

# If you Have a Lemon, Make Lemonade: A Guide to the Start-up of the African Multipurpose Community Telecentre Pilot Projects

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## **1.0 Introduction**

This is intended as the starting point for helping to guide the development of new

multipurpose community telecentres (MCT) in Africa. We refer to it as a "starting point" because it is the beginning of a formative process for distilling and sharing what we already know and what we learned about establishing telecentres what we learn as the five (5) African pilot telecentres are established. The Multipurpose Community Telecentre Pilot Projects are joint initiatives of the International Telecommunications Union, UNESCO, the International Development Research Centre and their national and local partners in Africa.

Although they have a long tradition of accomplishment and service, the three (3) international agencies that are sponsoring these pilot projects are also at a "starting point". The International Development Research Centre (IDRC), The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Telecommunications Union (ITU) are all undertaking a new form of collaboration and partnership in pursuing these pilot projects. They are fusing their respective organizational cultures in an effort, not only to build successful models for rural African telecentres, but also for international cooperation for social and economic development.

The "orgware"<sup>(1)</sup> to form partnerships among international, national and local organizations takes time, good communication and flexibility. The investment of time to create the right forms of partnership and collaboration will, in the end, sustain the pilot initiatives at least as much as will successful individual telecentre initiatives. Building sustainable "orgware" takes time, but in the end, is well worth the effort.

We hope that this document provides an opportunity for all international, national and local partners who participate in the formation process of Africa's first 5 pilot telecentres to become involved in documenting and sharing what they learn and know. It is also our intention to solicit and contribute the experiences of others who have been involved in the telecentre movement throughout the world into this work.

## ***"If You Have a Lemon.."***

We've selected the title *"If You Have a Lemon: Make Lemonade"* <sup>(2)</sup> because it metaphorically expresses what is a fundamental value of telecentre establishment since the first telecentre was established in Velmdalen, Sweden in the mid-1980s. The telecentre movement is preoccupied with spreading and sharing new tools and capacities for living, working and learning. It is a fundamentally distributive, as opposed to an acquisitive, institution and process.

It relies upon common-use access to new information and communications technologies within an organizational culture where informal learning, cross-coaching and skill fusion are the rule, not the exception. The driving force behind telecentres is to spread the benefit of empowering new technologies. This way people who don't have access to the lemon grove, can taste the benefits which the new technologies offer.

## **2.0 Definitions**

Definitions are neither right nor wrong. They are only more or less useful. As we develop a guide for the development of multipurpose community telecentre pilot projects, it is a useful time to provide some indication of what we mean by the words we are using.

### **Multipurpose**

Multipurpose means that the premises, people and technology of a telecentre can and will be used for many functions. Relating especially to the notion of "integration" in rural development, multipurpose connotes that the activities which take place in separate institutions in a metropolitan area (school, hospital, bank, college) all occur under the same roof and within a common, integrated operations program of a telecentre.

The rules of the singular institutions don't necessarily apply in the telecentre. For example, a large library will use a common classification system for its holdings such as Dewey Decimal. That makes sense for a large integrated library. It often does not make sense for the small number of holdings that will commonly be found in a telecentre.

This does not imply that there is necessarily a rotation of use by these institutions or that the services are delivered "side by side". Rather it suggests that cross-training, and informal coaching and learning within the telecentre creates a fusion of skills among staff and clients such that they can support one another effectively.

The skills of the staff in the telecentre cross over the traditional lines of library science, system administration and business administration. Add to this a special emphasis in education, health or rural and business development, and you create the fusion of skills in the "multipurpose" person who manages the multipurpose telecentre.

### **Community**

This can mean anything from community ownership to community access. It definitely does not mean private privilege. In Nakeseke, Uganda the telecentre will be owned by Local Council 3 of the Lowero District. It could just as easily have been owned by the Primary Teachers' College or the District Hospital, providing that the community at large has access to its services.

In the West, there are examples of very successful telecentres being "owned" by community co-operatives, small business, government agencies as well as educational institutions.<sup>(3)</sup> There is no reason why we would not expect a similar diversity of organisational forms in Africa.

Eventually a telecentre can and should charge fees for its services. The revenue received from the services, however, is not the primary purpose of a "community"

telecentre. The "community" telecentre is attempting to generate a public good.

The relationship that the "community" telecentre has to the private sector is three-fold. Business people can use the facility and develop new skills and services there. They can also use the infrastructure to develop products and services that add value to the investment made in technology and people at the telecentre. Lastly, the telecentre functions as a conditioning program or a "market maker" for the private sector to eventually develop their eventual entry into the marketplace.

In developing the revised Uganda MCT proposal, we met with several private sector organisations. Initially, it was unclear what the "fit" was between the Nakaseke telecentre and the products and services being offered by companies such as BushNet, InfoMail and Starcom.

Over time we came to understand that the telecentre would function to develop possible "channels of distribution" for the private sector to enter, compete and attempt to establish a market. For example, in Nakaseke, the Primary Teachers' College may very well come to see the program benefits and cost savings associated with the use of information and network technologies through their use of the telecentre. When this occurs, the 31 regional coordinators involved in delivering the primary teacher continuing education in the 5 regional districts of Uganda become a potential market for the connectivity and "store and forward" email services offered by firms such as BushNet and Infomail.

