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# Preliminary research report: SURVEY OF THE COMMUNITY TELECENTERS IN THE CARIBBEAN

Santo Domingo, August 25th 2006

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(with collaboration of Yacine Khelladi)

In preparation of the
**Caribbean Community Telecentres Workshop**
held 20-22 / 07 / 2006 (www.taiguey.org/ctw)


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IDRC International Development Research Centre
CRDI Centre de recherches pour le développement international

telecentre.org

## DISCLAIMER

This is a preliminary report which was prepared based on responses to a survey undertaken in June 2006. While we believe that it represents a good picture of the situation, some of the data refers to institutions which 1) do not fit the definition of telecenters as established by the survey and/or 2) are not all fully established. As such, further verification and refinement of the data needs to be undertaken. The results of this process will be made available in the document section of the web site: http://www.taiguey.org/CTW.

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# Executive summary

The survey was undertaken in preparation for the Caribbean Telecenters Workshop July 20-22, 2006 in the Dominican Republic. The objective was to identify telecenters in operation around the Caribbean and capture information on their main characteristics including location, operational structures, ownership, target audience, facilities, funding, main success factors and challenges. For the purpose of the study, the Caribbean included the thirteen CARICOM states, Dominican Republic, Cuba, Cayman, Puerto Rico, as well as the Dutch and French dependencies of the region.

Questionnaires were sent by email to over 100 individual telecenter locations and networks. There were 44 successful responses which reported on 970 telecenters. Thirty five of these represented individual centers, and the others represented telecenters belonging to national networks.

Questions were asked relating to: length of time in operation; location, legal status, ownership, development objectives, target groups, population size and literacy level of community served, equipment and facilities, services offered, staffing, operational costs, competitiveness of service, success factors, challenges, sources of financial support and lessons learned.

Tabulations were done of all the parameters under the heading if individual telecenters and telecenters belonging to networks. In addition a mapping of some defining characteristics was developed for each of the telecenters and networks which participated in the survey. Defining characteristics are features that address ownership, time in operation, sources of support, levels and quality of facilities, level and extent of services delivered and target groups and areas served.
Finally, a comparison of individual and networked telecenters was one for some of the parameters.

Analysis of the data showed that the telecenters of the region were fairly new with most of them <1 to 5 years old and located in rural and low income areas. Most were also legally registered, had ADSL connections, targeted youth, students and geographical communities; had among their development objectives, basic internet access and information dissemination and in the case of the networks, distance education; offered services including Internet access, training and document preparation, were located more than 8km from another community access point; generally had between 6-20 computers in their facility(with individual centers tending to have less). Both individual telecenters and networked telecenters felt that their major success factors included relevance to communities, support from community structures, however funding was a much more significant success factor for individual centers than for networked telecenters. Individual telecenters counted capable and adequate staffing and reliable connectivity as main challenges and networked telecenters felt that reliable connectivity and affordable overheads were their major challenges.

Other differences were that individual telecenters were more likely to be initiated/owned by NGOs, tended to serve smaller communities; received their support mainly from international donors, and paid significantly less for connectivity as well as overall overhead costs than telecenters in networks. On the other hand the networks were more likely to be initiated/owned by government, tended to serve larger communities and received their support mainly from government funds and paid a great deal more for connectivity and overheads than the individual telecenters. Significantly 85% and 91% of individual and networked telecenter respectively reported inadequate income to cover their overhead costs.

In reviewing factors which could best define a typology of telecenters of the Caribbean, it was felt that while there were differences based on language, length of operation, ownership, sources of support and other parameters,, a typology based whether the telecenter was an individual unit or part of a national network would be most useful in the overall context of establishing a framework for collaboration among telecenters of the region. .

# 1. Background

The survey was undertaken in preparation for the Caribbean Telecenters Workshop scheduled for July 20-22, 2006 in the Dominican Republic. The objective was to identify telecenters in operation around the Caribbean and capture information on their main characteristics including location, operational structures, ownership, target audience, facilities, funding, main success factors and challenges. For the purpose of the study, the Caribbean included the thirteen CARICOM states, Dominican Republic, Cuba, Cayman, Puerto Rico, as well as the Dutch and French dependencies of the region.

For the purposes of the survey and the workshop, the definition of Telecenters was taken as: "A telecentre is a public place where people can access computers, the Internet and other technologies that help them gather information and communicate with others at the same time as they develop digital skills. While each telecentre is different, the common focus is on the use of technologies to support community and social development — reducing isolation, bridging the digital divide, promoting health issues, creating economic opportunities, reaching out to youths. (http:/ www.wikipedia.org)

# 2. Methodology and Responses

The study commenced in early June with the development of two questionnaires: one relating to individual telecenters and the second relating to telecenter networks comprising more than 10 telecenters. The questionnaire development and management tools provided by Survey Monkey (www.surveymonkey.com) were used. Both questionnaires were translated in three languages - English, French and Spanish. Appendix 1 and 2 shows questionnaires for individual and telecenter networks respectively.

The identification of existing telecenter initiatives was carried out with the assistance of regional ICT practitioners and supporting organizations, as well as notices to the Caribbean Virtual ICT Community (CIVIC). Questionnaires were sent by email to over 100 individual telecenter locations and networks commencing mid June and responses were collected up to July 15, 2006. Non responses were followed up with telephone calls.

There were 56 attempted responses of which 44 were successful (i.e. more than 60% of the questionnaire filled in). Difficulties due to incorrect email addresses and/or contact telephone numbers, the adverse situation in Suriname, locations not actually started, discontinued locations, and general public aversion to surveys are felt to account for the number of responses. A small number of persons reported difficulties with the software, and seem to have inadvertently declined the questionnaire.

The questionnaires reported on 970 telecenters, of which only 35 represented individual centers. The others belonged to national networks with the largest being in Cuba (600); Puerto Rico (Apsira- 150 and CTCs – 65) and Martinique (37).

**PARAMETERS**

Apart from general background information, the questionnaires addressed the following questions:

1. Length of time in operation
2. Location(Urban/ Rural)
3. Legal status
4. Ownership profile
5. Development objectives
6. Main target groups
7. Population size served
8. Literacy level of community served
9. Presence of other similar facilities
10. Competitiveness of service
11. Main success factors
12. Main challenges
13. Hours of service
14. Type of internet connection
15. Services offered
16. Training offered
17. Equipment and facilities
18. Most popular services
19. Number of users daily
20. Staff
21. Connectivity cost
22. Monthly cost
23. Income vs. monthly costs
24. Main sources of financial support
25. Lessons learned

## Answers received

### Table 1 Individual telecenters who answered the survey

| Name of Initiative | Country |
|---|---|
| Briland Modem Fund | Bahamas |
| Cacique Digital Telecentro Comunitario | Dominican Republic |
| Centro Informatico para Refozar Conocimientos | Dominican Republic |
| Club de Informatica Don Bosco Indotel | Dominican Republic |
| CCI Indotel Asoprodete | Dominican Republic |
| CTC Restauracion | Dominican Republic |
| CTC Rancho Arriba | Dominican Republic |
| CTC El Limon | Dominican Republic |
| CTC Rancho Arriba | Dominican Republic |
| CTC Hato del Yaque | Dominican Republic |
| Centro Tecnologico Cumbre (RD) | Dominican Republic |
| Paix BouchTele Centre | Dominica |
| Ionia Thomas computer centre | Dominica |
| Cafe Zone | Dominica |
| Dubique Telecentre | Dominica |
| St Georges, the Villa | Grenada |
| GRENCODA | Grenada |
| Coastguard Resource internet center | Grenada |
| Community Resource Internet Centres (CoRICs) | Grenada |
| SEWA I. T. CENTER | Guyana |
| Telecentre des Jeunes | Haiti |
| College Sainte Famille | Haiti |
| Campus Numerique Francophone | Haiti |
| The Container Project | Jamaica |
| Caribbean Coastal Area Management (C-CAM) Foundation Cyber Center | Jamaica |
| The Liguanea Cybercentre | Jamaica |
| Zinc Link/Roots FM | Jamaica |
| Clarendon Internet & Computer centre | Jamaica |
| International School of Jamaica | Jamaica |
| Fancy Multimedia Centre* | St Vincent |
| Orange Hill CoRIC | St Vincent |
| Community Resource Internet Centre | St Lucia |
| Radio Toco | Trinidad &Tobago |
| Catedratico Asociado EGCTI U Puerto Rico | Puerto Rico |

**Table 2 Telecenter networks who answered the survey**

| Name of initiative | Country | Number of telecenters in network declared by respondent (*) |
|---|---|---|
| Centros Tecnológicos Comunitarios de la Oficina de Comunidades Especiales Puerto Rico | Puerto Rico | 65 |
| CCI (Centros de Capacitación Informática – INDOTEL) | Dominican Republic | 8 |
| ASPIRA | Puerto Rico | 150 |
| Programa Centros Tecnológicos Comunitarios (despacho de la Primera Dama) | Dominican Republic | 26 |
| Joven Club de Computación y Electrónica | Cuba | 600 |
| Point d'Information et de Communication (PIC) | Haiti | 5 |
| Cyber bases Martinique | Martinique | 37 (**) |
| Community Access Centres | Trinidad | 14 |
| Community Technology Programme | Barbados | 14 |
| Dept. of Community & Social Development | St Kitts | 17 |
| TOTAL | | 936 |

(*) Subsequent to the completion of the questionnaires clarifications on data showed several locations declared as telecenters were in fact “community centers” or “school computer labs” which that were not open to the public, or did not have internet connection, or both. For example, we understand that declared 17 telecenters in ST Kitts are community centers, 4 of which are planned to be equipped with computers this year, and that the Aspira Puerto Rico is offering vocational certified IT training but has not open walk-in community internet access centers. This should be verified and more careful definition for a follow up study.

