Final Report

Last Mile Initiative - Philippines

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Preface

This report is the result of technical assistance provided by the Economic Modernization through Efficient Reforms and Governance Enhancement (EMERGE) Activity, under contract with the CARANA Corporation, Nathan Associates Inc. and The Peoples Group (TRG) to the United States Agency for International Development, Manila, Philippines (USAID/Philippines) (Contract No. AFP-I-00-00-03-00020 Delivery Order 800). The EMERGE Activity is intended to contribute towards the Government of the Republic of the Philippines (GRP) Medium Term Philippine Development Plan (MTPDP) and USAID/Philippines' Strategic Objective 2, "Investment Climate Less Constrained by Corruption and Poor Governance." The purpose of the activity is to provide technical assistance to support economic policy reforms that will cause sustainable economic growth and enhance the competitiveness of the Philippine economy by augmenting the efforts of Philippine pro-reform partners and stakeholders.

This report was written by Atty. Jose Gerardo A. Alampay and Mr. Joel Umali to summarize the technical assistance provided to the Philippine Commission on Information and Communications Technology (CICT) at the request of Secretary Ramon P. Sales, CICT Commissioner, over the course of 12 months, November 2005 to October 2006, to help develop and set-up sustainable and viable Community e-Centers (CeCs) in rural and unserved areas in the Philippines, as well as to expand the use of Voice Over Internet Protocol (VOIP) and Internet technology in the regions.

The views expressed and opinions contained in this publication are those of the authors and are not necessarily those of the resource persons, USAID, the GRP, EMERGE or the latter's parent organizations.

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I. INTRODUCTION

The Last Mile Initiative/ Philippines (LMIP) is a program mandated to design, develop, assist in the set-up of, and evaluate at least ten (10) sustainable Community e-Centers (CeCs) in rural and unserved areas in the Philippines. Intended to provide mechanisms to help bridge the digital divide by providing citizens in remote places with affordable and relevant access to information and communications technologies (ICT), LMIP-assisted CeCs will be used to identify applications, services and models that enable broad-based participation in electronic commerce, distance learning, e-government and other online applications. The hope is that some or all of these can be replicated and scaled up under the Philippine government's Community e-Center Program.

LMIP is being implemented under the Economic Modernization through Efficient Reforms through Governance Enhancement (EMERGE) program, a USAID-funded assistance to the Philippine government to enhance economic reform, governance and overall competitiveness. LMIP specifically assists the Commission on Information and Communications Technology (CICT) in the implementation of its CeC Program.

In the past year (from September 2005 through October 2006), LMIP activities encompassed various forms of assistance and trainings for thirty-one (31) CeCs throughout the Philippines, yielding rich data and lessons for similar future efforts.

This document is an evaluation and detailed report on the information, models and learnings derived in the course of LMIP's implementation to date.

II. LMIP IMPACT BY THE NUMBERS – An Overview

All CeCs assisted by the Program are situated in rural and/or unserved areas with a population base (>5000) relatively sufficient to sustain the CeC, and demonstrably strong commitment of local stakeholders. The CeCs, more importantly, are contextualized to address the needs of the community.[1]

As of October 2006, LMIP assisted the set-up of thirteen (13) Community e-Centers throughout the archipelago, three more than the mandated target. Four (4) CeCs are located in northern Luzon, four (4) CeCs are situated in rural Cebu and another five (5) CeCs were established in Mindanao.[2] in

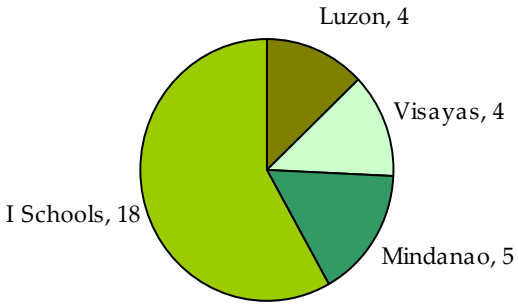


Figure 1. No. of CeCs Deployed

Moreover, to further expand the outreach of ICT and bolster sustainability through content development, the LMIP also provided support for two other related programs of the CICT –The Ischools Web Board and the Free and Open Source Software (FOSS) Literacy Program.

The LMIP was able to train eighteen (18) public high schools as part of the Ischools CeC program bringing the total CeCs assisted to thirty one (31) CeCs. Additionally, the Program assisted the CICT in the compilation of FOSS into CDs that were distributed to, and therefore benefited an estimated one hundred forty (140) existing CeCs, with additional sets provided to national government agencies.

Finally, LMIP, to date, has developed five (5) training modules for CeCs[3] which can be used to build the capacity of CeC staff to sustain the CeC's financial viability, service delivery and community acceptance. Present and future CeCs can use these modules to develop technical and entrepreneurial skills to prepare and implement business plans, identify and respond to the needs of the communities, investigate the market, promote services to the community and maintain CeC technology.

[1] Please refer to Annex A for LMIP's selection criteria and flowchart diagram for choosing LMIP sites.
[2] Please refer to Annex B for the community profile of LMIP's CeCs.
[3] Please refer to Annex C for a description of LMIP's training modules.

Table 1. Training Modules/Solutions Developed

Training Modules/Solutions	Target Beneficiaries
Community Development	CeC staff
Enterprise Development	CeC staff/management
Operations Management	CeC staff
Trainors' Training	CeC staff, schools
Web development	CeC staff, schools
Elearning Web Board	DepEd, schools
FOSS Kit	CeCs, schools, LGUs, NGAs

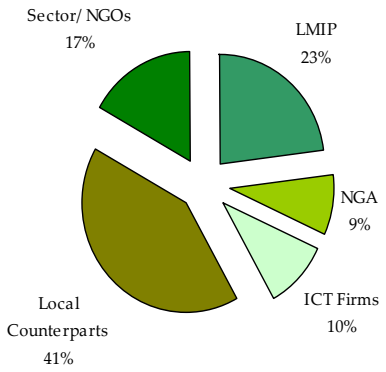
Public-Private partnerships were critical to the deployment of CeCs under the LMIP, as all existing LMIP-assisted CeCs resulted from synergies of efforts by the private, civil society and government sectors.

