



Telecottage Handbook

How to establish and run a successful telecentre

A practical guide for community development practitioners
on strategies for ICT-enabled community empowerment
(based on the Hungarian telecottage movement experience)

How to Build Open Information Societies

A collection of e-governance best practices and how-to primers



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Europe and the Commonwealth
of Independent States

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Foreword

Those who work in the area of information and communication technology for development (ICT4D) are well aware of the telecentre concept. It is also referred to as Multimedia Community Centres (by UNESCO) or Public Internet Access Points (by the EU). A telecottage is a type of telecentre. It is a partnership-based grassroots social enterprise that is owned by the community and run by local businesses on its behalf with an exclusive focus to serve local development needs by offering a range of ICT services, as well as ICT-enabled social and other services. There is already extensive literature on telecentres. So why develop another publication about this subject? One reason is that many publications about telecentres do not comprehensively describe how to create a successful one. Another reason is that publications about telecentres tend to analyze the concept rather than present practical prescriptions in a friendly format. A third reason is that, to date, experience has been relatively limited in operating telecottages from the countries served by the UNDP Bratislava Regional Centre (BRC).

Now there is a country in the region that has accumulated considerable experience in this area – Hungary. Dating from the mid-1990s, Hungary’s telecottage movement has served a valuable purpose and has continued and expanded ever since. Hundreds of telecottages operate across Hungary because they were created by local people for people who needed and used them. Public-private partnerships are at the heart of the telecottage movement and have been the basis of its sustainability.

This publication describes the Hungarian telecottage experience in the English language, making it accessible to an international audience who might like to customize and replicate this experience in other countries and settings. It was written by those who have pioneered this new form of ICT-driven socio-economic development. The publication is intended for a wide-ranging audience of ICT professionals, community development practitioners and public administrators who wish to improve social services delivery at a local level.

UNDP advocates consideration of the Hungarian telecottage model because it has the potential to contribute to the first Millennium Development Goal: the eradication of poverty and hunger. Telecottages can increase the productivity and profits of local entrepreneurs. They also bridge a big gap in non-income poverty helping ordinary citizens to have access to global knowledge and information resources. The telecottage programme also works to improve democratic governance by increasing transparency and participation through the use of online communication tools and digital content.

Yuri Misnikov, ICT for Development Regional Advisor at the BRC, and I extend genuine thanks to the Hungarian Telecottage Association for their excellent cooperation over the past three years and to all contributors and editors who have worked hard to produce this publication. We are hopeful that this handbook will contribute knowledge to assist the achievement of the Millennium Development Goals in Europe and the Commonwealth of Independent States and globally.

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Acronyms

ATM	automated (banking) teller machine
BSA	Business Software Alliance
CD	compact disc
CIS	Commonwealth of Independent States
CTSC	Community TeleService Centres
EU	European Union
EUTA	European Union of Telecottage Associations
HUF	Hungarian forints (currency)
ICT	information and communication technology
IT	information technology
ITU	International Telecommunication Union
LAN	local area network
NGO	non-governmental organization
OEM	original equipment manufacturer
PR	public relations
TV	television
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
VCO	voluntary community organization
VoIP	Voice over Internet Protocol
UK	United Kingdom
US	United States of America

Preface

Amidst the numerous information society initiatives advanced by governments, international agencies, NGOs and other organisations, to deliver the benefits of modern information and communication technologies and services to disadvantaged, rural and remote areas, the Hungarian telecottage movement is an outstanding success story. We use the internationally recognized term *telecottage* for these non-profit based community enterprises. Hungary currently has the world's highest number of telecottages per capita and persistent dynamic growth. This rapid expansion has occurred within the timeframe of a couple of years, in a country in transition. The telecottage idea was first manifested in Hungary in 1994, with an initial substantial grant awarded in 1996. Today, more than 500 telecottages operate in the country. With this proliferation of community access points, the number of telecottages has reached a critical mass. This enlarged network has become the national backbone of community access and is proficient in finding unique ways to sustain its operations. Telecottages also jointly provide the public, civil and business spheres with a wide array of services, more than 60 in total. New possibilities are gradually explored and added to applications, based on regional characteristics.

One very important feature of Hungary's expanding telecottage network is its *civic initiative*. In spite of attracting the government's attention and support as well as raising business interests, the core of the movement has remained civic or grassroots in nature. The local telecottage strategy is based on identifying and serving the needs of local communities through meaningful cooperation with local civil society, local governments and local businesses. The key to success has been that telecottages remain the concern of the locals!

The Telecottage movement has garnered a great deal of interest and enthusiasm both at home and abroad. The network's potential for expansion appears to be unlimited. Most of Hungary's neighbours have adopted the model within their own countries, and it has been recognized from even more remote places. Apparently small communities face similar problems regardless of where they are in the world. And, as already experienced, the core solutions to these problems might be similar as well.

Our objective, via this handbook, is to accompany you along the trajectory of developing a sustainable telecottage, serving a small community, from conception of the idea, to its first day of operation, and perhaps even a little further. We offer you the experience of the expansion of the Hungarian telecottage movement. One of the great lessons to be learned from Hungarian telecottages is that this journey of discovery is a communal undertaking. We learn the most from each other. Telecottage knowledge and experience are tangible and collaborative. Our present task of documentation is but one part of our journey of discovery. Your own experiences will become part of this journey when you say, "no, my friend, in my country it doesn't work like that." We hope that we can continue discovering the telecottage world together.

This handbook is based on Mátyás Gáspár's book, *"e-Community: How to Establish and Run a Successful Telecenter,"* written in 2004. Our task, as assigned by UNDP, was to compile a practical guide based on the Hungarian telecottage experience for all those interested in becoming more familiar with our telecottage experience. We have shortened the original book and added new parts to illustrate particular Hungarian examples and case studies. We hope that our experience and efforts will prove useful for all community development practitioners.

Finally, we extend our thanks to UNDP Bratislava Regional Centre for its consistent effort over the past three years in advocating the telecottage experience in Europe and the CIS as a means to extend the benefits of modern ICT for community empowerment and for better provisioning of public services – especially for the socially and economically vulnerable rural residents. Because ICTs have such transformative potential across so many different sectors (health, education, employment, etc.), we feel that telecottages decisively support development and poverty eradication initiatives and increase their sustainability. We offer this handbook as a contribution to the Millennium Development Goals project with aspirations that our experience will inspire others and give them new information about harnessing the power of ICTs to build better and stronger.

The Contributors

Introduction to telecottages

1.1 Basic definitions



As defined by the Hungarian Telecottage Association, a telecottage is a unique infrastructure-intelligence base serving the local community. Its components are:

- modern communication technology
- office, IT and educational equipment
- a community space
- organizational competence and capacity
- accessible professional assistance, know-how and information.



One of their most important characteristics is that telecottages serve **small, rural communities**.

Telecottages are *local community service centres* where information, assistance and help are available and where anyone can use the information and communication technology (ICT) and access the Internet. Telecottage users can solicit, disseminate, record, analyse, or simply access information. These institutions bring information to locals and provide opportunities to use information in different ways: to work, to learn or simply to play. The ever-increasing need for communal access to information society services can perfectly be satisfied by telecottages. The term *telecottage* was first used in Great Britain by the Telework Association.¹ We share the association's vision of these rural, ICT enhanced community spaces – so we decided to borrow their word.

Telecottages are *community enterprises* where users are provided with assistance to enable them to deal with the new array of info-communication equipment. Information about various e-services is available, and anyone can have hands-on experience. Telecottages are also communal hubs within the local communities, with sometimes very special services, such as operating the local cinema.

It should not come as a surprise that small settlements in both developed and developing countries have been among the first to embrace the new public services provided by the information society. ICT infrastructure offers access to a wide range of services and applications – email, access to information, counselling, employment, business services, education, culture and entertainment. All aspects of everyday life can be enhanced by telecottages. If a small community is only able to establish one set of such infrastructure, the telecottage potentially can cover all the needs. Telecottages can help schools, cultural centres, libraries, health or postal service providers that are unable to maintain their own institutions and infrastructure. In the same manner, telecottages can also support business services needs.

¹ <http://www.tca.org.uk>



Telecottage services are always tailored to **community needs**: they adapt the endless possibilities offered by modern ICT to the local setting.



There is no standard service package for telecottages. Each telecottage is **different**, developing its own profile based on community needs.



A typical telecottage is **equipped** with four to ten computers connected by a local area network (LAN), with Internet access and basic office tools such as telephone, fax, printer, scanner, and photocopy machine. Telecottages also employ at least one person to provide help and technical assistance to users.

The services provided by telecottages are extremely important for disadvantaged communities, where the gap between modern information technology and local culture hinders development. Telecottages create a link to the future for communities in need and offer opportunities for them to promote their own development. In addition to being a location for public access to technology, telecottages organize cultural events, provide various public services, publish local newspapers, organize training and educational programmes, and serve the information needs of local government, businesses and civil society.

Community orientation is the most important aspect of telecottages. This means that telecottages are very well integrated into local communities: they are not top-down institutions, but rather are built and established from ground-up community initiatives. Telecottages provide opportunities and assistance to those in need, who otherwise would not be able to learn to use modern technology. A telecottage is also a community centre where community members can meet and organize events. Telecottages are valuable tools for starting community development programmes and through their services strive to develop and strengthen local communities.

For tourist areas, telecottages can serve as information centres and provide services such as coordinating room reservations. Other examples of serving particular local needs include telecottages being involved with social services (for example to the elderly), being regional development centres in partnership with local governments and development agencies, and providing public administration assistance (such as help accessing and filling out forms, providing information and assistance to deal with local government or other public administration agencies). Almost all telecottages are very active in organizing training and education programmes – mostly on IT-related topics.

It is important to emphasize that *technology* is only a tool for achieving goals that are much more than simply being an access point for IT and communication services. Computers, networks, Internet access, services tailored to local needs, and competent staff are all necessary for providing equal opportunities for people and communities in great need and with very little or no chance of benefiting from the information society. Telecottages can be understood as viaducts bridging a sometimes very deep digital divide.



Experience shows that the full range of equipment is needed from the outset for some telecottages, while for other communities less equipment is adequate at the start-up of the programme.

Perhaps the most fundamental building blocks for a flourishing local community are successful NGOs, playing a vital role in the development of their respective communities. In this regard, the strategic benefit of telecottages is the ability to extend help to other NGOs, local government, and local businesses by providing information to enhance local economic development and local government service provision. Improved multisectoral local relations increase NGOs' sustainability and facilitate their role as service providers, hence enhancing both their credibility and ability to advocate.

1.2 The Hungarian telecottage movement²



As an NGO-based movement, **civic initiative** is a core element of the Hungarian telecottage model.

The telecottage story in Hungary began in 1994 when the first telecottage was opened in a hillside village. In 1996, the United States Agency for International Development (USAID³), within the framework of Democracy Network Program (for Hungary), supported the establishment of 31 telecottages. This core group of telecottages is still operational, and their enthusiastic staff play a leading role in governing one of the largest NGO networks in Hungary, consisting of more than 500 members. The telecottage boom started when, in addition to the international donor community, the Hungarian Government began supporting the establishment of new telecottages. In 2000, the National Telecottage Development Strategy and Program – developed by the Hungarian Telecottage Association – became a part of the National ICT Development Strategy aimed at doubling the number of telecottages every year, as well as recognizing them as fundamental partner institutions for alternative education, employment, rural development, social services and many other areas.

Telecottages are typically operated on a non-profit NGO basis. In Hungary, most telecottages are located in rural villages serving communities with populations smaller than 5000. Most Hungarian telecottages have not achieved self-sustainability by relying exclusively on their service incomes. Small communities typically are not in very good economic shape, thus telecottages are forced to find complex solutions for keeping themselves operational. Examples from the region show that only about one-third of total expenses are covered by the income generated from services. Another one-third comes from local sources: local governments often provide premises and furniture, and contribute to employment costs of the telecottage staff. Local businesses are also a good source of revenue when using telecottage infrastructure for their everyday operations. Further revenue derives from international and domestic donors, usually through grant programmes and projects.

² For details see Chapter 6: The telecottage movement in Hungary.

³ <http://www.usaid.gov>

The Hungarian Telecottage Association⁴ (see Section 6.10), one of the largest NGO networks in the country, has developed good relationships with the government and business sectors. The Hungarian Ministry of Information Technology and Communications considers the telecottage network as its key partner in building an information society at the local level. The Microsoft Corporation provides free access to all Microsoft products for registered telecottages, which in turn use this software to provide services to the public. Many other businesses, mostly telecommunication, use the telecottage network as selling points in remote and otherwise economically unattractive locations. The government also recognizes telecottages as a network of local institutions with the capacity to provide public services in the areas of social services, education, employment, and economic development. A sustainable telecottage usually has very good relations with the local government and other local public institutions. Consequently, it is very important to identify community needs in order to be able share the tasks and responsibilities of serving the public.

1.3 Transferring Hungarian know-how



Experience has shown that the Hungarian model encompasses much more than a particular set of services or mode of operation. During the years of supporting the establishment of new telecottages, it has become evident that the model incorporates the entire process from working out the grant programme, the call for proposals, the evaluation and selection method, monitoring, evaluations and mentoring. Efforts to establish the Yugoslav programme resulted in an integrated approach, for which the entire project development, implementation and evaluation comprises a package recognized as a replicable model, that is easily adapted to various local and regional conditions

The momentum of the Hungarian telecottage movement and know-how have not stopped at the borders of Hungary. Representatives from local communities in neighbouring countries and beyond have arrived – and keep coming – to Hungary, taking part in training and workshops. They subsequently return home to open the first telecottages in their respective countries. Usually these pioneers develop strong relationships with some of the Hungarian telecottages, with ongoing regular contact, joint programmes and meetings with representatives from the involved communities.

One of the most successful examples of exporting Hungarian telecottage know-how took place in the Republic of Serbia during 2000-2002, with the support of USAID, the Hungarian Telecottage Association, and in partnership with an Hungarian NGO, the Foundation for Development of Democratic Rights.⁵ This programme established 66 telecottages around the country, and became the most successful NGO and community development programme in Serbia, reaching into small villages even in remote areas of the country, and assisting people in rural areas to use ICT for the benefit of their communities. The Yugoslav Telecottage Association,⁶ established during the programme period, has successfully integrated telecottages into a national network. The association has participated in various national and international programmes and projects, and has received support from international donors for various programmes ranging across e-learning, community development, and employment.

⁴ <http://www.telehaz.hu>

⁵ <http://www.demnet.org.hu>

⁶ Now called the Telecottage Association of Serbia and Montenegro: <http://www.teledom.org.yu>

Based on the Hungarian model and adopted to local circumstances, telecottages have been established in Slovakia, Romania, Bosnia and Herzegovina, Bulgaria and the Ukraine. UNDP also sponsored several training and study exchange programmes in Hungary for participants from Uzbekistan, Belarus and Macedonia. In 2004, the European Union of Telecottage Associations (EUTA), based in Budapest, was officially established (see Section 6.22).



The **Yugoslav Telecottage Program** was the first national programme in a foreign country to be based on the Hungarian experience. Hungarian methods and experiences were easily tailored to new local circumstances. Within the framework of the programme, 66 telecottages were established in Serbia. The programme was financed by USAID. An accompanying **handbook** described programme implementation, shared the experiences of the Yugoslav Telecottage Association. The Yugoslav Telecottage Program ended in the first months of 2002, with the establishment and modest support for operations of a group of telecottages. The story, however, continues with telecottages still operating and serving their local communities. The handbook was written in English and Serbian and is available for free download at: http://demnet.org.hu/index_eng.htm.

The telecottage concept and models



The **father of the telecottage**, Henning Albrechsten, called his new institution a **centre for competence**, an entity through which each small community could become the centre of the world.

2.1 Origins

Where did this idea come from? It is useful to think back to the beginning of the telecottage movement in Hungary, although there is no doubt that the idea appeared somewhat simultaneously at various points on the globe. The world's first telecottage was established by the council of Jämtland in Härjedalen, Sweden, in 1985. The mother of all telecottages, however, is the one established by Henning Albrechsten on 13 September of the same year in Vemdalen, a settlement of 850, about 450 km from Stockholm. Mr. Albrechsten, the father of telecottages, was the first to publicize his experiences worldwide. Albrechsten, an oil refining engineer, fluent in a dozen languages (and a graduate of ancient language studies), having returned to Vemdalen to retire, installed 19 computers in an office on the first floor of the local department store, and began to teach people how to use them. The possibility of distance or tele-work was a key motivation for the first users as the two primary local sources of income – forestry and tourism – were on the decline. However, before long this first telecottage, open to new opportunities, was undertaking a wide variety of services, in particular, that of acting as a commercial intermediary.

2.2 Why a telecottage?

A telecottage is a *communal hub* offering access to information society services and providing assistance in using the tools and facilities. The essence of the telecottage is openness, and hence the terminology of *community* is intentionally emphasized rather than it being a *public* place.

During the first stages of the programme, people may seek justification for creating a telecottage rather than, say, installing ICT equipment in the school, library, cultural centre, council, post office, or within any other competent organization. Further, it may be questioned why the person who had this idea should receive funding, opportunity, and help. In this situation, determination together with a sound knowledge base can help a lot. Other institutions are usually constrained by their special activities, services and regulations. Community-orientation and the open profile of a telecottage are character-



Be prepared to respond to the following:

- Why are you involved in setting up and operating the telecottage?
- What personal goals are driving you?
- What do you expect from this? Community recognition, success in your profession, a source of revenue, conquering a new market, or merely to have fun?

istics that are not automatically guaranteed by other traditional organizations. Nevertheless, it is still possible for an existing institution to host or even to operate the local telecottage.

A particular innovation of the Hungarian model lies in its different approach towards *infrastructure*. More traditional institutions evolve in terms of their different public tasks and services, and the specialized requirements such as for health services, libraries, schools, social care services, postal services, and so forth. Each can be defined by the services provided. The Hungarian telecottage model is based on a different logic. The more services encompassed by info-communication, the higher the need for assistance to provide tools and services within a framework of more efficient and economic organization of any activity. The telecottage undertakes this role on a community basis.

2.3 Motivations for establishing telecottages

There are as many telecottage developers – often passionate missionaries – as there are motivations and interests. Usually the founders leave their mark on the telecottage being created. This is quite natural and unproblematic as long as the founder also allows the institution to develop according to its own internal nature and in harmony with the expectations and needs of the local community. The founder can be a businessperson, politician, civil activist, civil servant, IT professional, social worker, teacher, etc. It is a person who realizes that modern information and communication technology (ICT) is required for personal and/or community goals to be realized. The points of departure can be very different, but the common result is *the telecottage*.



It is very important to understand that in most small communities only one telecottage can be created and supported to fulfil and serve the range of goals, regardless of the developer's personality and his/her original motivation.

2.4 Telecottage types and models

A telecottage is a place of *community access* and does not only focus on business and specialized services solutions. The local community plays a decisive role. Box 1 presents different telecottage models, as distinguishable from operational aspects, by their structure and management. Community influence is present to some degree in each case.

Box 1: Telecottage types and models

Size of the community served*

- *Telehut or Telecottage satellite office* – service for very small communities (a few hundred people) with a limited set of services, generally with the assistance of a non-local organization (e.g. a nearby telecottage)
- *Telecottage* – institutionalized and serving a settlement or area of a settlement (up to a few thousand people) with a complete range of services
- *Regional telecottage* – a telecottage serving a number of settlements, capable of providing services for the area
- *Telecottage resource centre* – in addition to telecottage services, provides services that support the operation of other telecottages

Character of the settlement served

- *Provincial and rural environments* – loosely-structured settlements in rural areas, and family communities
- *Village* – a more densely-populated rural settlement
- *Neighbourhood* – communities at the edges of, or near towns, in housing estates or residential areas, that are like small communities in character
- *Urban* – communities of densely-populated areas, less suburban, communities far removed from the natural environment, and not displaying small community characteristics

The openness of the community served

- *Settlement, residential community* – the services of the telecottage are available to all members of the residential community
- *Focused on a special community* – telecottages primarily serve the members of particular social classes or groups (e.g. ethnic groups, the young, pensioners), or telecottages run by them
- *More closed community* – telecottages are established for individual members of particular (e.g. religious) communities, their services are not, or only minimally available to others

Dominance of ICT

- *Community technology centres* – special services to support use of ICT equipment
- *Multifunction telecottages* – service provision alongside ICT services (that can either be based on ICTs or be independent of them)
- *Community institutions with background ICT* – organizations that provide ICT access as an additional or background service (e.g. libraries, schools)

Openness of service

- *Completely open profile* – full telecottage undertaking, capable of providing services based on the community's needs
- *Service-dominated* – telecottage with a primary service profile (e.g. education), offering other complementary services
- *Specialized* – telecottage operating in a specific service area, only providing ICT services in connection with this (e.g. employment)

Type of service organization

- *Unique service system* – the telecottage is entirely integrated into a special service system, and is independent from other telecottages
- *Network service system* – the telecottage provides some services on its own, and others in conjunction with other telecottages, in a common, unified network
- *Franchise systems* – unified network franchise services are dominant
- *Complex telecottage franchise* – the telecottage is part of a franchise system, covering all elements of the services and operation

* See Box 14 for guidelines on appropriate number of available workstations.

