

## COMMUNITY OWNERSHIP OF ICTs: NEW POSSIBILITIES FOR POOR COMMUNITIES

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### The challenge of rural access

It is now widely acknowledged even by the World Bank<sup>1</sup> that a liberalised market fully in compliance with their own rigid prescriptions can fail in certain circumstances, one of which is in delivering network access to low-income rural areas. Despite significant growth in infrastructure and access to telephony, and to a lesser extent the Internet, poor communities in the South - a majority of the people in sub-Saharan Africa - remain well beyond reach. This is one of the main sub-themes of the WSIS, one linked integrally to intense debates about financing mechanisms and the Digital Solidarity Agenda.

There is general agreement on the main obstacle: dispersed populations and low levels of income translate into higher costs and reduced per-customer returns, rendering conventional approaches economically unattractive, whether for market-driven or incumbent providers. Pooling users in the form of telecentres and cybercafés can enhance usage levels, but extending the reach of the network remains the key challenge.

This paper examines a different solution, one that combines a centuries old institutional form with the latest technological innovations. A combination of community-owned ICT enterprises and the new wave of wireless and related technologies together may offer significant potential to extend networks and offer new services to poor communities in rural areas. This approach can greatly reduce costs and maximise the value-added of community resources, enabling the emergence of a new business model that is both more economically sustainable and more empowering than anything else available. Furthermore, recent regulatory trends and ideas suggest that a major obstacle to such innovation - regulatory paralysis - may be easing.

Applying the same principles of community participation and control can also significantly enhance the viability and development impact of 'hybrid' public/private/community networks and service solutions.

### Why community-owned enterprises?

Certain advantages of a community-ownership model have long been demonstrated in infrastructure projects, in both developed and developing countries. From irrigation systems and water supply to local electricity plants and bridge construction, community ownership, democratic control and participation means that local needs are addressed more effectively and at lower cost. In more recent decades the benefits of community-ownership and participation, in terms of empowerment, have also been recognised and exploited to good effect.

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1 World Bank (2005), *Connecting Sub-Saharan Africa: A World Bank Group Strategy for ICT Sector Development*. Global Information and Communication Technologies Department.

A community-driven approach has a number of advantages:

- Community resources, such as manpower and public commons, are mobilised to support the development and reduce costs.
- High returns on investment usually demanded by private investor are avoided, and profits reinvested to reduce costs and improve service.
- As a non-profit development-focused initiative, new forms of financing may in principle become available, and even relatively poor communities can provide some initial investment on the promise of services that will address their development needs.
- Ownership means that communities highly value the service, and have a stake in its maintenance and sustainability.
- Services provided arise directly from, and are tailored to, user needs and affordability. ‘Cherry picking’ - offering only the most profitable services to maximise profits - is avoided.
- A successful community-enterprise can have a significant empowerment impact and a catalytic effect on community development.

Few realise that there already exists a rich and ongoing history in rural telephony cooperatives, now moving into ISPs, broadband and wireless access, in the US (where over several hundred cooperatives exist and benefit from public grants), more recently in Poland and in Argentina.<sup>2</sup> Local authorities have also taken up a similar role. These have a successful track record in terms of price and service quality and, most important, have been shown to contribute and often stimulate other development activities locally.

In poorer countries, local community control and participation is widely recognised as being critical to the success of ICT projects such as telecentres and application development.<sup>3</sup> And rapidly expanding programmes for local access in India in recent years combine both network provision and community-controlled applications development and supply provision. The Akshaya initiative, in Kerala state, now extends to over 60 information kiosks, and is an interesting amalgam of public, private and community collaboration largely under local community control.

But are these merely niche areas or historical accidents?

### **The role of technologies**

In fact, variations of the community-owned model appear to have widespread relevance and applicability, but it has been to some extent hindered by the absence of champions among the main drivers of ICTs nationally and internationally. Recently, however, technological innovations considerably reinforce its potential to help solve the rural access issue. New and emerging technologies, especially wireless, are particularly suited to the deployment of community-owned network infrastructures because of their low level of initial investment and scalability, their relatively simple technical deployment, their low-cost and open standards, and their adaptability to voice and data requirements. Open sources software is now developed for full-scale networks management and wireless implementation.