(**) 20 not yet in operation

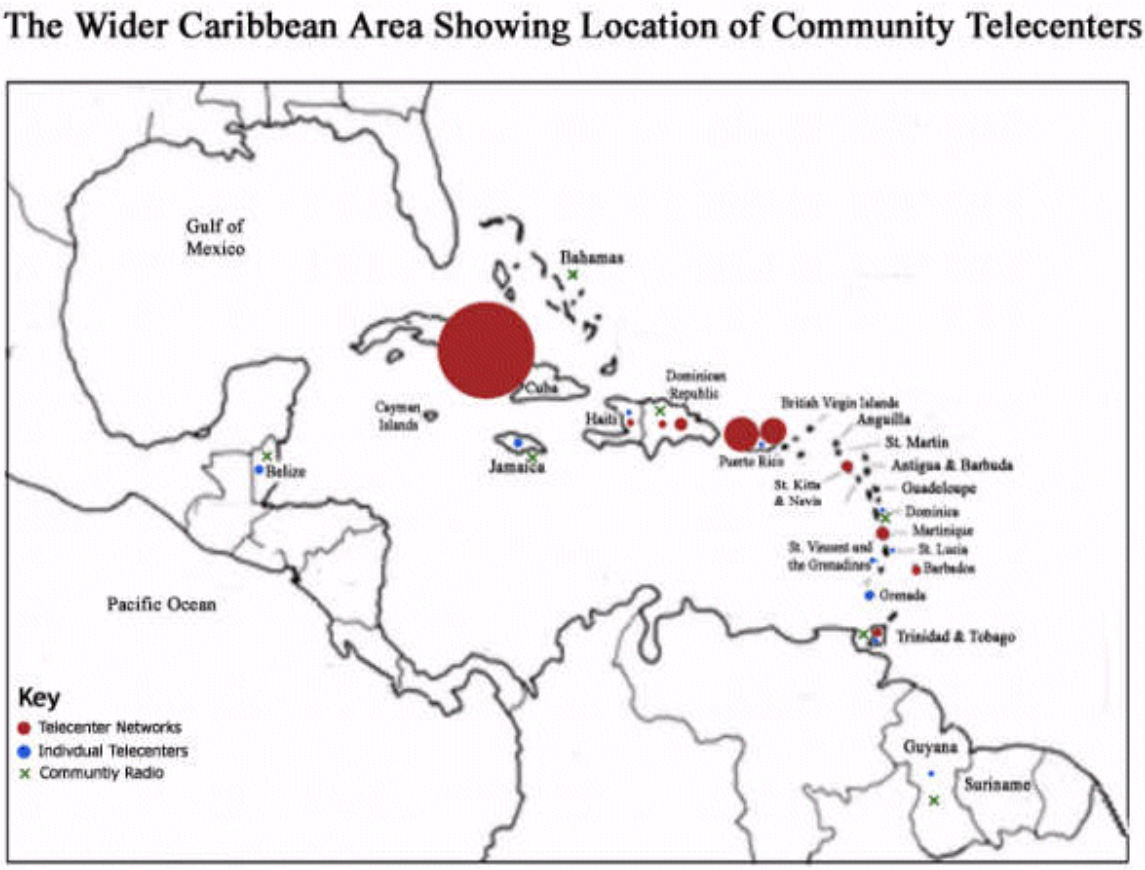
# 3. Results

The Results are reported in three parts: the first part addresses the situation in the individual telecenters of the region; the second section addresses the telecenters of national networks and a third section compares a number of parameters for the individual and networked telecenters.

The decision was made to separate the findings of the individual telecenters from that of the national networks, as it was felt that the sheer volume of telecenters in the national networks (approximately 30 times the number of individual telecenters) would easily swamp any level of detail on the characteristics of the individual initiatives.

For each of the first two parts of the Results section, a mapping of some Defining Characteristics of the telecenters is presented, followed by the detailed data for each parameter.
Defining characteristics is taken as features that best facilitates a characterization of the telecenters. These are features that address ownership, time in operation, sources of support, levels and quality of facilities, level and extent of services delivered and target groups and areas served.

**Figure 1 location map of Caribbean Telecenters**



This following is a work in progress: updated results will be posted online at http://www.taiguey.org/CTW/doc/countctw.html. Also see this page for the codes.

**Table 3 Telecenters per country and type: a work in progress**

| Country / País / Pays | TCs |
|---|---|
| Antigua | 1 OECS/Culture |
| Bahamas | 9 NGO / (Bahamas' Briland Modem Fund) |
| Barbados | 14 GOV (CTC) |
| Belize | 1 NGO (CMC) + 2 LIB. GOV |
| British Virgin Islands | ? |
| Cuba | 600 GOV (+5 mobil)/ Joven Club + 1 CMC (cocodrilo) |
| Cayman Islands | 14 LIB/GOV (*OP*??) |
| Dominican Republic | 21- CTC (gov), + 8 CCI (gov),+ NGO (Taiguey NOP + Limon + CIAGRO ) + 1 Gov/ wordlink |
| Commonwealth of Dominica | 3 CORIC (Good Hope, Petite Soufriere and Paix Bouche ) + 1 OECS/Culture + 4 NGO / Village Councils |
| Grenada | 3 CORICS (Coast Guard, Pearls and River Sallee communities) |
| Guyana | 1 NGO (Sewa)1 NGO / CMC |
| Guadeloupe | ? Gov Cyberbases |
| Haiti | 5 PIC (undp)1 NGO (medialternatif) |
| Jamaica | 1 Gov + 2 NGO (incl Container Project)<br>1 NGO/ CMC + 6 NGO / JSDN |
| Martinique | 37 Gov - (Cyberbases /Conseil général) -<br>20 OP / 17 NOP |
| Puerto Rico[1] | 65 Gov (CTC)<br>1 EDU |
| St. Vincent and Grenadines | 3 CORICs (Coulls Hill,Rose Place and Orange Hills )<br>1 OECS |
| St Kitts | 1 OECS/culture17 Gov (*NOP*) |
| St Lucia | 4 CORIC (La Maze, Mon Repos, Faux a Chaud and Belair communities) |
| Suriname | 1 NGO CMC (*OP*??) + 8 NGO (educons) (*OP*??) |
| Trinidad &Tobago | 1 CMC14 Gov (*OP*??) |
| US Virgin Islands | ? |

[1] see http://bibliotecavirtualut.suagm.edu/CEPR/mapaPR.htm

## *a. Individual telecenters*

Thirty four individual telecenters successfully responded to the questionnaire. The following table is a mapping of some defining parameters for these locations.