Physical implementation

- *Virtual* – a telecottage that only exists on the Internet, and is exclusively capable of providing network services
- *Real* – telecottage in a physical building, such as a house in the countryside, which in addition to network presence offers other services
- *Mixed* – telecottage operating and offering both real and virtual services, in which the two forms of implementation are mutually supporting

Permanence of installation

- *Settled* – the service is permanently installed in the community and continuously available
- *Transferable* – if necessary, can be moved to another community, building and all (e.g. a prefabricated container)
- *Mobile* – operates in different locations according to a fixed timetable and opening hours
- *Temporary* – the service is installed for a given period of time and subsequently discontinued, principally with the objective of education

Connections to networks

- *Outside of the network* – the telecottage is not in contact with any other telecottages, and operates independently
- *Service network* – the whole operation or parts of it (like e-learning or telework) is supported as a part of a network (e.g. see Powys telecottage network: <http://www.telecentres.com>)
- *Organizational network* – the telecottage is part of a larger network organization, not independent, or it gives up part of its independence
- *Technological network* – the telecottage's infrastructure is part of a comprehensive network technology system

Sector characteristics, culture

- *Administrative character* – dominated by the operational order, and culture of a public service, assisting and supporting public administration, office work “close to bureaucracy”
- *Non-governmental character* – dominated by a social, civic operational mode and spirit that is “close to the community”
- *Business character* – dominated by sustainability of services, sound business foundation, oriented to customer requirements, and service spirit
- *Balancing* – the telecottage operates across a combination of all three modes, tailored to the nature of the given activity and services

2.5 Public services

Although the service character of telecottages fuses business, government and community approaches, with differing distribution among the three, it is very important to highlight the services these institutions provide on behalf of the governmental sector. The easy accessibility and the quality of state and local governmental services can be problematic in both developed and developing countries. Service providers are not always eager to expend resources on developing and maintaining the user friendliness of public services. This is even more problematic for countries with a large territory, or countries – like Hungary – with thousands of small municipalities. In countries with a *democratic deficit*, where state and public service providers enjoy monopolies at the expense of society, efficient and user-friendly public services are often lacking. For small municipalities, it is often not a question of weak public services provision, but rather a lack of any locally available serv-

ices. Information must be provided to citizens in the shortest possible amount time, to enable their adapting to changes in the globalized world. This is a public task, which evidently cannot be solved by relying exclusively upon the given public administration structures and ethos.



Advantages of telecottages' involvement in public service provision

- The community controlled public access points are becoming part of the public administration system, by taking over some of services.
- The quality of service provision by the public access points is continuously evaluated and feedback is provided (there is no hierarchy).
- These service providers can pool necessary resources – in cases for which the national or the local governments are unable – to improve the quality of the services provided.
- Because telecottages are multifunctional, their operation is based on cross-sector co-operation. Consequently, operational costs are also shared. This solution is cheaper to run from the point of view of the government.
- The institutions, offices, information, and public administration services are increasingly being transferred to the Internet. The system of public electronic access points is accelerating this process, and forcing other organizations also to move online.
- The community-based nature of telecottages offers solutions to problems in the transition countries that are created by technological, economic and cultural gaps.

Services for the government – The public sector also requires information input locally and for national institutions. Practical examples include registering local residents or farmlands eligible for funding. Telecottages can collect, process and electronically submit this information. Naturally, there are also instances in which individuals need to personally authenticate or verify private data held about them in national databases. For these cases, telecottages can assist individuals by providing support and online access to the government databases (where these are available). Recently in Hungary, telecottages provided assistance to farmers to identify on satellite photos the areas of land they had been cultivating and then to submit this information to be recorded in a government database. More regular services include, for example, assistance for individuals and entrepreneurs in preparing their tax return forms. Local governments in rural and underdeveloped areas usually are under-resourced in ICT expertise and equipment, but if there is a telecottage, it can assist with provision of local government services – ranging from ICT training to serving as the citizen's liaisons office.

2.6 Service system and technology of telecottages

Service culture – For telecottages established because of civic initiative, the element of *service-orientation* is not self-evident. This is not a mistake or misunderstanding, but simply a natural consequence of civic thinking: “Here is the equipment, let’s let anyone use it, whenever needed, because these things are ours.” Nevertheless, even in under optimal conditions, the culture of civic institutions does not operate faultlessly. A telecottage is intended to be a *service provider institution*. This is important in both principle and practice, even for the smallest and friendliest community, because for the individual user much can depend upon whether or not services can be accessed when they are needed. If this is not taken into consideration, then instead of a telecottage, the entity is actually a less structured, less regulated club. Naturally, this model also has a *raison d’être* in certain circumstances.



The telecottage must guarantee availability, quality and reliability of services, in line with regulations and mandated conditions – it is very important to make these clear to users publicly (e.g. clearly posted hours of operation, a price list, etc.).

Although the essence of a telecottage is to make ICT infrastructure available to anyone, in addition to its other operations, it is always realized as a special set of services. This does not contradict the fact that telecottage cannot be defined by its services, because it is considered to be an open service profile institution. In truth, it is more apt to say that telecottages display great variety from a specialized or sectoral perspective. Nevertheless, it is always staffed and technically equipped for specific services. The service/technology profile can help in unveiling the initial, structural, and operational requirements in a telecottage when introducing a particular service.

Box 2 summarizes the range of telecottage services. No single telecottage can realistically aspire to offering the full range. Indeed, Hungarian telecottage managers assert that there are no two telecottages with an identical set of services. The service portfolio develops gradually. Just as “a little dog learns to bark”, a telecottage incrementally becomes capable of providing an increasingly complex range of services. Further, local needs and demands vary. A popular tourist resort has different needs and circumstances from a religious centre or a settlement wrecked by unemployment. Similarly, the context is different for an environment with many children and young people, or conversely, many old people, where there is a significant ethnic minority, and so forth. A telecottage must accommodate local needs, and thus, an initial analysis of needs is very important for determining what kinds of services to provide. It is also useful to assess community resources, which comprise a very important basis for the development of telecottage services (see Section 5.9).

Box 2: Telecottage services

A. Public e-services and for the (local) government

- Public information*
- General administration, agency services*
- Services for area or village management
- Agricultural information*
- Library services
- Social care services
- Child protection services
- Health services
- Labour and employment services*
- Public works services
- Telework services**
- Financial services (e.g. tax, social security)*
- Youth services
- Education and coaching services**
- Services for spotting and ministering talent
- Environmental protection services
- Local statistical and map services**
- Services supporting other local public tasks

B. Local, traditional and network business services

- Canteen
- Office and documentation, virtual office services**
- Computer use support services*
- Computer games*
- Online games **
- Local business intermediary service, virtual market
- Electronic commerce and business agency*
- Tourism services*
- Telework services**
- Distance education**
- Education management service*
- Advertising services*
- Electronic post office for the settlement*
- Internet services**
- Web studio – homepage building, server services**
- Purchase, construction and repair of computers
- Purchase and rental of software*
- System administrator service
- Banking service*
- Selling of goods
- Selling of second-hand goods
- Rental services

C. Local and network services for NGOs and VCOs (volunteer community organizations)

- Grant application and project development *
- Local public interest information services*
- Local information centre
- Settlement web page*
- Civic centre service*
- Local media and publicity services
- E-democracy*
- Community memory and local history
- Community development
- Virtual expansion of the community*
- Club service
- Events management services

Note: this is not an exhaustive list.

* Services requiring ICT equipment.

** Services requiring direct and continuous broadband Internet access.

Synergy – A great advantage of telecottages is precisely their variety. For the business, NGO and government sectors, a telecottage is attractive because it provides necessary assistance that other service providers are sometimes unable to organize or finance. A good example of this is helping the unemployed find work by providing support, information, advice, retraining, and skills development. All of these can be provided in the telecottage. This means that job seekers do not have to travel to distant labour offices or job centres. Local newspapers, a newsletter, advertisements, and other forms of publicity can help advertise these information and advice services. Organization of local teaching and training courses, provision of computers and access to the network, the settlement's own web page, and a number of other elements that are not directly connected to the activities of the employment sector also rely upon specific capacities developed within the telecottage. This is the essence of synergic operation, one of the huge attractions of the telecottages for state clients.

Box 3: Areas of governance for which telecottages provide services

- General administration (customer service)
- Social care
- Education
- Culture
- Youth and child protection
- Equal opportunities (minority rights, those with working disadvantages)
- Health
- Agriculture
- Tourism
- Economic development
- Employment
- Environmental protection
- Development of civil society
- Mass media and publicity
- Information society development

Minimum set of telecottage services – *Is there a minimum set of services that is common to all telecottages?* This is a particularly important question in context of telecottages functioning as a network, providing network services. By definition, a telecottage comprises a minimum service capacity that makes possible – indeed, guarantees – the provision of a wide range of services. This is the *telecottage minimum*, with specific reference to service provision. Because of national differences, cultural particularities and economic and technical contexts, it is difficult to define such terms that would be valid at an international level. However, based on the Hungarian experience, a generalized telecottage minimum is depicted in Box 4. It is important for the environment and the partners of telecottages, that there be a clear description and guarantees for the nature and service capacity of this new type of institution.



The telecottage minimum is identified across three different dimensions:

- (1) *services minimum* – the minimum set of services the telecottage must –or at least be able to– provide;
- (2) *technical minimum* – the minimum technical infrastructure needed to adequately serve the community's needs; and
- (3) *operational minimum* – the basic requirements focussed on managing the telecottage.

Box 4: Telecottage minimum

Minimum services provision

- Public telephone use
- Copying
- Scanning
- Printing
- Multimedia computer use
- Use of office (applications) systems
- Internet access
- Electronic mail
- Teaching (basics of computing)
- Computer games
- Computing instruction (personal help and introduction)
- Public interest provision of information
- Help with administration

Minimum technical requirements

- Number of computer workstations proportionate to population served (see Box 14)
- Computers with clearly-defined technical parameters (e.g. multimedia)
- Workstations connected to the local network
- Determined level of peripherals provision
- Given level of software provision
- Given number and quality of phone lines
- Predetermined broadband Internet access from all workstations
- Premises that are secure, accessible, and adequate in size

Minimum operational needs

- Responsible operator, manager, legally valid organization
- Embedded within the community
- Clearly visible sign outside, detailing opening times and list of services and prices
- Web presence, own website
- Fixed opening hours
- Professionally-trained service staff
- Regulations for service, house rules
- Ordered and transparent financial administration
- Systematic evaluation of operations
- Service development orientated to requirements

Technology is only a tool – It must be emphasized that technology is only a tool of the telecottage, not the ultimate goal. Technology is an instrument for furthering individual achievement and community objectives, in conjunction with other services provided in the telecottage. Indeed, it is important to know how many people in the community actually use computers and the Internet, how many people and their organizations have their own websites, and how many people visit the telecottage. However, while useful, this information does not fully answer the question of whether local needs have been satisfied by telecottage services. Have people had an opportunity to improve their lives and extend their opportunities? Have the conditions of the community improved? The answers to these questions contribute to the so-called *analysis of telecottage effect*. Methods for this analysis are described in Box 5.

Box 5: Analysis of telecottage effect and its possible indicators	
Intended effects	Indicators
• Making telecottage opportunities accessible to the community	• Capacity and traffic indicators
• Better access to information and improved sources of information	• Existence and use of information methods, people's knowledge
• Learning new skills	• The number of people participating in education and other training programmes, skills learned
• Access to information about job opportunities, expansion of employment	• The number of people finding a job and a livelihood
• Greater community organization	• Number of civic institutions and their members, size of their budgets
• Community solidarity, cohesion, strengthening of trust	• Expansion of local social capital (indicators for this are the subject of academic research)
• Greater community activity and interest	• The number of community programmes and their participants
• Strengthened external ties with the surrounding area and elsewhere	• The number of cooperating external organizations, partners, joint programmes and special attempts
• Elucidation and better utilization of resources	• Existence of a local resources map; the value of the mobilized resources
• Increasing the attractiveness of settlement	• Figures for visitors and investors to the settlement over time
• Decrease in people moving away; increase in people moving to the community	• Figures for people moving in and out of the community over time
• Decrease in unsatisfied needs	• Satisfaction of the needs previously elaborated by research
• Understanding and protecting cultural and other human assets	• The number of elements mentioned on the map of cultural assets
• Expansion of community memory content	• The number of elements accumulated in community memory
• Better control over time and money expenditures	• How figures develop for personal and family budgets for respective areas of analysis
• Better operation of the council	• People's satisfaction, goals set and goals achieved
• Better operation of particular institutions	• Indicators will depend on the type of institution
• Expansion of financial resources	• Size of budget and other sources of finance
• Increased confidence in the future and in development	• People's opinions of the village's future, numbers leaving and moving in, construction work
• Initiation and success of development programmes	• The settlement's development strategies and corresponding programmes, and guarantees of their success
• Growth in the village's or settlement's self-esteem	• The village's profile and people's participation in community life
• Strengthening of democracy, openness and political culture	• Existence of public forums, with issues of public interest being on their agenda

Intended effects	Indicators
• Strengthened role of the local area	• Existence of local initiatives, programmes and resources
• Resolving local conflicts	• Elimination of specific local social conflicts
• Increase in the standards people demand of public services	• Introduction of quality standards in public services
• Awareness of the challenges of the information society	• People's rate of participation in various information society initiatives
• Decrease in the isolation of a settlement (see connections)	• See local area and other connections
• Improvement of the quality of life of certain disadvantaged groups in particular areas	• Separate evaluation and comparison of indicators for the members of the group with other indicators
• Increase in people using computers and the Internet in their homes	• Figures for computer users and Internet subscribers over time



Example of a telecottage's mission statement

The telecottage is a local community response to the challenges of the information society. Its mission is to contribute to improving local living conditions and implementing local sustainable development in the context of a globalized world, and to guarantee equal opportunities for all to avail themselves of the new opportunities. It strives to make financial, cultural and other obstacles surmountable, and to mitigate the dangers that accompany change.



It can be said that one-third of a telecottage is about computers, and the other two-thirds are about servicing the local community via other means.

Community intelligence – Surprisingly fewer than half of the approximately 50 Hungarian telecottage services are ICT-based, for which informatics equipment and Internet use play an integral role. The conception of Henning Albrechsten, the father of telecottage, of a *centre of competence*, is a very sound one. It is reasonable to speak of a kind of *community centre of intelligence* in the sense of modernization, to the extent that intelligence is simply the capacity to adjust to one's surroundings and situations. This requires not only the possibility to use computers and the network, but also the capacity and support of the community and the programme organization and management. Services provided by telecottages can be expanded toward areas such as strategic planning based on community participation, programme organization, elaboration of grant applications, development of education and training, for which the role of ICT tools is secondary or insignificant.

2.7 Operation of telecottages

Still moments – Everyday life in telecottages can be envisioned as a comfortably arranged little shop, which opens at certain times, welcomes its visitors into nice surroundings, and serves them (at the computers, in the meeting room or teaching room). It accepts orders and commissions (personally, by telephone, the Internet, or by other means), carries out workshops in the backroom, and generates products (e.g. a local newspaper, business cards, bound dissertations, repaired computers, installed components). All this can be realized in a variety of ways – in buildings, with placements, appliances, time organization – all tailored to local circumstances, and embedded within the given national, ethnic, local culture.

Regulated flexibility – In order for both employees and users to be aware of what the telecottage is doing, it is useful to establish and post service regulations (see Section 5.10). A few basic operational issues are best made explicit and not left to chance or habit, because they can become problematic and cause conflict and difficulties. Consequently, these must be dealt with at the start-up of the telecottage, and operations must be organized in a flexible but regulated way.



Hungarian telecottages use a particular telecottage logo that also contains the name of the community. The green circle around the telecottage indicates that the telecottage is part of the telecottage franchise network.



- *Company sign and logo* – The telecottage sign should be prominently posted at the entrance. Without this, the telecottage does not have a ‘face’. If the settlement is large, it may also be useful to put up a visible road sign, to direct visitors to the telecottage.
- *Hours of operation* – Opening and closing times indicate when users have access to services. This requires flexibility. For some telecottages, it is a common practice to give the key to reliable users.
- *Services and price list* – An important device for achieving reliability and demonstrating transparency is an accurate service and price list on display.
- *The reception* – Considering the many services and openness of the telecottage environment, the reception area plays an important role. Often it is simply a place for conversation, until it becomes clear what the visitor would like to do.
- *Visitors and regulars* – The majority of users will in fact become well-known regulars. Thus, it is worth considering from the outset mechanisms for connecting regular users to the telecottage, and how these will work (club membership cards, prepaid cards etc.).
- *Advertising the telecottage* – Billboards, newsletters, leaflets, business cards, advertisements, and so forth, provide publicity for the telecottage.



The creation and operation of a telecottage is a process and involves continuous learning: renewal and rebirth. There are **no precise recipes** either for services or for operations as a whole. Answers to important operational questions will be found as a result of the collective and creative work of many people, perhaps even the whole community. However, it can be suggested with certainty that it is imperative to get to know and digest others' experiences, and to make creative use of what is relevant to local needs and can be accommodated to local assets. The situation is different for telecottage franchise systems and services, where it is obligatory to use a given solution, often with formal restrictions – if there is such an opportunity it is practical to use it.

Word of mouth can certainly spread news quickly, but it does not communicate accurate details about the services offered.

- *Service statistics* – From the beginning of operations it is important to maintain an itemized record of usage of services by type, and by type of user (anonymously, of course) according to gender and age, and further categories as warranted by the context. A record of requests that cannot be fulfilled and other suggestions should also be collected. This data can be highly useful for reports and improvements.
- *House rules* – It is important to elaborate and display house rules governing the telecottage's operation and use of its services. Making these conditions clear to all reduces scope for confusion about appropriate practices and possible arguments or tension. These are especially important for welcoming children into the environment.
- *Quiet and noisy activities* – Having a wide array of services requires suitable and sometimes special circumstances. It is particularly important to physically separate quiet and noisy activities (rooms, parts of the premises) and to require and provide suitable conditions.
- *Service spaces* – It is important that the spatial and other conditions of service functions (waiting room, behind the scenes operations, workshop space, storage space, rest rooms) are designed in such a manner to not disturb basic operations, while also being easy to service and secure.
- *External locations* – The external locations for certain telecottage activities and services (e.g. school computer rooms, home workstations) can also form part of telecottage development and operation. These should be included in the elaboration and regulation of suitable conditions and profile.
- *Network presence* – The virtual activity of the telecottage is an integral part of its operation (e.g. the telecottage web page), and as such, it is desirable to organize this element (at least in its basic form, although this is not always possible) before the telecottage is opened.
- *Payment, invoicing, accounting* – Meticulous financial procedures and administration (providing receipts, records of income and expenditures, separate budgets for programmes, keeping an inventory, etc.) are extremely important to practice from the outset. These ensure a secure and prudent environment, and transparent operation of the telecottage: the very basis for eligibility for any outside financial support.

2.8 Network of telecottages

Telecottages tend to connect to each other and recognize the importance of strengthening each other. It is no wonder that they appear as similar organizations in the eyes of partners (state, companies, donor organizations, global organizations), and display the strengths and capabilities of the network. Telecottage associations at regional and national levels are very important parts of the telecottage movement.



The Hungarian Telecottage Association was established in 1994 by fourteen individuals who shared a common vision about the development of the country's small rural communities. The organization ensures, among other things, information and network services to its members, and provides telecottages with professional and expert assistance. Today the Hungarian Telecottage Association is one of the largest umbrella organizations in Hungary (see Section 6.10).

Community networking

3.1 The community as a network



Most important telecottage effects within the community:

- Strengthened community spirit
- Creation, strengthening and utilization of civic institutions
- Improved human connections (events, mutual experiences, collective activities, results, products)
- Increased public trust as a result of openness (e.g. local newspaper) and democratic participation in collective affairs .



The characteristics of traditional communities reflect the particular situation of the post-communist countries, whilst the value set of the modern community is more a reflection of a desired state of community affairs in the post-communist environment.

Local social capital – Connectedness of the community, *local social capital*, is a very important resource. The telecottage can have a positive effect on expanding local social capital, and this makes it particularly significant for sustainable social, economic and cultural development. It is often asked what (dramatic!) changes are visible as a result of the operation of a telecottage. In the case of good operation, the telecottage's effects are visible within virtually every element of local social capital.

Open and closed communities – Small communities and traditional settlements very often have a closed nature. There is a natural and ancient instinct for such communities to protect their local culture, habits, spirit, integrity, and resources. Anyone who has ever experienced moving into such an environment will know that there are various obstacles that locals put in the way of newcomers to keep them from really belonging, even after having become an established member of the community. Over time this closed nature has been waning, not necessarily due to the emergence of information society, but rather as a side effect of the industrial revolution, alongside the weakening of traditional communities. In Box 6, some generalized characteristics of "traditional" and "modern" communities are compared. These traits have emerged in various parts of the world in a variety of ways and with differing degrees and intensity. There is not necessarily a correlation between the open-closed nature of small communities and the local quality of life. While the existence and operation of a telecottage represents a move away from the traditional closed community existence, it must also be emphasized that this new community institution also serves to protect, revive and strengthen community life and spirit.

