Community Telecenters in Some Countries of the ESCWA Region

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List of Acronyms

ADSL: Asymmetric Digital Subscriber Line
CAC: Community Access Center
CRTD: Collective for Research and Training on Development
EGP: Egyptian Pound
FARDOS: Fund for Integrated Rural Development Of Syria
ICDL: International Computer Driving License
ICT: Information and Communication Technology
ICTDAR: Information and Communication Technology for the Development of Arab Region
ITU: International Telecommunication Union
KS: Knowledge Station
MC: Syrian Ministry of Culture
MCIT: Egyptian Ministry of Communication and Information Technology
MCLC: Multipurpose Community Learning Centers
MIC: Mobile Information Centers
MOCT: Syrian Ministry of Communications and Technology
MTCC: Multipurpose Technology Community Center
NGO: Non-Governmental Organization
NITC: National Information Technology Center
PC: Personal Computer
PCA: Professional Computer Association
PICTA: Communication Technology Academy
PiPOP: Internet Point of Presence
PMU: Project Management Unit
SCS: Syrian Computer Society
SPE: Syrian Postal Establishment
STE: Syrian Telecommunication Establishment
TACC: Technology Access Community Centers
UNDP: United Nations Development Programme
Introduction
The advent of Information and Communication Technology (ICT) has given birth to various forms of new communal activities, creating better and more inclusive communicative relationships and enhancing almost all services, thus improving economic and social development. These forms can be extended to all sectors and segments forming a nation. This is valid for rich as well as poor countries.

This technology continuously displays new applications, transforming human life into a more informative, knowledgeable and productive one. What one is able to perform currently on the communication and information level was unthinkable a few decades earlier, empowering mankind to advance at a vertiginous rate. However, not all leaders and decision makers are aware of this fact, particularly in developing countries. Fortunately, however, some nations view this technology as an opportunity to achieve a breakthrough in their development, as is the case of some less developed European and Asian countries. An essential part of the two WSISs’ goals is to make sure that all nations are deploying the necessary efforts to assist their societies become Information Societies, which are synonymous to development.

The digital divide exists between societies and through societies themselves, but these divides should not obstruct the transformation process. Innovative solutions should be worked out and implemented. One of the best solutions for bridging the digital divide has been the establishment of telecenters. These centers have quickly gained a social and cooperative connotation and become “Community Telecenters” where citizens can access ICT services with a minimum cost and maximum benefit. This concept has been adopted almost everywhere, in rich as well as in poor countries, in urban as well as in rural areas. Community telecenters are the key instrument in offering IT literacy and access to information, directly by users or with the assistance of a qualified staff member. These community telecenters have an additional benefit in the area of gender equality, particularly in conservative and traditional societies where women may experience difficulties in using ICT structures such as Internet cafés.

Community telecenters are playing a positive role in their communities, at least at the level of ICT usage and information gathering; this role should be enforced and strengthened through the adjunction of a more focused services and knowledge component to their function. For instance, community centers could be instrumental in accessing e-government services, particularly in rural and isolated areas, as well as playing a key role in the dissemination of e-learning, assisting populations to develop their skills and improve their productivity.

Community telecenters started their development in ESCWA countries at the beginning of the actual millennium in countries including Egypt, Jordan, Lebanon, Syria and lately Iraq and Yemen. Their expansion and impact has varied from country to country, but their main role remains constant - to bridge the digital divide between underprivileged and wealthy areas. All of them focus on IT literacy and capacity building; this role should move from teaching people how to use ICT, to showing them how they can take advantage of it.

This report intends to present the current situation of community telecenters in five ESCWA countries, namely: Egypt, Jordan, Lebanon, Syria, and Yemen. Information presented in this report is collected directly from community telecenters responsibles or from field visits and meetings with community telecenters staffs.

This report is to serve as background for a project headed by the United Nations with the following goal: ‘to empower poor and disadvantaged communities through the transformation of existing ICT access points in selected countries around the world into knowledge hubs of
global knowledge networks. The project aims to increase the engagement of target beneficiaries in disadvantaged communities (with an emphasis on women) in these knowledge networks. This involvement will serve to deploy relevant knowledge pertaining to key areas of sustainable development such as employment, education, gender and health.”

The first section of this report deals with the ICT and human development in the ESCWA country members. Section two will address the management and business models of community telecenters, while section three will entirely dedicated to the status of community telecenters in some ESCWA countries, this will be summarized in section four. Recommendations are presented in section five.
I. ICT and Human-Socio-Economic Development among ESCWA Member Countries

For the past two decades different countries in different regions have been involved in the process of capitalizing on the information and communication technology in the socio-economic development, or the acceleration of this development; Ireland, Finland, Hungary and Malaysia are among the best known. Decision makers in these countries adopted the right policies to reap the fruit of the enabling factor that this technology offers to almost all sectors.

The United Nations organized two world summits calling for the adoption and the implementation of the Information Society. Both summits stressed the role of the ICT in the socio-economic development and sought to reduce the digital divide by developing awareness regarding the benefits of the Information Society and by presenting mechanisms to help developing countries advance towards such a Society within the context of the global knowledge-based economy. The first Summit (Geneva, 10-12 December 2003) resulted in a Declaration of Principles and a Plan of Action; and the second Summit (Tunis, 16-18 November 2005) focused on the implementation of the Plan of Action and financing mechanisms for using ICTs for development.

In some ESCWA member countries, NGOs and specialized groups started awareness campaigns calling for the preparation of the scene for the potential role that ICT will play in the development of their respective countries. Accordingly, some countries devised strategies and action plans in line with international trends; others launched proper initiatives, but for many e-strategies were inactive or simply non-existent.

In May 2006, ESCWA organized a workshop on “Information and Communication Technology Policymaking in ESCWA Member Countries”1, where an extensive analysis was carried out which showed:

“Most countries have not built comprehensive e-strategies based on a sound logical framework with clear policy objectives and strategic priorities, including monitoring and evaluation of the achievements of targets. Most of the declared e-strategies are seen in terms of access and not usage, without clear strategic drives for accelerating ICT usage for the population at large and for businesses.”

ESCWA member countries have not yet reached the level of maturity required to take full advantage of ICT in the development process of their societies. The same thing can be repeated for various topics strongly related to the implementation of e-strategies, such as the establishment of supportive infrastructure, protective legislation, etc. which is still lacking. In addition, most of the e-strategies formulated in ESCWA member countries neglect, perhaps unintentionally, many socials issues such as the rural digital divide and gender concern.

Statistics published by the ITU show that ESCWA member countries still suffer the digital divide when compared to the world average as depicted in Figures 1 and 2, where seven ESCWA member countries display scores lower than the world average in term of percentage of Internet users, and eight countries are lower than the world average in term of PCs.

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1 WORKSHOP ON INFORMATION COMMUNICATION TECHNOLOGY POLICYMAKING IN ESCWAMEMBER COUNTRIES, BEIRUT, 2-4 MAY 2006
Given the preceding figures, it is difficult to think that ICT is actually playing a key role in the socio-economic development of ESCWA member countries at large. This is further demonstrated in Figure 3, which shows that the number of bits per inhabitants in all ESCWA member countries is lower than the world average.
One has to remember, however, that in the past few decades the ESCWA region has suffered - more than any region in the world - many painful and interminable conflicts and crises. Policy makers of this region have thus focused on the most urgent issues of the day over development, which has virtually occupied a second place on the scale of priorities, despite the intimate relationship between capacity of conflict resolution and level of development.

However, as figure 1 and 2 show the low level of number of Internet subscribers and low percentage of PCs in the ESCWA region, community telecenters –by their equipment and services- offer a serious opportunity to remediate to this feebleness, particularly in rural and underprivileged areas, where some ESCWA countries achieved a reasonable success as this report shows.
II. Community Telecenters: Models and Success Factors

II.1. Introduction and Background

There is no standard definition of a telecenter, however the common pattern of telecenters leads to the following one: A telecenter is a location where one can typically find a broad range of communication services related to the needs of the community such as Internet access, telephone, faxing, and photocopying services. These services can be free or subsidized by governments or NGOs. Some telecenters provide services including: training on the use of ICT products, desktop publishing, sales or rental of digital devices such as CDs, books, etc. Some other telecenters offer more developed services such as employment information and banking procedures assistance. Others participate in community events, mainly those having an information component, such as health, education and employment issues as well as provide assistance to disabled people such as the visually impaired etc. This kind of telecenter is known as a Community Center.

The establishment of Telecenters has generally been part of a national government strategy to overcome the digital divide issue and/or to dynamize the use of ICT in the development process.

In developing countries, telecenters are generally located in underprivileged areas, such as rural and isolated areas and poor zones of urban areas. They have the mission to reduce the isolation and marginalisation of rural communities by mean of ICT and all its products which enables these communities to be in contact with the outside world. This implies, in the first phase, training rural inhabitants on the use of ICT, as well as assisting rural populations to access all kinds of useful information. This should evolve, in a second phase, towards the community’s empowerment by the ICT through practical applications such as business, health, education etc. and by the use of this technology in the advocacy of community problems at the decision making level.

Prior to telecenters, Scandinavian countries had established the telecottage in the 1980s, which aimed to spread computer technology use in the community. The rational behind these telecottages was to fight against the marginalisation of remote rural places.

The advent of the Internet has generated a similar structure to the telecenter called the Cybercafé that focuses mainly on providing customers with the use of computers and Internet. Cybercafés are usually implemented by the private sector in urban areas; their clients tend to be better educated and richer than telecenter ones.

Another innovation, due to the Internet, is the Information Access Point. These focus more on the Internet and tend to have a public service mandate. Computers and network connections can be installed in public places such as community centers, libraries, schools etc. They are part of governmental initiatives to ensure the outreach of public services and information to all citizens. Community telecenters, in contrast to the Information Access Points, are not necessarily part of public service or even governmental initiatives; they should always be seen as actors for the development of communities where they are located.

As the main concern of this report is community telecenters and their status in some ESCWA region countries. Some general aspects of community telecenters will be discussed, mainly their management models, business model and success factors which are strongly linked to the most
important concern of community telecenters i.e. their sustainability. Section II.2 deals with the
management models while the section II.3 discusses the business model, and section II.4
presents briefly the community telecenters success factors.

II. 2. Community telecenter Management Models

Community telecenter management is rather a difficult task because it has to balance two
conflicting goals that need to be tackled in every stage of the telecenter’s life. These goals are:

a. Socio-Economic Development: most community telecenters seek to provide rural areas with
access to new opportunities in learning and work through the use of ICT.

b. Sustainability: most community telecenters are located in poor areas but desire to become
financially independent in the long-term, thereby ensuring the continuity of the community
telecenter’s services.

The community telecenter’s sustainability should be considered on the financial level as well as
on the managerial level; i.e. community telecenters to be managed by the current support
structure in the long-term. It is important to differentiate between these two kinds of
sustainability and define precisely how telecenter will be supported managerially and how it
will be supported financially. The first relies on the management model and the second depends
heavily on the business model.

II.2.1. Management Models

There are various telecenter management models. They can operate as individual entities, as
part of a franchise, or as a multi-branch organization. They can be run by government
agencies, entrepreneurs, schools, community organizations or NGOs. These models are:

1. International organization-sponsored model.
2. NGO-sponsored model.
4. Private enterprise model.
5. Franchise model.
6. School-based model.
7. Management committee model.
8. Cooperative model.
10. Mobile information center model.

Telecenter management may combine elements from a number of management models listed
above in order to create community telecenters that uniquely meet the needs of a specific
community and insure their success and sustainability.

One has to realize that a management model employed at one site may not be suitable at
another; each management model will obviously be influenced by the community’s
characteristics.

In the following paragraphs, only the first three management models of the ten previous models
are discussed in detail in relation to their suitability with the models applied in the studied
countries in this report.

II.2.1.1. International Organization-Sponsored Model
Management: In this model, an international organization generally manages all the community telecenters in a region. Typically, a project management office located in the nation’s capital city supervises the operations of the community’s telecenters. The project management carries out reporting, offers on-going management support to telecenter managers and coordinates the telecenters’ activities.

Financial Support: In this model, an international organization, sometimes in coordination with government agencies, NGOs, or local organizations, is the primary financial supporter of the telecenters. This organization subsidizes the telecenters’ launching costs, as well as its operating expenses if needed. Community members also contribute to the telecenters’ revenues by purchasing and utilizing services. The community telecenters form a network, making the subsidization temporarily; that is, it continues only until the telecenter becomes financially independent by itself or within the framework of a telecenters member network.

Advantages: This model has various advantages. Sponsor funding allows telecenters to lower prices and expand service access to more underprivileged clients who otherwise would not be able to enjoy these services. This helps to accomplish one of the aforementioned primary telecenter goals. Additionally, this model allows the telecenter to invest in the community in order to become established by the return on this investment. This investment can be relatively low such as offering the local government and local business leaders’ free training or free Internet services, which can promote more business for the community telecenter in the short term.

In this model, community telecenters can receive management support from the head project management office and from the other community telecenter managers. Also, any community telecenter can take advantage from lessons learned across the community telecenters network.

Disadvantages: The largest drawback of this model is the shortness of the incubation period (5 years maximum). This period could be, in some cases, not sufficient to ensure a telecenter’s sustainability.

Management of telecenters is not always a linear task due to difficulty in performing continual remote monitoring by the central management, which thus provides assistance to community telecenters when needed.

Success Factors: For this model to work efficiently, the two disadvantages mentioned above should be addressed by (a) extending the incubation period – that is, the time when the central organization directly manages the telecenters – and (b) developing a transition plan for how the telecenters will be managed and supported without the assistance of the original organization. In addition, regular meetings between central management and field managers should be organized where difficulties and solutions implementation can be debated. The central management should provide strong encouragement to field managers and operators.

II.2.1.2. NGO-Sponsored Model

Management: In this model, an NGO manages all the telecenters in a region, typically through a project management office located in the nation’s capital city. The project management supervises telecenters via reports, offers on-going management support to telecenter managers and coordinates the telecenters’ activities. Telecenters in this model could be transferred back to the communities.
**Financial Support:** In this model, NGOs manage and fund the community telecenters project. Funding source could be the NGOs themselves, a grant from government agencies, international organizations or from private business having mutual interests. The NGOs subsidize the launching costs, as well as the operating expenses for the community telecenter as needed. Community members also contribute to the telecenters’ revenues by purchasing and utilizing services. The community telecenters form a network making the subsidization temporarily – that is, it should continue up to the point the community telecenter achieves financial independence by itself or within a network of other community telecenters.

**Advantages:** This model has many advantages. Donor funding allows community telecenters to lower prices and expand service access to more underprivileged clients who otherwise would not be able to afford these services – this helps accomplish one of the two main goals of the telecenter.

This model also has the benefit of management support from a head office and from other telecenter managers. In addition, NGOs can help to mobilize community support through local partnerships and local organizational clients.

**Disadvantages:** The largest disadvantage is that most NGOs lack the funding to support these telecenter projects in the long-term. Community telecenters may not be able to sustain themselves once this support has been terminated. Some NGOs may be able to secure financial support for the community telecenters, but lack the managerial support necessary to truly develop sustainable telecenters. Due to the fact that the central management headquarters is located far from community telecenters, it is generally difficult for the head office to continually monitor remote operations and provide support to community telecenters when it is needed.

**Success Factors:** For this model to work, the organization must be willing to manage the telecenters for a long period of time or have a transition plan for how the telecenters will be managed and supported when the original organization stops supporting the telecenters.

