## WSIS TASK FORCE ON FINANCIAL MECHANISMS

# FINANCING ICT4D – INSIGHTS FROM INITIATIVES IN INDIA

**IT FOR CHANGE**

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# Financing ICT4D – Insights from Initiatives in India

This document is a summary of insights emerging from a study of 3 large scale ICT4D initiatives in India[1]. This is intended to be a brief input to the Task Force on Financial Mechanisms. Detailed case studies are documented separately as part of the research coordinated by Sean O Siochru for UNDP.[2]

Issues relevant to financial mechanisms that are most important from a field level viewpoint, the cutting edge of ICT4D activity, have been discussed below under 4 key areas. These are issues of ICT-based services networks; ownership issues in multi-stake holder partnerships; infrastructure, technology and regulation, and ICT funding in core developmental areas.

## (1) Technology networks versus ICT-based services networks

Financing for ICT4D still largely takes a technology-centered stance, even though some attention is now being given to human capacity building for the effective use of technology. Such a stance seems to be informed by a view that technology, if accessed by people, will somehow give a lot of benefits to them. And if there is a gap in people recognizing the possible benefits and in their skill to use technology, this gap can be bridged by capacity building – providing knowledge and skills connected with the use of new technologies.

What we saw of ground-level initiatives tells us that this doesn't happen. Even if Internet is reached to villages, and even if it is subsidized, or made available free, usage does not follow automatically. And even if some usage for personal communication does begin, there is hardly any move towards the fulfillment of developmental goals through Internet usage.

What we found more crucial was a diligent localized effort to develop and build services[3] that leverage the new ICTs and put in place complementary real-world processes (as opposed to virtual online ones).

For the initiatives we studied, **developing these services has invariably meant developing a services network**. A services network may be described as an institutional structure for community interface and services delivery, employing an ICT-enabled platform and off-line systems, which is characterized by;

- a widely differentiated, locally-specific array of services, with backward linkages to the entire gamut of service-providers (government departments, individuals, banking and insurance institutions, etc.)
- shared support-systems between a number of community access points, pertaining both to technology (procurement, hardware maintenance and application

[1] Akshaya in Malapuram, Kerala; e-seva in West Godavari, Andhra Pradesh; and Rasi-Dhan Foundation in Madurai, Tamil Nadu.
[2] Email ITfC@ITforChange.net for the detailed case studies.
[3] We have used the term services in a very wide sense to include, apart from typical transaction based services, information dissemination, capacity building, knowledge transfer, peer-to-peer networking, media development etc.

development) and to logistic and human processes (eg. community mobilisers/animators, couriers/messengers) and
- very often, a common brand name

Development of a multiplicity of services is crucial both for sustainability of community access points (if run by local private operators) as also for developing a **critical mass of value needed to cultivate the individual and community habit to use and rely on the Internet**.

A good part of the value in Internet based/assisted services comes from a "network effect", and obviously the services network has to have a sustainable size and reach, as well as sufficient number and quality of linkages. There is a need for some agency at the local level to take up the role of the 'network orchestrator'[4]. An important insight that emerges from our research is that the needed services and their delivery mechanisms get developed only through sustained work, and a lot of trial and error. There is a lot of local variations in this process, though many common strands were also discernible. In our case studies, as also for most Indian situations, egovernance services provide a very significant plank for the services network.

**Sufficient investment in developing, incubating and sustaining services networks that build on the possibilities provided by the new ICTs is very important**. Only when such networks deliver palpable value to people will the 'pull' factor for the new technologies come into operation. Such a pull will drive quick technology diffusion, and even innovation, subject of course to helpful investment (both private and public) and regulatory environments.

(2) **Public sector, private sector and civil society – roles and ownership issues**

When we speak of a services network and the need for an agency to be the network orchestrator, the question that follows is who is best positioned to play this role. Developing services and a services network, is a gradual process, which as mentioned above, goes through a lot of trial and error. Private parties do not have the staying power (big players with deep pockets aren't interested in such a high risk-low potential market, and the small local players do not have the capital and risk-taking capacity) nor the public spirit, competency and drive for innovating and incubating socio-technical processes.

Our research indicates that this role is best undertaken, at least in initial times, by representative community bodies, which are backed by NGOs or by local government initiatives. At least initially, in rural areas with low population densities, it is most ideal to develop common ICT based platforms for government services, community services as well as those services that are generally provided by private players. Local government and/or community bodies/NGOs are better able to develop such common networks than private players. We also found that apart from having the credibility (and often the reach and authority, especially in the case of local government bodies) required to pull service providers together, these local institutions are also able to "market" new services by playing a public-spirited, evangelizing role, in ways that find better acceptability in rural communities. (Our research found a lot of other

[4] A term employed to mean an agency that puts together, drives and sustains the network.

reasons for describing such a community body as the best candidate for such a role. It is not possible to elaborate all these here, and these will form a part of the formal case study document.)

