A Framework
for
Designing Telecentres

Roger Harris
Roger Harris Associates
Hong Kong
March 2007

Contents

1. Introduction 4
Telecentre Overview Planning and Design Checklist 6

2. Programme Design 7
Development before technology 7
Information in support of development 7

3. Ownership models 9
Civil society 9
Academic research 10
Government 10
Private sector 10
Mixed 11

4. Information provision 13
Generic Information 13
ICT-focused Information Services 14
Information in support of development programs 14
Locally-based Information 15

5. Partnerships and Networking 17
Government 17
Donors 17
NGOs 17
Private sector 18
Educational institutions 18
Other Telecentres 18

6. Understanding the Community 19
Community dynamics 19
Participatory processes 21
Working groups 21

7. Gender sensitivity 22
In Telecentre operation 22
In Telecentre services 22
In Telecentre training 22
In Telecentre evaluation 22

8. Technology 24
Hardware 24
Software 24
Internet connectivity 24
Electrical Power 26
Radio 26
Other 26

9. Staffing 27
Steering committee 27
The Telecentre Manager 28
Telecentre staff and volunteers 29

10. Training 30
Staff training 30
User training 30

11. Business plan 32
Financial projections 33

12. Premises 35
Considerations for locating a Telecentre 35
Candidate locations for Telecentres 35

13. Marketing 37
Open days 37
Special events 37
Newsletters 37

14. Sustainability 38
Financing Telecentres 38
Scaling up Telecentres 39
Franchising 39

17 Evaluation 41
Why evaluation? 41
An evaluation framework 41

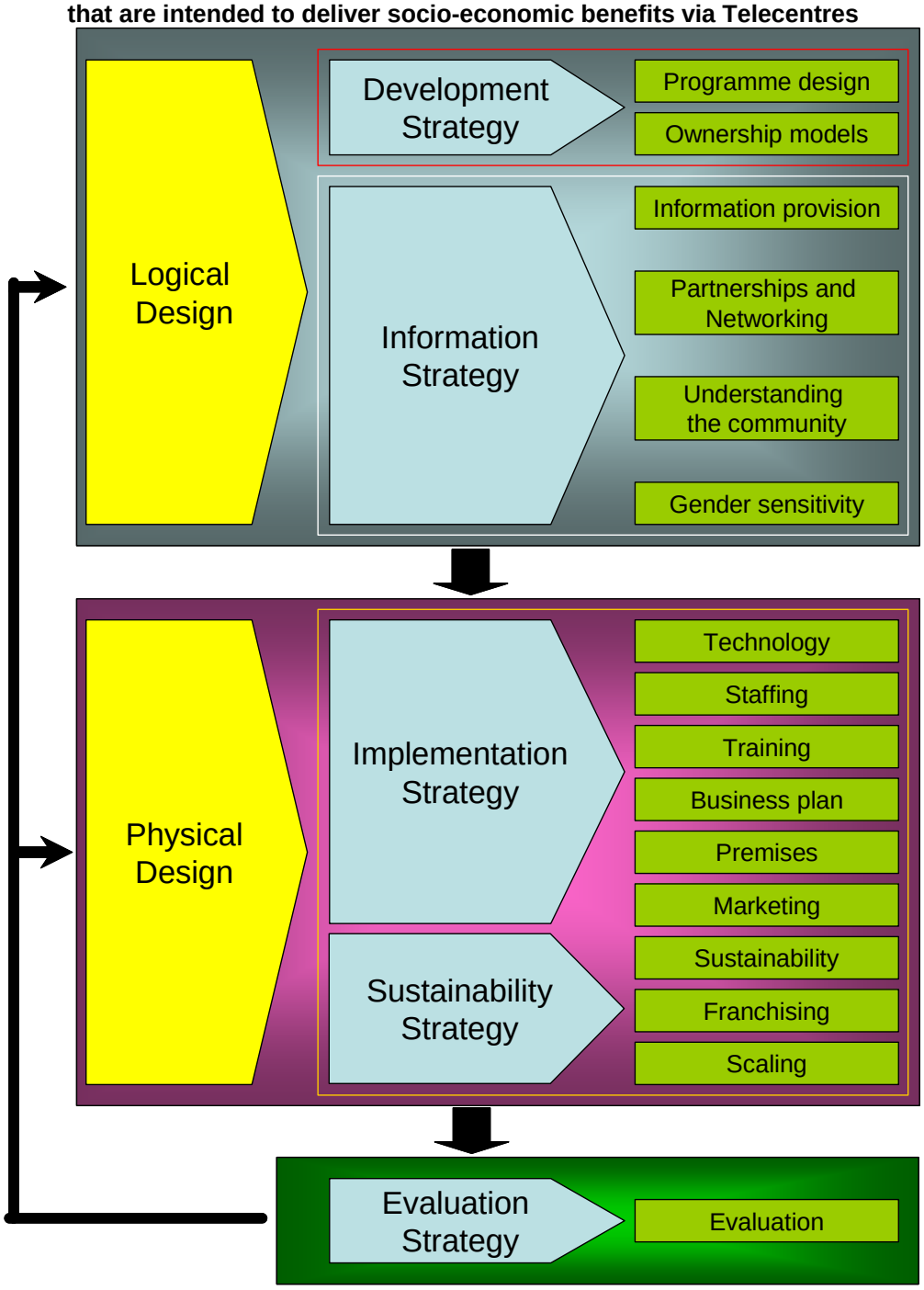
Further Reading 44

1. Introduction

This Framework is organised in the sequence of a logical approach to the design of information systems that are intended to deliver socio-economic benefits via Telecentres for the purpose of community level development and poverty reduction. Telecentres are promoted as an answer to the problems of the digital divide, whereby large sections of society do not enjoy access to Information and Communication Technologies (ICTs) and are seen to be excluded from the socio-economic benefits that such access brings. By providing shared, community-based access to ICTs, Telecentres help to overcome this disparity.

However, this framework for designing Telecentres is based on the understanding that whilst access to ICTs is important, of itself, it is insufficient. Telecentres should be capable of making use of ICTs in a way that delivers tangible benefits to their communities, and are therefore tools for development rather than an end in themselves. The Framework therefore provides a guide for implementing local development with the use of ICTs, in the form of a Telecentre. The audience for this Framework is the institutions or individuals involved in, or contemplating, the setting up of Telecentres. In such a process, the technology is not the objective, the development outcomes are. Accordingly, these are identified at the outset, and then expressed in terms of improved information flows, partnership relationships and choices of technology, which are finally realised through the implementation, operation and ultimately evaluation of the Telecentre. The process is depicted in the following diagram;

A logical approach to the design of information systems that are intended to deliver socio-economic benefits via Telecentres



Telecentre Overview Planning and Design Checklist

Programme design	Ensure the Telecentre is properly embedded within an effective development strategy.
Ownership models	Identify the different modes of institutional ownership that exist and their relative strengths and weaknesses for achieving the development objective.
Information provision	Identify the types of information that are likely to achieve development outcomes when delivered via the Telecentre.
Partnerships and networking	Identify the multi-stakeholder partnerships that will be needed to bring together the various capabilities required to achieve the development objective.
Understanding the Community	Ensure there is an intimate understanding of the socio-economic and cultural background of the community being served. Ensure there is a mechanism to maintain community buy-in to the Telecentre implementation.
Gender sensitivity	Ensure women are involved to the full in all aspects of the Telecentre programme design, implementation and operation, so that they are able to enjoy the benefits to the fullest.
Technology	Select technology that is appropriate to the circumstances of the Telecentre, are capable of delivering the required information and which will achieve the development objective.
Staffing	Develop a plan to staff the centre.
Training	Develop a plan to train staff and the community to make the most of the facilities provided by the Telecentre.
Business plan	Build a business plan that will highlight the financial aspects of Telecentre operation.
Premises	Identify and prepare suitable premises to maximise the Telecentre's impact.
Marketing	Promote the services of the Telecentre among the intended users.
Sustainability	Develop a sustainability plan to ensure a steady supply all necessary resources. Package the operations and delivery mechanisms so that others can adopt and adapt them for further implementations. Organise large scale replication.
Evaluation	Develop a plan to evaluate the Telecentre, paying particular attention to the extent that it has achieved development objectives.

2. Programme Design

Development before technology

Before embarking on the implementation of a Telecentre, it is important that the development objective is clearly understood. It cannot be assumed that merely making ICTs available to poor or underserved communities will automatically result in desirable outcomes for them. There are many reasons for this, not the least that it cannot be expected that poor people will demand access to ICTs until they have become familiar with how they can be used for their benefit. Accordingly, a Telecentre implementation must adopt a poverty alleviation focus within which information plays a key role in achieving the required development outcome.

There is a tendency when planning Telecentres to focus excessively on the technology; what to choose, where to obtain it, how and where to install it, how much it will cost and how to pay for it. Whilst these questions are important, they should not overshadow the equally important aspects of how the technology will be used for delivering tangible benefits to the targeted beneficiaries. In fact these are the questions to begin with. Promoting development with Telecentres is about harnessing the opportunities that ICTs offer in terms of information accessibility, sharing of knowledge and communication exchange among people, institutions and communities. It is unrealistic to think that merely installing a few computers in a poor rural, urban and/or remote community will have any positive influence in social change, particularly when the community didn't ask for them and scarcely sees any benefit. Setting up computers in such areas doesn't make any sense if it is not part of a wider social development initiative.

Telecentres should therefore target development opportunities before selecting the technology to deliver the information that will help realise them. The technology should be chosen to support the development, not the other way round. Pro-poor ICT initiatives need to be explicit about their development goals and how they will directly impact the target population as this will make them more likely to develop effective operating models and deliver tangible results. Initiatives that focus excessively on establishing the infrastructure or diffusing technology devices tend to lose sight of development issues and the people that are expected to benefit from the technology and they consequently deliver less tangible development results. The general rule with Telecentres is that the services should be demand-driven and they should be designed in a 'bottom-up' fashion.

Information in support of development

To lead towards successful and sustainable interventions, Telecentre initiatives will need to identify three to four strategic layers as a result of preparatory needs assessments and feasibility studies. Planning starts with the development strategy. From that, an information and communication strategy for implementing the development strategy can be derived. Out of this a technology plan can be developed. Finally a strategy for evaluating and sustaining the information services is developed. This approach faithfully interprets the relationship between ICTs and development. If this relationship is not properly understood, and there are many observable instances where it is not, then sub-optimal outcomes are likely. This happens when programmes begin with a technology strategy and work their way backwards towards a development strategy; often labelled 'a solution looking for a problem'. There are many dangers in failing to understand this relationship. Scarce resources for which there are multiple competing demands can be squandered and disillusionment can set in when ICTs fail to deliver their full promise, further inhibiting future corrective efforts.

