop cost-effective solutions for SMMEs as this is a market neglected by large CRM & ERP systems. Opportunity to deploy hosted systems
	Government	
	SMMEs – all sectors	
2. IT Systems Support		
Education training delivery, management, content provision, technical help desks	Education	ICTs as the delivery means for education. Knowledge portals for scholars and teachers, industry clusters, SMMEs etc. Content development using convergence technologies to stream to remote locations. Customised mixed technology e-learning solutions for businesses & Government, available anywhere, anytime for workers and customers. Touch screen technologies for Government public service institutions. Online applications and progress tracking.
	All sectors to upskill workforce or customers	
	Government	

Domain Name	Industry Sector	Motivation
4. IT in Business		
Call centres, end user applications and support, infomatics, business IT alignment, CRM, Information & knowledge management, information systems, IS security systems, telecoms in business	All sectors – telecoms in business, CRM & call centres Education Wholesale & Retail Government	Knowledge/information sharing systems, customer relationship management, smart cards analyse customer purchasing habits and proactively promote like products, stock management to point of sale, smart asset tracking for early detection of theft (assets linked to people), video conferencing, smart phones reduce travel costs, virtual workers, online retails services, hosted applications for small businesses including data backups. Simple access to Government products and services, user-friendly push and pull technologies, streamline systems, move to paperless offices and avoid queues and transport issues.
5. IT Systems Development & Implementation		
Systems analysis, database analysis, system design, database design, system integration	Government Transport & Logistics Tourism	Investment and uptake of locally produced ICTE solutions that improve service delivery, simplify processes and reduce duplication of data.
7. Convergence Technologies		
Video conferencing technologies, virtual workforce, integrated mobile systems, paperless workplaces, multi-media technologies, digital films	Tourism Government Education Health Wholesale & Retail All sectors for CRM & information dissemination	Mobile technologies “What’s happening in your area”, information dissemination, digital picture technology to diagnose agricultural /health problems linked to call centres/support centres. Remote medicine, paperless hospitals. Text to mobile for rural students. The list of how convergence technologies can provide new ways of informing people and assisting those in remote areas is enormous. Medicine control, tablet patient

Domain Name	Industry Sector	Motivation
		reminders for TB, own language sms communication to promote Government services, track application progress. Mobile videos to promote health care.
8. Electronic Devices & Embedded Software		
Customised automated solutions, GIS and tracking/security devices, manufacture of devices	All (security) Transport & Logistics Manufacturing Government Tourism (Entertainment)	Automation of traffic control (robots, warning signs etc.), disaster management, smart card technologies, process automation, smart tickets for public transport & events, smart asset tracking devices, bio-recognition devices. Digital pens for traffic offences, energy saving devices, water leak detection devices, integrated smart home technologies & devices. Smart trucks/containers for border control – single point of entry electronic data.

