

# “From Technologists to Business Developers” - the Evolution of ICT4Dev Practitioners in South(ern) Africa

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**Abstract:** In the light of multiple (documented) failures of ICT4Dev implementations in the developing world and especially in the light of the failure of ICT adoption, ownership and application in the South Africa MPCC initiative, the writers argue for a “commercial /business development” approach to ICT4Dev initiatives. Finding the (service delivery) channel; ensuring ownership and support in the channel; deploying ICT in “production” mode to render saleable products and services into the channel and establishing new ICT intensive service enterprises within this channel becomes the suggested paradigm for future ICT4Dev practitioners.

The paper therefore endeavours to provide a framework for sustainable community level eBusiness incarnations of ICT4Dev endeavours: Infopreneurs™ as “social entrepreneurs” in developing communities.

**Keywords:** ICT4Dev failure; development channel; multi-purpose community centres (MPCCs); Infopreneurs™; ICT4Dev sustainability.

## 1. Introduction

*Information and Communication Technologies (ICTs) for Development (ICT4Dev) has failed.*

“Strip away all the hype about rural telecentres and e-government for the masses and telemedicine for remote regions and e-commerce for micro-enterprises and what you've got – when you apply ICTs to the MDG (Millennium Development Goals) agenda – are the rusting tractors for the 21<sup>st</sup> century. Most of these projects never properly work, and for those that might just get off the ground, go back two years later, and it's all crumbled to dust. Yes, there might be exceptions but they are just that – exceptions; occasional minnows swimming against a riptide of failure. Our evidence base on this does need strengthening but a recent survey suggests at least one-third of such projects are total failures and one-half are partial failures, leaving little room for success. We are often blinded from this reality by the blizzard of e-development pilots, prototypes, plans and possibilities where “would” and “could” replace “does” and “has”[1].

### *1.2 ICT intensive Community Development Centres in the SA context*

Concurrently with experiences that led to the conclusion by Dr. Richard Heeks (above), there have been some developments in the service delivery arena of developing countries in the South - that have looked at ICTs as a core enabler - that are worth mentioning. One of these is the Multi-purpose Community Centre (MPCC) initiative in South Africa.

It is clear that the application of ICTs to enhance the effectiveness of MPCCs has been seen as a one of the “silver bullets” in the minds of a large section of planners as well as implementation agents /authorities to ensure enhanced effectiveness of such community level development facilities. Unfortunately the following comments about these initiatives are currently the rule rather than the exception: “From the burgeoning body of literature on experience with telecentre-focused MPCCs – in South Africa, as well as the rest of the continent where numerous donor-driven initiatives have been launched – it is evident that most MPCCs cost too much capital for the services they deliver, have great difficulty in covering running costs, and can only be sustained through ongoing donor grants or government subsidies.”[2]

### *1.3 Challenges regarding Ownership, Benefit and Sustainability*

With the precision tools of hindsight it has become quite clear that the relatively simplistic views of the ‘enabling powers’ of ICTs in the development arena has failed to deliver on the promised development goals, whether MDG or otherwise.

*“A classic example is Gyandoot; an initiative of computer kiosks in rural India. In 2000, amid much fanfare, this won awards from the Stockholm Challenge and the Computer Society of India. Later studies of Gyandoot in 2002 did not hit the headlines, but they found kiosks abandoned or closed; absurdly low usage rates of once every two-three days; and few signs of developmental benefits.”[1]*

This paper will argue that *development and implementation agents* need a *changed mindset* that sees the *creation of ICT enabled (service) entrepreneurs* that are focused on using ICT in the “production” mode (“the creation of hardware, software and other components of the ICT infrastructure”[1])(as well as *content* – our addition to the Heeks list), as their *main objectives*. These social entrepreneurs could operate within community development ‘channels’ and contribute immensely to the benefit and sustainability of these initiatives.