Development strategies will arise from various sources, often from multiple sources at the same time. A good starting point is to put some effort into understanding the problems, needs and aspirations of the community. There are many techniques for doing this, and they are well known among community development practitioners, so it is a good idea to have some included in the team. Appreciative Enquiry and Future Search are two such techniques. Additionally, development strategies may emerge from regional or national priorities and programmes, such as HIV/AIDs prevention, agricultural improvement or adult learning, Small, Medium and Micro-sized enterprise development, and so on. Where such programmes, exist, they will inevitably contain significant informational components which could benefit from using Telecentres as a communication channel. Additionally, Telecentres are being used as the point of contact between citizens and e-government services. Delivering public services across the internet can be a major driving force for setting up Telecentres. Telecentre planners should target as many applications areas like these when planning the implementations, although it may not practical to implement them all at once. The community should be involved in deciding priorities.

Checklist for Programme Design
1. Decide the development objective of the Telecentre.
2. Ensure the community agrees with the development objective of the Telecentre.
3. Determine what information will be required at the Telecentre to achieve the development objective.
4. Identify as many relevant applications as possible for the Telecentre.
5. Agree an implementation agenda for them with the community.

3. Ownership models

There are a variety of Telecentre models in existence, reflecting a number of variations along several key dimensions. The following table summarises the key operational dimensions of Telecentres.

The Key Operational Dimensions of Telecentres	
Narrow focus Provides access to technology only	**Multipurpose** Provides services, e.g. training, development information
Community-based Represents a broad constituency	**Establishment** Top-down government or business organisation based
Stand alone Not associated with another institution	**Attached** Operates as part of another institution, e.g. school, government units
Thematic Specific to theme, e.g. education, health.	**Universal** Whole community needs
Independent Operates alone	**Networked** Works with other Telecentres
Public sector Operated by a public body	**Private sector** Operated by a private body
Profit oriented Operates as a business	**Service oriented** Operates as a service
Public funded Funded by public funds	**Privately funded** Obtains funds privately
Commercial Charges clients for its services	**Free** Provides services for free
Urban And or peri-urban	**Rural** And or remote

Some of the operational dimensions of a Telecentre will be determined by its ownership. Some can be designed into the Telecentre. There are five basic models for Telecentre ownership; civil society, academic/research, government, private sector, and a mixed model involving two or more of these.

Civil society

The majority of Telecentres are non-profit, operated by NGOs. A good starting point for setting up Telecentres is to find social entrepreneurs and innovators, which are often initially found in NGOs but they can also turn up in the most unlikely of places; schools, private firms, universities, even occasionally within a government agency. Many government-led initiatives for community engagement are based upon the “spray n’ pray” approach. Rather than taking the time to locate and support community innovators, this approach adopts a “one-size-fits-all” programmed strategy. And, it almost never works. Non-profit Telecentre projects include those set up by foundations, international agencies, NGOs, and other civil society organizations. This category also includes those Telecentres set up through corporate philanthropy. NGOs typically receive funds from donors or their governments which they use to establish Telecentres that help them implement their development objectives.

Academic research

Some Telecentres have been established as a research project, to examine some aspect relating to the use of ICTs for development. They usually take the form of action research, whereby the researchers and the community try things out that they believe have promise, learn from the experience and then adapt the programme in response to the learning and try something else. Although set up as experiments, they may become useful enough to warrant support to keep them going as a permanent establishment beyond the point where the research has been completed. At that time, the Telecentre may evolve into another type. Research Telecentres are often treated as pilots; platforms for learning how to scale up into larger numbers of centres.

Government

Governments in many developing countries are taking an interest in setting up Telecentres. Government projects are those that are initiated by a government or government agency and may or may not aim to achieve sustainability/profitability on an individual Telecentre level. Government Telecentres primarily offer e-governance services and may also offer computer training, education, and activities related to agriculture, youth, and the empowerment of women. However, they typically lag behind the other models in the services that they other. Several activities, primarily the financial ones, are usually not offered at all.

As libraries are already in the business of providing information, in some cases they have been chosen as the venue to provide public access to information via ICTs. Whilst the existing institutional framework is an attractive proposition for facilitating management and administration, the development activities that Telecentres should perform do not sit well with the traditional role of the public library. Libraries are best known as the custodians of books.

Schools offer similar benefits to Telecentre operations as libraries; an existing institutional framework and their educational mission. However, practical difficulties often arise; especially surrounding ownership, public access and opening hours, and the role of teachers. These issues often serve to kill the idea. Similarly, post offices have been chosen to house Telecentres, but again, the roles of each institution do not usually converge and practical difficulties limit their effectiveness as vehicles for community development.

Various government agencies are involved in Telecentres; sometimes it is the ministry responsible for telecommunications, or it may be a ministry of agriculture, information or rural development or some other specialised ICT agency outside the line ministry structure. In the early stages of development, government sponsors the Telecentres, possibly with donor assistance, but it may later set up private sector franchising arrangements to hand them over to the private sector.

Private sector

For-profit Telecentres are set up by individuals or companies that aim to make a return on their investment. Phone shops and Public Call Offices (PCOs) are included here as they are so common in developing countries and can be described as the forerunners to Telecentres. In some cases they have developed from offering simple telephone services into full-blown Telecentres, although the role is different.

Agricultural activities are found most often in for-profit Telecentres, perhaps reflecting a willingness by farmers to pay for agricultural inputs such as accurate crop prices, weather reports, and crop diagnostic services. Other activities that are found almost exclusively in for-profit centres include business development, e-commerce, and

financial services. The success of this model depends on the financial ability of the community to spend. In this model, users are charged a periodic and/or a per-use fee to subscribe to a service on a daily, monthly or annual basis. This model is being used by many Telecentres when offering telephone, email and web browsing services. The utility or on-demand model employs a method of metering usage, or adopts the pay-as-you-go approach. Metered services generate revenue based on actual usage rates. This model has been traditionally used in the provision of essential services, such as telephone, electricity and water. However, many Internet Service Providers (ISPs) and cyber cafés in developing countries also use it to generate revenues from internet users.

Private for-profit Telecentres can be planned and run on a commercial basis and managed by local entrepreneurs capable of developing a business and management system. Preference should be given to Telecentre solutions which have a franchise element and can establish a network of Telecentres through the involvement of national telecommunication firms and internet players. A network of Telecentres under a single management carries the advantage of providing quality standards and support; such as a start-up package, an operating manual, recruitment and training guidelines, name branding, and standard payment vehicles (e.g., pre-pay cards). These increase the centres' recognition nationally and their presence in urban and rural localities. Such support tends to raise the quality of the centres and increase the chances that urban dwellers will purchase pre-pay cards or otherwise finance the participation of their rural friends and relatives.

In some cases, corporations have set up Telecentres to assist their primary suppliers. E.g. providing agricultural support and other services to the growers of raw materials for agriculture industries.

Mixed

When governments want to scale up to large numbers of Telecentres, they sometimes adopt a franchise arrangement with the private sector. In the typical models, a Telecentre manager is an independent entrepreneur who invests his capital in the Telecentre and creates community organizations to guide his activities; he is supported by a franchiser who provides technical and managerial support for the Telecentre operations. Telecentre managers select one of the telecommunication service providers who provide communication access channels. In a tiered-franchise approach, Telecentre owners offer a basic set of e-government services, but they may choose from an array of other services, such as insurance and micro-credit, in order to increase their revenue streams and become more responsive to local needs. The franchisor sets up the overall business model, best practice guidelines for the technology and services, signs business relationships with service providers, builds the software for delivering the services, collects revenues, tracks activity, does market research and ensures efficient operations of the business. They recruit qualified franchisees in the villages, train them, help them setup the Telecentres, get the loans and provide them the overall operating platform to run the Telecentre profitably.

The franchisee would run his or her Telecentre like a business. The franchisor would typically charge a setup fee and an ongoing monthly fee, either flat rate or a percentage of the service fee that the customer pays. The fee splits ensure that there is enough incentive for the villager to consume the services, for the Telecentre operator to make a comfortable profit while leaving enough money for the franchisor and the original service provider. Note that all the parties do not have to necessarily be involved in every transaction. For example, the Telecentre operator can offer desktop publishing as a service without having to pay the franchisor a percentage of the fees he charges his customers. The franchise model is emerging as a practical means of delivering e-government services to underserved communities.

Checklist for Ownership Model
1. Decide the most appropriate form of ownership from; civil society, research, government, private or mixed.
2. Plan how ownership might change from one type to another as the Telecentre matures.
3. If the Telecentre is a pilot, decide what forms of ownership will be suitable when the pilot scales up.

4. Information provision

The essential feature of a Telecentre is not the technology, but the information that the technology makes available to the community. It is therefore important that Telecentre implementers have a clear understanding of the information needs of the community and the types of useful information that could be made available. Telecentres deliver information that can be categorised into; generic information, information that is focused on ICTs, information in support of development programmes and locally based information. Of course these categories will overlap, but it is useful to examine each to ensure the Telecentre achieves its full potential. Telecentres need to offer each category of information in order to survive. The following table outlines the key characteristics of each category of information.

Categories of Information that Telecentres Deliver			
Category	Examples	Source	Delivery Mechanism
Generic Information	E-government, agricultural extension, distance education, e-commerce, e-health, news, weather, etc.	Government and national/regional institutions.	Institutional partnerships.
ICT-focused Information Services	E-mail, voice over IP, chat, internet searches, word processing, spreadsheets, presentations, ICT training, printing, photocopying, scanning, newsletters etc.	Local Telecentre owners, operators and staff.	Creative and client-centric entrepreneurial activity at the Telecentre.
Information in Support of Development Programs	HIV/AIDS awareness campaigns, micro-and small enterprise development support, skills training, micro-credit support, etc.	National/regional development initiatives.	Pro-active marketing of Telecentres among NGOs, and INGOs.
Locally-based Information	Local laws, poverty reduction schemes, local NGO activities, yellow pages, job placement services, classified advertisements, market prices, bus schedules, doctors and vets lists etc.	Local activists, NGOs, community-based organizations, government offices, social entrepreneurs, volunteers, schools, etc.	Community outreach, community mobilisation, local networking.

Generic Information

Generic information is useful to a wide audience; the entire region or nation. It includes e-government applications such as payment of tax and fees and applications for certificates, as well as national portals for agricultural and SME support, markets, on-line learning, health care, and so on. Other types of useful generic information include weather, news services and on-line banking facilities. Usually such information is general and non-specific about any locality, although it can be useful, but it does not normally lead to important changes at community level. Research suggests that 80% of

the information people are interested in relates to the immediate locality. Nevertheless, generic information of this nature is an important component of a Telecentre's overall information strategy, but of itself it is not sufficient to satisfy the information needs of any particular community.

ICT-focused Information Services

These are information services that become available only as a result of the presence of ICTs. The following is a list of the services that a Telecentre could offer. Some of these services are quite specialised and most Telecentres will start out by offering only a few of them, but in time, as demand grows, the range on offer can be expanded.