### II.2.1.3. Government-Sponsored Model

**Management:** In this model, a government agency manages all the telecenters in a region. The agency typically selects a project management team to oversee the operations of the telecenters and provide on-going management support to telecenter managers.

**Financial Support:** In this model, the government agency is the primary financial supporter of the community telecenters. Sometimes the government agency shares the project costs with other international donors, NGOs or the local community/authority. The government and its partners subsidize the start-up costs, as well as the operating expenses for the community telecenter. Community members also contribute to the telecenters’ revenues by purchasing and utilizing services.

**Advantages:** Support from the government allows community telecenters to lower prices and expand service access to more underprivileged clients who would otherwise be unable to afford these services – this helps accomplish one of the two main goals of the community telecenter. Additionally, this model allows the community telecenter to invest in the community in order to become established.
Additionally, government institutions are typically considered safe for all community members. So community telecenters set up in government buildings with government support are sometimes able to attract and include more community members than other models.

This model also has the added benefit of management support from the governmental head office and from other community telecenter managers.

**Disadvantages:** Sometimes government bureaucracy can slow down the support process. In addition, because the community telecenter movement is relatively new, some government agencies without specific ICT experience do not have the management capacity to effectively run the projects. Additionally, since the government agency’s project management office is located in a separate location from the telecenter, it is not always a part of the day-to-day operations, creating problems in evaluating remote management and providing support to community telecenters when it is needed. Lastly, the government might have difficulty with the community telecenter model as an institution since some government agencies cannot collect money for services – and this is a component of each community telecenter.

**Success Factors:** For this model to work, the government organization needs to collaborate with international organizations or NGOs who have experience managing ICT projects. Additionally, the project management support needs to have the ability to make financial and managerial decisions in a relatively short timeframe and be able to implement these decisions immediately. Lastly, if the government agency is not legally allowed to collect money for the services a community telecenter provides, a partnership needs to be formed with an organization that can facilitate this component of the project.

### II.3. Community Telecenters Business Model

Four main costs form the financial life of telecenters:
- Set up cost, which includes premises renovation, furnishing, ICT equipment, training of trainers, etc,
- Staff salaries,
- Recurrent expenses, which includes Internet subscription, electricity and water bills, and consumables
- Equipment upgrading, due to the fact that is ICT technologies evolve rapidly in addition to the relatively short age of ICT equipment

The first item is covered initially by telecenters sponsors who may cover partially the second and the third items, at least for the incubation period. After this period the telecenter has to depend on its resources and incomes in order to insure its financial sustainability.

The sustainability of telecenters depends on several key aspects. It is important that telecenters are able to address the needs of the community for basic information and communications services. However, income generation has proven to be a key for the success of telecenters. If they can provide services that locals are willing to pay, then they can generate profits that can contribute to their continuity which is clearly in the interest of their communities.

Several business models have been developed such as the stand-alone, joint purchasing, and a network of small satellite telecenters. The first one can hardly be adapted to rural and underprivileged areas due generally to the slim financial resources of inhabitants in these areas.
The second is rarely workable due to the weak interest that privates can show for isolated and impoverished areas. The third one seems the most suitable for the purpose of this study.

Whatever the business model used, it is important to stress the community ownership of telecenters and the role of community in preserving their sustainability. Telecenters should be part of the community instruments in its development; this will offer best insurance for the telecenters’ managerial and financial sustainability. However, telecenter proponents should explore partnerships with local potential stakeholders to minimize financial risk and share the running cost of their telecenters.

II.3.1. Telecenters network business model
Based on the following assumptions:

1. Community telecenters are built in villages and small towns and they are small (6-10 PCs) and medium (12-16 PCs). Their establishment should be part of a phased and balanced plan.
2. Community telecenters form a centrally managed network where medium community telecenters can financially assist the small ones, as well as share experience and knowledge.
3. Community telecenter trainers are not necessarily telecenter employees. Rather, they could be paid on a performed training basis, in which case the community telecenter will minimize the number of regular salaries.

The following represents a business model for the community telecenters.

1. Services offered by telecenters include: basic IT skills and foreign languages instruction, ICT services such as Internet access, phone calls, fax, printing, selling of technical ICT books and CDs, etc, services delivery such as e-gov and e-commerce as well as assisting citizens’ find information and content development.
2. Citizens training and different services are delivered by a qualified staff member whose skills are continuously upgraded.
3. Citizens training could be performed on a group or individual basis with adequate rates in each case. Training and services are oriented to the individual interest and community development.

Young citizens, males and females, are targeted in the first place. Training should help them get an IT-based qualification. In the mean time, all populations should be targeted concerning all services.

Children’s clubs, where the PC is instrumental in their activities, are part of the community telecenters’ activities. These clubs represent a double interest: financial as well as being effective in introducing ICT to the coming generation.

Community telecenters have to play an instrumental role in assisting rural and suburban populations benefit from e-government, e-commerce and all information-based services. This assistance should generate a financial income.

Community telecenters’ staff has to undertake a permanent awareness campaign to inform the community about the use of reliable information in their economic and
social activities. This will generate income for the community telecenters in the medium term. In case telecenters has a broadband Internet connection, it can offer Internet subscription to locals against a modest cost, this will be beneficial for community citizens and community telecenters

4. All types of training and services should be profitable, with discounts for women, students and families with many children. Nothing should be 100% free; at least inscription fees should be paid.

5. At least half of the collected money from training will be net income for the community telecenter (the other half could go to trainers) to be added to the income earned from other services.

6. Governmental offices, schools, and private enterprises should be targeted as potential clients for IT training courses ensuring minimum revenue and thereby allowing the community center to cover its basic expenses. Other incomes should cover center maintenance and development.

II.4. Community Telecenters Success factors

Success of community telecenters is not a granted issue, many telecenters exist physically but they are ineffective in their areas, others play vital roles for the development of their communities. Various factors are crucial in the success of telecenters such as:

II.4.1. Trained community telecenters staff on technical as well as marketing and managerial topics

It should be well understood that it is not only the community telecenter users who need training. Community telecenter staff, and particularly telecenter managers, needs to develop a range of business, administrative and community support skills.

When a community telecenter is established, there is often a lack of appreciation of the outreach of such centers. Telecenters can provide more than training and access to ICT resources. They should offer training and support to help people use these tools to maximum effect. It is therefore extremely important that telecenter staff are involved in a program of continuous training and that they be associated with institutions that offer high quality training in technical and managerial skills to ensure business and technical leadership. These skills are necessary prerequisites to make a telecenter function properly.

Field experience has showed that a community telecenter’s staff needs training on basic topic such as basic computer skills and basic business, financial, marketing and public relations skills. They should receive intensive training on information research and data gathering. A telecenter’s staff, particularly the manager, should fully understand the goals of the telecenter and the information role it is to play in the development of the community. The choice of the managers is a crucial issue for the success of the community telecenter.

II.4.2. Partnership with Local Community Actors

Community organizations and institutions such as schools, health centers, agricultural offices, cooperatives and community leaders can play a vital role for the community telecenter’s
survive. They can participate actively in the promotion of the community telecenter and its activities, as well as supplying the community telecenters with the necessary resources – in direct or indirect forms - to ensure its sustainability.

As mentioned in the three management models previously discussed, community telecenter management usually suffers from the remoteness of the central management. Local actors can therefore play an active role in bridging this gap by helping to adapt the community telecenter’s services to the specific needs of the community. This will ensure that community telecenters are of maximum benefit to their populations.

II.4.3. Community Awareness
Community telecenters should lead awareness campaigns focusing on three things: (a) the usefulness of ICT in the economic and social development of the community and the promotion of its activities, (b) the role ICT can play in reaching, gathering and archiving this information and (c) the role that ICT can play in providing the youth with better opportunities to get a decent job.

II.4.4. Sustainability
As was evoked in the beginning of this section, the sustainability of a community telecenter is two-fold; the first financial, the second managerial. Financial sustainability depends heavily on the business model adopted to run the community telecenter, which should secure sufficient revenue to cover staff salaries, operating expenses and equipment upgrades.

Managerial sustainability means the continuity of a support management provided by a central office. This central office should coordinate the community telecenters activities and ensure the stability of the community telecenters network as a national actor advocating the use of ICT in the economic and social development process. Regular meetings between community telecenter staff and ongoing staff skills upgrading are also essential elements of this role.

Sustainability is also inherent in the continuous innovation and adaptation of services offered to the community.
III. Telecenters status in some ESCWA countries

In this section the case of five ESCWA member countries will be discussed based on information collected directly by field visits and information published on the Internet and documents authorized by the targeted countries and specialised international organizations such as the UNDP or the ITU.

III.1. Egypt

The National vision of the Egyptian Information Society is based on seven basic axes, namely:

(a) Digitisation of telecommunication networks for fixed and mobile telephony;
(b) E-government services to citizens and investors in their locations via the Internet;
(c) E-business services to transform the Egyptian community into an information society in line with international developments;
(d) E-Learning applications aimed at spreading knowledge and information through the Internet;
(e) Developing health services using information technology (IT) to raise the efficiency of presenting therapeutic services and telemedicine, especially in remote areas;
(f) E-documentation of the country’s civilization and natural environment through the building of integrated information systems which will provide local and international presentations of Egyptian civilization;
(g) Developing technology related industries by raising the quality level of Egyptian companies along with their ability to compete internationally.

In order to make this vision a reality, the Egyptian government is capitalizing on human capacity building, which can achieve remarkable results. On this basis, Egypt has decided to base a major component of its national ICT plan on upgrading the overall understanding of ICT and practical computer skills within the country. The government has developed training programs and formed partnerships with training institutes to develop ICT capabilities within the country on the following scopes:

- Basic ICT skills or “IT literacy” -- the ability to use ICT for basic tasks and as a tool for learning.
- Professional ICT skills -- the ability to use advanced ICT tools and/or to develop, repair and create ICT tools and applications.
- Applied ICT skills -- the ability to apply simple ICT tools in general workplace settings.

The Egyptian government, as well as different stakeholders, have designed different, but integrated programs – ranging from basic to professional - aimed at upgrading IT skills through all levels of Egyptian society.

The different layers of training are designed to cover all facets of technology utilization, from design to the use in all fields. Egypt’s efforts to develop the country’s human capital have as their goal that every citizen will ultimately be qualified to contribute to a technology-based society. This awareness of the importance of qualified and well-trained human resources is shared throughout the governmental agencies, as well as the business sector.
The Egyptian Digital Divide

The figure below shows that Egypt, on the scale of main ICT indicators, is lower than the world average, particularly in terms of mobile phone, Internet users and the number of PCs per 100 inhabitants, which is one of the lowest in the ESCWA region.

Figure 4: The Egyptian Digital Divide


The Egyptian government announced at the time of the 2007 national budget project discussion that it targets 6 million Internet users (7.6%) and 18 million mobile subscribers (22.8%) for the year 2007.

There is no figure available showing the digital divide between rural and urban areas, but officials from the Ministry of Communication and Information Technology estimate that the ratio of PC presence between urban and rural households is at least five to one. This estimation is plausible given the fact that illiteracy is still a major issue in Egypt (40%) mainly in the rural areas. However, the Egyptian government has introduced various initiatives aimed at encouraging citizens to use ICT. One of these initiatives is called the “PC for Every Family”, which allows Egyptians to purchase a computer for 1500 Egyptian pounds (about US$250) plus an EGP 50 ($9) down-payment.

III.1.1. The IT Clubs Project comes under this human capacity building program, which targets common citizens, especially in underprivileged areas, and women who suffer from the digital divide almost everywhere in the world.

IT Clubs is a project launched in 2000 by the Egyptian Ministry of Communication and Information Technology (MCIT) with the aim of:

- Developing IT awareness among Egyptian children and youth.
- Developing IT skills for the above mentioned categories to empower and prepare their access to the information era.
- Reducing the digital divide by ensuring IT availability throughout Egyptian society, especially the underprivileged.

IT Clubs are a communal solution to problems of affordability, accessibility, and awareness.

The IT Clubs model is a public-private sector initiative aimed at providing affordable Internet access throughout the country to those who cannot afford a PC. As an added benefit, local
businesses can use also these clubs. IT Clubs are viewed by the MCIT as an essential component of the country’s national plan to familiarize people with computers regardless of their skills, gender and income level.

The first IT Club was opened in June 2000. Now they are located throughout all Egyptian governorates, from Aswan in the south, where there are 27 IT clubs, to the Dameitta in the north, where there are 33 clubs, and in the north of Sinai where there are 12 clubs. Cairo alone hosts 277 clubs, which is neighboured by the AlGiza governorate that has more than 150 IT clubs, as displayed in the following table:

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Num. of IT clubs</th>
<th>Governorate</th>
<th>Num. of IT clubs</th>
<th>Governorate</th>
<th>Num. of IT clubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aswan</td>
<td>27</td>
<td>Suez</td>
<td>27</td>
<td>Bani Suef</td>
<td>34</td>
</tr>
<tr>
<td>Asyut</td>
<td>62</td>
<td>Al Sharkeya</td>
<td>78</td>
<td>Port Said</td>
<td>29</td>
</tr>
<tr>
<td>Alexandria</td>
<td>89</td>
<td>AlGarbeya</td>
<td>62</td>
<td>Dameitta</td>
<td>33</td>
</tr>
<tr>
<td>Ismailia</td>
<td>33</td>
<td>ElFayoum</td>
<td>38</td>
<td>Janoub Sena</td>
<td>9</td>
</tr>
<tr>
<td>Luxor</td>
<td>17</td>
<td>Cairo</td>
<td>277</td>
<td>Kafer El Sheikh</td>
<td>43</td>
</tr>
<tr>
<td>AlBaher AlAhmar</td>
<td>15</td>
<td>AlKalyoubeya</td>
<td>54</td>
<td>Qena</td>
<td>43</td>
</tr>
<tr>
<td>Baharia</td>
<td>51</td>
<td>AlMounoufeya</td>
<td>58</td>
<td>Matruh</td>
<td>17</td>
</tr>
<tr>
<td>Giza</td>
<td>155</td>
<td>ElMenya</td>
<td>55</td>
<td>Shamal Sena</td>
<td>12</td>
</tr>
<tr>
<td>Dakhla</td>
<td>74</td>
<td>AlWadi AlJadid</td>
<td>12</td>
<td>Suhag</td>
<td>49</td>
</tr>
</tbody>
</table>

Source: MCIT, 2006

IT clubs are hosted by community actors such as community associations, culture palaces, schools, libraries, youth centers, universities, unions, municipalities and media centers. A community can apply to establish an IT club on its premises; the application will be followed by a MCIT staff visit and investigation of the area, the environment and the proposed location. The MCIT provides PCs, software licenses, Internet connection (when it is available) free of charge for one year, training for the IT club staff and salaries for the first year, while the hosting agency will provide a renovated and furnished location to host the IT club. The MCIT receives more than 500 applications per year.

An IT club is considered an independent unit living on its incomes; however this is not always the case. Usually a third of the income should be set aside for equipment upgrading, while the rest goes towards covering Internet subscription fees and staff salaries. An IT club’s staff is hired by the hosting agency. It compromises of one or two technicians and a manager and they must live in the same area as the club, thereby capitalizing on their familiarity with the needs and interests of the local community.