## **2. Objectives**

The objectives of this paper are 4-fold. It is an effort to:

1. Share lessons learned and challenges identified over a period of 10 (ten) years practical experience in the ICT4Dev arena;
2. Providing a framework for evolution from “technology movers” to practitioners who are establishing a sustainable network of “social entrepreneurs”;
3. Invite comments and contributions to the debate on ICT4Dev best practices; and
4. Invite participation from all stakeholders in (at least) the Southern Africa ICT4Dev arena.

### 3. Research, Development and Implementation Methodology

The approach and methodologies used by us during the 10 years of activity in this (ICT4Dev) arena are depicted on the matrix in the following diagram.

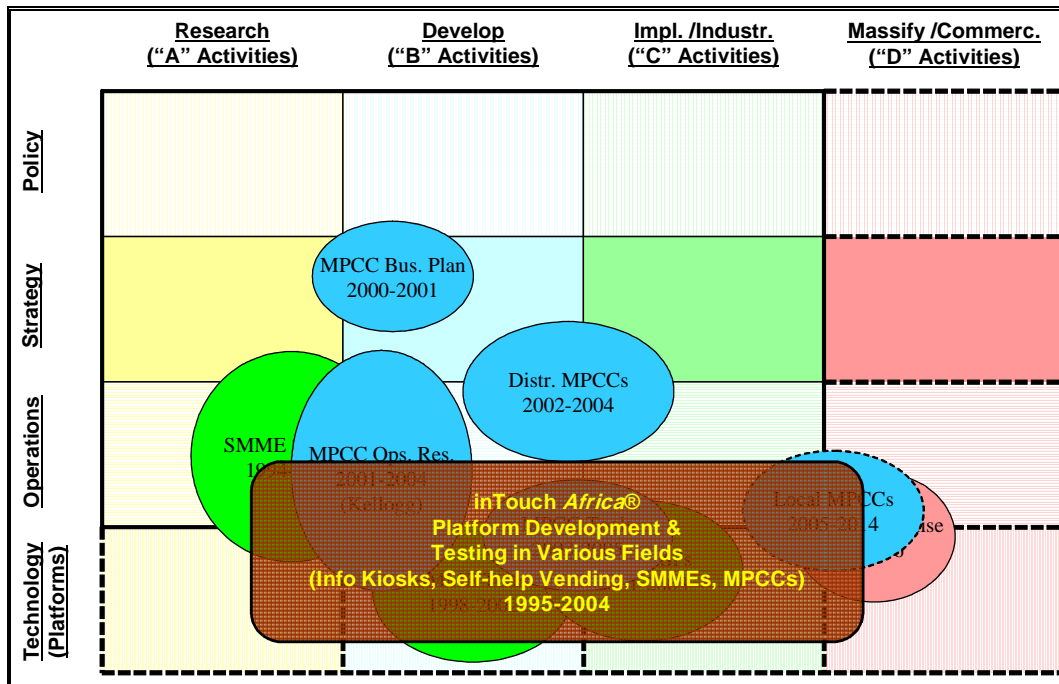


Figure 2: Research, development, implementation and massification activities over 10 years.

From the above, it should be clear that our expertise (and knowledge base) has therefore been shaped around: SMME (Small, Medium and Micro Enterprise) service delivery and support *operations research*; *developing models for MPCC operations* (1994-1995, 2001-2004); ICT4Dev *application development* (1998-2002); ICT4Dev *application implementation* (2001-2003) and ICT4Dev *implementation 'massification'* initiatives (current challenge).

