Innovative Financing for ICT Initiatives in the Third World

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The recent World Summit on the Information Society (WSIS) reconfirmed what has been widely acknowledged for some time now, that a better and more widespread use of information and communication technologies (ICT) could bring large benefits to the citizens of developing countries. Radio, television and audiocassette devices have already made significant inroads into the lives and livelihoods of all but the remotest communities. The telephone is now spreading gradually, and with the growing investment in new fiber optic and wireless technologies coming on the market, it will in time reach even many of the outlying areas of the Third World that are underserved today.

The Components of an Effective ICT Service

However, a very large part of the promise of ICT for contributing to the eradication of poverty lies in increasing the use of data processing and data communication technologies, particularly the computer and the Internet. To reach their users, who are widely distributed, these technologies have to be decentralized and made available in a manner that is accessible to all and at costs affordable by all. This requires several changes from current practice, such as the intensified use of local languages, the local generation of local content, the combining of online with offline products and the extensive reliance on shared access facilities. For the impact of ICT to reach its full potential, several preconditions must be met, including particularly:

Infrastructure

- for connectivity with sufficient bandwidth
- for power of adequate reliability

Content, application and services

- of relevance to local needs
- accessible to local skills

Management and Marketing Systems

- to expand the network
- to service the network

Technology

- that is affordable
- that is locally usable and maintainable

To achieve the vast social benefits possible, *all* these preconditions must be met. And all of them involve significant front-end costs, which need to be covered by significant capital investment. Because the finance needed for them is scarce, they will require new kinds of **financing instruments** that can:

- mobilize long-term, strategic investments for development
- evolve over time as the needs of a project and the opportunities offered by it grow and change
- attract private investments for the production of public goods

A Typical ICT Network

For ICT to bring the benefits of the computer and the Internet successfully into the Third World village economy, its structure must be sufficiently decentralized to have a presence everywhere. Yet, because of its technical, management and financial requirements, it must also have access to mainstream facilities. The approach discussed here, therefore, is based on the assumption that the functions that can best be done on a large scale will be carried out by a mother (central) organization and the others, which can most effectively be implemented at the local level, will be carried out by small decentralized entities.

Functions of mother unit (National or Provincial level)

- Policy, network design and implementation
- Management systems and methods
- Choice of technology
- Backend software and application engines
- Generic content, applications and services
- Partnerships and strategic alliances
- Mobilizing finance and financing facilities for local nodes
- Providing technical and marketing support to local nodes
- Overall coordination,

Functions of local nodes

- Servicing clients
- Managing local access point and collecting revenues
- Local market development
- Input of locally relevant information
- Paying agreed fees to central facility
- Providing substantive feedback to the central facility

The relationships between the mother business entity and the local ones can be designed to suit the specific context. At one end, it can be the simple vendor-client transaction exemplified in the use of an ISP by an independent cyberkiosk. At the other extreme, the local entities can be wholly owned branches of the company. In between lie the rich possibilities of a franchising arrangement.

Local Economy Revenues and Global Economy Costs

The mismatch between the financial requirements needed to set up a system of this level of sophistication and the ability of the end-clients to pay for its services is probably the reason why not many such facilities have been attempted so far. Annex 1 presents a more detailed analysis of this problem and attempts to identify the kinds of capital investment that are possible. In any case, it has become clear that the social benefits they bring are so large that we must find the means to accelerate their deployment.

While most of these functions require non-trivial resources in the form of skilled professionals, infrastructure and institutional systems, the key missing link in most developing countries is finance. Lack of financing systems is the single most important barrier to the rapid deployment of ICT in the non-metropolitan areas of the Third World.

This paper addresses the particular set of issues relating to how a national ICT facility might be financed, both for the mother unit and for the local enterprises. It does not, however, address the building of infrastructure to provide the "pipelines" or "highways" that are generally seen to be necessary for provision of ICT for Development services and products for two reasons:

1. Powerful models already exist to provide a roadmap for these initiatives. The Universal Service Provision Fund and the ATT Mainland Ozark Model are two examples of how public funds were mobilized to cover the cost of supplying universal telecommunications in rual and remote locations in the US. The Tennessee Valley Authority (TVA) is a third example of how highly subsidized financing (with interest rates of 1% to 2% and long periods of moratoria on paying these) were made available to encourage the setting up of both the electrical and telecom backbones in the American hinterland.

2. ICT affords immediate and rapid solutions for development. The deployment of these is greatly hampered by the cost of building the required infrastructure, which is a lengthy and complex task. The benefits of these technologies needs therefore to be provided without the installation of large-scale, centralized infrastructure the possibility of which has been demonstrated by a number of on-the-ground programmes.