Virtual extension of the community – No doubt, there are people in every community who have relatives living in other parts of the country or parts of the world. Those who have moved away do not typically participate in traditional community life. Small communities in the information society are capable of virtually extending themselves to include – even into the everyday life of the motherland – those who do live far away. This is especially a

Box 6: Comparison of traditional and modern small communities	
Traditional local small community	Modern local small community
• Respectful of traditions, passive	• Forward-looking, active
• Closed, exclusive	• Open, welcoming
• Tradition-led, feeds on the past	• Values-led, learning
• National or countrywide viewpoint	• Global viewpoint
• Cultural consumer	• Cultural producer
• Nostalgic community memory	• Current, living community memory
• Dependent, conformist, deferent	• Autonomous, innovative, developing
• National life is given prominence	• Local specialties are given prominence
• Hierarchical social embedding	• Network social embedding
• Soft national welfare net	• Local welfare (self-) protection
• Devalued natural environment	• Highly valued natural environment
• The state as local organizer, settlement as "state business," external control of resources	• The community as local organizer, the settlement as "local enterprise," local control of resources
• Community thinks locally, is directed globally	• Community thinks and is directed globally
• Representative democracy dominates	• Participative democracy dominates
• External control on economy	• Local control on economy
• Local economy is centred on labour and production	• Local economy is centred on resource utilization
• Local neighbourhood connections, rivalry with neighbours	• Global neighbourhood connections, cooperation with local area
• The community regards itself as cultural non market actor (no settlement marketing)	• The community sees itself as economic and market actor (settlement marketing approach)

great opportunity for those living in diasporas in other parts of the world. Many of these former residents would happily return to their roots in the form of a virtual inclusion with their former community. This means being able to envision a community as stretching over the whole world. Any small and out-of-the-way place where people live can be the centre of the world, thanks to the electronically extended community. Cultural, economic and human resources can spread far beyond these little worlds through mobilizing ICTs. This also means that any local culture – thanks to the community's local diplomacy – can be in continuous connection with other cultures and can become a visible part of a world that strives to be a mosaic of differences. Telecottages can do much for bringing people and cultures together, decreasing tensions, and helping to promote mutual understanding. This role of intermediating and extending communities and cultures is a fundamental part of the telecottage mission.

3.2 Community in the network

The previous section addressed what the network means to the community. This section considers the reverse: how the community manifests in the network. What is the role of the telecottages in this context? In brief, connected communities operate not only in a traditional way, but also via the network. Traditional and connected communities can complement each other, and the interconnection of the two types will become increasingly important. When comparing the different attributes of traditional and network community operations, the content and connection of the two forms of life become more clear. Box 7 illustrates how network presence and the existence of the community can rely upon network support for most community functions.

Box 7: Comparison of traditional and network local small communities	
“Traditional” local small community	“Network” local small community
<ul style="list-style-type: none"> • Instinctive response to information society 	<ul style="list-style-type: none"> • Local information society strategy, deliberate development
<ul style="list-style-type: none"> • Traditional media communication and technologies (telephone, post, radio, television), no community level access 	<ul style="list-style-type: none"> • Broadband Internet access of a suitable standard, for all members of the community
<ul style="list-style-type: none"> • Access for members of the community depends upon their individual circumstances, the community offers no solution for the disadvantaged 	<ul style="list-style-type: none"> • Community access guarantees digital equal opportunities, access for disadvantaged members of the community
<ul style="list-style-type: none"> • Info-communication services provided by actors outside the community 	<ul style="list-style-type: none"> • Local providers and services satisfy community and local ICT needs
<ul style="list-style-type: none"> • Use of ICT and the Internet is typically not used by decision-making members of the community, who use it only on occasion, when necessary, as an exceptional solution 	<ul style="list-style-type: none"> • ICT and the Internet are used by key decision-making members of the community in the same proportion as for a similarly situated community in the developed world
<ul style="list-style-type: none"> • The community is not present on the Internet, others publish information about it according to their needs, which the community cannot oversee 	<ul style="list-style-type: none"> • The community is present on the Internet with service-based web pages of a suitable standard, accessible through well-visited portals
<ul style="list-style-type: none"> • Local services, institutions and public services are not present on the Internet, or are neither connected to one another nor to the settlement 	<ul style="list-style-type: none"> • Local services, institutions, public services and business are present and available on the community’s own web page
<ul style="list-style-type: none"> • Community life takes place in traditional arenas, isolated from the Internet; outside observers may publish information about the community on the Internet 	<ul style="list-style-type: none"> • The Internet is one of the key arenas of community life, in terms of information, collective experiences and memories
<ul style="list-style-type: none"> • The community does not regard ICT as important; there are no programmes of this kind 	<ul style="list-style-type: none"> • Commitment to all the above, steps are methodically taken in the interests of implementation

Questions arise as to whether the network can have any real meaning for direct daily relations within a community where people are already in direct contact with one another and know each other personally. Is it conceivable or useful for people and institutions in a small settlement to communicate with each other via the Internet? Instead of personal meetings, do they retire to their houses for maintaining contact by sending messages through their computers? Is the vision of an *electronic village* at all realistic? This is **not** what being wired and web-connected means for the small community.

Computers and access to the network from within the settlement are not intended to replace traditional community connections, but rather to complement them with entirely different opportunities. The community's networked existence can mean the following:

- Presence and accessibility of the community via the Internet
- Presence and accessibility of individual community members via the Internet
- Use of Internet services and applications as tools for collective work, creative projects and entertainment
- Players, services and products of the local economy are available via the Internet
- Accessibility of local media and news on the Internet, which in turn becomes part of local media
- Access to services via the Internet
- Provision of services and local content for one another and for the outside world
- Community organization and expressions of public opinion via the Internet
- Accessibility of community memory via the Internet
- Virtual expansion of the community

The network, in addition to offering access to new opportunities, strengthens the community's traditional connections, and makes them more efficient and economical. Concurrent to these processes, there is always the possibility for conversation, cooperation, entertainment and work, moving from the virtual space and continuing in the real world. The telecottage – perhaps even simultaneously, both in the real and in the virtual arena – serves and expands the network operation and presence of the community with its services (see Box 2).

3.3 Cooperating with the business sector: network services and service networks

Tele-activities – When the network (both computers and the Internet) plays a key role in the service process, it can be seen as a network service. A characteristic element of the information society is the range of new services distinguished by prefixes such as *tele*, *e-*, or *distance*, and sometimes *virtual* or *online*. The previous categorization of services (see Box 2) also incorporates these activities. These services are appearing across the public, private, and civic spheres. In context of participation, activity and the role of telecottages these services can be grouped as follows:

- *Simple network services* – the telecottage provides infrastructure for their use, but its role is limited to securing the infrastructure (e.g. for chatting, e-mailing, downloading documents, information searches).
- *Internal network services* – the telecottage intermediates, participates in the service process, performs additional activities, usually for financial interest (e.g. tele-learning, administrative support, e-mail addresses, electronic post service).
- *Support network services* – the network provides support to the telecottage (e.g. network advisory support).
- *Telecottage local network services* – the telecottage provides services to the local community via a local network, which presupposes a reasonably high rate of home access (e.g. local Internet provision, home page development).
- *Telecottage external network services* – the telecottage is present on the Internet as a network provider for particular target groups (e.g. other telecottages) or for a wider circle of users (e.g. development and service of local content).
- *External network services* – the telecottage has the necessary infrastructure and support for providing network services (e.g. selling local products on the Internet) to members of local community (individuals and organizations).

Telecottage first – Although value-added activities are important to the operation of a telecottage, they take time to evolve and be incorporated into the initial repertoire of services on offer. At the point of establishing the telecottage, most of these opportunities are new and unknown to both the staff and users. While there is no adequate inventory of services suitably tailored to telecottages' user base, it is the interest of telecottage from the very begin-

ning to continuously and methodically search for new network services opportunities.

Network services first – In an optimal scenario, the organization of the telecottage takes place at the same time as the introduction of network services. Under conventional practices when new telecottages are established there is some kind of network service development happening anyway – e.g. e-learning, e-government. The relatively few telecottage franchise systems include network services, which are introduced parallel with the establishment. More typically, already operating telecottages are offered the opportunity to join network services systems.

Service networks – Service networks exist independently of informatics infrastructure (e.g. traditional mail services). Telecottages, as service points, can join such service systems (e.g. commercial, transactional, educational, customer service, subsidiary agency services), in which informatics or the Internet has only a secondary role, if any. This opportunity is particularly important when a number of telecottages jointly carry out services as a unified network. The more completely such a network covers a given area, the more valuable it is for the provider of services. This testifies to the significance of telecottages cooperating and organizing themselves into a network. Telecottages can be made suitable for the provision and acceptance of traditional network services, for their office, personnel, and technical requirements, and can be a significant resource for their maintenance.



Telecottages are highly suitable for operating as intermediary, service and access end-points for the widest variety of e-activities. Cooperation with the business sector is based on telecottages being located in places where it is not economic for businesses to otherwise be present. Qualified and reliable telecottage networks can deliver these services to local people – gaining profit for both telecottages and other companies.

E-services – Typical e-services that telecottages provide as intermediary, service and access end-points include:

- *Electronic correspondence* – sending and receiving letters over the Internet, using private e-mail addresses and online mailboxes
- *Chat, video conversations, VoIP* – Real-time, two-way or group communication, audio and image communication
- *Telework* – individuals working from home or in a communal workplace via Internet infrastructure and services
- *Virtual office use* – Collective use of distant computing resources and office applications by authorized participants, the support of their cooperation with suitable software
- *E-learning* – distance learning away from the educational institution via the Internet
- *Distance administration, e-government, virtual customer service* – arranging official and business affairs over the Internet, sending documents electronically, and using electronic signatures

- *E-commerce, e-business* – buying and selling over the Internet, ordering and paying for goods, support for electronic business with the use of e-business software
- *Telebanking, home banking* – conducting bank affairs over the Internet, including bank account transfers, account management, balances enquiries, etc.
- *Telemedicine, distance treatment* – communication of health data measured by medical equipment; requests for professional medical opinions and advice over the Internet
- *Televoting, e-democracy* – registering public opinion on the Internet, exchanging ideas in Internet forums; voting on certain issues
- *Teleconsulting* – giving and receiving professional and expert consultation over the Internet
- *Teleconferencing* – participating and sharing opinions in real or virtual conferences and discussions, via relaying of audio and video, and presentations and documents over the Internet
- *Web games, network games* – group games and competitions on the Internet
- *Distance supervision, distance maintenance* – surveillance of the security state of computers and local networks; correcting possible software errors via the Internet
- *Distance surveillance, alert systems* – surveillance of alarm systems over the Internet, alerting and taking security measures, and sending alerts over the Internet, via telephone or other means

Local partnerships for e-community

4.1 Local interests

Interest and motivation – People and groups are motivated by the interests arising from their values and needs. To better understand who will help and why, or conversely why some might want to cause harm or hinder efforts, it is imperative for telecottage developers to become acquainted with and thoroughly consider the interests of those potentially affected by the planned project. The developer has a very important role and responsibility to adequately communicate what the telecottage is all about, and further must be cognisant of local politics. The telecottage will have an effect on the development and use of local resources for the community and its members, and for accessing external resources. It is important to not have any illusions – this is an intervention into local social and economic relations, into an established system of local interests. There is the possibility of being caught in the cross-fire of local politics, and possibly even becoming a factor within the local political terrain. Thus, developers must be highly attentive to existing relationships and possible conflicts of interest surrounding the telecottage.

Social roles in small communities – At the level of basic social groups, or more precisely in terms of social roles played, the following are the main constituents of a local community:

- *Ordinary members* of the community (with no formal community role) can be considered as users and consumers of the telecottage's services, and can be grouped as target audiences, depending on their needs and living conditions.
- Sometimes smaller *ethnic groups* are present within the community as a subculture, with their own specific requirements, problems, and economic, social, and cultural characteristics. Such dynamics can significantly affect community life in both positive and (unfortunately) negative ways.
- *Local entrepreneurs* and managers of companies have a specific role in the community. As key actors in the local economy, local services, commerce and market, they bring livelihood and income to the members of the community. Dependent on local resources, they also are subject to local social and economic conditions.

- From the telecottage's perspective, the most important local entrepreneurs are the *local telecommunication and informatics providers and entrepreneurs*, if there are any, but more typically, the settlement or local community receives these services from outside.
- *Local civic organizations* (NGOs), generally are smaller interest groups of ordinary community members as mentioned above, which can be legal bodies (i.e. can enter into legal relationships, sign contracts) or can represent their members without such status.
- *Official representatives of local (or central) authority* are mandated by the laws of the country to act in the name of the community. It is their responsibility to implement laws at a local level, to arrange local affairs and public services using the settlement's budget (local governments).
- *Other local political powers* – individuals, families, organizations, e.g. parties, churches – which in practice have the opportunity to influence local issues and interests, irrespective of the means they use to achieve this influence and their official role and recognition.
- Closely linked to *local politics* is the local media, the institutions and people who command the attention of the local public, which can mean separate, independent media organizations (local newspaper, radio, cable TV), or other channels of news tailored to local distinctiveness.
- Special mention should be made of the *influential members* of society, opinion-formers, public speakers, advocates of particular issues, who have no formal role in the community, but enjoy sufficient respect (based on their merits, experience, or knowledge) for their opinion on given questions to be guiding for a large part of the community.
- *Local intellectuals* can appear in any of the previous categories, but it is also worth examining them as a relatively free-standing local group in their own right. They inhabit a role of thinking in the name and interests of the community, recognizing and solving problems.
- *Local public service providers* – e.g. teachers, doctors, librarians, adult educators – are the employees of the central, regional or local government institutions, and in direct connection with government (this is a significant consideration!) provide a variety of services to members of the community.
- *Local public servants* – although this group also forms part of the local public service providers, it also warrants separate mention depending on the extent to which *local public administration* is power- or service-oriented.

Accumulation of roles – One might not imagine that even in the smallest community there is such a distinction of roles. And yet there is. With the scrutiny of those who know the local society well, it is possible to describe any local community in terms of these categories. The above roles exist even if they are not played by dedicated people as their specialization. In very small communities the various roles can become merged. The unified effort of the community, which the telecottage can influence in a positive way, should be to limit or decrease the accumulation of roles, especially those capable of balancing and controlling interests and their representation. There is the need to examine separately the roles played in the small community and those who perform them. The key question is to identify who specifically fills the positions that are important for local life and development.

External stakeholders – Local interests are not only determined by local actors. Even the most isolated settlements experience external influence and decisions. In principle, any role can be played by an individual from outside, and if a suitable person cannot be found locally, one must be found outside the community. On such occasions, the attribute *local* does not mean the individual is local, but that the role played by an external person is a local role. The point here is that the external actor has local interests and concerns, and so becomes a player within the local conditions. This is important for a telecottage.

External actors typically also have interests in other small communities and settlements, and generally operate in a network. Thus it is very important for them whether changes happening in a given place will affect their regional, network interests and positions (even if only in the long-term). Like everyone else, they know that a good example is infectious. For this reason, they must be taken seriously, even more than suggested here, because they can be far more powerful and influential than any local actor (consider, for example, a communications provider which enjoys monopoly control in many places).

Surveying the stakes – Local interests are not always clearly apparent. It is not necessarily evident, even to those familiar with local conditions, why someone holds a particular position on a given issue, and whether what is represented actually expresses that person's wishes (motivation) or not. On each new question – which the community does not yet know or has not yet dealt with – the state of interests can be unclear, and may not even emerge as quickly as decisions are taken. This means that there is little else to do but undertake a methodical survey of the local interests concerning the telecottage. This is worth completing even if the situation appears transparent and the initiative enjoys apparent widespread support.



How to proceed? The matter must be discussed at length, and in different forums, and in consideration of the local context. As a general approach, the public must be made aware of the issue and then invited to sit down with other players in both an official and unofficial way, with much attention given to different opinions and reactions. This is the public part of the matter. In the background, there is a need to analyse the already gained experiences, and it is useful to prepare a *stakeholder map*.

Stakeholder map – Mapping out the different stakes is a simple technique for the methodical elaboration of attitudes of stakeholders in a given matter, and for tracking how their interests may change. This approach should be used when relationships and interests are complicated, and when those affected by the issue can be combined into at least four or five groupings. Stakeholder mapping is suitable for continuous tracking of actors’ positions, opinions, and real connections to the particular issue. It is a convenient tool for sharing information with others, for informing discussions, and for working out strategies and tactics relating to partners and distributing tasks. In the case of a telecottage, attention must be paid to temporary interests relating to the establishment, and permanent interests relating to its operation.

The preparation and maintenance of the telecottage map of stakes is the task of the leader in charge of the development programme. It is necessary to survey the telecottage profile of stakes of the previously listed actors in the small community, and construct a general version of the map (see Boxes 8 and 9). The mapping provides a general schematic, which must be tailored to its own specific situation.

Box 8: General telecottage map of stakes – higher level

Actors	The spread of digital culture	Digital equality of opportunity	General strengthening of the civic sphere	IT support for civic groups	Community access network	Community local tele-communications service	Network public services	Network business services	Training programmes	Public interest distance working network	Use of IT mentors	Research into civic informatics	International sharing of experiences	Displaying good solutions
International organization	+	+	+	+	+	+	+	+	+		+	+	+	+
International companies	+	+		+	+	+		+	+		+	+	+	+
Government projects	+		+		+	+	+		+	+				+
Central government	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Minorities organizations	+	+	+	+	+		+		+	+	+		+	+
Chambers of commerce	+	+	+	+	+		+	+	+	+			+	+
Content providers*	+	+			+	+	+	+	+	+	+			+
Civic umbrella organizations	+	+	+	+	+	+	+		+	+	+	+	+	+
Equipment suppliers	+	+		+	+	+		+			+			
National postal service	+	+			+	+	+	+	+	+	+			
National telecommunications companies	+	+			+	+		+	+	+	+	+	+	+
Regional administration	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Local area administration	+	+	+	+	+	+	+	+	+	+	+			+

* In a broad sense, all those organizations and companies offering services on the community access network, and which in this sense use the network for business purposes.

Box 9: General telecottage map of stakes – local level

Actors	The spread of digital culture	Digital equality of opportunity	General strengthening of the civic sphere	IT support for civic groups	Community access network	Community local tele-communications service	Network public services	Network business services	Training programmes	Public interest distance working network	Use of IT mentors	Research into civic informatics	International sharing of experiences	Displaying good solutions
Council	+	+	+	+	+	+	+	+	+	+	+			+
Politicians	+	+	+	+	+	+	+	+	+	+	+			+
Administrative officials	+	+			+	+	+		+	+	+			+
Press, media	+	+	+	+	+	+	+			+	+	+	+	+
Professionals, intellectuals	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Public services	+	+			+	+	+		+		+		+	+
Local telecommunications companies	+	+			+	+	+	+	+	+	+			+
Entrepreneurs	+	+			+	+		+	+		+			+
Civic organizations	+	+	+	+	+	+	+		+	+	+	+	+	+
Minorities	+	+	+	+	+	+	+	+	+	+	+			+
Users	+	+			+	+	+	+	+	+	+			



It is important to bear in mind that a map of stakes is more of a **working tool** than a finished work. It must be examined and extended on a continuous basis, depending on how interests and programmes develop.

The findings presented in the mapping can be used to predict the state of interests of other similar organizations. The areas of interests can also be examined and extended. The *profile of stakes* means that it is possible to fully assess the range of interests for certain actors (+ signs), specifically:

- What is the essence of the different stakes, and what is the stakeholder’s relationships to the telecottage?
- Are the particular interests beneficial or detrimental, supporting or hindering?
- If positive, what is expected and what can be contributed?
- If negative, what is the problem, or what kind of obstruction and/or damage can be caused?
- What other stakeholders are they in contact with, what is the nature of their relationship, and are these further relationships advantageous or disadvantageous (network of connections)?

4.2 Telecottage roles and actors

It is practical to consider local circumstances from the point of view of establishing and operating the telecottage. What needs does the telecottage have? To respond to these needs, is it necessary for those supporting the telecottage to also have a stake in the endeavour? Are there stakeholders with opposing interests? Are there rivals? In the case of a single telecottage, the situation is more straightforward. Nonetheless, various possible factors and situations still need to be considered, as they risk coming to the surface at a later point. It is very important to bear in mind that roles can become transformed and the persons in those roles may change.