4.3 GROWTH ACHIEVEMENT

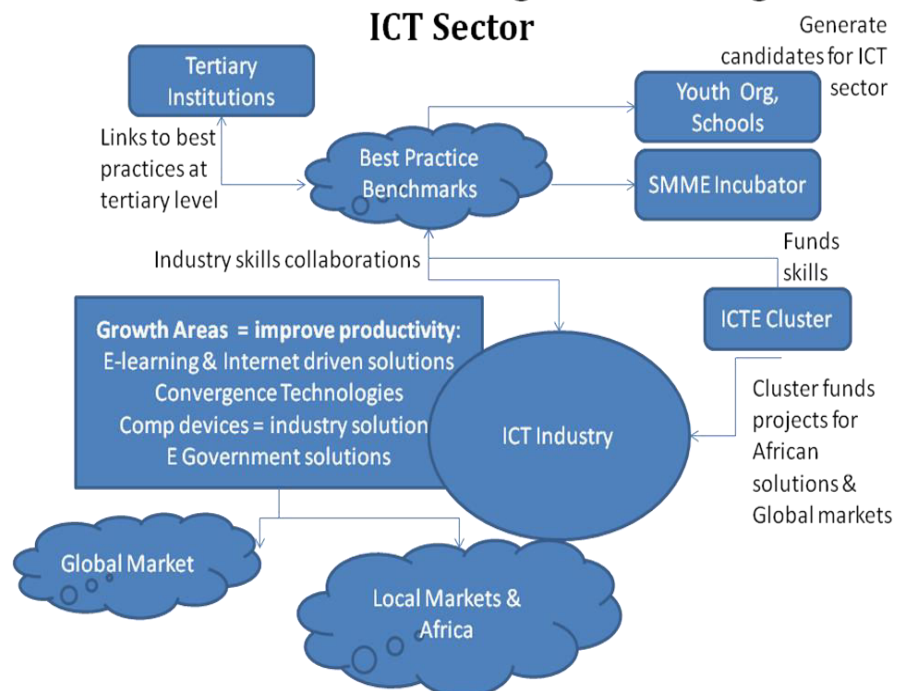
The diagrams below illustrate the common approach required by both the ICT and the Electronic sector in order for this growth to be achieved and the benefits of technology to be realized. Key to this is ensuring a steady supply of professional new entrants into the workforce as well as facilities that enable ongoing professional development of employees. A second critical factor to ensuring growth utilizes a Cluster approach to facilitate the building of solid partnerships between industry, government, tertiary institutions and other stakeholders. This vital component seeks to maximize information dissemination, encourage sharing of knowledge and facilities and improves access to support structure as well as access to critical technologies. A third vital component in creating an enabling environment for growth is to engage with schools and young organizations to build a culture of learning, problem solving skills and critical thinking skills. Technology provides the ideal platform to quickly and efficiently provide a vast array of knowledge resources to

Chapter 4: A Focus on ICTE SMME Potential Growth Areas

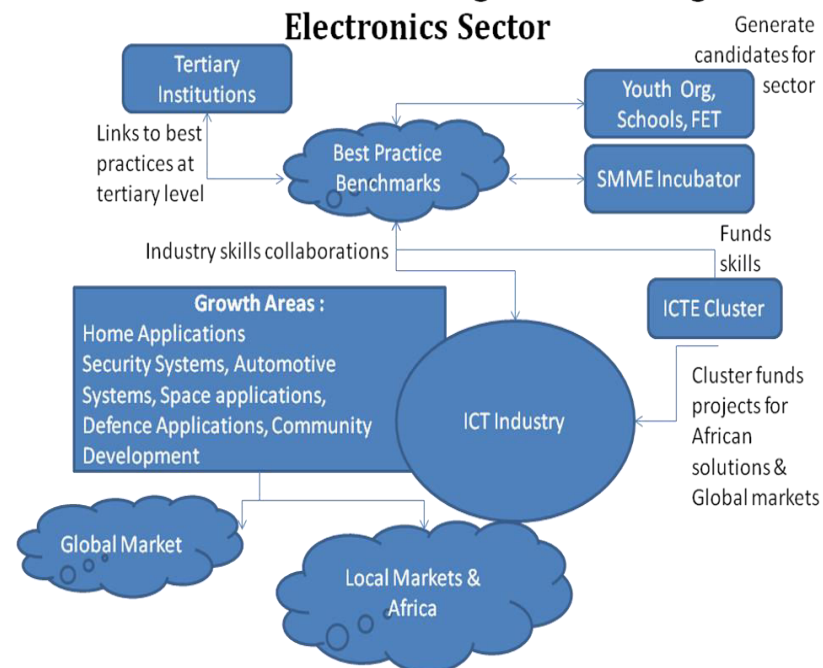
both teachers and students. Internet/convergence driven projects encourage schools to work together on subject matter projects also serve to promote understanding of different cultures and enhance research and collaboration skills.