The focus of this paper is therefore on the financing of initiatives that either use existing infrastructure or set up decentralized means for power and/or connectivity. We would be happy to address the issue of infrastructure financing in a separate paper if that is of interest to GKP.

Investing in a Commercially Viable ICT Service

The first premise, based on limited but credible experience, is that it is possible to set up an ICT facility that can, over time, become commercially viable even in economies with relatively low incomes and little purchasing power. Such a facility needs:

- Multiple revenue streams, and therefore
- Multiple products and services (click as well as mortar)
- High quality (expensive) support systems
- High quality (expensive) management systems
- Staying power to reach profitability

This means that considerable capital investment is needed at the startup and early stages until the venture has reached breakeven. Such initial capital must be accessed at low cost and on relatively easy terms to enable the business to build up its operations and capacity utilization without going negative on cash flow. Although no actual enterprise on the ground has achieved breakeven, plausible business plans show that with sufficient numbers (of information products and users) profits can gradually build up to a stage where further growth can be financed with commercial investment capital.

Activities

Benefits Sources	Social	Private
Public	Infrastructure	Subsidies
Private	Philanthropy	Business Market Mechanisms

= Scalable and Sustainable Solutions

Actors

Benefits Sources	Social	Private
Public	Government Foundations NGOs	?
Private	Foundations So-called "CSR"	Companies Individuals

Corporate Social Responsibility (CSR) is often confused with philanthropy. The two concepts are actually quite distinct, with very little overlap in meaning.

CSR is the set of guiding principles that govern the behaviour of a company that aspires to be a good corporate citizen. In essence, this means that it complies fully with the laws of the land where it operates. Where it considers these to be inadequate for the health and well-being of its workers, neighbors and the public at large it may well take action that goes beyond the requirements of the local laws. CSR has often been found to be a beneficial strategy even from a strictly business point of view since responsible management of companies generally leads to better performance on all fronts, including particularly the financial bottom-line. As long as the marketplace gives primacy to capital over the other factors of production, and the shareholder's interests are legally above those of the other stakeholders, the justification for CSR lies in its potential for positive impact on shareholder value.

Philanthropy occurs when a company contributes a portion of its profits to causes that are outside the scope of its business and aimed at creating benefits to society more broadly. Such actions may be undertaken from a sense of moral responsibility on the part of the management but are often also designed to improve the corporate image and expand markets. In many countries, philanthropy has played a fundamental role in bringing about a more fair, just and equitable society and a healthier natural environment. Whatever the motivation, and however great its contribution to society, philanthropy is, however, inherently limited in its ability to help support initiatives that need large investment to scale up and sustain their operations. It can be only a small part of the overall profits of corporations and it is too vulnerable to the exigencies of the business cycle to be a reliable source of investment over a long period.

In the past, most social (including infrastructural) investments have been made from public funds. Given the huge financing needed by the Third World to tackle its immediate problems (hunger, disease, poverty, ….) and to make strategic investments for socio-economic development (health, education, livelihood enterprises, infrastructure, ….) new

sources of finance and innovative instruments of financing must now also be found. Philanthropy and "CSR" can only make a relatively limited contribution. If private investment is to be made on a truly scalable and sustainable level, it will need to see financial returns that are comparable to those it can get from alternative uses of its funds. This means that ICT projects will have to rely on wholly new approaches, with business models and revenues that are attractive to commercial investors. One such approach is offered by the concept of Social Enterprise, a business entity whose purpose and products are designed to contribute to the public good.

The Lifecycle of an ICT Enterprise

The Charts below describe the sources of investment that exist today and the possible sources that could accelerate the deployment of rural ICT facilities in the future.

Chart 1 shows how a startup rural ICT social enterprise can use financing from diverse sources to build up its operations to a level where it can position itself to attract commercial capital. It is based on the real experience of one such entity, TARAhaat in India. At the time of startup, very few funding sources were available to support rural ICT activities and the primary inputs came from the promoter, Development Alternatives. Subsequently, other sources of finance, gradually came in – mainly through sponsored projects to support the build up of operations.

The Table gives indicative figures of the kinds of money needed to set up a national level rural ICT network.