- *Creators, initiators* – those who participate and have a direct stake in the creation of telecottage, investment and implementation. These are usually local people and institutions, but others from outside the community can also have an interest.
- *Financial supporters* – organizations with an interest in financial support, for whom the services, effects, operation and experiences of the telecottage are important.
- *Equipment supporters* – alongside the financial support interests, those who want to gain access to the given area and social group for their equipment.
- *Sponsors* – financial supporters who are not particularly interested in the actual content, but the rather the fact that their support, help, or charity enhances their own profile.
- *Owners* – those who control the staff and technical infrastructure directly related to the service provision. It is advantageous for the community to be able to control the use of services.
- *Community body* – closely connected to ownership (although not necessarily) – a governing board that directs the use of the telecottage's resources. It is advantageous to have representation from a majority of the local stakeholders.
- *Host* – person or institution providing the building, institutional environment and services necessary for hosting the telecottage; a community building in local public hands (e.g. community centre) is the best suitable host institution for the telecottage.
- *Operator* – person or institution responsible for the continuous operation of the telecottage and its daily activities. Personal interest is vital for this role (e.g. local entrepreneur or NGO).

- *Financiers of operations* – certain organizations (e.g. local government, central government, civic organizations) can have an interest in the general financing of operations and in making the telecottage operational. This especially applies to activities that are difficult to break down into services (e.g. public interest information service, help with administration).
- *Financiers of services* – there can be a number of organizations with an interest in providing public services and other services connected to or assisting business activities (e.g. training, consulting).
- *User supporters* – one form of financing is to provide financial support for users' access to the telecottage services, such as pre-paid vouchers (this kind of solution is used in Bulgarian telehouses).
- *Associate service provider or network provider* – organizations using the telecottage or the network of telecottages for the provision of their own services. These have an interest in cooperation and in a partial absorption of costs, however the question of a monopoly may arise.⁷
- *Local user* – individual users of a telecottage who guarantee and influence the use of its capacity. Their opinion informs the public view of the telecottage.
- *Network user* – an organization using a telecottage to reach a given target group with a particular service, this presupposes the association of telecottages in a network.
- *Community of users as supporter* – users can also be service providers and supporters, and have an interest in seamless operations, and for such services to be implemented, which are not feasible on a commercial basis.



For the case of the Hungarian telecottages, it was very important that start-up support was given only to organizations able to demonstrate local community support for the initiative. The support of the local community – e.g. both financial and in-kind support, premises, etc. – has always been a fundamental principle since it creates conditions in which local project ownership is meaningful.

It must be the case of the locals! – Decisions about who can best perform telecottage functions and where, and who will be capable and most suitable in the given circumstances, can only be taken locally, based on very thorough analysis of the local peculiarities. In other words, project ownership must be under the control of the local community – ideally from the outset – or it must be transferred to the local community as early as possible.

⁷ For a particular type of service, a telecottage or the network of telecottages provide access to network service for a single or for a number of suppliers.

4.3 Structural solutions

In the interest of stable operation, the telecottage's three basic roles must be described in a clear, legally regulated, organizational construction. The main elements include:

- *Owner* – who has at his/her disposal the non location-specific means and conditions (e.g. legal rights) required for the provision of services, and can decide whether or not also to perform the following two roles.
- *Host* – has at his/her disposal the location-specific, physical means required for the provision of services (in practice, the building), and who can render them useable, under the proper conditions.
- *Operator* – guarantees the provision of services, takes responsibility for their quality and accessibility, for management being conducted properly, and for the employment of suitable staff.



In Hungary, the **owner** is typically an NGO that has received equipment in-kind through an open grant competition. Nevertheless, as there are fewer grants available, local governments are increasingly the owner of premises and the equipment. The **host** is typically a local public institution, e.g. the cultural centre or the library. **Operators** are mostly NGOs, but there are increasingly instances of private entrepreneurs fulfilling this role.

In practice, for the system of service provision and for the telecottage conditions there are clearly distinguishable roles, which can be found in the widest variety of forms and arrangements. There are essentially three forms of management structure that can be appropriate:

- *Operating within a public institution* – state or local government organizations or institutions, which (because of their public mandate) have some kind of interest in the operation of community access services and their infrastructure.
- *Operated by a voluntary community organization* – social organizations partly specialized in these functions, significant users with great needs of their own.
- *Operated as a business enterprise* – larger-scale and local actors of the informatics and communications market, for whom community access is an integral part of the market, or a means of its access.

Which is the most appropriate? The next logical question is which sphere and social method of satisfying needs is the most appropriate for guaranteeing local community access, and their optimal role in the operation of a telecottage. In various countries, all three spheres have registered their interest in providing info-communication services. However, there is no stand-alone best solution. Local circumstances can vary enormously from country-to-country and even from one settlement to another. It is appropriate to compare the pros and cons from different aspects from the perspective of the local community and sustainability.

Box 10: Comparison of general structural solutions for community access		
Sectors	Advantages and assets	Disadvantages and dangers
Business	Personal interest in operation, exploitation of business opportunities, creativity	Lack of spending power, monopoly situations, people at others' mercy, lack of social sensibility
Central/local government	Public responsibility for services, security of financing, equal opportunities	Inflexibility, lack of personal interest, institutional boundaries, political arena
Civil society	Servicing all local needs on the basis of local social consensus, mobilization of resources	Harder to enforce responsibility for services, more difficult to govern, hybrid organization

Community focused operation as key – This is important because on one hand, community access is an extremely significant factor and tool in community development. On the other, the issue of the telecottage – sooner or later – tends to become a central issue for local politics. This is a natural phenomenon because of the community requirement to contribute resources to the project. Consequently, there will be debates concerning the nature and the amount of the resources used. There are useful arguments to consider in these debates.

Local social embedding – Community access presupposes *local social embedding*. A number of the world's information technology projects (a field now half a century old, community development communication – or its new form: *community informatics*) have proven that new information and communication technologies can most efficiently elaborate their highly complicated capabilities and effects in developing societies, economies and cultures, when they are under local community control. The international success of the telecottage movement lies in its local social embeddedness, e.g. in the capacity to play the role of a 'cultural translation machine' and construct local information society. It not only provides the tools, but also uncovers new personal and community needs to be satisfied in given places and living conditions, arouses interest, and, in a special way, helps individuals, groups and the community as a whole to make the best of the new opportunities. It takes the broadest possible mobilization of the community's resources to orchestrate these services. And, it makes use of the community surplus of the new culture, in the same way that a library is an arena not merely for loaning books but of the community culture of reading, of public culture and self-improvement.

Community goal – A great lesson learned from telecottages is that means must not be confused with the ends. Community embedding provides a guarantee of this. Local society thinks in terms of problems, needs and

requirements of the small community. In the operation of community access institutions, computers and the Internet are indispensable. However, they are no more than basic tools only able to fulfil objectives in combination with people who serve and assist, with the community space, accumulated and accessible knowledge, local social capital (cohesion, connections), and all accessible services operated via the network. The ultimate goal can be nothing other than improving the quality of life and creating equality of opportunities.

In principle, it is a public service – Universal access provision is a public good and consequently requires state activity, intervention and cooperation. Thus, one solution would be state service provision via its institutions. In practice, however, burdens on state budgets often mean that this is not a viable option. Such an approach would not be a clear solution, because the authority and regulation-oriented state, with its administrative and public service culture – especially in the case of the less developed countries – would be incapable of organizing such services, which presuppose new, large-scale creativity, education, openness, commercial and service attitudes, flexibility, etc. This can also be problematic even for the most developed countries.



Although typical within Hungary, the civic solution to community access is not an Hungarian invention. Of the world's telecottage development initiatives, 62% are civic, 24% commercial, and 14% government-backed in origin.⁸ Even where governments support telecottages to ensure their sustainability, importance is placed on local social embedding and civic control of telecottages (e.g. Canada, Australia).

Civic solution – Supervision of the practical implementation (organization and operation) of a telecottage is left to a local civil society organization, embedded in the local society, which affords a broad constituency outreach and membership, democratic operation, and support. It does not necessarily mean that the particular civic organization provides the service; neither has it meant that guaranteeing the conditions for implementation is exclusively left to the civic organization (e.g. insurance of premises). The essence of the *civic solution* is control and ownership by local society, the locals' direct influence over ICT infrastructure, which serves important community objectives. Above and beyond its local significance, the civic telecottage has advantages for society as a whole, which can be summarized as follows:

- Under civic control, a new type of institution can be created, which deals exclusively with community access and serving the needs of the community.
- Creating a civic institution is generally easier than creating a public one. It can employ a flexible gradualism, and is predisposed to assist telecottages in the interests of the existing civic network.
- Mobilizes local resources – human, financial, and others – to ensure community access.

⁸ Source: http://www.digitaldividend.org/knowledge_bank/knowledge_bank_05_tele.htm.



Local civic organizations could become a key player for the combined structural system. They are best suited to the development and operation needs of telecottages, especially if they have a high degree of social embeddedness. It is not possible to generalize what kind of organization serves needs the best under given circumstances, however, the so-called **community foundation**⁹ characterizes the ideal NGO structure.

- Strengthens local social capital, cohesion and civic organizations, and thereby the development of the NGO (voluntary) sector in society as a whole.
- Flexible capacity for creating resources, cross-sector partnerships, and for sharing costs across sectors.
- Embedded solutions in local politics (NGO workers as voters), undertaking social responsibility, and efficient mechanisms for local politics via community interests.
- As a repository for local democracy and public openness, strengthening of participatory democracy across the whole society via transparent operation.
- Capacity for accepting the role as stand-in for institutions, gateway between sectors and professions, sector-independent services through which there are opportunities to undertake (disappearing or not yet available) public services.
- Willingness to engage and to develop the local and network economy,
- Capacity to participate in and to serve local and regional economic development via project generation and management.
- Receptiveness to local social innovation, obligations, and opportunity for creativity due to participation in solving community problems.

⁹ See, e.g. <http://www.communityfoundations.org.uk/> , <http://www.cof.org/>.

Establishing a telecottage – step-by-step

5.1 The staff



According to experience, the telecottage is like its employees! The community needs an inventor, and the inventor needs a worker.

Scope of work – Depending on the tasks performed and services provided, telecottages may function without full-time staff, have a staff of one or two people, or employ a larger full-time work force. The essential brief of telecottage staff is to guarantee availability of the infrastructure, to accept requests and orders, and to act as intermediaries for services, guiding customers through processes to the right information source, individual or organization. Securing the necessary staff is not trouble-free and is not only a financial question. Human resource solutions vary from country-to-country depending on local cultural conditions.

The model telecottage employee – Finding the ideal individual to occupy the telecottage on an everyday basis and welcome visitors is not an easy task. Because the job requirements are both demanding and diverse, telecottage employment is best approached as a process of achieving experience and skills, rather than a strict set of competencies. This method usually works well when the human ingredient is sound, with the candidate viewing the offer of employment as an interesting, substantive post, providing a livelihood while simultaneously fulfilling a community service. The right motivation clearly depends on the individual, the situation of the telecottage, and the local culture. In some situations, it can be an attractive opportunity for the telecottage manager or worker to turn the telecottage into an enterprise.

Box 11: What are the attributes of a model telecottage worker?

- *Kind* – makes people feel welcome, the worker's demeanour invites users to approach for questions, advice and direction
- *Understanding* – capable of empathy, of putting him/herself into others' situations; is tolerant even in adverse conditions such as a user's lack of understanding or inimical behaviour
- *Calm* – accepts conflicts and attacks in a cool way, answers in a considered fashion, does not jump in until he/she has fully considered the situation
- *Self-aware* – can be critical of him/herself and continually work towards self-improvement

- *Ready to serve* – is happy to fulfil a community service role, and views this challenge as a pleasure rather than a chore
- *Local patriot* – is attached to the place where he/she lives, even if it is not where he/she is from
- *Community person* – believes in the importance and strength of community, and is capable of evaluating his/her work from this perspective
- *Trustworthy* – on the basis of lifestyle, behaviour, honesty, knowledge, and other positive attributes, people trust, respect and listen to this person
- *Good learner* – is willing and able to learn, gain new skills
- *Good organizer* – is able to think through, dissect, schedule, delegate, coordinate and supervise tasks
- *Technically-minded* – uses technology on a regular basis, propagating the everyday usefulness of modern ICTs
- *Innovative* – is sensitive and welcoming to both technical and social innovation, is an innovator him/herself, and dares to undertake new initiatives and novel approaches
- *Team-worker* – is capable of mobilizing people for a given task, and to resolve tasks drawing upon the input and cooperation of others; is able to share success and acknowledge others
- *Can make him/herself understood in English* – knows or has learned enough English to connect the community with the outside world

5.2 Choice of location

Central location – All over the world, buildings used by the whole or majority of the community – such as the town hall, churches, restaurants, schools, cultural centres, libraries, post-offices – are generally found in a *central location* of the settlement. Telecottages should also appear on this list of community institutions, especially if located within one of the mentioned institutions. The telecottage should be centrally located, within easy reach of all. It is ideal to be accessible, with the coming and going of users visible from a main road. If a high degree of centrality and visibility is not possible, road signs can be used to help direct customers.

Telecottage as a rural centre – In many places in the world, people live in sparsely populated areas, where houses are many kilometres apart – e.g. on farms and in desert huts. Alongside their unique, self-sufficient way of life, these people require communal establishments and institutions. One solution to these needs – for a church, shop, restaurant, post office, school, car service garage, etc. – is a rural centre, where the telecottage appears ever more often as a new institution, offering previously unimagined services.

We have the building! – Choosing the premises marks a critical point for the telecottage's development. The location determines many things and makes processes more tangible and better imaginable. Via the property risk taken, it establishes a clear commitment for those involved (the host organization, the

owner of the building, in most cases the responsible leaders of the local community). It is no exaggeration to describe this as a turning point in the establishment process. The building stimulates people to debate, take a stand, take action, and has a mobilizing effect on specific intentions and decisions. Is the choice the right one? Is it suitable for the intended purposes? How will it be renovated and refurbished to suit the new needs? It becomes easier to attract new believers, supporters and helpers to the cause, once the choice of premises has concretized the vision.



The first telecottage in Hungary (Csákberény)



Szentpéterszeg Telecottage, Hungary

Appropriateness of the building – The selection of the building requires thorough consideration from the perspective of the telecottage’s intended functions. The available space and its arrangement will to some extent ‘write in stone’ the configuration for future operations. It is often the case that multiple options are possible, and in such instances, a consistent comparative analysis will help determine the best approach. The most likely situation, however, is that there is only one realistic location solution at any given time. It is also natural at the outset for it to be difficult to predict all the demands the telecottage will make on the building, and how these may evolve over time. One must also be prepared for the possibility that the first location will not be the final one, especially if particular needs, opportunities and functions remain undetermined. In this case, an interim solution must be sought, with the anticipation that a more final one will be found later based on the experience gained.

Box 12: The telecottage building**A. Requirements for a telecottage building**

- Clear property ownership, *availability* for the telecottage
- *Community influence* for determining the use of the building
- *Easy access* for all residents of the settlement
- *Untroubled entry* to the rooms of the telecottage, including wheelchair and disabled access
- *Undisturbed use*, e.g. if there is more than one organization in the building
- *Separate entry* to the telecottage premises, ideally *from the street*
- The telecottage premises should be on the *ground floor*
- Adequate *floor space* for services and their spatial functions (see Part B)
- Adequate *number of rooms* for basic operations that are functionally separate (reception, quiet and noisy activity spaces, individual and group services spaces)
- *Possibility for expansion* of the floor space and rooms, for telecottage development

B. Typical spatial functions of telecottages

- Information board, advertising board, table, prospectus library, bookshelves
- Waiting room, common room, periodicals and reading room
- Receptionist's workstation
- Quiet, individual workplaces
- Noisy, group workplaces
- Room for traditional (non computer) group work, meetings
- Private meeting room
- Protected copying space, communication space (fax, telephone)
- Staff room
- Workplaces for rent
- Presentation spaces, walls (exhibitions)
- Lockable storage room, server room
- Workplaces for specialist services (e.g. office binding)
- Garden, front yard, as a waiting space and location for outdoor activities, with suitable garden furniture
- Kitchen, canteen
- Spaces for decorations (flowers, pictures, statues)
- Bathroom, toilet

The building's message – The telecottage building and premises reveal much about the culture of the organization. A great deal can be gleaned about the creators and operators from the spatial arrangement, furnishings, decoration, quality of furniture, cleanliness, inscriptions, comfort afforded to staff and to visitors (and possibly the difference between the two), and the secondary use of rooms (e.g. exhibitions on the walls, photo gallery, advertising boards, presentation of life of the community, etc.). These elements provide evidence about for whom and for what importance the telecottage is making. Management science refers to “a moment of truth”, when everything is exposed about a service, when the provider and the user meet in person. The environment in which this takes place is crucial. Telecottages must be designed and furnished such a way that people come to like it, are keen to be there, feel good there, are proud of it, think of it as their own and see themselves reflected in the space. These feelings of comfortable and productive belonging strengthens their attachment to each other and to their community.

Mobile telecottages – There are experiments and solutions in which the telecottage is temporarily installed, being transported on a lorry (or other means of mobility) or using a flexible construction that is easily expanded, disassembled, and reconstructed. These fixtures do not express the unique needs of a particular settlement, but rather reflect initiatives and systems for serving special goals, particular considerations of service providers and more comprehensive programmes, transferability if local conditions are not as expected, expensive rental market, lack of suitable property, experimentation, etc. As far as the community is concerned, these are of a temporary nature, and do not satisfy the requirements of a permanent telecottage building. These temporary solutions are difficult for the local community to view as their own, and rather are regarded as having fallen from the sky. These short-term pavilions or ‘wandering circuses’ are not integral to the culture and organization of the settlement and evidently are not a full institution. Nevertheless, they can play a positive role in the evaluation and testing of services and opportunities, and in convincing users during the development period. Of course, in critical circumstances – for lack of other options – the mobile telecottage can be useful and permanent.

5.3 Telecottage hardware

Telecottage technology – A significant part of the telecottage’s services is based on technical equipment, technologies and related services available there. The below summary of a typical inventory is based on the experiences of Hungarian telecottages. Attention must be paid to the fact technology evolves quickly and opportunities in various countries are different.

Box 13: Typical telecottage equipment

- | | | |
|---|--------------------------------------|-----------------------------|
| • Server | • Telephone handset | • Digital camera |
| • Workstations | • Cordless landline telephone | • Television |
| • CD read/write | • Telephone usage timer | • Radio |
| • Printer | • Mobile telephone | • Video recorder |
| • Scanner | • Fax machine | • Video projector |
| • Other peripherals (speakers, mouse, etc.) | • Office binding and cutting machine | • Projection screen |
| • Uninterrupted power supply | • Laminator | • Refrigerator |
| • Photocopier | • Shredder | • Coffee machine, tea maker |
| | • Digital video recorder | • Alarm system |

What equipment is needed? – Telecottage equipment needs can be deduced from the services planned for the short- and long-term. The essence of the method is to list services and activities, and to compile the technical conditions each requires, also keeping in mind the expected volume of usage. Often it can be even easier than this. The money or support in-kind that is available from the outset determines everything. It is very rare that this initial support will fulfil all real needs in quality and quantity. The advice is that it is worth beginning the telecottage with less, with a collection of technical equipment that is incomplete, even with (the addition of) used equipment. If not all necessary equipment is available from the outset, then the services menu must be rethought. Services which are not available, or which cannot be provided to a suitable (at least minimally acceptable) standard must not be advertised. For a telecottage, positive tension is not a bad thing. Being unable to meet all valid needs and real requirements provides a strong impetus to grow. However, it is important to remember the *telecottage-minimum* (see Box 4).

How many and what kinds of computer workstations are required? – Most often, the number of computer workstations characterizes the technical infrastructure. There are differences between the server machine, the workstations, and other special-use workstations. Telecottage managers work with service workstations, and in general, it is not advisable to make these machines generally available. The workstations are for those who use telecottage’s services. Special-use workstations are only used for well-defined, limited services such as computer playgrounds for children (Multicenter, KidSmart). Clearly, the number of general use workstations should be adjusted to the size of community. However, there is no international standard for the optimal ratio of computers to population served.



In Hungary, the various grant programmes for establishing new telecottages typically have included provision of five workstations, plus one server to the local organization. If the size of community is below 500, only two workstations and one server are donated.

Box 14: Telecottage service normative

Service normative for user accessible workstations for settlements with fewer than 5000 inhabitants, in Hungary*

Population	Inhabitants/computer	Optimal number of workstations
under 500	150	3-4
500-1000	200	4-5
1000-2000	250	5-8
2000-3000	300	8-10
3000-4000	350	10-12
4000-5000	400	12-14

* Hungary’s geographic area – 93 thousand km²; population – 10 million; number of settlements – 3200; population density – 1088; number of small settlements with fewer than 2000 inhabitants – 1700; between 2000 and 5000 inhabitants – 1000.

Being up-to-date – At the beginning of the Hungarian telecottage movement, during the second half of the 1990s, activists were thinking in terms of so-called technical generations. *First generation* telecottages would consist of stand-alone machines, only one of which was connected to the network. *Second generation* referred to a slow Internet connection shared between machines. *Third generation* implies networked workstations with always on broadband Internet access. Today such distinctions are no longer useful. It is clear that from the outset, telecottage development must strive for fully networked computer infrastructure supported by a broadband Internet connection (the third generation) – even if this is not immediately attainable. The evolution of technology, decreases in cost, and national and international efforts to raise the level of disadvantaged regions are factors contributing to the spread of ICTs to the world’s most remote places.