Diagram 4: Models for Growth in the ICT and Electronic Sectors

SMME & Stakeholder Linkages for Growing the ICT Sector



SMME & Stakeholder Linkages for Growing the Electronics Sector



Explanations of the key elements of the models above follow

4.4 STAKEHOLDERS IN GROWTH

Best Practice Benchmarks: One of the keys to creating world class sectors that are geared for growth is facilitating knowledge and information sharing, assisting with access to key technologies, providing ongoing research into industry needs and opportunities, building partnerships with local, national and international 'best practice' tertiary institutions as well as programmes to produce industry ready people and programmes for ongoing professional development for the sector. The programmes and projects in Chapter 5 include all of these functions.

Tertiary Institutions: Business has already identified 'best practice' tertiary institutions and the growth model seeks to leverage from this expertise and involves working with both public and private 'best practice' institutions. Ideally such expertise should be utilized to raise the level of knowledge at other tertiary institutions, however, it is also critically important that specialization streams are encouraged and not diluted by attempting to create a one size fits all tertiary education.

Youth Organisations, Schools and FETs: Currently schools are producing an inadequate number of pupils able to enter into the ICTE fields. This is primarily a result of insufficient number of pupils studying Mathematics and Science subjects. A further problem facing school leavers is the lack of good career guidance information. Career choices are often made without adequate knowledge of the proposed field of study and/or knowledge of individual strengths and weaknesses and ability/interest to work in the chosen field. It is therefore critical that support for schools, FETs and youth organizations is provided in terms of resources available to assist teachers and children in the study of Mathematics and Sciences, as well as provide knowledge and understanding of the various careers available in this sector. In order to make this a manageable task, ICTEs with an emphasis on convergence technologies should be used to disseminate information and host a knowledge portal.

SMME Incubation: It is commonly acknowledged that small businesses create more jobs than large companies. Another positive impact of small businesses is their flexibility and willingness to create innovative products and services – they are also prepared and able to offer services to outlying areas at a more cost effective price than large businesses. However, in order for small businesses to flourish and avoid the many pitfalls of building a business, incubators need to be established to provide an enabling environment for small business growth. Partnerships between large and small businesses need to be facilitated – however, in order for this to happen, small businesses must have professional skills sets that enhance and complement those of the large businesses. Thus incubators need to encourage and

Chapter 4: A Focus on ICTE SMME Potential Growth Areas

promote ongoing learning in both technical and business areas. These programmes need to cater for the different levels of growth to be found in an incubator and be capable of also providing mentorship and guidance. In the early stages of growth it is difficult for a small business to absorb the cost of good technology and a professional environment. Thus a second important role of the incubator is to provide common facilities that enable a professional working environment as well as access to broadband technologies and information. Incubators rely heavily on building partnerships with industry, tertiary and training institutions, government and other SMME support agencies and their primary role is one of mentoring and facilitating the growth of the small businesses.

Industry: Competitive collaboration is the new buzz word in a globalised society and industries active participation is needed in order to grow the sector. They have a wealth of knowledge and resources that can assist in the growth as well as being able to clearly identify global trends, local opportunities and skills needs. Therefore they play a pivotal role in guiding many interventions as well as in building knowledge resources.

ICTE Cluster: Historically the ICTE sector has been fragmented and the launch of the Provincial ICTE Cluster provides an opportunity for the sector to work together to build the sector and to collaborate and give input into development strategies, frameworks and legislative issues that face the sector. In essence the ICTE Cluster is the glue that holds the various stakeholders together by facilitating interactions and developing and implementing strategies that grow the sector to the benefit of all players. The key role of the Cluster is to build partnerships, facilitate processes and implementation of the various Cluster Strategies as well as to fund initiatives to ensure that growth takes place.

4.5 CONCLUSION

It is evident from the two models that growth requirements for the ICT and Electronics Sector are very similar. Therefore the interventions described in the next Chapter apply to both sectors and the contents on these projects will be customized to ensure coverage of critical sub-sector specifics.

The following Chapter will outline a number of interventions that can be implemented in order to grow small businesses within the ICTE sector. These interventions arise from the above models that were produced from research conducted with the various stakeholders of this industry sector.

