

# **TELECENTERS IN 2005**

prepared for

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## THE TELECENTER ENVIRONMENT IN 2005

In the village of Wu'an in Hebei Province on the China mainland, a farmer named Li Suotian continually received agricultural market information via the Internet. He discovered that an Israeli variety of tomatoes sold well in the Province. Based on this information from the Internet, he decided to grow this variety of tomatoes in place of grains, and his income grew eight times larger. The farmer encountered a new world of agricultural marketing and a new world of information and communication technology. In 2005 we expect the trend in these conditions to continue: a changing agriculture and rural life, globalization, more complex marketing, and pressure toward the Millennium Development Goals mean more personal and community-level decisions that need more information and more communication. In some areas of Asia, the situation has grown even more complex as coastal towns and villages and whole islands face the challenges of social and economic recovery from the 2003 tsunami.

Information and communication technologies have been helping farmers in many countries. For example, there is a story that appeared on the front page of *The New York Times* last year. It was about an *eChoupal* – which is a local term in India for a *digital village* or gathering place. The story tells of a villager in India who every day turns on a computer in his house to obtain soy bean prices on the web site of the Chicago Board of Trade in America. The farmer's home is called an eChoupal because it is a *community* resource for agricultural information that comes from on-line providers. This is where this one village farmer obtains crop prices and other information. The farmer reports his findings about prices to other farmers in the community. Those prices influence the farmers' decisions about whether to sell their soy beans in the local market, or to hold them until the prices on the Chicago Board change and then sell them in the local market. These Indian farmers are harvesting in a global marketplace.

These and other rural people are confronted by a digital world and a world market. Recognizing this, an agricultural entrepreneur in India – ITC Limited – has set up more than 3,000 similar village information kiosks in India that bring farm families into the global village. The agricultural kiosks are bringing more profits to farmers, eliminating profiteering middlemen, and improving market operations, as well as providing information on health, nutrition, bus schedules and entertainment to rural families.

### The MDG Force

From Malaysia to Mexico and across the world, international agencies, national governments and local organizations are experimenting with information and communication technologies (ICTs) to build stronger economies, combat illness and disease, empower those without power, and to educate young people and older adults. Many of these challenges match the Millennium Development Goals which, for the next decade, will be among the most prominent driving forces behind the spread of ICTs. The MDGs are an important political and moral force because they were adopted by more than 190 nations whose representatives convened in New York at a Millennium Summit in September 2000. The Millennium Declaration listed specific development targets to be met by the year 2015. They included cutting world poverty in half, universal primary education, reducing child mortality by two-thirds, reducing the proportion of the population without clean drinking water by two-thirds, combating the incidence of malaria and HIV/AIDS, and other development goals. Parallel to and intersecting with this great attention to the Millennium Development Goals is the two part World Summit on the Information Society (WSIS).

## **The World Summit**

In December 2003, Part 1 of the World Summit laid out challenges about using information and communication technologies for reaching the Millennium Development Goals. While there are people who question the investment in information technologies rather than clinics and medicines, there are enough dramatic examples of the value of information data banks (web sites) and of rapid communication over difficult distances and geography that there are many champions in what is called ICT4D, or information and communication technology for development. For example, in West Africa, computers and satellite radio help to control river blindness. Local inhabitants send information from sensors along 50,000 kilometers of rivers to entomologists who use the data to make decisions on when to spray against the blackfly.

During the lifespan of the Millennium Development Goals, governments, civil society and the private sector will build public digital data bases to provide people with the kinds of information and communication services that may help us meet a variety of important economic and social goals. Already, the English language shows movement in this direction with new words like "eGovernment", "eHealth", "eEducation", "eCommerce", and "eDevelopment." A major challenge for many nations, however, will be to help people gain access to appropriate and relevant ICT resources.

That access, according to FAO communication expert Van Crowder, will help people in many ways. That access to ICT will help to

- reduce the isolation and marginalization of rural communities;
- facilitate dialogue between rural communities and those who influence them, such as government planners, development agencies, researchers, technical experts, educators, and others;
- encourage participation of rural communities in decision making which impacts their lives;
- coordinate development efforts in local regions for increased efficiency and effectiveness;
- share experience, knowledge, and 'lessons learned' with other rural people;
- gain information, training resources and programs when needed in a responsive, flexible manner; including, for example, resources related to agriculture, health, nutrition, and small business entrepreneurship.

