A Digital Hub Strategy for Kwazulu-Natal, South Africa

Prepared for:

KZN Department of Economic Development

by

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LIST OF ACRONYMS

DPLG	Department of Provincial and Local Government
ICT	Information and Communications Technology
ISETT SETA	Information Systems Electronics and Telecommunication Technologies Sector Education and Training Authority
KZN	Kwazulu Natal
KZN DED	Kwazulu Natal Department of Economic Development
MPCCs	Multi-Purpose Community Centres (now called Thusong Service Centres)
NQF	National Qualifications Framework
SEDA	Small Enterprise Development Agency
UKZN	University of Kwazulu Natal
USAASA	Universal Service and Access Agency of South Africa

1. INTRODUCTION

Growth of the ICT sector has been identified as one of the key factors in stimulating economic growth in South Africa. Likewise KZN has recognised the importance of this sector in its Provincial Growth and Development Strategy and the Industrial Development Strategy. Not only is the sector seen as a critical enabler for the creation of a knowledge economy, but also as a contributor to social development and participation of the wider community through ICT-enabled activities. For this reason, the provincial Department of Economic Development (DED), in collaboration with Gijima KZN, has identified the need to develop a provincial Digital Hub Strategy and Action Plan.

To date, experience has shown that stand-alone telecentres have not had a high success rate and that the 'one size fits all' approach has not been effective. The general difficulties of sustaining telecentres are borne out by international and local experience. The emphasis on small pilot projects has generally not had the desired impact in terms of making ICTs more widely accessible, and a number of initiatives have had to go back to the drawing board to re-assess their strategies, India being a prime example. In South Africa, the Universal Service and Access Agency of South Africa (USAASA) has similarly had to face the fact that implementation strategies to address universal access have not been successful. Experience suggests that a much broader integrated approach is needed, which aligns the various ICT-related initiatives more effectively and explores ways in which a range of partners can be involved from the private and public sectors, as well as non-governmental organisations.

In KZN, various ICT-enabled activities are underway but the initiatives are fragmented, and there seems to be limited awareness between players of what is on the ground. There also seems to be more opportunity to explore partnerships with the private sector. If wider, improved and affordable access to ICTs is the goal within KwaZulu-Natal and, given the limited resources available, there is a need to ensure better alignment and a shared goal across a wider range of players. This needs to be a key element in the development of any strategy.

This document presents a proposed strategy for the roll-out of digital hubs in Kwazulu Natal. The strategy has been based on:

- The findings of an audit carried out on existing telecentres, multipurpose community centres and school cyberlabs in KZN (available as a separate report);
- A review of international experiences on sustainable telecentres (also available as a separate report), which particularly focuses on the experiences in India;
- Preparatory work carried out by the Meraka Institute for the development of this strategy; as well as

- The practical experiences of members of the project team, and inputs from selected experts and key players who were interviewed and/or who participated in a strategic working group session held in June 2007 and a workshop on 17 July 2007.

2. NEEDS AND OPPORTUNITIES

Several activities to increase ICT access for the public are already underway in KZN. Although these are not presently exploiting possible synergies between them, the fact that many are either in the planning stage, or already being implemented creates an opportunity for collaboration and possible sharing of infrastructure, training, technical support and improved service delivery. Included are the following (and there may be others which have not as yet been identified or fully explored):

- The KZN Department of Economic Development (DED) has been working in collaboration with the KZN branch of USAASA to investigate the deployment of a provincial network of Digital Community Hubs and Community Satellites. Although the present telecentre system is generally not working optimally, there are opportunities to build on some of the success stories and emulate these in other areas.

- The KZN Department of Arts and Culture has, through its library and information services, introduced computer stations into their libraries over the past few years. Ethekwini libraries already provide free Internet access.[1] The Carnegie Foundation provided funding to put ICTs into the Mzundusi library and the National Department of Arts and Culture has provided grants to cover the introduction of computers (capital, operational costs and some staff resources). The intention is to set up a small-scale Cybercadet scheme, providing work for youth in the community, and through which the public can be assisted with basic computer skillS support in the libraries. These will be paid part-time positions based on active recruitment through advertising. The Department intends rolling out ICT access points and improved ICT infrastructure to all their libraries. Creating a cadre of Cybercadets across a number of initiatives may create job creation opportunities.

- The Dube Tradeport initiative[2] is intending to create a common IT platform to support its growth of agribusiness in KZN. The proposed three freight villages and numerous agri-villages could cater for the inclusion of digital hubs and satellites operated by specially-trained operators who could render ICT-enabled support services to farmers, SMMEs, and citizens, while meeting the requirements from KZN for increased export production. Examples from India which could provide useful models include Indiagriline and the eChoupals (*cf.* separate report on international telecentre experiences).

[1] The Western Cape Smart Access project has adopted the approach of using libraries as access points. To date, over 100 000 users have been assigned emails.

[2] See Appendix II for an graphic representation of the Dube Tradeport initiative

- Local Integrated Business Service Centres are being set up in district municipalities – this could be an opportunity to establish Infopreneurs™ on the premises, to provide ICT-enabled services to SMMEs at a fee and to provide services to anchor clients.

- A number of cluster initiatives (including incubators) have been proposed in KZN e.g. manufacturing, footwear, etc. The inclusion of ICT access points could be considered.

- Increased access to ICTs through schools has been addressed through the USAASA Cyberlabs initiative and others such as Telkom, Microsoft and the provincial department of Education. This has had some success and there may be opportunities to extend access to the broader public through the school facilities.

What has not, to our knowledge, been explored are opportunities in which the private sector exploits ICTs to provide services in rural areas using a network of community access points. Relevant international examples include the selling of (railway) tickets, provision of micro-finance services, banking services, online retail shopping outlets, agribusiness, etc.