CHAPTER 5: INTERVENTIONS FOR ICTE SMME DEVELOPMENT

5. INTRODUCTION:

CONTEXTUAL BACKGROUND FOR SMME INTERVENTIONS:

The contextual background that informs the SMME interventions for the ICTE sector includes:-

- i. Building on existing best practice institutions in KZN to strengthen their offering and extend their reach as well as to enable replication customized to key nodal areas in KZN
- ii. The institutionalization of the ICTE Cluster office by the KZN Provincial government
- iii. The need to integrate the functioning of the ICT and Electronics segments within the ICTE sector in KZN.
- iv. The need to integrate relevant interventions with the KZN Provincial ICTE Sector Strategies (e.g. Broadband, Skills, Digital Community Hubs, Research, Development and Innovation).

As was discussed in the previous chapter, the models for growth in the Electronic and ICT sector comprise almost identical components (refer to Diagrams 2 and 3). This Chapter focuses on the key recommended initiatives in order to achieve growth in the combined sector. The main objectives of growing the ICT-E sector are:

- Electronics and convergence technologies as the driver of growth in ICTE
- Promoting the growth of BEE small businesses and encouraging the sector to achieve BBBEE.
- Cluster - to become the key public-private funded initiative to engage, grow and market the sector in the KZN province.

5.1 KEY FOCUS OF THE ICTE SMME INTERVENTIONS

In the SMME Development Programmes outlined in the table below, 8 critical interventions have been identified to ensure growth of SMMEs within the ICTE sector. Each intervention links directly back to the growth model discussed in Chapter 4. What is important to note here is that these interventions are interdependent. Furthermore, the majority of interventions should be implemented in parallel rather than in sequence as this ensures that SMMEs have access to the full set of development programmes and skills required for their growth into sustainable business entities. It is also critical that these development programmes are geared towards the different levels of SMME growth.

To increase the successful delivery of the programmes listed below, it is strongly recommended that the Province adopts a strategy of building on existing best practice initiatives. This will ensure that existing successes become more successful and have the funds and resources to replicate their successes elsewhere in the Province. Part of this replication process should involve the transfer of skills to local institutions (new or existing), at which point the replicated institution/s will play the role of mentor and knowledge channel.

It is also important to point out that the majority of the interventions should ideally be implemented in Small Business incubators. Therefore a primary role of the Province would be to create ICTE Incubators that facilitate and coordinate development programmes for local ICTE SMMEs.

1. ICTE SMME SKILLS DEVELOPMENT PROGRAMME

This intervention focuses on programmes that help build the general and technical skills specifically needed by ICTE SMMEs. Such skills include ICTE Business skills, Financial Management, Marketing, Public Relations, Export skills, Human Resource Management, Communication, Commercialisation, Research, Project Management, Incubator Management, Incubator Mentorship and Coaching etc. On the technical side, local SMMEs need to constantly upgrade their skills, specifically in the area of Internationally Certified programmes as well as to upgrade their technical skills to include new ICT trends such as convergence and mobile technologies.

Ongoing research into the needs of this sector will inform future skills development programmes to ensure that local ICTE SMMEs are capable of performing to a professional level that is acceptable to the national and international markets.

An ongoing engagement with schools will ensure career counseling to matriculants and generate interest in ICTE as a career choice. This can be done by creating audio visual media on growth opportunities and integrating it into the school curriculum.

Research has shown that creating a pool of skilled ICTE professionals is a fundamental pillar for growth (SAITIS 2000). However, with the rapid pace of change in this sector, it is increasingly difficult for tertiary institutions to produce industry ready candidates. A further issue confronting South Africa is that an insufficient number of students are selecting Mathematics and Science as Matriculation subjects. Couple this with the fact that fewer and fewer young people are opting to attend Universities and one can see that interventions at school level are critical. Thus, the list of focus areas for the Skills Development programmes includes pre-tertiary interventions, post tertiary interventions (to create industry ready candidates) as well as education and training interventions that will assist in growing a small business. It is also recommended that the first skills development initiative is to develop a detailed Sector Education Programme – this will ensure that the content of the various skills development programmes meet the needs of all the key stakeholders.