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<sup>2</sup> See the case studies in Seán Ó Siochrú and Bruce Girard “Innovative Technologies and Community Ownership: A New Model of ICT Access for the Rural Poor”, produced for UNDP by Seán Ó Siochrú and Bruce Girard (2005); and for the US see [www.ntca.org](http://www.ntca.org)

<sup>3</sup> See Ballantyne, Peter (2003), *Ownership and Partnership: Keys to Sustaining ICT-enabled Development Activities*, IICD, Netherlands. [www.iicd.org/iicd/articles/IICDnews.import2286](http://www.iicd.org/iicd/articles/IICDnews.import2286)

Wireless technologies of different types are beginning to demonstrate their value in those regulatory pockets that allows them (and in some that do not). Not only pilot projects, but a few full scale roll-out programmes are deploying low-cost radio to reach low-income rural communities, where beneficial applications are being developed from the ground up.

## **Regulatory openings**

Of course, regulatory obstacles have long been the major barrier to progress in many areas of ICT development. Reluctance to innovate in regulation is sometimes attributable to genuine concern to ensure that the most broadly beneficial policy is applied; but may also be motivated by the defence sets of vested interests. Recently the limitations of ‘one-size-fits-all’ liberalisation, and the failure of ‘one-operator-does-all’ vested interests, is leading debate beyond binary oppositions and into new and less dogmatic territory.

It is now recognised that the reality of ICT environments and needs vary hugely. Underpinned by a ‘global public good’ rationale for certain ICT network components,<sup>4</sup> principles such as technology neutrality, transparency and open access to backbone infrastructure are beginning to be raised in the context of the WSIS, among donors and lenders, and in a number of developing countries. A layered approach to network development, each with potentially a different set of regulatory and ownership possibilities, is emerging.<sup>5</sup> Alongside private or public ownership, partnerships, local authorities, small and medium enterprises and indeed communities are seen as having a role to play.<sup>6</sup>

It is early days yet, and the trend towards regulatory innovation has a long way to go. But there is little doubt that paradigms in ICTs are becoming more varied and complex, each recognised as suited to certain possibilities.

## **A local level dynamic**

These technology innovations, and at least glimmerings of regulatory openings, could open the door to a powerful local level dynamic that could go in a couple of directions.

One is towards the private sector taking the entrepreneurial role, perhaps backed by external capital or as subsidiaries. The second is towards the community-owned model. Both models will probably find their place. Each is oriented towards different circumstances, but there is also a significant area of overlap where variations of either model, and hybrids, are possible.

The private investment approach is likely to be welcomed by business sectors, and can readily take advantage of conventional supports for private investment including from international lenders and donors. Where it reinforces local economic activity and ownership, by for instance encouraging local small and medium enterprises to become involved, it is to be applauded, and deserves support for the benefits it may offer beyond mere service provision.

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4 Accuosto, Pablo and Niki Johnson (2004), “Financing the Information Society in the South - A Global Public Goods Perspective”, prepared for APC by the Instituto del Tercer Mundo (Uruguay).  
<http://rights.apc.org/documents/financing.pdf>

5 See for instance InfoDev (2005), “Open Access Models: Options for Improving Backbone Access in Developing Countries (with a Focus on Sub-Saharan Africa)”, an infoDev Technical Report by Spintrack AB, August..  
[www.infodev.org/content/highlights/detail/2568](http://www.infodev.org/content/highlights/detail/2568)

6 All the above feature in the Task Force on Financing Mechanisms’ report (2004), *Financing ICTD for Development: A Review of trends and an analysis of gaps and Priming Practices*. December. [www.itu.int/wsis/tffm/final-report.doc](http://www.itu.int/wsis/tffm/final-report.doc)

But empirical evidence strongly suggests that the community-owned model offers potentially much greater benefits especially in a development context. The community-owned model and hybrids based on the same principles have the potential to viably extend networks further out into poor rural communities, to provide more affordable services, and to ensure that these services have a greater development impact through linking directly with the needs of these communities. They also have the potential to act as a community catalyst and as a support for a range of other development activities.

Yet for all that, this approach may attract few champions among major international and national players, given their general orientation and dominant national and corporate interests. For this reason, the community-owned model deserves, and requires, special attention from the international and national development community and from those governments that are interested in the impact of ICT on development.