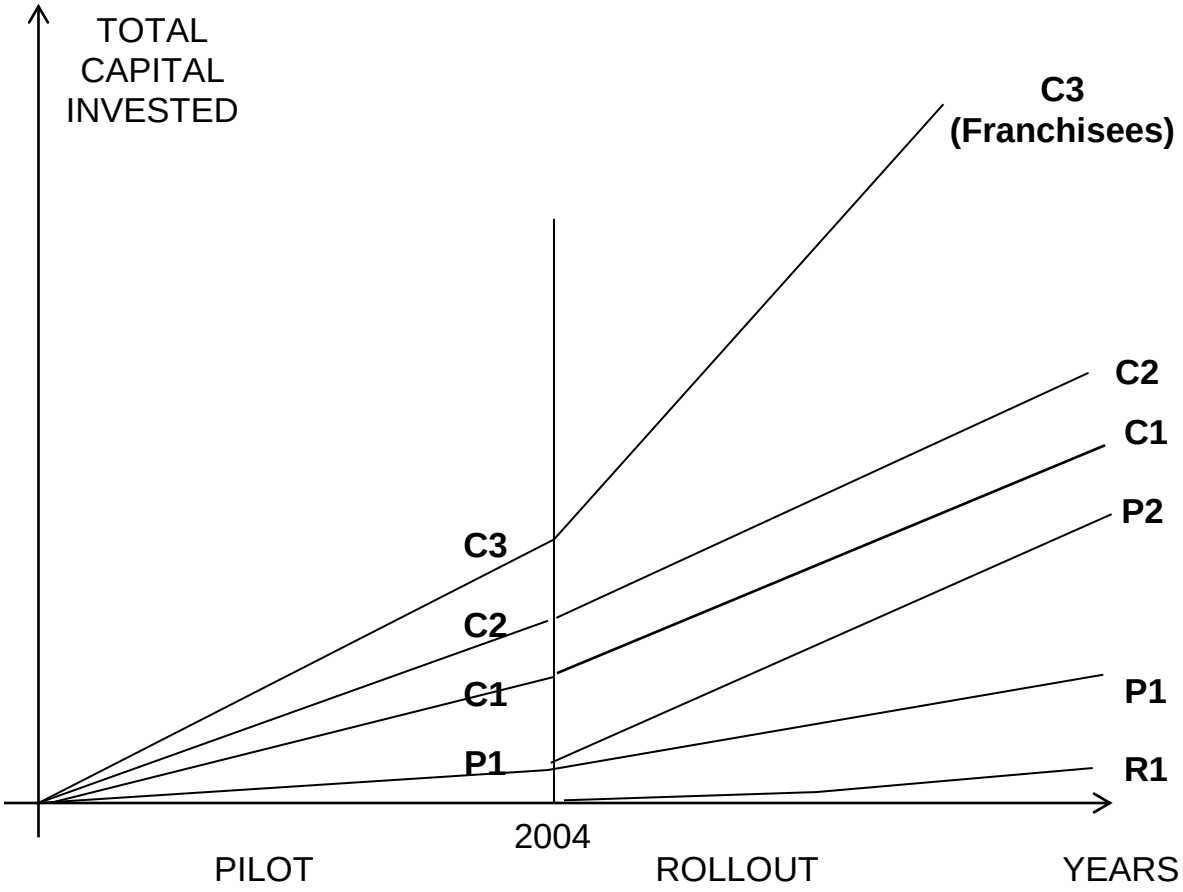
Chart 2 schematically shows the typical lifecycle of a rural ICT enterprise and the various stages it successively goes through to reach a point where it becomes profitable and therefore attractive to commercial investors.

Charts 3 and 4 show how the national, regional and local structures of a decentralized ICT enterprise providing online and offline services to village clienteles evolves, indicating the kinds of investors, partners and alliances it can use to bootstrap its operations in the early stages and expand them as it matures.

Chart 5 presents another view of the operational structure and functions of the ICT network, highlighting the responsibilities and tasks that can be taken on by the partners at the different levels.