- Telephone calls (outgoing and incoming).
- E-mail and Internet access (send/receive e-mail, browse the web).
- Word processing (typing and formatting of letters, job applications and other documents).
- Desktop publishing (newsletters, flyers, stationery, business cards, tickets, circulars, wedding invitations, etc)
- Pamphlets, logos and computer artwork.
- Spreadsheets and databases (financial budgeting, bookkeeping, invoicing and farm management).
- Computer use (hourly or daily rates can be charged for this).
- Education and training (distance education, on line-learning).
- Computer training (basic computer literacy, computer applications; spreadsheets, e-mail, word processing. etc).
- Graphic design (assist with presentations, assignments, adverts).
- Printing (laser printing and copying for promotional materials and presentations)
- Web Page design (personal home pages designed, launched and maintained)
- Professional writing (prepare grant applications and funding submissions).
- Scanning (scan pages of text or graphics (including photographs) for use in a newsletter, e-mail or for printing).
- Photocopying (school study material, circulars, newsletters, licence applications).
- Binding (for professional presentation of documents and booklets).
- Laminating (photographs, certificates, business documents).
- Fax communications.
- Business and secretarial services.
- Service directories (local community phone directory and yellow pages).
- Video conferencing (two-way audio and video conferencing with other regions).
- Digital camera hire (daily or weekly hire of photo/video).
- Internet based research (Telecentre staff research a topic on the Internet for study, business or pleasure).
- Information brokerage services (e.g. employment exchange)

Some or all of these information services can have immediate applicability for a newly-established Telecentre within a community that has not had little previous exposure to ICTs. Individually, they may be regarded as rather trivial in terms of stimulating local development and poverty reduction, but they have an important contribution to make in the process of infusing ICTs into the fabric of daily life and helping the Telecentre establish its reputation and relationship with the community. They are more or less applicable everywhere and they serve to stimulate demand for ICTs and can provide a useful revenue source.

Information in support of development programs

Nearly all villages in the developing world have been touched by one or other development project; promoted either by international or local NGOs, or by the government. In almost all instances, such projects carry important informational components, relating either to their co-ordination or more directly to the benefits that they

bring to their targeted beneficiaries. Wherever information flows exist, there are possibilities for improving them in some way with ICTs. For example, somebody working for an NGO in community forestry, or in bio-gas, or irrigation, or malaria control, in a mountainous and remote area can communicate directly with their office in the capital and with her overseas donors, as well as with similar initiatives world-wide. She can access information and knowledge that she was not previously aware of in order to improve the impact of her project. NGOs sometimes select their locations for working based on the availability of ICTs, so Telecentres can actually stimulate a range of local development activities, if they are marketed appropriately. Development projects that rely on efficient and effective flows of information between and among communities and regional, national and/or international institutions should seriously consider setting up Telecentres to facilitate such flows. Although it may be difficult to justify a Telecentre based on a single application, the opportunity exists to deliver other types of information, as described here, to strengthen the case for installing ICTs. As with generic Information and ICT-focused information services, information in support of development programs are an important component of an overall information strategy for any Telecentre.

Locally-based Information

Locally-based information will probably emerge as the single most important information category for any Telecentre. Understanding what this information should consist of requires that a Telecentre conducts a participatory demand survey among its community. Local information relates directly and significantly to the daily problems, aspirations and opportunities of the community. An example of local information demand and local content creation is the Telecentres in Pondicherry, India; a rural area of around 20,000 inhabitants. In response to a list of information requirements identified at the early stage of setting up the Telecentres, volunteers in the villages created a local database that comprises:

- details of government programmes for low income rural families,
- cost and availability of farming inputs such as seeds and fertilisers,
- information about grain prices in the various local markets,
- a directory of insurance plans for crops and families,
- pest management plans for rice and sugar cane,
- a directory of local hospitals, medical practitioners and their specialities,
- a regional timetable for buses and trains,
- a directory of local veterinarians and cattle and animal husbandry programmes,

Locally relevant information needs to be in local languages. In this regard, the use of radio, video, voice-based communication (e.g. loud-speakers) and multimedia tools is much more effective for communicating with illiterate people compared to the textual information that is prevalent in the developed countries. Cost-effective and easy-to-use tools to author knowledge contents locally should be provided at the Telecentre; along with training in their use, so that the community can participate in its own knowledge creation and presentation. Research suggests that Telecentres are often perceived as places that provide services only for the educated and this perception is related to the language of the content. Without consideration of such local content, attempts to encourage greater internet usage in Telecentres may meet with limited success.

Checklist for Information Provision
1. In conjunction with formulating the Telecentre's partnership arrangements:
2. Decide the Telecentre's strategy for providing generic Information
3. Decide which ICT-focused information services the Telecentre will provided.
4. Decide the Telecentre's strategy for providing information in support of development programs.
5. Decide the TELECENTRE's strategy for providing locally-based information

5. Partnerships and Networking

Among the few general rules that exist for setting up and operating Telecentres is that partners are essential. Multi-stakeholder partnerships bring together the varied range of expertise and resources that are necessary for achieving desirable results with Telecentres. At the local level, typical Telecentre partnerships include; community leaders, community organizations, schools, health centres, agricultural extension agents and input suppliers, and local cooperatives. These institutions will assist in identifying the demand for information within the community and in mobilising the community toward promoting developmental activities that make good use of it. In this regard, local agricultural extension agents, community health workers, schoolteachers and government officials need to re-examine how information technology can contribute to their efforts. They will need help in doing this, and it is the job of the Telecentre to provide that help. Outside the immediate locality, partnerships should be sought with; government, donors, NGOS, the private sector, educational institutions, and other Telecentres.

Government

Government related services, in the form of e-government, should be provided through partnerships with the local government agencies. It is preferable to deal with one central agency that takes interest in and responsibility for the success of these services. For most citizens, public services are provided by a range of government agencies, some local, some centralised, so there is a considerable challenge on the part of Telecentre implementers to co-ordinate the various agencies involved in developing their services for on-line delivery at the Telecentre. Nevertheless, it is evident that poor people depend heavily on public services, so the Telecentre will add considerably to its relevance by providing access to them for such people. Where Telecentres are being implemented as part of a government programme, as is the case in several developing countries in Asia, then the programme should co-ordinate with key line ministries; agriculture, health, education, rural development and enterprise development, for example, in developing and delivering on-line services that can be accessed at the Telecentres.

Donors

Donor agencies contribute much needed resources of course, but the also have wide ranging expertise and networks that can strengthen Telecentre projects. They will be active in a variety of developmental sectors; health, education, agriculture and so on, so there is an opportunity for Telecentre implementers to tap the expertise in these areas as sources of useful information. However, as with governments, co-ordinating the various departments involved and encouraging them to adopt on-line delivery channels will be a challenge. Donor-led development projects tend to set rigid objectives and if ICTs are not included at the outset, it is all but impossible to bring them in half way through.

NGOs

NGOs are a vital source of support for the users of Telecentre services and they should be included in Telecentre implementations. Local NGOs usually have the contacts and confidence of Telecentre host communities and can be instrumental in several key aspects of Telecentre development; such as determining and supplying information needs and mobilising the community towards information-based development activities. International NGOs can bring in vital resources, expertise and contacts with other development activities. NGOs also tend to be adaptable and ICT savvy and can be a source of creative ideas on how to make best of the technology.

Private sector

Information services based on Telecentres can be offered through partnerships with corporations and other entities that look upon poor communities and rural areas regions as a target market. This may involve agricultural businesses that see an opportunity for cultivating closer relationships with their farmer suppliers by delivering useful information via the Telecentre in support of promoting improved methods, informing better choices and supplies of farm inputs and co-ordinating crop cycles and harvesting. Partnerships can be developed with financial institutions that may be interested in providing loans and insurance services to rural customers, either as a market opportunity or in compliance with legal requirements. Healthcare providers (private as well as public) can also operate interactive and information-based services to distant communities via the Telecentre, probably in conjunction with the local clinic. Partners in the private sector can work with Telecentres so that they don't need to build their own networks. Conversely, the Telecentre does not have to develop its own products and services from scratch if it can partner with organisations that are already developing them.

Educational institutions

On-line education emerged with the growth of the internet and many educational institutions now offer their courses, either in entirety or partially on-line. This benefits a variety of non-traditional educational learners; distance learners, adults in employment (in the form of continuous learners), housewives, out-of-work youths, the unemployed and school drop-outs. Both public and private educational institutions are exploiting ICTs to expand their course offerings beyond the classroom. Telecentres face an opportunity in providing access to such courses, and sharing in the income that they generate for the providers.

Other Telecentres

Forming partnerships with each organisation and government entity for every locality by the various Telecentre operators individually is not feasible nor is it desirable. A more workable approach is to create an umbrella organization to represent a number of Telecentres to form relationships with the various entities and to establish best practices for the Telecentre operators to use in setting up, operating and growing their Telecentre based businesses. As the World Bank has said, "the mindset of an isolated Telecentre must be overcome". By clustering Telecentres in some fashion umbrella organizations can leverage their influence and economies of scale in support of localised information services. The cost of producing local information is spread over a number of Telecentres. One response to this approach is the franchise model that synergises local market sensitivities within a broader well established operating framework for all Telecentres within a district or country. This is discussed later in another section. Partnering with other Telecentres also avoids re-inventing the wheel with local applications and methods of operation. It also facilitates the formation of support services and self-support networks for the entire group of Telecentres that would not be feasible for individual units. According to Latin America's Somos@Telecentros Network, "if Telecentres are to make their mission more effective, they need to organize themselves into overlapping national, regional and international networks".

Checklist for Partnerships and Networking
1. Identify suitable partners, from government, donors, NGOs, the private sector. Educational institutions and other Telecentres.
2. Recruit them into the Telecentre implementation plan.

6. Understanding the Community

Community dynamics

The community is the primary stakeholder in the Telecentre; it is for them that the centre exists. It is crucial to understand the needs, interests, aspirations and constraints of the community. However, even small and remote communities can be complicated and dynamic and made up of several socio-economic groups. An important first step is to identify the different groups within the community. Likely groups would include; women, youth, the elderly, farmers, professionals, teachers, religious leaders, health workers, business people, poor people, and so on. All the groups should contribute to the Telecentre programme design and community information needs assessment. This assists in building community ownership from the start and minimises the risk of any resentment or feelings of isolation. The more the community contributes, the better they feel, and the more they will support the Telecentre. Telecentre managers must reach out to community groups and demonstrate how Telecentre resources apply to business, government and development activities.

It is important for the Telecentre implementers to get to know the community and it is equally important for the community to get to know the Telecentre implementers. Desirable results will emerge when both groups work together in a spirit of mutual learning and understanding about the role that ICTs can play within the social dynamics of the community. A participatory approach should be adopted to understand the following factors relating to the potential services that the Telecentre could deliver;

- the problems that the community is facing,
- the development needs of the community,
- its aspirations and priorities for development,
- what it has achieved in the past (as an indicator of what is possible),
- what activities have failed in the past (as an indicator of what is probably not workable),
- what development activities are currently under way.