While computers and networks have reached global penetration, many individuals, communities and regions have not shared in the benefits of ICTs. However, in 2005, experts guess that there may be as many as 150,000 – 200,000 public access centers where people can exchange messages, access web sites, and use other ICT resources. The challenge now is to increase the relevance and sustainability of those existing facilities and to expand the movement to those persons still on the margins. Community-based telecenters are part of that movement.

### **A memo concerning demand-driven telecenters**

This APEC Telecenter Training Camp is an important event for all those associated with the development of telecenters. Chinese Taipei is demonstrating a passion for translating policy

and rhetoric into concrete programs that could bring new opportunities to people who are yet to experience the benefits that come with computers, networks and other information and communication technologies. But the contents of this document are less about information and communication *technologies*, and more about *information and communication* — and about issues that relate to the sustainability of demand-driven telecenters. Our observations are based on fairly close observation of telecenters in Africa, Canada, Australia, Hungary, Mexico, India and mainland China, and on a large variety of published reports. You will get an even broader perspective from the fine experts at this Camp from other APEC Economies.

In other chapters of the main document we prepared for the Camp, we explore particular aspects of telecenter management. Assuming that administrators, planners, and policy makers could benefit from familiarity with the details and challenges of telecenter operations, we drew heavily on a handbook we prepared earlier for telecenter managers and staffs. (The complete *Handbook for Telecenter Staffs* is available at: <http://ip.cals.cornell.edu/commdev/handbook.cfm>.)

In this paper, we look first at some specific issues related to the sustainability of telecenters. For example, to be fully effective, telecenters need to become visible information and communication institutions in their communities. To do this they need more than the hardware and the digital networks; they need at least the following:

- Research — Telecenters need to find out what kinds of information and communication resources their communities want and need. This is what helps telecenters become demand-driven — a vital issue in their sustainability. Telecenters need research also to evaluate continuously how well they are serving the needs of their communities.
- Local and relevant content — Too much content on the web is not relevant to farmers and other rural people. It is a common problem around the world, where external information dominates locally-tailored material. This is where credible, useful and user-friendly information needs to be crafted. The UNDP has suggested that the most important reason for the failure of telecenters is their lack of suitable content.
- Training — People in telecenters need to be trained in how information can contribute to development. We have found telecenter managers who know a lot about computers but don't know how to link telecenter potential to health clinics, schools, agricultural extension, or local government.
- Community awareness — Telecenters need to make their communities aware of the value of information, such as peanut marketing information and technology transfer in silkworm enterprises, or the chances for more education through distance learning. Awareness of the value of information will help the communities realize the value of the telecenter.
- Human resources — Telecenters need volunteers who can help make telecenters good places to visit — volunteers who can help people search and understand the basic rewards of a digital experience. And who can welcome special groups such as women and the elderly who are frequently shut out of telecenters by social and cultural factors in the community.

### **The larger issues for policy makers, planners and administrators**

Organizations and officials who have responsibility for community development programs often must think beyond the individual telecenters and think more about systems.

Take, for example, the agriculture and food security issue. We mentioned earlier that the world in the 21st century has become more complex and challenging for farmers and others in rural communities. Some markets have become globalized; biotechnology and other technologies are providing opportunities and bewilderment for producers; and farmers are confronted with making decisions that had previously been dictated by tradition or governments. The frontiers of information technology constitute a fresh approach to building a rural information system characterized by (i) more efficient linkage among researchers, extension and farmers; (ii) technical assistance to farmers tailored to highly specific agronomic and marketing conditions; and (iii) an array of knowledge, training and information resources related to broader family needs, including health, education, and life-style concerns.

A comprehensive agricultural development program" requires an integrated communication system (ICS) that interconnects the agricultural research community and provides effective contact with users of improved and new agriculturally-related technologies. Such initiatives as the new Global Open Agriculture and Food University and Cornell University's Essential Electronic Agricultural Library demonstrate the more technically sophisticated side of an ICS. You can find similar structures in health, education, and other sectors affecting rural life. Having community telecenters that can tie into such resources and extend them in user-friendly ways to farmers and rural families suggests *systems*-type planning. We suggest the following nine points as a beginning for building a viable telecenter component in an integrated rural communication system.

### **1. Translate national policy into action.**

We sometimes say "Talk is cheap." So is national policy if it fails to go beyond political talk. Chinese Taipei, as we know, has been much on the frontier of ICT policy development with its National Information Infrastructure initiative announced more than a decade ago. This led to the creation of its telecenters which were also in the early stage of a worldwide movement. And with the political backing implicit in its policy, Chinese Taipei is poised to improve and expand its telecenter program. National Telecenter Policies have become part of the agenda of many countries in recent years.