**Table 4 Mapping of defining parameters for individual telecenters**

| Name of Initiative | Country | Ownership | Time in operation | Location | Development Objectives | Main Target gps. | Hrs/week |
|---|---|---|---|---|---|---|---|
| International School of Jamaica | Jamaica | NGO/CBO | 6-10 years | Rural | I,R/ID,DE, $ | G,Y,F,S | 21-40 hrs |
| Liguanea Cybercenter | Jamaica | NGO/CBO | 6-10 years | Urban | I,R/ID,$ | Y,S,SB | > 40 hrs |
| Radio Toco | Trinidad | NGO/CBO | 1-5 years | Rural | R/ID | Y,S | < 10 hrs |
| Container Project | Jamaica | NGO/CBO | 1-5 years | Rural | I,Other(digital media) | Y | > 40 hrs |
| GRENCODA | Grenada | NGO/CBO | 1-5 years | Rural | I,R/ID | G,Y,F,S,SB | <10hrs |
| Paix BouchTele Centre | Dominica | NGO/CBO | 1-5 years | Rural | I,R/ID,DE, $ | Y,S | 11-20 hrs |
| Zinc Link | Jamaica | NGO/CBO | 1-5 years | Urban/innercity | I,R/ID,DE,$ | G,Y,S | > 40 hrs |
| C-CAM Cybercenter | Jamaica | NGO/CBO | 1-5 years | Rural | I,R/ID,$ | G,Y,,S | <10hrs |
| Dubique Telecentre | Dominica | NGO/CBO | 1-5 years | Rural | I,R/ID | G,Y,F,S,SB | 11-20 hrs |
| SEWA I. T. CENTER | Guyana | NGO/CBO | < 1 year | Urban | I,R/ID | Y,S | 11-20 hrs |
| Orange Hill CoRIC | St. Vincent | Na | < 1 year | Rural | I,R/ID,$ | G,Y,F,S,SB | 11-20 hrs |
| Cafe Zone | Dominica | NGO/CBO | < 1 year | Rural | I,R/ID | G,Y,F,S | <10hrs |
| Ionia thomas computer centre | Dominica | Government | 1-5 years | Rural | I,R/ID | Y,S | 11-20 hrs |
| Clarendon Internet & Computer centre | Jamaica | Government | 1-5 years | Rural | I,R/ID,SS$ | G,Y,S,SS | > 40 hrs |
| Community Resource Internet Centres | St.Lucia | Government | < 1 year | Rural | I,R/ID,$ | G,Y,F,S | 21-40 hrs |
| Briland Modem Fund (4) | Bahamas | JV(Pub/Pvt) | 6-10 years | Urban/Rural | I,R/ID,DE,$ | G,Y,F,S,SB | >40hrs |
| Alliance Francaise | Grenada | JV(NGO/Govt) | < 1 year | Urban | I,R/ID,DE | G,Y,S | <10hrs |
| Community Resource Internet Centre (CoRICs | Grenada | JV(Govt/NGO) | 1-5 years | Rural | I,R/ID,DE,$ | G,Y,F,S, | 11-20hrs |
| Coastguard resource / internet center | Grenada | JV- Govt / NGO | < 1 year | Rural | I,R/ID,$ | Y | 11-20 hrs |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Telecentre des Jeunes | Haiti | Joint venture | 1-5 years | Urban | I, R/ID,$ | S,Y | >40 hrs |
| College Sainte Famille | Haiti | Joint venture | na | Urban | I, R/ID,$ | S,W | 21-41 hrs |
| Campus Numerique Francophone | Haˆti | NGO/CBO | 6-10yrs | Urban | I, R/ID | G, Y, S, W | 21-41 hrs |
| Cacique Digital | Dom Rep | JV(private/ social vocation) | <1 year | Urban | R/ID,$,SS,DE | G, Y, S, W,SB | < 10 hrs |
| Vision Mundial | Dom Rep | NGO | <1 year | Urban | I, R/ID,SS, DE | G, Y, S, W,SB | 11-20hrs |
| Instituto Salesino Don Bosco (Moca) | Dom Rep | NGO | 1-5yrs | Urban | T | Y, F,S, W | >40 hrs |
| Asociacion Pro Desarollo de Tenares | Dom Rep | NGO | <1 year | Urban | I,T,DE | F, Y, S, W,SB | >40 hrs |
| CTC Restauraci¢n | Dom Rep | Government | 1-5 years | Urban/innercity | I, R/ID,$,DE | G, F,Y, S, W | >40 hrs |
| CTC Rancho Arriba | Dom Rep | Na | < 1 year | Rural | I, SS,DE | na | na |
| CTC El Lim¢n | Dom Rep | Na | 1-5 years | Poor area | $,SS,DE | F, Y, S, W,SB | >40 hrs |
| CTC Rancho Arriba | Dom Rep | Government | < 1 year | Urban | na | F,S, W,SB | >40 hrs |
| CTC Hato del Yaque | Dom Rep | Government | <1 year | Urban/Innercity | ID,SS,$ | Y, S, W,SB | 21-41hrs |
| Centro Tecnol¢gico Cumbre (RD) | Dom Rep | NGO | 6-10 years | Poor area | I,ID,SS,DE,$ | G, F, Y, S, W,SB | < 10 hrs |
| Catedratico Asociado EGCTI U Puerto Rico | Puerto Rico | Government | 1-5 years | Urban/Innercity | I, R/ID,$ | G, Y, W,SB | 11-20hrs |

**KEYS:**

**Development Objectives** I-Internet access; R/ID-Research/information dissemination; SS-Sectoral support; DE-Distance education; $-Income generation G-Geographical community; Y-Youth; F-Farmers; S-Students; SB-Small Business; W-Women

**Table 5 Mapping of individual telecenters (cont'd)**

| Name of Initiative | Connectivity | # computers | Services provided | Main support | Success factors | Challenges |
|---|---|---|---|---|---|---|
| International School of Jamaica | ADSL | 15 | I,P,F,DP,Tr | Int. Donors | 1, 2, 3, 4, 6, 7, 8 | 1, 6, 7 |
| Liguanea Cybercenter | ADSL | 31 | I,P,F,DP,Tr | Int. Donors | 1, 4, 8 | 2,3* |
| Radio Toco | Dial up | 5 | I,R,F,DP | Int. Donors | 1, 2, 3, 4, 5, 6, 8 | 1, 5, 6, 7, 8 |
| Container Project | ADSL | 12 | I,P,F,DP,Tr | Int. Donors | 3, 4, 5, 9 | 1, 2, 5, 6, 7, 8 |
| GRENCODA | ADSL | 19 | I,P,F,DP,Tr | Int. Donors | 1, 2, 3, 5, 6 | 1, 2, 3, 5, 6, 8 |
| Paix BouchTele Centre | Dial up | 6 | I,DP,Tr | Int. Donors | 1, 2 | 6,7,8* |
| Zinc Link | ADSL | 11 | I,Tr,S | Int. Donors | 1, 3, 5, 7, 8 | 1,2,3,6,7,8 |
| C-CAM Cybercenter | ADSL | 13 | I,P,F,DP,Tr | Int. Donors | 4, 5, 6 | 1, 8 |
| Dubique Telecentre | Dial up | 5 | I,P,DP | Int. Donors | 1, 2, 6 | 3, 6 |
| SEWA I. T. CENTER | ADSL | 9 | I,P,DP,Tr | Earned income | 3, 4, 5 | 1, 2, 3, 4, 5 |
| Orange Hill CoRIC | none | 4 | Tr | Int. Donors | 1 | 5, 6 |
| Cafe Zone | ADSL | 3 | I, Tr | Int. Donors | 3 | None |
| Ionia thomas computer centre | ADSL | 15 | I,P,F,DP,Tr | Earned income | 1 | 6 |
| Clarendon Internet & Computer centre | Dial up | 11(4working) | I,P,F,DP,Tr | Earned income | 2,4 | 1 |
| Community Resource Internet Centres | Dial up | 3 | I,TR | Int. Donors | 1, 3 | 2,3 |
| Briland Modem Fund | ADSL | 10 | I,P, R,F,DP,Tr | Int. Donors | 2,3,4,5,7,8 | 5 |
| Alliance Francaise | None | 1 | None | Int. Donors | Na | 2,5,6 |
| Community Resource Internet Centres (CoRICs | ADSL | 9 | DP,Tr | Int. Donors | 1,2,3,4,5,6,7 | 1,2,7 |
| Coastguard resource / internet center | Dial up | 11 | I,Tr | Int. Donors | 1,2,7,8 | 3,5,6,7,8, |
| Telecnetres Jeunes | WiFi | 6 | I,DP,Tr,E | Earned income | 3,5,6,7,8 | 1,3,4,5,6,7,8 |
| College Sainte Famille | Satellite | 11+5 | I,T,DP,Tr | Comm sources | 4,5,6,7 | 3,4,6,7,8,9 |
| Campus Num,rique Francophone | Satellite | 33 | I,P,F,DP,T | Int. Donors | 3,5,6,7,8 | 1,2,4,5,6,7,8 |
| Cacique Digital | WiFi | 20 | I,P,F,T,DP,Tr,DC, | Earned income | 3,6,7,8 | 3,4,6,7 |
| Vision Mundial | WiFi | 10 | I,Tr,Dc | Int. Donors | 1,6,7,8 | 3,5,6,7,8 |
| Instituto Salesino Don Bosco (Moca) | ADSL | 30 | I,P,T,Tr | Comm sources | 1,3,6 | 1,2,3,5,6,7,8 |
| Asociacion Pro Desarollo de Tenares | ADSL | 21 | I,DP,Tr,DC | Na | 3,4,5,6 | 1,7,8 |

| | | | | | | |
|---|---|---|---|---|---|---|
| CTC Restauraci¢n | na | 17 | I,P,R,F,DP,Tr | Government | 1,3,4,5,6,8 | 1,2,3,4,5,6,7,8 |
| CTC Rancho Arriba | na | na | I,P,R,F,DP,Tr | Na | 1,3,5, | 1,2,3,6,7,8 |
| CTC El Lim¢n | na | 11 | I,P,R,F,DP,Tr | Na | 1,2,3,4,5,7,8 | 1,2,3,4,5,6,7,8 |
| CTC Rancho Arriba | WiFi | 22 | I,P,R,F,DP,Tr | Na | 1,2,3,5,6 | 1,2,3,6,7,8 |
| CTC Hato del Yaque | ADSL | 20 | I,P,R,F,DP,Tr | Earned income | 1,2,3,4,5,6,7,8 | 1,2,3,4,5,6,7,8 |
| Centro Tecnol¢gico Cumbre (RD) | Dial up | na | I,DP,Tr | Na | 1,2,3,6 | 1,2,4,5,6,7,8 |
| Catedratico Asociado EGCTI U Puerto Rico | other | 8 | I,P,F,T,DP,Tr | Government | 1,3 | 2,7 |

**KEYS:**
**Development Objectives** I-Internet access; R/ID-Research/information dissemination; SS-Sectoral support; DE-Distance education; $-Income generation G-Geographical community; Y-Youth; F-Farmers; S-Students; SB-Small Business; W-Women
**Services provided** I-Internet;R-Radio; P-Photocopy; F-Fax; DP-Document Prep; T-Telephone; Tr-Training
**Success factors and challenges** 1 Financial support; 2-supportive community; 3-relevance to community; 4-location; 5-technical support; 6-adequate staffing; 7-affordable overheads; 8- reliable connectivity

## *b. Individual Telecenters: Detailed data for all parameters*

**Table 6 Length of time in operation**

| Time in operation | <1yr | 1-5yrs | 6-10 yrs | >10yrs |
|---|---|---|---|---|
| Percentage | 42 | 45 | 13 | 0 |

**Table 7 Location(Urban/ Rural)**

| Location | Urban | Rural | Inner city | Residential |
|---|---|---|---|---|
| Percentage | 28 | 53 | 13 | 6 |

In addition, 85% of telecenters were located are in poor/low income areas.