There are a number of workshop approaches and participatory research techniques that can be used to elicit this sort of information. These include focus group discussions, SWOT analyses (strengths – weaknesses – opportunities - threats), problem tree analyses, visioning, ethnographic research and various forms of appreciative enquiry. All these techniques are standard forms of social research and are well covered elsewhere, so they are not further detailed here.

Baseline research in the form of a quantitative questionnaire-based survey should also be conducted to arrive at a socio-economic profile of the community, including;

- demographic profile
- education
- occupations
- household incomes
- sources of income
- sources of information
- uses of information
- use of telecommunications
- knowledge of ICTs.

There are many standard questionnaires in existence that will elicit this information, so no single questionnaire is included here. The most straightforward approach is to adapt

an existing instrument to the needs of the situation. The results of the needs assessment will serve at least two purposes;

- Providing an understanding of and arriving at an agreement of the needs and problems of the community and the opportunities for development that they have recognised. The Telecentre programme can identify the information that is necessary for implementing development activities that the community will welcome. All subsequent design and implementation activities are built upon this understanding, which will of course evolve over time as the Telecentre project evolves and as the community itself goes through the natural social changes that it will experience. Accordingly, the needs assessment is a dynamic exercise that should be maintained through appropriate techniques of community engagement.

- In the fullness of time, when the Telecentre has been operating for a year or two, there will be the need to conduct some form of evaluation of its impact in the community. The original needs assessment provides a useful benchmark for judging this, but not the only one. More explanation on evaluation is provided later.

There should also be a mechanism for the community members, including the poor and vulnerable, to participate in designing the services that the Telecentre provides. A village community should create a governing or advisory body to support the Telecentre manager in identifying community demands for services and providing mutual support and partnership arrangements. Capacity building of Telecentre managers and community leaders to jointly conduct a participatory demand survey and stakeholders meetings in the design phase of a Telecentre is essential and in many cases, local NGOs can conduct such capacity building most effectively. The long term sustainability of the Telecentre depends on the community accepting it as part of their daily lives. When they do so and begin to feel a sense of ownership over the centre, they will support it and work towards maintaining and further developing its services.

Community participation should be formally planned and facilitated through different aspects of the Telecentre's operations. This starts with implementation planning and proceeds through periodic evaluations and impact assessments. At the same time, Telecentre implementers should understand that it is important not to assume an idealistic representation of village life, or develop unrealistic expectations that their desire for the community to participate openly and fully in their endeavours will not confront any existing class and power asymmetries within the community.

The Telecentre has to work within the realities of the social structure of the community in order to be effective. When it does so, it is more likely to achieve the condition whereby the community appropriates the technology for its own socio-economic purposes, taking over from the implementers and directing the use of the Telecentres independently from those who originally installed it. This is a highly desirable condition. It is known as social appropriation of technology and it indicates that the community has acquired genuine ownership of the centre, that the centre has become woven into the social fabric of the community and that the indications for long term sustainability are positive. Social appropriation of technology is a community-based approach that allows the meaningful uses of ICTs that can address specific community needs. In addition, the involvement of community members and leaders fosters the social sustainability of the centre, since people are able to integrate and adopt those ICT-solutions that are relevant to their indigenous lifestyles and solve concrete problems. Social appropriation of technology arises from community participation in the Telecentre planning processes and in its governance and operations.

Participatory processes

Although careful attention to community participation is known to deliver important benefits, it has been pointed that participation does not happen spontaneously. Participation also comes in various forms; including participation in Telecentre planning, governance, usage, operation, and evaluation.

Accordingly, there are benefits to be gained by adopting a methodological approach to participation that will result in the following;

- a sense of community ownership of the Telecentre
- the Telecentre reflects community values
- the Telecentre identifies information needs
- the Telecentre provides acquires resources, such as volunteers, premises, equipment or technical expertise.

Moreover, it is equally important to decide who should participate. Certain groups of people should receive specific attention because of the possibility they will be marginalized; women, poor people, minorities, youth, the elderly. There are several ways in which community members can participate in Telecentres, so a methodological approach helps in identifying who does what, and when. Additionally, individuals will respond better when there are incentives to participate. These may be in the form of preferential Telecentre services to themselves, better services overall the community, as monetary payments for services rendered, or in the form of public recognition.

Community participation should be encouraged across all stages of Telecentre planning, implementation, operation and evaluation. At the outset of a Telecentre project, the community leaders should be involved to ensure they understand and approve of the proposal. As planning proceeds, other community members should be involved so that their opinions are incorporated. When the Telecentre is set up, a steering committee or user committee should be established, consisting of prominent community members and leaders. The section on staffing outlines the functions of the Telecentre steering committee.

Working groups

One of the most effective methods for achieving community participation is the creation of a number of working groups based either on topics of interest, such as education, health, or enterprise development, or based on particular groups of users, such as women, students, poor people, farmers, youth, the elderly, and so on. A key role of the Telecentre staff is to facilitate these groups towards generating ideas for solving local problems with information and fostering local development as well as defining the type of information that the Telecentre should obtain in support of such ideas.

Checklist for Understanding the Community
1. Conduct a baseline study
2. Hold participatory workshops and focus group discussions with the community.
3. Establish the Telecentre Steering Committee from community members.
4. Set up mechanisms for regular community participation in Telecentre planning.

7. Gender sensitivity

In Telecentre operation

It has been said in discussions about running Telecentres, “the right man for the job is a woman.” It seems that women have attributes that are particularly suitable to running Telecentres. Whilst there is a good deal of learning available regarding the ways in which gender roles are affected by development processes, the reasons for incorporating this into the business of ICT diffusion within communities go beyond the customary reference to an understanding of gender within a perspective of human rights. As one observer has suggested, “if women are not recruited, engaged and involved within the social transformations associated with the Information Society, the economic transition to a knowledge-based economy will not succeed”. Moreover, research indicates that more women use the services of Telecentres when they are operated by women. Therefore, women should be on the management structures of Telecentres, but not as a front. They must be women with skills who can deliver results, and capacity building may be required within the Telecentre to help women achieve this. However, research indicates that women in leadership roles face problems of loneliness, self-criticism, competition, conflict, chauvinism, cynicism and lack of skills, lack of time. Women need support structures to deal with these stresses. The barriers that prevent women from assuming leadership positions include cultural, structural and educational issues.

In Telecentre services

Services offered by Telecentres should be sensitive to the needs of women. There are indications that services providing government information are not of key interest to women. Issues such as the education of children, family health and food preparation are considered to be issues of more concern to women than men. Women and women's organisations (rather than male-dominated traditional and civic local authorities) need to be asked what information women require whether electronically, verbally or in document form. A focus group should be organised consisting of women Telecentre users to explore their information needs and their experiences of using Telecentres. A quantitative/qualitative survey of women users is also useful. Women are also useful as information creators through Telecentres. As a Telecentre becomes an information provider, there should be an environment created that is empowering to women so that they are able to generate their own information and to create their own websites.

In Telecentre training

Training activities at Telecentres need to ensure that the requirements of women are properly accounted for. These are some of the questions to consider;

- How many of the people trained are women?
- Does training take into account the learning needs of women?
- Are trainers of women, men or women?
- Are women trained in mixed groups or with other women?
- Where there are women managers, do they have the space to introduce new forms of management which are specifically focused on the needs of women in the community?

In Telecentre evaluation

Telecentre evaluations should establish the extent to which the Telecentre caters to the needs of women. Answers to the following questions should be sought:

- Is information provided relevant to women?
- Are services geared specifically to the needs of women?

- What are the actual needs of women?
- What are the reasons for non-use by women?
- Are Telecentre owners women or women's organisations?
- Where communities own Telecentres, are women's organisations involved?
- Where Telecentres run as individual businesses are the individuals who are provided with equipment men or women?
- Does the information provided encourage networking with other women or women's organisations?
- How enabling is the environment for women to seek additional relevant resources?
- Are women encouraged to access information relating to governance that has specific relevance for them?
- Are women motivated to produce their own resource materials? If so, what motivates them? If not, why not?

Checklist for gender sensitivity
1. Establish participatory mechanisms for women that are separate from those for men.
2. Recruit women into Telecentre management and operations.
3. Develop Telecentre services specifically for women.
4. Train women, in Telecentre management, operations and use.
5. Include women’s issues in evaluations.

8. Technology

The choice of technology for a Telecentre should be driven by the decisions made about what type of information services it will provide. At the same time, as the technology itself is developing rapidly, new technologies make new services possible and these may have relevance for the information and development strategy that the Telecentre is implementing. Against these considerations, there is the realisation that the cost of technology has become a major impediment to the more widespread implementation of Telecentres. This means that low-cost devices are often promoted as the answer to the digital divide, whereas the real answers lie in the promotion of development that uses technology effectively, rather than in the technology itself. Low cost ICTs solve only part of the problems that Telecentres face; they are not the whole solution, and if they do not contribute effectively to local development, then they are no solution at all.

Hardware

Most Telecentres contain a mix of computers, with internet connectivity, telephone services and various peripherals. The major choices for computers are between PC-based or Apple computers and between desktops and laptops. PC-based computers cost less and are more common, which makes inter-connection and maintenance easier. Laptops consume less power than desktops, but are less robust and more difficult to adapt with additional hardware. Other hardware may include digital photographic and video equipment; digital still cameras, video camera, television, and VCD/DVD players. New digital technologies are making digital still and video photography more affordable, easier to handle, and very competitive with professional formats in terms of quality. Digital video has promising potential within a range of developmental activities, and its convergence with internet-based technologies widens its potential impact.