It is important to note how a regional grouping of nations such as the European Union has had an influence in ICT policy matters. In order to join the European Union, Poland is shaping a national ICT policy. Why? Because the EU requires all its new members to have a national ICT policy. Similarly, the African Information Society Initiative has influenced African nations to establish national ICT policies, and many of them have done so. The AISI *vision* included these expectations:

- Every man and woman, school-age child, village, government office, and business can access information and knowledge resources through computers and telecommunications.
- Access to international, regional, and national 'information highways' is provided by providing 'off-ramps' in the villages and in the information channels catering specifically to grassroots society.
- African information resources reflect the needs of government, business, culture, education, and other aspects of every day community welfare.

Most African countries have started on their "national information and communication infrastructure" (NICI). In 2003, 17 had completed their strategies.<sup>1</sup> High on their list of priorities is improvement of access to ICTs in rural areas through the use of telecenters.

In its domestic Community Access Program (CAP), the Canadian Government went beyond the rhetoric of an Information Society and committed people and funding to make the Internet affordable in rural and urban communities across the nation through ICT community access facilities. It made a six-year commitment, providing start-up money and an infrastructure to help local organizations participate in the initiative. While the resources offered by the central government were not enough for a complete comprehensive multi-purpose telecenter, the *imprimatur* of the Canadian government combined with some "serious" money motivated a nation-wide community-based effort that commanded provincial, regional and local participation. Canada now has more than 8,000 CAP Internet sites.

Besides the direct funding available and the administrative push, a national policy can also be instrumental in providing a favorable regulatory and tariff climate, and in producing the human resources that are vital to a telecenter movement. Some telecenters in Uganda and Senegal, for example, had to go through considerable bureaucratic hurdles simply to have imported IT equipment released to projects or simply be repaired.

To support its policy goal of becoming an Information Society superpower, the Indian government doubled the number of persons it would graduate from its technology training institutes. The Egyptian Government's plan for incorporating ICTs into its business and socio-economic development includes – besides Technology Access Community Centres in rural areas – creation of facilities in all its 27 provinces that can train 30,000 people annually in computer uses.

## **2. Build groups of telecenters.**

Recently the World Bank sponsored a world-wide video conference about telecenters. In the discussion, communication expert Eduardo Contreras said: "The mindset of an isolated telecenter must be overcome."

The Canadian venture into building community access to digital resources initially resulted in the creation of more than 9000 CAP sites. 98% are organized into networks or groupings that share a common interest or purpose and are committed to working together. When we visited CAP sites in eastern Canada, we found some struggling individually to deliver material in the French language. Because of this struggle, some were laying plans to organize for joint action.

The Western Australia Telecenter Network Support Unit illustrates well what can be done when telecentres are combined in some way so that they share a support system. The Support Unit lobbies, seeks funding, develops initiatives, and carries out a variety of other management functions for the 80 members of the Network. From Hungary to Brazil we find persuasive arguments for fostering *clusters* or networks of cooperating telecenters to expand content-related services such as Tele-agriculture, Tele-business, and Tele-culture which are more affordable when serving multiple members.

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<sup>1</sup> In 2003, these included: Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, Egypt, Gambia, Mauritania, Mauritius, Morocco, Mozambique, Rwanda, Senegal, Seychelles, South Africa, Sudan, and Tunisia.

Creating appropriate localized content is very labour intensive, and without volunteer resources can be quite costly. The clustering of telecentres in some fashion can help support a localized information service. In the Pondicherry Project in South India, the Swaminathan Research Foundation has made this arrangement, and the cost of producing local information is being spread over a number of telecenters in a relatively small area.

Latin America's Somos@Telecentros Network (S@T) was one of the earliest significant regional community-based telecenters networks. After it had been in existence for two years, S@T published a study in which it listed the lessons it had learned. The very first on the list was: "No telecentre is an island." The study asserted: "If telecentres are to make their mission more effective, they need to organize themselves into overlapping national, regional and international networks."

One of the major recommendations to the Government of India (GOI) that came out of a 2001 national ICT workshop in Chennai was that the government foster the establishment of a non-governmental National Association of Telecentres. The recommendation included the following list of tasks for such an association.