The Uganda Post and Telecommunications Corporation is a principal sponsor of the MCT pilot project in Uganda. They will come to develop a new appreciation of the pricing, service and diffusion strategies associated with introducing a "telecentre" into a rural community. Additionally, a new customer base for their established telephony services will be developed through the telecentre as will new clients be created for the Internet and other related services they intend to offer.

In the Canadian telecentre example, the private sector came to play a variety of roles. In Southern Labrador, the most remote of the Canadian locations, a multimedia company, Labrador Software Ltd., grew out of the telecentre there. In Clarenville, at least 15 different information and network based start-up companies emerged from using the telecentre's services. The "Crown Agency" which actually owned all of the telecentre assets entered into joint ventures with medium-sized private companies. One of these, Fast Forward Technologies Inc., was selected as among the "Top 25 Software Firms to Watch" by Canada's Financial Post magazine.

In truth, however, telecentres tend to move much more quickly than the larger metropolitan companies and institutions with which they deal. This is especially true of the telecommunications providers. In every jurisdiction where telecentres have emerged there has been a "creative tension" with the telecommunications providers whether they are state or privately owned. Telecentres create the demand for telecommunications services before the market is sufficient to justify providing the service. (4)

Community means that private, public, voluntary and civil society interests all have a stake in and benefit from the success of the telecentre. While this can sometimes be a rocky road, it nonetheless leads to progress for those who travel on it.

## **Telecentre**

The term telecentre has been used to describe a broad range of services including commercial call centres, satellite offices and facilities (e.g. fax, telephone, computing, Internet) use. Through the development of the 5 pilot projects, the international and national partners are attempting to develop an African definition and understanding of what the term "telecentre" will mean in that context.

Until an African definition of use is developed, we understand the term "telecentre" to mean the fusion of telecommunications, information, multimedia and computing functions to help address a variety of community problems and needs. While books and periodicals will be available, the telecentre is not a library. Neither is it a Uganda Post and Telecommunications outlet. It is a telecentre with its own brand and identity.

### **3.0 Critical Success Factors**

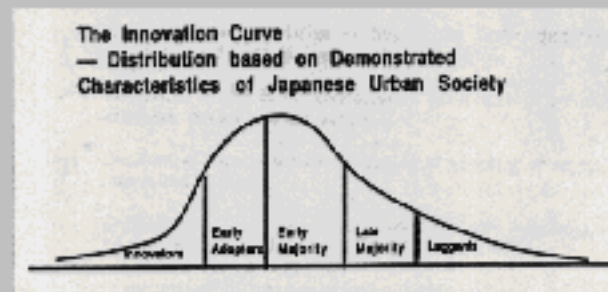
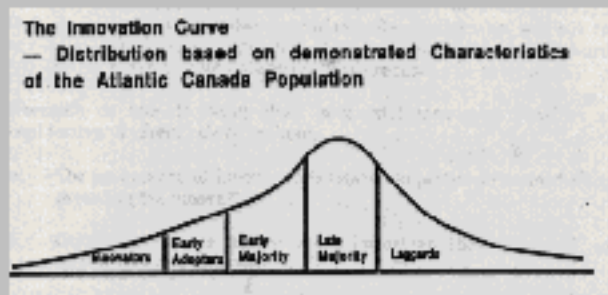
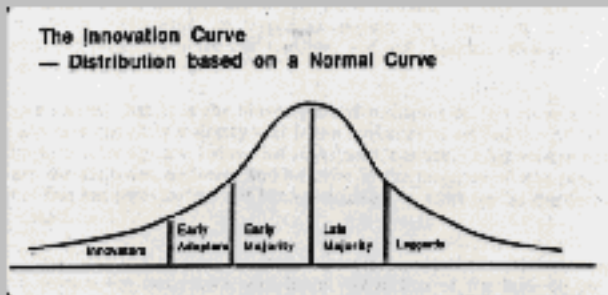
The telecentre "movement" has existed for little more than a decade. Starting first in Scandinavia in the mid-1980's, it moved quickly to Western Europe, Australia and North America. In the decade of the 1990's it is being adopted in Africa, Latin America and Asia. While there is no authenticated set of principles associated with telecentre development, we offer the following lessons that are derived from a decade of actual telecentre planning, implementation and research in Canada, South America, Europe and now Africa.

#### **The Innovation Curve: Knowing Who You're Helping**

Marketing experts know and understand that different institutions and people are suspended along various stages of the innovation curve. Innovators and early adopters will spot trends quickly and adopt new processes or buy new products as soon as they are available. The majority of the population, however, tends to wait for mass acceptance of a product or service before they adopt it. Some folks never become convinced that it's time to change or try new things.

In order for telecentres to be successful, they must respond to the different ways in which people develop new skills and their accompanying values and attitudes along the innovation curve. If only the innovators benefit, then the service will be elitist. If change is so slow that there is no innovation, then the community can't be

sustained and the local economy won't be able to compete. If telecentre-induced innovation and change isn't shared with the powerful "early-majority institutions" (see graphic on next page), then it runs the risk of being defined as frivolous and unnecessary.



“Virtually all government programs directed at the stimulation of technology have zeroed in upon the innovators with little recognition of the bulk of the people suspended in the other segments of the innovation curve.”