5.4 Telecottage software

What software is needed? – Selection and acquisition of computer programs is as important to the technical infrastructure as the physical technical equipment. Indeed, software costs can be as much as the cost of computers and this element requires careful planning. Box 15 lists the types of Software generally used by telecottages, corresponding to the services offered. When determining software needs, it is important to identify whether individual or group (multi-user) licences are required, and whether particular software installation is affordable from technological, legal and business perspectives.



The Hungarian Telecottage Association enjoys a fruitful co-operation with Microsoft Corporation. Since 2001, Microsoft has provided telecottages with free access to its most up-to-date software and has offered an affordable solution for obtaining licensed Windows operating systems for each and every telecottage computer. Ensuring a legal software environment is a high priority for telecottages.

Box 15: Typical software used in telecottages

- Operating systems (Windows, Linux)
- Office applications (word processor, spreadsheet, database, publisher, graphics and document software, etc.)
- Utilities (compression software, Acrobat Reader, multimedia players, peripheral drivers)
- Security programs (firewall, virus scanner)
- Communication software (Internet browsers, network utilities, download manager, chat programs)
- Game programs (children’s games and interactive learning software, individual and network games)
- Educational and cultural programs (informatics, language teaching, programs supporting school education, training software, encyclopaedia)
- Programs assisting work (accounting, professional journal publisher, sound and video studio software)
- Software development and translation programs
- Special telecottage software (for network administration, administering the use of machines, making a record of services)
- Special client (end-point) software for use of network services

Microsoft or Linux? – The question of which operating system to install on the computers or network deserves particular consideration. The operating system has bearing on the further programs and applications that can be run on the machine or on the network. In practice, there are two basic options: *closed* (Microsoft) and *open* (Linux) *source operating systems*. The former can be bought, while the latter, and a impressive section of its software, can be accessed online for free, or can be bought as a bundled package (e.g. from Red Hat, which includes user support). Box 16 compares some advantages and disadvantages of the two operating systems from the telecottage perspective. There is also the possibility to simultaneously run both operating systems. In Hungary, telecottages sometimes have both software cultures and combined solutions. There is an intense fight between the two software worlds for market share. Telecottages cannot escape this reality. Microsoft’s support policy, alongside education and research, prioritises socially disadvantaged groups and areas. More cynically, this corporate giant also sees the long-term potential market comprised of those they are helping today.

Box 16: Microsoft or Linux?		
	Microsoft	Linux
Advantages	User-friendly, easy to learn and use, supports more applications (especially for games), it is more prevalent, and its hardware better supported	Free, greater operational security and stability, especially prevalent in the operation of servers, its user-friendly nature continuously grows, better defended against viruses
Disadvantages	Costly, offers less security and system stability (e.g. the ‘blue screen of death’), many errors in the server systems, easier to hack, viruses spread easily through particular programs	In certain cases, its use requires a higher level of programming talent, adapting it needs informatics knowledge and experience, currently supports fewer applications

Legal software environment and security – In some countries, a blind eye is turned to the crime of stealing software. Different governments deal with illegal software use with varying strictness. The *software police* (BSA – Business Software Alliance) is active in an increasing number of places, hunting down illegal software use. In highly ‘infected’ countries, as a first step they offer solutions for the ‘whitening’ of black software markets, and for legalizing programs without punishment. Telecottages and the local community as a whole cannot allow illegal software use (not to mention illegal trafficking of software), because – in addition to it being an internationally punished crime – the spread of informatics culture cannot be squared with the infringement of software rights.

How to acquire software? – How can one fight the battle against illegal software use, when such use proliferates, and if one does not have sufficient

resources to purchase the expensive original programs? As a general attitude and approach, it is suggested that the goal should not be to *own* software or the network, but rather to *gain access* to their use and the applications, activities and services they make possible. In light of this perspective, a wide range of possibilities opens up for a given telecottage, wherever it is in the world.

Box 17: How can we acquire software?

- Software purchase at full price
- Software supplied with purchased machines (OEM) is much cheaper
- Renting or leasing software
- If a number of customers (telecottages) buy software together, they can get a discount
- Discounts are also offered when buying more than one piece of software
- National telecottage associations can obtain significant software discounts for member telecottages
- Free software for telecottages on the basis of comprehensive agreements (e.g. between Microsoft and the Hungarian Telecottage Association)
- Use of institutional discounts (e.g. schools, Microsoft) by the welcoming institution
- Free peripheral support (driver) software (downloadable from Internet)
- Free software (freeware)
- Free use of software for limited amount of time or trial basis (e.g. downloaded from the Internet, CD attachments in computing magazines, shareware)
- Use of open source software (e.g. Linux)
- Development of own software (e.g. website engine for local use and others)
- Generating end-user software with basic programs (e.g. spreadsheet, database software) or with software engines
- Company gifts, software from sponsors
- Use of software as an intermediary (for presentation and for own use)
- Software legally brought in by users
- Internet applications replacing software (with no need for software on one's own machine)

5.5 Communications technology

Broadband – A significant number of telecottage services (see Box 2) require broadband Internet access, which can no longer be considered the luxury of wealthy countries. It is no accident that national and international organizations and information society strategies aim to provide broadband access to the network to raise the living conditions of disadvantaged regions and social groups. Only full network access can offer the most efficient services and solutions for bridging the digital divide. Before elaborating a telecottage development plan, one must carefully research opportunities, programmes and initiatives offering broadband network access to the area in question.

Local network – The well-known difficulty and dilemma of building communication service systems is the so-called *last mile problem*. Its essence is that the most expensive part of constructing a network is the last bit of infrastructure to connect the end-user, the households. The smaller and more distant the settlement and the less densely-populated the locality, the greater the cost. Further, return on investment for rural and remote locations is low

because badly served regions are poorer, more backward, with less spending power. Without government intervention, or other external, international assistance, this digital divide continues to deepen. Local networks, which include households and community access points, are increasingly feasible with the emergence of new wireless technologies. The progress of the local e-community boosts the significance and role of the telecottage and improves its service capacity and sustainability, while at the same time increasing the number of households with Internet access.

Telecottages as local Internet service providers – The telecottage, organized upon community, social, and solidarity foundations, given certain conditions can achieve a significant role in developing the network and bringing the Internet to the local community homes. There are already examples of this. A new phenomenon is that of telecottages undertaking the role and ownership of local Internet service provision. The need for community ownership and service is particularly evident for local networks. Community ownership, with exceptionally high capacity and service potential, ensures that the community will not become dependent on the market for access to services that are increasingly critical for just about all aspects of life.

5.6 Maintaining technical quality levels

Second-hand machines? – Subsequent to an inspiring presentation by the telecottage manager, an executive of a large company offers to donate used computers that have recently been replaced. Should the telecottage manager accept the offer? Generally, the recommendation is the following, if there is no better solution, and it is a high priority to open as quickly as possible, accept the offer. Of course, there is no need to accept gifts of wrecked old machines, but certainly equipment that is properly usable for particular tasks – possibly even in the long-term. It is quite usual for a telecottage to begin its career in this way. The objective of the compromise is three-fold:

- The momentum of telecottage development should not be lost if it is not possible to gather the money for new machines.
- There should be something to begin with, and existing items and achievements bring on new ones, others are keen to join, and opportunities improve.
- Used equipment can continuously be repaired, extended, organized in a network.

Collaboration between telecottages can help in acquiring used computers from government, business and other institutions, which can efficiently be put at the disposal of small communities. An internal system of equipment

support within the growing international telecottage movement itself is quite imaginable.

'Progress Fright' – It is a good feeling when the machines from the first grant arrive, and the staff unpacks the new equipment. Only a few months later, some signs of the astonishing speed of technical progress appear. The latest software 'doesn't run on a year-old machine.' 'Progress fright' always accompanies telecottage work. Within two years, a given piece of equipment is usually written off. The telecottage does not have enough income to replace it, and there are no new grants for renewal. The original donors are no longer as implicated, because as far as they are concerned the telecottage is 'up and away'. Meanwhile, technical progress increases. Users come to the telecottage less, because they are not keen to use outdated equipment. Is there a remedy for this? There is good news: the situation is not at all tragic, in fact it is manageable. In the case of home use, regular replacement of equipment due to technical progress is only available to wealthier families. Community use offers more flexible opportunities. The following are some solutions:

- One must not wait until the equipment becomes completely out-of-date, computers will need incremental updating with additions (e.g. extra memory) and replacement of parts (in extremis, the motherboard).
- If the telecottage is operated by an entrepreneur, it has better opportunities for acquiring parts for continuous updating of machines with greater corporate discounts.
- There are hardware-software combined network server solutions which can accept even older machines as end-points, using shared central resources.

Of course, the continuous maintenance of an up-to-date technical level of the equipment is also a financial issue. This is addressed in the following section.

5.7 Financing and sustainability

Is a telecottage a good business opportunity? – If yes, then for whom? If not, then why invest in one? For some, it is incredible that many people are capable of making sacrifices to establish and maintain a telecottage. Some may even cast aspersions that underneath a veneer of charity and social solidarity that the enterprise is actually doing very well. There can be speculation that the telecottage is a way of dragging public money into the private sector, at community, regional or national levels. Such questions concern many and are very important because they capture the essence of telecottage economy, its financing and sustainability. The telecottage manager must

have the strength of character to withstand sometimes cruel attacks. It is hurtful to receive such low blows, and to have genuine altruism rewarded with accusation.

What kind of investment? – When analysing the different stakes, it is important to observe that many participants have a stake in the telecottage. More than just one of them is business-related. Investment and returns can be considered in two senses. In the case of business investment, someone achieves financial benefit from the enterprise. The return on social investment, on the other hand, does not appear on the accounts of the person bearing the costs, and is conceivable not in terms of money, but rather in terms of some other added-value or opportunity for individuals and for the narrower or wider community as a whole. The situation is further complicated by the fact that depending on telecottage models, the proportion of social-to-business investments and interests will vary. There is (or at least can be) business interests in the telecottage, even at local level, and the larger the telecottage network, the larger these interests are. The smaller the settlement and the more difficult the situation of the local economy, the less the telecottage can be sustained on a commercial basis, justifying government and community intervention – even for the long-term. This applies to even the most developed countries, and is borne out by their experience (e.g. Australia, Canada, the UK and the US).

What kinds of business opportunities? – How do business interests in telecottages come about, and in what way can they promote the collective satisfaction of the community and entrepreneurs? The idea of a *community of interests* provides perspective on this question. Telecottages can take part in all aspects of these different examples:

- Equipment and materials purchasing, for which the larger the order, the greater the business is for the provider (economies of scale).
- Services purchasing, such as Internet and network content services, which similarly benefit from economies of scale.
- Telecottages serving as an intermediary for goods and services – which implies business interests for resellers, service providers and the telecottage.
- Telecottage operation business interests – in which the entrepreneur directly makes a profit from services, or the telecottage guarantees an enterprise access to the local market (and thus undertakes telecottage maintenance costs as a business cost).
- Network services as a business interest – in which there is profit from providing a particular service. A fully developed form of this is the network

franchise system, in which the supplier and intermediary (if there is one) share the business profit.

- General network business interests can spread across a number of telecottages, and with regard to all of the above, engendering issues of who realizes business profits resulting from communal network presence – telecottages, suppliers, or intermediary institutions between the two.

5.8 Telecottage budget

Investment costs – This section focuses on planning and calculating a telecottage’s investment costs. It is prudent to separate premises and ICT infrastructure costs, because equipment can always be transferred from one location to another, while costs for the building and premises are fixed. Similarly, investment costs exclude more detailed items related to network connection. Further investment specifications can arise from investments in specialized services.

Box 18: Typical elements of a telecottage investment

- | | |
|--|--|
| <ul style="list-style-type: none"> • Initial one-time costs of establishing and creating access to the building (e.g. container truck, part of house, etc.) • Renovating and adapting the premises (electricity, toilets, security gate) • Computers and peripherals (e.g. printer, scanner, CD writer, etc.) • Local network equipment and construction of network • Software • Other additional equipment (e.g. secure power supply, air-conditioning) • Communication equipment (telephone, fax) • Costs of accessing the network, one-off costs of using communication services (connection fee) | <ul style="list-style-type: none"> • Photographic and video equipment (e.g. digital camera, video camera) • Display devices (e.g. TV, video, video projector, projection screen) • Other office equipment (e.g. spiral binding machine) • Security system (alarm) • Office furniture (table, chairs), shelves, etc. • Preparation of information materials (notices, leaflets, etc.) • Consulting and planning fees (studies, e.g. equipment planning, survey of needs, regulations, training, teaching, etc.) • Other investment costs relating to particular telecottage services (e.g. minibus) |
|--|--|

Operational costs – What costs should be included in the ongoing telecottage budget? Some budget items will be the concern of the operator, and other costs will accrue to the owner or host organization (see Section 4.3). How can this ‘playing field’ be used to the telecottage’s advantage, for support that is public or confidential? Further, are there opportunities for misuse of funds? The budget items, listed in Box 19, do not take into account apportioning various maintenance costs or identifying within whose budget they should be. The hybrid organizational model provides a legitimate opportuni-

ty for operational costs to be transferred and shared, and this is precisely the condition benefiting from economies of scale. Openness, as well as regulation and contracts, guarantee that this takes place in the interest of the community, in a way that is completely transparent, legal and ethically correct. The entrepreneur operating the telecottage must uphold the openness of government, local government, the community and civic organization costs, expenses, grants and discounts – as public interest data – and it is worth stipulating this requirement in the contract.

Box 19: Typical costs of operating the telecottage

- Wages and other labour costs
- Employment taxes and social security payments (payments to the state budget)
- Travel costs
- Premises rental costs
- Energy (water, sewage, electricity, gas, other heating, petrol)
- Communication costs (post office, telephone, use of other fix-lined or communication channels, Internet subscription)
- Acquisition of goods (books, office items, etc.)
- Software expansion, renewal
- Renovation of equipment, exchange
- Costs of keeping equipment operational
- Use of other services (e.g. rental of equipment, expert advice), e.g. in order to provide services
- Use of financial services (e.g. accounting costs)
- Insurance
- Bank charges

General and direct costs – It is particularly important to separate these two types of costs, because not all services are directly supplied by the telecottage. The unique nature of telecottage is that it provides infrastructure for the local implementation of other services. All conditions and associated costs that are not associated with any one given service are called *general costs* and are to be recouped from activities and services provided. Expenditures exclusively related to one particular service are *direct costs*. The total expenditure for one particular service comprises shared general costs *and* direct costs. It is important to ask how and what proportion of general costs can be recouped from services provided. There are two relatively simple means of doing this:

- The simplest is when a particular service – e.g. computer education – makes use of calculable services of the telecottage (use of rooms, machines, Internet). In this instance the fee for each of these elements can be counted, and if justified altered up or down as necessary, within the framework of the telecottage's pricing structure (see below).
- In a more complicated scenario, if there is no such direct service provided, or if the telecottage is burdened by the given use (e.g. the given time and/or space used limits provision of other services), then the service in question can be charged according to a general, operation, service cost, measured as a percentage of direct costs, and determined by local conditions and bargaining.



Although there is no fixed price how much a telecottage can charge for one hour of Internet access, there are recommendations. According to these, Hungarian telecottages may charge 125 HUF (.50€) for an hour of broadband access.

Telecottage pricing structure – Pricing of telecottage services cannot be considered on a classical or clean *cost-based price calculation* approach. The issue of pricing is contingent on services. In the capacity of intermediary and retailer, the telecottage should not set the price – at most it can negotiate the agency fee. In terms of its own services provision, it is often the case that users cannot afford the full costs. The missing resources can be covered with support, discounts, and by any income surplus from other services. Consequently, the price for particular services is determined not by costs but by local spending power, which can even lead to some services being offered free. The economic balance of a telecottage must be ensured at the level of the overall budget, not at the level of individual services.

Free service provision? – It may seem strange advice that one should be careful with free service provision. Charging a fee is not only a prerequisite for the sustainability of services, covering costs, and possible sources of profit – it is also an expression of value of the service. Real-life telecottage experience shows that completely free services appear less valuable in the eyes of users. It is also a risky strategy, because without fees, there is no mechanism to guarantee continuous provision of the free services. Thus, even if fortunate conditions make free service possible, the telecottage manager must carefully consider whether these should be permitted. It is even worth asking children to pay something – a small amount corresponding to local norms for pocket money – for time spent playing games even if operations are completely financed by the community. It is worth maintaining the possibility of free services and discounts to motivate people, and to recognize their work for the community.

Programme budgeting – Initiating and managing projects and programmes is a common function of telecottage operations. These activities are principally associated with grant applications and subsequent reporting. As far as its structure is concerned, the operational and programme budget plans are similar. The recommendation here is that these two categories are kept strictly separate. When economic responsibility is split in more than one direction, accounting for programme resources must be differentiated from the organization's resources. Attention must be paid to this from the planning stage onwards and be consistently controlled (even if based on external need). Planned and actual expenditures, effective utilization of capacities, and continuous provision of resources, must be assessed in context of the achievements and results of the particular programmes.

5.9 Finding resources and sustainability

Where will the money come from? – When discussing telecottages, sooner or later, this brash and businesslike question will be raised. On such occasions, the driving force to ‘change the world’ subsides, and the counting begins. As expressed by the famous Czech novelist, Bohumil Hrabal “When money talks, the muses go silent”. The preoccupation of businessmen is whether the project will bear fruit – or not. There is good and bad news in this respect. It will bear fruit, however, it will require a lot of work. The resources drawn-upon to establish and operate telecottages are not values that are exclusively expressed in financial terms. This can certainly confuse and put off those who are only interested in money. This is not a problem. Those who are more broad-minded and persistent will appreciate this particular opportunity.

Community resources – Complexity is heightened by the fact that the telecottage, as a community institution, avails itself of directly available resources, but also broader community resources – if it is deemed worthy in the eyes of local society. Therefore, before getting down to the practical details of money, it is useful to consider the local community values that can be drawn-upon. It is worth thinking these through, one-by-one, to determine which telecottage activities and services can be mobilized in the interests of the local economy and society.

Box 20: Potential resources and values of the local community and government

- *People*: labour, knowledge, experience, accepted and working value system
- *Nature, environment*: natural treasures, landscape, environment
- *Spatial location*: ‘proximities to,’ ‘distances from’
- *Character of the settlement or local government*: image that encapsulates the settlement or council, how well-known they are
- *Historical, cultural heritage, traditions*: ‘living past’, revivable heritage, historical monuments
- *Information, intellectual values*: data, documents
- *Technical means*: infrastructure, other technical means
- *Rights*: rights that can be used, rights that can be sold, right to regulation
- *Organizations, institutions*: as operating organizations, as good organization, capability, efficiency, as structural culture (institutionalized system of values)
- *Connections*: potential connections, partnerships, cooperation
- *Land, property ownership*
- *Financial wealth, budget mechanisms*

Telecottage resources – It is intentional to not limit discussion to income, but also to identify a broader set of resources. Necessary operating funds can be derived from donated or earned sources of money, from cost savings in areas of operation, and from contributions in-kind. The less the telecottage can be maintained on a commercial basis, the greater the significance of solutions that avoid the need for money. Box 21 provides examples of how a telecottage can make money, how it can accrue savings, and how it can

obtain non-financial resources. This list of course is not exhaustive, but provides a good starting point for identifying the range of possibilities. The examples in this list can be extended to include national and local opportunities and assets, and it is strongly recommended to do so.