### **¿What should be done?**

There is general agreement that no single model of local ICT network and service development is suitable everywhere, and efforts at transplantation have had mixed results. Three identified variations of a community driven approach are the user/community-owned cooperative, the local government owned network, and the hybrid entrepreneurial/community-driven model. Each might suit different circumstances.

However, they all share two pressing needs: access to finance and an enabling environment at national and local level. While a community-owned approach enhances the viability and sustainability of ICT access and use, the reality of poor communities is that such networks will still require some form of preferential treatment and dedicated support. The goal, with the support of such investment, is to ensure long-term sustainability from the community itself.

#### *Investment and financing*

While everyone agrees that more finance is needed to realise the Digital Solidarity Agenda, the debate continues at the WSIS on whether a new financing mechanism is needed, raising funds from new sources, or whether existing mechanisms are sufficient.

A compelling case can be made that the idea of community-owned networks would fall within the terms of any new financing mechanism, and that it should qualify for funding focused on development needs and pro-poor actions in the context of the Millennium Declaration.

Community-owned networks target areas that have virtually no hope of gaining ICT access from private sector or public funding, in current circumstances. Yet the potential benefits to poor communities in terms of reinforcing wider development efforts are at this point well documented.

Furthermore, the non-profit status and ethos of community-owned networks, one of capacity building and empowerment, fits well within the accepted principles of development. Though the provision of affordable service is the immediate goal of the community-owned enterprise, it is also part of a bigger picture of development.

Aside from the possibility of a new mechanism emerging, some existing international financing instruments currently focused on private-sector infrastructure investment in poor communities could also be relatively easily adapted to community-ownership. For instance, a number of

donors have collaborated to form a Private Infrastructure Development Group, aiming to mobilise private sector investment in infrastructure and basic services in poor areas. It operates several programmes focusing on assisting private investment in infrastructure in Africa and Asia, including pre-feasibility and pilot projects.<sup>7</sup>

Any significant level of take up of community-owned networks, however, might require a national institutional level of support. And whether national or international, a number financing modalities would be useful.

First, a once-off subvention to cover part of initial construction costs - a logical source, if it exists, is a Universal Access Fund. Second, a facility for low-cost long-term loans, preferably including loan guarantees. Third, assistance in devising workable schemes to raise investment funds locally, from users, local development organisations, local government, or others. Legal and institutional issues may come into play here.

### *An enabling environment*

Apart from financing, the promotion of community-ownership (like the promotion of competition or any other approach) requires an enabling environment that will eliminate unnecessary obstacles and offer incentives for growth.

A key decision might be to set up a National Promotion Unit for Community-Owned ICTs. This would advise, conceive, design and implement a coherent set of policies and actions focusing on the ICT needs of activities poor rural communities.

A National Policy would: identify areas where current approaches are failing and where special attention is needed; establish a suitable legal structure flexible enough to support different partnership and ownership structures; and spearhead policies for tax exemption for non-profit status, and a means to ensure that surpluses are reinvested.

A regulatory climate favourable towards local and community network deployment would be applied in the areas identified. In such a climate:

- Licenses should be technology-neutral, so that services may use the most suitable;
- Flexibility should be allowed in license award and conditions;
- License-exempt spectrum for wireless use should be free of costs and administrative burdens;
- Interconnection pricing should be favourably set, including 'asymmetric' pricing;
- An 'open access' policy for connections to the national backbone could be promoted.

Starting and running community-owned network also requires training and capacity building. Business, organisational and technical skills are likely to be in short supply at local level. This could be addressed through direct technical support, through training and capacity building, through international exchanges internationally, through building support networks and exchanges of experience.

Such a menu of supports may seem like a lot. Yet the effort could rapidly yield development returns in some of the most marginalised communities. Furthermore since the incumbent

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<sup>7</sup> DFID (2004), *Public Private Partnerships in Infrastructure: A Brief Overview of DFID Programmes of Support*. October. [www.dfid.gov.uk/pubs/files/makingconnections.pdf](http://www.dfid.gov.uk/pubs/files/makingconnections.pdf)

operators and market forces currently show little interest in these areas, innovation will encounter less of the 'inertia' that obstructs progress elsewhere and rapid progress may be possible.