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*Technology and Innovation:  
An Atlantic Approach*  
Stephenson Kellogg  
Ernst & Whinney., 1988

The first telecentres in Scandinavia and Canada<sup>(5)</sup> shared the common approach of attempting to build an innovation capacity in educational, health and small business institutions in rural "back of the market" locations. When they were originally started they were heralded by

both metropolitan and rural institutions as being worthwhile and received corresponding public investment. While the rural locations they served often continued to benefit from their presence, they eventually lost favour within the metropolitan institutions which were anticipating more direct service and fiscal benefits.

Within the telecentre movement in Canada, Scandinavia, Australia and Western Europe, very little attention has been paid to linking innovators in metropolitan areas with the new rural innovation capacity. As a result they have either survived through developing a co-operative or small business operational model or they have been grafted onto local institutional sponsors. In few cases have they become integrated into the operational life of large metropolitan institutions.

In the case of the Uganda Multipurpose Telecentre pilot,<sup>(6)</sup> we quickly found that, while there were several innovators in Kampala, they were not necessarily connected with one another and much of their innovation had been forestalled by inadequate resources. The general pattern, however, wasn't one of innovation or early adoption. The major sponsoring institutions were towards the centre and at the back of the innovation curve.

In the rural community of Nakaseke itself, there was hardly any experience with information and network technology innovation or adoption. But this community had an "asset" that wasn't necessarily evident in the national organizations and institutions in Kampala. These people desperately need and want better information and communications. The small businessperson that travels 32 km each day to make a phone call and the District Hospital Medical Superintendent that trained using telemedicine techniques both know there is a much better way to do what they need to do.

Necessity is the parent of invention. Accordingly, we developed an approach in Nakaseke which will build a core team of information and network technology innovators in the educational, health, public administration and library sectors at the local level. They will both support one another technically and become "missionaries of modernization" in their respective institutions for the appropriate use of the technology. They will build the "product life-cycle" of the telecentre. They will make the telecentre indispensable within their respective organizations.

But this won't be enough. If the Kampala and District based institutions are not a part of the solution which the telecentre offers, they may very well become part of the problem. Metropolitan institutions don't appreciate it when the "outback" has better tools, skills and resources than they do. In the words of one of our Kampala collaborators "We shouldn't do that. Then the people of Nakaseke will know more about it than we do."

This "natural" disposition of metropolitan institutions has to be acknowledged and respected. It shouldn't, however, be successful in dominating how resources get deployed as they will tend to consume most of the benefits directly. Metropolitan institutions do, however, need to be accommodated.

Our solution was to introduce what we called "capacitation programs" that would link the Nakaseke telecentre to these Kampala based metropolitan agencies. This way they could benefit from training and access to the new technology. Additionally, we proposed linking some of the more well endowed international agencies in Kampala with both their later adopting national counterparts and the rural telecentre.

Through this approach, the disposition to innovate across the entire society can be accelerated. While the multipurpose community telecentres will provide an important new service, African society's capacity to innovate in the Information Society is at the very core of what the pilot telecentre program is hoping to support. Developing new ways of forming partnerships and generating innovation for social

and economic development is really the task at hand.

## People Don't Know What They Don't Know.

Experience really is the best teacher. While in Uganda it quickly became evident to us that none of the people who were collaborating with us there had ever actually seen a telecentre, much less worked in one. Many of the individual proponents of the telecentre service had never used a computer, sent or received a fax or email or been "on" the Internet and the World Wide Web<sup>(7)</sup>. Little wonder that all of the sponsoring institutions tended to see the telecentre through their existing lens of library services or telephony.

The lack of institutional experience with telecentres is also relevant at the local, service delivery level. Many people don't actually use "information" in their decision-making or daily lives. Especially in slower moving rural societies, both in Africa and the West, decision-making is comprised largely in the reproduction of processes which have been transferred through many generations. Accordingly, often when you ask people what different or better information they need, they'll most often reply "I don't need any. I'm just fine the way I am."

The doctor, the nurse, the librarian and the teacher are the exceptions to this general rule. But they also often assume that, just like themselves, people want and need information to make better decisions. They also often take for granted that they know what information people need. These are very common assumptions and can result in costly errors.

For example, when the first Canadian telecentre was being developed in Clarenville, Newfoundland in 1989, a survey was done of 223 small businesses in the area inquiring, among other things, what new types of information the business people required. The telecentre proponents were surprised to learn that most small businesses get their information from family, friends and sales agents. They don't know or think that they need any more information.

Before setting out on the noble path to provide people with the information they need, there are several steps that should occur first. People need to be encouraged to become involved in "information seeking behaviour." Simply put, people need to come to learn that it is worth their while to take the time and trouble to find information to help them solve their problems. Before we decide what information will be good for the farmer, the midwife or the entrepreneur, we need to spend some time helping them understand the value of information and the tools that can be used to access it.

In Nakaseke, Uganda, this shouldn't be too great a problem. The teacher in the senior high school that lectures about reading maps without a map in the classroom, the Medical Superintendent that can't make a phone call to arrange patient transfer to the hospital in Kampala and the new Primary Teacher's College that will service 31 school districts all know they need more and better information and communications. Provide the senior high school teacher with Corel Draw, the

Medical Superintendent with basic telemedicine tools and the field worker for the Primary Teacher's College with access to the Internet and the World Wide Web. They will notice the difference in the quality and quantity of how they contribute to social and economic development in a hurry.