- (1) Promote and coordinate the supply of content with developers and suppliers.
- (2) Negotiate with resource suppliers.
- (3) Arrange public relations advocacy and awareness campaigns for ICT and telecenters.
- (4) Provide liaison with government departments and NGOs.
- (5) Train telecenter personnel and organizational users of telecenter facilities.
- (6) Promote and arrange telecenter research.
- (7) Provide leadership and enforcement of minimum standards of service and professional codes of conduct

We suggest an addition to this list: collecting, archiving and diffusing information on best practices regarding telecenter planning (possibly in collaboration with a Country Gateway) so that learning about telecenters can be incremental and cumulative.

### **3. Support continuous research.**

Roger Harris is a telecenter consultant based in Hong Kong. He describes an activity in East Malaysia that is essential to creating demand-driven telecenters. Prior to the establishment of a telecenter in the small settlement of Bario in Sarawak (Borneo), the project collected data on the information needs of the community. The data reflected the type and amount of information members of the settlement would like to receive, what they were currently receiving, the type and amount of information they were sending, and the sources and channels used. The survey revealed that the community placed most importance on information relating to agricultural, and medical and religious practices -- with job opportunities, government policies and family matters rated slightly less important. In addition, using Participatory Action Research (PAR) methods, project leaders and the community were able to agree on priorities. This

resulted in one person's action in assembling and documenting best practices for the production and treatment of Bario rice for which demand outstripped supply.

The Tamil Nadu University of Veterinary and Animal Sciences (TANUVAS), in cooperation with Cornell University, has created a small network of rural telecentres in the state of Tamil Nadu, India. During the summer of 2001, our team conducted an information and communication needs assessment. The researchers collected qualitative and quantitative data through a survey questionnaire and focus groups of local women and men in the three villages where telecentres were to be established. Approximately 750 persons were interviewed.

The analysis of the focus group exercises shows differences in information uses and patterns depending on gender, age and occupation. Agriculture is the main economic activity of the villages studied. Farmers – men and women – require information on new seeds and products, fertilizers, market prices, and other agriculture-related issues. However, women especially demand information about their children's education and health, while the younger people are mainly interested in employment opportunities.

The research shows that there are cyclical changes in information needs during the annual calendar because village economic and social life revolves around agricultural seasons and local religious and cultural traditions. The research results are directly related to priorities that the telecenters give to different kinds of information services. For example, men and women with high rates of illiteracy and low levels of formal education express an interest in employment opportunities during the months when there is not much activity in the fields.

However there is another role that research should play in a demand-driven telecenter approach. Although there is a lot written and said about the potential of ICT for rural development, to this date there is only a meager inventory of documented development outcomes resulting from telecenter initiatives. Research evidence on impact is, at best, sparse and anecdotal. Evaluation research is necessary if for no other reason than to guide future telecenter policy and decisions.

You may ask: Who can do research at a rural telecenter? We will suggest an answer to that question later.

#### **4. Concentrate on relevance.**

Here we concentrate particularly on content issues. A *demand-driven* telecenter translates into the need to provide people in host communities with access to relevant and useful content. Some organizations – such as the Country Gateways promoted by the World Bank – are working on the content issues but much of the information available via electronic networks today may not meet communities' needs for *local* and *localized* information on agriculture, health, micro-enterprises and jobs, and nearby markets. A telecenter may also have low relevance if information is in unfamiliar or inappropriate language or dialects. Or if the *style of expression* does not sufficiently match that of the villagers. For example, those of us who use English can be confused by the terminology used by more sophisticated computer users

Even where the mainstream language is English, there is evidence that this is not sufficient to attract people to ICT information resources. A study by the Children's Partnership in the United States looked at the extent to which currently available content met the needs of diverse communities. The study reported that the greatest barrier keeping low income people away from information portals was a lack of locally relevant information. Low income persons

needed such practical content as adult literacy programs, information on public benefits, easy-to-understand health encyclopedias, consumer and credit information, and information related to employment and training.

A 2002 multi-nation study by the International Institute for Communication and Development (IICD) in The Hague suggests that “easier access to *globalised* knowledge is fast turning us into ‘consumers’ of distant and potentially irrelevant information.” Local content, the report says, faces intense competition because big external content initiatives tend to push their foreign content onto local communities. Similarly, another IICD report suggests that “More worrying, perhaps, is that developing countries are being ‘invaded’ by foreign ideas and values that may undermine or overwhelm local cultural heritage and economic livelihoods.” It is interesting to note that Chinese Taipei authorities helped some 6000 villages build their own web sites with local information.