**Table 8 Legal status**

| Status | Registered | Unregistered |
|---|---|---|
| Percentage | 61 | 39 |

**Table 9 Ownership profile**

| Profile | NGO | Government | Joint venture |
|---|---|---|---|
| Percentage | 61 | 18 | 21 |

**Table 10 Development objectives**

| Objectives | Basic Internet access | Information dissemination | Sectoral support | Distance education | Income generation | Other |
|---|---|---|---|---|---|---|
| Percentage | 76 | 70 | 27 | 39 | 52 | 39 |

**Table 11 Main target groups**

| | Geographical community | Youth | Farmers | Students | Small business | Women | Other |
|---|---|---|---|---|---|---|---|
| % | 58 | 94 | 48 | 84 | 55 | 29 | 13 |

**Table 12 Population size served**

| Population | <1000 | 1000-5000 | 5000-10,000 | >10, 000 |
|---|---|---|---|---|
| Percentage | 36 | 29 | 14 | 21 |

**Table 13 Literacy level of communities served**

| Estimate of literacy level in communities served | <30% | 30-50% | 50-70% | 70-90% | >90% | Don't know |
|---|---|---|---|---|---|---|
| Percentage | 31 | 11 | 23 | 17 | 9 | 9 |

**Table 14 Presence of other similar facilities within 5 miles(8km**

| | |
|---|---|
| Yes | 46% |
| No | 54% |

**Table 15 Competitiveness of service**

| | |
|---|---|
| Very competitive | 85% |
| Reasonably competitive | 12% |
| Not competitive | 3% |

## Main factors contributing to the success of the telecenters

This question focused on what people felt was the most significant contributor to the success of the telecenter. Data for "Very significant" and "Significant" factors are represented and are ranked below i.e. most individual telecenters felt the "relevance of the service to the community" was a main contributor to their success.

**Table 16 Main factors contributing to the success of the telecenters**

| Factors | Percentage |
|---|---|
| Relevance of service | 96 |
| Funding /financial support | 89 |
| Supportive community (local govt, businesses etc.) | 85 |
| Adequate/available technical support | 81 |
| Capable/adequate staffing | 81 |
| Affordable overheads | 70 |
| Reliable connectivity | 70 |
| Strategic location | 67 |

**Table 17 Main challenges to the success of the telecenter.**

| Factors | Percentage |
|---|---|
| Capable/adequate staffing | 100 |
| Reliable connectivity | 90 |
| Adequate/available technical support | 81 |
| Affordable overheads | 81 |
| Funding /financial support | 76 |
| Supportive community (local govt, businesses etc.) | 76 |
| Relevance of service | 71 |
| Strategic location | 67 |

**Table 18 Weekly hours of service**

| Hours | <10 hrs | 11-20hrs | 21-40 hrs | >40 hrs | na |
|---|---|---|---|---|---|
| Percentage of telecenters | 21 | 27 | 15 | 34 | 3 |

**Table 19 Type of internet connection**

| Internet connection | Dial-up | ADSL | Cable | WiFi | Other(Sat) | None | na |
|---|---|---|---|---|---|---|---|
| Percentage | 26 | 42 | 0 | 10 | 6 | 6 | 10 |

.

**Table 20 Services offered**

| Services | Internet | Community radio | Photo-copying | Telephone | Fax | Document preparation | Training | Other |
|---|---|---|---|---|---|---|---|---|
| Percentage | 87 | 16 | 55 | 19 | 39 | 68 | 81 | 48 |

The other types of services offered included web creation, provision of scientific documents, hosting of discussions, entertainment (TV), leadership training etc.

**Table 21 Telephone offerings**

| | |
|---|---|
| did not offer telephone services | 81% |
| offered service to make national and international calls | 15 % |
| offered only international calls(VOIP) | 4% |

**Table 22 Training offered**

| |
|---|
| The main types of training offered were in basic Office applications and typing skills. A few locations offer CXC subjects, computer repair training, intermediate and advanced computer training etc. |

**Table 23 Equipment**

| No of computers | 1-5 | 6-10 | 11-20 | 20-50 |
|---|---|---|---|---|
| Percentage | 29 | 25 | 38 | 8 |

**Table 24 Most popular services**

| Internet browsing | Word processing | Email | Document preparation | Photocopy/fax | Telephone | ICT training |
|---|---|---|---|---|---|---|
| 74 | 71 | 81 | 32 | 26 | 6 | 58 |

**Table 25 Number of users daily**

| No. of users | <10 | 11-20 | 21-40 | >40 |
|---|---|---|---|---|
| Percentage | 20 | 44 | 23 | 13 |

**Table 26 Staff**

| |
|---|
| The telecenters had a range of staffing arrangements which included full- time and part time staff as well as full -time and part-time volunteers |

**Table 27 Connectivity cost**

| Cost in US$ | <20 | 21-50 | 51-100 | 101-150 | >150 |
|---|---|---|---|---|---|
| Percentage | 22 | 11 | 26 | 19 | 22 |

**Table 28 Monthly operating cost**

| Cost in US$ | <500 | 500-1000 | 1001-2500 | >2500 |
|---|---|---|---|---|
| Percentage | 34 | 22 | 22 | 22 |

**Table 29 Income vs. monthly costs**

| | |
|---|---|
| that monthly income was not enough t cover the cost of overheads. | 84% |

| | |
|---|---|
| adequate income to cover their overheads | 16 % |

Data shows the percentage of telecenters which have the following as their main source of financial and other support.

**Table 30 Main sources of financial support**

| Sources of financial support | Earned income | Government | International Donors | Community Sources | na |
|---|---|---|---|---|---|
| Percentage | 15 | 6 | 55 | 6 | 15 |

The following were noted as lessons learned:

**Table 31 lessons learned**

- Seek buy-in from the community of the telecenters
- Community outreach is important
- Subsidies by local government and expatriates can facilitate free telecenter access to locals
- Hardware maintenance and updating of software must be budgeted
- Some enterprises fail because of inadequate supervision by the entity setting it up
- Do not depend on volunteers and donors -self reliance is very important to sustainability
- Undertake development planning for the telecenter well in advance of implementation
- The issue of satellite access needs to be addressed for telecenters in the region.

## *c. Networked Telecenters*

**Table 32 Mapping of some defining parameters for telecenters which are part of national networks**

| Name of Initiative | Country | Ownership | Time in operation | Location | Development Objectives | MainTargetgps | Hrs/week | Connectivity |
|---|---|---|---|---|---|---|---|---|
| Centros Tecnologicos Comunitarios | Puerto Rico | Government | <1yr | 49 rural | I,ID | G,Y,W,F,S | >40hrs | 45ADSL;4Dial up |
| CCI INDOTEL | Dominican Rep | NGO | | 4 rural | I,ID, DE | NA | 11-20hrs | na |
| ASPIRA network | Puerto Rico | 50NGO; 100 govt | 6-10yrs | 100 poor;50 Middle income | I,ID, DE | G,Y,W,S,SB | 11-20hrs | ADSL |
| Programa Centros Tecnológicos Comunitarios | Dominican Republic | Government | 1-5 yrs | 2-urban; 24-rural | ID, DE,SS,$ | G | >40hrs | 4ADSL;24 other |
| Joven Club de Computación y Electrónica | Cuba | Government | 6-10yrs | 462-urban;138-rural | ID,DE,Tr,SS | Y,W,F,S | >40hrs | 209 dial-up; 333-ADSL |
| Point d'Information et de Communication (PIC) | Haiti | NGO | <1year | 1 -urban; 4-rural | I,$,ID,SS | G,S,Y,W,SB | >40hrs | 4 Satellite;1WiFi |
| Cyber bases Martinique | Martiniqueue | Government | 1-5yrs | 15-urban;5-rural;10 innercity; 7 residential | I, DE, ID, SS, | G | 21-40hrs | ADSL |
| Community Access Centres | Trinidad | Government | 1-5yrs | 4-urban; 3-rural; 1-resid; 2-commercial; 3-low income area | I,R/ID, DE,$ | G,Y,S,F,SB,W | >40 | 4 Dial up;10 ADSL |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Community Technology Programme | Barbados | Government | 1-5yrs | 4-rural; 2-commercial; 5-mid/low income; 3 mid/high income | I,R/ID,DE,Tr | persons wth no IT skills | >40 | 2 dial-up;12 ADSL |
| Dept. of Community & Social Development | St Kitts | Government | >10yrs | 4-Urban; 13-rural; | R/ID,SS,$ | G,Y,S,W | 21-40 | none |

**KEYS:**
**Development Objectives** I-Internet access; R/ID-Research/information dissemination; SS-Sectoral support; DE-Distance education; $-Income generation G-Geographical community; Y-Youth; F-Farmers; S-Students; SB-Small Business; W-Women
**Targets:** G-Geographical community; Y-Youth; F-Farmers; S-Students; SB-Small Business; W-Women