3. THE STRATEGIC APPROACH

3.1 The Infopreneur™ model

In the preparatory work for this strategy, undertaken by the Meraka Institute, the Infopreneur™ model was proposed as the basis for rollout in the province. The basic concepts of this model have been incorporated in the development of the present strategy, largely because the Infopreneurial™ concept aligns closely with best practice emerging locally and from India.

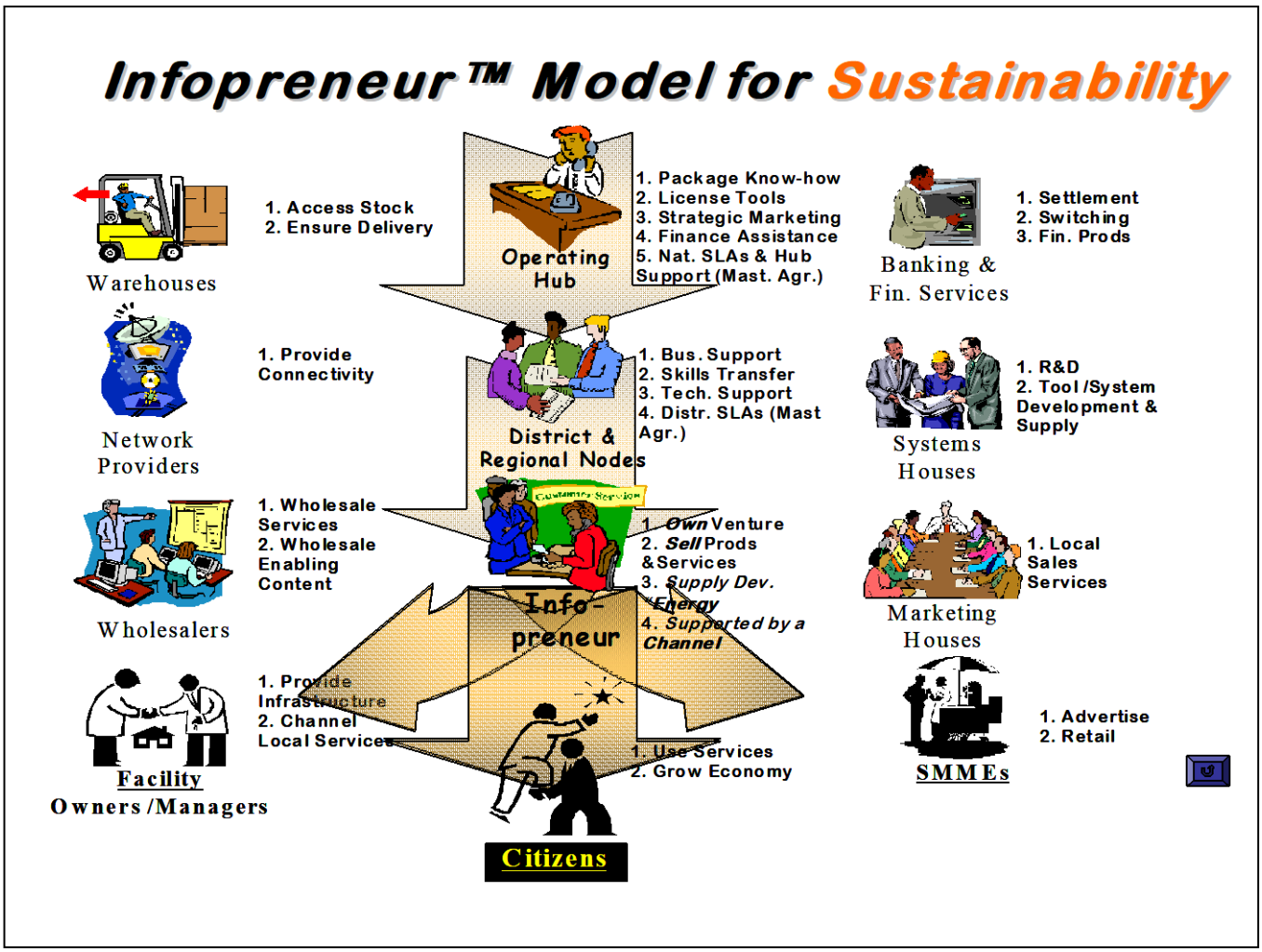
3.2 What is an Infopreneur™?

The Infopreneur™ model, created by the Meraka Institute (CSIR), is seen as a possible way of addressing staffing and sustainability problems experienced at community level service centres. Infopreneurs™ are self-employed social entrepreneurs using ICTs to enhance the range of their service offerings.[3] They generally operate in a franchise-like mode, as a network of operators, and managed through an operating hub which takes responsibility for strategic marketing, coordination of training and know-how, mentoring, project management and business development to facilitate bringing Infopreneurs™ and potential clients together.

[3] There are similarities in concept and function between this and the proposed Village Level Entrepreneur (VLE) in the Common Services Centres being instituted by the Government of India

The model makes several assumptions which are integral to the present strategy:

- Revenue streams arising from most rural communities are too small to sustain telecentres.
- Alternative revenue streams have to be sought outside a community through anchor clients who could be in the public or private sector – likely sources are government, retailers, banks, micro-finance institutions, service providers, companies sourcing products e.g. crafts, agricultural products, tourism services, etc.
- Infopreneurs™ provide an outreach (front office) resource for anchor clients who otherwise do not have the networks in place to reach the community marketplace.
- Infopreneurs™ need a mix of skills not presently addressed through existing training providers i.e. marketing and business skills as well as ICT skills. These are scarce resources (or even non-existent in many communities) and will therefore require active recruitment and training, and succession planning, since turnover is generally high when people have acquired ICT skills;
- Infopreneurs™ need to be managed through an operating hub (and possibly regional hubs) to ensure adequate support and management of high-level business development, and to ensure that sufficient back-end clients can be found to support entrepreneurial activities in remote locations.