A case in India shows how the staff of a “village knowledge centre” dealt with the issues of local, relevance and language. In one case, coastal villages were highly dependent on weather and tides information. Because many fishermen there were not literate, digital network information such as weather reports was downloaded and converted to *audio* by the village knowledge center. The audio versions were then played on loudspeakers in the open air.<sup>2</sup> In addition, project volunteers in the villages built their own information resources in the center to complement the external databases thereby providing local and *localized* information on agricultural, health and government programs for low-income people. With the project staff, many locally useful databases were designed and developed, including, for example, a directory of general and crop insurance schemes; a list of about 130 schemes available as entitlements to rural families; a directory of hospitals and medical practitioners in Pondicherry – grouped according to their specializations; bus and train schedules covering Pondicherry and two nearby towns; and pest management information for the sugarcane crop.

In China, a village telecenter in Shanghe *converts* important content found on the web into meaningful localized information and presents it in more understandable local terms on a bulletin board in the telecenter, or on a community blackboard in the village center.

The importance of local content is illustrated by a new award recently introduced to the international community. The “Yeomans Award for Local Content” aims to encourage and bring into international recognition projects and experiences that demonstrate how local content can change lives. The award is given jointly by the Global Knowledge Partnership ([www.globalknowledge.org](http://www.globalknowledge.org)) and the Open Knowledge Network.

## 5. Train stakeholders

For the Telecenter Planner, training has several important dimensions. There is the obvious: the training of telecenter staffs. We had an opportunity recently to visit several telecenters in rural areas, and, through an interpreter, we explored the perspectives of the telecenter manager. We asked the young man what contacts he had with local businesses. He said there were no businesses in the community. Yet, we saw many sellers of goods on the main road within a kilometer of the telecenter. We asked what contact he had with the local schools, and with the community's health center. He had none. The telecenter manager had

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<sup>2</sup> There has been a report on the Internet that during the December 26, 2004 tidal wave, the population of a whole village on the east coast of India was saved because of this kind of communication system that warned the coastal people.

good computer skills and, we suspect, experience with basic computer programs. But clearly, to be a success in that community he needed substantial additional training. (In our *Telecenter Handbook* (which you can access and use without cost) we provide some simple training materials that include chapters on marketing, strategic communication planning, building community participation, training techniques, along with basic computer and searching skills.

Another dimension of training is *training of the community*. Training community members draws people into the telecenter and helps it become part of the fabric of the community much as schools and clinics are. A study conducted by Canada's International Development Research Centre -- a study of 36 telecenters in five African countries -- indicates that only a small percentage of the population uses the telecenter facilities, and most of them are youth and young adults. Also, fewer women than men use telecenter services in practically all the rural African centers surveyed by the researchers. Evidently the differences in access to the telecenters has various causes (including literacy level, education, age, gender, and service cost), but community awareness about the value of information and communication services available at telecenters (and even awareness about the location and existence of telecenters) appears as one of the key reasons for the lack of users.

Malaysia's National Information Technology Council recognizes the challenge in establishing a community's awareness of the benefits of information. Its vision is "to evolve a value-based knowledge society in the Malaysian mould where the society is rich in information, empowered by knowledge, infused with a distinctive value-system, and is self-governing." Thus, high on its strategic agenda is an effort to develop a national *mindset* that includes making Malaysians aware of the emerging "E-world" and to enable the diffusion and acculturation of ICT at the grassroots level.

Government or private sector initiatives targeting popular participation in the Information Society will need to consider carrying out vigorous campaigns to illustrate the benefits of information as an important resource for daily living. As the Malaysians suggest, the target includes producing "ICT-fluent" professionals, including leaders in education and government.

Because training is a key component in telecenter sustainability, it is important that it is done effectively. The Canadian Government's recent evaluation of its decade old Community Access Program includes a list of recommendations and the first two were: include coaching of the community, and promote the program to government agencies and to the "hard-to-reach."

We cannot overlook the role of intermediary community groups in promoting the awareness and use of telecenters. Various community organizations and institutions urge their constituents to request relevant telecenter services. Schools, health centers, agricultural extension agents and input suppliers, community leaders, and cooperatives should be partners with telecenters in identifying what information and education related services can be useful to their constituents, and then help telecenters build these particular resources.

The stage has been set for doing this with the Millennium Development Goals. In planning the World Summit on the Information Society in Geneva (2003) and Tunis (2005), one of the principal objectives was the identification of strategies and actions that would mainstream ICT into the work aimed at achieving the Millennium Development Goals. This presents an opportunity for enterprising telecenter advocates and planners to tie telecenter visibility to important international and community priorities.