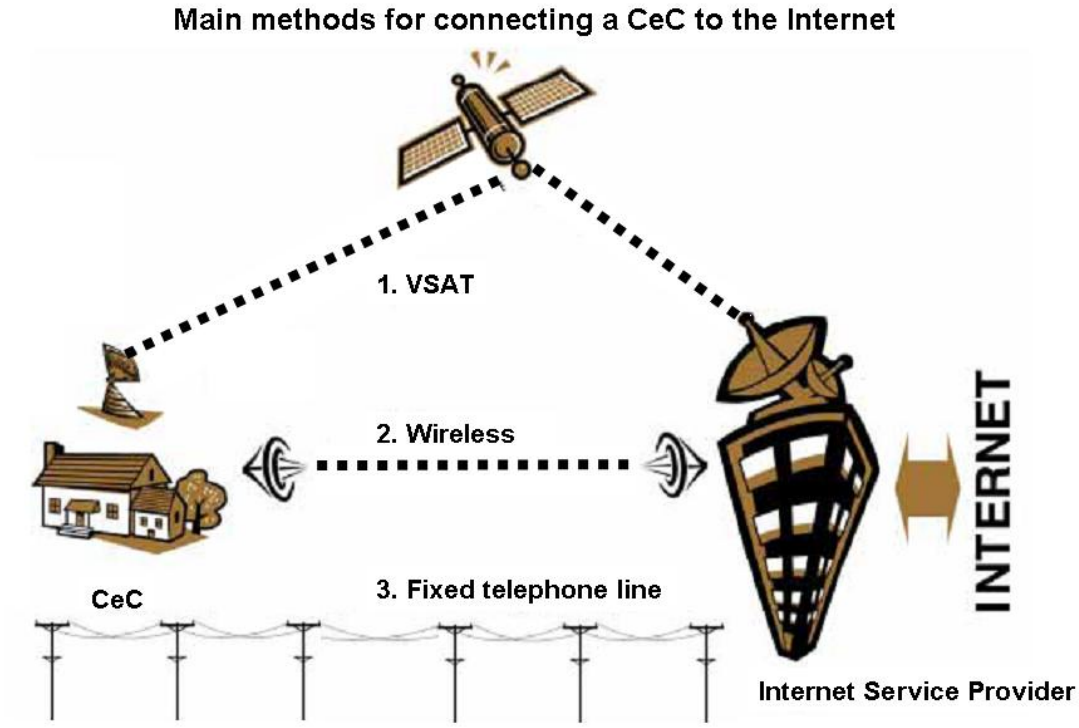
Peripherals are the external hardware devices that are not part of the basic computer system. Telecentres will require a range of them; printers for hard copy and modems for internet access. Although many computers today have internal modems, it is better to buy external modems because of the rapid changes in modem technology. A photocopier may be useful as there is always demand for one. Other potentially useful hardware includes; a binding machine, CD-writer, scanner, digital camera, overhead projector and a laminator.

Software

The major decision for the software to use in a Telecentre is between proprietary Windows-based software or Free and Open Source (FOSS). The choice of computer will influence the choice of software. All computers need an operating system, virus protection and office software. Standard software is available for text and spreadsheet editing as well as Internet browsing. Proprietary software solutions are expensive and require regular purchases of upgrades. FOSS software costs much less and it exists for most computing requirements but it is not as well known as the leading proprietary software systems. With careful planning and design, free software can meet many of the essential needs. Of a Telecentre, whilst commercial software licenses often represent a substantive part of the Telecentre's ICT budget.

Internet connectivity

Internet access will often be a crucial factor for a Telecentre's telecentre component. The various technological solutions for connecting to the Internet follow a similar pattern; the Telecentre connects to an Internet Service Provider (ISP) that has a high-speed connection to the Internet. The following diagram illustrates the main alternatives:



What already exists often determines the options, which are usually limited. Telephony is still very relevant for rural access. Adequate technical skills are required for ensuring and maintaining a robust connectivity infrastructure. Internet technologies offer new options to provide cheaper and more flexible services (e.g., internet telephony). Where telephone lines are available these are generally the cheapest and most reliable means of providing Internet connectivity as well as telephone and fax connections. In some areas digital telephone exchanges allow for a Digital Subscriber Line (DSL) which is a faster, permanent telephone line connection to the internet.

For areas without landline telephones, and for distances up to 20km, terrestrial wireless systems can provide a means of connection to the nearest internet point-of-presence (POP). For more remote locations, satellite is the best alternative. Fixed satellite for either interactive or receive-only communications is known as VSAT (Very Small Aperture Terminal). It is increasingly the system of choice for remote access; however, licensing arrangements remain a barrier in many countries. Connection to a satellite network requires a small satellite dish to send and receive data, a coaxial cable between the satellite and Telecentre, and a computer and satellite modem connected to the Telecentre computer network.

Wireless in Local Loop (WLL) can provide affordable wireless connectivity in about a 20-km radius. At the Telecentre, a subscriber wall-set with a wireless connection to a base station in a town provides a telephone connection as well as an internet connection. WiFi is another wireless technology for the provision of low cost access services. Internet Service Providers are already using WiFi 'hotspots' extensively to provide public access to the internet, mostly in cities. WiMAX technology enables the delivery of wireless broadband access as an alternative to cable and DSL. In areas without pre-existing physical cable or telephone networks, WiMAX may be a viable alternative for broadband access that has not previously been economically available.

While wireless and satellite technologies provide many opportunities for Telecentre connectivity, benefits can also be delivered from a simple cellular phone. Next generation cellular networks and technologies such as Short Messaging Services (SMS) can provide connectivity without major infrastructure requirements and at minimal cost.

Electrical Power

ICTs depend on electrical power, which may be unreliable or unavailable via the national electricity grid in the Telecentre location. Although the public electricity supply is generally the least expensive source of power, it may not be the most reliable. A Telecentre may need to establish its own reliable source of electricity to avoid power interruptions. Many Telecentres may have an unreliable electricity supply from the mains supplemented by a generator and/or solar generated electricity. Solar electricity requires solar panels which are expensive to purchase but have very low running costs. Wind or water power are alternatives to consider in locations with high wind or water energy. A back-up generator will ensure continued operation in the event of main power supply failure. When using alternative sources of power, the Telecentre should try to minimise the power requirements of the equipment. For example, a laptop computer consumes much less power than a desktop computer. While laptops are more expensive, a solar power set can usually provide power for twice as many laptops compared to desktops.

Radio

Community radio is another potential application for a Telecentre. When combined with internet access, it can foster significant developmental benefits. Radio stations that operate from Telecentres that are equipped with computers and Internet access can receive requests for information from the audience, search the web for the appropriate data, and return the results to the listeners, in local language. As a tool for social change and participatory communication, radio has several comparative advantages over other media. It is cost-efficient, pertinent in terms of language and content and therefore suitable for an illiterate population, and has wide geographic coverage. The convergence between radio and the internet is providing new strength to community radio.

Other

Other Telecentre requirements for equipment include; fixtures and furnishings, a sign-in book (or computerised system) to keep track of user patterns, a large wall clock, a bulletin board for notices of interest to users, filing cabinets and cupboards or shelves for software, supplies, daily, weekly and monthly logs, neon lighting, stationery, and reference materials.

Checklist for technology
1. Base technology choices on the needs of the development programme.
2. Choose low cost technologies wherever suitable.
3. Select connectivity solutions based on what is avalaible the locally.
4. Consider FOSS.
5. Ensure reliable electrical power supplies.
6. Select peripheral devices to help with generating revenue.

9. Staffing

Steering committee

Among the early steps in setting up a Telecentre is to appoint a permanent Steering Committee. It will be responsible for guiding the whole process of starting the Telecentre and then, on a long-term basis, for ensuring its continued success and development. Depending on the local legal requirements, the Steering Committee can serve as the governing body or in an advisory role. A Steering Committee will normally consist of members of the community who have a keen interest in starting a Telecentre. Additional members of a Steering Committee may be appointed at a public meeting to which members of the community are invited.

Among the Steering Committee's early tasks is to help with the identification of the information and communication needs of the community, and to appoint a Management Committee, which will be more involved in the day-to-day running of the Telecentre. The Management Committee is normally a smaller group comprising some members of the Steering Committee, some Telecentre staff members, and others with special skills. The Management Committee is accountable to the Steering Committee and usually appoints a single person as the manager responsible for the Telecentre. It is usually not possible for a Telecentre organiser to have all the skills and experience necessary to set up a Telecentre on her or his own. So a good organiser must be able to select and recruit people who have the skills that are needed to plan, establish and guide the operations of the Telecentre. A Steering Committee should be:

- Representative of the community
- Committed to the community and to the Telecentre
- Active; Steering Committee members who only attend meetings and do nothing else are of no use

The Steering Committee should consist of at least:

- The Telecentre Manager
- Representatives from the target group (or the broader community)
- Representatives from the local business sector
- Representatives from the education community
- One or more other professionals, preferably people with technology expertise, experience in finance and marketing, and legal expertise.

The Steering Committee's tasks are to:

- Set the directions, guidelines and strategies for the Telecentre.
- Help to obtain and secure start-up and on-going funding for the Telecentre.
- Seek new directions for the Telecentre, where possible.
- Develop policies and procedures relating to membership, usage, data collection, financial management and other operations.
- Observe legal requirements.
- Provide specialist advice.
- Appoint the Management Committee.

The Management Committee's tasks are to:

- Oversee the management of the Telecentre in accordance with its stated objectives.
- Provide on-going support to the Telecentre staff.
- Provide safe conditions for public access to the Telecentre
- Ensure that there are proper accounting processes
- Ensure on-going evaluation and monitoring of the Telecentre.

- Ensure that that the Telecentre continues to be sustainable and provide for and anticipate the needs of the community,

The Telecentre Manager

One of the major weaknesses of Telecentres that has been identified by studies is poor management. Many Telecentres experience some management problems, ranging from poor attitudes, to weak management, technical and even social skills. Some Telecentres keep formal government working hours, which limit the time during which the facilities are open to the public. They may not open in the evening, on Sundays, or during public holidays, indicative that the manager is not sensitive to profit making or customer sentiments. Local champions are vital to a Telecentre's success with the community.

Here is a list of the tasks for a Telecentre manager:

- Manage the day-to-day operations of the Telecentre.
- Assist the Management Committee in activities to meet the objectives of the Business Plan.
- Set up and maintain a logging system for the use of the computers and other equipment.
- Supervise and maintain the Telecentre's security system.
- Sign up users and introduce them to the Telecentre.
- Show users and other staff how to use all of the Telecentre's equipment.
- Assist users who wish to enrol for distance education courses.
- Liaise with educational organisations and other organisations in the community.
- Arrange tutorial and study assistance if this is required.
- Organise self-help groups, orientation programmes and social events if required.
- Maintain suitable records for the Telecentre.
- Be responsible for the management, supervision and appraisal of any staff, and ensure that staff undertake their duties in accordance with their job descriptions, or as specified by the Management Committee.
- Keep up to date with all new developments in the community concerning education, training, technology, communication, information and business enterprise.
- Undertake training where necessary.
- In consultation with the Management Committee and other relevant people, negotiate and co-ordinate employment and training opportunities for Telecentre users, where required.
- Together with the Management committee, formulate, develop and review policies and procedures relating to membership of the Telecentre, usage, data collection, financial management, and other operations of the Telecentre.
- Ensure that all policies and procedures are implemented and adhered to.
- Promote the Telecentre.
- Plan and co-ordinate activities to increase the number of Telecentre users.
- Advertise the services offered by the Telecentre.
- Identify and develop a network of users or potential users of the Telecentre.
- Keep the community informed of the activities of the Telecentre.
- Purchase appropriate hardware and software for the Telecentre in consultation with the Management Committee.
- Ensure that the facilities of the Telecentre are maintained in good working order.
- Advise the Management Committee of any future equipment and service requirements.
- Develop and maintain a database of community skills.
- Develop and maintain a database of potential funders of the Telecentre.
- Seek on-going funding for the Telecentre by sending out fundraising applications, applying for government grants, etc.