Table 2. LMIP Partners

Private Sector	Government	Local Counterparts and Civil Society
Microsoft Intel Philippines Smart Globe AZCOM PLDT	CICT NCC LGU – Kiangan, Manolo Fortich, Aleosan, Maitum, Malapatan MPGCHS	CANVAS World Corps SITMO PRRM Casa San Miguel

LMIP resources were spent largely on capacity building and training activities, connectivity, and augmentation of CeC facilities. Most expenditures for hardware and software equipment were borne by the local counterparts. The CICT and other government (including LGUs) partners, ICT firms, telcos and the private sector also provided significant support by way of computer acquisitions, connectivity and software applications.

Figure 2. Resources Provided by Stakeholders for CeC Set-up



LMIP required its CeC partners to demonstrably give their full commitment in ensuring the sustainability of the e-centers by providing tangible counterpart contributions. This strategy did not only generate a sense of shared ownership and stake in the CeC's long-term success, it also enabled LMIP to leverage its limited funds, and maximize the Program's impact and reach.

Thus, while total costs for the thirteen CeCs assisted by the LMIP amounted to approximately Php 5.3 million, excluding staff salary and office space cost, LMIP only expended approximately 23% or Php 1.2 million of the total cost. Put another way, every peso spent by LMIP was effectively matched by more than three pesos from its partners. [4]

"We would like Manolo Fortich to serve not only as gateway to central Mindanao but gateway to the 21st century. Through this CeC, this Municipality will be the model of others in taking the last mile initiative to a new future,"

-- Rep. Neric Acosta

[4] Please refer to Annex D for a detailed breakdown of LMIP assistance, partnerships and costs of establishing the CeCs.

III. LMIP IMPACT – A Detailed Self-Evaluation

METHODOLOGY. The LMIP conducted a self-evaluation to document the results and impact of the LMIP and make an assessment of how well it met its overall objective of developing viable and sustainable models and best practices for community e-centers (CeCs).

The evaluation principally utilized (a) structured interviews with CeC proponents, managers, stakeholders, and partners; and (b) client exit surveys of CeC users to develop a profile of the clients and identify the major strengths and weaknesses of the CeC's product and services. The evaluation seeks to establish trends and provide broad lessons that could enhance CeC viability and sustainability based on actual best practices observed from operations[5].

A. FINDINGS ON CeC SERVICES AND CONTENT

All Community eCenters provide a wide array of services to address information needs of the community. The mix of these services not only increases the viability of the center but serves as an incentive to users as the center acts as a one-stop for all their needs such as internet surfing, research, office applications, printing, copying, telephony, among others. Centers with multiple services tend to be more profitable and innovative with its services.

- Internet service is the top revenue stream for the CeCs except for the Catmon CeC, which to date, remains offline due to the continued unavailability of connectivity options in the area.

- The use of office applications such as word processing, spreadsheets, and presentations then follow as the second highest source of revenues for the CeCs.

- Users also frequent the center to print and photocopy documents and use the facilities for telephony, either through PSTN or VoIP.

- Eight CeCs offer basic ICT literacy training including office applications and how to use the internet. Of the eight CeCs offering training, two are equipped to offer advance training courses such as web making, graphic design and elearning. ICT

[5] See Annex F Sample questionnaire utilized during the interviews with CeC managers.

training services not only yield social benefits by providing ICT skills to the community – it also serves increase the CeC revenues.

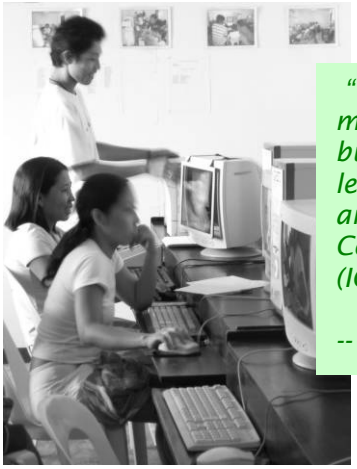
- A few CeCs maintain websites which act as an informational tool for users. For instance, the Manolo Fortich, Aleosan, Maitum and Malapatan CeCs have websites developed by the National Computer Center to jumpstart e-governance. A step above an informational website is utilizing web presence as a promotional tool to generate revenues. The Kiangan CeC harnessed the power of the internet to advertise their eco-tourism events, and at the same time promote the objectives of the organization particularly to potential funders/donors.

- Finally, other CeCs offer creative services such as digital ID processing, cd burning, ink refill, jobs database, among others.

All community e-centers are managed by staff persons who handle day to day operations.

- Community based CeCs are managed by entrepreneurs such as out-of-school youth while NGO-based CeCs are administered by their employees.

- On the other hand, government and school based CeCs are being managed by LGU employees and teachers respectively.



"We were trained not only to manage a community e-center but to share what we have learned with our community and help them use Information Communication and Technology (ICT) in their daily lives."

-- Charlaine Atillo, Cebu

Table 3. Services Offered by CeCs

	Internet	Office Applications	Desktop publishing	Basic ICT training	VoIP	Website presence	Others
Alcantara	●	●	●	●	●		CD burning
Aleosan	●	●	●				
Borbon		●	●	●			
Catmon	●	●	●	●			CD burning
Kiangan	●	●	●	+ web and graphic design		●	Resource mob, eco-tourism
Maitum	●	●	●			●	e-gov
Malapatan	●	●	●		●	●	e-gov
Manolo Fortich	●	●	●	●	●	●	Jobs , e-gov
Mountain Province	●	●	●	+ skills training for teachers	●	●	LGU training
Sogod	●	●	●	●	●		Cd burning, ink refill, repair
Zambales	●	●	●	●			CD burning

Of the thirteen CeCs assisted by LMI, ten (10) have formed the ICT Steering Committee which oversees CeC management, develops policies and provides decision making. Having a steering committee is beneficial to the CeC as it provides direction for the center, ensures funding support, and provide technical expertise for efficient operations.