An IT club generally contains 12 networked PCs, an Internet connection and a printer. It offers training on basic IT applications, Internet access, free use of PCs and citizens’ accessing reaching e-government services. Prices are symbolic for courses as well as Internet access. The MCIT determines the fees; it is generally around 2 EGP per hour (Internet access, basic IT course, free use etc) and may be free in some cases.

By the end of 2006, 1453 IT clubs had been established across Egypt containing approximately 19,000 PCs. More than 1100 of them are connected to the Internet. These clubs employ more
than 4000 young technicians and managers. The MCIT plans to build around 300 IT clubs per year and to equip each community of more than 25,000 inhabitants with an IT club.

<table>
<thead>
<tr>
<th>Number of established IT clubs</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>31/12/2000</td>
</tr>
<tr>
<td>300</td>
<td>31/21/2001</td>
</tr>
<tr>
<td>427</td>
<td>31/12/2002</td>
</tr>
<tr>
<td>618</td>
<td>31/12/2003</td>
</tr>
<tr>
<td>1055</td>
<td>31/12/2004</td>
</tr>
<tr>
<td>1293</td>
<td>31/12/2005</td>
</tr>
</tbody>
</table>


Some of these IT clubs are actually advanced Capacity Building Centers (CBC) graduating:

- professionals in the field of ICT who are capable of using advanced ICT tools and/or to develop, repair and create ICT tools and applications.

- practitioners in field of ICT who have the ability to apply simple ICT tools in general workplace settings.

There is one CBC per governorate at least; each of them has at least 40 PCs. They offer professional training on various IT applications such as database, networking etc. Training in these centers is scheduled by the MCIT and offered free for new university graduates who have not secured employment. The MCIT remunerates centers for the training and offers grants for trainees in areas of government or business demand. Each center performs four sessions yearly.

Until the end of 2006, according to MCIT estimates, IT clubs trained more than one million citizens, 55% of whom were female. The number of people using these clubs is increasing along with the way ICT is being utilized within the business community with ICT being used to assist a wide range of business endeavours, from furniture design to manufacturing.

**II.1.1.1. IT club management**

In each governorate there is a governorate’s employee in charge of monitoring the clubs and reporting to the central management in the MCIT about their activities and current status in his/her region. The MCIT carries out countrywide supervision of IT club activities, gathers information and conducts quality control visits to all IT clubs, one per year as a minimum standard. The IT clubs are under the supervision of the Human Development and Training Directory of the MCIT.

The Egyptian community telecenter management model is a mix of governmental and NGO models. It builds on the most advantageous aspects of public sector participation - i.e. ensuring the sponsoring and providing a national plan - while the NGOs are in charge of the day to day operations, overseeing the community centers with all the flexibility that the public sector doesn’t enjoy.
III.1.1.2. Field Visit (19 December 2006)
Two IT clubs were recommended by the senior manager of IT clubs at the MCIT; these two clubs are considered as representative sample of IT clubs network.

1) IT Club of the Benevolent Association for Children and Orphaned Care

This is an association aimed at children and orphan care, located in the eastern part of AlGiza governorate. This Association hosts 32 orphans; all of them use the association’s IT club in their free times.

The area where the Association’s club is located is inhabited by the poor to lower-middle classes. The greatest beneficiaries of this IT club are from the underprivileged part of the area where this IT club is located. This club also accommodates 25 similar associations dealing with orphans.

This IT club was opened in 2002; established in two rooms and a public library. It has 12 networked PCs, ADSL connection and a printer provided by the MCIT. It also contains a photocopier bought by the Association. There are two technicians working in the club and paid by the Association, along with a benevolent manager who also serves as the Association’s executive manager.

This club offers basic IT courses for all citizens, on an individual or group basis, for 2 EGP per hour. The main segment benefiting from this club is young, male as well as females. More than 300 persons attended training (12 hours per session in average) in this center during 2006. On average, 30 users – mostly female - access the Internet daily. As well as this, the club’s technicians assist people in accessing e-government services.

The incomes of this club are derived from photocopying, report typing, Internet access, training, and computer rental fees. This club was able to sustain itself and generate some extra money allowing it to partially upgrade its equipment, despite the fact that it offers more than 50% of its training and Internet access services for free.

2) The Korean-Egyptian Information Technology Club

This club was established in 2003 at the initiative of the Egyptian Women’s Association for Development affiliated with the Ministry of Social Affairs. In 2004 it was transformed into a CBC when it was expanded through a cooperation agreement between the MCIT and the Korean government who donated around 60 PCs and renovated the premises.

This club is located in Almarwaiteh/AlGiza, King Faissal Avenue. The area is considered an upper-middle class area. Literacy in this area is very high.

The club contains 74 PCs, 3 servers, 2M ADSL connections, printers and training networking equipment. Eight technicians and administrative assistants work in this club as well as hired trainers for specific assignments.

The focus of this club is on capacity building and preparing the youth for the job market. The training in this club is scheduled by the MCIT. This club is accredited to offer training in a variety professional topics such as ICDL, database, networking, Oracle, etc. Trainees of the last subjects receive grants from the MCIT in case they are unemployed, young or newly graduated from university. In order to be considered for a grant the subject must display an outstanding
work ethos during the training period. MCIT covers the cost of the club’s training, as well as the specialist trainers hired by the club.

Training is performed 5 hours per day, four sessions per year. This club trains 160 people each session, 75 per cent of whom are female.

III.1.2. Other Community Telecenters Projects in Egypt
As a complement to the previous IT clubs, The Mobile Information Technology Clubs was implemented by the MCIT, the UNDP-Egypt and the Ministry of Foreign Affairs’ Cooperazione Italiana program in 2003. This project currently features two caravans and two buses outfitted with PCs. The Mobile IT clubs travel across the country serving remote areas, such as El Minya, Giza or Al-Ubor, with the aim of overcoming a scarcity of access to computers and Internet connectivity. Each vehicle has a satellite link giving users access to e-mail and the Internet. The project was set up to provide people in remote communities with training and awareness about computer basics, Internet and multimedia use, along with associated skills such as languages and Web design. The caravans have 20 computers each and can accommodate around 20 students, while the buses have 10 PCs in each. Each has a driver, coordinator, supervisor and instructors, a data projector, a power generator, air conditioning, a printer and scanner and Web cameras.

The Caravan offer a five-week course providing an in-depth exposure to computer hardware and operating systems and helps students prepare for the A+ certification.

Between February and July 2005 (before the mobile IT clubs had been granted local academy status) the two caravans managed to serve 16,000 visitors, 45% of whom were female, across six of Egypt's 27 governorates.

Prior to the IT clubs project, another project launched in 1997 known as the 21st Century Kids Clubs (CKCs). This was a cooperative project between MCIT, the Egyptian Cabinet, Information and Decision Support Center (IDSC), the Regional Information Technology and Software Engineering Center (RITSEC) and an NGO, The Integrated Care Society (ICS) who managed the CKCs.

A typical Club contained 8-10 PCs, a printer, Internet connectivity, a library and computer software packages. The Clubs offered training courses and awareness seminars to the local communities, with a primary focus on kids aged between 8 and 15. In 2001, there were 40 Kid Clubs available in 17 governorates which had provided IT services and training to 14,000 children. The 21st Century Kids clubs fused with the abovementioned IT clubs at the end of 2001.

III.1.3. Technology Access Community Centers (TACCs)
In 1998, a UNDP pilot project supported by the Egyptian Government established three TACCs aimed at offering ICT services for the empowerment of local communities. The ICT services offered by a TACC include telephony, fax machines, copiers, personal computers, software libraries and affordable Internet access in addition to the organization of seminars, workshops, professional training, technical and technological expertise for professionals, as well as for the general public. Typically, a TACC has about 10 networked PCs, printers, a scanner, a fax machine, a photocopier, and Internet connectivity. TACC’s staff is basically a center manager, 1-2 technical persons and 1-2 administrative persons, in addition to visiting professional experts.
The TACCs are open to the general public, and have specialized programs that target the needs of the local communities, including professionals, minority groups, women, children, students, etc. TACCs organize specialized training courses, seminars, and workshops, based on a community needs assessment.

There are three TACCs established in the Governorates of Sharkeya (to the northeast of Cairo), Luxor and Aswan. They still working, but without any expansion plan due to the rapid expansion of the IT clubs.
III.2. Jordan
Jordan began to establish telecenters in 2000, in accordance with the vision of King Abdullah II who declared at the 2000 Annual Meeting of the World Economic Forum in Davos, "We will ensure that everybody is computer-literate. Every single school and community will be wired to be able to do that, simply because this is the type of quality and talent that we want in our work force."

III.2.1. Knowledge Stations
The Jordanian telecenters, called “Knowledge Stations” (KS), have the following objectives:
- Bridge the digital divide between the governorates and different regions in the Kingdom.
- Introduce ICT to the different localities in Jordan and encourage the use of ICT in the daily lives of the country’s citizens.
- Alleviate IT illiteracy by providing training in ICT.
- Encourage the use of the National Information System for retrieving local information.
- Enhance the use of the Internet for socio-economic development at the community level.
- Enhance local community skills through ICT training.
- Enhance competition among citizens by increasing their knowledge in ICT.
- Prepare local communities to get involved in the e-government projects.

Box 2

The Jordanian Digital Divide

Jordan is in a better position than Egypt when compared to the world average, especially in number of mobiles per 100 inhabitants, but still lower than the world average in fixed phone, Internet penetration and number of PCs per inhabitants as shown in the following figure:

Figure 5: The Jordanian Digital Divide

![The Jordanian Digital Divide](image-url)


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4 Impact of Knowledge Stations in Bridging the Digital Divide in Jordan” National Information Technology Center, Sept. 2005
There are no statistics that can be used to gauge the digital divide in Jordan, the gap should not be very big but it still exists. A survey carried out by the National Information Technology Center (NITC) in 2005, of 1135 individuals living in 80 different locations, showed that in the northern region 57% of surveyed people had a PC against 65% in the central region, and 19% had an Internet connection in the northern region against 28% in the central region and 34% in the capital city of Amman.

The KS network includes 135 stations established between 2000 and the end of 2006 and distributed all over the Kingdom as per Table 3. On average a KS contains 12 networked PCs, an Internet connection, a printer, photocopier and a TV set. The number of employees varies according to the activities of the KS and the number of citizens it serves, as outlined in the visited KS section.

Table 3: Distribution of Jordanian KSs per Governorates in July 2006

<table>
<thead>
<tr>
<th>governorate</th>
<th>Num. of KS</th>
<th>Governorate</th>
<th>Num. of KS</th>
<th>governorate</th>
<th>Num. of KS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajlon</td>
<td>5</td>
<td>Irbed</td>
<td>16</td>
<td>Madaba</td>
<td>5</td>
</tr>
<tr>
<td>Amman</td>
<td>26</td>
<td>Jerash</td>
<td>9</td>
<td>Mafraq</td>
<td>9</td>
</tr>
<tr>
<td>Aqaba</td>
<td>4</td>
<td>Karak</td>
<td>11</td>
<td>Tafileh</td>
<td>6</td>
</tr>
<tr>
<td>Balqa</td>
<td>11</td>
<td>Ma’an</td>
<td>8</td>
<td>Zarqa</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: www.ks.gov.jo

The selection of sites for the KSs takes into consideration the equality in distribution of Knowledge Stations among governorates and rural and remote communities.

### III.2.1.1. Knowledge Stations’ Activities

One of the main objectives of the KSs is to induce a total development process in the local communities. This objective is implemented by matching training in certified ICT courses in the local communities with the needs of the local communities. The KSs adopt e-learning and English language teaching as one of the major tools for using ICT and the Internet.

The KSs are also intended to perform training workshops and seminars on health awareness programmes, provides health education courses and facilitates access to health education sites on the Internet.

The KSs also pave the way for local communities to learn about e-government processes for future use, since the KSs will be used as access points to e-government sites and services.

The following table shows the numbers of trainees between 2000 and May 2006 and the percentage of female/male trainees on basic computer literacy and advanced courses such as networking and data transmission:

Table 4: Knowledge Stations Trainees and Female Share

<table>
<thead>
<tr>
<th>Year</th>
<th>Total number of trainees</th>
<th>Male percentage</th>
<th>Female percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2001</td>
<td>13829</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>2002</td>
<td>8626</td>
<td>43%</td>
<td>57%</td>
</tr>
<tr>
<td>2003</td>
<td>14045</td>
<td>43%</td>
<td>57%</td>
</tr>
</tbody>
</table>
More than 70,000 citizens have used the Stations’ walk-in services that include Internet access; fax machines, photocopiers and various multimedia services. In addition, more than 3600 loan applications have been performed through the KSs.

A survey carried out in 2004 by the NITC covering 1135 individuals living in 80 different locations showed that the most used place for accessing the Internet are the Knowledge Stations, as outlined in the following figure:

![Figure 6: Places of Accessing the Internet](source)

This percentage is more accentuated in the regions out of the region of Amman; in fact 60% of Internet users in the northern region are Knowledge Station clients. This demonstrates the vital role of Knowledge Stations within Jordanian society.

### III.2.1.2. Knowledge Stations Management

A royal commission, comprised of specialized and experienced individuals from government and civil society, managed the Knowledge Stations initiative. The commission was also charged with the task of ensuring the long-term sustainability and successful operation of the stations. To further complement the role of the Royal Commission, the National Information Technology Center (NITC) was appointed as the executing agency, charged with the responsibility of overseeing the establishment of Knowledge Stations in the various Governorates and providing the necessary technical support. Subsequently, a Project Management Unit (PMU) was established within the NITC to manage the initiative on a daily basis.
The establishment of a KS adheres to an agreement between the KSs central management and the local authority (municipality), which provides the renovated premises, pays the electricity and phone bills, and the KS’s staff salaries. In return the municipality will collect money earned from training and services. The NITC, through the PMU, will equip the KS with computers, printers etc, funded essentially by the King Abdullah II Fund for Development and occasional sponsors such as the UNDP and others. In some cases the KS project will offer subsidization for poor municipalities.

PMU staff are paid by the project fund, while the KSs’ staffs are paid by the municipalities where the KSs are located.

The knowledge stations management model is the Government Sponsored Model discussed previously, but in a cooperative form between two main agencies: the NITC and the municipalities. The PMU provides an umbrella of central management, organizes training of trainers, national thematic agreements and annual meetings, while the municipalities, along with the KS’s staff, oversee the daily management. The central management has established a dedicated blog where all KS employees can discuss their concerns and issues.

The Jordanian model successfully avoids the usual drawbacks of the governmental models due to the fact that the central management does not have to intervene in the daily affairs of a KS, rather, the KSs’ staff and the municipality are the first concerned.

III.2.1.3. Field Visit (10 December 2006)
Four knowledge stations were visited; three in the suburb of the governorate of Irbid and the fourth is located in the town of Jarash.

1) Alramtha KS
This KS is located in the municipality building and managed since October 2006 by a Bachelor in Computer Science, assisted by a part time administrative assistant, who usually works for the municipality. Alramtha is home to 95,000 inhabitants. The main activities are commerce with Syria, heavy and long-distance transport in the region (there is a lorry fleet owned by some of AlRamtha citizens), and the olive agriculture. There is important foreign investment in two industrial zones near AlRamtha. A university (University of Science and Technology) and an academic hospital are established in AlRamtha town.

The AlRamtha KS has 12 networked PCs, printer, photocopier, video projector, an ADSL Internet connection and a TV set to be used in case of projection for kids. This KS was inaugurated in 2002.