## **The Value Chain of Information.**

Data -> information -> knowledge -> wisdom

The information business isn't just about information! As in all other walks of life, people want to add value to what they already know or presently do. In rural communities there is a lot of local knowledge and wisdom which has never been processed and represented to others as information. Equally, there is external information available that can help local people become more knowledgeable and wiser.

In developing telecentres, it is extremely important to understand where the services fit on the "value chain of information". It is also critical that, over time, more and more of what gets offered moves up the value chain towards knowledge and wisdom.

This doesn't have to be as difficult as it might seem. For example, people love to communicate not only because it is entertaining and socially enlivening, but also because it is also often the quickest and most efficient route to getting access to knowledge and wisdom. Unlike many libraries, telecentres should combine the resources of information "science" with the technological tools for communication to help people move up the value chain of information.

This can also drive the types of products and services that might be offered. A direct e-mail inquiry to an "expert" in health, education or any other field can save a lot of time and money. Especially in a largely oral culture, people will prefer tools that help them get access to knowledge and wisdom quickly through new tools for communication.

When we think of the stereotyped "library" environment where people are required to be silent as they read in isolated quietude, we might understand why the value of communication in sharing information is sometimes lost on librarians. People want to talk, tell stories and make gestures to transmit and receive information. Especially in an oral culture where literacy rates are low, information should be closely integrated with communications services. The Nakaseke telecentre should only be silent when it is closed!

## **Telecentres: The Breakfast of Champions**

The telecentres that succeed do so, in the long run, because there is a community champion for whom the word failure doesn't exist. If we look at the Cork Telecentre<sup>(8)</sup>

in Ireland, the Walcha Telecottage<sup>(9)</sup>

in Australia, the Telestugan Fargelanda<sup>(10)</sup>

in Sweden and the Clarenville<sup>(11)</sup> telecentre in Canada, this is one unmistakable conclusion that can be reached.

While many more examples of this could be drawn, all of the foregoing telecentres had "local champions" who were part of their telecentres for a decade (the exception to this is the Walcha Telecottage which started in 1990). They were also involved in the "founding" of their telecentres.

In the case of Canada's system of telecentres in rural Newfoundland, finding local champions was the most important ingredient in the successful launching of that system by a metropolitan institution. In the Canadian case, locations were selected for the first rural telecentres based largely on where the strongest and most dedicated local champions for this new rural service could be found.

In Canada, like in Nakaseke, none of these "local champions" had actually ever seen or visited a telecentre. Accordingly, they were sent to visit with the "founder" of Scandinavian telecentres, Henning Albrechtsen in Velmdalen, Sweden and other Scandinavian telecentre pioneers. Upon their return, they were certain that their communities needed a telecentre.

Nakaseke, Uganda, as a community, has all of the right ingredients to be a "local champion" for the first pilot rural MCT. They are information and communications deprived and they are a very strong, homogeneous and organized community. Both the Public Libraries Board and the UPTC have the potential to be important and influential metropolitan allies for the Nakaseke pilot telecentre. It remains unclear which of the "founding" local organizations and individuals will emerge to be the "local champion" in Nakaseke. The prospects are very good that there will be more than one..

## **The Right Man for this Job is a Woman..**

If finding a local champion is the most important element in supporting telecentre development, then selecting the right person as the first telecentre manager is the second most important decision that will be taken. And the chances are that that right person for the job will be a woman.

Many of the Western European telecentres selected telecentre managers who were technically trained, oriented and certified with degrees in disciplines like computer science, physics and mathematics. In Canada, the selection process applied very different criteria. Telecentre managers were selected primarily on the basis of their community development, communications and organizational skills. An aptitude, willingness and interest in learning how to use computers was a secondary, but nonetheless important, attribute as well.

The example of a local person who learns how to use computers in becoming a telecentre manager provides an unmistakable demonstration effect in the community. In the early going, as well, organizations and individuals in the community need to be recruited to visit and use the telecentre. Additionally, learning how to work with computers and communications technology has to be made simple and accessible. This takes tremendous skills of sociability, communications, empathy and other-directedness.

Whether one subscribes to anthropologist Ashley Montagu's arguments for the "Natural Superiority of Women" or psychologist Jerome Kagan's nurture and nature explanations for gender differences, men and women tend to bring different areas of strength and skill to what they do. This is not to suggest that all women will make better telecentre managers than all men. It is, however, to argue that the converse is almost certainly wrong.

Industrialist, turned politician, Ross Perot noted some of the same observations in his firm, Electronic Data Systems. Since women are not culturally expected to excel with technology (which thankfully is changing) they risk much less by admitting that they don't understand how to work or fix a technical challenge. This helps them be predisposed to greater information openness and share information more efficiently: both key dispositions in an area where informal learning is so prevalent.

Simply put, this means that women are more likely to ask for help when they need it. Women in most cultures have also higher indices of sociability and empathy than men and in many societies they are also more likely to see the keyboard as their friend. For these reasons, and many more, women have been successful as telecentre managers and service personnel in Canada, Europe and Australia.

It is also far easier to train people to develop skills in areas relating to information and network technologies than it is to take the shy, reticent and socially reluctant person and turn them into an extrovert and community animator. While the Canadian example of telecentre development in rural Newfoundland included successful male managers as well, most of the managers and information consultants were women. Indeed, many of the actual information consultants in the Canadian telecentres began as administrative personnel and "grew into" their roles as telecentre service delivery staff.