We oppose the idea that "If you build it, they will come." They will not come unless the planner builds staff and community training into the priorities.

## **6. Have a participation plan and design a strategy for using volunteers**

With widespread interest in the "digital divide" issue, broad-based community participation may become part of a telecenter's mandate. This may present a challenge in reaching out to ethnic minorities, women, children and the elderly who are often on the minus side of the divide. Sometimes the "learning" label on a center, or the technology, or its location in a library or school intimidates those who might benefit from the services.

Building an atmosphere of community participation and a feeling of ownership is an important consideration in the demand-driven formula. Yet, one of the most under-appreciated aspects of the participation issue is that participation is *not* a spontaneous phenomenon. Once we get beyond the rhetoric of participation, we discover that effective participation requires planning and skills – but it has very practical value for telecenters. For example, conscientious attention to participation can yield benefits in such activities as assessment of information needs, planning, management, advising and in the day-to-day telecenter operations. Participation comes in various forms including participants as telecenter users, participants as telecenter staff volunteers, and participants as telecenter advisory groups.

From a telecenter planner's perspective, part of the challenge in building effective participation results from the ambiguity of the participation concept, and the need to translate the idea of participation into concrete action terms. At a minimum this might involve answering the following questions:

1. *Why* is participation important to this project? Among the answers might be: because it conveys a sense of community ownership; it provides indigenous wisdom; it helps reflect community values and will help us identify information needs; it provides important resources, such as volunteers or technical expertise, at a favorable cost; and some people need the telecenter's services.
2. *Who* should participate? The answers may flow out of the answers to the first question, but they should be made explicit; it is not enough to say "the community." What groups of people should receive specific attention because of the possibility they will be marginalized – like women, poor people, minorities, the elderly? In Africa, the elderly are the least represented group among telecenter users. And this probably reflects the situation in many places.
3. *How* might people participate? The easy answer is to say that all can participate through their use of the ICT facilities and services. But there are other ways community members can participate in telecenters: volunteers who oversee daily operations; tutors who give lessons; advisory groups for policy making and management of the telecenter; people who provide links to other community organizations; and people who build and manage particular data bases and "add value" to external information resources.
4. *When* should participation take place? This depends on what kind of participation (the *how*) is being considered. It probably should begin no later than the time in the planning when participation itself is being considered. By making participation an issue in the planning process, it sets the climate for implementation in various aspects of telecenter life – and being specific about the timing avoids the "we know it's important but haven't got to that yet" excuse.

5. *What incentives* can be offered? How people participate is related to what incentives should be offered for their participation. Benefits they receive from the telecenter's services may satisfy most. Money and public recognition are important, but so too are special privileges regarding use of telecenter facilities or discounts from shops in the community.

We must reinforce our message about volunteers. In most communities, volunteers offer a variety of benefits for telecenters. They contribute to the day-in, day-out supervision of the facilities – a potential personnel expense that many telecenters could not otherwise afford. But the volunteer has deeper significance: the variety of volunteers provides telecenter clientele with personal models with whom they can identify and feel comfortable. In telecenters throughout the world, one can find high school and college students, retired business people, active and retired school teachers, and others providing one-on-one and group training and assistance. In some places, women do not feel welcome in a telecenter because of the “maleness” of the environment and the accompanying intimidation. The presence of self-confident women volunteers helps overcome some of these obstacles. For example, as part of a strategy to attract women to participate in telecenter activities in Pondicherry, the Swaminathan Foundation requires that at least one woman is engaged in the management of each center. (The telecenter in the village of Embalm is ruled by *four* female volunteers, and note also that in the new ITU initiative (January 2005) to create 100 Multi-purpose Community Telecentres it is specified that the MCTs “are to be managed by women.”)

Volunteers can also contribute to enlightened decision-making in the telecenter because they reflect a variety of community constituencies. One of the most important results of our needs assessment activities in India as part of the veterinary university project mentioned earlier was the creation of a local steering committee for each telecenter site. These committees, formed by a diverse group of villagers (including people of both sexes, youth and elders), are in charge of monitoring the economic and social sustainability of the telecenters – in close contact with people at the university. For example, these committees decide about new services by taking the pulse of village needs, and they administer existing resources and look for new ones (including looking for volunteers in the community interested in telecenter activities). The steering committees act as local telecenter *champions*.