The main activities of this KS are: training, conducting awareness campaigns and assisting local citizens in some e-applications. The training topics focus on computer basic skills (ICDL, Typing, Internet courses, FrontPage, Photoshop, and a tailored IT course for mothers). Courses and Internet fees are symbolic; ICDL course costs $40, while the rate in private centers is three times as much. One Internet hours costs $0.3, and e-mail check is free.

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5 Such as the agreements signed with (1) the Development and Employment Fund where KSs are considered as centers where citizens can apply for loans with the help of KSs staff, (2) the Ministry of Education in order to link the KSs to e-school project implemented by the ministry and (3) with The AlMANAR for job application through the website: http://www.almanar.jo.
Since 8 October 2006, 35 people – mainly women – have received training (15 ICDL, 5 Internet, 7 typing). The KS provided 115 Internet hours during the same period.

The second main activity is to organize lectures and workshops around topics of interest for the local community (such as a conference, targeting women, on computer illiteracy) and to showcase the usefulness of ICT in communications with relatives living outside the country. Other examples of workshops include one of the theme of “oneself management” and another focusing on the wax industry.

The third main activity is to assist citizens in applying electronically for a business loan from the Development and Employment Fund, and also to assist women in the acquisition of woman’s loans (a small loan equivalent to $2250 aiming at helping women start a small economic activity). The KS staff also offer assistance to students browsing the Internet for information searches. Also, in some cases, the KS offers math and English courses to school pupils.

2) AlHousen KS
This KS is located in the Cultural Center of the AlHousen municipality. Alhousen Louaa is part of the Irbed governorate. The number of inhabitants is around 15,000. Most of AlHousen adults work as clerks at the state offices.

The AlHousen KS is directed by a computer engineer. It contains 12 networked PCs, two printers, video projector, scanner, photocopier and an ADSL Internet connection.

This KS offers the same services as AlRamtha’s KS, except the awareness conferences and workshops are performed by the Cultural Center with assistance from the KS if needed (information search).

In 2006 there were 115 trainees, 98 of them female. The apparent reason for this high percentage of females undertaking training in this KS is that the trainer is a woman, who is, to some extend, attractive in a conservative area. The number of Internet users for the same period exceeded 1800, with an average of two hours per user, 50% of whom are female.

The KS is not far from the AlHouse College, which is part of the Balkaa University; this college specializes in communications and computers. College students use the KS frequently, for ICDL course or for information searches.

During 2005, this KS assisted more than 300 citizens for loan applications and more than 50 women for the woman’s loan. The Development and Employment Fund opened a branch in Irbed at the beginning of 2006, so citizens can now go there to apply and receive the loan directly.

3) The KS of Azmi Almoufti Camp
Located in Irbed governorate in a Palestinian Camp of around 22,000 inhabitants, most of whom are workers or have small workshops generally oriented towards construction.

This KS contains 9 PCs, printer, scanner, photocopier, video projector and ADSL internet connection. It is located in the Camp Commission (equivalent to the municipality). It was
opened in 2003. This KS, as the others, offers training on PC applications and hosts awareness
conferences and workshops.

In 2006 it trained around 130 persons, 54% of whom were female. This KS assists students in
getting the information they need for their homework, and offers administrative assistance for
officials in the camp such as typing official messages and printing reports etc.

It is managed by a Bachelor in Computer Science. The climate in this KS is very friendly, as
reflected by the down to earth relations between the trainer and the KS users, 85% of whom are
young females. The manager of this KS aims to build a database for the job seekers in the
camp.

4) The Jarash KS

This KS is located in one of the municipality buildings in the town of Jarash, a governorate of
around 150,000 inhabitants. The town is famous for its archaeological ruins and olive culture.

The Jarash KS has 10 networked PCs, printer, scanner, photocopier, video projector and an
ADSL Internet connection. This KS is licensed as a CISCO local academy. It is managed by
three females, one comes from the Municipality as an administrative assistant and the two
others are engineers in electronics and computers.

This KS performed 9 ICDL sessions, 11 CISCO sessions and 2 typing sessions in the year
2006. The courses were attended mainly by women (60%).

Besides training, this KS organizes workshops around themes of interest for Jarash citizens, as
is the case in the other centers. This KS also offers assistance for those who want to apply for a
loan from the Fund for Development and Working (more than 100 applications in the year of
2006). This KS offers assistance for those who seek a job via Almanar website.
III.3. Lebanon

The Lebanese E-strategy, devised in 2003, is based on the desire “to move the economy and society of Lebanon towards a Knowledge Based Society in the shortest possible time while at the same time addressing related challenges and opportunities that Lebanon is facing”. The National e-Strategy proposal includes seven initiatives:

1. Prepare Lebanon for the new technologies (or bridge the digital divide).
2. Implement national ICT policies (or the role of government).
3. Improve the ICT sector (or encourage ICT as a production sector).
4. Develop Human Capacity (using ICT to improve education and using education to develop ICT skills).
5. Use ICT for Social Development.
6. Use ICT for Economic and Business Development.
7. Speed up e-government.

These initiatives reflect clearly the desire of Lebanon to use ICT for its development, economic as well as social.

Despite the fact that Lebanon is in a much better situation than most of ESCWA’s countries in terms of the digital divide, disparities still exist between rural and urban areas, as shown in Box 3. To remedy this disparity, various NGOs have started different projects to establish community telecenters in rural and disadvantaged areas throughout the country.

III.3.1. The PCA's Centers

This is the largest community telecenter network, established by the Professional Computer Association (PCA). This PCA telecenters project was launched in 2002 as an Internet Point of Presence (PiPOP) initiative by providing equipment and Internet subscriptions to 10 villages across Lebanon. PiPOP centers are located in municipalities or community centers of small towns and villages. Forty-eight PiPOPs were opened between 2002 and the end of 2006. This project corresponds with the major goal of the PCA, which is to transform Lebanon “into a knowledge enabled economy, in order to participate pro-actively in the Global economy”.

The national e-Strategy report notes “response to PiPOPs has been outstanding. Cultural characteristics must be noted. Girls whose parents might not allow them to visit Internet Cafés have access to established centers in municipalities and community centers where PiPOPs are located.” Unfortunately, there are no reliable statistics about the PiPOP users and types of services, but the preceding statement was witnessed during the field visits discussed below.

The PiPOPs were established in cooperation with different national and international partners such as ACT (Automation & Computer Technology), Best Buy, BSA (Business Software Alliance), Microsoft, UN (ESCWA, UNDP), USAID, CIS (Computer Information Systems), PiPOP Donor, etc.

In addition to basic IT training, the PCA launched in September 2006 the Information and Communication Technology Academy (PICTA) which aims to provide free workshops to all segments of local communities, particularly those areas hard-hit by the most recent war in Lebanon. The Academy aims to strengthen local capacities and empower people to benefit from

7 http://www.pca.org.lb/
available employment opportunities and improve their living conditions. The first Academy was opened on the 22 September 2006 in Nabatiye, followed by Baalbeck, Bint Jbeil and Marjeyoun. Other centers will be equipped in areas including Burj Al Barajneh, Qana, Hasbayyah, and Batroun. Local partners from civil organizations and NGOs should manage these academies as part of a process that will ultimately lead to the transfer of ownership and management of the project to the local partner. The PICTA initiative is a partnership between different players, national and international, operating in Lebanon.

Box 3

The Lebanese Digital Divide

The figure below shows that Lebanon is close to the world average in terms of the main ICT indicators; the number of Internet users is one of the higher rates among ESCWA countries due to the high number of knowledgeable inhabitants in one foreign language such as French or English.

Figure 7: The Lebanese Digital Divide

However, disparity between rural and urban areas exists in ICT as well as in other fields. In fact, according to the e-Readiness assessment\(^8\) carried out in 2003, the disparity in residential telephone penetration rate throughout Lebanon, as shown in the following table, is striking.

Table 4: Teledensity per region

<table>
<thead>
<tr>
<th>governorate</th>
<th>Tele-density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beirut</td>
<td>55%</td>
</tr>
<tr>
<td>Mount Lebanon</td>
<td>11%</td>
</tr>
<tr>
<td>Bekaa</td>
<td>10%</td>
</tr>
<tr>
<td>South</td>
<td>9%</td>
</tr>
<tr>
<td>North</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: The National e-Strategy for Lebanon: e-Readiness Assessment

The table shows clearly that Beirut has a teledensity almost 4 times greater than each of the other governorates. This table also reflects the possible disparity in Internet usage across Lebanon.

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\(^8\) National e-Strategy for Lebanon: e-Readiness Assessment Page 65.
Another important feature of the PCA initiative is the creation of a portal (www.PiPOP.org) containing the websites of all areas having a PiPOP. These websites display information about related areas and social services such as e-cards, events calendar, etc. This portal does not seem to attract a high level of usage by reason of its rather static content.

III.3.1.1. PiPOP Management
A PiPOP can be established in cooperation between a local community player and the PCA. The PCA, following a semi-feasibility study, initiates a cooperation work agreement with a defined local actor who has displayed an interest in establishing a PiPOP and who can provide a suitable premises for its hosting. The PCA offers, through national and international donors, the needed equipment, the Internet subscription for up to a complete year, instruction for the trainers and ongoing monitoring of the new PiPOP. The PiPOP staff is paid by the hosting agency.

The PiPOP model is an NGO management model where at least two NGOs, the PCA and a local NGO, cooperate in the establishment of a PiPOP. Under this model the local NGO has to tackle the daily issues and adapts its PiPOP activities to the specific needs of the local community, while central management will take care of collective issue such as skills upgrading of trainers and remote supervision for the new PiPOPs, as well as monitoring strategic issues related to the implementation of PiPOP objectives. This is a flexible model and one that ensures sustainability at both levels: managerial and financial.

III.3.1.2. Statistics
There are no reliable statistics held by the central management of the PiPOP, as one would expect given that the PCA plays the role of broker, ensuring the acquisition of necessary equipment from national and international donors, and the following up in terms of training of trainers through specific programmes such as PICTA.

One can find some indicative statistics on the PiPOP web site: http://www.pipop.org/Statistics.asp. These are, however, without a time reference.

III.3.1.3. PiPOP’s Community Telecenters Visit (12 December 2006)
Three PiPOPs were recommended by the central management, they are different in size and activities.

1) The PiPOP of Baalbeck
The Baalbeck PiPOP is part of a multipurpose center managed by the Lebanese Association for Studies and Training, which is an association focusing on the social development of the Bekaa region. This association has two branches, one in Baalbeck and the other in Ala’ain, a town in the northern Bekaa.

In this center there is a library, an Internet-café, an English language center and the PiPOP. In this PIPOP there are 15 networked PCs and a printer.
Training and Internet are subsidized by a network of local and international donors. Training is developed around Microsoft Office, but with the aim of showing how the computer can be of benefit in a wider context. The Association plans to introduce courses covering how to use the PC in agriculture and tourism.

Baalbeck’s PiPOP was inaugurated in December 2005 and is based in an old community center started in 2001. It has trained more than 1000 people, in addition to more than 200 clerks from the public sector and around 150 teachers. Baalbeck city hosts a branch of the Lebanese University which does not have a Computer Laboratory, a role that the PiPOP is filling.

Since 2005 the English Language Center has trained more than 700 citizens. The course fees for 200 of its graduates were sponsored by Mercy Crops.

A PICTA session is to be held in the PiPOP premises within days, aimed at upgrading the technical skills of PiPOP trainers. This session is planned to last three months.

There are five employees working at this multipurpose center, paid by the Association, while the PiPOP trainers are paid on a task-by-task basis ($10 per hour).

This center has a microwave Internet connection.

2) The PiPOP of Niha
Niha is a village linked administratively to the city of Zahleh. Its population is 2700, however this number decreases to 1500 during the winter. The main activity of the village is agriculture and tourism is a secondary industry. There is a wonderful Roman temple largely visited in the summer period.

The PiPOP of Niha is located in the library of the cultural center, which is part of the municipality. It contains 6 networked computers and one printer and it was inaugurated in February 2004. This center offers basic training on the use of computers during the summer. This training is performed by a university student from the village and the center is open all year round to be used by the village population, especially pupils of the public school who do not have not computers in their houses. The main use is Internet browsing and report writing for pupils’ homework. The average use per day is 3 persons, 30 minutes each. One hour Internet costs 1000 LL, the dial-up Internet subscription is paid by the PCA.

In 2004 more than 25 adults were trained at this center and around 120 in 2005, but in 2006 training was stopped due to Israeli aggression against Lebanon.

3) PiPOP of Rass Al Meten
This is a village of 6000 inhabitants, located in the mountains about 20 Km to the east of Beirut. The main activities of this village are agriculture and pine wood commerce.

The PiPOP is located in the Association of Rass Al Meten Ladies premises, which seems to be a very active association devoted to the social development and good welfare of the village.

In addition to the PiPOP, the Association’s premises hosts a large library and, more importantly, a public clinic offering around the clock free health care (and medicines when available) to the village citizens.
This PIPOP was opened in October 2004 and it contains a printer and 11 PCs, 8 of them provided by the PCA which also paid for the Internet subscription for a year. The Internet subscription is paid by the association.

Training sessions are held during the summer, but access to the computer room is free, while one hour Internet, dial-up connection, costs 1000LL. The PiPOP is used by more than 50 citizens per month, the majority of whom are students.

III.3.2. MTCCs:
Another set of community telecenters are the MTCC (Multipurpose Technology Community Center) established in the region of Akkar (northern part of Lebanon; considered one of the most impoverished areas of Lebanon) in three small towns: Bebnine, Muqaybleh and Tal-Abbas. These centers were established in cooperation between ESCWA, Fares and Safadi Foundations, Microsoft and local municipalities. The three MTCCs were inaugurated in Akkar in 2003; the first on September 20th in Tal-Abbas, the second on December 8th in Muqaybleh, and the third on December 20th in Bebnine. Municipalities provided the centers with essential services such as electricity supply, telephone lines and Internet connections. ESCWA offered “train-the-trainer” for the MTCCs' trainers to enable two staff members in each MTCC to manage the center and deliver training. Accordingly, the MTCC delivers courses in basic IT skills such as word processing, spreadsheet operations, databases and browsing the Internet. Each center is equipped with almost 10 networked PCs, laser printer, and dialup Internet connection. Training and Internet access are free of charge in all these centers. ESCWA remotely conducts the technical supervision and shares the center staff salaries with the municipalities.

According to the mayor of Muqaybleh⁹, more than 170 individuals received basic and ICDL training in this center up to November 2006, 70% of whom were female. Children received awareness sessions. The center offers 4 hours Internet access daily for the citizens of the town and suburbs. The Bebnine center trained more than 250 individuals on basic Microsoft Office programs up to November 2006 and plans to offer advanced training for the coming sessions. Both centers complain about supervision and training coordination that ESCWA performs. The Mayor of Bebnine¹⁰ wants more equipment such as a video projector equipping the center with movie projection and digital library facilities. The third community center was closed at the time of writing this report due to the withdrawal of the Fares Foundation from the project. A local actor is yet to be found.

III.3.3. NGO-based Community Telecenters
Different development-oriented NGOs built community telecenters in poor and isolated areas such as the north and the south of Lebanon. One of the most active NGOs in this regard is the Safadi Foundation, which since 2000 has been carrying out a computer literacy program based on a 10-week curriculum with 3 hours per week of instruction. To ensure that the program reaches the widest possible number of beneficiaries in all regions, the Foundation has established sixteen fixed training centers and other facilities. The Safadi Foundation created, funded and continues to sponsor and manage the centers of Tripoli, Minieh/Dinnieh, Akkar, Batroun, Bsharre, Zghorta, and Koura. Other training centers are managed by the Safadi Foundation in partnership with civil society organizations, as is the case in Jbeil and Koura. In 2005 the number of beneficiaries was 3,540¹¹.