The question begs itself as to whether there are any reasons why African women will not respond as successfully to the challenges of managing and working in telecentres as they have in the West. In Uganda, we observed that the patterns of gender specialization and power distribution were clear and distinguishable. Given the more general social development intentions of the pilot projects, this offers but one more reason why women should be actively recruited to play key roles in the leadership and management of the multipurpose telecentre pilot projects.

## **"Demo or Die!"**

Throughout the life of telecentre development and establishment, it is extremely

important to adopt and follow the principle of "demo or die". It is one thing to talk about telecentres in Africa, it is another thing entirely to demonstrate what a telecentre might provide whenever the opportunity arises. (12)

This is critical for several reasons. First, this helps to communicate, through example, the informal skill transfer and coaching ethos which helps to drive the telecentre movement. In Kampala, we met with a Swiss "missionary" group called "Uganda Connectivity". They have taken this principle very seriously and set out to introduce and train as many Ugandans as possible to the Information Society. Their one rule is that, if you participate in their training programs, which are provided gratis, then you must be agree to train someone else.

Second, the range and level of experience which people have with the use of information and network technologies is very varied. Especially when a telecentre program is first being introduced in a rural setting, most people will have little notion of what the computer, the network and the Internet means for them. It is foreign. It is strange. It is something other people do. If we want to involve people in decision-making about telecentre development, as we rightly should, they need to develop an appreciation of what the technology can produce and how they might benefit from it.

Third, as the "orgware" for telecentre development begins to form, those involved need to begin to use ICT tools to manage their collaboration and their work. The sooner this begins, the better. The "demo or die!" principle helps to promote skill transfer and it provides those involved with responsibility for telecentre planning and implementation with direct knowledge about people's skills and what the local infrastructure can sustain.

For example, while in Uganda, it wasn't until the very last day of the mission that an extended demonstration of the Internet, networks, e-mail and the World Wide Web was provided to some of the major stakeholders involved in the MCT project. For all but one, this was the first time that they had actually been presented with what networks might actually mean for them in their work as librarians. While this 2 hour demonstration was delivered "better late than never", ideally it should have occurred much earlier in the mission.

With the development of Canada's first series of telecentres, the "demo or die!" principle was an important underpinning of everyday operations.(13) When the demonstration didn't work, it was important to understand why and to make sure the same oversight or error did not reoccur. When it did work, there was a shared sense of accomplishment and incremental mastery.

During the Uganda mission we were fortunate to have arranged Internet connectivity through the Uganda Help Desk as well as to have access to a "Business Centre" at a large international hotel. Future missions associated with the MCT pilot projects should ensure that access to these tools is available and that the "demo or die!" principle is followed.

## 4.0 Values

As the 5 pilot telecentres develop in Africa, is it important to understand, document and communicate the values which underlie the participation by international, national and local participants.

TELECENTRE VALUE CONTINUUM	In developing a new mechanism for bringing integrated information, telecommunications and computing resources to rural development, we need to clearly indicate what we want to accomplish. In short, what is our vision of success?
*extractive	On our telecentre value continuum <sup>(14)</sup> (see box), there can be a diversity of combinations and gradients which can emerge. As the
*interactive	pilot telecentres are being developed to assist Africa's progress and
*centralized	participation in the Information Society, we take a developmental
*decentralized	view of what we are trying to accomplish.
*market	<b>Extractive-Interactive</b>
*culturally defined culture	Interactive telecentre services provide a mix of access to
defined market	international and national information resources with the production
*credentialist	and distribution of local information for exchange in national and
*discovery-experience	international forums. The "interactive" approach attempts to manage
*private	a rough equilibrium in the information "balance of trade" between the
	local community and the global village. Creating and "trading" local
	information "products" is as important as receiving information from
	outside the community.
	<b>Centralized-Decentralized</b>
	A telecentre is not a tool for concentrating power and
	decision-making. Instead, it is a tool for the decentralization of
	capacity. Information and network services have created the
	capacity for far greater output and decision-making among workers
	in the increasingly flat organization. So too should telecentres bring
	a similar new capacity for self-direction to the community. In
	Uganda, the national policy of decentralization is entirely consistent with the types of outcomes which the telecentre can generate.

### Market Defined Culture-Culturally Defined Markets

If all that telecentres bring to the African development landscape is the enhanced ability to access representations of Western market values, then the pilot projects should proceed no further. Quite to the contrary, the African telecentres ought to both build the capacity to create African information and communications products

and services at the same time that they condition and "make", or create, local, national and international markets.

## **Discovery-Experience**

A telecentre should be the very antithesis of the credentialist institution. Services in telecentres should be self-paced, self-directed and self-help with staff to help people feel comfortable learning and using the information, systems and technology. The real wonder about how computers and networks have been introduced into work, education, healthcare and everyday life is how people have learned to use the technology mostly through self-paced learning or informal coaching, training and mentoring with little or no formal training or certification for what they have learned.

## **Private Privilege-Public Good**

Telecentres represent a public good. They are an enabling environment where communities, institutions and people learn mission-critical skills. They add value to the work of voluntary organizations, government agencies, health care organizations, schools and the private sector. They also need to find a way to become self-financing.

The movement to self-sustaining revenue has to be carefully planned such that the initial cost profiles for services do not discourage the novice user from taking the time and trouble to learn if and how the technology is valuable for them. This can be accomplished through budget allocations from participating organizations on a fee for service basis or through the formation of public-private consortia into national and international export markets.