- Develop integrated Sector Education Programme - to be workshopped with industry, tertiary institutions, SMMEs and Government.
- Pre-Tertiary Interventions
 - Early career guidance assistance in ICTE field. Engagement with FET's, high schools and youth organizations.
 - Bursaries - for Basic Course in ICT / E Assembly line processes – creates industry ready candidates or entrepreneurs.
- Engagement with Best Practice Tertiary institutions. The aim is to forge strong partnerships that leverage the various areas of expertise as per input from industry.
- Use of ICT as a delivery mechanism for education and training. This would involve development of distributive systems for knowledge dissemination as well as the development of innovation multimedia e-learning material. The key here is that using ICT as a delivery mechanism enables remote access to critical ICTE training, interactive workshops, joint project participation and so on.
- Assistance for Import of skills for exporting firms
- Skills portal
 - Ongoing research on ICTE skills supply and demand
 - Enable access to information on skills development initiatives (public and private).
 - Access to e-learning material.

2. ICTE SMME INCUBATOR PROGRAMME

Chapter 5: ICTE SMME Development Interventions

This intervention comprises the set up of ICTE incubators in prioritised provincial nodal areas. Five areas are identified for this purpose viz:- Umhlathuze, Ugu, Newcastle, uMgungundlovu and Ethekwini.

A critical success factor for this intervention is to use the expertise of successful ICT incubators. Feasibility studies / business plans will be conducted for each nodal area as per an agreed timeframe.

Private corporate sector will also be linked into this intervention by encouraging them to adopt ICTE SMMEs for incubation. Encourage long term mentoring partnerships with corporates and SMMEs. This type of incubation is happening on a small scale but can be extremely effective. Ideally an incentive scheme would encourage corporates to nurture a small business of their choice. Such mentoring partnerships often involve a form of venture capital.

3. ICTE SMME STARTUP PROGRAMME

This programme would involve interventions that encourage start up SMMEs to enter into the specific fields mentioned below. E.g. Techno-Entrepreneur course. Such interventions may well require common use of sponsored labs to enable small businesses to hone their skills and develop the necessary products and services in these areas. This lowers the cost barriers for SMMEs to enter into capital intensive areas.

Some of the projects that can be taken up to help ICTE SMMEs in the start-up phase include:-

- i. Providing assistance for legislative compliance.
- ii. Facilitating access to SMME support agencies for the development of business plans, marketing and other pre-incubation requirements.
- iii. Facilitating access to incubation.

4. ICTE SMMEs CROSS-CUTTER PROGRAMME:-

This Programme includes interventions to link the ICTE SMMEs with SMMEs and stakeholders in other sectors so that they are ICTE enabled.

There are numerous opportunities to use ICTE as a service delivery enabler. However, in order for small businesses to understand how they can service these areas dialogue forums are required to assist ICTE SMMEs to understand the needs of the different sectors. Thus the workshops listed below would serve a double purpose: firstly to inform the SMMEs of how the sector currently

functions and identify problem areas, secondly to brainstorm innovative ICTE driven processes, products and/or services that improve efficiencies and solve identified problems in a cost effective manner in other sectors.

- Facilitate workshops between SMMEs and industry players in the growth target areas. For example: Agriculture, BPO, Health, Automotives, Mining, Chemical, co-operatives, Construction etc
- Facilitate workshops between SMMEs and Community institutions (eg library services, sports organizations, NGOs etc.)
- Facilitate workshops between SMMEs and government departments and agencies (e-governance solutions).
- Facilitate workshops between SMMEs and educational institutions, specific government departments such as health to look at how ICTEs can improve processes, service delivery and extend their reach.