**Table 33 Mapping of some defining parameters for telecenters which are part of national networks (cont'd)s**

| Name of Initiative | # computers | Services provided | Support | Success factors | Challenges |
|---|---|---|---|---|---|
| Centros Tecnologicos Comunitarios de la Oficina de Comunidades Especiales Puerto Rico | 4 to 10 | I,Tr | Government | 6 | 1,2,3,5,6,7 |
| CCI El Puerto | na | P,DP | Community sources | 1,3,6 | 1,3,4,6 |
| ASPIRA network | 20 | I,Tr | Government | 1,2,3,4,5,6,7,8 | 1,5,7 |
| Programa Centros Tecnológicos Comunitarios | 20-30 | I,R,P,T,F,DP,Tr | Earned income | 1,3,4,8 | 1,2,3,6,7,8 |
| Joven Club de Computación y Electrónica | 11 | DP,Tr | Government | 1,2,3,5,6,8 | 3,6,7,8 |
| Point d'Information et de Communication (PIC) | 3 | I,P,T,Tr | Earned income | 1,2,3,4,6 | 2,3,7,8 |
| Cyber bases Martinique | 12 | I,Tr | Government | 1,2,3,4,5,6,8, | 2,7,8 |
| Community Access Centres | 15 | I,P,T,F,DP,Tr | Government | 1,2,8 | Being evaluated |
| Community Technology Programme | 15 | I,T,Tr | Government | 3,4,6,8 | 4,5 |
| Dept. of Community & Social Development | 0 | Tr | Government | 2,3,4 | 1,5,6, |

**KEYS:**
**Services provided** I-Internet; R-Radio; P-Photocopy; F-Fax; DP-Document Prep; T-Telephone; Tr-Training
**Success factors and challenges** 1 Financial support; 2-supportive community; 3-relevance to community; 4-location; 5-technical support; 6-adequate staffing; 7-affordable overheads; 8- reliable connectivity

**Networked Telecenters: Detailed data for all parameters**

*Note:* in some instances the numbers relates to number of networks and in other instances it refers to actual number of telecenters.*

**Table 34 time in operation**

| Time in operation | <1yr | 1-5yrs | 6-10yrs | >10yrs | Unknown |
|---|---|---|---|---|---|
| Number of networks | 2 | 4 | 1 | 2 | 1 |
| Percentage | 20 | 40 | 10 | 20 | 10 |

**Table 35 Location (Urban/ Rural) of centers**

| Location | Urban | Rural | Inner-city | Residential |
|---|---|---|---|---|
| Number of centers | (491) 29 | (269) 131 | 1 | (7) 7 |
| Percentage | (64) 17 | (35) 78 | <1 | 1 |

( ) = with Cuba

This data was disaggregated to eliminate the Cuba factor i.e. influence of the large number of centers in Cuba on the overall picture.

**Table 36 Legal status of centers**

| Status | Registered | Unregistered |
|---|---|---|
| Percentage of centers | (94)83 | (6) 16 |

( ) = with Cuba

**Table 37 Ownership profile of centers**

| Profile | NGO | Government | Joint venture |
|---|---|---|---|
| Percentage | (6)24 | (90)61 | (4)15 |

( ) = with Cuba

.

**Table 38 Development objectives of networks**

| Basic Internet access | Information dissemination | Sectoral support | Distance education | Income generation | Other |
|---|---|---|---|---|---|
| 64 | 91 | 55 | 73 | 46 | 46 |

**Table 39 Main target groups**

| | Geographical community | Youth | Farmers | Students | Small business | Women | Other |
|---|---|---|---|---|---|---|---|
| % | 73 | 82 | 64 | 73 | 64 | 46 | 36 |

.

**Table 40 Population size served by centers**

| Population | <1000 | 1000-5000 | 5000-10,000 | >10, 000 |
|---|---|---|---|---|
| Percentage of centers | 21 | 6 | 19 | 54 |

**Table 41 Literacy level of communities served by network**

| Estimate of literacy level in communities served | <30% | 30-50% | 50-70% | 70-90% | >90% | Don't know |
|---|---|---|---|---|---|---|
| Percentage | 0 | 27 | 36 | 18 | 9 | 9 |

**Table 42 Presence of other similar facilities within 5 miles(8km) of network facilities**

| | |
|---|---|
| Yes | 20% |
| No | 80% |

**Table 43 Competitiveness of service of networks**

| | |
|---|---|
| Very competitive | 25% |
| Reasonably competitive | 38% |
| Not competitive | 12% |
| Other | 25% |

Most significant contributor to the success of the telecenters

This question focused on what people felt was the most significant contributor to the success of the most successful telecenters in the network. Multiple responses were allowed and the percentages represent the frequency with which the respective factors were selected by respondents as being either "significant" or "very significant".

**Table 44 Most significant contributor to the success of the telecenters**

| Factors | Percentage |
|---|---|
| Relevance of service | 92 |
| Supportive community (local govt, businesses etc.) | 82 |
| Capable/adequate staffing | 72 |
| Funding /financial support | 64 |
| Adequate/available technical support | 64 |
| Affordable overheads | 54 |
| Strategic location | 54 |
| Reliable connectivity | 36 |
| Other | 18 |

**Table 45 Main challenges to the least successful of the telecenters in the network**

| Factors | Percentage |
|---|---|
| Affordable overheads | 64 |
| Reliable connectivity | 64 |
| Funding /financial support | 55 |
| Relevance of service | 55 |
| Adequate/available technical support | 55 |
| Supportive community (local govt, businesses etc.) | 36 |
| Capable/adequate staffing | 27 |
| Strategic location | 18 |
| Other | 18 |

**Table 46 Weekly hours of service of networks**

| Hours | <10 hrs | 11-20hrs | 21-40 hrs | >40 hrs |
|---|---|---|---|---|
| Percentage of networks | 0 | 27 | 27 | 46 |

**Table 47 Type of internet connection at centers**

| Internet connection | Dial-up | ADSL | Cable | WiFi |
|---|---|---|---|---|
| Percentage | (4)10 | (91)76 | 0 | (5)14 |

( ) with Cuba

**Table 48 Percentage of networks offering the following services**

| Services | Internet | Community radio | Photo-copying | Telephone | Fax | Document preparation | Training | Other |
|---|---|---|---|---|---|---|---|---|
| Percentage of networks | 82 | 27 | 55 | 36 | 27 | 46 | 100 | 36 |

The other types of services offered included training in non ICT disciplines.

**Table 49 Training offered**

Introductory ICT Courses;
- programming and applications,
- computer literacy,
- electronics;
- workshops in Office (Windows, Word, Excel, Power point, Internet)
- workshops in science,
- Programming Microworlds (LOGO),
- robotics

Non ICT training including:
- Environmental Education,
- Professional Orientation,
- Sex Education,
- traditional literacy (to read and to write) with use of the Computer Programmes

**Table 50 Equipment and facilities:**

Average number of computers placed by networks in their centers

| No of computers | 1-5 | 6-10 | 11-20 | 20-50 |
|---|---|---|---|---|
| Percentage of networks | 9 | 18 | 54 | 9 |

**Table 51 Most frequently used services at networks**

| Services | Internet browsing | Word processing | Email | Document preparation | Photocopy fax | Tel. | ICT training |
|---|---|---|---|---|---|---|---|
| Percentage of networks | 100 | 90 | 60 | 40 | 30 | 20 | 60 |

**Table 52 Average number of users daily at networks**

| No. of users | <10 | 11-20 | 21-40 | >40 |
|---|---|---|---|---|
| Percentage of networks | 0 | 33 | 42 | 25 |

**Table 53 Staff**

| |
|---|
| The telecenters had a range of staffing arrangements which included full- time and part time staff as well as part-time volunteers. Government run centers all had at least one full time staff member. |

**Table 54 Connectivity cost paid by networks**

| Cost in US$ | <20 | 21-50 | 51-100 | 101-150 | >150 |
|---|---|---|---|---|---|
| Percentage of networks | 9 | 18 | 18 | 18 | 37 |

.

**Table 55 Monthly operating cost paid by networks**

| Cost in US$ | <500 | 500-1000 | 1001-2500 | >2500 |
|---|---|---|---|---|
| Percentage of networks | 11 | 22 | 22 | 45 |

**Table 56 Income vs. monthly costs**

| | |
|---|---|
| monthly income was not enough to cover the cost of overheads | 91% |
| adequate income to cover their overheads. | 9 % |

.

**Table 57 Main sources of financial support**

Data shows the percentage of telecenters which have the following as their main source of financial and other support

| Sources of financial support | Earned income | Government | International Donors | Local donors | Community Sources |
|---|---|---|---|---|---|
| Percentage of networks | 18 | 64 | 0 | 0 | 18 |

**Table 58 Lessons Learned**

The following were noted as lessons learned:

- It is important to:
- Create a demand for the services of the telecenters
- Create services to satisfy the community needs
- Target services and training to improve livelihoods
- Recognize that each community is different
- Provide services to provide value added and link to the state activities
- Be flexible and adaptable
- Have an accurate vision

In addition observations were:

- Digital literacy is not the goal of the programme-it is a social project
- There is a need to ensure a safe place for equipment
- People are afraid of technology because they don't know it

## *d. Comparison individual vs. network telecenters*

A comparison of the parameters for the individual telecenters and networked telecenters showed that there were both similarities and notable differences. The figures below show a graphical representation of these differences.