- Initiate and maintain revenue generating (money earning) programmes to achieve self-sufficiency for the Telecentre.
- Provide information, assistance and advice to Telecentre users.
- Take responsibility for the administration of any money that is paid into the Telecentre on a day-to-day basis.
- Provide written reports to the Management Committee, funders, and others, as required.
- Together with the Telecentre Management Committee, be responsible for the on-going evaluation of the Telecentre.
- Attend Management Committee meetings and present monthly reports on the activities, usage and outcomes of the Telecentre.
- Undertake additional tasks of benefit to the Telecentre as directed by the Management Committee.

Telecentre staff and volunteers

The Telecentre manager is usually assisted by staff. The Telecentre staff should include someone with technical expertise to take care of the equipment and to provide first line maintenance and technical support to users. Telecentre staff should always be drawn from the community. They are sometimes volunteers who receive free access to the ICTs in return to the time they spend working in the Telecentre.

Checklist for staffing
1. Assign a steering committee.
2. Have the steering committee assign the Telecentre staff.
3. Define the jobs of the Telecentre staff.
4. Provide training to the Telecentre staff.

10. Training

Alongside the information that it provides, the most critical component of a Telecentre is the people deploying and maintaining it and the training they, and the Telecentre users, receive. Training is a vital component of a successful Telecentre project. Training should as far as possible be practical and experiential, as opposed to being theoretical.

Staff training

The staff of a Telecentre may need to be trained in the skills required to do their jobs; including technical skills, managerial skills and skills with dealing the public. As they are engaged in community development, the Telecentre will need to know how to elicit the information requirements of a community in support of local development activities.

User training

Training Telecentre users in ICT literacy skills is a common task. Another training need is helping the community leaders in understanding how information can contribute to development. Telecentre managers who know a lot about computers but don't know how to link Telecentre potential to health clinics, schools, agricultural extension, or local government will not serve their communities well. Telecentres need to make their communities aware of the value of information, which will help the communities realize the value of the Telecentre. Training community members draws people into the Telecentre and helps it become part of the fabric of the community much like schools and clinics are. It also stimulates further demand for the services of the Telecentre.

Typical basic Telecentre training activities include;

- Computer literacy, including;
    - Basic word processing and office software
    - Computer hardware operation and basic maintenance
    - Internet access and computer networking
    - Web site development.

Beyond these training courses, a Telecentre might construct training programmes around specific themes, such as;

- Public access and/or open-lab time
- Internet access
- Pre-school and family activities
- After-school activities
- Adult education
- Career development and job preparation
- Job placement
- Electronic publishing
- Electronic commerce.

Training programmes may then comprise;

- Access to the Internet. Training in web browsing should include access to a tailored web site guide to on-line resources for the local community.
- Assisting local businesses, NGOs and public institutions to establish a presence on the Internet.
- E-mail to fax services. This can include very low-cost access to international faxes via remote e-mail-fax gateways in the destination countries.
- Internet training courses for individuals and groups.

- Video conferencing and voice-over IP services.
- After-school activities. These activities can be structured for different age groups or offered as open-lab time for children and students.
- Multimedia Publishing. This involves designing personal web pages,
- Adult Education. To establish a comprehensive adult education programme, a Telecentre will probably need to work in collaboration with an organisation in the community that is already offering adult education programmes. Adult education may include: Adult Basic Education (ABE) classes. These classes teach adult students how to read and write and do basic arithmetic. Life-Long Learning Opportunities. This includes extension courses through higher education institutions or universities. Basic computer training. Workshops on basic computer training teach adults to use the keyboard and the mouse, and how to use basic office applications without assistance.
- Services for the elderly. Telecommunications and email contact with relatives or friends. Financial planning assistance. Health care, social welfare and other services information.
- Job skills training, including classes for basic computer literacy; keyboard skills; typing/word processing; graphics applications; spreadsheets; databases and other office skills.
- Job search activities include how to compile a CV; interviewing skills such as what questions to ask and what is likely to be asked; how to dress; workplace behaviour; and how and where to look for a job.
- Business Services. Many different business activities can be carried out at the Telecentre, such as ecommerce, outsourcing, small business support, self-employment, and entrepreneurship.
- Small business support. Telecentres can offer to make computers available for accounting, tracking information and services, invoicing, advertising, etc.
- Self-employment. The Telecentre may allow users to design fax sheets, produce brochures, give technical assistance to establish a computer system and create homepages on the Internet. Instead of a usage fee, individual users who use Telecentre equipment for these purposes could pay a percentage of their earnings to the Telecentre.

Checklist for training
1. Develop a training plan for Telecentre staff.
2. Develop a training plan for Telecentre users.
3. Develop training programmes for user groups, based on their needs for using ICTs.
4. Monitor training activities and their outcomes.

11. Business plan

Most Telecentres will require some form of plan, known as a business plan, in order to reveal its financial profile; what it will cost to maintain the Telecentre and where it will find the money to support it. A business plan will include a budget. There are two parts to the budget; a start-up budget gives details of the one-time costs of setting up a Telecentre. An operating budget gives details of the on-going costs of running the Telecentre. Start-up expenses include the cost of getting everything ready before opening the Telecentre. There are two kinds of expenses;

- Capital expenses and one-time expenses such as renovations to the premises, purchases of equipment, furniture and furnishings and deposits to suppliers of electricity, telephone connections, etc.
- Continuing expenses that will continue once the Telecentre is operational such as salaries, rental, equipment maintenance and replacement, insurance, software and computer supplies, marketing costs, telecommunications costs, educational materials, stationery and cleaning materials, etc.

The final business plan will contain the following key elements

- Programme focus of the Telecentre, the community's needs for information.
- Description of the Telecentre's services and programmes.
- Community partners
- User projections
- Operations
- Timeline;

The time could be something like the following;

- Months 1 - 4
    - Form a Steering Committee
    - Conduct the first meeting of the Steering Committee
    - Conduct a community audit
    - Hold a community meeting
    - Conduct the second meeting of the Steering Committee (with new
    - community representatives)
    - Gather in-depth information about the target group's needs and assets
    - Hold the third meeting of the Steering Committee to discuss the information collected
    - Decide on the governance structure for the Telecentre and institute the legal arrangements
    - Design a fund-raising plan
- Months 5-8
    - Hold Steering Committee meetings once a month
    - Determine the programme focus of the Telecentre (to reflect the needs and interests of the community)
    - Identify equipment needs
    - Build partnerships with local institutions/organisations
    - Develop a business plan
    - Begin with fundraising campaign
    - Develop a strategy for on-going operations and begin a pilot programme
    - Find a location for the Telecentre
- Months 9-12
    - Advertise and market the Telecentre
    - Hire a manager for the Telecentre
    - Identify software programs to meet the programme needs of the community

- Acquire computers and software
- Renovate the premises and begin to set up the Telecentre
- Recruit volunteers to assist with staffing the Telecentre
- Launch the Telecentre

The start-up needs of a Telecentre include all items, services and expenses that need to be acquired and paid for before the Telecentre opens its doors, including costs relating to the Telecentre premises, staff, equipment, supplies, salaries, software, hardware, cleaning materials, stationery, etc. The on-going needs include:

- Premises (rent, utilities, security, insurance, maintenance, rubbish removal, etc.).
- Staff (including salaries, benefits and perks for volunteers).
- Marketing and promotion.
- Equipment and furniture (including replacement and repair costs).
- Software (including purchases, upgrading and replacements).
- Computer and office supplies.
- On-line services and Internet accounts.
- Publications and reference materials.
- Budget for special events (such as the launch of the Telecentre or an open day where refreshments are provided, etc.).

The Telecentre business plan is vital in raising the funds and obtaining other kinds of support needed to start the operation. The business plan is also a living document that should be reviewed by the Steering Committee every year to accommodate new developments and new ideas. A Business Plan has on-going value:

- It is a guide to setting up and running the Telecentre.
- It explains to partners and funders why the Telecentre needs their help.
- It is used to raise funds for the Telecentre.
- It acts as background material for staff and volunteers.
- It sets the Telecentre's on-going operational budget.

A business plan describes everything about the Telecentre. It is a detailed statement of the objectives of the Telecentre and the strategies for achieving the objectives, and explains how progress will be assessed on an on-going basis.

Financial projections

All the services of a Telecentre offers must be carefully and individually costed and priced. It is important to check what other Telecentres are charging for services and to carefully calculate what resources are needed for each task, including the amount of staff time. Ideally charges should be such that even though the Telecentre is making a profit, the costs of the services can be afforded by small community groupings and large community education projects; large businesses and small entrepreneurs; and government departments and state institutions. Different membership fees can be charged according to different categories of users For example, very frequent users or students might get a discount or pay a flat monthly rate, e.g. for e-mail. Normally individual training will cost more than group training. Here is a general set of categories, which can be used to define the way services can be itemised:

- Annual Telecentre Membership (Membership could provide discounted services, priority access, e-mail address/web page etc.)
- Personal member
- Concession (students, retirees etc)
- Family
- Business
- NGO/CBO
- Government department.

Checklist for the business plan
1. Build the budget for capital expenses.
2. Build the budget for continuing expenses.
3. Construct the business plan,
4. Incorporate the community needs.
5. Generate financial projections,
6. Project the time line
7. Maintain the plan

12. Premises

Considerations for locating a Telecentre

Another of the impediments to the more widespread use of Telecentres that has been identified is an inappropriate location. Location greatly affects accessibility and the use of facilities in Telecentres. Additional costs, such as for transportation to get to the Telecentre, and perceived threats to the user associated with the location, reduce its use. Potential users might be intimidated by public spaces or simply do not have the freedom to be there as this may be considered culturally inappropriate. Government buildings are often intimidating to poor people. If a Telecentre is located in an area in which a number of facilities and businesses are providing similar services it may face competition.

In many Telecentres, the available space is either too small or poorly managed. In some, there is little privacy for users of the telephones or other equipment. Ideally the community should provide a Telecentre's premises rent-free and maintenance free. If this is not possible, an organisation might be able to provide the space or pay the rent as part of their contribution to the Telecentre, at least until it becomes viable. A readymade market is the most obvious advantage of sharing space or jointly establishing a Telecentre with an existing organisation such as a library, a business enterprise, or a community advice centre.

There are many examples already showing that placing a Telecentre inside or close to an existing business or service, such as a post office, results in increased traffic for both operations. It is expensive to design and build Telecentre premises from scratch and not many Telecentres can afford these costs. It may be possible to renovate an existing building. Air conditioning may be necessary; to minimise the need to open the windows which lets in dust which is harmful to the equipment, to reduce the operating temperatures of the equipment, which significantly decreases failure rate and to increase the comfort levels of the staff and customers. In particular, a cool Telecentre during the height of the summer may prove an attractive feature, encouraging users to visit it and spend more time using the facilities. At a minimum, window blinds are necessary for meetings, classes and training centres that use an overhead projector.