- All thirteen CeCs have specific policies on client and revenue targets, human resource, product feature and pricing, information security and intellectual property.

B. FINDINGS ON CeC USAGE AND CLIENT BENEFITS

Data gathered from selected CeCs reveal that usage pattern, and thus viability and sustainability, is affected by length of operations, CeC policies, content and technology.[6]

- In the early stages of operations, as is to be expected, few community members utilize the centers. Poor marketing of products and services, non-involvement of critical sectors in CeC development and incorrect pricing are among the factors that affect usage.

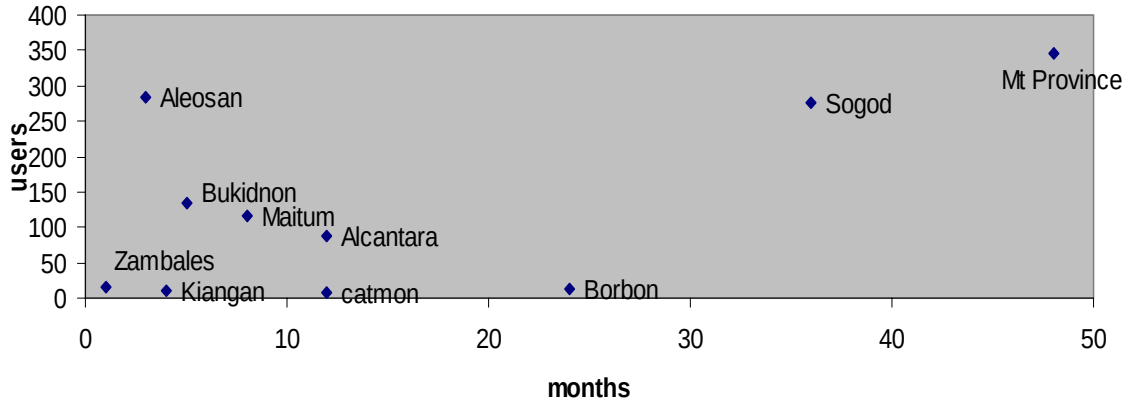
- Community and NGO based CeCs like those in Zambales, Kiangan, and Alcantara posted low usage levels due to lack of extensive marketing strategies.

[6] Please see Annex E – Table on CeC Usage.

- On the other hand, CeCs with captive markets such as school based CeCs and LGU based CeCs recorded higher levels of community participation and client usage even during early months of existence. This is partly due to availability of specific content such as jobs application, e-governance, elearning, and telephony for ready customers such as students, public school teachers, government employees and citizens transacting with the government. For instance, the Aleosan CeC which is only on its 3rd month of operations registered high usage levels comparable with that of the 4-year old Mountain Province CeC, which is also school based CeC.

Usage levels are also affected by the technology of the CeC which determines the services offered by the center.

Selected Usage data



CeCs with more computers tend to have higher access levels since more clients can be accommodated within the center operating hours.

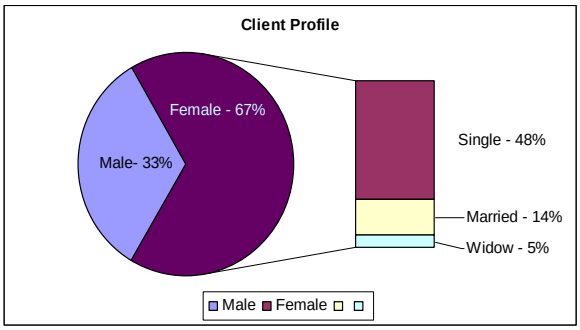
- CeCs with broadband connectivity exhibited higher usage levels since these CeCs are able to offer more services at faster speed. For instance, the Sogod CeC posted higher usage levels since clients can do research and download references faster than a center with dial-up connection. Furthermore, services only possible with broadband connection such as VoIP and video communication/conference contributed to higher usage levels. This is contrasted by the situation in Catmon CeC where the center has no internet connection and which only survives through encoding, cd burning and basic ICT training.

- Having broadband connectivity, though does not guarantee increased demand and more sustainable operations. As a case in point, note the the Borbon CeC where even after upgrading to DSL connection, usage levels have remained flat. Interviews revealed that community users wanted facilities – specifically web cams -

that, unfortunately, could not run on the center's computers which were all relatively older and which all used incompatible open source platforms.

The LMIP team also conducted a more extensive client exit survey for the users of the Sogod, Borbon and Manolo Fortich LGU community e-centers.[7] While it may be too limited to make conclusive generalizations, the exit survey does provide an interesting snapshot on the profile of users in these CeCs, and the possibilities for CeCs to help address their specific needs.

- In these communities, women overwhelmingly frequent the CeCs more than men do. Of the twenty one respondents, fourteen, or nearly 70% were women, about half of them single.



They access CeC services for various purposes. Public school teachers use the internet for research on their subjects they teach, search for jobs abroad, access GSIS and chat with friends abroad.

Further, they use computer services such as encoding, spreadsheets, word processing, presentations and printing.

Single women who are either students or out-of-school youth who use the CeC mainly to communicate with friends, find work and finish school requirements.

Some considerations for future LMIP activities

Community e-Centers present opportunities for gender empowerment, given that the numbers – though limited – point to heavy interest from women.