Source: Meraka Institute, CSIR

3.3 The Beneficiaries

The strategy will focus on the community marketplace (also referred to as the Bottom of the Pyramid (BOP)), as indicated in the figure below. Various players and service providers within the private and public sectors need to focus on integrated service delivery within both the socio-political and business arenas. This community marketplace constitutes the bulk of the KZN Digital Hubs' marketplace.

Source: Meraka Institute, CSIR

3.4 The Service Offerings

The Infopreneur™ model identifies the following generic service offerings, based largely on local experience but corroborated with experiences elsewhere. The list is a good starting point for assessing local user needs for service delivery – we make specific recommendations regarding possible service offerings later in this document.

Generic list of services which could be offered by Infopreneurs™ (KZN Draft Strategy, Meraka 2006 with additional information)

1. **Database Related Services:**
   a. (Spatially Referenced) Data Creation & Maintenance.
      i. LED Data (Economic Indicators)
      ii. Local Business Promotion.
      iii. Tourism Catalogue.

2. **Information & Advisory Services:**
   a. Front-desk / Monitoring & Evaluation Services.
   b. Business / Project Development. Services
      i. SWOT / Idea analysis.
      ii. Business Plans.
   c. Process & Reference Information (Branded).
   d. Event /Community Diaries.
   e. Audio-visual & Broadcasting
   f. Tender Advice Services
   g. Marketing Intelligence
   h. Consumer research

3. **Office Services (Telecentre):**
   a. Phone, fax & copying.
   b. E-Mail & Internet.
   c. Entertainment /Gaming /Café
   d. Desktop Publishing.
   e. Computer Assisted Learning.

4. **Agency Services:**
   a. BDS /SEDA /OCP Offices
   b. Membership Org. (e.g. NAFCOC).
   c. Youth & Academia. (e.g. Umsobomvu Youth Fund, UNISA).
   d. Financial Services
      i. Individual (Insurance, Funeral, Housing)
      ii. Group (Ins., Loans, Save, Fun.)
   e. Bureau services (e.g. accounting.)

5. **e-Banking Services:**
   a. Bank Accounts and debit cards.
   b. Electronic payments & transfers.
   c. Pre-paid commodities.

6. **ICT Services:**
   a. WAN connectivity.
   b. LAN connectivity.
   c. HW / SW Supply & Maintenance / refurbishing

7. **Commerce & Logistics Services: (currently being developed w SAP Gmb)**
   a. Procurement Services.
   b. Inventory Services.
   c. Transport brokerage and logistics services.

3.5 The Framework

To date, the telecentre approach has been based on a 'one-size-fits-all' model which has not worked well in practice. Supply-driven models, based purely on the provision of ICTs to an undefined market, have not found sufficient interest to make them sustainable. The telecentre audit carried out in preparation for this strategy clearly indicates that most have not been viable and are barely functional.

The proposed strategy has to make allowance for the differing needs within and between communities – SMMEs require different services to women-headed households; unemployed youth have different requirements to government employees. We do not believe that enough emphasis has been placed on fully understanding where the various needs lie – the audit reveals some perspectives on needs but more information would be needed before any implementation takes place to ensure alignment with user needs. Working with institutions who already understand their user base is therefore a critical element.

We therefore propose a multi-pronged evolutionary approach which requires interventions in several areas and through various channels, but building largely on existing initiatives and on key economic development activities in the province. The key building block will be the creation of a network of Infopreneurs™, coordinated by a facilitating institution (the ***network orchestrator***) and underpinned by collaborative efforts in three key areas:

- Provision of robust ICT infrastructure, including the adeqaute provision of power sources to drive this infrastructure;
- Appropriate and relevant content development; and
- Capacity building and skills development.

We propose the following **six key strategic interventions,** each of which is presented in more detail in Section 4:

1) Establishment of an agri-support network as an integral part of the proposed freight villages / agri-villages network which will link to the Dube Tradeport initiative;
2) Establishment of an ICT-enabled business support network;
3) Establishment of digital hubs and satellites within municipal offices;
4) Expansion of school cyberlab activities to allow community access;
5) Expansion of ICT access in libraries; and
6) Establishment of a network of kiosks in key locations for the 2010 World Cup.

Other possibilities that may be considered at a later stage include kiosks and mobile units in deep rural areas.[4]

The figure below shows a graphic representation of how we see the high-level model. What is critical in the model is the function of '*network orchestration'*, which will ensure better coordination in terms of:

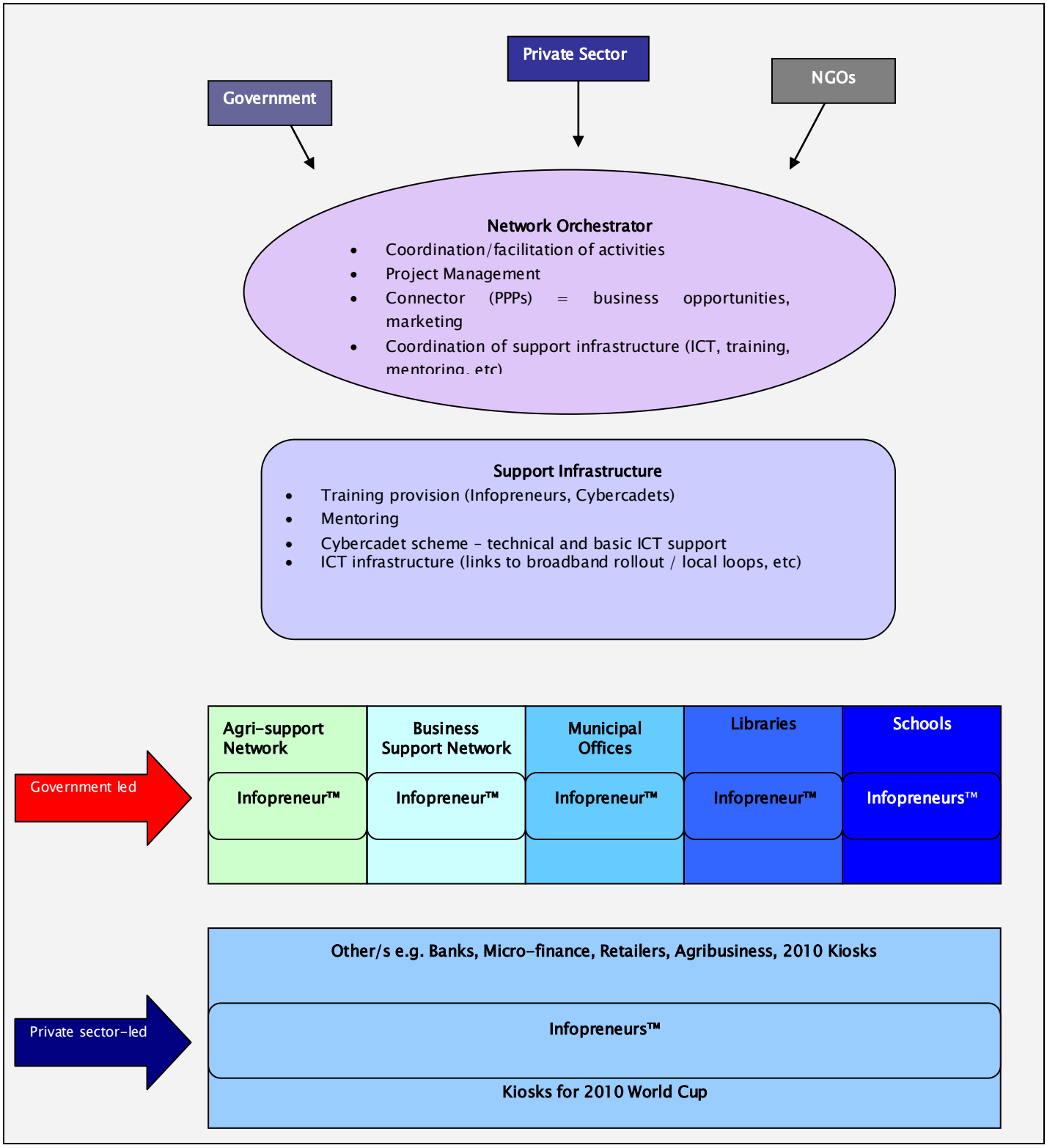
- Optimal rollout of ICT infrastructure;
- Identifying, operationalising and maintaining potential business opportunities for entrepreneurs;
- Consolidated activities in skills development and mentoring of Infopreneurs™ and Cybercadets;
- Ongoing technical support;
- Facilitating the possible sharing of physical infrastructure (e.g. buildings, ICTs) and other resources e.g. financial and marketing capacity; and
- Facilitating and coordinating the various activities, involving numerous and varied players, outlined in this strategy.

The institution which undertakes the role of 'network orchestrator' has to meet the following criteria:

1) It is regarded as a credible institution by most key stakeholders
2) It shows strong project management capabilities, and with a track record for delivery; or it should have the capability to contract in such skills where required;
3) It is likely to be an institution which is situated outside the provincial or national government structures, with autonomy to carry out its functions according to agreed upon deliverables;
4) It will be overseen by a board comprising representation from key leaders and experts from government, the private sector, the research community and civil society;
5) If at all possible, existing institutions should be considered rather than the establishment of a new structure. At this stage the ICT cluster appears to be the strongest contender for taking on this function.

[4] This should only be addressed once the network of Infopreneurs is well established and has proved to be sustainable. As a second phase a hub-satellite network of kiosks could be set up. At this stage it is very unlikely that these will be sustainable as there is no framework within which such kiosks could be operated.

POSSIBLE MODEL FOR ROLLOUT OF A DIGITAL HUB STRATEGY IN KZN



3.6 Critical success factors

- Reliable, improved, more accessible and more affordable connectivity
    - Proposed implementation must be linked to the
        - KZN broadband strategy implementation
        - Proposed changes in unbundling of the local loop and availability of underserviced area licences which will present new opportunities for universal service and access
        - Wifi / WiMAX community networks
        - Increased use of mobile networks and applications
        - Provision of reliable electricity or alternative energy sources.[5]
- A network of skilled Infopreneurs™ who have the necessary marketing and business skills as well as ICT skills, together with the passion and drive to succeed in running their own businesses.
- A multipronged approach is needed, with strong linkages to the key strategic priorities of the province in terms of economic growth and social development.
- Demand needs to be created for ICTs, and citizens need to understand the role that ICTs can play in improving their lives and livelihoods. Massification of ICT literacy needs to be intensified – marketing campaigns have not been very effective to date and communities are unaware of even those few services that are offered.

3.7 Assumptions

- The desire for a more integrated approach. Many ongoing activities are fragmented, resulting in duplication of effort.
    a. Improved linkages and coordination is required between existing activities in:
        i. Libraries
        ii. Integrated Business Service Centres (IBSCs)
        iii. Schools and Cyberlabs
        iv. Telecentres
        v. 2010 activities
- Some telecentres will never be sustainable and will require support as a public service.
- Telephone lines and connectivity will be available.
- Power supply will be available.