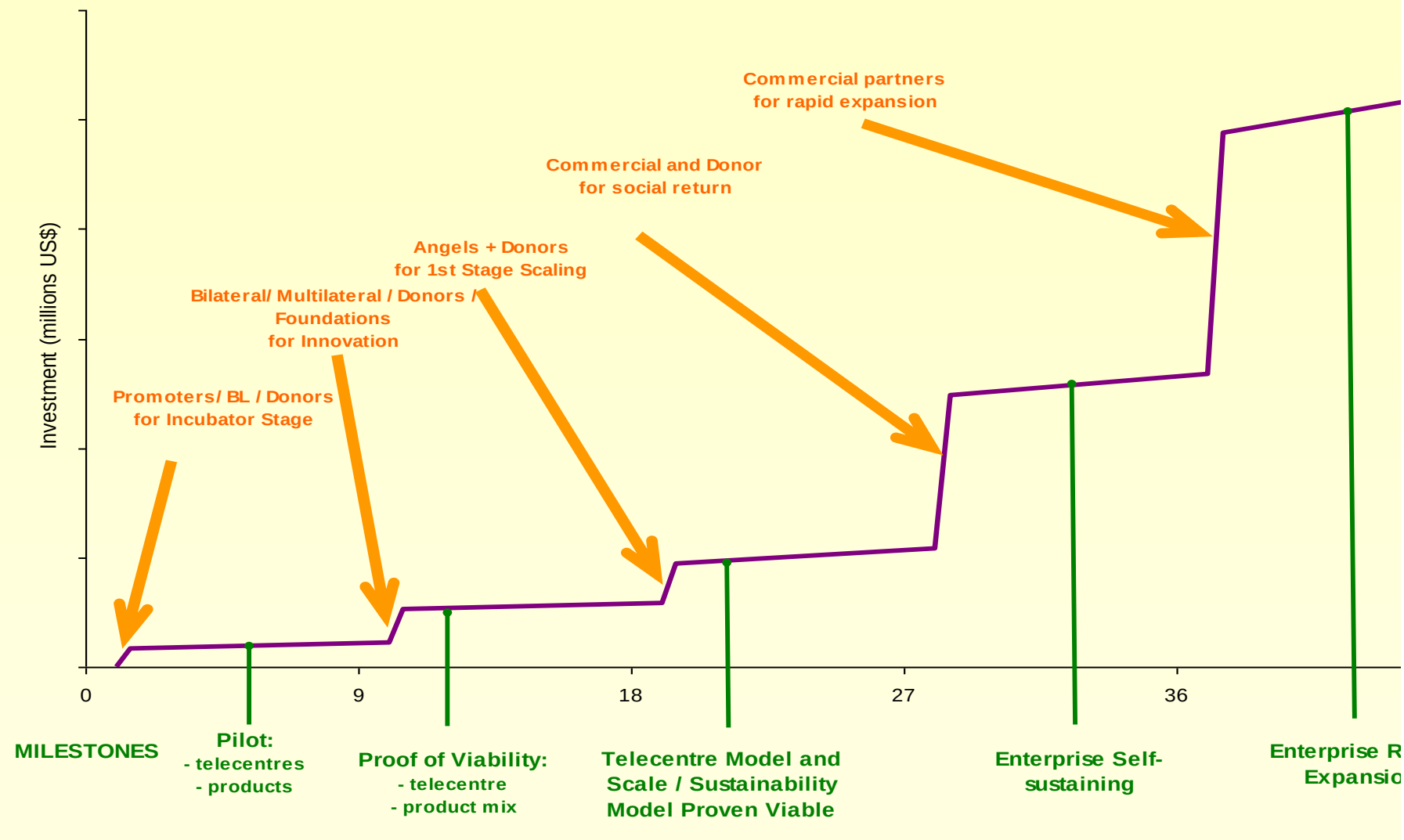
With the current dearth of financing systems available, these are probably the best descriptions of the trajectories that will have to be followed by successful ICT enterprises attempting to connect remote, off-grid communities to the global village.

Chart - 1



	Capital Invested, Illustrative ($) **Sources**	**Pilot Phase** **30 Kiosks**	**2 Years of Rollout** **400 Kiosks**
P	**Public**		
P1	Promoters, Foundations	750,000	200,000
P2	Donors (BL, ML)	800,000	3,500,000
C	**Private**		
C1	Private Investors	200,000	300,000
C2	Other Corporations	200,000	500,000
C3	Franchisee	50,000	1,000,000
R	**Revenues**		
R1	Retained Earnings	-	100,000
	Total	**2,000,000**	**5,500,000**