### 4. Critical Issues

Four (4) broad categories of *issues* have been identified in our ICT4Dev work to date: *Context, Content, Technology and Deployment*. Various elements of these issues are summarised below with the focus of this paper clearly embedded in the *last bullet*:

- Enhance the *service channel* through the use of ICTs (Context issue);
- Enable *local people* to create *local information, knowledge & advice* – preventing communities from becoming ‘consumers’ on the wrong side of the “digital divide” (Content issue);
- Bring ‘Supply’ and ‘Demand’ together through *information bridge /channel building* (Content Issue);
- Overcome the *cost of bandwidth in Africa* through “localised” tools (Technology Issue);
- *Maintain information at “source”* – where the intellectual property (IP) is located (Technology Issue & Deployment Issue);
- Transfer technology to new environment and *ensure support, usage and mastering* (Deployment Issue); and
- *Establish sustainable ventures through job /enterprise creation in the information industry (Deployment Issue).*

## 5. Experience and Learning

The current *service channel* for *integrated community development* in the South African context is depicted in Figure 3 (EIC = Enterprise Information Centre).

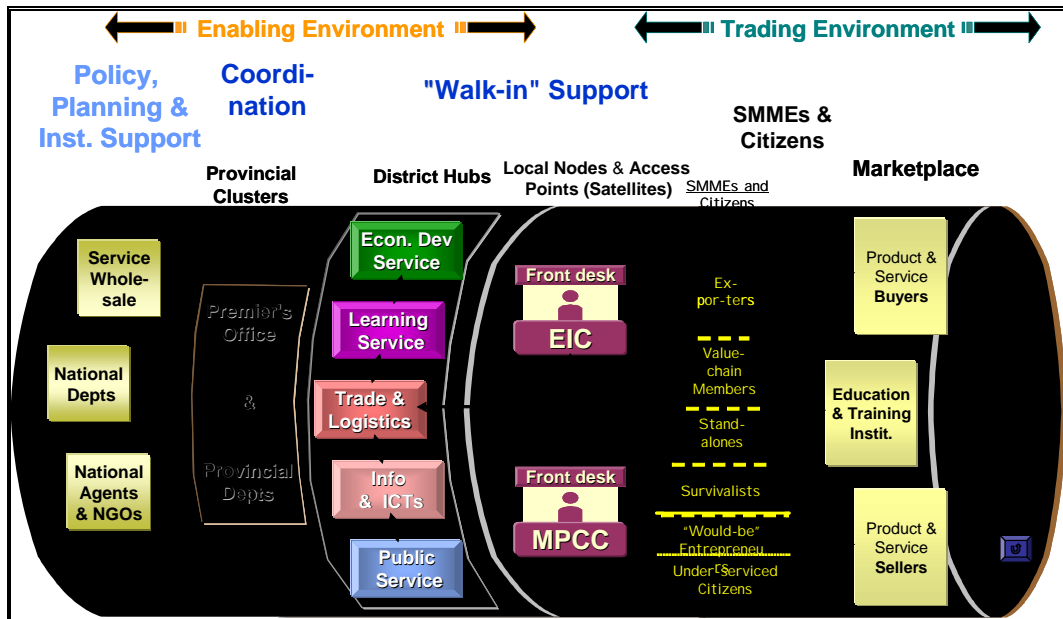


Figure 3: MPCCs and EICs as community level development facilities.

In most cases the *local access point* (MPCCs and EICs) are equipped (or planned to be) with ICTs and staffed with salaried employees such as Centre Managers (employed by Local Authorities), a Communications Officer (ward councillor or national government official) and (periodic) public servants from various departments rendering governments services. Figure 4 provides an overview of the *configuration of the local access point*.

To date the *real challenges* that have emerged were: (1) the creation and maintenance of a *sustainable staffing model* for the “front desk”; and (2) providing an *outreach orientation* to these centres.

India has recognised the fact that the *mode in which services are delivered* is critical to its effectiveness. They have thus developed a business model to ensure sustainability and success of their Telecentres as a service delivery mechanism. These Telecentres are run by local entrepreneurs (TARAKendras) as small businesses who have a substantial stake in the success thereof.[3]

Based on our own (and the Indian experience), we have developed the *Infopreneur™* model as a means of addressing staffing and sustainability problems experienced at community level service centres. Figure 4 provides a graphical presentation of this. These *Infopreneurs™* are *self-employed “social” entrepreneurs* utilising *ICTs in “production” mode* to enhance the range of their service offering. They are to provide a “front desk” (with clear competency areas as indicated in Figure 4) and outreach capacity at the centres where they are deployed. In order to achieve the relevant skills, Infopreneurs™ will be put through appropriate training programmes.