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⁹ Telephone conversation, on 28 November 2006, with Muqaybleh Mayor.
¹⁰ Telephone conversation, on 28 November 2006, with Bebnine Mayor.
¹¹ Data collected by correspondence with the Safadi Foundation telecenters’ manager.
The Safadi Foundation and the UNDP also formed a partnership in which both parties will establish two new Community Access Centers (CACs), one in the Safadi Foundation’s Women’s Academy in Tripoli and another in the agricultural center established by the Safadi Foundation in Deir Dalloum, Akkar. These CACs aim to provide the local population with affordable means to access technology and deliver IT and English language training. There will also be a digital library available with CD-ROMS with vocational training self-learning tools.

The Collective for Research and Training on Development (CRTD) is currently working to establish three community telecenters in the AKKAR region, in partnership with the Canadian and Japanese embassies and the Women’s associations in that region. In 2003, the CRTD launched a gateway project - “Lebanon Development Gateway” - aiming at using ICT to contribute to gender equality and social development at the local and national levels. The project is now entering its implementation phase which includes the construction of a development knowledge portal (in both Arabic and English) on gender equality and social development, with particular focus on the needs and priorities of the LDG stakeholders, namely NGOs, local municipalities and community centers as well as private sector companies with social responsibility.

III.3.4. The Ministry of Social Affaires Community Centers

The Ministry of Social Affaires has established more than 65 community centers across the country in underprivileged areas. Known as “Development Services Centers”, their mission is to assist the local population in their development. These centers offer literacy courses, health care services, professional training and lead awareness campaigns related to general concerns such as smoking or traffic accidents etc. Most of these centers are equipped with 4 PCs to be used as a PC lab offering a very basic IT training.

The UNDP signed an agreement with the Ministry of Social Affairs stipulating the opening of 4 telecenters to be hosted by four development services centers: Bourj Hammoud, Hermel, Jbeil, Seir Denney. The UNDP had to provide 8-10 networked PCs, and a multifunction printer, in addition to a subsidy amount of $250 for 6 months. The Ministry had to provide a renovated premises, furniture and management.

One of the most active community centers is the Bourj Hamoud Community Center (visited on 11 December 2007). It is located in Bourj Hamoud (Beirut). This center offers various social and developmental services, such as a maternal and paediatric clinic, dental care service as well as professional training workshops on various topics. It runs permanent literacy classes in Arabic and English, has a children’s library and performs many other social activities. The center’s area is quite poor and suffers a high rate of unemployment.

This center was furnished, in May 2005, with a PC Lab containing 10 networked PCs, a multifunction printer and a dial up Internet connection. A training session on Microsoft Essential (35 hours) costs 25,000LL ($16).

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12 CRTD is a non-governmental organization initiated in July 1999 and based in Beirut. Whether working in Lebanon or across the Arab World - primarily in Yemen, Egypt, Syria, Morocco, Tunisia, and Algeria - the CRTD seeks to contribute to the social development of local communities and organizations through enhancing capacities particularly in gender analysis, gender and development and poverty and exclusion, for the purpose of contributing to a more just and equitable environment.

13 Information collected through telephonic conversation with the CRTD director.
The trainer is hired by the Association of Generous Generations (جمعية عطاء الأجيال) and assigned to Bourj Hamoud Community Center. In 2006 the number of trained people exceeded 100 despite the Israeli war against Lebanon; more than 90% were female as is the case in almost all activities at this center. Prior to undertaking any IT training sessions, trainees at this center must have completed the English language course.

Internet use is rather rare due to the slowness of connection, the existence of a neighbouring Internet café, and the limited opening hours of the lab (9 a.m. to 12 a.m.).

This center is evidently a community center, but it is not a community telecenter matching the definition given in this report. The direction of this center follows the telecenter aspects; however its sustainability is doubtful.

The same type of center was replicated in six municipalities: Ayoun, Hammana, Houreich, Mazboud, Rachya, Rmeich; the outcome of this project in terms of IT training seems to be insufficient.

III.3.5. The Multipurpose Community Learning Centers (MCLCs)
The MCLCs are local centers providing community members with lifelong learning opportunity aimed at improving the quality of life of citizens from underprivileged areas. MCLCs activities are planned and implemented by community members. The MCLC is a UNESCO concept targeting out-of-school children, youth, and deprived women.

The MCLC establishment is based on a partnership agreement with a local official actor. The UNESCO role is mainly confined to the provision of equipment, know-how and the organization of regular meetings with MCLCs staffs. The local partner has to provide a premise and cover the day-to-day management and training of staff. Seventeen MCLCs have been implemented in different regions in Lebanon since mid-2005, located in municipalities and within associations. Each MCLC has a computer lab comprising 8-10 networked PCs, scanner and printer and dialup connection and offers basic IT skills training in addition to various learning activities. Libraries are an intrinsic component of MCLCs.

The MCLC is not intended to be community telecenter, but it should be considered as such given its mission as a knowledge carrier.

III.3.6. The E-Caravan
The E-Caravan is a fully equipped mobile computer school that roams clusters of villages offering IT training for disadvantaged villages in Southern Lebanon. This project was launched in 18 January, 2006, as an initiative undertaken mainly by ESCWA and the Foundation Saradar. The E-Caravan is equipped with a network of ten PCs, laser printer, and LCD projector with screen, two satellite connection modems, an AC system, a water dispenser and other accessories. The E-Caravan also provides easy access for disabled persons.

The goal of the E-caravan is to train around 1,660 people per year; 65% female, 30% male and 5% disabled. The content of the different training sessions is based on the needs of the target population. Courses range from beginners to courses for future trainers. Sessions are offered 6 days a week, Monday to Saturday, and last for two to four hours. Sessions include up to eight participants at a time, fostering a close learning relationship between the trainer and the participants. The project has been implemented in partnership with private companies and concerned municipal councils, existing local and international organizations and UN agencies.
The E-caravan trained more than 200 people in less than three months - 44% female - in five underprivileged villages in Southern Lebanon.

Mercy Corp and USAID and other local sponsors carried out other similar initiatives in 2002 in which a SmartBus - a mobile Internet unit with ICT facilities – was operated. It is equipped with ten networked PCs, LCD projector, pull down screen, audio visual teaching aids, laser printer, fax machine and scanner. It is designed to reach rural communities to offer ICT training, where it is expected to train up to 4800 people per year. It operates on a per request basis.

In addition to the SmartBus, Microsoft funded a Microsoft Electronic Library, which is a technology education facility offered to Lebanese children and adults. The main objectives of this MEL, as stated by Microsoft Lebanon, are:

- To offer children and adults in Lebanon access to computers and the Internet. The library aims to train children and adults on leading technologies that are available to more privileged people in other parts of the world.
- To help children and adults better understand the benefits of learning with the aid of PCs and the Internet.
- To help children and adults in Lebanon develop required computer skills to be competitive in their future educational and professional endeavours.

Lastly, a mobile computer school designed and funded by the Foundation Saradar was launched in 2002, as a pilot project titled ‘Saradar IT Programme’ (SITP). The SITP seeks to provide IT training to remote areas of Lebanon such as the villages of Cazas of Aley, Baabda and the Chouf, with the participation of the municipalities. According to registration records at these municipalities, the number of applicants largely exceeds the caravan seating capacity.

The Safadi Foundation, within its computer literacy program mentioned above, also equipped a mobile training center, which trained more than 330 people in 2005.
III.4. Syria
The Syrian government adopted an ICT strategy in 2004. One of the principal goals of this strategy is to "provide high-quality information and communication services: fixed and mobile telephone lines, data communication, Internet dissemination, with affordable prices for individuals and institutions regardless of their location, and in a way that increases their socio-economic competence." One of these strategy initiatives is “The National Knowledge Society” Initiative.

“This initiative aims at fostering the bases for a knowledge-based society in Syria, which entails awareness-raising, public freedom, and opening up to all social segments and groups, and to Arab and other countries worldwide. What the initiative also involves is seeking to disseminate ICT among communities in rural and urban areas, and encourage the development of digital Arabic cultural, media, and entertainment content. The following are the key steps towards this initiative:

- Adopting the declaration of principles that ensued from the Geneva phase of the World Summit on the Information Society, and embracing the recommendations of the UNDP Human Development Report 2003
- Encouraging Internet clubs and cafés, and creating community access centres and local community portals in rural areas, in cooperation with STE, SPE (Syrian Post Establishment), SCS, FARDOS Programme and other similar programmes for rural development."

To this end, the Syrian Ministry of Communications and Technology (MOCT) launched two projects; the first, in-conjunction with the UNDP-Syria, aimed to establish community telecenters in rural and suburban areas, and the second, in-conjunction with the Syrian Ministry of Culture (MC) aimed to create access points in cultural centers across the country. The first project has been implemented under a cooperation programme signed between the MOCT and the UNDP in 2002 called: The “Strategic ICT Programme for Socio-economic Development in Syria” (ICT4Dev14). This project commenced its community telecenters activities in 2004 under the label of Reefnet (rural network).

Box 4
The Syrian Digital Divide

Syria, like many countries in ESCWA region, suffers from the digital divide as reflected by main ICT indicators displayed below:

Figure 8. The Syrian Digital Divide

14 The aim of the ICT4Dev programme is to expand the utilization of information and communication technologies in economic and social development. It has various projects, community telecenters and community portal projects are part of this programme.
The digital divide between rural and urban areas is very wide as confirmed by a survey\(^{15}\) carried out in mid-2005, covering 1200 households across the country, were as follows:

- Tele-density per Household = 63%: Rural = 47%, Urban = 79%;
- Households with a PC = 23%: Rural = 14.8%, Urban = 31.2%;
- Computer users = 37.5: Rural =28%, Urban = 46%;
- Percentage of citizens accessing the Internet = 13.5%: Rural = 6%, Urban = 21%.

III.4.1. The Access Points Project

A joint project between the MOCT and the MC commenced in 2004 aimed at building small access points in the premises of cultural centers throughout the country. The MOCT is in charge of supplying furnishing and ICT equipment, while the MC is in charge of premises renovation and management.

These access points aim to allow easy and assisted access to information and e-public services, in addition to training on basic ICT skills.

Twenty-two access points were established across the country during the years 2004-2005; each equipped with 6 networked PCs, a laser printer and a dial-up Internet connection. The cost of 30 hours training is less than $10, while an Internet hour costs $ 0.5.

Their management model is 100% governmental without any partnership with local NGOs or authorities. They suffer strongly from the bureaucratic aspect of this kind of management model. In fact, field visits to these centers found a considerable delay in the decision making process from the central management, which paralyzes the operational action of these access points.

To this date, the number of users or visitors to these access points is very low, so they remain far from fulfilling their stated role.

III.4.2. The Reefnet Project

Reefnet is one of the ICT4Dev projects. It is a twofold project; the first relates to the establishment of community telecenters while the second concerns the implementation of a

\(^{15}\) Syrian Information Society Indicators, UNDP-Syria, ICT4Dev, 2005
community portal. Reefnet focuses primarily on underprivileged areas and has the following objectives:

- Expand and support the uses of ICT in social and economic development.
- Build an environment that can use those technologies, especially in isolated areas.
- Contribute to closing the digital gap between cities and rural areas.
- Contribute to the creation of job opportunities which depend on ICT.
- Assist small sized communities to use those technologies and empower women in rural areas to benefit from them.
- Motivate Syrian citizens to use ICT in acquiring new skills.
- Participate actively in communities’ social and economic activities.

III.4.2.1. The Community Telecenters:
Under this project, 10 community telecenters were established in various Syrian governorates, offering services ranging from courses in basic computer skills and ICDL to Internet usage, printing and other office needs such as national and international phone and fax and photocopying. In addition to this, different services are offered in these telecenters such as assisting community members find information on the Internet, along with the provision of a digital library, foreign language (English and French) courses and summer clubs for children.

Community telecenters that are located in relatively large areas offer advanced professional software courses, such as AutoCAD and PhotoShop, in addition to special courses for visually impaired people about the use of the PC and Internet.

All community telecenters were established in partnership with local organizations, which provided the premises and pay the electricity and water bills. The Reefnet project provided equipment and furniture, as well as the capacity building of the local telecenter staff. It will also provide financial and managerial support until the center achieves self-sufficiency. The size of a community telecenter is proportional to the size of the population living in the telecenter area. Each community telecenter contains 12 networked PCs in average, printer, photocopier, scanner, fax, international phone line, video projector and ISDN or dialup Internet connection. The first one was inaugurated in April 2004.

In addition to this, two community telecenters are equipped with a screen reader to be used by visually impaired people.

The telecenter management model utilised until now is the International Organization-Sponsored Model.

In addition to the community telecenters, the ICT4Dev is establishing centers labelled “Computer Training Center” (CTC) in urban areas with the aim of offering professional training, such as networking, e-publishing, website administration, etc. The first one was opened in Damascus in December 2006; the main beneficiaries of this center are motor handicapped people who can undertake professional IT courses for free. The second one is located in DeirAzzor governorate; its official opening will take place before the end of January 2007. Each CTC has at least 25 networked PCs, printers, photocopier etc.

III.4.2.1.1. Statistics
The following table shows training courses and trainees’ numbers since the establishment of telecenters until the end of November 2006.

Table 5: Training offered by the Syrian Telecenters between Apr. 2004 and November 2006

<table>
<thead>
<tr>
<th>Training</th>
<th>ICDL</th>
<th>IT</th>
<th>Languages</th>
<th>AutoCAD</th>
<th>Photoshop</th>
<th>Other</th>
<th>Child Club</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>1070</td>
<td>2489</td>
<td>1417</td>
<td>141</td>
<td>254</td>
<td>676</td>
<td></td>
<td>6047</td>
</tr>
</tbody>
</table>

Source: ICT4Dev annual report

A little more than 52% of trainees are females; women are entitled to a discount fee rate in all telecenters. It should be noted that at least 25% of training courses were carried out free of charge in underprivileged areas.

Other services offered by all telecenters are displayed in the following table for the same period as above:

Table 6: Walk-in Services offered by Syrian Telecenters

<table>
<thead>
<tr>
<th>Services</th>
<th>Photocopying (pages)</th>
<th>Printing (pages)</th>
<th>Fax</th>
<th>Internet (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>211696</td>
<td>20183</td>
<td>3942</td>
<td>12660</td>
</tr>
</tbody>
</table>

Source: ICT4Dev annual report

One can notice in the above table the low use of Internet, which is less than 2.5 hours per day per telecenter. This is due to the low Arabic digital content, the complete absence of e-services in Syria, and to the very slow Internet speed in the country.

Additionally, the two telecenters equipped with software for the visually impaired have carried out free training courses for 42 people suffering vision impairments within the period of a year. More than 50% of these use the Internet.

**III.4.2.2. Community Portal**

The second part of Reefnet is the implementation of community portals where suburban and rural areas can develop a website and harness the benefits that this can bring. By the end of 2006, 28 small towns and villages had their website on the portal www.reefnet.gov.sy.