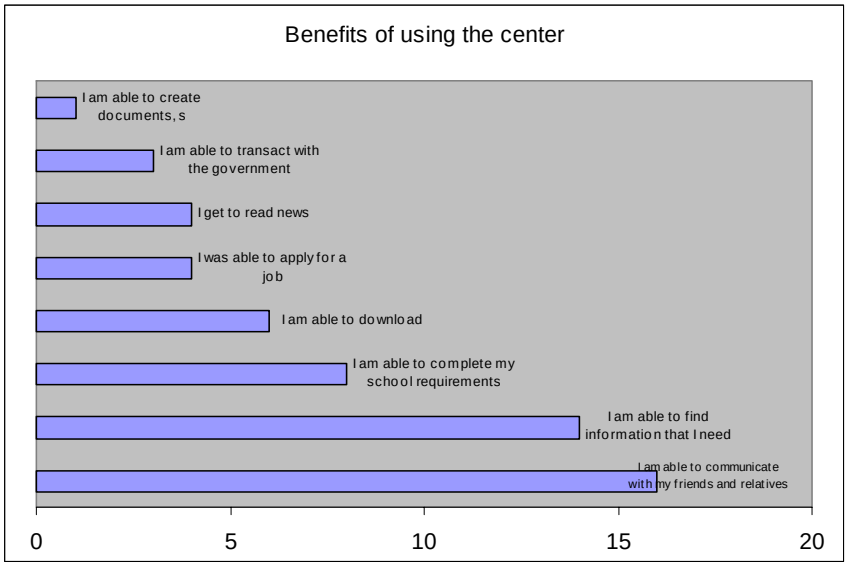
Education-related applications, as well as e-commerce/livelihood-creating opportunities should be explored.

Equally important, it was found that chatting and social networking applications are also in heavy demand from female users (a point supported by anecdotal evidence from other CeCs). While there is nothing intrinsically wrong with the use of the Internet for these purposes, additional information and training on possible dangers of fraud and exploitation may be needed to ensure the communities' awareness and protection.

[7] Please see Annex G – CeC Client Exit Survey.

- Half of the CeC clients surveyed use the center services daily or twice a week. Clients generally use internet for one or two hours each visit. These regular clients have been using the internet and computer for more than two months and generate a steady stream of revenues for the CeCs.

- Clients utilize CeC services, especially internet access for a variety of purposes. Close to 70% of the respondents revealed that they use the internet for school work research, to find new materials for teaching, enterprise development and find information for their needs.



- The use of email and communication through instant messengers are also popular among community based CeCs where users are mostly women.

- Half of the clients surveyed also use the productivity services of the center such as encoding, word processing, spreadsheet, printing and photocopying especially for school requirements.

- Clients also visit the CeCs to learn basic ICT skills which are offered for free by the three CeCs. The training services had helped the clients to become more proficient in use of ICT especially word processing. Certificates issued by the CeCs were used by the clients in applying for work to show that they possess ICT skills needed for the job. In Manolo Fortich, the CeC also provides ICT training not just for the community but for barangay officials.

- The CeCs were also instrumental in facilitating job application through online job searches such as jobseek, jobstreet, jobsdb, inq7.net and trabaho.com. Based on the exit survey, two of the four clients who were seeking employment were able to apply and lodge their resumes online.

- Aside from these services, the CeCs also offer other demanded services including online games, phone calls and scanning.

Finding job opportunities through CeCs

The Manolo Fortich CeC works hand in hand with the Public Employment Service Office (PESO) of the LGU and the Department of Labor and Employment (DOLE) to assist both employers and job seekers in job matching.

The CeC has been relatively successful in job matching and has already completed numerous job interviews via VOIP and with the use of webcams with Taiwan-based firms. Ten residents have been hired overseas through the facilities of CeC. Towards the end of the year, the CeC will conduct a job fair and will again utilize VoIP services of the CeC for online job interviews.

The CeC also developed an offline system for a more efficient job matching with local employers. Using a simple database, job seekers lodge their application together with their resumes directly to the system. Using this approach, the PESO can efficiently search and filter applicant's profile based on the skills requirements of the employer. Apart from the offline system, the CeC assists job applicants to register in the Philjobnet of the Department of Labor and Employment (DOLE), an online database and job search portal. Through the portal, job seekers were able to showcase their skills and expertise and gain information to local and international job opportunities.

"Ultimately, we want out Municipality to become the center for people looking for opportunities through our job database. Through our CeC facilities, applicants can arrange for online interviews and eventually land jobs."

-- Mayor Socorro Acosta

Some considerations for future LMIP activities

The use of VoIP and webcams to facilitate online job interviews was successfully demonstrated by the Manolo Fortich CeC.

Can this be replicated, or is it just a lucky confluence of unique factors? Can it be scaled up? Future activities can be undertaken to explore these questions.

One key factor is the type of connectivity – Manolo Fortich is serviced by a broadband DSL connection which provides sufficient bandwidth for online video interviews. This should be a prerequisite for selecting follow-on pilot sites for purposes of replicating such an application.

C. FINDINGS ON THE FINANCIAL SUSTAINABILITY OF CeCs

Financial sustainability refers to the capacity of a CeC to generate income to cover its operational costs and expenditures. Services must always be created and reinvented to respond to the changing needs of the market. Thus, while costs have to be minimized, revenue generating services must be also enhanced but always in full consideration of the capacity of the community to pay for such services.

Content should always be responsive to demand, human resources must be well managed and core financing and partnerships must be secured.

CeC sustainability should not be viewed on the basis of providing and selling ICT services alone but also as investments in ICT services that support an overall goal of community development.

- Four CeCs, namely the Maitum CeC, Mt. Province CeC, Sogod CeC and Kiangan CeC registered positive cash flow in the past two months. These CeCs were able to cover operational costs including connectivity, utilities, salaries, supplies and repair and maintenance.

Table 4. Cash Flow Positions of Selected CeCs

	Alcantara	Borbon	Catmon	Kiangan	Maitum	Mt.Province	Sogod	Zambales
Aug	breakeven	Break-even	Break-even	Break-even	+	+	+	na
Sept	breakeven	Break-even	-	+	+	+	+	na
Oct	+	-	-	+	+	+	+	-

The Maitum CeC, an LGU-based CeC posted profit margins through its e-governance services.

On the other hand, Sogod CeC, a community based CeC and Mountain Province CeC, a school based model, saw significant improvements in their cash flow positions after upgrading to broadband, which resulted in increased customer demand, as well as more service offerings that are feasible only with broadband technology.

- Some CeCs do not purely rely on actual users of computers and internet to become viable and sustainable. For instance, the Kiangan CeC which is managed by the SITMO, utilizes its CeC facilities to offer eco-tourism activities. It was able to promote eco-tourism events by developing a website and sending invitations through emails.