**Figure 2 length of time in operation**

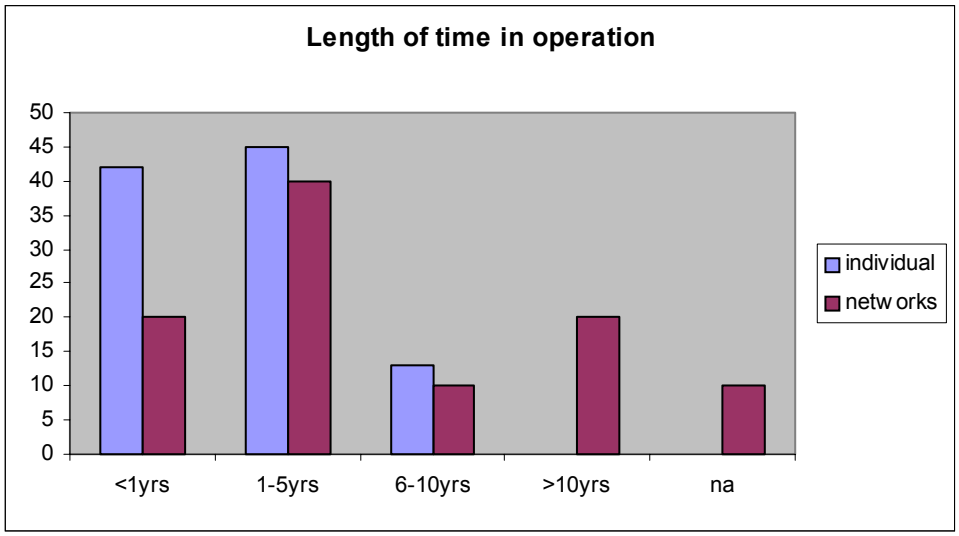



**Figure 3 Location of Centres**

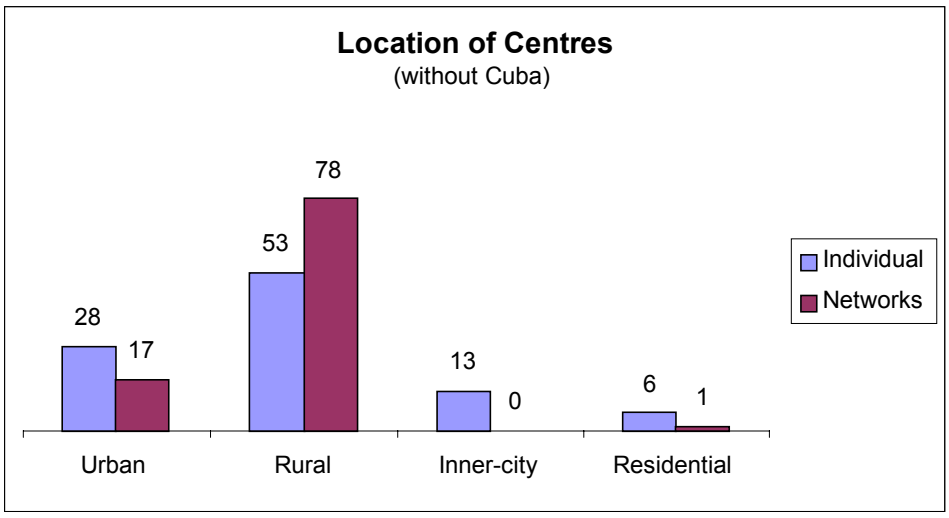


Figure 4 Ownership (without Cuba)

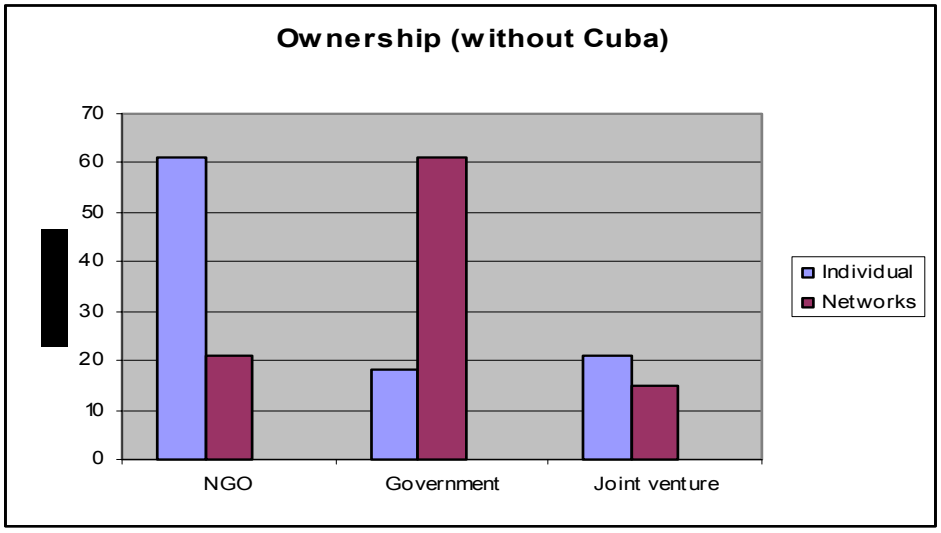



Figure 5 Ownership (with Cuba)