3.8 Risks

- **Lack of integration of effort** – consolidation of scattered efforts throughout the province is required if any visible effects are to be seen.

[5] The telecentre audit identified this as a major stumbling block in the provision of connectivity. In most cases, power outages were numerous and extensive in terms of downtime.

- **Lack of connectivity** – in many of the existing ICT-enabled centres, telephones are not working and typical telecentre services cannot be delivered. If this is not addressed more effectively, it is unlikely that broader ICT access can be achieved.
- **Lack of skills levels** in potential Infopreneurs™ – most agencies who have carried out work in this arena regard the lack of appropriate business skills as a major stumbling block. The lack of ICT skills likewise is a limiting factor. An inability to address appropriate skills development in Infopreneurs™ is likely to result in continued failure.
- **Lack of start-up funding** – underresourcing is generally a problem for SMMEs. Start-up funding to provide equipment and initial operational costs will have to be sourced through external mechanisms as most Infopreneurs™ are unlikely, particularly in rural areas, to be able to provide their own funds.
- **Lack of ongoing support** – current levels of support and mentoring of Infopreneurs™ has been inadequate and has been a major contributing factor to failure.
- **Lack of reliable income streams** – revenue streams need to are generated from outside of the community as many, particularly in deep rural areas, are unlikely to generate enough income to support a digital hub – the Infropreneur™ model has to date been one of the more successful local models and was proposed for the Mzundusi Hub.
- **Lack of ICT familiarity** is the case in many locations where KZN wishes to roll out ICT-enabled services. There will therefore have to be a massive awareness raising initiative and massification of ICT literacy skills development hand-in-hand with any rollout effort.

4. STRATEGIC INTERVENTIONS

The six proposed strategic interventions are presented below according to:

- Target markets and beneficiaries
- Institutional infrastructure (physical facilities, ICT infrastructure)
- Staffing
- Skills requirments
- Training and support
- Institutional and governance structures
- Sustainability.

Intervention #1:
Establishment of an Agri-support Network

Appendix I provides a graphic overview of the proposed Dube Tradeport agribusiness activities and its linkages to freight villages, which in turn will be connected to agri-villages. Each of the freight villages will be equipped with cold storage facilities, and will be housed close to fresh produce markets, thereby forming a transport and logistics chain. There is likely to be a high demand for ICT-enabled services from farmers using the facilities, those

involved in the scheduling and transporting of agricultural products, as well as from provincial government who need data to support their economic planning activities. Such services could be contracted out to a network of Infopreneurs™ [6] who will run the facility on an outsourced basis for the freight and agri-villages. The design of the freight villages should include provision for setting up an ICT-enabled service in a location which is suitably branded and visible to potential users. The possibility of working together with secondary cooperatives should also be considered.

Establishment of an Agri-support Network	
Target markets / beneficiaries	Primary: Farmers, cooperatives (primary and secondary) Secondary: local community members
Products and services[7]	• *Information services,* e.g. crops, market prices (local and international), farming practices, etc • *e-Procurement,* e.g. purchase of seed, fertilizers, pesticides; access to markets - requests for delivery of agri-products into local, regional and international markets • *Database services,* e.g. maintenance of records for farmers such as produce sold (volume) and price, paperwork required for export, financial records, data capturing and statistical analysis for provincial/national government • *Agency services* e.g. keeping of records for cooperatives, farmers associations, community associations • *Telecentre* (copying, telephone, fax, email, Internet) • *Business services* (typing of letters, etc) • *ICT Training - basic ICT skills* for farmers, local community members, local youth
Institutional infrastructure (physical facilities, ICT infrastructure)	Adequate provision should also be made for physical infrastructure requirements e.g. access to broadband connectivity, floor space to house computer facilities, adequate power points, easy-to-access facilities for users, adequate security, computer training facilities where required. Phase 1: • Digital Hub based in freight village which consists of telecentre facilities, computer training centre. A digital hub is likely to include access to 3 - 4 computers, connectivity, office equipment e.g. printer, fax, video camera, laminator, etc • Appropriate software to manage e-procurement / data management / GIS / records management / office services • Linkage to technical support system (Cybercadets/ Service providers) Phase 2: • Expansion to include satellites in agri-villages and beyond (kiosks staffed by 1 person, could be housed in a farmer's home if necessary) linked to Digital Hubs in the freight villages but located in smaller centres
Staffing	Phase I: 1-2 Infopreneurs™ per freight village; 1 admin person (possible

[6] Equivalent to Village Level Entrepreneurs in the Indian CSC model - see separate report on international sustainable telecentre experiences

[7] Note that services suggested here are drawn from the generic list of offerings presented in Section 3.4 of this chapter