The website is intended to reflect community activities and serve as a mirror for its daily problems. It contains all common information and daily news about the community, as well as a free forum where the local population can debate its issues. This forum has experienced tremendous success; it has gained popularity at a citizens’ level and it represents a free space where each citizen can share his opinion.

This portal offers many useful topics and services such as health, development, and educational forums. This portal is the 17th most visited Syrian website.

Each community telecenter is assigned a website and the telecenter’s staff are responsible for its management and maintenance.
III.4.2.3. Community Telecenter Management
All telecenters have a local staff, technical and managerial. In each telecenter there is at least one employee managing the daily life of the telecenter. The community telecenters' staff receive assistance from the central management, located in Damascus, every time they face a new difficulty. The central management receives regular reports allowing remote monitoring. A special Blog was designed for the telecenters' staff enabling them to exchange ideas and discuss related issues. Regular meetings (2-3 per year) are held in Damascus, where the activities bulletin of each telecenter is discussed. This type of management strengthens the network spirit among the telecenters’ staffs.

Technical staff, trainers mainly, are either telecenter employees or hired on the basis of 50% of the revenue of the training they perform.

Skill upgrading of the telecenters' staff by the Reefnet project is a continuous process on various topics such as project management, marketing, web sites design etc. All telecenters' employees have the ICDL at least.

All telecenter staff members receive a monthly salary and 15% of a telecenter’s net benefit is paid at the end of each year.

III.4.2.4. Community Telecenters Financial Sustainability
Half of Syria’s telecenters are currently financially sustainable and the entire telecenters network is also financially sustainable (i.e. telecenters having surplus pay for those with insufficient income). This result is partially achieved thanks to the assistance offered by local authorities in the form of an exemption from electricity and water bills. In addition, the Internet bills of the small community telecenters are paid by the MOCT.

Revenues: On the revenue side, the greatest source of revenue was from training courses, particularly ICDL courses, Internet usage and foreign language courses.

Expenses: Given that the telecenters are new, maintenance has not so far been an issue for any of the Syrian community telecenters, so the main expenses are staff salaries, communication and sundries.

III.4.2.5. Community Telecenters Field Visit (November 2006)
Two community telecenters were visited as the most representative sample of the Syrian community telecenters network.

1) Alzabadany Community Telecenter
Zabadany is located at 50 Km to the west of Damascus and home to more than 25,000 inhabitants most of them work in agriculture or tourism. The Zabadany telecenter was opened on March 31st, 2004, and is hosted in the Cultural Centre of the city. It is composed of two rooms, one dedicated for training and the other contains free access computers, a book and software library, video projector, printer and photocopier, scanner and fax machine. It includes 16 networked PCs, of which 7 are dedicated to training. The telecenter works from 9am – 8pm, 6 days a week. The staff includes 2 women handling administrative issues and a technical employee.
The Telecenter is an ICDL certified training center. Most trainees undertake training to improve their employment opportunities. Specialized courses include Adobe Photoshop, Web Design, AutoCAD and 3dMax. Photography shop owners and workers also receive training on Photoshop. The telecenter also provides Internet access. The staff are trained to help locals find the information they are seeking. This center trained more than 600 citizens - of these 160 have been trained for ICDL - and offered more than 1400 Internet hours. Fifty-one per cent of center’s users were female.

Free training for top students in local schools and government employees was organized. In addition, discounted training programmes were organized targeting women. It is worth noting that the telecenter has women in the administrative staff, which helps create a more welcoming environment for females. Females in this community find it uncomfortable attending Internet cafés and prefer the telecenter.

The telecenter’s staff also maintains a website that contains local news. This is part of the community portal (www.reefnet.org.sy). The content provided also covers local history, tourism, agriculture, culture and local governance. The website also includes items such as newspapers, forum and a local directory which contains important local information.

2) Maa'ret Al Nua'man Community Telecenter

Maa'ret Al Nua'man, is around 70 Km to the south of Aleppo, more than 50,000 inhabitants are living in this town exercising agriculture (olive and pistachio) and trade within their region. The telecenter is hosted in a building belonging to the municipality. The telecenter has 18 networked PCs; it also has a video projector, printer, fax machine, photocopier, a digital library, and an ISDN Internet connection and a screen reader for the visually impaired. A woman and one technical employee manage this telecenter.

Most training courses cover the ICDL material and more specialized training requirements. This telecenter is certified for ICDL training. Among the training courses being delivered are AutoCAD and ETAB, which are tailored for civil engineers. In addition, the telecenter delivers language courses by hired instructors. The number of trainees exceeds 950, including around 100 for ICDL; 39% of trainees are females.

The staff assists users in locating useful content on the Internet and in the digital library available at the telecenter. Students conducting research on general information tend to use the digital library resources, since it is cheaper. The telecenter's staff also help local businesses collect information, such as Mosaics. The Mosaic SMEs collect designs from the Internet and use them in the artwork they produce. The staff also assisted these SMEs in creating websites and introduced them to e-mail and to concepts of e-commerce (http://www.nourmosaic.com and http://www.sahlamosaic.com).

The telecenter has also conducted several creative activities as part of its outreach program to the local community. These activities include a summer camp for children. The camp included an introduction to ICT, language courses in Arabic and English, Arabic handwriting courses, music playing, and day trips.

Another creative activity in this telecenter is the one-day course programme, not limited to ICT skills, but developed to show how ICT can be used to deliver training in the community’s respective specializations, such as the Dental surgery where Internet resources were used to
demonstrate new dental techniques. The telecenter coordinates with Unions to perform capacity building programmes and general awareness campaigns such as for the bird flu case.

The telecenter is also equipped with software tools for visually impaired individuals. The telecenter coordinates with the Handicapped Society of Aleppo on the training programmes to be offered to the visually impaired.

The telecenter’s staff are also responsible for maintaining their website content which is part of the community portal on the web, as in the case of the Zabadany telecenter.

III.4.3. MTCC-Syria
An MTCC is a Multipurpose Technology Community Centre focusing on information technology aimed at offering basic IT skills in underprivileged and rural areas, as well as serving as an Internet access point. The idea of MTCC was developed by ESCWA and has been substituted by Smart Community, where one can find at its core the MTCC and a production facility of a potential and beneficial product. The benefit created by the production facility can be used partially to ensure the sustainability of the MTCC, in addition to all positive sub-products such as job creation, poverty alleviation etc. This type of Smart Community has been implemented in Syria and Yemen in cooperation with local authorities, ensuring a commitment to the continuity of the MTCC.

In Syria there is one Smart Community in the village of Qusaybeh, located in the south of Syria in the governorate of Quonytra. It is an impoverished area of more than 3000 inhabitants. Cattle farming is one of the most practiced professions and there is excess milk, which is not being exploited efficiently and profitably, so a dairy facility was established as a production unit.

The Qusaybeh MTCC was opened in December 2005 while the dairy was opened in December 2006. During the past year the MTCC offered basic IT courses at symbolic fees. More than 100 inhabitants completed this course, mainly school pupils. It is presently too early to assess this type of community center; the only risk could be on the managerial side. It should not, however, suffer from financial sustainability.

III.4.5. Mobile Information Centers (MIC)
The Fund for Integrated Rural Development Of Syria (FIRDOS) has equipped three mobile computer units that provide ICT capacity building programme in cooperation with the SCS and other Syrian donors. These mobile units schedule a three weeks stay in a community to deliver a complete training programme in 30 villages belonging to four governorates (Hama, Homs, Idleb and Aleppo) where FIRDOS has developmental projects. Each mobile unit is equipped with 16 networked PCs and a dialup Internet connection. SCS provides training materials and training of trainers while Syrian donors provide material assistance. FIRDOS provides day to day management and financial support. In 2006, MICs organized 84 free training sessions attended by 1195 trainees. The MICs are not functioning as community telecenters but rather as IT training centers combating IT illiteracy and helping villagers improving their productivity and job opportunity.
III.5. Yemen
Yemen has not yet adopted a national information strategy. It has been in gestation for a long time and by now it should have passed through the various stages and be ready to be voted on. This strategy intends to lay out a roadmap for the establishing of ICT infrastructure, the institutional and legal frameworks and the human resource requirements from both the service user and service provider perspectives. It will focus on the achievement of the following:
- Mainstreaming ICT into national development priorities
- Formulation of a national E-strategy that includes capacity development, economic
- Opportunity and social equity, in addition to infrastructure and other policy dimensions.
- Bringing together and facilitating dialogue between all key players on the priorities and modalities of implementation.

In the Vision 2025 and the Second Five Year Socio-economic Development Plan 2000-2005 document, the Ministry of Planning and Development highlighted the importance of ICT infrastructure, ICT applications, and capacity building. The Vision documents also suggested a basic benchmark for ICT indicators to be targeted by 2025, as per the following table.

Table 7: Suggested Benchmarks for Penetration of ICT in Yemen as suggested by Vision 2025.

<table>
<thead>
<tr>
<th>Suggested Benchmarks</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed lines - teledensity (per 100)</td>
<td>15</td>
</tr>
<tr>
<td>GSM density (per 100)</td>
<td>15</td>
</tr>
<tr>
<td>Internet users (per 100)</td>
<td>26*</td>
</tr>
<tr>
<td>Internet hosts</td>
<td>7000</td>
</tr>
<tr>
<td>PC’s (per 100)</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: National Profile for the Information Society, Yemen; ESCWA 2005.

Even if these benchmarks are achieved by the year 2025, Yemen will still rank lower than the 2004 world average in teledensity, mobile and number of PCs per hundred inhabitants. This situation is due to various factors such as a lack of electrical installations and other necessary infrastructure.

ICT-based communitarian concepts do not seem to be finding their place in Yemeni society despite the fact that these concepts could be of great help in remedying the access problems in cities as well in rural areas. Recently, two community telecenter networks were introduced and are being implemented by UN agencies, such as the ESCWA and the UNDP. To this can be added some isolated projects pertaining to capacity building efforts, rather than community telecenter activities.

Box 5

The Digital Divide in Yemen

The figure below shows the situation of Yemen in 2004 on four basic ICT indicators compared to the worldwide average. One can see that this country displays very low figures on the communication indicators as well as on the IT indicators, the number of PCs per hundred inhabitants is very low and consequently the number of Internet subscriber is lower.

Figure 9. The Yemeni Digital Divide
In this case it is worthless to argue about the divide between rural and urban areas.

The same picture is reflected in the level of ICT’s applications use such as e-government, where Yemen ranked 154 from 178 on the e-government readiness scale in 2004. Access to the Internet is still low and most of Internet subscribers are from the business community and foreign organizations, in addition to the unfair distribution of Internet cafés between urban and rural areas as the following table shows.

Table 8: Internet cafés in some Yemeni areas in 2004

<table>
<thead>
<tr>
<th></th>
<th>Sana'a</th>
<th>Aden</th>
<th>Taiz</th>
<th>Lahej</th>
<th>Ibb</th>
<th>Abyan</th>
<th>Al-Baidah</th>
<th>Shabwah</th>
<th>AL-Mahrah</th>
<th>AL-Hodeidah</th>
<th>Sayon</th>
<th>Al-Jawf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed</td>
<td>295</td>
<td>63</td>
<td>65</td>
<td>0</td>
<td>45</td>
<td>5</td>
<td>9</td>
<td>4</td>
<td>36</td>
<td>17</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Internet</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: National Information Center

III.5.1. Community Access Centers
The UNDP-Yemen, in cooperation with local NGOs, ICTDAR and Microsoft, established three Community Access Centers in the towns of Ta’az, AlHoudidah, and AlMoukala in September 2006. These centers have the same role as the community telecenters studied in this report; i.e. capacity building, Internet access and carrying out awareness campaigns dealing with topics relying heavily on information that can be collected partially or completely by means of the Internet, such as human rights, voting, democracy, HIV/AIDS, etc.

The UNDP’s role was to provide equipment: 10 PCs and a printer per center in addition to a one year Internet connection and central management. The local partners (Ta’az: the Youth Center; AlHoudidah: the Health Care Center; AlMoukala: the Youth Association for Innovation) provided the renovated premises, while Microsoft provided the necessary software under the programme Unlimited Potential. ICTDAR will offer copies of the screen reader IBSSAR for visually impaired people. This cooperation programme is scheduled to last one year, however, it can be renewed on the basis of a positive assessment.

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16 UNITED NATIONS GLOBAL E-GOVERNMENT READINESS REPORT 2004 TOWARDS ACCESS FOR OPPORTUNITY
17 Helmi Noman. UNDP An Overview of The Demographics and Usage Patterns of Internet Users in Developing Countries: Yemeni Internet Population as a Case Study http://www.undp.org.ye/ict.htm
Ta’az and AlMoukala centers started basic IT skills training in September, while AlHoudidah training activities started in December. Internet services have been available since September in Ta’az and December in the two other centers. The tables below show the number of trained people in the three community telecenters in addition to the number of Internet users.

Table 9: Number of People Trained in the three CACs

<table>
<thead>
<tr>
<th></th>
<th>September 2006</th>
<th>October 2006</th>
<th>November 2006</th>
<th>December 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>79</td>
<td>94</td>
<td>110</td>
<td>103</td>
</tr>
</tbody>
</table>

Source: Telephone Conversation with the CACs manager in 20 January 2007

Table 10: Number of Internet Users in the three CACs

<table>
<thead>
<tr>
<th></th>
<th>September 2006</th>
<th>October 2006</th>
<th>November 2006</th>
<th>December 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>340</td>
<td>290</td>
<td>590</td>
<td>1662</td>
</tr>
</tbody>
</table>

Source: Telephone Conversation with the CACs manager in 20 January 2007

Of the 386 trainees, only 119 (31%) were female and the percentage of females accessing the internet at the centers fell to 23%. This is completely understandable due to the low literacy rate for Yemeni women, which does not exceed 30%.

Training and Internet access are not free of charge; the prices must cover the CACs’ staff and their operating expenses.

### III.5.1.1. Management Model

The CAC’s management model is a mixture of the international and NGOs model, which means that the sustainability issue remains unresolved, managerial as well as financial, especially in case of maintenance, equipment upgrading and renovation.

### III.5.2. SOUL

SOUL (سؤول التنمية المرأة والطفل) is a non-profit, non-governmental Yemeni organization committed to raising the quality of life of Yemeni women and children through establishing development projects and creating partnerships with civil society, government, private, and international organizations. It focuses on sustainability and cost effectiveness and started its activities in 1997. Since then SOUL has successfully implemented many projects supporting the development of Yemeni women and children, focusing essentially on capacity building.

Among these projects was the establishment of two capacity building programs in basic ICT. The first, in partnership with Microsoft, aimed to train 250 women in 2006. Microsoft covered the training of trainers, the running costs and the trainers’ salaries. The second, in partnership with MEPI (Middle East Partnership Initiative), through the Women in Technology Initiative in Yemen, saw the establishment of three training courses in April 2006 aimed at training 50 women in networking (CCNA), 100 women in computer maintenance (A+ and Network+) and 250 women in basic IT skills. This program has been implemented in three different areas: Sana’a, Khamar and Yarem. The advanced training is sponsored by MEPI, is limited to Sa’ana, and it carried out in cooperation with the Public Institute for Communication due to the need to use advanced equipment.

The goal of SOUL was to offer, through The Community Training and Learning Centers (CTLCs), PCs and premises. The CTLC in Sana’a has 12 networked computers, while the other two centers have 10 computers each. Sana’a and Yarem centers have an ADSL connection,
while Khamar is still without an Internet connection due to the community’s reluctance to use the Internet.