In many places we found locally developed Multi Stakeholder Partnerships (MSPs) between government bodies, CBOs/NGOs and private operators very useful. **However, the extent to which an MSP demonstrates community accountability depends on where the crucial node of control is located among the partners.** In the locally developed MSPs, we found that the local government bodies often took on that important role. (In one case, an established grassroots NGO held this role.) In such cases there is a mutually beneficial relationship where the local government bodies contribute their reach, authority and resources (non-financial as importantly as financial) to glue and keep the network and partnership together. NGOs or CBOs contribute the community skills and reach. The private operators bring the entrepreneurship and energy very much needed for innovation required in this new and uncharted area of developing services based on new ICT opportunities.

In all the places where the services network was successful, the private operator was subsidized to a good measure directly or indirectly by a government body or an NGO. Often this subsidy was designed in a dynamic manner so that the initiative of the private operator is kept up even as the subsidy element reduces gradually as market forces develop to allow sustainability. However many forms of specific subsidy, or direct payments by service provider to the service center operators, may continue to operate for delivering obligatory government services, and development services to the disadvantaged. Some such payments are made in each of the initiatives we studied (like for instance, a fixed fee per child paid by the education department to the center operator for e-learning provided to economically and socially disadvantaged children), and often these are crucial for the sustainability of the centres, as well as affordability for the disadvantaged sections.

We found that these community-oriented MSPs made possible a framework of cross-institutional accountability. This ensured that each party was made accountable both to the objectives of partnership as well as to contributing the means for its success. The private operator was obligated to stay within the community orientation thrust and the government agency and the NGOs were obligated not to slacken on providing the support and means for running the services network successfully.

**So even when an MSP including private players is in operation, control, and therefore effective or de-facto ownership, remaining with the community is crucial to success of the initiative**. Our insight from the study of these initiatives therefore is that the 'ownership' issue needs to be interpreted more broadly in terms of
(1) mechanisms of ensuring outcomes that are favorable to the whole community, in terms of relevance of services and of equity, and
(2) the means of continuous effective community oversight.

However, MSPs with strong private partners may be able to skew effective control in their favor. This was illustrated in one of our case studies. Not only did this compromise community interests in the short run, unabashed commercialization has in this, ironically enough, case actually weakened the very viability of the initiative. The main point in the successful models where effective accountability to the

community could be maintained was that the private parties, if included, were local, and not large outside companies.

Therefore, a central element in the process design of any ICT initiative is the clear allocation of the roles of partners as well as a framework for ensuring conformity to these roles. A central role for a community representative body becomes critical to success.

**(3) Infrastructure, technology and regulation – need for local solutions**

Obviously, one of the biggest costs and constraints of developing community oriented ICT-based services networks is connectivity. In our study we found **local development actors, local governments and NGOs, feeling tied down because of the politics of technology regulation**. While local development is their domain and mandate, and ICTs are emerging as a key plank of developmental initiatives, telecom infrastructure and polices are being controlled by a distant national or central government. The local rural initiatives have had to buy bandwidth at prices often higher than those available to the urban customers. With no local flexibility, these initiatives could not even get telephone connections on priority from the public sector telecom player subject to policies controlled by the central government.

For local initiatives, the frustration has been that **while the rapid development in wireless technology has made the business of connecting locally something they can easily handle on their own, regulation has not been favorable**. Nevertheless, all the initiatives we studied were using wireless last mile options, including WiFi, often through innovative, or even blatant, bypassing of the regulation. Things have been easier for some of these initiatives because they have been sponsored by local governments, and some local officials have shown personal initiative to choose such risky options.

VoIP over these local wireless intranets, that have provided local access from optic fibre backbones that reach upto 15-20 Kms of most rural locations in India, is also common. Though local computer to phone voice connection is still illegal, operators were connecting overseas VoIP calls innovatively to local lines to provide cheap internationally calling facility to home users with telephones. Many government agencies communicate internally through VoIP.

Most local government officials and NGOs/CBOs, and the private community access point franchisees, felt that allowing wireless local access along with VoIP will make connectivity very cheap and bring good revenues to their centres. These private operators were eager to work as local ISPs, distributing the bandwidth they received from wireless networks (owned by local government bodies) over cables, or through wireless, to home users.