Social Enterprise Financing Life Cycle
-- Today's Scramble for Funds

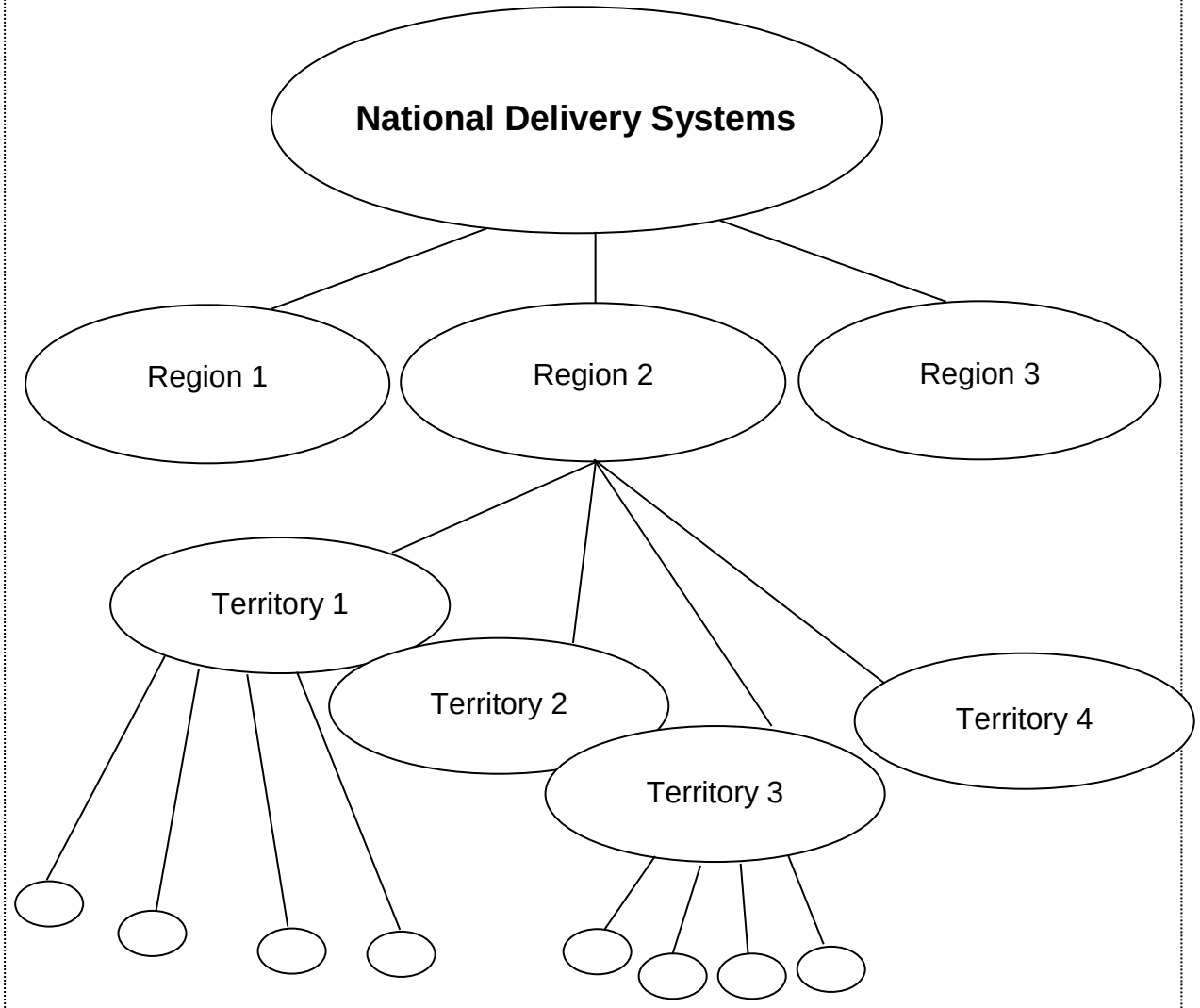


Investors and Partners for Village ICT Services

Early Stages : **("Incubator" to "Social Returns")**

Possible Public Sector Alliances and Funders

- ML, BL, Donors, Govt. Project Funds for Systems, Content and Roll-out
- ML, BL Donors for Network Management Structure
- Govt., BL Donors, Foundations for Renewable Energy Connectivity Infrastructure