Establishment of an Agri-support Network	
	opportunities can also be created for cybercadets) Phase II: Satellite offices to be staffed by one person but linked to Digital Hubs in freight villages
Skills requirements	Minimum: Diploma in agriculture / business ICT training would be a bonus Infopreneurial training can be provided
Training and support (initial and ongoing)	Infopreneurial training (learnership – marketing and business skills, ICT skills, project management, specialist skills in agri-business) Specific training on ICT systems to be used to link into freight villages and Dube Tradeport Ongoing mentoring provided through Infopreneur Network / Network Orchestrator
Institutional and governance structures	Service level agreements will need to be set up with Infopreneurs who will provide the services to the Freight Villages and agri-villages. Overall responsibility for the supervision and management of the Infopreneurs will rest with the Network Orchestrator, who in turn will assume responsibility for negotiations with key anchor clients, e.g. freight villages, provincial government, private sector companies wishing to make use of Infopreneur network for service delivery, agribusiness companies. other government departments, etc.
Sustainability (financial, human resources, infrastructure)	Revenue will be generated through: Services offered to anchor clients, either on a commission basis, or through contract agreements for the delivery of specific services as listed above. This is likely to provide the major portion of the revenue streams. Possible anchor clients include: • Department of Agriculture (contracting in of services for database management, telecentre) • Agribusiness companies – to be identified in collaboration with Dube Tradeport, SEDA, Department of Ariculture, Department of Economic Development • Logistics operations • Other government departments 2) Direct service provision to farmers and communities e.g. business services, telecentre, computer training. From previous experience, it is unlikely that these services alone will generate enough revenue to support themselves. It is therefore imperative to ensure that anchor clients are in place to provide a more reliable revenue stream. It will be the function of the network orchestrator to identify and close negotiations with possible anchor clients

Intervention #2:
Establishment of a Business Support Network

Through the activities of the Small Enterprise Development Agency (SEDA) and the provincial Department of Economic Development, plans are underway to roll out Integrated Business Service Centres in each of the District Municipalities. We propose that each of these facilities should consider the inclusion of a digital hub in each of these centres to provide ICT-enabled services to be delivered to SMMEs. At this stage, it does not appear that planning of facilities has taken the inclusion of a digital hub into consideration – this presents an opportunity.

Business Support Network	
Target audience / beneficiaries	• SMMEs
Products and services	• Telecentre (phone, fax, photocopying) • Business services and advice (letters, applications, etc) • E-government support • Basic ICT training (where facilities are available) • Tender procurement / submission of e-tenders • Market information
Institutional infrastructure (physical facilities, ICT infrastructure)	• Existing and planned Integrated Business Support Centres (IBSCs) in District Municipalities • Digital hub equipment (1 – 4 computers depending on need); office equipment; required software to provide abovementioned services; • Floor space in IBSCs (size depends on availability, services required)
Staffing	1 – 2 Infopreneurs™ Cybercadet assigned where available
Skills requirements	Preferably 2 – 3 year post-school education Level of skills dependent on level of services offered, and likelihood of finding skills in the area Basic ICT / business skills Infopreneurial training
Training and support (initial and ongoing)	Infopreneurial training Mentoring support to be increased, particularly in marketing of services Set up support infrastructure for business support Infopreneurs™
Institutional and governance structures	Service level agreements with IBSCs; to be negotiated by Network Orchestrator with Infopreneurs™; Infopreneurs™ to be managed by Network Orchestrator.
Sustainability (financial, human resources, infrastructure)	Possible anchor clients: • Government (for provision of e-government services) • Banks • Provincial government (provision of tender services) Increased revenue streams to be found through other anchor clients e.g. retailers, microfinance institutions, other companies within the Business Support Centre Consider Thusong model with the IBSC being the anchor client.

Intervention #3:
Establishing Infopreneurs™ in Municipal Offices

This strategic intervention will largely be led by USAASA, who have recently made a decision to change direction regarding the rollout of telecentres. All existing and viable telecentres are to be incorporated into municipalities. Existing telecentres within Multipurpose Community Centres (now called Thusong Service Centres) will in future be managed as part of these larger centres. We believe that a multi-pronged approach will be needed to ensure that the existing telecentres and future proposed digital hubs are viable. Below are some proposed options:

1) ***Strengthen the capacities of existing stand-alone and MPCC telecentre managers*** where some evidence of sustainability is present – this could be done through additional training and mentorship. A new Infopreneur™ learnership is presently under development by the Meraka institute which consists of approved unit standards (Level 4) from the New Venture Creation learnership (under the Services SETA) and ICT skills (Level 5) managed by the ISETT SETA.
2) ***Reliable connectivity is critical*** – no digital hub can function if ICT infrastructure cannot be provided and this should be a prerequisite for the siting of any future sites at municipalities.
3) The ***connectivity at existing sites should be re-assessed*** – the proposed unbundling of local loops and the test case concerning the legality of community networks needs to be investigated urgently, as do other innovative solutions which will bring down costs;
4) ***Implement an improved and direct relationship between service providers and digital hubs***; at this stage there appear to be tripartite arrangements where existing telecentre managers do not have direct access to service providers but have to wait for USAASA to take action. The audit interviews reflect that this is not an ideal situation which results in delays of many weeks where equipment does not work and potential revenue is lost.
5) ***Review the existing relationships between telecentres and MPCCs*** and implement specific interventions to improve service delivery. This may involve a revision of the existing model and would need to be negotiated between the key players – DPLG, USAASA, KZN DPLG, KZN DED and the MPCC and Telecentre Managers. The option of setting up telecentres as cost centres in the MPCCs should be considered, with the government departments being the anchor clients to provide a basic revenue stream for these telecentres, based on a monthly payment for delivery of specific services. The possibility of the management of the telecentres being taken over by some MPCC managers should be considered. This will require closer control over the management of the existing service level agreements with telecentres.
6) Regarding future rollout of new digital hubs and satellites, we believe that an ***entrepreneur-based model should be developed*** through public-private sector partnership. The Indian CSC model could serve as model, where the government has committed to a 25% revenue share to contractors for the provision of e-government services on its behalf (it thus becomes an anchor client for the vast network of village

level entrepreneurs).[8] This is an incentive for a) entrepreneurs to be guaranteed work through a government revenue stream; b) an incentive for government since they believe that this model will cost less to implement than the traditional provision of services through government offices and c) an incentive to the private sector which can piggyback additional services on the guaranteed revenue stream from government and use this to grow other services.