SOUL received over 1000 applications to join the program. The program is expected to produce almost 650 graduates in the first year (compared to the target of 500).

Until the end of 2006, more than 400 women received basic IT skills training at the three CTLCs. There has been unexpected demand at the three centers and as such the cooperation programme with MEPI has already been extended from April 2007 to September 2007 to train 150 more women.

In the three centers there is no Internet access, but all of them have the potential to become a community telecenter for women.

**III.5.3. The MTCC Project**

As they were instituted in Syria, the MTCCs are part of the Smart Community Project (SCP) - championed by ESCWA - which contains at its core a multipurpose technology community center aimed at offering basic IT training in two centers, the first in Ta’az and the second in Hadran (a village in BaniMattar near Sana’a). The capacity building activities will be carried out in cooperation with the Ministry of Planning and International Cooperation and the National Programme for Capacity Building.

Training activities will start in 2007, training of trainers started in January 2007 at a training center in Sana’a (EduTec). It lasted 10 days and focused on the ICDL syllabus.

The Agro-Food processing Unit in Hadran center is coffee processing and packaging. While in Ta’az it is intended to establish a local cheese facility but this is facing infrastructure and logistic problems which can abort this project.

**III.5.6. IT Academies for Teacher Training**

Various capacity building projects have been launched in Yemen, such as the one implemented between the Ministry of Education and Microsoft (Microsoft’s Partners in Learning (PiL)) aimed at training teachers as trainers. Five Microsoft IT Academies for Teacher Training (ITATTs) have been established at five teacher training centers around Yemen since 2004. These centers are located in Sana’a, Aden, Ta’izz, Ibb and Say’un. The training course serves a two-fold purpose: to prepare the participants for accreditation in the ICDL and to provide them with the ‘soft’ skills – presentation and teaching – they need in order to pass on their knowledge to others. PiL plans to train two officials at each ITATT, and eventually at each school, in technical support and troubleshooting. This will build sustainable capacity at the local level to service the technology needs of the schools.
III.6. Recapitulation

The implementation of community telecenters in the ESCWA region started with the beginning of this millennium, their initial goal was firstly enforcing IT literacy by providing basic IT training. This goal has been evolved to offer assistance to citizens in their information-based activities. Some of the ESCWA region community telecenters, namely Jordanian's and Syrian's, have information-based awareness component, some others, Jordanian's and Egyptian's, are serving as information offices assisting their communities reaching the available e-applications. Table 11 shows the different familiar services provided by the community telecenters of the studied countries, and annexes 1, 2 and 3 provide comparative table and information on community telecenters per country and per visited telecenters.

Table 11. The different services provided by the community telecenters

<table>
<thead>
<tr>
<th></th>
<th>Basic training</th>
<th>Professional training</th>
<th>Internet access</th>
<th>Phone</th>
<th>Fax</th>
<th>Photocopying</th>
<th>Printing</th>
<th>E-gov services</th>
<th>Language courses</th>
<th>Content develop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Jordan</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lebanon</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Syria</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Yemen</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

Source: data compiled for this study

All these community telecenters have almost the same type of equipment; the only difference could be the type of connectivity as it is shown in the table 12, where one can see that all community telecenters in Lebanon have dialup connection and 24% of Egyptian community telecenters are without an Internet connection.

Table 12. Types of connectivity

<table>
<thead>
<tr>
<th></th>
<th>broadband</th>
<th>dial-up</th>
<th>unconnected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>76%</td>
<td></td>
<td>24%</td>
</tr>
<tr>
<td>Jordan</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lebanon</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syria</td>
<td>60%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Yemen</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: data compiled for this study

The ESCWA countries have different history regarding the establishment of community telecenters, Egypt started this type of activities in 2000 while some others started in the second half of 2006 as it is the case of Yemen. Table 13 depicts the evolution of the establishment of community telecenters, and figure 10 displays this evolution with reference to the number of inhabitants, while figure 11 shows the yearly change related to the number of inhabitants. Lebanon, Jordan and Egypt have a comparative evolution while Syria and Yemen are far behind.

Table 13. Accumulative number of community telecenters

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>50</td>
<td>250</td>
<td>127</td>
<td>191</td>
<td>473</td>
<td>238</td>
<td>160</td>
</tr>
<tr>
<td>Jordan</td>
<td>0</td>
<td>12</td>
<td>23</td>
<td>20</td>
<td>28</td>
<td>33</td>
<td>19</td>
</tr>
<tr>
<td>Lebanon</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>10</td>
<td>14</td>
<td>41</td>
<td>16</td>
</tr>
<tr>
<td>Syria</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>
Governments are the main player in the establishment of these community telecenters, in fact 93% are sponsored by governments and the rest by international organizations or private social as it is drawn in the following figure:
But the involvement of local community in the management of these community telecenters is clear, which a very positive point for their sustainability.

![Figure 13. Distribution of community telecenters by type of Management](image)

Source: data compiled for this study

It is quite normal for community telecenters to start their activities by focusing on how to use ICT, but they actually should shift to a more beneficial stage by focusing on how ICT can be useful especially in education, health etc. It is worth noting that community telecenters can play a very positive role in the popularization of e-government applications mainly in rural areas where illiteracy (not only IT illiteracy) still strongly present as it is the case in Egypt and Yemen.

In the mean time, community telecenters should move toward being proactive in assisting local business, such as pharmacies, medium stores, clinics, big farms etc, on how they can improve the efficiency of the management of their business in adopting information technology.

ESCWA countries are on different stages in the development of community telecenters as it may be viewed by the surveyed countries summarized in the following:

**Egypt:** The Egyptian Community telecenters project works in line with the Egyptian national vision and plays a key role in the transition towards an information society, 1453 IT clubs were implemented in the 27 governorates of Egypt between 2000 and 2006 training more than one million citizens. The management model is quietly robust due to the healthy relations between the MCIT and local NGOs. The governmental desire to expand this project annually at the rate of 300 IT-clubs per year is clear evidence of its commitment to this vital project. Furthermore, the number of annual applications by NGOs for the establishment of an IT-club in their community testifies to the high level of interest that local communities have in this project. However these IT clubs seem generally to lack the role of organizing awareness events on topics heavily dependent on information. Their role can be strengthened by the creation of a community portal related directly to areas where IT clubs are established and by the development of appropriate local content.

<table>
<thead>
<tr>
<th>Community Center</th>
<th>Mgmt Model</th>
<th>Number of</th>
<th>Average Number</th>
<th>Average Number</th>
<th>Other Equipment</th>
<th>Type of Internet</th>
<th>ICT Training</th>
<th>Other Services</th>
</tr>
</thead>
</table>

Table 14. Egyptian IT Clubs data
Community Telecenters in Some Countries of the ESCWA Region, 2006

<table>
<thead>
<tr>
<th>Type</th>
<th>(sponsored by)</th>
<th>Centers</th>
<th>of Staff</th>
<th>of PCs</th>
<th>Connection</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT-Club</td>
<td>Government and local authorities and associations</td>
<td>1453</td>
<td>2.75(per center)</td>
<td>13 (per center)</td>
<td>Printer, LAN</td>
<td>ADSL* basics and professional such as networking, database</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>citizens assistance in accessing e-gov services and loans applications</td>
</tr>
</tbody>
</table>

Source: data compiled for this study

**Jordan**: The Knowledge Station project is completely in line with the Jordanian strategy for the transformation of Jordan into an Information Society. The yearly expansion of the KS network testifies to the willingness of the Jordanian government to cover all the country’s areas. There are actually 135 knowledge stations providing a wide range of training (basic and professional) and services.

The management model of the KSs, as discussed before, should not face the sustainability challenge, on the financial as well as on the managerial levels. However, this issue should be tackled carefully in the medium and long term. In fact, most of KSs’ equipments will need upgrading or replacement in the near future and some KSs are asking for expansion, in terms of hard and soft equipments.

The central management is considering this issue and is studying different alternatives, such as widening the range of services delivered by the Knowledge Stations. This will be necessary, especially with the expansion of the KSs and the total expected cost increase.

The knowledge station network is certainly the most developed and successful in the ESCWA region as community telecenters network. Its role will be enforced in case a website is associated to each KS. This website can reflect the community activities and provide informational services to locals.

**Table 15. Jordanian Knowledge Stations data**

<table>
<thead>
<tr>
<th>Community Center Type</th>
<th>Mgmt Model (sponsored by)</th>
<th>Number of Centers</th>
<th>Average Number of Staff</th>
<th>Average Number of PCs</th>
<th>Other Equipment</th>
<th>Type of Internet Connection</th>
<th>ICT Training Courses</th>
<th>Other Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Station</td>
<td>Government and local authorities</td>
<td>135</td>
<td>2 (per center)</td>
<td>12 (per center)</td>
<td>LAN, Printer, TV set, Video projector, Scanner</td>
<td>ADSL</td>
<td>basics and professional such as networking, database</td>
<td>citizens assistance in accessing e-gov services</td>
</tr>
</tbody>
</table>

Source: data compiled for this study

**Lebanon** is one of the richest ESCWA member countries in term of ratio of community telecenters, management models and the wide spectrum of telecenters sponsors. Some of these telecenters have sustainable characteristics such is the case of PiPOPs, while others may suffer serious crises in the near future as it may be the case of telecenters sponsored by foundations or international organization.

The PiPOPs are true community telecenters by the nature of services they provide their community and the type of management where local NGOs are main actors. They cover almost all areas in the country. However, the PiPOP website should be activated, each sites should be administrated by the communities themselves which is not the case yet.

**Table 16. Lebanese Community Telecenters data**

<table>
<thead>
<tr>
<th>Community Center Type</th>
<th>Mgmt Model</th>
<th>Number of Centers</th>
<th>Average Number</th>
<th>Average Number</th>
<th>Other Equipment</th>
<th>Type of Internet</th>
<th>ICT Training</th>
<th>Other Services</th>
</tr>
</thead>
</table>

52
Community Telecenters in Some Countries of the ESCWA Region, 2006

(sponsored by) NGOs, local authorities, international organizations
More than 67
1.5 (per center)
10 (per center)
LAN, Printer, Dialup
basics

Source: data compiled for this study

Syria: The Syrian community telecenter network still a small one; its impact is rather limited. This may due to the fact that a national IT literacy programme has been implemented in cooperation between the SCS and the Ministry of Education allowing citizens to have training in secondary schools labs scattered across the country; this programme trained more than 400 thousand of citizens in all the country areas.

The Syrian community telecenters experience has, however, demonstrated the efficiency and usefulness of community telecenters in various aspects as described above, it also demonstrated the efficiency of the network business model. However, Syrian actors, such as the SCS and the MOCT, are reluctant to expand the community telecenter network, in addition, the Ministry has not the adequate structure to manage this type of telecenter, as was the case of access centers built in cooperation with the Ministry of Culture. The Syrian telecenters could disappear if no national partner emerges capable of driving this project to a successful conclusion.

The community portal, however, is a tremendous success; this idea showcases the benefits that the Internet can provide in the development of communities. This experience can be duplicated in different ESCWA member countries at a very low cost.

Table 17. Syrian Community Centers data

<table>
<thead>
<tr>
<th>Community Center Type</th>
<th>Mgmt Model (sponsored by)</th>
<th>Number of Centers</th>
<th>Average Number of Staff</th>
<th>Average Number of PCs</th>
<th>Other Equipment</th>
<th>Type and Speed of Internet Connection</th>
<th>ICT Training Courses</th>
<th>Other Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Center</td>
<td>Government and International organization</td>
<td>11</td>
<td>2 (per center)</td>
<td>12 (per center)</td>
<td>LAN, Printer, Video projector, Scanner, fax, phone, UPS</td>
<td>ISDN+ dialup</td>
<td>basics and professional such as networking</td>
<td>citizens assistance in browsing the Internet</td>
</tr>
</tbody>
</table>

Source: data compiled for this study

Yemen: Community telecenter is a new concept in Yemen, only five community telecenters have been implemented since September 2006. Their management model is international organization model which means that they can vanish if there is no local powerful partner overseeing their activities and ensuring their sustainability.

Table 18. Yemenis Community Access Centers data

<table>
<thead>
<tr>
<th>Community Center Type</th>
<th>Mgmt Model (sponsored by)</th>
<th>Number of Centers</th>
<th>Average Number of Staff</th>
<th>Average Number of PCs</th>
<th>Other Equipment</th>
<th>Type of Internet Connection</th>
<th>ICT Training Courses</th>
<th>Other Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Access Center</td>
<td>International organization And local association and authorities</td>
<td>5</td>
<td>1 (per center)</td>
<td>10 (per center)</td>
<td>LAN, Printer</td>
<td>dialup</td>
<td>basics,</td>
<td></td>
</tr>
</tbody>
</table>

Source: data compiled for this study
IV: Recommendations

Recognizing the vital role of community telecenters in the development of their communities, different recommendations can be suggested on the level of:
- Capacity building,
- Community services,
- Networking,
- Preparing for the future,
- Sustainability.

Capacity Building: IT literacy efforts should continue, but on a standardized basis. This will help trainees obtain recognized certificates which will ensure trainers are fully qualified to meet their job requirements. On the other hand, certification will broaden their job opportunities. ICDL training, for example, could be the base for IT skills training.

Capacity building should not be limited to the acquisition of basic IT skills. Rather, it should go further in some communities and be job and market-oriented. Skills in typing and administrative assistance, for example, will be provided in some communities, as is the case in Jordan, which has a positive effect by creating employment opportunities for young women. Other professional skills to be provided cover the maintenance of basic ICT equipment, such as A+ certificate, which will also have the double effects for ICT equipment consumers and job creation.

A more determining role that the community telecenter can play is in the advocacy of the use of ICT as an assistive tool in the daily work, such as the use of accounting software for the management of stores, pharmacies, clinics and big farms. Community telecenters should organize regular workshops for the promotion and implementation of such applications.

Community Services: Citizens are increasingly aware of the role that information can play in the development and promotion of their activities. Various reasons hinder their access to information, such as illiteracy in foreign languages or a lack of knowledge regarding the handling of information devices etc. Community telecenters can play a key role in this regard by:

• Assisting citizens browse and reach information,
• Website design and implementation for local businesses,
• If the community telecenter possess a broadband Internet access, it becomes profitable for citizens as well as the telecenter to offer Internet subscription for quasi-free access against a modest fee. This can seriously contribute to the financial sustainability of the telecenter.
• Regularly display information related to community activities, such as weather forecasting and farming products list prices etc. in agrarian communities.
• Facilitating citizens’ access to e-government services as is the case with the Jordanian knowledge stations.

In addition to the usual activities of community telecenters, they should implement an individual community website where all types of information related to social and economic activities can be published beside a community forum where citizen can discuss their local and collective issues, as in the Syrian case which demonstrates its usefulness and impact.

Networking: Community telecenters in ESCWA member countries have a wealth of diverse and instructive experiences. In almost every country there is a network linking the community
telecenters within the country. It would be very judicable, however, to link all these telecenters in a single unique network allowing cross-border knowledge transfer and experience sharing. This could be done by the creation of a website (in Arabic) consisting of updated data about the community telecenters in each country, and by organizing meetings between key persons from each country.