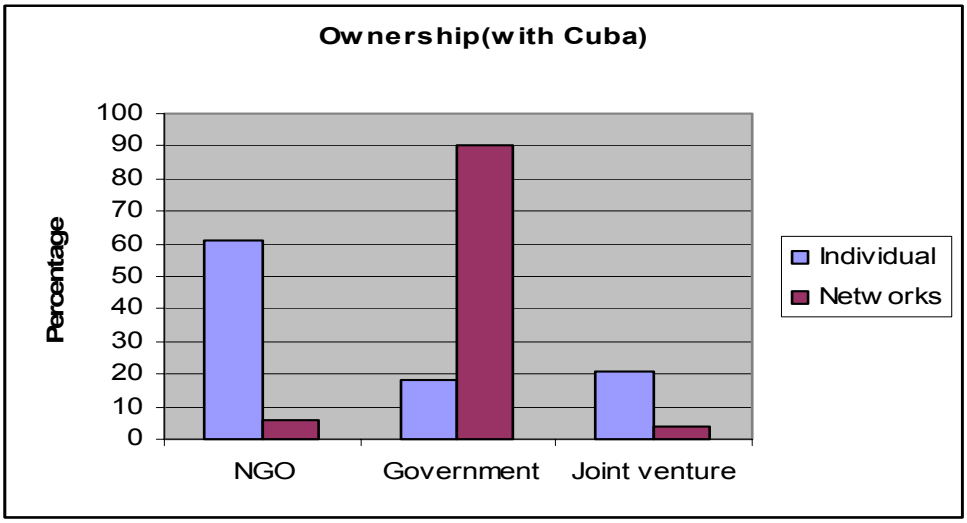


**Figure 6 Development Objectives**

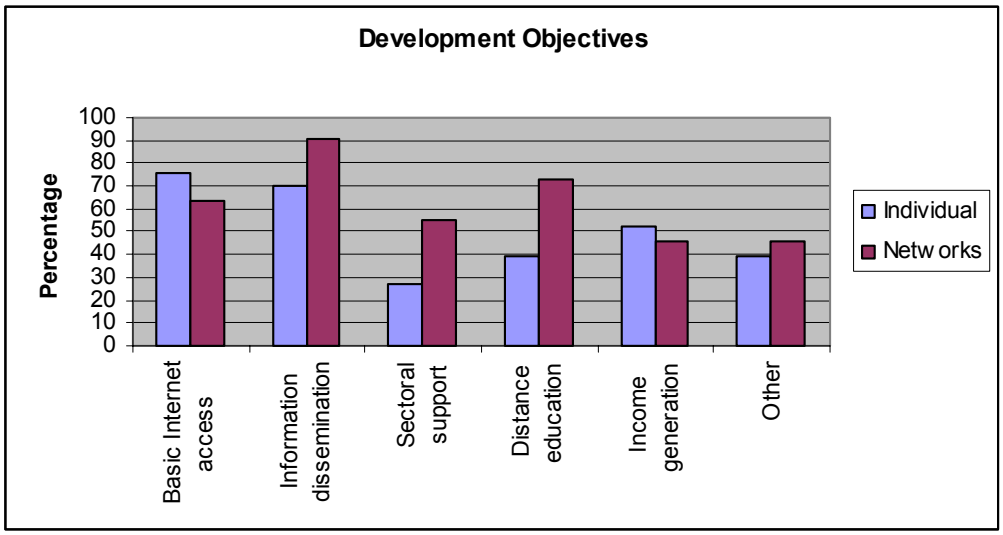



**Figure 7 Population served**

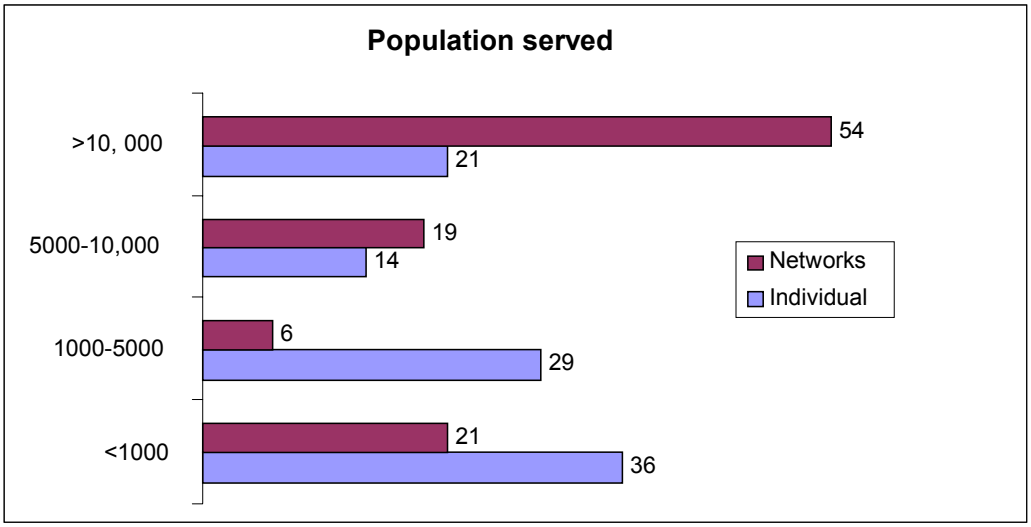



**Figure 8 Sources of financial support**

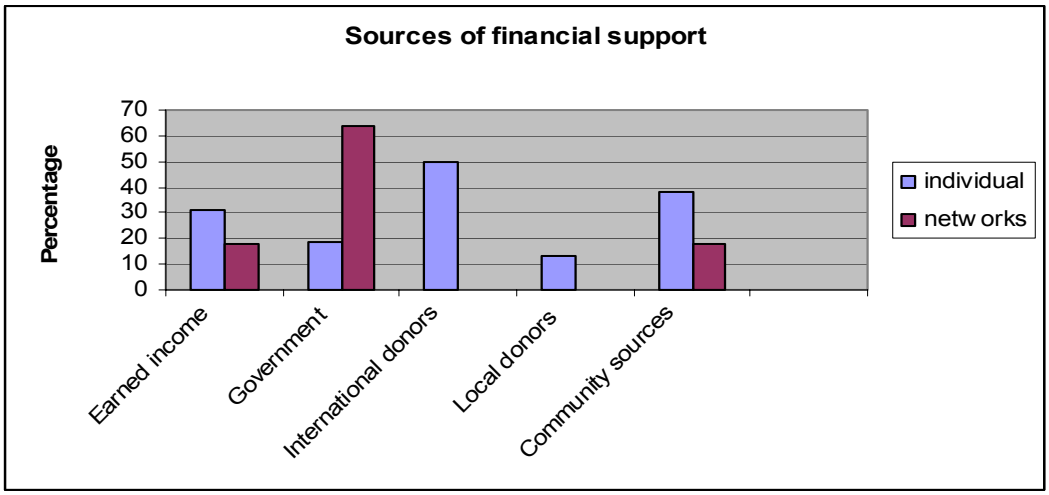


**Table 59 Comparison of Main success factors for Individual and networked telecenters**

| | Individuals | Networks |
|---|---|---|
| Relevance of service | 96 | 92 |
| Supportive community structures | 89 | 82 |
| Funding/financial support | 89 | 64 |
| Technical support | 81 | 64 |
| Adequate and capable staffing | 81 | 72 |
| Affordable overhead | 70 | 54 |
| Reliable connectivity | 70 | 36 |
| Strategic location | 67 | 18 |

**Table 60 Comparison of Main challenge factors for individual and networked telecenters**

| | Individual | Networks |
|---|---|---|
| Capable/adequate staffing | 100 | 27 |
| Reliable connectivity | 90 | 64 |
| Adequate/available technical support | 81 | 55 |
| Affordable overheads | 81 | 64 |
| Funding /financial support | 76 | 55 |
| Supportive community (local govt, businesses etc.) | 76 | 36 |
| Relevance of service | 71 | 55 |
| Strategic location | 67 | 18 |

# 4. Analysis and conclusions

The survey shows that there are several similarities between telecenters of the region as well as many differences. Preliminary types are seen for both individual and networked telecenters as shown in Boxes 1 and 2

**Box 1: Characteristics of Individual Telecenters in the Caribbean**

- More than 85% are 5 years old or less. None are over 10 years old.
- More likely to be in rural areas, with 85% located in poor/low income areas
- NGO initiated
- Legally registered
- Development objectives are mainly Basic internet access and information dissemination
- Targeted mainly at youth, students, geographical communities
- Serve mainly smaller communities - 65% serve populations < 1000 – 5,000
- Serve communities of various literacy levels :65% serve literacy levels of 70% and below
- They are slightly more likely to be more than 8 km from similar facilities: 54%
- Are either very competitive or reasonably competitive: 97%

**The main success factors are** :

- Relevance of service to the community
- Funding/financial support
- Supportive community (eg. local govt., local businesses etc)
- Adequate and available technical support
- Capable staffing

**The main challenges are:**

- Capable/ adequate staffing
- Reliable connectivity
- Adequate and/available technical support
- Weekly hours of service are mostly between 11- 20 hrs (38%)and >40 hrs(31%)
- Type of Internet connection is mainly ADSL- 42% and Dial up 26%

**Most commonly offered services :**

- Internet offered at 87% of locations
- Training offered at 81% of locations
- Types of training offered: ICT Basic Office applications and typing skills
- few offered computer repair and intermediate to advanced IT training
- Non ICT training- CXC subjects
- Most telecenters provided between 6 -20 computers per location- 63%; a significant number had just 1-5 computers (29%)

**Most frequently used services were:**

- Internet browsing (including email)
- Word processing
- Training

- Average number of users daily: 67% of telecenters reported 11-40 users daily
- Staffing –mixed arrangements- a few fulltime staff as well as volunteers
- Connectivity cost : 59% pay up to US$100 per month;41% pay more
- Monthly cost of overheads: most(66%) pay <US$500-1000
- 44% pay between US$ 1001- >US$2500

- The income of 84% of individual telecenters does not cover costs
- The main source of financial support for the individual telecenters was:
  - International donors 50%
  - Community sources 31%
  - Earned income 13%

**Lessons learned**:

- Importance of garnering community support,
- remaining relevant to community needs, self reliance;
- development planning for the long term and
- satellite access,
- subsidies to support free local access;
- issues of hardware and software

**Box 2: Characteristics of telecenters which are part of national networks**

- Most (60%) are 5years old or less; 20% are over 10 years old
- They are generally rural
- Government initiated
- Legally registered
- Development objectives are mainly information dissemination; distance education and providing basic internet access
- Targeted mainly at youth, students, geographical communities
- Serve communities of all sizes, but mainly larger communities:
- 54% serve >10,000
- Serves communities of various literacy level: 63% serve literacy level of 70% and under
- They are generally more than 8 km from similar facilities: 80%
- Are either very competitive or reasonably competitive: 63%
- **The main success factors** are ranked as follows:

- Relevance of service to the community
- Supporting community (eg. local govt., local businesses etc)
- Capable staffing
- Funding/financial support
- Adequate and available technical support

- **The main challenges:**
  - Affordable overheads
  - Reliable connectivity

- Weekly hours of service are mostly between 20 - >40 hrs (73% of networks)
- Type of Internet connection is ADSL- 91% (with Cuba) 76% (without Cuba)
- Most commonly offered services among networks:
  - Training offered at 100% of locations
  - Internet offered at 82%
- Types of training offered: ICT Basic computer literacy, Office applications
- Non ICT; social issues environmental, sex education etc
- Most networks provide between 6 -20 computers per location- 72%
- Most frequently used services were:
  - Internet browsing
  - Word processing
  - Training, email
- Average number of users daily:
  - Range between 11 to more than 40
  - 67% of networks reported 21- more than 40
- Staffing –mixed arrangements:
  - Most government locations had at least one fulltime staff member
- Monthly cost of overheads:
  - 45% of networks pay >US$ 2,500
  - 45%Pay between US$ 500-2500
- The income of 91% of networks does not cover costs
- The main source of financial support for the networks was government.
  - Government 65%
  - Earned income 18%

**Lessons learned:**

- Important to create a demand for services,
- satisfy the customer needs,
- focus on services to improve livelihoods and create value added,
- facilitate links to state activities, recognize the differences between communities,
- Maintain flexibility and adaptability and have an accurate vision.
- Also recognize that digital literacy is not the goal of the programme, the telecenter is a social programme;
- recognize people's fear of technology, and
- make provisions for the safety of equipment

The Analysis is done based on a reflection on the various parameters, some of which are clustered as appropriate, and with regard to developing a perspective toward defining a typology for Caribbean telecenters.

**Length in operation**

Generally telecenters in the region are a relatively new phenomenon, with the vast majority being between <1year- 5years old. No individual initiative and only one network has been in place for more than 10 years. There seems to be no correlation between length of time in operation and whether the telecenter is an NGO or government initiative, or whether the telecenter belongs to a network or is a stand alone entity.

Classification of telecenters in terms of their length of time in operation could be useful from the perspective of facilitating a focus on the developmental path of the older, obviously more sustainable initiatives. This would provide insights into lessons learned and mentorship opportunities in understanding how to sustain an operation over a long time period, and so address one of the main concerns of every telecenter initiative.

**Ownership and Sources of support**

The telecenters generally have three "ownership" structures: NGO, Government or joint venture. It was found that the vast majority of telecenters in the region are government owned. This is influenced by the fact that the large networks which command membership of over 900 telecenters are government initiatives. In addition, about half of the individual telecenters are also government initiatives. The other half is mainly NGO initiatives, with a few joint ventures (public/private sector, or NGO/private/academic). The ownership structures generally have significant implications for how the entities are operated and the level and source of support they receive. It was found that there was considerable correlation between ownership and the sources of financial and other support that the telecenters enjoyed. For example, government established entities are more likely to benefit from government subsidies and other resources, while it NGO initiatives depend mainly on international donors (Part 3:table 7). An emerging model which needs to be further explored is the joint venture which can include NGO, private funds as well as government support.

Classification of telecenters along ownership lines could have value as there are a number of characteristics shared by NGO initiated telecenters which make them different from government initiated telecenters.