7) The Limpopo Province is in the process of implementing a network of 62 youth Infopreneurs™ in each of their municipal offices. The initiative is being driven through the provincial department but implemented locally. The intention is that they will be employed for one year as interns under supervision of the municipality. They are to be paid a monthly stipend, in return for which they will take responsibility for data input into municipal databases to support LED analysis, databases of accredited service providers, etc. When their contracts expire, it is expected that each intern will be trained as an Infopreneur™ and will then be able to provide the services on a contract basis to the province. A one-year ***learnership*** will be set up. This model could form the basis for a similar activity in KZN.

8) KZN DED and USAASA have developed a Digital Community Hub concept which has been presented to a few municipalities (See ***Appendix II*** for a graphic representation of the functions envisaged in this model). What is however obvious from the assessment of the Inanda Hub, the only existing Digital Hub in KZN, is that a) the Digital Hub (telecentre, refurbishment centre) on its own is not fully sustainable, despite being successful in delivering on its objective of training SMMEs and providing ICT-enabled facilities. It is dependent on a number of resources outside the telecentre e.g. its MTN phone shop and revenue from its extensive training programmes, to provide the bulk of its revenue. We therefore believe that the rollout of Digital Hubs will need to be considered on a case-by-case basis.

Establishing Infopreneurs in Municipal Offices	
Target audience / beneficiaries	• Provincial and local government • Community members
Products and services[9]	• Database development and maintenance • Telecentre • Business services • Call centre An inventory of possible products and services that can be outsourced by government should be compiled.
Institutional infrastructure (physical facilities, ICT infrastructure)	• Depends on available infrastructure in municipal offices • Needs assessment to be undertaken as part of implementation
Staffing	1 – 2 Infopreneurs™ in District Municipalities

[8] This model has parallels with the Infopreneur model – Infopreneurs = Village Level Entrepreneurs; the anchor client is not based in local communities but outside and ensure a constant revenue stream for services delivered on its behalf in the community.

[9] Note that services suggested here are drawn from the generic list of offerings presented in 4.2 of this chapter

Establishing Infopreneurs in Municipal Offices	
	1 in smaller municipalities
Skills requirements	Post-school diploma Basic ICT skills / understanding of government services Infopreneur™ training
Training and support (initial and ongoing)	Infopreneur™ training Specialised ICT training for database systems
Institutional and governance structures	Service level agreement with municipal offices. To be negotiated with assistance from Network Orchestrator and in collaboration with Infopreneurs™
Sustainability (financial, human resources, infrastructure)	Possible anchor clients: • Government (outsourcing of services) • SMMEs • Community members • Service providers to government

Intervention #4:
Increased community access through schools and learning institutions

The audit results for cyberlabs revealed the opportunity of throwing open school cyberlabs to the general public. A concerted effort should be made to work with existing schools to assess the possibility of this option. The role of schools in community could be enhanced and scarce ICT resources could be made available. The expanded use could provide additional revenue streams for existing cyberlabs to fund expansion and upgrading of equipment and facilities. This will require collaboration with the Department of Education, learning institutions such as the Durban Institute of Technology and University of Kwazulu Natal. School that are already undertaking community outreach should be used to set an example for those who show interest and commitment.

A second opportunity exists in the establishment of an adopt-a-school project in collaboration with the private sector. This could stipulate that wider community access should be a prerequisite for participation and possible awarding of ICT equipment to schools. This could be a social responsibility project undertaken through the ICT cluster.

Increased network through schools / learning institutions	
Target audience / beneficiaries	• Local community members • Youth – entertainment, additional computer training • Parents
Products and services	• Telecentre • Entertainment • ICT training
Institutional infrastructure (physical facilities, ICT infrastructure)	• Existing school facilities • University campuses e.g. University of Kwazulu Natal's five campuses
Staffing	Infopreneur™ (could be locally trained teacher or community member, students working in holidays, also out-of-school unemployed youth –

Increased network through schools / learning institutions	
	Cybercadet scheme)
Skills requirements	High school / preferably post-school Infopreneur™ training to include ICT skills, entrepreneurial skills and possibly also specialist skills to assist in the school environment
Training and support (initial and ongoing)	Infopreneur™ training Ongoing support from network
Institutional and governance structures	Existing school and university governance structures
Sustainability (financial, human resources, infrastructure)	Possible anchor clients: • Community, particularly youth and parents • Local private sector • Adoption of schools by private sector e.g. Unilever schools, possibly ICT cluster members Some sucessful models based on fundraising and use of volunteers e.g. St Martin D. Porres in Port Shepstone, Mpofomeni in Pietermaritzburg

Intervention #5:
Increased community access through libraries

The KZN provincial library and information services already has a strategy to roll out more libraries in underserved areas. It has also been working on installing computer facilities in a number of their libraries. Initial discussions with the director of libraries revealed an interest for collaboration and the potential for using existing facilities for ICT training, the creation of a cybercadet scheme, and providing ICT access through the library facilities. The Northern Cape Province has also set up a successful Infopreneur™ in Pampierstad, an example that needs further investigation.

We do not believe that any specific action is required beyond recognition that libraries are likely to be significant players in terms of creating more ICT access points in communities. They should therefore be included in future discussions regarding provincial ICT-related developments. Their fledgling cybercadet scheme can usefully be integrated into the proposed provincial cybercadet scheme, which is addressed in more detail in the action plan.