As with all services aimed at the public, experience has shown that the right location is at the top of the list of key ingredients for the success of a Telecentre. A Telecentre that is far away in a side street will have to work very hard to make itself known to the community and is unlikely to attract any passing traffic. Sustainability hinges on a Telecentre's visibility and accessibility to as many users as possible. It may not always be possible to have a main street location. The availability of electricity and/or phone lines can be a more important determining factor, or often the location of the sponsoring organisation will decide where the Telecentre is placed. Where a Telecentre is not able to secure highly visible premises, marketing plans should take this into account, and relationships with other organisations in the community will be especially important.

Candidate locations for Telecentres

Buildings that can be used for Telecentres include:

- Post office
- Disused school building
- Community hall
- Community radio station
- Vacant shop premises

- Library
- Museum
- Shop fronts
- Vacant house or flat
- Religious or educational organisation
- Rooms in a trade union's or a local NGO's offices
- Trailer or converted container
- Policeman's house or perhaps even a police station.

A Telecentre can operate in almost any space that is available and affordable for a community, provided it has electricity, a telephone connection and is reasonably secure. A Telecentre might be given a small amount of space initially and later on, as the Telecentre's reputation and its importance to a community is established, it may either be invited to occupy larger premises by a local organisation, or bring in sufficient revenue to rent, buy, or raise funds for larger premises. Research shows that Telecentres take an average of two years before they can expect to be self-sustaining.

Separate rooms rather than one large room are preferable. Ideally there should be enough room for telephone booths (about 1 m x 1 m each) computer stations (at least 1.5 m x 1 m each), a reception area, an office, work and rest areas and a general traffic area. If a kitchenette and toilets are not included in the space, they should at least be fairly close. If a Telecentre wants to reach the largest possible number of people in the community, it needs to be open for as long as possible. Opening hours from 7am to 10pm are not uncommon. Telecentres need to be safe, cool, secure, and comfortable. A customer-friendly, comfortable Telecentre with good security and well cared for equipment will attract users and ensure a Telecentre's survival. Telecentre staff need to cultivate a 'culture of service', where the staff are trained to ensure that guests have a comfortable and enjoyable stay so that they will keep on returning.

As it is the intention of the Telecentre to become a community centre, such an existing centre may be a good choice for a Telecentre location, subject to the other requirements. Similarly, Post Offices may be a suitable venue as they are to be widely found, they already attract community members and they may be able to provide networking and staffing of use and relevance to the Telecentre. Many Telecentres have been set up schools, making additional use of their ICT facilities at times in the evening when they are not being used by the pupils. Arrangements for secure access and staffing have to be installed when schools set up Telecentres. Religious centres; mosques, temples and churches, have also set up Telecentres, leveraging their community focus.

Checklist for premises
1. Identify suitable locations for premises
2. Consider existing premises and partnerships.
3. Plan the premises for the services to be provided.

13. Marketing

A Telecentre has to positively market its services among its intended audience if it wishes to make an impact on local development. The goal of a new Telecentre's marketing strategy will be to:

- Introduce itself to the community
- Become a familiar organisation within the community
- Broaden its participant base
- Generate interest in its activities.

The marketing plan will lay out how the Telecentre will achieve this. It is important that all Steering Committee members contribute their ideas. A brainstorming session with the committee is a good way to begin to develop the marketing plan. Holding a public meeting is useful activity. There are a few other activities that should be included in the marketing plan.

Open days

The opening event of the Telecentre is an ideal opportunity to begin building the required relationship with the community. It is a good idea to invite a high-profile person from the community to open the Telecentre such as a local parliamentarian, or the director of a funding agency. The Telecentre should send invitations to all community organisations in the area, as well as to local government representatives and representatives of the business sector. It should also involve the local media. The programme might include an opening speech and a demonstration. There should be plenty of photographs taken. Make sure that a member of the Steering Committee or the Management Committee is available to welcome guests. Ensure that all the people who attend the event register as they arrive, so that their names, addresses and contact details are recorded. Specific forms can be drawn up, which will include space for visitors to note which Telecentre service they are most interested in, and any other comments they might have about the opening of the Telecentre. These comments can be included in articles and in displays of the opening event. After the opening of the Telecentre, it might be a good idea to mount a display, including photographs, in the local library, shopping centre or community centre.

Special events

Arising from the community-centred approach of Telecentres they should become involved in organising activities that relate to the community's use of information and ICTs. For example; school projects, farmers' workshops, women's groups, SME seminars, etc. Events like this help to mobilise community resources towards further use of the Telecentre and can be a source of revenue.

Newsletters

Regular newsletters distributed from the Telecentre can maintain its profile within the community as well as publicising future events and past achievements. They also provide a cumulative history of activities that will be of interest to the community and to outside supporters.

Checklist for marketing
1. Prepare the marketing plan.
2. Hold an opening event.
3. Run further open days.
4. Hold special events.
5. Publish a newsletter.

14. Sustainability

Financing Telecentres

To survive, Telecentres need a sustainability plan. There are several dimensions to sustainability. Telecentres need to sustain; a flow of finances, a supply of staff, a supply of relevant information services and continuing community acceptance. This section focuses on the issue of financial sustainability.

Telecentres that are self-sustaining financially have greater positive effects in developing communities, and there are key elements that make Telecentres financially sustainable. Incentives to privately-sponsored Telecentres can help them become viable distributors of ICT services for the purposes of development. These incentives generally fall into two categories: i) those aimed at expanding telecommunications infrastructure into under-served areas (rural and remote), and ii) those designed to enhance Telecentre performance for development purposes. Many countries are crafting market-oriented reforms intended to privatize and deregulate their telecommunications sectors and to improve access and investment in rural, underserved and un-served areas. Among the mechanisms they are implementing to spur private sector investment in the early stages of Telecentre establishment are; license obligations to serve rural communities, minimum subsidies schemes, telecommunications development funds, and variations of build-transfer-operate arrangements.

There are two ways to enhance Telecentre performance for development purposes: grant tax breaks or provide fees for those Telecentres that provide e-government services on their premises, and negotiate with telecommunications companies so Telecentres in rural areas can obtain low cost flat rates for telephone charges. When Telecentres are established as part of a scheme that requires local investment, the advantage is that it fosters the entrepreneurship and management skills of local Telecentre operators. They need to implement money-making schemes in order to survive. Some countries are basing their policies for large scale implementation of Telecentres on such schemes. However, the drive for up-scaling and sustainability can itself become a challenge, as it may cause a drift away from a focus on the needs of the poorest. Arrangements for financing Telecentres need to find a balance between ensuring financial viability (which may or may not include subsidisation) and equality in sharing the benefits among those in most need of them.

Telecentres sponsored by the public sector often lack a strategic business plan and a performance evaluation process, running the risk of becoming tools of political propaganda or simply disappearing once the resources from the government are withdrawn. In general, private sector-managed Telecentres have shown better performance in terms of achieving financial sustainability (e.g., producing current operational profit). There are also many examples where the Telecentre manager's entrepreneurial dedication played a key success factor for Telecentre operations. However, Telecentre managers require a combination of technical, managerial and social development skills that are sometimes difficult to learn spontaneously by local entrepreneurs.

On the other hand, when poverty reduction is the objective, charging for services to generate revenues and cover costs may not be considered an appropriate action. Most governments, including those of the poorest countries, subsidise services that even the well-off benefit from, and such subsidy schemes are not new. Schools, libraries, fuel, transportation and health services are examples. Pressure for financial sustainability in

Telecentre projects can force those that succeed to narrow their targeted users to the groups that can afford the services most, typically urban dwellers and the better off.

Overall, whichever approach to sustainability is adopted, community acceptance of the Telecentre is the most important ingredient to achieve it. In this regard, research reveals the close association between community acceptance and the quality of Telecentre management.

A sustainability model for a Telecentre is therefore based on three pillars:

1. Social, which is structured along two components:
    - Training of Telecentres' managers in the use of ICT and in the appropriation of different strategies to administer the Telecentres and to participate in other community work.
    - Community participation in every activity related to the Telecentres. Specifically, developing participatory research practices that link the community with the Telecentre's management team.
2. Economic, which refers to the activities that contribute to the financial sustainability of the Community Telecentres. The economic pillar of the model is designed around the provision of services for a fee.
3. Technological, which refers to the framework that will ensure the optimum technical functioning of the Telecentre. Two processes are involved:
    - Technical support to prevent or repair malfunctions of the equipment.
    - Technical training of Telecentre managers to develop the necessary skills to diagnose technical problems and to generate local solutions.

Scaling up Telecentres

Scaling up successful Telecentre projects to expand the impact of ICTs on poverty reduction involves more than replicating promising pilot projects. It requires taking successful projects to another level of commitment, adapting institutional systems, structures and budgets, adopting new development policies and changing development practices. Scaling up Telecentre projects for poverty reduction depends on the project providing useful services that are driven by the real needs of the community, but it also depends on achieving this with effective staff that can maintain high levels of community acceptance within centres that are financially sound, probably as a result of being operated within effective public-private partnerships.

Franchising

The results of research suggest that public-private partnerships show the most promise for delivering reliable and desirable public services via Telecentres in a financially sustainable manner. Telecentres also benefit from being part of a larger organization that contributes scale and network economies. A network of Telecentres under a single management can share experience and best practices and provide and vet quality standards, start-up support, an operating manual, recruitment and training guidelines, name branding, and standard payment vehicles (such as prepaid cards). A franchising company can develop infrastructure networks and undertake bulk procurement of equipment and of software licenses, while leaving delivering services and dealing with clients to the local franchisees. A large organization can also provide technical assistance to communities and entrepreneurs preparing proposals for Telecentres and during investment and start-up.

Checklist for sustainability
1. Decide the financing arrangements for the Telecentre.
2. Recruit private investors and entrepreneurs.
3. Ensure suitable balance between revenue generating services and poverty reducing services.
4. Devise scaling and franchising arrangements for wider scale Telecentre implementations.

17 Evaluation

Why evaluation?

Evaluations of Telecentres are necessary for at least two important reasons; i) development practitioners around the world still require better empirical evidence regarding the impact of ICTs on poverty reduction and the contribution that Telecentres make towards this process, and ii) individual Telecentres and Telecentre programmes need to know if they are effective. The first reason concerns wider development practice and the research activities that support them, and is therefore beyond the scope of this Framework. The second reason involves activities that programme implementers and the staff of individual Telecentres can undertake, so some guidance is offered here, based on evaluation practices that have already been demonstrated to be effective.

The evaluation should be as participatory and locally based as possible and should involve research institutions in the area, local-community organizations, and Telecentre management and staff. Telecentres should adopt a process of continuous feedback and learning involving all stakeholders, especially at the local and national levels, so that participation and feedback become part of a learning system. This has implications for how evaluations are conducted. Telecentre evaluations should be comparable; using common research frames, instruments, and indicators that will help researchers compare the experiences of diverse community-Telecentre programs. This does not mean uniformity, which can bludgeon local issues and nuances. It means comparability of results through the inclusion of a few core indicators, in addition to those reflecting local concerns. Strengthening comparability across evaluations of pilot Telecentre projects is important because in most countries the number of Telecentres in the pilot phase is small and therefore, without an international cross-sectional sampling frame, evaluation projects would be limited to individual case studies.