Public - Partnership Opportunities - Private

Possible Private Sector Partners and Investors

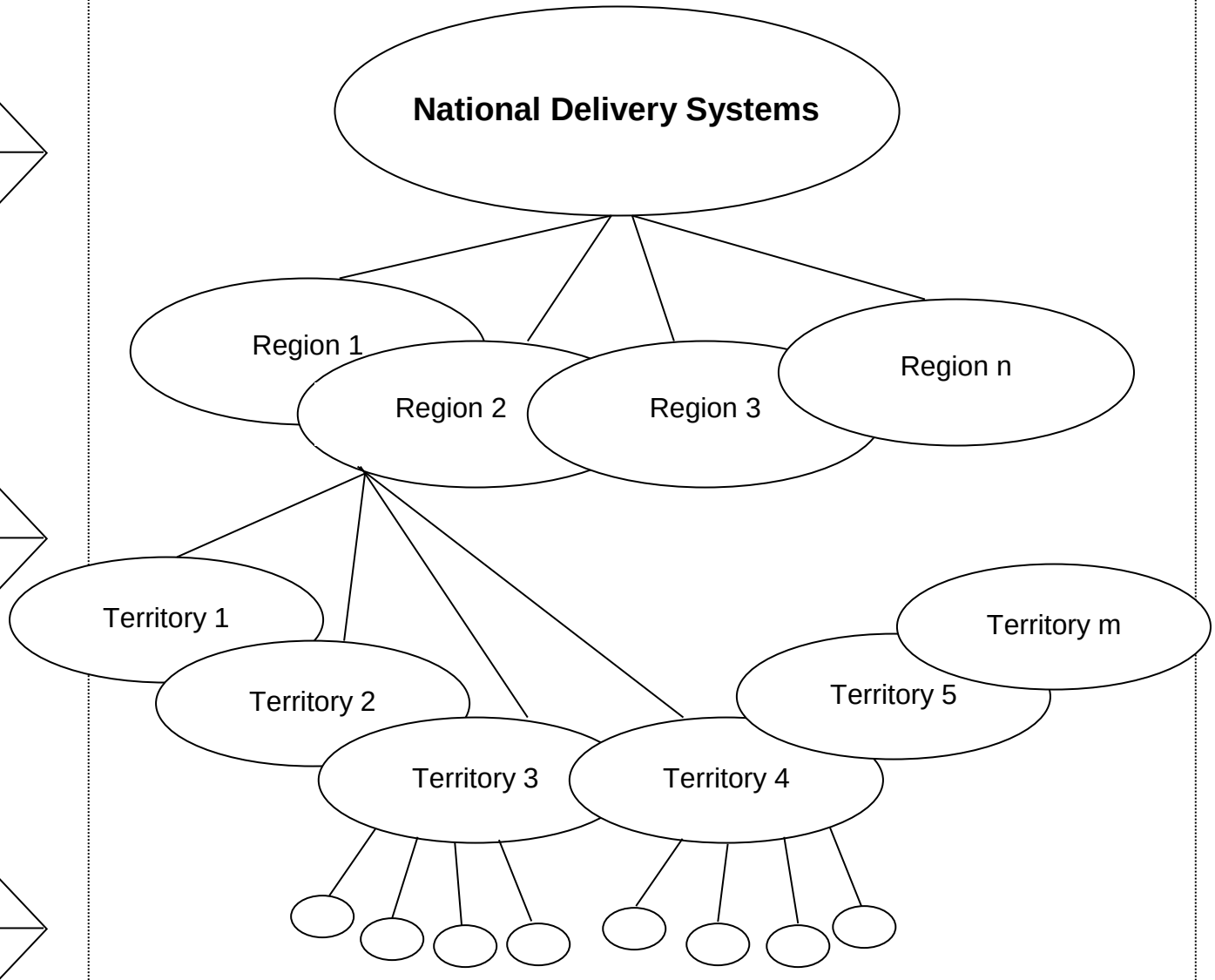
- CSR and Philanthropy
- Special Prices from Hardware, Software Companies
- **Early bird local vendors**
- Banks and local franchisees

Investors and Partners for Village ICT Solutions

Later Stages **: ("Self Sustaining to "Rapid Expansion")**

Possible Public Sector Alliances and Funders

- ML, BL Banks for Systems, Content and Roll-out
- ML, BL Banks Netcorps, Geekcorps for Network Management Structure
- Govt. as Customer for Renewable Energy Infrastructure / connectivity



Public - Partnership Opportunities - Private

Possible Private Sector Partners and Investors

- International and National Companies (Software, ICT, Renewable Energies)
- National and Regional Companies, Rural Products, Marketing and Supply Chain Management
- Leading Local Companies
- Small and medium Enterprises, Banks and local franchisees + Customers