## **State of the Art-"State of the Market" Products**

Africa will never "leap frog" its participation into the Information Society if it relies upon "hand me down" technologies which are at the end of their life cycle in the industrial world. While there is room for using some of these technologies in particular applications, they cannot be the main technology base for the telecentres.

It is also important not to adopt "state of the art" technologies which have yet to be tested for reliability and delivery. The last thing a telecentre in rural Africa needs is a bright idea for a new technology that doesn't work. The purpose of the 5 pilot projects isn't to test out new technology but rather to test a new service. Accordingly, the technology adoption approach should be based on products which are "state of the market", which is to say, demonstrated to work.

The telecentres should, however, be the incubators, early test-beds and first markets for products, services and technologies that arise within Africa as it defines its participation in the Information Society. Indeed, the speed with which these are

developed and introduced into the local and national market will be one reflection of how successful the pilot projects are.

There is, however, a compelling need for research and development in the area of information and network technologies in Africa. This is especially the case in the convergence of computing and wireless telecommunications technologies. While the 5 pilot project telecentres can help build the level of awareness for this type of research and development, their technology platforms should be stable and mature.

## **Institution-Community Partnership**

While there may be much to be gained, there is little to be learned from an existing large institution introducing telecentre services into the community through the 5 pilot projects. The emphasis in forming partnerships is to create something new that would not have existed had the pilot not have been attempted. This is contrast to the mere extension of an existing service into a new location.

The pilot projects should, ideally, build new forms of partnership and collaboration among international, national and local organizations such that our telecentres can be genuinely multipurpose rather than being solely a rural extension of an existing metropolitan institution.

The Uganda MCT pilot initiative in Nakaseke provides the environment for developing new organizational, technical and service models which can make a very large difference in the social and economic life of a very determined community. Without the "community" component in the Nakaseke pilot, it is difficult to imagine what would be learned other than the arrangements for financing the rural extension of metropolitan institutions.

## **Donor/Recipient-Partners**

The relationships among the international and national agencies in the 5 pilot projects should not be of the conventional donor-recipient variety. Along with financial resources, the international agencies have a vested interest in learning from the pilot project process so that it can be generalized to other locations and applications in Africa.

National participants may wish to receive the financial contributions for the projects and then undertake project management and implementation without the participation of the international agencies. This should not be how relationships in the pilot projects are organized. We need to develop a common vision and set of skills for how the telecentres will contribute to African social and economic development. That will take the active participation of local, national and international partners.

## **Established - Pilot**

The multipurpose community telecentre program is a "pilot" initiative. This means

that systems for documenting, learning, evaluating, sharing and communicating what takes place are important objectives of the collaborative activity.

The manifest function of the "pilot" initiative is not to establish 5 telecentres in specific locations, although that would be a welcomed latent function. Rather it is to develop models for international, national and local activity which others can learn from and emulate. The international agencies involved in the "pilot" telecentre initiative have no interest whatsoever in financing telecentre development throughout all of Africa. They are, however, interested in generating a sufficient profile and diversity of approaches such that other institutions, businesses and communities understand and invest in similar initiatives.

## 5.0 Getting Started

Experiences in Canada, Australia, Scandinavia and Western Europe, as well as what we have more recently learned in Uganda, have taught us a great deal about the initiation or "kick off" process for generating interest and relevant project ideas for the 5 pilot multipurpose community telecentres. The first MCT pilot project is now moving towards detailed planning and implementation. It is an opportune time to share and document what we have learned before we begin animating active interest in the remaining 4 locations where the telecentres may be developed.

### **The First Few Steps**

The first few steps in animating interest for the pilot telecentre projects can either create or save a lot of time, money and work. In the case of the Uganda MCT, the short project visit to Kampala generated interest among the Public Libraries Board and the Uganda Post and Telecommunications Corporation in the initiative.

*My Board has been working with UNESCO on the Rural Library Services Pilot Project since 1995 and* The up-side of the initial approach that was taken in Uganda is that both of these organizations remain interested and committed to the project, even after more than a year of waiting for the implementation of their proposal. The down-side is that the primary interest of both organizations is an extension of their existing, traditional service lines. The objective of creating a telecentre service is secondary to their primary interest in the pilot projects.

*o u r understanding was that the present project was a follow-up a n d a modification of the previous* In the case of the Libraries Board, their interest arises from another proposal they submitted for a Rural Library Service Project. For the UPTC, the telecentre project is an opportunity to extend their infrastructure to a part of the country that has been without service for a decade. In neither case is the core idea of an integrated, multipurpose community telecentre their preoccupation or top priority.

The mixed objectives of the project proponents is entirely understandable. Their interest in the project was animated through international agencies with whom they are in regular contact along with a short field trip to Kampala. They started out wanting a pilot rural library and a new initiative for rural telecommunications infrastructure and that's still what they want. A telecentre will be a nice addition to their primary objectives for participation, but it isn't mission-critical to their core functions as an institution.

When combined with the clear interest of the community of Nakaseke for a telecentre (or their present understanding of what a telecentre includes) and a lot of active participation by the international partners, a common vision and implementation program for a telecentre remains possible. In future, however, there may be some alternative steps that can be taken in the early stages of project identification and selection.

The Scoping Phase-Another mechanism for identifying possible future pilot projects is to use the informal connections which UNESCO, ITU and IDRC have within the NGO community to generate a list of potential projects for consideration prior to seeking proposals for funding of any kind.