All these local government officials as well as NGOs/CBOs and private players were keen to have a convenient backbone connectivity. They even welcomed the option of a nationalized backbone, since there is hardly any value in competitiveness in this part of telecom infrastructure owing to significant idle optic fibre bandwidth and the commoditised nature of bandwidth. This backbone would provide them external connectivity at a fixed low cost, and they would have their own local access networks.

Service center operators are also keen to use VoIP to provide telephone services and coverage. Such a scenario would largely obviate any need for incumbent telecom companies to expand in the area of local access.

**In fact it is in this local access part of telecom infrastructure that free competition is most relevant today. Local players must be allowed to have their own means of providing last mile connectivity, and the regulation in this respect must be technology neutral.** Such free competition in the last mile is being blocked by the same national and multi-national companies that have been vocal advocates of market forces and free competition when they had to gain entry into the national telecom scene.

In fact wireless options for local access today are so attractive that not only the local governments but also the local NGOs involved in the initiatives we studied either owned the local access network, or were ready to acquire it if the regulation permitted.

**(4) Taking ICT funding into core developmental areas**

Another important issue that came up in our study was the tension between the agency developing the ICT based composite interface with the community and the traditional developmental agencies in various areas, including line departments of the government like of education, health, agriculture etc.

The interface ICT4D agency typically attempted to develop simple deliverable solutions in the areas of education, health, agriculture etc to increase value delivery, as well as sustainability of the initiatives. These attempts were often not enthusiastically supported by traditional players in these developmental sectors, who often considered them amateurish. While the domain expertise of these players is unchallengeable, they have themselves had little or no ICT based strategy to improve their capacities generally, and delivery systems, specifically.

**More effort need to be directed towards mainstreaming ICTs into development sectors by traditional development actors, so that they develop service systems that can be in sync with the ICT enabled community interfaces that are being developed by ICT4D agencies.** At the same time, at present it may be opportunistic and pragmatic for the ICT4D agencies to develop simple, high-value, high-visibility solutions in sectors like health, education and livelihoods, independently, or through ad hoc arrangements with experts. In the long run however, their work in developing the community ICT interface should tend towards providing the ideal inter-connect and delivery mechanism for domain players in these sectors, as the latter develop ICT capacities and services.

We did find interesting examples where **investments in mainstreaming ICTs** in core or traditional developmental sectors were **consciously designed and deployed in conjunction with investments in building the ICT enabled community interface agency**.

It is of utmost importance to coordinate deployment of ICT4D finance by various actors towards a scenario where ICTs are the mainstay of institutional structures that

serve hitherto under-served communities for their overall development, and are not just stand-alone tools that individuals may be expected to employ for their empowerment.

**Summary recommendations for financing ICT4D**

On the basis of our research, we are of the view that financing for ICT4D should focus on the following imperatives.

- While technology expansion, and capacity building, is an important area for investments, there is a great need to focus investments on developing local, geographic-community specific networks of ICT based services. These services networks will deliver governmental, developmental and private services. The actual mix of services is context specific. However, in the initial stages, e-governance services are often a big plank that can provide strength to the services network.

- The institutional structure/ agency that supports this ICT based community interface of services delivery needs to be structured in manner that community/social objectives of ICT deployment are ensured. In situations where MSPs are found to be the ideal option, the locus of control, for ensuring accountability of partners to common objectives, must lie with a community representative body.

- To exploit the opportunity presented by the availability of wireless local access technology solutions, especially in conjunction with VoIP, the telecom sector needs to be regulated differently in the two areas of telecom backbone and of local access infrastructure. It is unjustified that when rural areas are struggling for connectivity, incumbent telecom companies are allowed to keep large amounts of unutilized bandwidth on their optic fibre network, which reaches upto 15 to 20 kms of most rural locations in India. Increased competition in, and freedom to own, local access infrastructure needs to be encouraged.

- While investments are being made to enable communities to use ICTs, and interface institutions are being developed for facilitating such use, corresponding investments must be made to enable core developmental sectors like of education, health, livelihoods, to develop ICT capacities and services. The investments in these areas should be coordinated towards a future where local communities are completely ICT enabled and mainstream developmental and governmental agencies are geared to serve these communities in a community specific manner leveraging new ICT opportunities.

- ICT4D financing therefore needs to follow a local community specific route, encouraging local development of services and building capacities of locally active agencies to leverage ICTs, within community accountable structures. However, investments by various agencies need to be coordinated according

to sub-national road maps that take a telescopic view of the local, so that complementing elements are proportionately funded towards creating ICT-enabled institutional structures that serve marginalized communities.