Some considerations for future LMIP activities

The Kiangan CeC quickly demonstrated the power of the Internet and the potential of CeCs for ecotourism and cultural and indigenous communities.

In the two months of operation since its launch, it engaged in simple email marketing invitations for two local festivals which would, among others, allow visitors to plant/harvest rice on the famed Rice Terraces and enjoy unique cultural performances from indigenous peoples. From this Internet effort alone, they drew over 100 new visitors generating over P200,000.00 in gross earnings.

They were also able to use the facilities to obtain grants to support SITMO activities and the CeC as well.

Can this be replicated by other cultural communities?

- On the other hand, some LGU based CeCs (Aleosan, Manolo Fortich, Bukidnon and Malapatan) which are managed by government staff still subsidize CeC costs and have yet to charge for its services. These CeCs are in the process of developing appropriate legal instruments (generally LGU resolutions) to allow the CeCs to charge for its services.

Some considerations for future LMIP activities

Constituents have a difficult time understanding why an LGU-based CeC would have to charge for the use of the facilities. Future LMIP activities should therefore consider additional public awareness and information campaigns particularly on the costs and benefits of CeCs, and why it is worth it to support a fee-based structure for CeCs.

Interestingly, based on interviews, users of the CeCs indicated a willingness to pay for training on the use of computers and the Internet (which are currently being provided for free by the CeC as a social service).

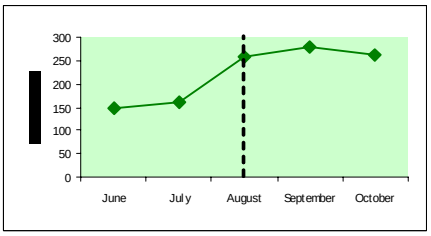
- Some CeCs are not faring as well, and have been experiencing declining cash flow positions.
    - The Zambales CeC, barely a month old, understandably is still in the process of conducting its extensive marketing campaign. However, it is still generating revenues from the use of internet and Cd burning facilities for its students.
    - The Catmon CeC, on the other hand is still working offline thereby foregoing all internet related revenues.

- As mentioned previously, the Borbon CeC faces technological issues which failed to maximize service offerings requiring broadband connection.

The availability of broadband connectivity impacts the CeC in two ways. First, it allows the CeC to diversify its services thereby reinventing itself to meet the needs of the community. Services such as VoIP, streaming video, chatting and downloading of applications and educational reference materials became core services which generated revenues. For instance, Sogod CeC posted an increase of users after it has upgraded to broadband connectivity.

However, computer facilities can hamper the full exploitation of broadband capabilities. In the case of Alcantara CeC, it was able to set-up its server to run on a closed proprietary system which supports video communication through messenger programs. Its terminals, with much slower computing capacities, however, can only support open source programs that are not interoperable with video communication applications using closed proprietary systems.

Figure 3. Usage Before and After DSL installation in Alcantara and Borbon CeC



Compared with the Sogod CeC, and while doing slightly better than the Alcantara CeC, usage in Borbon remains relatively flat since it was not able to upgrade its system to offer video communication as demanded by the clients. Thus, this CeC still posted a negative cash flow as the increased cost of broadband connectivity did not yet translate into enough increased revenues sufficient to cover the additional cost.

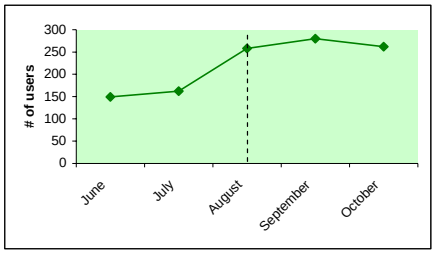


Figure 4. Usage Before and After DSL installation in Sogod CeC

Second, the availability of broadband leads to competition. As telecommunications companies begin to rollout broadband technology to rural areas, previously unserved areas have gained access to online information at much faster speed. While realizing the developmental goal of providing access to information in unserved areas, CeCs now face competition which threatens its sustainability. Having demonstrated the viability of providing services to the untapped market, CeCs face tough competition from internet cafes with more up to date equipment and better facilities.

Some considerations for future LMIP activities

Note that broadband both increases the CeC's competitiveness by allowing it to offer more and faster services, and increases the threat of competition from new players.

While it is not the role of LMIP to protect its CeCs from competition, preparing these CeCs for the competitive challenges that will inevitably arise must also be emphasized.

D. THE I-SCHOOLS WEB BOARD PROGRAM

Background

To further assist the CICT in developing content for CeCs and providing skills enhancement to ICT champions, the LMIP provided technical assistance for the CICT's iSchools (the school-based version of CICT CeCs) by developing and packaging the "iSchools Web Board," a set of teaching and e-learning resources to support the skills development of teachers and students in public high schools.

The Web Board

"The training equipped us with the skills on how to use ICT to improve our teaching materials."

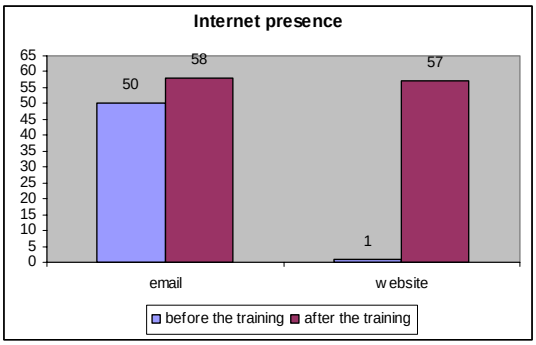
Merlen Sancha, a public school teacher at Bohol National High School

The I-schools Web Board is an interactive menu-based teaching and elearning resource for teachers. It contains instructional presentations, guided activities, references, test materials that teachers can use to improve learning. The Web Board can be accessed online at www.ischoolwebboard.orgfree.com. The LMIP not only assisted the CICT in developing the Web Board program, but also provided e-learning literacy training for teachers on how to use the Web Board.