The greater percentage of *revenues* are designed to come from the “*back office*” *environment*, which means that the Infopreneurs™ will act as *agents* for a variety of “wholesale” institutions. These institutions will typically be service (and product) providers who want to expand their services to the “*bottom of the pyramid*” without setting up a branch office. To ensure that Infopreneurs™ remain *community focused*, they also offer services that are appealing to community ‘buyers’.

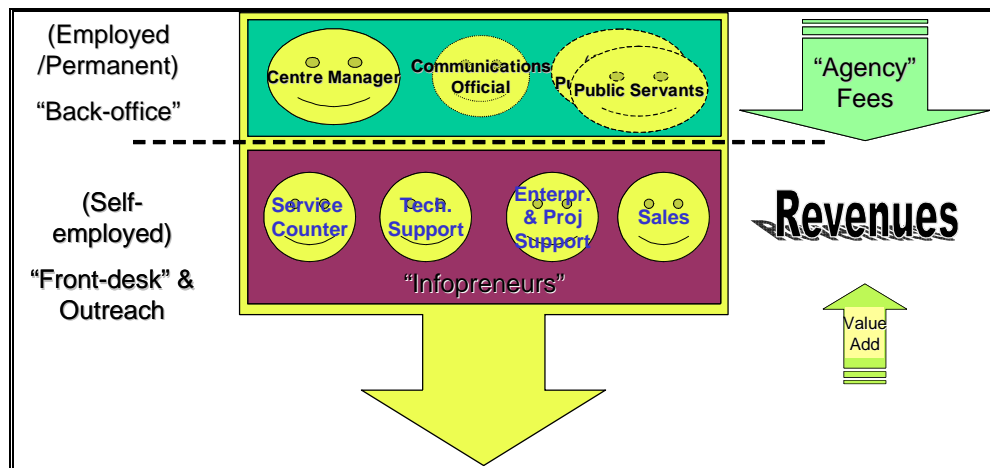


Figure 4: Envisaged “Local Access Point” configuration.

## 6. Preliminary Results and Assumptions

In response to these various challenges encountered over 10 years in the field of Information and Communication Technology for Development (ICT4Dev), we have recently developed and (initially) tested *a deployment model* for the implementation of ICT4Dev in a manner that establishes and support *information, knowledge and advice intensive SMME service businesses* called *Infopreneurs™*. These Infopreneurs™ are the *basic enablers and delivery channels* for an *integrated ‘service bundle’ into under-serviced communities* in a *self-sustainable* (commercial) manner. They utilise the *inTouch Africa®* application suite that addresses bandwidth challenges in communities in transition (African rural context). Figure 5 provides a graphical representation of the model.

Infopreneurs™ are ideally based at community centres that aim to service small medium & micro enterprises (*SMMEs*) and *ordinary citizens*. These centres usually lack the human capacity to successfully deliver on their mandate. In such environments, clients to the Infopreneurs™ are:

- Facility Managers /Owners who provide the *physical infrastructure*;
- SMMEs who benefit by utilising the *business development* and *other services* offered by the Infopreneurs™; and
- Ordinary citizens within communities who are able to access *relevant information and (commercial) services* rendered by these Infopreneurs™.

District /regional Nodes offer *business and technical support*, are responsible for *skills transfer* and enter into *SLAs* (Service Level Agreements) with new service ‘wholesalers’ at district level.

The Operating Hub *packages the knowledge, licenses* the (ICT) tools, does the *strategic marketing* for the Infopreneurs™ and sign *national level SLAs* with institutions to utilise the extended service channel /network.