5. ICTE SMME ENHANCEMENT PROGRAMME

This Programme targets the following:-

- ICTE SMMEs set up in Programme 3 above
- Existing ICTE SMMEs
- Start-ups

Most SMMEs [ICTE and non ICTE] once set up are faced with a barrier to growth. SMME enhancement can be achieved by providing mentorship programmes (technical and business orientated) that address the varied needs of the developing businesses from startup to established growth stages. Given the specialized nature of this sector it is advisable to include a Techno-Entrepreneur course for the early stage businesses and Masterclasses for the more advanced stage businesses. The complete set of incubation development programmes would form part of the incubation replication plan.

Workshops and Portals can be used to help SMMEs network with each other, forge partnerships and do business with each other. It is also recommended that the Portal includes an SMME discussion forum whereby more advanced SMMEs can share their solutions to common growth barriers. This will be carried out across the 5 nodal hubs and at local, national and international levels.

The following can be established and held:

- An SMME Networking Forum
- A SMME Export Development Programme

- Quality Improvement Workshops and Certifications - to enable local ICTE firms to meet quality parameters of local and international buyers.

Some of the countries identified for this purpose include Mauritius, Kenya, Malaysia, Singapore, India, USA, Canada, Finland, South Korea, Germany and Japan.

5. ICTE SMME FUNDING & INVESTMENT PROGRAMME

One of the biggest stumbling blocks to the growth of small businesses is access to start up capital as well as access to capital to fund the development of new products and services. Furthermore, the average new business owner has little or no understanding of venture capital and therefore few are willing to use this type of funding. Whilst a number of national and provincial funding mechanisms are in place, the long delivery cycle demoralizes new businesses, with many of them giving up after lengthy waits. The Provincial Government is in the ideal position to facilitate access to these funds as well as facilitate the process of application. Recommended interventions to improve access to finance are:-

- Workshops with ICTE SMME's on available financial assistance. This must not only talk about where to go for financial assistance, but should explain the different financing models pointing out their advantages and restrictions. Such workshops should also provide further assistance to potential SMMEs to assist them with the preparation required in order to apply for the loans.
- Workshops with SMME Finance providers, incubators and SMMEs on how to resolve the problems they experience and the problems experienced by applicants.
- Develop Financial Assistance Programmes for ICTE SMME's that enable financing in areas not covered by the existing finance schemes. Ideally this should look at an innovative model that links loans to mandatory mentoring and skills development and therefore reduces the risk of financing the loans.
- Look at existing funding programmes for SMME's and ones that SMMEs can extract benefits
- Propose new ways to plug the gaps or new ways and methods of improving access to these funds
- Introduce special interventions and actions to attract investment. Work with TIKZN and DIPA and other government investment agencies in the districts and municipalities

- Develop Financial Incentives Programmes for ICTE SMME's. For example, the DTI's Black Business Sponsored Programme provides a once off grant to assist small business to develop professional marketing products. This excellent scheme helps by providing up to R140,000 per business (80% funded by the DTI and 20% funded by the SMME). However, similar schemes are needed, particularly if the uptake of new businesses is to be encouraged in areas of new technology.
- Introduce a special provincial fund via TIKZN to fund SMME attendance to ICTE Fairs and conferences

There is the potential for international and local collaborations for the manufacture of selected electronic devices as well as for outsourced ICTE services. These interventions address this need from an SMME perspective. Special projects may involve the sponsorship of costly equipment that will lower the cost of entry into high capital areas.

6. ICTE SMME MARKETING & ADVOCACY PROGRAMME

South Africa does not have a history of supporting 'home-grown' products and services. In the ICTE sector this is clearly reflected by the fact that large ICT corporate favour international products. As a result it is extremely difficult for locally produced products to find a willing market even if the product is as good as, or better than the equivalent international product. Therefore a number of interventions are required to build advocacy for local products and services as well as to enable easy access to markets for SMMEs.