Box 21: Various sources of income for telecottages, and opportunities for cost savings

- *Sales-1*: Goods of smaller value, e.g. books (new, used), newspapers, maps, gifts, handicraft products, telephone cards, postcards, stamps, envelopes, etc.
- *Sales-2*: Good of greater value, e.g. sale and assembly of computers, parts, peripherals, floppy disks, blank CDs, etc.
- *Sales-3*: Sales of goods and services on a commission basis, via the Internet.
- *Organizing distance work*: Evaluating and promoting local labour potential in return for a commission fee; serving distance workers.
- *Business services*: Provision of office, documentation, teaching, grant application, computing, system administrator, accounting and other services, using telecottage staff or with the participation of external human resources. Opportunities for business and intermediary services strengthen the reputation of the telecottage (see the following point).
- *Advertising*: Use of the telecottage's surfaces (walls, newsletter, leaflets, etc.) for local advertisements, publication of an advertisement paper, and acceptance of advertisements to be posted on the telecottage website (or other related online locations). As one of the only trustworthy, honest and virtual entry points into the small community, the advertisement value of the telecottage is very high. It should strive to make the most of this, as there is little or no significant competition, it has a high profile at a very personal level, and is capable of appealing to those affected by any given issue.
- *Lending*: (Sometimes subsidized) acquisition and rental of equipment used by more than one person (e.g. tools, video cassettes, small tractor, motorized sprinkler).
- *Housing of equipment*: Suppliers place their equipment in the telecottage (photocopier, ATM machine, public telephone, drinks machine), paying a rental fee and/or a commission on turnover.
- *Telecar*: Coordination of journeys made into the county seat or capital, making transport cheaper, possibly the establishment of a 'transport favours bank' or club (with a membership fee payable to the telecottage).
- *Services for tourists*: Promoting and organizing local tourism opportunities, accommodation and programmes – in return for a commission.
- *Canteen*: Serving coffee, tea, soft drinks, desserts, etc., like an Internet café.
- *Photo and video service*: Digital camera photography services to record local and family events, with colour printing and preparation of albums on CD; identification photo service (for passports, identity cards, etc.).
- *Childcare, playhouse*: Combining supervision of children with activities for them; including younger children, if there is an appropriate space.
- *Local media*: Operation of a local newspaper and other media (radio, cable TV), realizing income out of these (subscribers, advertisers, local government support).
- *Local Internet service*: Local Internet service provision via microwave or other means (e.g. cable network).
- *Electronic mail*: Distribution of e-mail addresses, electronic mailbox in the telecottage in return for a monthly fee; if necessary, putting letters in envelopes and delivering them.
- *Internet telephony*: Internet telephone facilities (VoIP).
- *Internet homepage services*: Preparation and maintenance of homepages for private individuals and institutions.
- *Local Internet content provision*: Operation of a private homepage with specialized content, making use of income opportunities (advertisements, subscribers, support).
- *Office and room rental*: If the conditions are appropriate, rental of rooms and office space for a defined period (e.g. advisors working on a seasonal basis, state administrative employees).
- *Shared use of the building*: Sharing of general costs with another user.
- *Taking on public tasks*: Contractual undertaking of tasks from central and local government institutions (e.g. social assistance, teaching, employment of community service workers).
- *Use of volunteers*: Individual tasks performed by volunteers for no fee or in return for benefits in-kind (e.g. computer use).
- *Financial and in-kind donations*: Organization of appeals for donations for particular causes.
- *Postal service*: If a postal service does not operate in the settlement, it can be in the interests of the national postal company to come to an agreement with the telecottage.

- *Projects and grant applications*: Elaboration of grant applications for various areas of developing local economy and society, management of projects, and using these to cover a part of maintenance costs.
- *Pre-paid cards*: An organization can assist its members or those it supports by giving out vouchers or coupons for the telecottage, which allow free or discounted access to particular services.
- *Reference support*: Agreement with companies to provide sponsorship and/or support, in return for advertisement of the company's name/logo, products and services.
- *Event management*: Organization of campaigns, conferences, festivals, camps, etc., either on the telecottage's own initiative or upon request, in such a way that these produce a surplus and bring other benefits to the telecottage.
- *'Informatics for free'*: The discovery, promotion and use of free software and services (storage space, mailing, other).
- *Telecottage discounts*: Discounts and allowances achieved via telecottages working in collaboration with each other.
- *Communal use of equipment*: Shared use of expensive equipment with neighbouring telecottages (e.g. video projector).
- *Operation of clubs*: Club-like solution for particular services, with club members paying membership fees to the telecottage.
- *Telecottage membership fee*: An annual or monthly payment allowing discounted use can also be viewed as a general or regular membership fee. Its advantage is the predictability of income and receipt of payments in advance.

Sustainability – Sustainability figures as one of the most prominent issues in the telecottage literature. A number of analyses have addressed telecottage management, across very different circumstances. There is little scope for generalization. To the contrary, practice indicates that questions of sustainability should be posed in a much more subtle way. Sustainable profitability? Provided as a public service? To keep it for ourselves? The three classical approaches – business, community, civic – must be combined in the interests of long-term sustainability, survival cannot otherwise be achieved. Current operation of thousands of telecottages illustrates that they are sustainable in the longer-term. The following is distilled from international experience in community-based telecottages.

- For initial investment, outside help is virtually indispensable; small communities cannot fully finance the establishment of a telecottage in an optimal way.
- The very existence of the telecottage should be regarded as a public necessity – even as a part of universal communications services – and state funds mobilized for this purpose.
- Via cross-sector cooperation, contributions from all three spheres must be maximized in proportion to their interests.
- From the outset, it is important to create and strengthen the telecottage's own resource-finding capabilities, in which there must be a personal interest.
- Initial financial support must afford conditions that allow the telecottage time and opportunity to learn how to find resources and manage its own finances.

- Support must only be given when completely necessary, for activities in which results can be measured.
- Economic foresight or business planning must be insisted upon, even if circumstances are not easy to predict.

'Over financing' – The consequences of exaggerated support are rather like muscles in a state of weightlessness, they waste away in the absence of burden. To use another analogy, "palm trees grow under pressure". Initial support must be used to create and strengthen the telecottage's ability to sustain itself. However disadvantaged a settlement might be it must learn to make maximal use of existing resources. The most valuable support targets this aspect. It is easier to find resources for the development of a telecottage if it can be shown that existing assets are being used as effectively as possible. This question leads to the world of grant applications, which deserves separate mention.

'Proposal-writing machines' – One of the telecottage's most important tasks is to find resources for the community. This can most obviously be achieved by applying for grants. In Hungary, the most successful telecottages are called 'application-writing machines'. It is not rare that through grant applications telecottages raise support for the community, which can even be comparable to the budget of local government in question. The telecottage should hone its skills in this area to the highest possible level. It is understood that it should use its capacity for writing and managing grant applications for boosting its own revenues. However, this carries some risks. Too many programmes can have a detrimental effect on everyday operations and service availability, making it necessary to mobilize substitute resources – both people and technology. If grants comprise a large part of the budget, it is also more difficult to make long-term financial management plans. Success with grant applications is difficult to predict, and highly flexible organizational, human and other resource management solutions are needed to satisfy strongly undulating capacity requirements. This is very difficult to implement in a small community. 'Grant application frenzy' is a common illness affecting telecottages, with 'over winning' being a condition in which the capacity of the organization is overwhelmed. The telecottage can also succumb to 'grant application phobia', which also is not a symptom of a healthy organization.

The good grant application – There is extensive literature devoted to successful grant applications and project writing skills. In terms of applications, telecottages must think big and small in parallel. This means that attention must be given to large international organizations and national, regional or even local government opportunities alike. Simultaneously, concerted effort must be devoted to thinking within the context of telecottage – using the

organization's brains as well as those of the members of the small community. A good project idea is born not out of the announcement of the grant, but out of the needs of the community. The announcement is the race-track where there is competition for resources, according to specific rules and conditions. But, most important are the needs of the small community. These must be researched and planned, independently of application announcements, on a continuous basis, and a row of projects must be stockpiled in community strategic plans. This is not only the task of the telecottage, but it must play a part in the planning process, in order to establish priorities and facilitate accessing opportunities for the community that are in line with its needs.

5.10 Rules, regulations and contracts

How to regulate operations? – Community cultures differ in terms of the importance, estimation and respect accorded to formalizing rules and regulations. What factors most influence the operation of communities and organizations – unwritten rules (cultural norms), habits, group customs, publicly announced alliances, promises, written contracts, reputation, internal rules, laws?

Why regulate? – From the perspective of designing the telecottage's organizational and operational environment, the approach to content of rules and regulation is paramount. The function of rules and regulations is to provide a predictable, reliable framework for resolving disagreements, and if necessary, mechanisms for enforcement of rules. Rules, regulations and contracts serve to guarantee an operation of the telecottage that is suited to community expectations. Setting and following rules entrenches and validates rights and obligations. If these are elaborated in the right way, they can help prevent corruption and misuse of the organization's resources. They can also shield the telecottage from scandal mongering. The moral values embedded in these generally accepted rules and regulations guide and promote proper conduct of those making use of or controlling public funds.

Written form – Recording agreements and rules in written form is an historical and widespread practice. Creating a written record is recommended for all instances in which something important is at stake and guarantees are required. Over time, members of the institution are replaced and conditions can be expected to evolve. Given the goodwill of two or more partners, there are usually no obstacles to putting things in writing. It is wise, for this reason, to effect a written record at the time of agreement and to formalize the points of consensus. Those who resist this practice generally lack serious intentions and should be viewed with caution. The implications of the telecottage are often complicated and its participants too interdependent to sur-

vive the disappearance or failure of commitment of a particular actor. The fact of things being written down is often a sufficient condition for the organization taking on a responsibility to keep agreements, for fear of otherwise losing its reputation with the community. When agreements are kept, on the other hand, this can be announced, improving participants' reputations by highlighting their productive contributions.

Relations to be regulated – As the telecottage develops and grows, it will enter into new relationships, especially for purposes of offering new services. These relationships need to be regulated in a suitable manner to protect both parties and to formalise the conditions of the arrangement. The laws of different countries define and regulate these legal relations in different ways, and can require written contracts or other forms of reporting. Situations that may be subject to legal regulations are listed below. This is not an exhaustive list, and the elements are informed by a Central European country experience:

- Cooperation in the interests of establishing a telecottage between local organizations, the establishment of a consortium
- Establishing a new organization to supervise and operate the telecottage (e.g. founding an association, its deed of foundation, within which it is important to fix suitable spheres of activity to form a basis for services)
- Required permits for certain activities (e.g. operating a canteen in the telecottage)
- Internal regulation of the operation of the organization (structural and operation regulations) and regulations for particular procedures (inventory, dealing with money, informatics security, work security, etc.)
- Responsibilities accepted with regard to support and establishment, and the accompanying rights, for example the insurance of the community building or premises, and the conditions for this
- Commissioning and mandating an individual to create the telecottage development programme
- Entering into agreements with the telecottage for provision of services and means, and determining the rights and obligations to provide services thereby acquired (e.g. exclusive service rights)
- Taking over public tasks from the local government, other state bodies, institutions, which determines the task, the conditions of its being served, and the financial and other benefits for the telecottage
- Service mediation contract with suppliers, determining the content, conditions and commission associated with the activity

- Service framework of the telecottage, which determines which services the telecottage provides, for whom, with which conditions and guarantees
- House rules, publicly announcing expected behaviour for those using the premises
- Employment contract with the telecottage's employees, agreement with those employed in other ways
- Grant support contracts, within the framework of which the telecottage receives resources for the completion of a particular programme or activity
- Sponsorship support or advertising contracts, in which the telecottage receives financial or in-kind support and accepts responsibility for publicizing the sponsor
- Alliance or association contracts, accepting obligations as members and exercising rights (e.g. joining a telecottage association)

5.11 The process of establishing a telecottage

Universal recipe? – Of course there is no such thing. A telecottage can come into being in a number of ways. A wonderful opportunity appears all of a sudden, the best grant in the world, a philanthropist, and all wishes are satisfied at once. Possible? Yes, but not typical. Between this and the other extreme of very slow, arduous work, there are many degrees. The following is a *logical framework*, principally based on Hungarian experiences, upon which the process of creating community telecottages can be founded, into which both amazing and everyday events and tasks can be placed. These steps can be used as a basis for planning the process of establishing a telecottage, to clarify logical connections between implementation tasks, and to identify links in the chain that are missing if problems and conflicts manifest in the implementation. More generally, this framework can serve as a template to assist the elaboration of plans for similar but different establishment programmes.

STEP 1: Appearance of a devotee – The *devotee* (or *initiator*) often arrives in the community from elsewhere. His/her important medicine is to move the initiative from nowhere to somewhere. This is sometimes a person with a 'hard' character, who can overcome difficult obstacles, but who can also be difficult to keep in check. If institutionalization (establishing an organization and suitable regulation) does not occur, the telecottage can lose the enthusiasm of its initiating person, which can be an insurmountable loss. The initiator, the founder, the jungle warrior is not always suitable for the routine operation of the telecottage, precisely because of this innovative nature and always being on the lookout for challenge (but this is not a general rule). It is

a known and understood fact in the telecottage movement that initiators tend to pull-out after a while. If this does happen, care must be taken to ensure that they do not take the telecottage spirit away with them, and that the organization is able to protect and preserve this of its own accord. Recognition of the merits of the founder is an important element in strengthening telecottage culture. The personal invitation and knowledge of passionate telecottagers can help in 'fanaticizing' the group and community.

STEP 2: Collection of information – Without the benefit of factual information derived from reliable sources, the programme will be built upon unstable foundations. First, it is useful to study experiences of already well-developed telecottages. Not surprisingly, the Internet is a good source for such materials. Even more useful, however, is to visit operational telecottages. Material should be collected from a number of sources, with special attention paid to difficulties, failures, critical requirements, local specificities (especially those that are different from the context at hand). All of these elements should be enquired about specifically. The experiences of cultures closer to the one at hand are of greater weight, but as a community innovation for which novel approaches are often used, the practice of more distant examples may also be of interest. Different approaches provide useful information for understanding the telecottage phenomenon. It is not necessary to 'reinvent the wheel' with each new telecottage – usually it is more than sufficient to adjust opportunities to local circumstances, during which time there will be many opportunities for local innovation.

STEP 3: The circle of initiators – The circle of local allies are ideally attracted to the project simultaneous to the inception of the idea. This is important because, if possible, they should be included in the list of initiators. If they contribute and advance the idea before the concept is fixed and made public, then it becomes a shared concept. This is what makes them real allies. From this point, the telecottage becomes the 'child belonging to all of us', to be collectively raised and nurtured. From this point on, the initiators must act communally and in harmony. The issues of the first agreements include: objectives, opportunities, obstacles, and further partners (a partner strategy). The question also arises as to what kind of organization should stand behind the telecottage initiative. Is there such an organization? Does a new one need to be created? The success of the initiators, over and above correctness of the original concept, depends on how trustworthy and influential they are in the community. This must be considered when they are selected. For the most part, they are already known entities within the community. One winning tactic for convincing good candidates to join is to entreat an already 'infected' partner to nominate and bring in the next one.

STEP 4: The first written plan – Preparing a short concept paper (two pages maximum) for the telecottage project is the collective task of the initiators. A few people write the first plan which outlines the most urgent problems and provides clear objectives to solve them. This short document delineates the solution, with alternatives if necessary, and addresses those affected or with an interest. There is no need for detail at this stage. The primary goal is to elevate the idea to the level of a public issue, to clearly identify the need for a telecottage, and to inculcate the sense of responsibility of the community, stressing the danger of inaction. Questions that are contingent on the basic issue of whether a telecottage is in fact needed must be put to one side or left open. In this first plan, the openness of the programme must be made clear, affording all a chance to join. The document addresses future partners, and the members of the local community, and should be drafted accordingly.

STEP 5: The critical circle of partners – With the concept paper in hand, and following a considered map of stakes (see Boxes 8 and 9) and a partner strategy, initiators can then knock upon the doors of those whose participation will be critical for establishing the telecottage. At this stage, contact can also be established with people outside the community or settlement, in order to make the initial conception as secure and realistic as possible. Thus, representatives of local power – if not already among the initiators – cannot ignore the issue. The written plan is not yet published, but the gossip network is already spreading information, generating interest. Care must be taken to respect the subtle structure of local power and interest relationships, in terms of how information is disseminated. Negotiations must begin with the most influential people. Precision about determining what can be expected from whom is essential for this stage, especially with regard to the most basic condition for the telecottage – its location. If necessary, a community supervision committee can be created from representatives of participating organizations, as an organizational guarantee.

STEP 6: Selection of building – A list of likely buildings (see Box 12) must be drawn-up during the course of negotiations with partners. Clear details about the building's requirements and attributes are necessary for ensuring that the best location for the telecottage is considered in a reasonable manner. From the instant of building selection, the telecottage can be considered in a physical dimension, thoughts about it can be connected to its premises, the location can be presented, the institution can be planned technically, its costs can be determined, the programme can be concretized, can be displayed, and is easier to sell. The potential hosts or housemates appear as direct participants in the telecottage, although the extent to which they are affected can also lead to conflicts of interest. It is conceivable that the situation may initially require a temporary location, which can reduce tensions associated with ensuring a building for the telecottage. Naturally, it is better

solution if a long-term concept is partnered with a building that is available in the long-term.

STEP 7: Popularization – During this stage, the plan for establishing the telecottage is officially made public. There are a number of different ways to address the community (local government council meeting, public hearing, prospectus, local newspaper, presentation – in Hungary, “paths of vision” were organized in the interests of establishing new telecottages), adjusting to the particularities of local cultures. The goal of popularization is to generate enthusiasm and support so that community members will be inclined to embrace the idea and cooperate with the plans for the project. It is particularly important to ask for opinions, ideas and suggestions and to build these into the conception. Bringing the project to the public increases responsibility of participants. In the same manner, publication of the existing obligations and promises heightens their certainty and lowers their risk of not being met.

STEP 8: Finding resources – Most often, grants provide the first resources. Uncovering and obtaining the project’s own (financial and in-kind) resources increases chances of acquiring support from outside. When researching available resources, equal attention must be paid to first investments and possibilities for long-term sustainability. During this stage, the objectives include identifying how and from where financial conditions can be satisfied, how well-founded the programme is from this perspective, and increasing the likelihood of the plan’s success. These elements concern intentions and opportunities rather than exact figures or agreements. It is extremely useful to be aware of successful resource-finding practices of other telecottages. However, this kind of experience does not preclude entirely new paths of finding sources of finance (see Section 5.9). The goal is to prepare a financing plan that identifies possible channels for attaining financial security. Next steps in this direction must be initiated on the basis of this plan (applications, requests, negotiations, etc.), although some steps can only be taken when the detailed plan (see below) is elaborated.

STEP 9: Surveying needs – A methodical examination of demands users will make on the telecottage is a continuation of the popularization process. The objective of this needs survey is twofold: to determine genuine needs while also seeking wider popularization of the concept; and to measure the likelihood of cooperation. After presenting opportunities brought about by telecottages in a simple, easy-to-understand way, it is expedient to ask people: 1) for what and how much they would make use of the opportunities (equipment and services); and 2) how they might be able or willing to take part in the provision of services and satisfaction of needs. It is practical to separate the needs of characteristic local target groups, and perhaps to examine these in different ways (e.g. focus groups). A critical moment for this stage is deter-

mining whether the need for the as yet unknown services can be measured at all. For this reason it is better not to examine service needs directly, but to approach potential expectations of the telecottage through problems that need to be resolved and satisfied.

STEP 10: Selection of staff – Having got this far, it is likely that there will be a clear idea of who can be considered as potential telecottage colleagues. It is best to select first the telecottage director, the ‘soul’ of telecottage, before details are fully worked out. This is perhaps the most important decision from the perspective of good operations. We can best measure candidates’ potential performances in meeting the requirements as evidenced by their day-to-day work (see Box 11). In the interest of this, it is worth arranging for a (mutual) trial period. In addition to knowledge and skills, acceptance of local community must be a key consideration for selection. It is useful for the person being considered for the director position to be actively involved in the preparatory stages. However, in and of itself, good preparation work is no guarantee that the person will be able to manage the telecottage with the same skills. If possible, it is practical to request formal applications for the position, especially if a number of persons are under consideration.

STEP 11: Preparation of detailed plan – The feasibility study encompasses everything that pertains to establishment and operations: services, organization, staff, location and technical plan, cooperation, management and regulation plans. In an ideal case, the first business plan is completed simultaneously, but in practice, this is very rare. When introducing telecottage franchise systems, however, this is indispensable. The feasibility study is a critical document (if circumstances permit, it should be visually pleasing – well-formatted, coloured, illustrated) for the fundamental decisions to be made about the telecottage, signing of agreements and contracts, and submission of grant applications. This document serves as a common denominator for cooperation established in the interests of telecottage development, the starting point for collective action, or as the Hungarians say, “the stove from where the dance begins”.

STEP 12: Expanding partnerships – The broadening of partnerships continues. The detailed plan has identified the range of needs, and this informs the search for new partners and supporters for implementation. This stage draws upon a complete map of stakes. A series of agreements and contracts can be signed in the interest of the success of the telecottage, following and further developing the partner strategy. Existing cooperation is mobilised to acquire new partners. The objective is to maximize the security of plans to establish the telecottage, and its subsequent operation and long-term sustainability. This work does not end with the opening of the telecottage.

STEP 13: Organization – The operative organizational tasks of establishment become increasingly intense. An eight-hour workday is no longer sufficient for the work at hand. The telecottage manager negotiates, coordinates, makes recommendations, prepares proposals, plans the telecottage design, and learns a lot. She lives through the first failures, encounters setbacks, feels the initial conflicts, and overhears ill-intentioned gossip. Life is in full swing. The telecottage has become a public issue, everyone is talking about it. There are many misapprehensions to be dismissed. Although the community is fond of dumping the majority of tasks onto a single person, the manager must strive to delegate to smaller groups and volunteers, to share tasks and responsibilities, and to make the whole affair a communal issue, and mutual experience. This is not impossible: with patient, persistent work it can be achieved, if participants are offered a space for local (possibly group) creativity and renewal, the chance to plan, organize and arrange their own new little home.