Other identified role players are:

- Service providers (*‘wholesalers’*) who would want to extend their reach to the *“bottom of the pyramid”* by utilising the service channel, that the network provides;
- *Network providers* providing *connectivity* that Infopreneurs™ will use and sub-sell;
- *System houses* that will continue *researching, developing and supplying appropriate tools and systems* to the network as well as link “front desk” and “back-office” systems;
- *Warehouses* that will start featuring when *goods are moved over the network*; and
- *Financial institutions* will provide access to *banking services and financial products*.

See Figure 5 for an overview of this model.

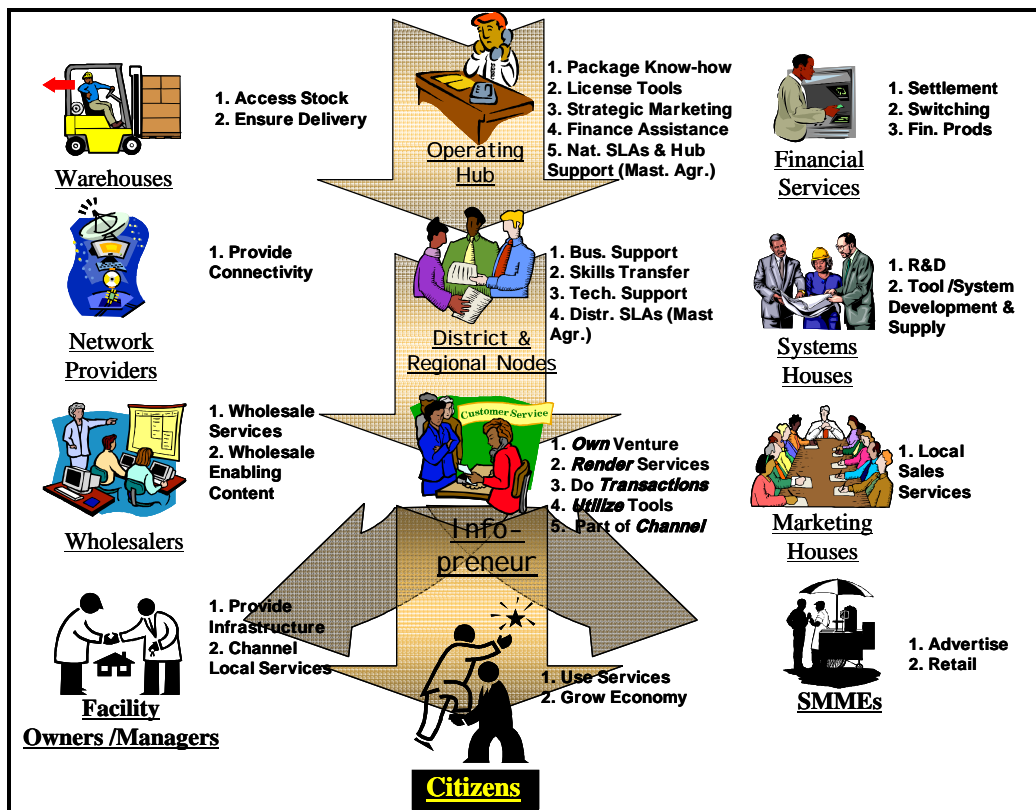


Figure 5: The sustainability model for Infopreneurs™.

## 7. Sustainability Benefits

The above model provides for *technology (ICT) intensive enterprises* in the *information industry* to be established, *utilising ICTs in “production” mode* to provide the *products, information and knowledge required* to run their businesses successfully.

*Current systems* (inTouch Africa®) developed to enhance the performance of centres that support SMMEs and citizens, *continue to form the platform used by the Infopreneurs™* for all their operations. These systems were previously used in isolation and fell in disuse, as there were no tangible (monetary) incentives for the operators to utilise it optimally.

The *focus* has therefore *shifted* (for the ICT4Dev practitioners in the development arena) *from moving technology “boxes” and applications to establishing* a (commercial) *“community of practitioners”* that also delivers on the development outcomes required.