- ICTE Local Products and Services Marketing programme
Done within the auspices of the ICTE Cluster and TIKZN. Undertake database consolidation (list of local SMMEs and their products and services), marketing material and events, government contracts and tenders.
- Monitoring Local Market Behaviour - Monitor software purchases of formal ICTE firms - nationwide and concurrently start a process of showcasing local excellence.
- Marketing excellence awards for ICTE SMME's [current initiative to be expanded]
- Funding to sponsor SMMEs to attend key ICTE conferences.
- Showcase local SMME innovation and excellence at conferences worldwide.

For the more developed small business, entering the global market can be daunting. The following interventions aim to provide access to information on global markets, ICTE spending patterns as well as information on buyer expectations for specific ICTE areas. It is important to workshop with SMMEs on business partnerships and collaborations so that once they are in a position to take products/services to market, they are well prepared to deal with the business transaction aspect.

- Identification of key global partners in ICTE trade [research based]
- Undertaking of a SWOT analysis of firms focusing on the export market [in KZN]
- Develop and Monitor skills transfer programme
- Workshops for entrepreneurs on how to break into the Global market and what they need to do to prepare their company for this type of work. This should include information on IP and international contracts. E.g. Global Market Programme
- Access to research documents on ICTEs in Global markets.

7. ICTE SMME PARTNERSHIPS AND COLLABORATIONS

In a knowledge based economy that is a part of the global world; collaborative competition becomes critical to the ongoing evaluation and improvement of the strategy implementation and the various interventions. Therefore building good relationships with various partners to facilitate the sharing of knowledge and best practices is important. Three key areas of partnerships have been identified to enable sufficient interaction and buy-in locally, nationally and internationally.

1. *For global best practice*

- Mauritius - Cyber City
- Malaysia - Knowledge Commission [in place]
- Ireland - to be identified
- Singapore / Japan - to be identified
- Silicon Valley - to be identified
- India - *e-choupal* project of ITC / any other

2. *For government procurement, e-governance, roll out of Model*

- all District Municipalities in KZN
- all Provincial governments in South Africa

3. *Define precise terms of engagement with regard to ICTE SMMEs with agencies such as:-*

- ISETT SETA, DUT, UKZN, TIKZN, DIPa, BPeSA, DTI, DoC, UYF, Ukwaka etc.
4. Incubator soft-landings exchange programmes with partner countries -Malaysia, Korea, Vietnam, Taiwan, Singapore, India, UK, Germany, Japan, Canada, Australia

8. ICTE SMME RESEARCH, DEVELOPMENT, INNOVATION AND COLLABORATION PROGRAMME

This Programme looks at Research & Development , Innovation and Commercialisation from two perspectives:-

- i) Innovation Support Programme
- ii) Sector Monitoring

The first aspect aims to work with existing tertiary institutions to encourage and facilitate research in the ICTE sector that targets growth in focus areas. ICTE Incubators can partner with existing tertiary institutions that have already established commercialization institutions. For example, UKZN Innovation Company and the newly formed DUT Technology Transfer Office which won an award from the Minister of Science and Technology in November 2008 for the Most Innovative Higher Education Institution. The Department of Education has recently advised all Universities of Technology that they must set up commercialization offices of this nature, so the opportunity exists to work with these centres as well.

Commercialization centers have strong links to research departments and these need to be leveraged to encourage more ICTE research that will, over time, build a solid set of local innovative products and services and open the doors for international trade.

The second aspect of this Programme will monitor regional and national trends in the ICTE sector to help make informed judgments and decisions.

5.2 CONCLUSION

Chapter 5: ICTE SMME Development Interventions

The interventions discussed above are based on the existing needs of the ICTE SMME sector. Whilst many of these will be needed on an ongoing basis (to cater for new SMME entrants), others may need to be adapted to reflect future technologies, market trends and SMME growth trends.

The rollout of these interventions is explained in Chapter 6 and discusses two different implementation models as well as suggestions for ensuring that ICTE SMME Interventions keep pace with changing requirements. Overriding critical success factors are listed as well as budget, critical success factors and suggested key performance indicators per intervention programme.