The Web Board seeks to empower the teacher to exercise her role of teaching inside the digital space and improve learning by both teachers and students through e-learning resources. By equipping the teachers with ICT tools, students and teachers can go beyond textbooks and explore innovative learning. Coordinated with and supported by the Department of Education (the Web Board is fully aligned with the DepEd standards and curriculum), the Web Board is seen as a critical resource in pursuing the directive of the President to focus all ICT efforts of the government into education.

Web Board Training Evaluation

Participant Profile



The LMIP was able to train DepEd supervisors and fifty five (55) public high school teachers from eighteen (18) public high schools throughout the country.[8] Mathematics, Science and English teachers from national public high schools, general comprehensive high schools, and specialized schools such as science and arts high schools were targeted for the pilot run of the Web board training. All the schools which participated have a computer laboratory for students' use. These laboratories also have internet access via dial-up, VSAT or DSL connection. However, these laboratories are presently being used solely for basic computer lessons and have not been utilized to benefit or enhance science, math or english subjects.

The Web Board participants, before undergoing the training, possessed little knowledge and capacities to use ICT in their teaching.

- Based on the teacher self rating profile, most of them were not proficient in using ICT tools such as word processor, spreadsheets, presentation maker, internet browsers and using online content.

- Further, more than eighty five percent (85%) of the participants do not incorporate the use of ICT for their classes.

- Almost all the participants already had existing email accounts using free email hosting (e.g. yahoo, gmail). However, the emails were not being used for communication and knowledge sharing. Most teachers revealed that they opened an email account only to comply with the requirements associate with applying for an eGSIS account. Thus, before the web board training, only one teacher has a web log account and was only solely using it for documenting personal events.

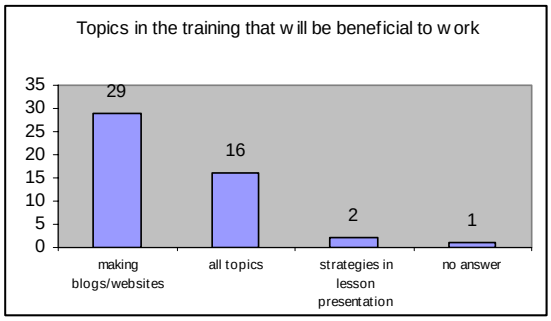
- Almost all teachers were of the opinion that having a website enhances teaching skills, but none of them had the capacity to build one, prior to the training.

Training Outcomes

ICT serves as a tool for teachers in enhancing their teaching methodologies and at the same time provide them with new and up to date reference materials for their subject matters.

[8] See Annex H for a summary of the profiles of participating schools in the Web Board trainings.

- More than 95% of the web board participants perceive that ICT is beneficial to their work.[9] These teachers believe that ICT can improve their teaching techniques for academic subject such as mathematics, science and english. This belies the popular notion that ICT is just one more subject to be taught only by an IT teacher.



- At the end of training, the web board participants revealed that among the topics presented, making instructional websites using web logs is the most useful and beneficial skills they have learned. Having a web presence increases their creativity in developing innovative lesson plans at the same time allow students to learn from a wide array of online references and not just rely on textbooks, which are most of the time, dilapidated, outdated and not accessible by students. As part of the Web board training, teachers demonstrated new skills to develop the following:

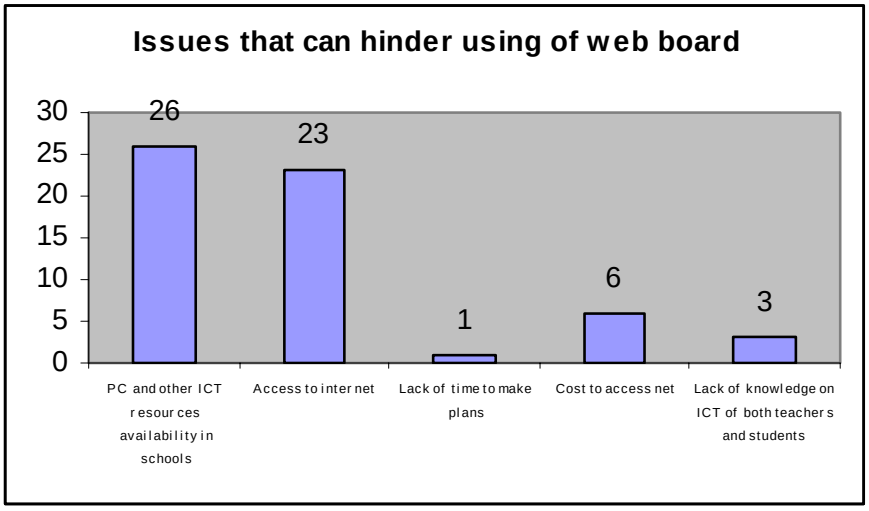
    - A teacher managed instructional website for elearning
    - A space in the web developed and managed by a teacher using best practices in elearning and DepEd and CICT standards
    - ICT skills including using relevant online content, using web based tools and programs such as encyclopedias, discussion forums, online communities, online assessment, among others.

- All fifty five participants were able to make an instructional website with at least one sample lesson plan complete with references, online links, online quiz/assessment tools and a rubric evaluation tool. The outputs of all the participants can be accessed at www.teacherwebboard.blogspot.com.

Issues Encountered

The Web Board is a valuable tool in jumpstarting elearning in public schools. However, there are still some issues that need to be addressed by both the school and the government.

[9] Participants were asked to fill out an exit survey form at the end of the web board training. A total of 48 participants provided feedback for the training. Please refer back to Annex F details.



- First, lack of ICT facilities and outdated equipment can hinder the mainstream use of elearning. Although these schools have computer laboratories, computer units have to be shared by all students and teachers. The CICT estimates that for every 1 PC inside the laboratory, 7 students have to share the resource. This translates to just five minutes of computer use each day for a student. Further, teachers do not have dedicated units for improving teaching through ICT and only have access to the laboratory after school hours.

- Second, aside from lack of PCs, connectivity poses a problem in deploying elearning. Very poor internet connection, coupled with high access cost in rural areas can also hinder the use of e-learning including the Web Board application.