**Preparing for the Future**: The share of e-applications is growing on the internet and via digital devices such as e-health, e-business and e-learning. These applications, sooner or later, will be part of the daily routine for all societies. As such, ESCWA member countries should be prepared to deal with this change successfully. The ground seems to be well prepared for the uptake of e-learning applications; one can find in the market place various products in Arabic and the Syrian Virtual University and the Arab Open University are prime cases where community telecenters could play a supportive role. SMEs are discovering the power of the Internet for the promotion of their products and in arranging contracts or agreements, which is a big step *per se* in the absence of adequate tools and legislation for the true practice of e-commerce.

**Sustainability**: Most of the community telecenters discussed in this report have to deal with the sustainability issue as a determining factor for their continuity, on the managerial as well on the financial level. To face this issue successfully they should:

- Adopt a clear business model leading to financial sustainability.
- Train their staff in management and marketing aspects, as well as in new technologies and products.
- Strengthen their links with local players and stakeholders in their communities and adapt telecenter activities to the local needs initially, as well as creating and promoting new activities in line with the socio-economic development of their communities such as content development.
- Focus on underprivileged groups such as women and unemployed people.
- Promote the concept of a community telecenter on a public, as well as a private level, and seek extra funding to cover the training costs of the above mentioned underprivileged groups.
Annex 1. Identity cards of visited community telecenters

<table>
<thead>
<tr>
<th>The IT-Club of the Benevolent Association for Children and Orphaned Care (Egypt)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td><strong>Services</strong></td>
</tr>
<tr>
<td><strong>Management model</strong></td>
</tr>
<tr>
<td><strong>Sustainability assessment</strong></td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Korean- Egyptian Information Technology Club (Egypt)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td><strong>Services</strong></td>
</tr>
<tr>
<td><strong>Management model</strong></td>
</tr>
<tr>
<td><strong>Sustainability assessment</strong></td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alramtha KS (Jordan)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td><strong>Services</strong></td>
</tr>
<tr>
<td><strong>Management model</strong></td>
</tr>
<tr>
<td><strong>Sustainability assessment</strong></td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AlHousen KS (Jordan)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td><strong>Services</strong></td>
</tr>
<tr>
<td><strong>Management model</strong></td>
</tr>
<tr>
<td><strong>Sustainability assessment</strong></td>
</tr>
<tr>
<td><strong>Recommendation</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The KS of Azmi Almoufti Camp (Jordan)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
</tr>
<tr>
<td><strong>Equipment</strong></td>
</tr>
<tr>
<td><strong>Services</strong></td>
</tr>
<tr>
<td><strong>Management model</strong></td>
</tr>
</tbody>
</table>
### Sustainability assessment
Financial sustainability could be an issue in the future

### Recommendation
Establishment of website for the local community with emphasis on job opportunities in the region

### The Jarash KS (Jordan)

<table>
<thead>
<tr>
<th>Location</th>
<th>Jarash governorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>10 networked PCs, printer, scanner, photocopier, video projector and ADSL</td>
</tr>
<tr>
<td>Services</td>
<td>Basic IT and advanced courses such as CISCO.</td>
</tr>
<tr>
<td>Management model</td>
<td>Government + local authority</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>Quiet sustainable</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To establish a website for the local community and to focus on the promotion of IT benefits in its community</td>
</tr>
</tbody>
</table>

### The PiPOP of Baalbeck (Lebanon)

<table>
<thead>
<tr>
<th>Location</th>
<th>Plain of Beckaa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>15 networked PCs and a printer in addition to an Internet café (in construction) with a Microwave link</td>
</tr>
<tr>
<td>Services</td>
<td>Basic IT training, English courses and library</td>
</tr>
<tr>
<td>Management model</td>
<td>NGOs</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>Quiet sustainable</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To activate the Baalbeck’s website, and to focus on the promotion of IT benefits in its community</td>
</tr>
</tbody>
</table>

### The PiPOP of Niha (Lebanon)

<table>
<thead>
<tr>
<th>Location</th>
<th>Zahleh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>6 networked computers, dialup connection, and one printer</td>
</tr>
<tr>
<td>Services</td>
<td>Basic IT training, Internet browsing and library access</td>
</tr>
<tr>
<td>Management model</td>
<td>NGO + local authority</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>questionable</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To activate the Niha’s website</td>
</tr>
</tbody>
</table>

### PiPOP of Rass Al Meten (Lebanon)

<table>
<thead>
<tr>
<th>Location</th>
<th>20 Km to the east of Beirut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>11 networked PCs, printer, and dialup connection</td>
</tr>
<tr>
<td>Services</td>
<td>Basic IT training, Internet browsing and library access</td>
</tr>
<tr>
<td>Management model</td>
<td>NGOs</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>Quiet sustainable</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To activate the Rass Al Meten’s website</td>
</tr>
</tbody>
</table>

### Alzabadany Community Telecenter (Syria)

<table>
<thead>
<tr>
<th>Location</th>
<th>50 Km to the west of Damascus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>16 networked PCs, video projector, printer, photocopier, scanner and fax machine</td>
</tr>
<tr>
<td>Services</td>
<td>Basic and technical IT training, foreign language courses, communication services, Internet browsing, local content</td>
</tr>
<tr>
<td>Management model</td>
<td>International organization + government</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>Serious managerial and financial risks</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To focus on the promotion of IT benefits in its community</td>
</tr>
</tbody>
</table>

**Maa'aret Al Nua'man Community Telecenter (Syria)**

<table>
<thead>
<tr>
<th>Location</th>
<th>70 Km to the south of Aleppo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>18 networked PCs; video projector, printer, fax machine, photocopier, a digital library, ISDN Internet connection and a screen reader for the visually impaired</td>
</tr>
<tr>
<td>Services</td>
<td>Basic and technical IT training, foreign language courses, communication services, Internet browsing, local content administration and assistance of visually impaired</td>
</tr>
<tr>
<td>Management model</td>
<td>International organization + government</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>Serious managerial and financial risks</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To focus on the promotion of IT benefits in its community</td>
</tr>
</tbody>
</table>

**Community Access Centers of Ta’az, AlHoudidah, and AlMoukala (Yemen)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Yemen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>10 networked PCs and printer in each of the three towns</td>
</tr>
<tr>
<td>Services</td>
<td>Basic IT training and internet browsing</td>
</tr>
<tr>
<td>Management model</td>
<td>International organization, local NGOs and local authorities</td>
</tr>
<tr>
<td>Sustainability assessment</td>
<td>Obvious risk</td>
</tr>
<tr>
<td>Recommendation</td>
<td>To establish websites for their respective local communities</td>
</tr>
</tbody>
</table>
## Annex 2. Comparative table for studied countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Number of Centers</th>
<th>Average Number of Staff (per center)</th>
<th>Average Number of PCs (per center)</th>
<th>Most Common Operating System and Application Software</th>
<th>Other Equipment (most common to all centers)</th>
<th>Total Number of Users (yearly average for all centers)</th>
<th>% of Female Users (yearly average for all centers)</th>
<th>Most Common ICT Training Courses</th>
<th>Total Number of Trainees (yearly average for all centers)</th>
<th>% of Female trainees (yearly average for all centers)</th>
<th>Average Number of Training Hours (per trainee)</th>
<th>Total Number of Internet Users (yearly average for all centers)</th>
<th>Other Services (most common to all centers)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>1453</td>
<td>2.75</td>
<td>13</td>
<td>W XP&amp;MsO</td>
<td>LAN, Printer</td>
<td>ADSL</td>
<td>NA</td>
<td>NA</td>
<td>Basic and professional</td>
<td>150,000</td>
<td>55%</td>
<td>NA</td>
<td>NA</td>
<td>Awareness</td>
</tr>
<tr>
<td>Jordan</td>
<td>135</td>
<td>2</td>
<td>12</td>
<td>W XP&amp;MsO</td>
<td>LAN, Printer</td>
<td>ADSL</td>
<td>NA</td>
<td>NA</td>
<td>Basic and professional</td>
<td>15,000</td>
<td>55%</td>
<td>NA</td>
<td>NA</td>
<td>Awareness</td>
</tr>
<tr>
<td>Lebanon</td>
<td>More than 89</td>
<td>1.5</td>
<td>10</td>
<td>W XP&amp;MsO</td>
<td>LAN, Printer</td>
<td>Dialup</td>
<td>NA</td>
<td>NA</td>
<td>Basic</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Awareness</td>
</tr>
<tr>
<td>Syria</td>
<td>11</td>
<td>2</td>
<td>12</td>
<td>W XP&amp;MsO</td>
<td>LAN, Printer</td>
<td>ISDN, Dialup</td>
<td>NA</td>
<td>NA</td>
<td>basic</td>
<td>3000</td>
<td>52%</td>
<td>NA</td>
<td>NA</td>
<td>Awareness</td>
</tr>
<tr>
<td>Yemen</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>W XP&amp;MsO</td>
<td>LAN, Printer</td>
<td>Dialup</td>
<td>NA</td>
<td>NA</td>
<td>basic</td>
<td>1170 (est.)</td>
<td>31%</td>
<td>NA</td>
<td>NA</td>
<td>Awareness</td>
</tr>
</tbody>
</table>
### Annex 3. Information summary for each studied country

<table>
<thead>
<tr>
<th>Country</th>
<th>General Information</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Egypt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Community Center Type</strong></td>
<td><strong>Mgmt Model</strong> (sponsored by)</td>
<td><strong>Numbe r of Centers</strong></td>
</tr>
<tr>
<td>IT-Club</td>
<td>Government and local authorities and associations</td>
<td>1453</td>
</tr>
<tr>
<td><strong>Jordan</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Community Center Type</strong></td>
<td><strong>Mgmt Model</strong> (sponsored by)</td>
<td><strong>Numbe r of Centers</strong></td>
</tr>
<tr>
<td>Knowledge Station</td>
<td>Government and local authorities</td>
<td>135</td>
</tr>
</tbody>
</table>
### Lebanon

| Community Center Type (local designation) | Mgmt Model (sponsored by) | Number of Centers | Average Number of Staff (per center) | Average Number of PCs (per center) | Operating System and Application Software | Other Equipment | Type and Speed of Internet Connection | Total Number of Users (yearly average) | ICT Training Courses | Number of Trainees (yearly average) | % of Female trainees (yearly average) | Number of Internet Users (yearly average) | Average Internet Session Time (per user) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Internet Point of Presence (PiPOP), Multipurpose Technology Community Center (MTCC) | NGOs+ local authorities+ international organizations | More than 89 | 1.5 | 10 | WXP & MsO | LAN, Printer, Dialup | NA | basics | NA | NA | N/A | N/A | | Sustainability risk in some cases |

### Syria

| Community Center Type (local designation) | Mgmt Model (sponsored by) | Number of Centers | Average Number of Staff (per center) | Average Number of PCs (per center) | Operating System and Application Software | Other Equipment | Type and Speed of Internet Connection | Total Number of Users (yearly average) | ICT Training Courses | Number of Trainees (yearly average) | % of Female trainees (yearly average) | Number of Internet Users (yearly average) | Average Internet Session Time (per user) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Community Center | Government and International organization | 11 | 2 | 12 | WXP & MsO | LAN, Printer, Video projector, Scanner, fax, phone, UPS | ISDN+ dialup | NA | basics and professional such as networking, | 3,000 | 52% | N/A | N/A | | Serious sustainability risk |
### Yemen

<table>
<thead>
<tr>
<th>Community Center Type (local designation)</th>
<th>Mgmt Model (sponsored by)</th>
<th>Numbr of Centers</th>
<th>Average Number of Staff (per center)</th>
<th>Average Number of PCs (per center)</th>
<th>Operatin System and Applicati on Software</th>
<th>Other Equipment</th>
<th>Type and Speed of Internet Connection</th>
<th>Total Number of Users (yearly average)</th>
<th>ICT Training Courses</th>
<th>Number of Trainees (yearly average)</th>
<th>% of Female trainees (yearly average)</th>
<th>Number of Internet Users (yearly average)</th>
<th>Averag e Internet Session Time (per user)</th>
<th>Other Services</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Access Center</td>
<td>International organization And local association and authorities</td>
<td>5</td>
<td>1</td>
<td>10</td>
<td>WXP &amp; MsO</td>
<td>LAN, Printer</td>
<td>dialup</td>
<td>NA</td>
<td>basics,</td>
<td>1170*</td>
<td>31%</td>
<td>N/A</td>
<td>N/A</td>
<td>Serious sustainability risk</td>
<td></td>
</tr>
</tbody>
</table>

*Estimated
### Annex 4. Most Effective community telecenters and most suitable e-applications

<table>
<thead>
<tr>
<th>Country</th>
<th>Community Telecenter</th>
<th>Suitable e-application</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>IT Club of the Benevolent Association for Children and Orphaned Care</td>
<td>e-learning for pupils and illiterates</td>
<td>Ekram Fathy <a href="mailto:ekram@mcit.gov.eg">ekram@mcit.gov.eg</a> +2023446655 Mob: +202106000040</td>
</tr>
<tr>
<td></td>
<td>The Korean- Egyptian Information Technology Club</td>
<td>e-learning for students and adults (lifelong learning)</td>
<td>Ekram Fathy <a href="mailto:ekram@mcit.gov.eg">ekram@mcit.gov.eg</a> +2023446655 Mob: +202106000040</td>
</tr>
<tr>
<td>Jordan</td>
<td>The Jarash KS</td>
<td>e-learning for students and adults (lifelong learning)</td>
<td>Nasser Khalaf <a href="mailto:nasser.k@nitc.gov.jo">nasser.k@nitc.gov.jo</a> Mob +962795512225</td>
</tr>
<tr>
<td></td>
<td>Alramtha KS</td>
<td>e-commerce and business</td>
<td>Nasser Khalaf <a href="mailto:nasser.k@nitc.gov.jo">nasser.k@nitc.gov.jo</a> Mob +962795512225</td>
</tr>
<tr>
<td>Lebanon</td>
<td>PiPOP of Baalbeck</td>
<td>e-commerce &amp; e-learning</td>
<td>Rami Allakees +9613638215</td>
</tr>
<tr>
<td></td>
<td>PiPOP of Rass Al Meten</td>
<td>e-health</td>
<td>Gabriel AlDeek <a href="mailto:gabriel.deek@omnisystems.com.lb">gabriel.deek@omnisystems.com.lb</a> Mob +9613322993</td>
</tr>
<tr>
<td>Syria</td>
<td>Alzabadany</td>
<td>e-learning</td>
<td>Sammer Ta’aalab <a href="mailto:taalab@scs-net.org">taalab@scs-net.org</a> +96394255486</td>
</tr>
<tr>
<td></td>
<td>Maa’ret Al Nua’man</td>
<td>e-learning</td>
<td>Sammer Ta’aalab <a href="mailto:taalab@scs-net.org">taalab@scs-net.org</a> +96394255486</td>
</tr>
<tr>
<td>Yemen</td>
<td>Community Access Centers</td>
<td></td>
<td>KAIS Al-Abhar <a href="mailto:kais.alabhar@gmail.com">kais.alabhar@gmail.com</a> Mob +967711750695</td>
</tr>
</tbody>
</table>
Annex 5. List of Key Persons responsible for Community Telecenters in the Studied Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Function</th>
<th>Phone</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>Ekram Fathy</td>
<td>Ministry advisor</td>
<td>+2023446655</td>
<td><a href="mailto:ekram@mcit.gov.eg">ekram@mcit.gov.eg</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mob: +202106000040</td>
<td></td>
</tr>
<tr>
<td>Jordan</td>
<td>Nasser Khalaf</td>
<td>Knowledge Stations Director</td>
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