**Location and Target groups**

Most of the telecenters are found in either rural or inner city areas. In addition approximately 85% of all locations are in low income areas. However, if Cuba which has a ratio of 462/138 (urban/rural) mix in its network, is considered this profile changes. It is clear that apart from Cuba, the need for accessibility in rural

areas may be one of the determining factors for the establishment of telecenters. In view of the common challenges of sustainability, the fact that there are efforts to serve in areas which cannot financially sustain the service confirms the general intention of telecenters in the region to function as vehicles of social inclusion.

The main groups targeted for all locations are youth, and students (where there is obviously some overlap) and geographical communities. This is expected as youth and students are among the easiest groups to become involved in ICTs. Both governments and NGOs are challenged with involving youth in programmes to improve skills, develop employment opportunities and otherwise engage them in the development process. ICT is an excellent vehicle with which to involve them and so it is expected that these groups should be the most targeted. Other groups targeted are the geographical community – a natural extension of the telecenter as a community resource- and farmers, women etc. Particular effort has to be made to involve farmers as the technology is generally new to them and relevant material has to be made available to engage them. Most effective engagement of farmers is likely to come through intermediate groups e.g. farmers' associations.

It was also clear that the populations served by networks were generally larger than those served by individual telecenters. Perhaps an effort is made by governments to establish telecenters in areas where it can serve larger constituencies.

A classification of telecenters along lines of location i.e. rural/urban lines would possibly highlight the peculiar needs of groups such as farmers, fisher folk and rural women who require more focus and concerted effort for their inclusion in the benefits that a telecenter can bring. In particular, relevant content, affordable and reliable connectivity, literacy levels and appropriate means of content delivery such as community radio would emerge as issues needing to be addressed.

**Development Objectives**

The development objectives of the region's telecenters are basic internet access, research/information dissemination and to a lesser extent, distance education, capacity building in ICTs, sectoral support and income generation. In the case of the individual telecenters, there is considerable emphasis on basic internet access and research/information dissemination, whereas in the case of the telecenters within networks there is also emphasis on distance education. The higher delivery of distance education in the networked telecenters is probably due to the influence of government programming and the ability to use the networks as vehicles to reach large, disparate populations across the country.

In several cases, the space at the telecenter locations is also used for awareness rising of social issues such as HIV, environmental awareness and training in care giving, hosting seminars and entertainment (games, television). The use of the space for multiple activities serves to build and fulfill the development portfolio of the respective organizations as well as provide alternate opportunities for raising funds.

**Services offered**

The services offered are generally in keeping with the development objectives of the respective telecenters. The majority of telecenters offered Internet access, training in ICTs and other areas, document preparation, photocopy, and to a lesser extent fax and telephone. An emerging trend is community radio which is presently being offered by a few locations, and is being considered seriously by several others. This is seen as a way of more effectively reaching a wider constituency especially for remote locations, and also for reaching persons who are not literate. Support for community radio projects in the region is being provided by UNESCO which since fairly recently also commenced support of a small regional network of community radio operations. Much needs to be done in terms of national communication policies to facilitate this trend throughout the region.

Also related to the level of services offered are the following:

**Connectivity**

A welcome trend is the move away from dial-up connections to ADSL or WiFi and in a few instances satellite connections (Part I Tables 21,22 and Part 2: Tables 18,19). This provides the telecenters with the ability to offer a better quality of internet connection. It can be seen that telecenters in networks have predominantly ADSL connectivity (76%) whereas there is a greater diversity in connectivity modes for individual telecenters ADSL(42%), dialup(25%) WiFi (16%). No doubt the cost of connectivity is a factor particularly for the individual telecenters which are mostly run by NGOs and supported by donors who frequently do not support recurrent costs. The networked telecenters on the other hand, which are largely government supported, are more likely to have some provisions for the cost of connectivity to be met.

**Connectivity costs and overhead costs**

The networked telecenters seemed to have higher connectivity and overhead costs than the individual telecenters. For example 37% of networks paid >$150 per month for connectivity-no doubt due to exorbitant ADSL bills; and 45% paid over US$2500 per month for overheads (Part 2:Tables 21,22). In comparison, only 22% of individual telecenters paid for connectivity costs in excess of US$150 and overheads in excess of US$2500(Part 1:Tables 18,19). Most individual telecenters paid <US$500 for monthly operating costs and between US$ 51-100 for connectivity.

No doubt the individual centers have a greater imperative for ensuring lower costs as their sources of funds are not consistent. Regarding the networks, it would be expected that economies of scale should result in lower costs. However, it may be that the need to ensure coverage in varied locations creates higher costs in some locations, and thus result in higher overall costs for the networks.

**Number of computers**

Individual telecenters have a greater range in terms of the number of computers placed at their locations. These range from 3 up to 31. Most entities have between 11- 20 computers (38%), but a significant number have facilities with 1-5(29%) and 6-10(25%). The networked telecenters have the majority of their locations with 11-20 computers (54%) with some in the 6-10 computers range (18%)(Part1:Table 4). That there is a greater diversity among the individual telecenters in terms of facilities than with the networks is not unexpected as more standardized approaches by governments in establishing networks would result in more consistent and higher numbers of computer equipment placed.

**Issues affecting success**

This was somewhat challenging to analyze as some respondents selected multiple choices as being "very significant" as a success factor as well as a factor which presented a challenge. It may be that the factors could be seen as really two sides of the same coin. What is reported in Part 3: Tables 8 and 9 is the frequency with which the factors were selected as "very significant" and "significant". It was found that most telecenters of the region identified "relevance of the service to the communities" and "supportive community structures". This was true for telecenters of all sizes and belonging to individual or networks. Funding and financial support also featured significantly for individual, NGO operated telecenters. The reasons for these choices are apparent as the telecenters see themselves primarily as providing a social and development service. As such, it is natural for them to perceive as important to their success profile, their relevance to community needs, and the support of community structures. Notwithstanding this, the importance of financial support faced by the smaller individual initiatives is also reflective of their susceptibility to non sustainability due to inconsistent sources of funding.

The largest challenge to telecenter success was seen a capable and adequate staffing and reliable connectivity for the individual telecenters and reliable connectivity and affordable overheads for the networks (government owned entities). In the case of the individual telecenters it is clear that difficulties with consistent funding would have implications for financing recurrent cost for staff and reliable connectivity. For the networks, the reliable connectivity and overheads are concerns probably because of the same cost factors. It has been seen that these networks pay significant amounts for both of these cost items(see Connectivity and overhead cost above) and even with higher levels of financial support than that enjoyed by the individual telecenters, these costs are not sustainable over the long term.

**Other factors**

Language

The data shows that there is a difference between the Spanish speaking countries and the French and English speaking countries regarding the numbers of telecenters and length of time they have been in existence. The Spanish speaking

countries have much larger networks than elsewhere in the region. This is dominated by Cuba with the highly developed and extensive Joven Club (600+ telecenters)which is over 10 years old, ASPIRA Puerto Rico (150) -6-10 years old and the more recently established CTCs, also in Puerto Rico(65). Most of these, with the exception of 50 ASPIRA telecenters in Puerto Rico are government initiatives. There is also a network (government of 26 telecenters in the Dominican Republic and a few individual telecenters, evenly split in ownership between government and NGO/Joint venture.

In terms of the French speaking countries (Haiti and Martinique) the initiatives are both fairly new (under 5 years old) and fewer in number, although the Cyberbases network of Martinique has some 37 telecenters. Haiti has three individual telecenters and one small network.

In respect of the English speaking Caribbean, most telecenters represented are individual and most are fairly new(<5 years old) except for the Liguanea Cybercenter, the International School of Jamaica(Jamaica) and the Briland Foundation(Bahamas) which are all 6-10 years old. There are also a few, but smaller networks amounting to 14 telecenters each in the case of Trinidad and Tobago and Barbados, and 17 (largely non functional) telecenters in the case of St Kitts.

There is not much justification for classifying telecenters along language lines as there is little correlation between language and several of the critical functional and operating parameters of the telecenters.

**Individual vs. networks**

The telecenters easily lend themselves to a classification along these lines. It is apparent that there is a range of types of types of telecenters based on their status as follows:

- Individual telecenters established by small NGO's largely dependent on international donors for financial support. Many of these are have as their major constraints/challenges financial support and also list financial support where it exists among their main reasons for success. The data show that more than 80% of these do not have adequate earned income to sustain their operations
- Individual telecenters established by government, sometimes as pilots, sometimes as part of an initiative of an international agency, such as CORICS supported by the UNDP in states of the Eastern Caribbean
- Telecenters belonging to small networks-generally fewer than 10 telecenters initiated by NGOs, government or some joint venture arrangements e.g. Briland Foundation in the Bahamas, PICs in Haiti, El Puerto (Dominican Republic), and JSDN Jamaica. In terms of concerns for sustainability, these are similar to the NGO run individual telecenters
- Larger networks (10 -20 telecenters) established by governments such as those in Barbados, Dominican Republic, Trinidad and St Kitts.

- Very large networks i.e. more than 30 telecenters such as those in Cuba, Puerto Rico and Martinique which benefit from significant government support.

The comparisons carried out on individual and networked telecenters (although not broken down the fine detail outlined above) also reveals comparisons between NGO and government owned telecenters; smaller vs. larger telecenters, government supported vs. donor supported initiatives. As such it is felt that this could represent the best basis on which to establish a typology for telecenters in the region.