"The issue in the Philippines is not merely poor infrastructure but the lack of skills of teachers to use e-learning tools. Teachers have to be as comfortable online as they are in the classroom. By equipping the teachers with ICT tools, students and teachers are empowered to go beyond textbooks and explore innovative learning."

-- Dr. Emmanuel Lallana, Commissioner of the Human Capital Development Group of CICT

IV. Key Findings and Recommendation - Best Practices and Lessons Learned

A. DEVELOPING DEMAND-DRIVEN AND FINANCIALLY VIABLE CeCs

A demand driven approach necessitates the development of CeC services that respond to the needs of the community, which maybe unique from other CeCs with different profile and interests. The success of the CeC in this regard can be measured against the community's ability and willingness to pay for its services.

Another important element of a viable CeC is the presence of enough demand or the existence of a critical mass of potential users which can sustain the CeC.

Business strategies for CeCs using a shared access model must also be developed. Since the envisioned CeC will be operated like a business establishment, proper business fundamentals should be set-up in order to attain sustainability.

B. TECHNOLOGY OPTIONS

Technology innovation plays a vital role in the CeC success since the CeC technologies are considered dynamic and swift to mature. CeCs must always reinvent themselves to suit the demands of the community while keeping pace with technology developments. It is thus prudent to set aside funds from profits (if any) that will allow it to invest in appropriate (though not necessarily the latest) technologies which can meet the demands and needs of the community being served.

Computer systems should be capable to render multiple applications such as desktop publishing, office applications, audio-video programs, computing, editing, internet surfing, among others. A full service CeC with multi purpose use should have at least four (4) multimedia Pentium workstations.

As the CeC becomes more viable and sustainable, the CeC may opt to increase the number of workstations, upgrade existing specifications or add additional equipment. Investment in software applications is the second biggest cost in CeC establishment, next to computer hardware infrastructure.

The CeC can choose from closed proprietary software such as Microsoft products or free and open source software such as Linux and Open Office.

Closed proprietary software would usually entail huge investment cost to obtain license to use while free and open source entails very minimal cost and usually can be downloaded from the internet for free.

Some considerations for future LMIP activities

- There are various advantages and disadvantages of using proprietary or open source applications. Licensed proprietary applications, specifically Windows OS platform, support many applications especially in education and communications that open source applications are not interoperable with or may not be able to support. The Borbon CeC, for example, is unable to compete with newer Internet Cafes principally because its Linux OS operating on older computers cannot support webcams.
- On the other hand, Linux based OS is free, have lesser bugs and currently is less prone to virus attacks. In poor rural communities, the investment savings of using free and open source software is therefore a compelling option.
- The determining factor for a CeC on what platform to use is significantly affected by the funding for software, the information needs of the community and the available technical support for licensed or free and open source applications.

Each CeC must be able to weigh the costs and the benefits of using open source or proprietary software depending on its budget, ease of use of the software, interoperability with services and facilities to be offered, support for popular programs, technical support on installation and maintenance and the demand for specific programs.

C. ATTAINING SERVICE SUSTAINABILITY

Sustaining service delivery and community acceptance will ensure the flow of revenue for the CeC and contribute to attaining community development goals. Sustaining service delivery refers to the continuous flow of information services that are useful to the communities. It also relates to sustaining the overall services of a CeC in terms of adapting to evolving community needs by continuously seeking innovative services and preparing the

"We, the Igorots, are grateful for helping us harness the power of ICT for the preservation of a truly magnificent Filipino masterpiece. The center will be very helpful in our endeavor to make Ifugao economically developed and sustained as a world heritage site and a world class ecotourism destination."

-- SITMO President and former Ifugao Governor Teddy Baguilat.

community for the value of new technology.

Much of the CeC's sustainability and success of services being offered will be determined by the degree of acceptance by the community. CeCs should be developed like social and cultural community centers rather than technological providers.

Community acceptance can also be strengthened by community ownership of the center by taking a central role in organizing and actual CeC operation. This uncomplicates efforts of solving problems with relevancy of services, marketing and mobilization of partnership funding.

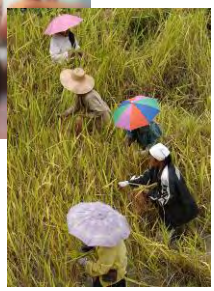
D. DEVELOPING CONTENT

The key element in content development in the early stages of CeC operations is capacity building for the CeC staff on the creative use of available web based resources to address community needs. By training the staff on how to find relevant applications, he/she can match the needs of the community with available information in the web. The community should also be trained on the basics of how to use the computer and the internet.

An important element in maximizing benefits from web resources is training the community how to find relevant resources through the internet. The internet encompasses vast wealth of information which can be accessed simply by training the community on how to find appropriate web content.

Some considerations for future LMIP activities

LMIP experience point to a number of innovative content for CeCs that can be explored for further development, replication and scaling up, including VoIP, job matching, e-governance and e-commerce solutions, eco-tourism, and telemedicine applications.



E. STAFF SUSTAINABILITY – TRAINING AND ENTREPRENEURSHIP

To develop a viable CeC model, human resource management should also be considered. Given that the CeC technology needs particular skills for the effective and sustainable CeC operations, the CeC should invest in training people in managing the CeC technology.

This should include training on enterprise development and management, community development, content development, web development and networking applications, among others. CeCs also need to develop technical capacity to operate communication equipment to maintain a stable service. CeC staff also needs at least basic capacity for troubleshooting and risk reduction. The government can also provide training on how to offer e-government services.

F. MULTI-STAKEHOLDER APPROACH

A multi-stakeholder approach allows resources, funding and technical capacities to be pooled together to make the centers more viable. Multiple stakeholdership is the key to secure much needed funding and will allow the risks to be shared thereby attracting more investments and support for the CeC.

CeC managers should therefore work hand in hand with the LGU and the community in creating applications, designing content and even office space layout. This gives them the assurance that the CeC will be useful for their daily lives and not just any services which are supplier driven.

Since CeC technology will be relatively new to most rural communities, having a sense of community ownership will avoid technology alienation and will even create marketing opportunities.