During our field work we came across several organizations and institutions that might just as easily have been original proponents for the MCT in Uganda. In several instances, (e.g. DENIVA, Uganda Connectivity, Albert Cooke Medical Library) organizations had considerably more related technology adoption and diffusion experience where the "telecentre" idea had already occurred to them.

We can think of other examples of possible telecentre type projects that have come to our attention both through informal networks and through contacts at conferences and exhibitions like the recent "Global Knowledge-Local Wisdom'97" event in Toronto. As the network of those interested in the MCT pilot projects widens, there is every opportunity to generate more information and intelligence on possible future projects for consideration.

PHASES OF TELECENTRE DEVELOPMENT	
<i>Phase One</i> <i>Project Scoping</i>	
Use informal NGO networks to gather project ideas.	
Identify and interview "local champions"	

While there are a variety of mechanisms that might be used, the scoping for future MCT pilot projects might benefit from a wider purview along with considerably more detailed early field work in each country. Ideally, an overview of possible partners and players, along with a description of trends and developments relating to ICT, should be done in each country before any project is selected for development.

## The Proposal Phase

The Uganda MCT began at the Proposal Phase and, until the development of the revised proposal, it remained there for an extended period. In fact, the Proposal Phase should be very short. Those associated with the project can describe it succinctly, seek

for the telecentre idea.	the participation of national and local partners, and then submit their ideas to the tripartite team of UNESCO, ITU and IDRC.
Undertake extensive initial field work in "preferred project" locations.	As was the case in Uganda, assistance in proposal development should be available from the international agencies. The Proposal Phase should be short because, at this juncture, no organization should be asked to commit scarce resources to a line of action that might not be funded. Extensive commitment by national organizations tends to engender a corresponding "political" process to ensure that the investment of resources is rewarded.
Scope entire ICT community for partners and contributors.	While this can be a positive sign indicating the serious intent of the national organization, it can also divert attention and resources if the project being pursued is seriously flawed.
<u>Phase Two-The Proposal Phase</u>	<b>The Planning Phase</b>
Draft proposal with national and local proponents.	The third step is where an initial commitment is made by the international agencies for the idea that's been proposed by the national and local proponents. Detailed technical, operational, service and evaluation plans are developed. Steps are taken to build local awareness of how telecentre and ICT services can be of assistance.
Begin increasing awareness by using ICT to communicate about project.	At this juncture, local champions and proponents are sent on a familiarization tour to an existing successful MCT site (in future, hopefully at Nakaseke). A communications program on the MCT should also begin with additional local and national partners.
<u>Phase Three-Detailed Planning Phase</u>	The "orgware" for the project also begins to take form during the detailed planning phase. With the assistance of the international agencies, and the eventual hiring of a Project Coordinator, the Planning Phase should last no longer than 3-6 months and it should move directly into implementation.

## The Sequential Implementation Phase

We refer to this as "sequential" implementation because it involves "learning by doing" and starting small with a plan to grow. The actual technology and service base of a telecentre should never be static. It should always be dynamic in responding to a greater number of more diverse needs.

We would suggest that a telecentre is ready to "open" when:

it has completed its first set of target user groups needs assessments and developed a service delivery plan;

an initial mini-library collection has been ordered and received;

the telecommunications and power is connected and operational;

the work-stations are loaded with applications software and operational; and staff have been trained to a minimum level in operating all the equipment and providing services.

In the early operations of a telecentre the staff time is split among:

refining the systems and services at the site;

training local users and volunteers; and

building awareness and participation through presentations, demonstrations and communications.

In the case of the Nakaseke telecentre, we have recommended a Telecentre Management Trainer to address the service delivery and training functions and a Project Coordinator to implement the awareness, communications and demonstrations activities. While this should be the general division of labour between the two roles, in reality they should cross-train and share one another's responsibilities to ensure that they understand both the capacity of the telecentre and the expectations of partners.

Once it is operational, there are many other phases through which a telecentre will move. At the point when the demands for services exceed available resources, choices will need to be made as to which services are core to the telecentre's operations and which can be either discontinued or moved to another sponsoring organizations.

Telecentres will also continue to move through cycles of awareness building, service delivery and evaluation with different segments of the community as well as people and organizations located on different dimensions of the innovation curve.

## **6.0 Other Issues**

There are many other issues which will need to be addressed for the pilot multipurpose telecentres to be successful. As we are now dealing primarily with "start-up" issues, we will mention them only in passing. They will, however, loom very large as the MCT pilot projects grow and mature.

### **Continuing Training and Research and Development**

It is extremely important that telecentre staff have some involvement in a program of continuing training and that they be associated with institutions that are doing research and development in areas of telecommunications and systems development. Over time, telecentre managers come to be the lead resource in the community for technical leadership. They need to be as knowledgeable as possible to play this role successfully.

## **Interaction Among MCT Pilot Projects**

The telecentre manager will have a very unique job in every location where an MCT is established. The 5 telecentre managers will need some basis of meeting annually as well as maintaining communications and contact with one another electronically. We would suggest that the same will be true for those involved in leadership positions on the respective management and steering committees.

## **Continued Awareness Building**

Awareness building about the MCTs can never stop. As there tends to be an "out of sight, out of mind" disposition among many metropolitan institutions, the MCTs in rural areas must remain visible to key national institutions throughout their operating life.