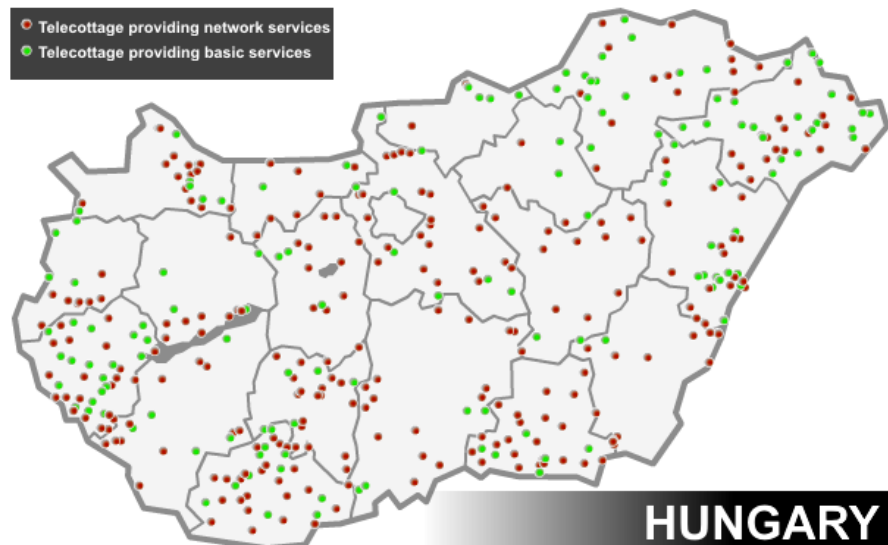
STEP 14: Opening – And the great day of the ceremonial opening arrives. In truth, the telecottage has been open for a while (during a trial period) to test the equipment, routines and services – in short, to avoid the results of the long struggle being soured by teething problems. The intention of the ceremonial opening is to share the glory. Although invitations are extended to a large number of guests, important people, all previous collaborators and those who may be approached in the future, the press from near and afar – it is for the local community members that the opening of the telecottage is celebrated. It is handed over to them, not the important people, and thus it is the members of community who must be at the centre of attention. This is the occasion, when – with the hospitality and gifts the situation allows – everyone's contribution is recognized and thanked. This is also an opportunity to gain new partners. This is not the time to get lost in judging merits, but is certainly the time to forgive and forget conflicts that may have arisen. It is the time to offer an opportunity to participate to those who had their doubts, or even worked against the project, but have since changed their minds. This is in the interest of the community and of the telecottage. Photographs should be taken and the telecottage's Visitors' Book initiated with descriptions and impressions of events to-date, as well as wishes for the future of the telecottage.

STEP 15: ...and the next day? – The telecottage is operational! Development does not stop. Visitors are registered (name and address), why people come, what services they use, what they ask for, requests that cannot be fulfilled – is all documented. Operations are assessed on a regular basis, as is the feasibility of regulations. Adjustments to things such as opening hours are made. House rules are revised and rewritten to better reflect actual conditions. Users are solicited for feedback and recommendations. Changes that can be

made to make the layout more comfortable are undertaken. Visitors are invited to contribute to the decoration of the telecottage. The notice board is highlighted as an open space for lively chat, and for passing on information about the community. The Telecottage Newsletter is published on a regular basis to inform people of opportunities, successes, good examples, and future developments...

The telecottage movement in Hungary

From its inception, at the beginning of the 1990s, the Hungarian telecottage movement attracted attention from international specialists and its achievements were soon widely known. Currently, more than 500 telecottages serve one-fifth of settlements in the country.



Source: www.telehaz.hu

Working on a civic basis, the network is increasingly implicated in Hungarian electronic commerce institutions and public service systems. The documentation of its challenges and successes has become a basic resource for planning development strategies in many neighbouring countries including Bosnia-Herzegovina, Montenegro, Romania, Serbia, Slovakia and the Ukraine. Experience-sharing relationships have been developed with, among others, Austria, Bulgaria, Estonia, Lithuania, Poland, Spain, South Africa and the US. International cooperation with these countries – as well as global organizations such as the Community TeleService Centres (CTSC), the International Telecommunication Union (ITU), USAID, the World Bank, UNDP and UNESCO –



See Attachment 2 for a brief chronological summary of the development of the Hungarian telecottage movement.

have afforded opportunities to repeatedly address vital questions. What kinds of experiences and ideas will enrich the global trend towards complete community access? How does the civic nature of community access modify (or not) the things people can do with modern ICT? What kinds of regional and micro-level differences call for what kinds of approaches? Engaging these questions, from the vantage point of Hungarian experience and circumstances has demonstrated that functional and achievable solutions are possible.

6.1 Development programmes for society

The telecentre movement and related programmes are rooted in different contexts. The impulse can derive from communication and information technology business opportunities, via societal integration, advances in achieving equality, the bridging of the digital divide, migration to a knowledge-based economy, the expansion of participatory democracy, and so forth. Experience shows that an important component of success is the fact of information technology being viewed as a tool of (local) societal and economic development. Of the more than 50 services offered by the Hungarian telecottages, nearly half are closely tied to use of computers and the Internet. A component of successful lobbying (see Section 6.21) was that the Hungarian telecottage programmes were directly related to societal development strategies. These include rural development, expansion of digital capabilities, improving equal rights for minorities and the disadvantaged, addressing the situation of Roma society, distance working and lifelong learning and the serving state, citizenship and administrative services in the community. The unique advantage of the telecottage is that it empowers local people to solve their own problems in ways they know will be best. Technology is a crucial tool for this project – but does not imply an automatic fix. You can lead a horse to water but, without knowing or understanding the beast, you cannot make it drink.

6.2 Beginning with a working model

We have experienced many times in our work the psychology of social innovation. It is possible to persuade politicians, the state and local government – often not the most logical of social entities – of the need for renewal in various respects. However, risk-taking is not usually inherent in the nature of most officials. The positive response of public opinion regarding the movement, the force of its impact, its modernity, the degree of penetration and its profound effects in communities, as well as the enlargement of the telecottage map are what won officials over. We had to undertake demonstrating to

politicians why the developments were necessary, and why it was in the interest of the state to support the movement. The ministers, the administrative departments (for example social, employment, culture and rural development), seized the opportunity to efficiently achieve their aims.

Before any significant progress could be made almost all donors wanted absolute certainty of success. In order to be persuasive we successfully employed two methods. First, an initial working model was devised and subsequently transformed into a folk-tale. The legend of the Hungarian telecottage is connected with the very first telecottage, in *Csákberény* (opened in 1994). This telecottage was founded during a meeting of villagers, who were asked where they saw their village in a number of years' time. Initially known as 'our office' it soon became a huge hit within the community and its success was repeated and replicated across the country. The second was the *model experiment* method, in which demonstrating the efficacy of a particular programme engendered further, risk-free experimentation through promises of great kudos to involved enterprise offices and regions resulting from ensuing national dissemination.

6.3 Simultaneously from above and below

The dilemma of bottom-up or top-down approaches was resolved by striving, when possible, to go in both directions at once, depending on the arrangement of particular developmental programmes. Telecottages came into being primarily due to local civil initiatives. Only organizations able to demonstrate capacity to engage programmes recognized as fitting the wider aims of the movement received support. However, we also recommended these programmes to central and regional government and administration. In this manner, both sides could share joint involvement as initiators. This sharing of tasks, responsibilities and risks also reassured the contributors. A vital transformation, beyond the development of the telecottages, was the coalescing of their services and the 1995 creation of a telecottage association to both centrally represent their interests and control logistics, and to assign tasks.

6.4 The enthusiasts

From the beginning, the enthusiasts played an undeniably critical role in establishing individual telecottages and organizing the association. According to the 'nay sayers' these are crazily-driven people, obliterating any and all obstacles in the path of their goal. They were seen as almost dangerously obsessed, as fanatics. However, their celebration and recognition are

crucial to the movement. It is our conviction that the best tool for effecting lasting change is the personal example. Material acknowledgement also is a very important issue because the costs (personal and material) of these people as disseminators, instructors and ultimately individual institutions, to some extent, must be compensated. Enthusiasm and civic-mindedness are important, but on their own are insufficient instigation to drive individuals to become pillars of the national movement as teachers and mentors.

6.5 Achieving recognition at home

In 1997, the first large telecottage project to receive foreign support (USAID) was organized. Traditional Hungarian folk wisdom asserts that 'no-one can become a prophet in his own house', meaning that it is difficult to attain validation at home, within one's own community, settlement or country. People are more willing to accept those coming from afar and foreign examples, rather than the discoveries of locals. Thus, the first 30 telecottages were brought into existence with financial assistance from the US rather than domestic sources. It was the success of this foreign sponsored programme that, to a great extent, encouraged Hungarian government support for a similar programme in 1998. Since then, foreign acknowledgement and investment has time and again influenced and stimulated local support.

6.6 Role of the media

When considering the effective lack of progress during the first two years following the creation of the first telecottage (1994-1996), there are some interesting conclusions. Time was apparently needed for the public to become familiar with and to accept the idea of community access and the essence of and need for telecottages. During this process, the media – TV, radio, daily newspapers and magazines – played an undeniably important role. For them the transformation, the societal drama, the clash of cultures (computers and the Internet in a muddy little village?!) and the newsworthiness of the movement's successes and struggles were the attraction. It was necessary to establish good relations with the press from the outset and encourage their involvement. Efforts in this regard were, without a doubt, valuable. The moderate press has become one of the movement's most important and long-standing allies. Hungary's information society development offers few other such opportunities to demonstrate in such a definite, eventful and photogenic way the practical applications and societal and personal impacts achievable throughout the various levels of a society. The telecottage stories warrant constant depiction and presentation of the movement's ongoing and significant role in society is ensured via the media.

6.7 Civic basis

Telecottages and teleservice centres of the world have been manifested in many different forms: technology centres, community office and education centres, telecommunications centres, distance work centres and multifunctional telecentres. Entities that created and now run them can be classified into three categories: central or local governments; business and private companies (e.g. telecommunication companies); and civic, non-governmental organizations. The Hungarian telecottage movement is operated by multifunctional civic organizations. The nodes of the network are subject to local control but are also firmly influenced and predisposed, as a result of their involvement, to regional and national civil programmes, and organizational and personal relationships. This model is particularly effective for the emerging post-socialist democracies. Given a relative ability for its firm delineation from the state and from governmental politics, this kind of organization will thrive despite changes in the economy and government through effective and suitable lobbying activities.

The telecottage movement, as a fundamental part of the civil society sphere, reinforces the sectors of society suffering from a deficiency of democracy. These sectors, of course, have the greatest need for support. This kind of activity provides a balance of participatory opportunities and ensures continual and roughly equal democratic growth. Crucially, it affords access to new technologies on a civic basis. For Hungary, this has resulted in a much-reduced need for concern over poor people's ability to gain access. In many of the more developed countries there have been significant debates regarding the undemocratic nature of computer and Internet access, with only more economically successful people being able to afford these. Further, for many of these countries there has been a significant lag between uptake in urban and rural areas. In Hungary the civic basis, the emphasis on community access and the focus on small communities has, to a large extent, tackled these problems.

6.8 Singular culture

Taking this civic emphasis as a starting point, there has always been a strong conception of the cultural mission of the Hungarian telecottage movement. The socialization challenge facing the transforming societies of this region is well-known, as is the general moral crisis preceding the forthcoming changes. Our examinations of organizational culture have reinforced the impetus of telecottage enthusiasts and employees to represent and disseminate an example of the unique telecottage culture in local communities. This culture can be described in terms of: solidarity, equal opportunities, knowl-

edge and information, (public) service, community, interconnectedness, social and community renewal, local culture and traditions, humour and happiness, tolerance, openness, understanding and representation of values.

The rapid expansion of the network – on average between 50 to 200 new telecottages each year – presents serious challenges to the telecottage's organizational culture and its preservation and transmission. The persistence of this strong internal organizational culture and engagement with community experiences is of paramount importance because of its ability to surmount erosion and dilution of our value system. The underlying culture of the organization, its true aims and methods of achieving them, working practices and methods of internal knowledge transmission, must be preserved if previous successes are to be repeated and improved upon.

It goes without saying that the organizational culture of the Hungarian telecottage movement is itself a product of common Hungarian business practices, of the specific legal, political and economic situation regarding civic organizations in the country and the history of the country and its civil society. Thus it is possible that some elements of the model might be inappropriate for movements in other countries. Indeed, for countries that have not experienced the degree of political, economic and social change found in Hungary, it may prove difficult to build such strong and independent civic movements. However, we firmly believe that for the many countries where movements like the telecottage association are springing up, the general conception and basic model will still be of use.

6.9 Economies of scale, multifunctionality, sustainability

The big secret of rural or *neighbourhood community information technology* is in maintaining economies of scale. In order for the telecottage to be economically viable, all services and activities (business, civic or public) must be entrusted to a service organization. If local ability to financially meet demands, or the money generated from the organization's undertaking of government services provision is still insufficient, then other inputs from local, regional or central government are necessary. A vital condition of this is a wide-ranging, intersectoral governmental commitment. This is only possible via intensive lobbying, an abundance of well-demonstrated examples (i.e. media support) and the unified activities of the telecottages (i.e. the Telecottage Association). Despite these factors, in Hungary, the road toward such a commitment has remained bumpy, and requires ongoing negotiation for the many natural obstacles as well as those deliberately set. This is unending work and can never be completely successful.

6.10 Hungarian Telecottage Association – the service mechanism

The keystone of the telecottage phenomenon in Hungary is the nationwide Hungarian Telecottage Association. This organization represents the interests of the telecottages to other parties such as the central government or foreign bodies, establishes relationships with business partners and organizes co-operative projects with them, and works together with them to organize network services. The association formulates development programmes and oversees their implementation. It manages lobbies for financial support, makes applications (and further applications!), operates the telecottages' internal information system and manages national and international relations. As the movement evolved, the association was split into seven regions, each representing their own telecottages to the executive and implementing programmes originating from the central office. These regional associations assist the development and operations of the telecottages with their education, mentoring and monitoring apparatuses. There are regional resource centres and an increasingly strong system of internal, democratic processes. The biggest challenge is finding resources with which to maintain this huge mechanism. The government, business and civil society spheres have expressed their great interest. The association has demonstrated beyond all doubt its high level of competency, even in light of severely limited resources. Thus, it is time that government and business, if they want to benefit from what telecottages offer, accept logistical and funding responsibilities. Resolving the movement's long-standing financial struggle will not prove easy, as will become apparent in the following sections.

6.11 Partnerships with the business sector

Telecottages often work in markets that are largely inaccessible to business networks. In spite of telecottage familiarity and understanding of local and in many cases even personal needs and conditions, business sector interests as a means to access these markets is not automatic. In any given country or area, there is a threshold number of telecottages that is required before significant local business interests are awakened. In part, this is because business interests seek reassurance that the telecottage is not a unique case or particular solution to a given problem, that its usefulness extends to more than just a few pockets of people. In the same vein, it is also critical to strive for the movement's ubiquity and continuous spreading, and for its ability to achieve the lofty goals already set. The nature of these two elements, coupled with our own past experiences, suggest that the threshold required implies telecottages functioning in five to ten percent of communities. After this point, we observed the market sector taking a serious interest in the network, bombarding the organization with all kinds of offers of services and invest-

ment. The real breakthrough (awakening of interest of the large, national companies) came when the government committed itself to supporting, developing and especially using the network. This guarantee appeared essential to business investors. It is thus worth noting that the movement's partnerships with the business sector were to some extent contingent on its already existing partnerships and connections with other bodies.

Once successfully initiated, relations with the business sphere have proven extremely important. The actual forms these take can vary hugely. There are sponsorship agreements between local companies and individual telecottages. Telecottage staff sometimes run local businesses through the telecottage, forming partnerships between members of the community as customers or vendors. Telecottages have entered into contractual relationships with companies, as they have with local government offices, to provide services such as Internet websites, computer training, network maintenance or technical support. One of our biggest partnerships involves a sponsorship deal with Microsoft which supplies the entire movement with its software. We feel that it is through business relationships that telecottages can generate a significant amount of their income as well as raise their prestige in the community. Of vital importance, however, because they are only contractually bound to these business partners they retain a critical level of independence from the ruthless world of business.

6.12 Partnership with the public sector

From the time of the central and local government's awakening to idea of telecottages, in 1998, they have continuously supported the movement. We are now entering the fourth administration. Initially, the movement was viewed as only a possible target of assistance, it gradually received increased attention, and government awareness slowly opened up. Governmental co-ordination and involvement is still not fully matured, there remains no real nationwide, integrated policy or method of approach. Thus, support in any given local area is almost completely dependent on particular individuals. For example, if the mayor likes the idea without seeing it as a threat to his or her own authority, the initiators are greeted with public honour and local financial support for their proposal. Conversely, if the mayor deems the proposal unnecessary or in some way a threat, it is significantly more difficult to activate anything.

Initial responsibility was conferred upon certain individuals, later as the movement developed nationally responsibilities became branched out and delegated to members in other regions and with other specialities. Key to this development was the creation of the Ministry of Informatics and

Communication, which at last represented a centralized government agency. This Ministry has taken charge of constructing the entire community access network, a programme planned at present to run until 2006. This will take place not only through the telecottages, but also through the other institutions, for example: schools, libraries, culture houses, post offices and others. The government's strategy in this area has simultaneously simplified our work and made it more difficult. While support is always welcome, the technical and material content as well as ensuring operating conditions required for a viable system of community access demand a unified network, a singular approach and good coordination. This is difficult to achieve when different agencies, often beholden to different government ministries, are in charge of various project components and there is no firm or authoritative leadership. The Hungarian telecottage movement increasingly views its role as one of coordination, however, significant challenges will persist for the future.

6.13 Partnerships within the civil society sector

The telecottage is not merely one of the civil organizations in a given community. As a result of the conditions laid down in the telecottage minimum (see Box 4), it works as a so-called 'civil house' and as one of its basic tasks assists other local NGOs in their operations. It is thus no coincidence that the central government has defined the telecottages as amongst the most important components in its future civil strategies. For the future, the movement is expected to assume a central role in operating the nationwide system of civil inclusion and implementing the entire civil network. This is both in technological terms, for example PublicNet (see Section 6.15), as well as more traditional administrative terms. Given its already existing infrastructure and robust organizational culture, the Hungarian telecottage movement is uniquely suited to perform this role. Presently, across different communities, civil society organizations with different aims and different organizational structures operate telecottages. According to our plans, we would like to broaden the mandate of these organizations so they can serve in their respective locations as an umbrella organization assisting in every kind of local civic initiative. This most emphatically does not imply an intention to standardize individual programmes or to restrict their freedom to engage in projects deemed by them as beneficial to the local community. It means simply that in terms of administrative issues (such as opening hours, local partnerships or time devoted to community programmes) other local organizations, wherever they may be, can count on the telecottage for the support they need. There are already numerous good examples of this in Hungary, but the hoped for level of integration is still missing, as are the guaranteed quality controls (see Section 6.16) or a sufficiently developed programme of national support systems.

6.14 Community access, community task

The Hungarian Telecottage Association network is progressively taking on more public services. These include IT services for schools in small communities, assistance in office administration, public service information provision, advice for funding applications, etc. It is increasingly apparent that public access and its provision is a public task and public responsibility. One of our first goals is to make the central government accept that provision of these tasks should be recognized by and financed from the central budget. We already have the infrastructure, organization and skills necessary for the job. We lack the financial resources. We are striving, for example, to achieve a parallel status with the libraries. If public access to books is an accepted undertaking of the state why should the same not be true for access to computers and the Internet? In this domain, we are starting to finally achieve some successes. The question has now become one of making our lobbying power more effective, honing it to certain issues. The most important of these is the need for the development of legal frameworks through which the government, having identified its load bearing capacity in this field, legally binds itself to undertake the related budgetary responsibilities and lays down legislation regarding how this will occur. It is time, we argue, to codify in law community access in terms of universal access and universal service. This process has already begun. Legal changes initiated in 2003 have already included significant legislation regarding Internet access. This is, we stress, merely the beginning of the process, there is significant progress that remains to be made, but we feel that, after many years of getting nowhere, we are finally on the right track.

6.15 The road to institutionalization – the community net

It is highly likely that community access on a telecottage basis will become the standard means of Internet service provision to small Hungarian communities. It will strive to serve equally business, civil society and state spheres. In order to realize this aim we are uniting a broad range of local associations and local government institutions, from all parts of the country, to present our joint case to the central government. We are involved in these movements in every place where there is community access as well as in those places where it is merely planned and crucially, where community access, under civil control, is supported by local government. We refer to this organizational structure concept as the 'community net'. We are now striving to induce government to institutionalize this entity as a model and framework for cross-sectoral and rural-urban interrelations. The community net should be understood in terms of the following four components:

Network endpoints – The community access points, mainly telecottages, which undertake responsibility for operating the community network and for providing access to users and ensuring standard quality controls (see Section 6.16).

Network infrastructure – In November 2002, based on a telecottage movement initiative, the government committed itself to creating PublicNet. This means that every organization or movement supplying public services throughout the country, amongst which of course are the telecottages, will be able to connect to the government optical fibre network. It also refers to our intention that local communities eventually become the owners of their own fibre optic networks.