Baseline data about the community should be collected and shared before it is too late. An increasing number of pilot Telecentres are becoming operational before anyone has collected any real baseline data on the communities, and this will make any evaluation of their impacts and benefits more difficult. As early as possible in the evaluation process, each study should include a clearly defined exercise to “scope” the dimensions of the evaluation. This scoping exercise should result in evaluation objectives and criteria agreed on by the stakeholders, an identification of the necessary activities, and a work plan and budget. These constitute the initial evaluation plan. The evaluation plan will include both the analytic framework for the evaluation and an implementation work plan. One important component of the evaluation planning process is a multi-stakeholder process designed to enable Telecentre stakeholders and those responsible for the evaluation to arrive at a shared understanding of the overall objectives of the evaluation and how they will be achieved in the different evaluation and monitoring activities.

An evaluation framework

The following framework can be used to examine the poverty alleviation focus of a given ICT strategy or policy. It should be used to examine the extent to which a Telecentre programme or project design is pro-poor. It is based on a “12 Cs” approach, that addresses; Connectivity, Content, Community, Commerce, Capacity, Culture, Cooperation, Capital, Context, Continuity, Control, and Coherence. A Telecentre can be evaluated against each of these, following the guidelines in the framework.

12 Cs	Key Issues	Questions
Connectivity	▪ Infrastructure & technology (hw/sw) accessible & affordable	▪ Extent to which the Telecentre ensures the people living in poverty can use and afford it.
Content	▪ Relevant ▪ Accessible ▪ Beneficiaries involved	▪ Extent to which the content provided at the Telecentre is relevant to the needs of the targeted population. ▪ Can women and men access and use the information to meet their needs? ▪ Is it available in the local language & accessible to non-literate and ICT illiterate people? ▪ Do beneficiaries participate in the development of the content?
Community	▪ Who benefits? ▪ Beneficiaries participate	▪ Who should be the target group of the Telecentre? ▪ How do the different stakeholders participate in the Telecentre programme? ▪ Are beneficiaries taking part in the design and implementation of the Telecentre programme? ▪ How will the intervention affect the different groups (women, men, old, young, illiterate, etc.) of the community?
Commerce	▪ Supports livelihoods	▪ Does the Telecentre sustain the livelihoods of the beneficiaries? ▪ To what extent does the Telecentre support the economic activities of the beneficiaries?
Capacity	▪ Beneficiaries capacity ▪ Organizations' capacity	▪ Do beneficiaries have, or can they acquire the capacity to participate in the Telecentre programme? ▪ Do the organisations involved have the (financial and organisational) capacity to develop and implement the Telecentre programme?
Culture	▪ Supportive culture ▪ Learning promoted	▪ Is there a forward looking and supportive culture for using ICTs for poverty reduction?
Cooperation	▪ Stakeholders cooperation favourable	▪ To what extent is the cooperation among the different Telecentre stakeholders favourable to ICTs for poverty alleviation?
Capital	▪ Financial sustainability	▪ Are there sufficient financial resources for the Telecentre?
Context	▪ Adapted to context ▪ Influences context	▪ Is the Telecentre programme adapted to the local context? ▪ Is the Telecentre able to influence changes for a more favourable context for using ICTs for poverty alleviation?
Continuity	▪ Monitoring and evaluation ▪ Flexible, promotes learning ▪ Potential for increased impact ▪ Socially sustainable	▪ Does the Telecentre programme incorporate a monitoring and evaluation component? ▪ Does it promote learning and allow flexibility for adaptation? ▪ Could the Telecentre programme be scaled up? ▪ To what extent is it socially sustainable?
Control	▪ Beneficiaries ownership ▪ Stakeholders accountable	▪ Do beneficiaries have ownership of the Telecentre programme? ▪ Do beneficiaries have a say in the design, implementation and evaluation of the Telecentre programme? ▪ Are the different stakeholders accountable?
Coherence	▪ Pro-poor	▪ To what extent is the Telecentre programme consistent with other pro-poor policies and interventions?
Adapted from the Framework for pro-poor ICTs, UNCTAD Information Economy Report 2006.		

Some further pointers are useful in evaluating Telecentres:

- Evaluations that are not independent are likely to be biased.
- Beneficiaries should play a central part in the evaluation.
- Beneficiaries should benefit from the evaluation as much as the implementers.

- Evaluations should adopt open questions and qualitative assessments.
- The timing of evaluation should not be donor driven; it should be conducted at a time at which it can be of most use to the community.

Evaluation design questions include the following:

- What will the research design be?
- Will the survey be a single survey, a longitudinal survey, or a cross-sectional one?
- How will baseline data be collected?
- How is the population for each Telecentre to be defined?
- What samples will be selected for study?
- How will community-level variables be measured?
- What primary and secondary data are to be collected?
- For household surveys, who will be interviewed in each household?
- How will ongoing monitoring be undertaken?
- How will these data feed into the evaluation?

The evaluation team should establish indicators during the evaluation-framework planning process. Indicators fall under four main categories, each with several subcategories:

- Telecentre performance indicators
  - Basic Telecentre parameters
  - Demand for services
  - Service performance
  - User behaviour and perceptions
- Sustainability indicators
  - Financial sustainability
  - Policy and regulatory environment
  - Human-resource sustainability
- Content indicators
  - Content demand
  - Information online
  - Sector-specific information
- Impact indicators
  - Economic impacts
  - Social impacts
  - Impacts on organizations

Checklist for evaluation
1. Conduct base line studies.
2. Design a participatory evaluation scheme.
3. Incorporate the 12 Cs approach to pro-poor evaluations.
4. Implement mechanisms for continuous monitoring.
5. Develop suitable indicators.
6. Conduct evaluations when appropriate.

Further Reading

Lessons From The Field: An Overview Of The Current Uses Of Information And Communication Technologies For Development A Digital Dividend Report By The World Resources Institute, John Paul and Robert Katz, and Sean Gallagher, November 2004. http://www.idrc.ca/telecentres/ev-97434-201-1-DO_TOPIC.html

Comparing Urban and Rural Telecenters Costs Hani Shakeel, Michael Best, Bruno Miller, Sam Weber, Electronic Journal on Information Systems in developing Countries, EJISDC (2001) 4, 2, 1-13. http://www.ejisdc.org.

Assessing Community Telecentres: Guidelines for Researchers, by Anne Whyte IDRC 2000 ISBN 0-88936-916-X.
http://www.idrc.ca/en/ev-9415-201-1-DO_TOPIC.html

Checklist for the Planning, Design and Implementation of an ICT Project Incorporating Gender Issues, World Bank
http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/EXTICTTOOLKIT/0,,contentMDK:20271939~menuPK:562595~pagePK:64168445~piPK:64168309~theSitePK:542820,00.html

Uganda School-Based Telecenters: An Approach to Rural Access to ICTs. Meddie Mayanja, ICT Community Development and Business Specialist, World Links, TechKnowLogia, July-September, 2002, nowledge Enterprise, Inc. www.TechKnowLogia.org.

ICTs, Telecenters And Community Development, Royal D. Colle, Cornell University (USA). http://www.col.org/telecentres/chapter%2001.pdf

Gender Analysis of Telecentre Evaluation Methodology. APC, http://www.apcwomen.org/resources/research/telecentre-gender.html (1 of 14)11/21/2006 4:02:46 PM

Sustainable Networking Strategies for Australian Remote Indigenous Communities, Peter Farr Consultants Australasia Pty Ltd, Australia, Issued: September 2003. http://www.dcita.gov.au/indigenous_programs/publications_and_reports/recent/tapric_report_and_other_government_reports_on_indigenous_communications

Telecentres in Rural Asia: Towards a Success Model, by Roger Harris, Conference Proceedings of International conference on Information Technology, Communications and Development (ITCD 2001), November 29-30, 2001, Kathmandu, Nepal. www.itcd.net

A Guide to Community Multimedia Centres, UNESCO,
http://portal.unesco.org/ci/en/ev.php-URL_ID=15665&URL_DO=DO_TOPIC&URL_SECTION=201.html

Sustainable Telecentres A Guide for Government Policy by Björn Wellenius, Public Policy for the Private Sector, http://community.telecentre.org/en-tc/sustainable-telecentres-a-guide-for-government-policy

Information And Communication Techonologies For Development In Africa Volume 2 The experience with community telecentres, Edited by, Florence Ebam Etta and Sheila

Parvyn-Wamahiu, http://www.idrc.ca/openebooks/006-3/ (1 of 137)11/21/2006 3:52:10 PM
Telecentres: Case studies and key issues, Colin Latchem and David Walker, Editors, Published by The Commonwealth of Learning, Vancouver, 2001, http://www.col.org/telecentres/

Connecting Rural India to the Internet: The Challenges of Using VSAT Technology http://www.sdcn.org/webworks/cases/vsat_da1.htm
By Stephanie San Miguel February 2001

From the ground up, the evolution of the telecentre movement, http://community.telecentre.org/en-tc/from-the-ground-up-the-evolution-of-the-telecentre-movement

Making Waves. Stories of Participatory Communication for Social Change, A Report to the Rockefeller Foundation, By Alfonso Gumucio Dagron, 2001 The Rockefeller Foundation. http://www.teichenberg.at/essentials/makingwaves.pdf

Memo To Telecenter Planners, Royal D. Colle, Cornell University, The Electronic Journal on Information Systems in Developing Countries, http://www.ejisdc.org

Research For Telecenter Development: Obstacles And Opportunities, by Raul Roman and Christopher Blattman, http://wsispapers.choike.org/research_telecenter_development.pdf

The Community Telecentre Cookbook For Africa Recipes For Self-Sustainability How to Establish a Multi-purpose Community Telecentre in Africa by Mike Jensen and Anriette Esterhuysen United Nations Educational Scientific and Cultural Organization Paris, 2001, http://unesdoc.unesco.org/images/0012/001230/123004e.pdf

Toolkit for setting up Rural Knowledge Centres, M S Swaminathan Research Foundation Centre for Research on Sustainable Agriculture and Rural Development, Chennai, INDIA www.mssrf.org

Community Technology Centers' Network, Center Start-Up Manual, U.S. Department of Housing & Urban Development and the National Science Foundation. http://www.ctcnet.org/

Connected for Development, Information Kiosks and Sustainability, United Nations Information and Communication Technologies Task Force, http://www.unicttaskforce.org

UNCTAD Information Economy Report 2006, Chapter 3 Pro-poor ICT Policies and Practices, http://r0.unctad.org/ecommerce/ecommerce_en/ier06_en.htm