Partnerships & Alliances

Investors and Partners for Village ICT Services

Operational Structure and Financing

Operating Responsibilities

Design for a New Funding Mec

Governments
Corporations
Academia
Civil Society

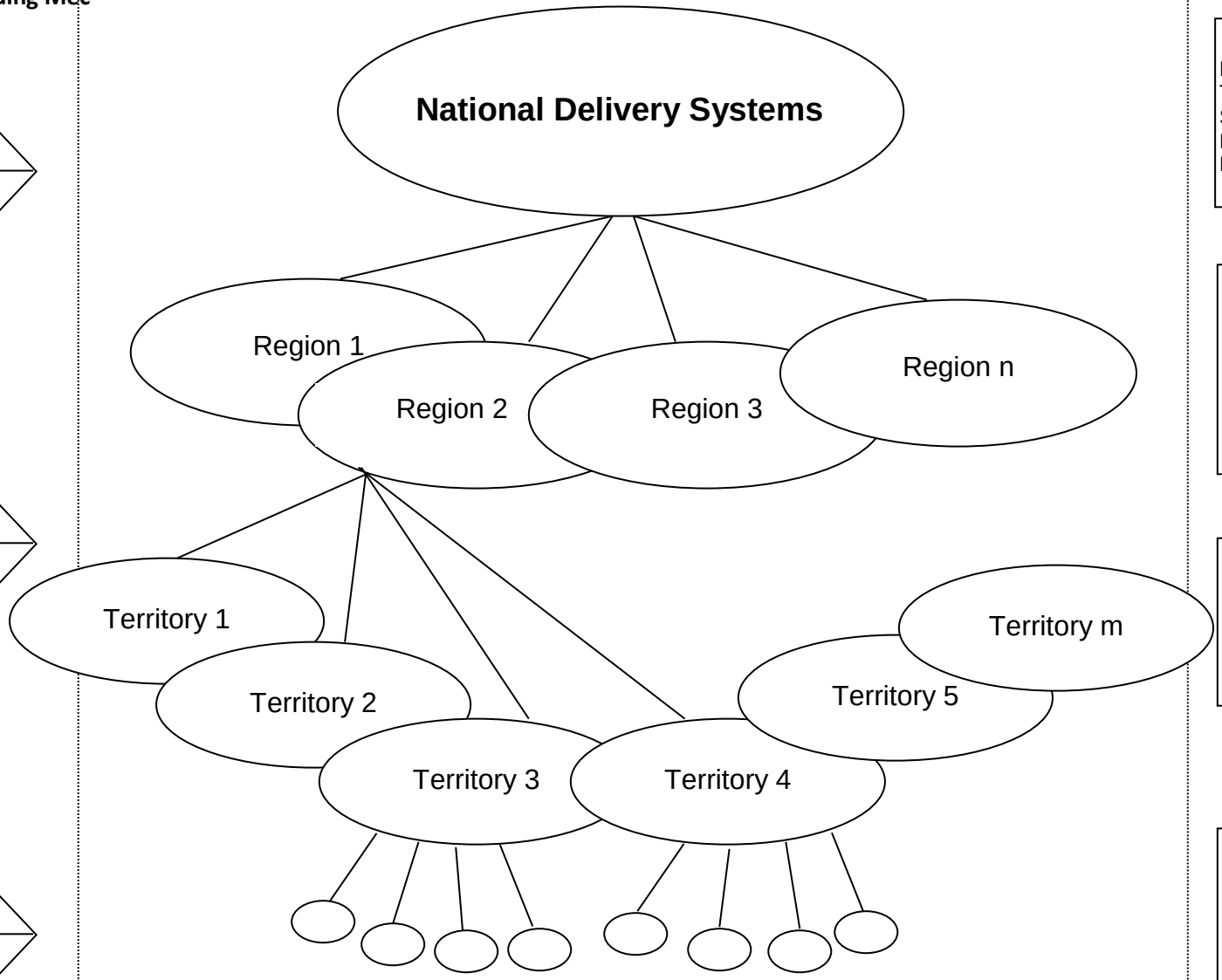
for
Products
Services
Information

Regional
Business,
Academic Inst.
Content Providers
NGOs & CSOs

Structure

Local
Goverments
Businesses
NGOs & CSOs

for
Locations



Public - Partnership Opportunities - Private

Task : Get Economies of Scale

Processes & Systems manuals. Training, Complete Management Support Structure, Content, Products & Services, Q.C. Mobilise Financing Systems

Task : To Localise Management and Control

Regionally Relevant Products, Services and Information
Set up Territory Offices,
Localise Training, Content

Task : Recruit, Manage and Support

Local Telecentres

Task : Deliver the Benefits of ICT

Online and Offline Delivery of Locally Relevant Products and Services

Design for a New Funding Mechanism for ICT4D

The first part of this paper has addressed the critical issues of essential organisational, financial and operational structures for **sustainable** social entrepreneurs. It has also identified the current sources of funding available to such initiatives and proposed a basis of how funds for essentially social benefit versus private benefit should be sourced.

The structures identified are essential components of any enterprise that has the commercial capacity to be self-financing after the "*viability phase*", either through internally generated funds or through financial market mechanisms. We now address the Funding structure necessary to nurture and allow social entrepreneurs to achieve sustainability and scale.