Yet, there are problems. In Canada, the volunteer issue is widely regarded as the key challenge for its public access sites. But volunteers can “burn out.” And in Africa, an Acacia (Canada) study reports that telecenter staffs and volunteers are usually poorly trained to carry out their daily tasks. Additionally, telecenter personnel often lack incentives to remain in their jobs. Hence the “burnout” reported from Canada. Deficient or nonexistent economic rewards, together with a lack of professional training on how to properly administer telecenters, constitute serious obstacles to the effective management of volunteers.

The challenge for telecenters is to move from largely spontaneous use and management of volunteers toward developing an explicit strategic plan for recruiting, training, and rewarding volunteers. Trish Barron, a telecenter authority in Western Australia, summarizes the issue in three words: Gain, Train, Retain.” The important issue is to find incentives to fit the kinds of volunteers available. For some it is the recognition they receive; for others it is free time on the computers; and for others it may be college credits in the local university or discounts contributed by local merchants.

## **7. Find and support champions.**

We mentioned local steering committees as champions. We discovered in South Africa that the main reason for the extraordinary reputation of the Gasaleka Telecenter as one of the most active and vibrant in South Africa is Masilo Mokobane, the director of the project. In spite of nagging infrastructure and economic problems, we discovered him to be a telecenter visionary. Mokobane personifies what we call a "champion." The obscurity and abstractness of the "Information Society" requires the missionary zeal of individuals who can translate and demonstrate the relevance and application of these kinds of concepts to the realities of the community. And for the innovator to be from the community itself increases the credibility and potential spreading of the telecenter initiative. As we interviewed key persons in the Canadian program, it was clear that champions were vital to a community's decision to establish a community access site, and to helping it mature.

Can you *train* people to be champions? This is a question we are beginning to explore, and we hope there will be interest in analyzing what the qualities are of successful telecenter champions.

## **8. Make a business plan.**

You can find many details on telecenter business plans on the web. In our *Handbook*, we adopted much of the material from UNESCO's *Telecenter Cookbook*. Here we would like to suggest several ideas that you probably will not find mentioned in business plans. First, however, we note that factors influencing long-term financial sustainability of telecenters are diverse. Telecenter sustainability is closely dependent on some of the factors we have already mentioned, like content relevance, community awareness, participation, and a well-trained staff. Most telecenters face the dilemma of being sustainable at the same time that they are providing "public goods" for poor people whom they are expected to serve. Some telecenters use the income from user fees and other income services to make public goods more affordable or free. Are people willing to pay for the information services they can get at a telecenter? Some cannot. However, the evidence we have from focus groups among a range of economic and educational levels in South India suggest that some people are willing to pay if they are convinced that what they get is valuable.

Other than urban cybercafés, most telecenters operate in a not-for-profit mode but they still must obtain funding in some way. Typically donor agencies and governments reduce or discontinue financial support for telecenters after an initial incubation period. Alfonso Gumucio, a development communication expert with the Rockefeller Foundation argues that telecenters that have a mandate to contribute to a community's welfare should not be responsible for their own full financial support any more than a community library bears full responsibility for its survival. The FAO's Francisco Proenza offers an perspective in suggesting that telecenters should be more rigorous about adopting business models. Proenza says that telecenters can learn from their cousins the cybercafés – which are generally a commercial success. Perhaps the compromise answer is that telecenters need to have a financial plan for whatever the sources of support will be. Perhaps an examination of the telecenter ("telehauz") movement in Hungary best illustrates Proenza's position. Telecenters there need to be innovative in exploiting income-producing opportunities to support their operations. Among the telecenters in Hungary, there are more than 50 different services offered to the various supporting communities. A major source of support for the telecenters are the contracts that they obtain from government agencies, thus becoming (for a fee) extensions of government services.

In Australia, the Queensland Learning Centres offer training courses which are paid for by trainees' employers or by the individuals themselves. Businesses and industry groups pay for use of telecenters as teleconferencing facilities, and institutions in the community pay membership fees to the Centres. Telecenters elsewhere may find it valuable to explore the idea of *individual* memberships and alliances with eCommerce initiatives. And, Scott Robertson in Mexico suggests the need for telecenters to get involved in remittance transfers that could help telecenters and the people who use remittance transfers to move money from country to country.

When we say "business plan" most of us think first of money and financing. We suggest that there are two important aspects of a business plan that need to be considered in telecenter planning. First, In a variety of places in this document we have mentioned issues that relate to a telecenter being *demand driven*. Essential to a business approach to telecenter sustainability is the need to identify demand and to take steps to meet the demand – some of which may be economically rewarding.