Infopreneurs™ are *packaged micro enterprises*. The *package* includes “master agreements /*Service Level Agreements* (SLAs)” with various wholesalers, e.g. financial institutions, commercial banks, etc. for whom the Infopreneurs™ act as agents. It also includes agreements with appropriate training institutions for learnerships as well as support agreements from “wholesale” support institutions and the donor community.

Potential Infopreneurs™ benefit from gaining practical experience in existing workplaces (incubator mode) from where they are supported once they’ve moved into their own businesses. Alternatively, they act as (outreach) branches of such a “cluster owner” who in turn is supported by a “cluster co-ordinator”, ideally at district level.

A whole *network of practitioners* is thus deployed. The network *produces valuable data* and information concerning service delivery as well as buying and usage patterns at “the bottom of the pyramid”. The Figure 6 provides an overview of such a community of practitioners.

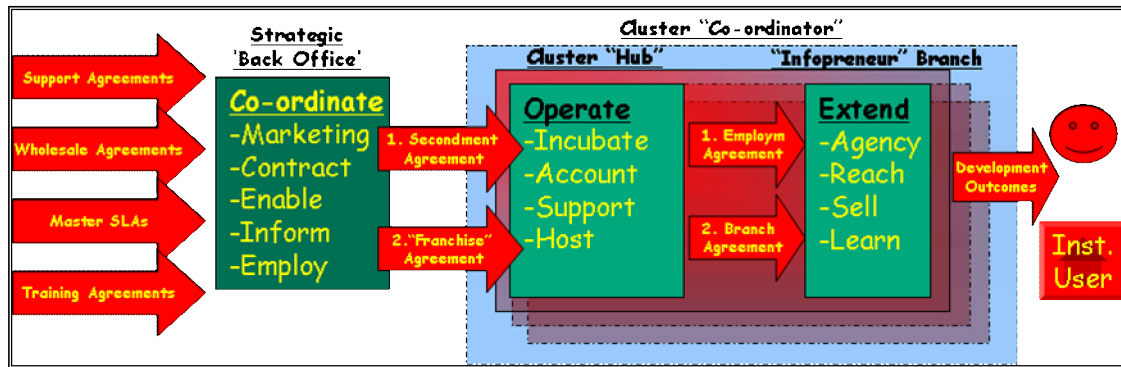


Figure 6: Community of Practitioners

## 8. Conclusions

It is therefore argued that ICT4Dev practitioners need to develop (and utilise) much more of a business development mindset. This new paradigm should put far more emphasis (than has been the practice to date!) on the following challenges:

1. Clearly defining the *complete channel* – from “back office” to “front desk”;
2. Ensuring ownership and support mechanisms *throughout* the channel;
3. Deploying *ICTs in “production” mode* at various points in the channel but very specifically at the “front desk” (modern day community well!);
4. *Supporting enterprise creation* around the ICTs in “production” mode;
5. Enhancing the *‘bundling’ of services /products over the same cost structures* (physical and human infrastructure, ICTs and support /maintenance mechanisms); and
6. Ensuring *intensive (“virtual” incubation) support* for these enterprises.

There is still *considerable validation work* to be done on this model and the developers are currently embarking on an extensive (province wide) deployment of the complete model to provide more clarity around questions like:

- What types of nodes /institutions are available to support the channel and “front desk” Infopreneurs™?
- What kind of service /product bundles will be required in communities with different profiles, e.g. deep rural, rural, peri-urban, etc.?
- What kind of person profiles (of the Infopreneurs™) would be more conducive to success?
- Which “wholesalers” will have a real interest (and commitment) in extending their reach to the “bottom of the pyramid”?

These and other similar questions would hopefully provide an incentive for other practitioners in this arena to participate in defining and providing greater clarity on the mindset (and practices!) required for the move from “technology diffusers” to (ICT intensive) “business developers”.

## References

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