Increased network through libraries	
Targets audience/beneficiaries	• Youth • General public
Products and services	• Internet access points
Institutional infrastructure (physical facilities, ICT infrastructure)	• Existing library facilities, including possible use of meeting rooms for computer training
Staffing	Cybercadets (job creation for youth in ICTs) Existing library staff Volunteers
Skills requirements	ICT training Cybercadets
Training and support (initial and ongoing)	Ongoing mentoring, as part of a provincial cybercadet scheme

Institutional and governance structures	Existing library structures
Sustainability (financial, human resources, infrastructure)	Possible anchor clients: • Budget for Cybercadets provided through provincial budget Technical support through existing library structures e.g. SITA

Intervention #6:
Creating a network of kiosks for the 2010 World Cup

This strategic intervention should be linked to proposed 2010 activities in the province. Detailed planning should be undertaken once the 2010 provincial strategies are in place. We have included this proposal so that a provisional budget allocation can be made for the commissioning of kiosks in time for the 2010 World Cup. These should be operated on a commercial basis. Consideration should be given to the re-deployment of these kiosks in other locations after the World Cup event.

Kiosks for the 2010 World Cup	
Targets audience/beneficiaries	• General public - • Tourists, • Sports enthusiasts (local, regional, international)
Products and services	• Kiosks providing information content relevant to 2010 World Cup • Advertising of tourist facilities • Government / SA information • Information on sports events, venues, etc
Institutional infrastructure (physical facilities, ICT infrastructure)	• Part of 2010 planning activities in KZN
Staffing	Contracted out
Skills requirements	Contracted out
Training and support (initial and ongoing)	Contracted out
Institutional and governance structures	Likely to be commercial operation
Sustainability (financial, human resources, infrastructure)	Revenue streams from advertising Redeployment of kiosks after 2010, possibly into municipal offices, beachfront areas, communities, etc

5. CONCLUSIONS

The strategy presented here covers a wide range of possible interventions, which will need to be prioritised. Proposals are made in more detail in the action plan, presented in a separate document – this includes suggestions for possible projects and estimated costs.

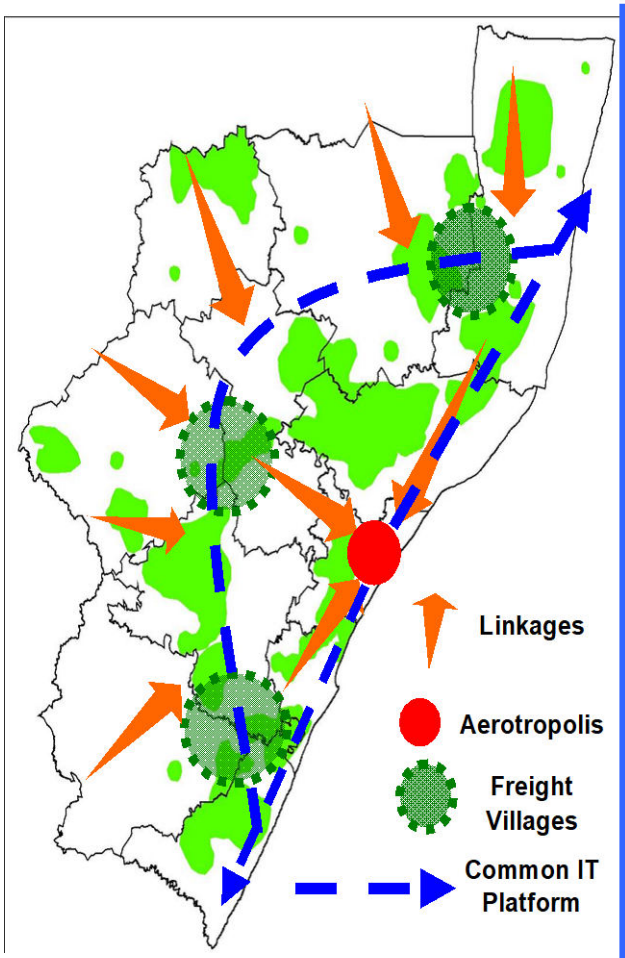
What is evident though, is that government will have to take a strong lead to support implementation of digital hubs in KZN. There will need to be evidence of firm commitment (political, financial, in-kind) if a government-led strategy, as this is likely to be, is to gain buy-in from a broader range of players.

Finally, the situational audit carried out to support the development of this strategy did not include an assessment of facilities at municipal offices, nor did it assess other ICT-enabled facilities e.g. Internet cafes, non-USAASA facilities at schools such as Telkom's school rollout, Microsoft Digital Villages, libraries, business support centres. It would be useful to have a knowledge base of other existing facilities and to the creation of a digitised map of existing public access points throughout the province. This would form a useful baseline and planning tool against which to measure future progress in providing increased ICT access to communities.

APPENDIX I: THE DUBE TRADEPORT INITIATIVE

Courtesy of Mlibo Bantwini, Dube Tradeport

Perishables - New platform for labour-intensive growth



- Regional specialization: Develop spatial clustering opportunities based on competitive advantage.
- Potential to create 3 freight villages to support DTP Agri Zone and cargo terminal

Examples of regional specialization & potential export products

Midlands region – cut flowers (proteas, other fynbos, roses, anthuriums, gerberas, heliconia), organic vegetables, baby vegetables (baby marrows,etc) sweet corn, mange tout,

North Coast – pineapples, Fresh Herbs (e.g. Coriander, Basil, Dill And Tarragon), Cut Flowers (Anthuriums)

Southern region - subtropical products (Exotic bananas, papayas, etc), macadamia nuts, organic avocados

Inland & northern Region - aquaculture products, mushrooms, organic vegetables , Lettuce, Peppers, agro Medicinal, Plants - essential oils (rose geranium, lavender), herbal teas

APPENDIX II: DIGITAL COMMUNITY HUB MODEL PROPOSED BY USAASA / KZN DED