The second may seem like a very obvious point (though frequently ignored or overlooked) is the importance of *making a telecenter a nice place to be*. Francisco Proenza suggests that telecentres can learn about this from some of the better cybercafés. In Canada, we were told that just changing the name from "Community Access Program Site" to "Cybercafé" increased the visibility and use of the facility. We studied one of Canada's community access facilities and found that separate times had to be scheduled for adults and young people because each was intimidated by the other.

The BusyInternet telecenter in Accra (Ghana) takes the issue of atmosphere seriously. To attract people to BusyInternet who might not otherwise be interested in information technology, movies are shown at the center on weekends. Another magnet is Liquid, the BI Accra restaurant and bar with its cool-blue bubble design. This is where the local cyber crowd hangs out to network and dream up ideas. The BusyInternet philosophy is that creating a social scene around technology will help spark an innovative technology culture, and it places equal importance on both social and financial returns. For example, to raise awareness about national ICT policy, the telecenter hosts monthly debates and organizes lectures by experts. Low or no-cost Internet access is offered to those attending HIV/AIDS workshops and other socially oriented programs. Those who cannot afford the normal daytime prices of fee-based services can pay half-price at night.

## **9. Build partnerships.**

As we mentioned earlier, community organizations and institutions can create demand for telecenter services. Schools, health centres, agricultural extension agents and input suppliers, community leaders, and cooperatives should be partners with telecenters in identifying what communities need in order to be able to develop appropriate information services. Telecenter managers must reach out to community groups and demonstrate how telecenter resources apply to business, government and development activities. Agricultural extension, community health workers, schoolteachers and government officials need to re-examine how information technology can contribute to their efforts. China has 150,000 farmers associations that could be linked to telecenters – if telecenters were there.

Hungary has demonstrated that a former socialist country steeped in centralized planning could develop a telecenter system built on local non-governmental organizations (NGOs) with community ownership and management. It is called a "civic initiative" because of its emphasis on local NGOs applying for government telehauz grants where the communities

must show that they have the support and partnerships and local governments or private organizations.

One of the oddest characteristics of the telecenter movement is the absence of universities as telecenter partners, or as telecenter *incubators*. The social role of the university historically has been to create, store and diffuse knowledge, a collection of activities that partially parallels some telecenter operations. Yet, few major programs link universities to telecenters as an institutionalized support system.

Recall some of our earlier points about telecenter needs and note how these relate to university capabilities:

- Research. Many universities have research capabilities that could be applied to the telecenter research needs we mentioned. And universities could use telecenters as social research labs for their faculty and students.

- Content. Universities such as agricultural universities have access to science-based information that could be tailored to regional, provincial and local social, linguistic, and cultural characteristics, and could be matched with many of the Millennium Development Goals.

- Training and learning resources. Naturally, universities have the capacity to teach and train, but equally important, they have the cultural credentials to give credibility to their knowledge resources.

- Human resources. And universities have human resources such as students who could serve as telecenter interns, and faculty members who could serve as content and development advisors. One of our Ghanaian friends has been working on a plan to incorporate telecenter internships as part of his country's post graduation service requirement. For some places – perhaps Chinese Taipei -- service in a telecenter for young men and women could become an alternative to military service.

What makes an institutionalized partnership so logical is that the universities can gain a learning and research laboratory via a telecenter, while a telecenter can fill some of its important operational needs via the university. Many places like Chinese Taipei, Mainland China, India and many nations in Africa have universities that can be a resource in telecenter planning and operations, and the universities are among the most stable institutions in the community. These could be valuable resources in the sustainability of telecenters, especially if universities and telecenters were regionally networked.

## CONCLUSION

Much of the attention in the past 10 years has been on the *connectivity* side of making ICTs accessible to individuals and communities. While these issues have not yet been completely solved,<sup>3</sup> we recognize that there are other challenges that need addressing if telecenters are to be significant forces in reaching the Millennium Development Goals – as well as opportunities associated with eGovernance, eCommerce, distance learning and other digitally-related programs

In the next stage of telecenter development initiatives will need to concentrate on how to use ICTs and telecenters more effectively for development. This question of telecenter effectiveness merges into discussions of content, demand, sustainability and viability – significant subjects that are woven throughout telecenter planning. And we should remember that colleges and universities should be considered in developing a plan of action. They can help create the demand and satisfy the demand in a *demand-driven* telecenter system.

RDC  
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