As noted during the panel discussion on "Innovative Financing Mechanisms for ICT4D: - Venturing beyond the 'Forever Pilot' Syndrome" at WSIS, current mechanisms for financing social entrepreneurs engaged in the ICT for development field are inefficient and generally doom such efforts to a perpetual start-up mode. Many of the issues were surfaced and discussed during the panel discussion. What is wrong with the current mechanisms?

Problems with Current Mechanisms

- Lack of Funds
- Access to Funds
- Funding is Project based
- Narrow Projects are not sustainable
- Failure to fund to enterprise viability
- Etc.

The Fund

Overview

A Mega Fund has been proposed to aggregate funds from Governments, Bilateral, Multilateral and other donors for ICT4D. We endorse this proposal but recommend a more broadly conceived mechanism. The Mega Fund – with a proposed working title of The Hope Digital Fund (HDF), should be composed of two sub-funds. The HDF for Social Advancement (HDFA) and the HDF for Sustainability (HDFS). This separation would allow the funds to fund social entrepreneurs through the most appropriate financing vehicles for the social and the commercial components of a social enterprise.

The HDFA would be funded by Bilateral, Multilateral, Foundations, and Corporate Responsibility Programmes (Donors). Its objectives would be to bear the start-up costs incurred by social entrepreneurs to build the infrastructure components and capacity building necessary to establish their business and normally paid for by society as a whole. The need for these funds has been previously discussed in this paper. These funds would be in the way of grants to the social entrepreneur.

The HDFS would be funded by Donors and importantly by Corporations and by the Financial Markets, and these funds would provide 2nd Stage and later funding in conjunction with the HDFA. These funds will be provided to the social entrepreneur by HDFS through the full range of market based financial instruments including equity stock, stock options, debt instruments etc. These funds would therefore generate a return for the HDFS and allow for flexibility in attracting funds by generating returns for investors. Of course the investor will be given the option of re-investing the returns generated by the HDFS in the HDFA or HDFS, allowing over time for a self-financing mechanism to promote ICT4D.

The bifurcation of the Fund is essential for two reasons. First, the not for profit element is necessary to enable the enterprises to deliver social benefits while building up their capacity to become self-sustaining. The second reason is to attract a broad base of investors who require financial returns to be generated. if we are to mobilise a sufficient corpus to make this fund a significant factor in ICT4D and a detailed analysis can be prepared, if required, to design and support the marketing effort to attract existing financial market players to invest in the corpus of the HDF.

Fund Structure and Management

It is proposed that the creation of the Fund and the fund raising be the responsibility of a central institution, either an existing recognised international organisation or one specifically responsible for the management of the fund. Full time staff be limited and the management group be virtual and connected digitally. In order to contain costs the secretariat of the fund must be located in the South.

Fund raising and management and funding of the deal flow for the fund to invest in, must be segregated. In order to ensure that the funds are distributed efficiently, cost effectively and in the most appropriate way, from both a development and financial criteria, Regional or Local institutions must be contracted to identify in-region social entrepreneurs qualifying for funding from the HDF. They would be responsible for performing due diligence, evaluating business plans and monitoring the performance of the Regional portfolio of investments.

These regional entities would function as intermediaries with the HDF and "sell" their loans to the HDF. The compensation of such Regional or local mini-funds would be based on performance. The use of such regional organisations is a relatively recent development and has been successfully deployed by Donors to develop more cost effective and result oriented programmes to manage their development efforts. Detailed issues of governance, funding criteria, and day-to-day management can easily be developed if the overall concept is approved.

The proposed fund mechanism would greatly facilitate the social entrepreneurs' ability to establish their enterprise by providing funding sufficient to attain viability and seek market based funding. In addition it would eliminate sub-optimal and inefficient enterprises whose focus is on fund raising at every step of the process rather than having an assured financial base to achieve operating viability.

Conclusion

The intent of this proposal is to combine the best practices of both Donors and Business to create the most efficient and sustainable mechanism to harness the awesome power of ICT for Development as quickly and sustainably as possible. The world can not tolerate another generation of women and children lost to broken and undelivered promises. ICT not only offers us an opportunity to redesign and deliver the widespread benefits of technology to the most remote location, it also offers us a new approach to Sustainable Development. An approach that will empower people to take control of, and manage their lives. To fulfil these lofty goals we must also redesign the institutions, which are charged with ensuring that for once, we, the international community, deliver on our promises.

Social Enterprise Financing Life Cycle with New Funding Mechanism