Administrative public service – This is the entirety of Internet services, which central and regional governments, as well as public service bodies, want made available for small communities on the network. This is not merely a question of creating these services, but more crucially of how they are to be effectively and fairly disseminated to users and how feedback from those users is to reach back to central points of service provision.

Public telework network – Ensuring in everyway possible, that users are fully enabled to make the most of the possibilities afforded by the Internet. This is envisioned as taking place through distance learning and a telework network, mentoring programmes, provision of public services and suitable training and background information provision. The telecottage movement, along with many other civil society programmes in Hungary, is capable and willing to provide these services and indeed already has experience in doing so. Moreover, we feel that wherever possible these things are best done at a civic level.

6.16 Quality assurance

It is not unreasonable to suggest that civic organizations, by their very nature, can be unreliable and inefficient. However, they need not be thus. With careful planning and organization, coupled with a properly legislated and technologically developed quality assurance system, it is possible to attain the standards required of societal institutions and for being connected to the systems of other spheres (i.e. e-commerce, e-government). In Hungary, almost from the beginning, telecottage minimums were defined (see Box 4). These control what kinds of NGOs can call themselves telecottages and require them to produce certain minimum standards and services. However, attempts initiated to contractually bind organizations through the use of the telecottage name have remained unsuccessful, chiefly due to the speed with

which the organization has grown. Introduction of this system does not promise to be an easy task, however it is, in our view, essential.

A significant part of this problem lies in the difficulty of monitoring the movement. Since the outset, there have been efforts to establish monitoring and research frameworks, and to maintain an accurate and up-to-date database of what is happening in which telecottage and when. Without such data it has proven difficult in the past, for example, to convince potential funders, government and sceptics about the impact and influence of the organization. Although a significant amount of research has taken place, this has largely been from an academic perspective, rather than of direct functional interest. Indeed, even when we have managed to produce in-depth and accurate reports about the current state of affairs, based on questionnaires and interviews, these have unfortunately been one-off occasions. The reasons for this are, we feel, two-fold. First, the speed with which the organization has expanded from a 'family' affair to one of more than 1000 people has made simply keeping up with who is who and where a challenging task. Moreover, as the diversity of activities and membership increases, even simple categorising or generalizations about the movement become difficult. A second problem is theoretically more straightforward – the problem of finances. Given the financial challenges of day-to-day survival, the financing of a widespread and long-term (much less permanent) monitoring programme is currently impossible.

Thus ensuring that quality of standards that we require are maintained and exercising legal control over the telecottage name, remain challenging tasks. However, they are not insurmountable.

6.17 Critical point: human resources

Initially, the movement grew out of sheer enthusiasm. The first 30-40 enthusiasts functioned as a large family. Currently, in 2005, the telecottage movement is the source of primary occupation for more than 1000 people. This number looks likely to double within a few years. The specialist knowledge of these workers, their readiness to help and their growing prestige in local communities demand the institutionalization of certified, accredited competence based telecottage manager training, and ongoing collection and dissemination of their experiences and tried and tested solutions to common problems. In this vein, the earlier more informal training methods were systematized and theorized. A comprehensive programme of state-recognized training was assembled and we began a movement-wide training system and a mentoring and monitoring network.

The association also is involved in an international project to design and distribute an online, multifunctional education programme in partnership with Estonia and Spain, as well as with organizations in Scandinavia and the United Kingdom. This programme seeks to develop a highly user-oriented and user-structured education package for telecottage managers and employees. This project, if successful, will provide a substantial contribution to telecottage personnel training and further will become one of the first truly large-scale co-operative projects achieved under the auspices of the European Union of Telecottage Associations. We believe that investing in education and training is an essential condition of NGOs' attempts to build a solid infrastructure, to improve the quality of their work and to ensure the ultimate material security of their organizations. A key requisite of the network's institutionalization is a system of quality assurance, which can only come from effective training and from the recognition that this training produces people capable of quality work, quality ideas and quality co-operative relationships. If we can convince state and business partners to recognize this, development will follow.

6.18 Community information technology, new professions

In Hungary, a new science or profession of *community information science* is emerging. This form of scientist is the source of community information science and a guide to its practical and effective applications. We are convinced that, with careful direction, the self-empowering nature of structured local information society can mitigate the 'falling apart' of small communities. Moreover, community needs are increasingly met via new opportunities offered by community access and information technology. It is vital to consider the new requirements of communities in the contemporary world. How far have new possibilities led to entirely new sets of needs and desires, how much have they strengthened previously existing ones? From a sociological perspective these issues raise fascinating questions regarding how technology and society intermingle and how active programmes, such as the telecottage movement, can contribute to both academic research and subsequent, practical application.

Much research has focussed on individual use of the Internet, and we feel it is time for more concerted examination of communities and the Internet. The association, without a doubt, offers possibilities in this area. We have clearly observed, for example, changes in the traditional locations of local culture, its production and consumption, the places where information and experiences are exchanged. Indeed the forms in which knowledge and skills are transmitted and the kinds of connections that exist with others beyond the confines of the village have radically been altered. It is becoming an everyday occur-

rence to hear the local innkeeper complain that people now frequent the telecottage for news and gossip, and that especially for youth, the telecottage is the place to be...

6.19 Strategic growth and development

The past ten years have witnessed an evolution from the initial appearance of the telecottage idea, the opening of the first (still operational) telecottage, through to the association's assuming an institutional role in modern Hungarian society. During this time, the increasingly defined and modified versions of the telecottage's national strategy have played an important role. From the outset, our ambitions have been to harmonize these strategies with the government's development plans and programmes. We have been, it seems, successful. In the government's National Development Plan, the nationwide spread of community access often explicitly involving telecottages, is defined in relation to information society development strategy, civil strategy and EU acquisition communication strategy. Moving from strategy to budgetary realities, however, is a difficult road and one that we are only beginning to travel. It would be optimistic to assert that we had finally achieved our long-term goals, however, we are perhaps closer to them now than at any stage in the past. As financial experts are only too quick to point out, one who does not match the government in expenditure does not exist in its eyes. We are, through our international relationships, increasingly able to do this.

6.20 Where has the money come from until now?

The Hungarian telecottage movement until now has received financial support from the government only in the form of grants, which have grown year by year. As crucial as this has indeed been, we strongly feel that the absence of systematic and continuous support has been a significant problem, one that remains largely unsolved. We have worked to ensure that this shortcoming has not resulted in the project being economically unviable. Indeed, in international terms the problems we have faced have been in no way rare or unknown. To consider this issue from a positive perspective, the telecottages were and are compelled to learn how to provide services efficiently, make themselves economically viable and find their own sources of income. Their skills in the area of funding applications is exemplary and in terms of joining the EU this can only improve their situation, given the largely grant-based nature of European Union application and funding processes.

However, this does not mean that the purchase of services by local or central government and making availability of these services a public task, is unnecessary or undesired in the ongoing maintenance and improvement of the network, or in the joining to the electronic economy. Systematic governmental support is essential for maintaining a unitary, national service. According to our experience, such a service cannot survive only through civic activity and from civil society sources.

6.21 The lobby school

During the last 15 years, since the political changes in Hungary, it has been necessary to re-learn the concept of lobbying, as well as many other notions such as 'capital' and 'profit.' It also has been necessary to conceptually move away from previously accepted notions such as protectionism. We have had to study and apply methods that were to all intents and purposes new to us. Thus the people of the telecottage movement have been forced to rapidly adjust to new working conditions and methods. Basic to this process was the building of new relationships at the highest level. A further critical necessity was to establish realistic and achievable social goals, and to extend the promise of success in programmes and achievements. In all our programmes and grant applications a minimum working condition was total transparency and the exercise of all possible means to exclude any possibility of corruption. Indeed our practices have served as examples to some government organizations. In achieving these aims a degree of psychological, management and public relation skills have also proven necessary. For example, proper acknowledgement of achievement, suitable handling of the media and achieving the required amount of external attention are all crucial to successful lobbying. We feel that it is important to share these experiences, and the expertise we have developed in this field, with the telecottage movements of other countries too.

6.22 International relations

News of our movement, which grew out of the specific conditions in Hungary, quickly spread to neighbouring countries. There are, of course, many Hungarians living outside the borders of the country. 'Telecottage tourism' rapidly became commonplace, and as a result, similar movements soon sprang up in Romania, FR Yugoslavia, Slovakia and the Ukraine. Our international relationships have spread across the world through a variety of programmes, e.g. Localnet, through co-operation with the European Union and global organizations such as the ITU, UNESCO, USAID and the UNDP. We have also taken part in many successful twinning programmes with Estonia, Lithuania, Poland, Russia, South Africa, Spain, the UK, etc.

The opportunities afforded by direct, cross-border relationships between individual telecottages are far from being fully realized. Last year the European Union of Telecottage Associations (EUTA)¹⁰ was successfully launched with the joint efforts of telecottage federations in Bosnia-Herzegovina, Bulgaria, Estonia, Hungary, Russia, Serbia and Montenegro, and Slovakia. EUTA will provide a service and support network to which all telecottage and similar movements can join, from which they can receive support, and through which they can share experiences and expertise to the benefit of themselves and each other. We envision a virtual 'telecottage country' that will evolve particular notions of the global village into achievable practice.

The association is presently involved in a wide variety of international cooperative projects and agreements. In our view, international relations and joint projects are currently one of our most important tasks. This is not simply because Hungary has recently joined the European Union. Rather we observe that telecottage movements are now beginning to come to fruition in many other countries. Moreover, our interest is not restricted simply to telecottage movements. We recognize that, just as our movement grew out of some very specific and rarefied conditions in Hungary at a certain period in history, the same was true for other places. Communities of Internet users, whether bound by 'real' or 'virtual' ties, occur in a huge diversity of forms, with a significant range in their goals and means of achieving them. All kinds of organizations should be seeking to work together as time goes by, with the aim of taking civil society beyond the borders of individual countries and discovering how we can assist each other in our wider aims.

¹⁰ <http://www.euta.hu>

Attachment 1: Checklists

Preliminary questions about the telecottage programme, critical points



The following **checklists** are used by the Hungarian Telecottage Association when establishing a new telecottage. They are useful tools for helping developers consider all important issues and critical points for the successful launch of a new telecottage.

Please answer the below questions honestly and in a short and focused way, by enumerating the facts. If relevant, also put these questions to other direct stakeholders. Assess the answers, request clarification from experienced telecottage managers in case of any uncertainty. As a result of this exercise, all critical and weak points will be revealed.

- Is there an enthusiast-type person, who will work towards the telecottage's realization as a labour of love, believing in its usefulness, and able to convince others to support the cause? Who is he/she?
- Is there a person, or a group of people, who are able to gain the appropriate knowledge and operate the telecottage? Is this person or group trusted? Will the locals be comfortable turning to this group or person with their questions? Have the locals already been asked this? Who is this person or group?
- Is there *appropriate support* from people who are important and influential in the local community? Are there any individuals or groups who are against the telecottage programme? Who are the supporters and who are the opponents?
- Does the local community support the initiative? If yes, in what ways? Or is it neutral, or hostile towards the programme?
- Is *co-operation* secured from the local groups and organizations to which the telecottage would offer services? Are they willing to co-operate? Is there any co-operational agreement in this respect? With whom?
- Is there any *co-operation* with any organization *outside* of the local community in relation to the telecottage programme? With whom and what is the nature of this arrangement?
- What problems or issues within the local community can be addressed by the telecottage? What kinds of opportunities for the local community will be enhanced by the presence and services of the telecottage? Enumerate these.

- Is there a development plan (concept) for the local community, or the small region, into which the telecottage can integrate and connect with its services?
- What kind of regular services are planned for the telecottage? Enumerate these. Has the definition of these services been based on a realistic survey of needs? Can the necessary conditions for the particular services be secured?
- Who will be the owner of the telecottage equipment, employer of the telecottage staff, and responsible for operations? Has any decision already been made in this respect? Is the telecottage manager reliable and fit for job?
- What kind of organization will this be and who will operate the telecottage? Has any decision been made in this respect? Is the organization stable and fit for this undertaking? Do the locals accept the organization?
- Where will the telecottage be located? In a shared building? Housed by another institution? In a stand-alone building (who is the owner)? Has any decision been made in this respect? What is the address of the planned telecottage?
- How many rooms are available for the telecottage operations? Is the layout between them appropriate? Is it possible to separate these workspaces? Can simultaneous activities be organized?
- What is the spatial availability within the telecottage? Is there enough space for the planned services?
- Is there an appropriate number of telephone lines available, or is it possible to get additional lines immediately? Is the quality of the telephone lines appropriate for (broadband) Internet connection? Is cable-TV available in the village?
- What other favourable conditions (such as well-functioning local NGOs) are contributing to the telecottage programme? What further efforts have been undertaken as steps to establish the telecottage? List, for example, grant requests, information gathering, planning, development results, local initiatives, and so forth.
- In the event of a successful application, from the start of funding, within what timeframe do you anticipate being able to open the telecottage? If you are unable to realistically predict the timeframe, why?
- What kind of risks and dangers do you anticipate? How do you propose to mitigate these?

- ❑ Are you familiar with the operations of any existing telecottage? Do you have enough experience? Are you planning to undertake further studies, exchanges of experiences, etc.?
- ❑ *In terms of finances* – considering incomes and expenditures, how long are you able to foresee the sustainability of the telecottage? A half year, a year, more than a year? What are the facts, upon which your prognosis is based? Would you be able to make a business plan for the telecottage?

Organizational dilemmas that can occur in the telecottages, for which responses are needed



There are three essential approaches for avoiding, resolving, and handling organizational problems and conflicts. These need to be employed simultaneously to ensure their effectiveness.

- The highest possible degree of *transparency and openness* in decisions, decision-making processes, the execution of the decisions, and accounting.
- *Personal responsibility* and clearly defined rights and duties for every situation, event, and task.
- Clear, straightforward and simple *regulations, written agreements, and contracts*.

- ❑ The organization exists only on paper. In reality, every decision has been made by one person or by a group of a few people – without any social or other control whatsoever.
- ❑ The real objectives of the initiator are not identical with the telecottage objectives and role; the aim is only to get resources. The fulfilment of the grant support requirements automatically causes conflicts, and the benevolent outside participants risk suffering the consequences.
- ❑ The telecottage is not organizationally independent. The manager of the telecottage is not the legally recognized leader. He or she may be called the manager but in fact doesn't have any discretion over the resources and equipment.
- ❑ The identity, or the independent 'look and feel', of the telecottage cannot be created, because the receiving organization hinders this (possibly unintentionally). This has a bad effect on operations.
- ❑ The staff is selected by somebody other than the manager. The selection may result in a mismatch of people and positions.
- ❑ The organization and the administrative processes of the receiving institution are too complicated and slow, and/or too many people have influence over operational decisions. The situation is not compatible with the telecottage requirements.
- ❑ The telecottage is overly dependent on the benevolence of its main supporter (e.g. the local community, a company). In spite of written agreements and contracts, its existence is contingent on good relations with the supporter, and it lacks the means to enforce agreements.
- ❑ In a hybrid organization, the interests of one of the participants become overwhelming (too much administrative or business orientation, resulting in monopolization of possibilities and equipment), and there is no mechanism to restore the balance.

- ❑ The NGO is dissipating or 'fading away', for example, because it was founded only to participate in the grant programme. Its operations are halted, leaving the telecottage vulnerable to other organizations and individuals.
- ❑ The role of the NGO is taken over by the local community, and this cannot be stopped by the contractual relations, or by the individuals.
- ❑ Personal, business and family ties and interests become stronger than the organizational co-operation, contracts and regulations. The organization operates in contradiction to regulations and contracts, because of the influence of these personal relationships. Participants are inclined to accept this situation for one or another reason.
- ❑ Trust-based relationships are upset. Contracts may not be sufficiently precise and it becomes impossible to handle unexpected situations in a predictable way. Problems become unsolvable, and since events are not recorded, opinions exceed the role of facts.
- ❑ Roles and responsibilities are not regulated or evenly allocated by the telecottage. Or, there are no responsibilities or tasks defined for even the smallest organizational unit (two people). Telecottage employees view given tasks as someone else's.
- ❑ Co-operation between organizations is not documented in written agreements, which may result in deteriorating relationships when things do not happen in the planned way, with the organizations consequently blaming each other.
- ❑ The non-permanent status of the staff (either because of lack of financial sustainability or the particular type of employment) causes organizational instability. Although this basically is a financial issue, which cannot be handled by organizational actions, it does affect the organizational situation.

Points to ensure regarding control of the telecottage building and floor plan

- ❑ The telecottage's right to use the building and rooms is uncontested. The location is secured for the appropriate period. If the available room is momentarily less than appropriate, then an extension is possible.
- ❑ The operational independence of the telecottage is secured. There is no need to share space with other organizations that would conflict with telecottage activities. There is no problem with the opening times.
- ❑ The building is accessible, its location is central, there are enough parking spaces, and locals can easily find the place (there is a prominently placed information sign).

- The building's electricity, sewage, water, heating systems and connections are in good working condition. The operation costs of the building are not too high.
- The building and its surroundings are appropriate for the telecottage purpose and functions.
- The building and its rooms comply with insurance companies' criteria for security. An alarm system is installed.
- The building has appropriate social and sanitary facilities (toilets, separate room for smokers).
- The number of rooms and other facilities affords adequate separation of the different activities (reception area, room for silent activities, for noisy activities, service rooms).
- The rooms are separately accessible separately and can be reached without disturbing other activity spaces.
- The rooms can be separated accordingly to the different activity types. The movement of people throughout the building does not disturb the different activities and services. Possible conflicting situations include: noisy and quiet activities, closed-type activities (such as negotiations, interviews) and more open activities (forums, training) and activities with additional security requirements.
- There is sufficient and separate space for the specific work and activities, the equipment can be accessed easily.
- There is sufficient and appropriate storage facilities (both open and closed).
- The quality and comfort of the furniture is acceptable for the users.
- The general state of the building, its decorations (flowers, pictures, etc.), its cleanness, etc., contributes to a comfortable atmosphere in harmony with the intended spirit of the telecottage.
- There are no particular circumstances, or local problems, which can undermine the operations of the telecottage.
- Is there any particular quality of the building or its surroundings, which could be useful for the telecottage or for its services (such as an historical building, cellar, garden, etc.)?

Attachment 2: Telecottage Movement Timelines

Chronological summary of the Hungarian telecottage movement

1989-90 – The attention of the state, politics and economics become focused on the change in system, while concerns develop about the challenges posed by an information society, civil thinking, and free and responsible action.

1992 – Librarians introduce the telecottage concept, but nothing comes of this as the change in system introduces more important and immediate concerns.

1994 – The first Hungarian telecottage is established due to a local community development initiative supported by the Ministry of Social Affairs.

1995 – The Hungarian Telecottage Association comes into existence through private initiative.

1996 – Attempts are made to capture government notice – without much success.

1997 – USAID's Democracy Network Program supports the first major telecottage programme – 30 telecottages and the development of the first National Telecottage Program.

1998 – The Ministry for Communications supports the programme to establish 40 new telecottages.

1999 – The Ministry for Agriculture and Rural Development joins the movement, and other branch telecottage programmes (social, employment) are developed.

2000 – The six-year National Telecottage Strategy and Program is completed and 120 new telecottages are established.

2001 – With the support of the Government Commissioner's Office for ICT, telecottages appear for the first time in the national information society strategy, and telecottage numbers double, resulting in 200 new telecottages. The first contract with Microsoft is signed. Restructuring the Hungarian Telecottage Association occurs to better serve membership needs.

2002 – Decreasing government support, as ICT is raised up to a ministerial level. The telecottage movement opens the door to the business sector, makes plans to introduce a telecottage franchise system.

2003 – Telecottages reclaim their decisive role in achieving community access, cooperation agreements are worked out with government entities.

2004 – Financial support is received to strengthen the service capacity of telecottages and to increase cooperation with the business sector. The number of telecottages exceeds 500. The European Union of Telecottage Associations (EUTA) is established.

2005 – New challenges in accessing EU grants. Focus on strengthening public service delivery capacity through the telecottage network.

Links

European Union of Telecottage Associations (EUTA)
<http://www.euta.hu/>

Foundation for Development of Democratic Rights (Hungary)
<http://www.demnet.org.hu/>

Hungarian Telecottage Association
<http://www.telehaz.hu/>

Powys Telecottage Network
<http://www.telecentres.com/>

Red Hat – The Open Source Leader
<http://www.redhat.com/>

Telework Association (UK)
<http://www.tca.org.uk/>

UNDP Bratislava
<http://europeandcis.undp.org/>

UNDP online telecottage course
<http://www.undp.sk/ictd/>

USAID
<http://www.usaid.gov/>

Yugoslav Telecottage Association
<http://www.teledom.org.yu/>

Information and Communications Technologies (ICTs) are powerful tools of knowledge sharing, which enhance local and global development opportunities, promote political accountability, and improve the delivery of basic services. Without innovative ICT policies and initiatives however, deprived social groups may be left behind or further afflicted in the transition to knowledge societies. Working in 166 countries, UNDP helps to draw on expertise and best practices to develop strategies that expand access to ICTs and harness them for development.



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