CHAPTER 6: IMPLEMENTATION, MONITORING AND EVALUATION OF THE PROVINCIAL SMME ICTE STRATEGY

6 INTRODUCTION

This chapter sets out a quality control framework to enable monitoring and evaluation of the interventions discussed in Chapter 5. In each case the Critical Success Factors (CSFs) and Key Performance Indicators (KPIs) are listed. Whilst an attempt has been made to extend the KPIs into the second and third year of operation, it is strongly recommended that this strategy is reviewed annually.

Reviewing the strategy annually allows for the current economic climate to be taken into account. It also enables the development of new technologies and ICTE trends to inform the review as well as guarantees that interventions are aligned to current ICTE SMME requirements. A further advantage of annual review is that it will provide the opportunity to re-evaluate the first year's work and analysis the implementation process and progress. Hence one should accordingly anticipate changes to some of the interventions and their respective CSFs and KPIs.

6.1 IMPLEMENTATION OPTIONS

As a result of the interdependence of the programmes that follow there are two possible implementation options that the KZN Provincial Department of Economic Development can employ:-

1. **Option 1: Project by Project outsourcing.** The ICTE SMME budget ensures the availability of funds to enable the effective SMME Strategy implementation by appropriate entities and ensure that an integrated approach is taken by the various service providers to cater for the interdependencies of the various programmes. Thus each service provider would be responsible for monitoring and quality control of their

individual programme/project and its links to other programmes/projects, whilst the ensuring an overall monitoring and quality control of the implementation of the SMME ICTE Strategy.

2. **Option 2: Outsource the entire implementation.** The KZN Provincial Department of Economic Development can identify a best practice institution to implement the SMME ICTE Strategy programmes. This service provider would then be responsible for the total monitoring and quality control and would in turn oversee the implementation of individual programmes/projects by selected best practice service providers of its choice. This service provider would then be responsible to ensure that the implementation ensures the interdependencies between the various programmes/projects takes place.

To increase the successful delivery of the programmes listed below, it is strongly recommended that the Province adopts a strategy of building on existing initiatives. This will ensure that existing successes become more successful and have the funds and resources to replicate their successes elsewhere in the Province. Part of this replication process should involve the transfer of skills to local institutions (new or existing), at which point the replicated institution/s will play the role of mentor and knowledge channel.

It is also important to point out that the majority of the interventions listed below need to be included in Small Business incubators. Therefore a primary role of the Province would be to facilitate access to information and programmes so that these can also be included in the development programmes of incubators.

6.2 OVERALL CRITICAL SUCCESS FACTORS

1. ICTE SMME programme is adequately resourced
2. Stakeholder buy in to the ICTE SMME programme is strong

3. Identification of best practice (for partnerships and replication)
4. Availability of funding for programme implementation

6.3 INDICATORS

In order to track and monitor progress for the implementation of the strategy and the ICTE SMME sector, the following indicators can be used at the outset. These indicators can be revised and amended continually

- 6.3.1.1 Number of ICTE SMMEs in skills programmes
- 6.3.1.2 Number of ICTE SMME participation in skills programmes
- 6.3.2.1 Number of provincial ICTE incubators established at nodes
- 6.3.2.2 Number of private ICTE incubators established
- 6.3.2.3 Number of ICTE SMMEs residing at incubators
- 6.3.3.1 Number of new ICTE SMME start-ups
- 6.3.3.2 Number of incubator-industry partnerships established
- 6.3.4.1 ICTE SMME sales (total turnover)
- 6.3.5.1 Number of ICTE SMME funding programmes
- 6.3.5.2 Amount of investment in ICTE SMME
- 6.3.6.1 Number of international incubator exchange programmes
- 6.3.6.2 Number of local incubator exchange programmes
- 6.3.6.3 Number of partnerships established
- 6.3.6.4 Number of research technologies, solutions and processes commercialized
- 6.3.6.5 Number of patents obtained

6.3 CONCLUSION

The success of these programmes and projects rests on the effectiveness of the all stakeholders working together.

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