Awareness building is also necessary within the community itself. Some segments of the community will tend to be more attracted to the telecentre in the initial days of operations while others will be intimidated by the technology and will stay away. The telecentres will continue to have to work hard to overcome people's fears about learning how to make the technology work for them.

## **7.0 Conclusion**

The foregoing has been a distillation of what we know about telecentre development and what we are beginning to learn as we move through the early cycles of proposal, planning and implementation of the multipurpose telecentre pilot projects in Africa. We remain very far from reaching a "conclusion" in what we will learn from this process.

Attached to this manuscript is a "Summary Report" which was drafted and redrafted numerous times with our national partners to reflect the general principles, functions, orgware, planning activities, budget and timeline for the Nakaseke telecentre. This "Summary" will doubtless change many more times. We offer it as a model for the consideration of those who will be working to develop the other MCT pilot initiatives.

As the MCT pilot projects develop, it will continue to be important to reflect, share and communicate about what is being learned. To assist with this process we have created the Uganda MCT Pilot Project "ExtraNet" on the World Wide Web. Access to the site is password protected. To arrange for access to the site, contact the author at rfuchs@fastfwd.com.

## **About the author**

Rich Fuchs led the establishment of North America's first rural telecentres in Newfoundland, Canada beginning in 1988. He has visited, worked with and assisted telecentres in Brazil, Australia, Africa and throughout Europe. A sociologist who has been involved in rural development for a quarter century, he has worked in government and the university for many years. He now operates his own firm, Futureworks Inc., with four (4) of his colleagues. Although Richard travels, writes and makes presentations in many parts of the world, he "teleworks" from his "Global Home Office" in Torbay, Newfoundland, Canada. In July 1997 he was contracted by the International Development Research Centre (Canada) to go to Uganda and assist national and local organisations to further develop their ideas and proposals for a rural telecentre there.

The author gratefully acknowledges the assistance of Jeannette Vogelaar (UNESCO) and Gilles Cliche (IDRC) with early drafts of this manuscript. Both these colleagues challenged me to add value to what I had already done and thought I already knew. All errors, omissions and other limitations of the document are solely the responsibility of the author.

## **Endnotes**

1. 1 To the best of the author's knowledge, the term "orgware" was first coined by Lars Qvortrup of Odense University in Denmark in the late 1980s. The term relates to the new organizational forms which the technology of software and hardware necessitate.
2. 2 The author acknowledges that the title for this manuscript is a manner of speech which is commonly used in the West and may not have similar meanings or relevance in other cultures. It has also been used as the title of other books and articles.
3. 3 For example the Cork Teleworking Centre (Ireland) is privately owned, as is Telestuga Fargelanda in Sweden (although the building in which it is located is owned by the local Vocational School). The Walcha Telecottage is owned by a community cooperative and all of the Newfoundland telecentres are owned by the provincial government in partnership with local organizations which own and contribute space in the buildings. The ownership of the Newfoundland telecentres is now being devolved to local economic development groups and a community college.
4. 4 When the first network connection was made from what would become the Southern Labrador telecentre in 1990, no one took much notice, including the telephone company. Six years later when a meeting was held in the same telecentre about the "Information Highway", almost 100 people were in attendance,

including a telephone company "community liaison" representative who had been permanently located to deal with complaints from business, organizations and individuals concerning bandwidth and connectivity.

5. 5 North America's first telecentres, in Newfoundland, Canada, borrowed heavily from the Scandinavian model in terms of the range of services and applications that are offered. They also differed from the Scandinavian pioneers in many respects, including the development of concomitant online services and the building of telecentres within a common organizational framework from the very start.

6. 6 The author worked with national and local groups in Uganda in July 1997 to help plan a rural telecentre in Nakaseke, Uganda in the Luwero Triangle.

7. 7 To a very large extent, this was also the case for all of the rural partners when Canada's first system of rural telecentres was forming in 1988. A major difference, however, was that the sponsoring metropolitan institution had considerable ICT adoption and diffusion experience.

8. 8 The Cork Telecentre in Ireland is doubtless the longest lasting and most sustainable telecentre in Western Europe. Anyone who has met Imogen Bertin, the founder and owner, knows why.

9. 9 The Walcha Telecottage in Australia has also had a local champion, Andrew Hunter, who managed the facility on behalf of a community cooperative which he helped to develop.

10. 10 Lennarth Bernhardson has been the driving force behind the Telestuga Fargelanda for more than 10 years. His telecentre has survived the rise and fall of metropolitan favour through sheer determination, innovation, flexibility and many hours of hard work.

11. 11 While there were many champions for the Clarendville Telecentre (including the author), the person who remains with that facility through the swings of metropolitan favour is Steve Quinton, now the Chair of Telelearning for the College of the North Atlantic.

12. 12 The author has a long history of "dying" as much as "demoing" and his field mission to Uganda was no exception when he was unable to connect to the Internet from the UPTC outlet in Luwero.

13. 13 The author himself has done demonstrations for rural development workers in a wide variety of venues including the back seat of cars using a "portable" computer and a small diconix printer.

14. 14 An earlier version of this continuum was developed by the author for an IDRC seminar on "Digital Utilities for Community Use" in Ottawa, Canada (December 1994). The author gratefully acknowledges the contribution of Gilles Cliche in assisting with revisions to this.