The LMIP advocates the creation of a steering committee or ICT councils that will monitor the operation of the center, provide guidance and decision making. ICT councils can be composed of LGU officers, NGOs, community representatives, and sector based organizations.

G. STRENGTHENING SUSTAINABILITY AND CeC INTEGRATION

The LMIP advocates the creation of a **CeC resource portal** as a means of aggregating the e-commerce and e-governance potentials of the individual CeCs, and as a starting point for direct participation in community development, particularly by overseas Filipinos.

Specifically, the portal can also serve as a knowledge database to strengthen sustainability of existing centers and increase viability of future CeCs. Various resources needed to set up a CeC such as strategies, approaches, equipment configuration, connectivity options, training modules, and human resource development, among others will be made available.

Moreover, the portal can also be conduits for software such as FOSS and other software relevant to CeC development, which include anti-virus programs, computer management, accounting, educational games, etc. that can be downloaded for use in the CeC.

A portal can also serve as a technical support resource by offering online (through VoIP, email, chat, or SMS) technical assistance in terms of troubleshooting, connectivity, repairs and maintenance, and virus attacks. It can also provide online discussion forums to allow interaction and sharing of strategies and best practices among CeC owners and managers.

Aside from providing these services to the CeC, the portal can act as a monitoring tool for policymakers and donor institutions. Through the use of GIS, the portal can create a database of all CeC initiatives and best practices in the Philippines, which will include CeC information like location, services offered, mandate and development goals, and financial plan and status.

This tool can also track down the performance of different CeCs and draw lessons from their experiences.

Finally, the portal can also be utilized as a resource mobilization and as a bridge for direct participation in countryside development, particularly by overseas Filipinos who would likely have the resources and, more importantly, the inclination to support the development of CeCs and the communities they serve.

V. CONCLUSION

Overall, community appreciation for the community e-centers, especially considering that these are located in previously unserved areas, has been universally positive. The impact on individual people is illustrated in LMIP's various success stories, which can be viewed at the www.lastmileinitiative.ph.

But beyond the impact on individuals, LMIP has identified models and applications that hold the promise not only of replicability, but also scalability and sustainability. If so, the Program could potentially have dramatic impact on communities and people's livelihood and quality of life opportunities:

- ***Jobs*** – For instance, the CeC established for the Municipality of Manolo Fortich has already used the facilities (particularly VoIP) to arrange and conduct online job interviews that successfully landed a number of its constituents offshore jobs.

- ***Environment & Tourism*** – The recently launched CeC in the town of Kiangan, Ifugao has already yielded jobs contracting leads to create the website of the Banawe Hotel, as well as for LMIP-trained local staff to provide training to neighboring towns interested in setting up similar facilities. Moreover, the CeC facilities have successfully been used to market local tourism-related activities, resulting in actual visits by more than 100 visitors to two separate festivals.

- ***Out of School Youth*** – In rural Cebu, several LMIP-assisted CeCs are providing opportunities for out-of-school youth to develop marketable skills, as well as to actually run the CeCs as businesses.

- ***Health*** – LMIP has began to work with the Philippine General Hospital (PGH) of the University of the Philippines to explore the use of community e-centers to expand and complement the delivery of health services in remote and unserved areas. A pilot program is being developed for the Municipality of Upi in Mindanao, in coordination with USAID's GEM, which will begin with online capacity building trainings for local health workers, as well as environmental health lectures for local farmers and which could eventually lead to virtual medical missions for the area.

- ***Education*** – LMIP's assistance to the CICT and the Department of Education (DepEd) for the development and training in the use of the iSchools web board has been very well received. As a result of the positive assessment in terms of increasing the skills and knowledge of trained teachers, CICT is already requesting an expansion of the training to include all its iSchools as well as the around 70 DepEd ICT Coordinators, most of whom, according to the CICT, are sorely in need of training.

Assuming an extension or expansion of the LMIP is called for, the main challenge is to determine which of the possible models are in fact, replicable and not merely the happy result of a lucky confluence of factors. The demonstration of such replicability could then be followed by a serious attempt at scaling up such models.

The second major challenge would be to link up the various CeCs, possibly through a portal – both LMIP-assisted as well as other initiatives that are being pursued by other groups – to enable not only the sharing of best practices and resources between CeCs, but to also help create the economies of scale that might make it more possible to entice private sector as well as OFW participation.

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ANNEX A

Economic Modernization through Efficient Reforms and Governance Enhancement
Last Mile Initiative Philippines

Selection criteria for CeC establishment

Rationale:

Community e-Centers or CeCs are envisioned to provide the general public with access to voice and data services, as well as provide the means for them to participate in electronic commerce, distance learning and e-government. Telecenters empower local communities to meet the challenges of the information society.

The Last Mile Initiative program aims to support the government's Community e-Center initiative by providing technical assistance to set-up and demonstrate the viability of pilot community e-centers in at least ten rural communities in 2005-2006. These CeCs will be closely monitored and evaluated to arrive at various sustainable and replicable CeC models. As such, it is important to effectively select potential viable sites to match with the programs limited resources. The selection criteria was developed to prioritize and identify sites which are likely to be more viable and sustainable.

The Selection flowchart

The selection criteria is presented in a flowchart diagram which will guide the LMIP team and EMERGE in selecting potential sites. The criterion is mainly divided into three decision points/phases wherein a potential site must pass all parameters in all phases.

The first decision point will center around the economic and technology scenario of the potential site. First, there should be a technical request from among various government agencies, LGUs, non government organizations and civil society, public schools, and private sector in setting up a CeC. Second, the LMIP team will perform a technology audit and environment scan to determine if the site is in a rural area and if the area is currently unserved or underserved in terms of ICT connectivity and access. Further, the team will determine potential options for connectivity, assess demand for CeC services and evaluate the viability of the CeC location.

Once the site is determined to be in a rural unserved/underserved area with a promise of potential users, the team will conduct interviews and meetings with the proponents to assess the institution's commitment in establishing the CeC. LMIP will prioritize partnerships with institutions which has full commitment in setting up the CeC in terms of financial resources, availability of CeC space, availability of CeC staff and management support.

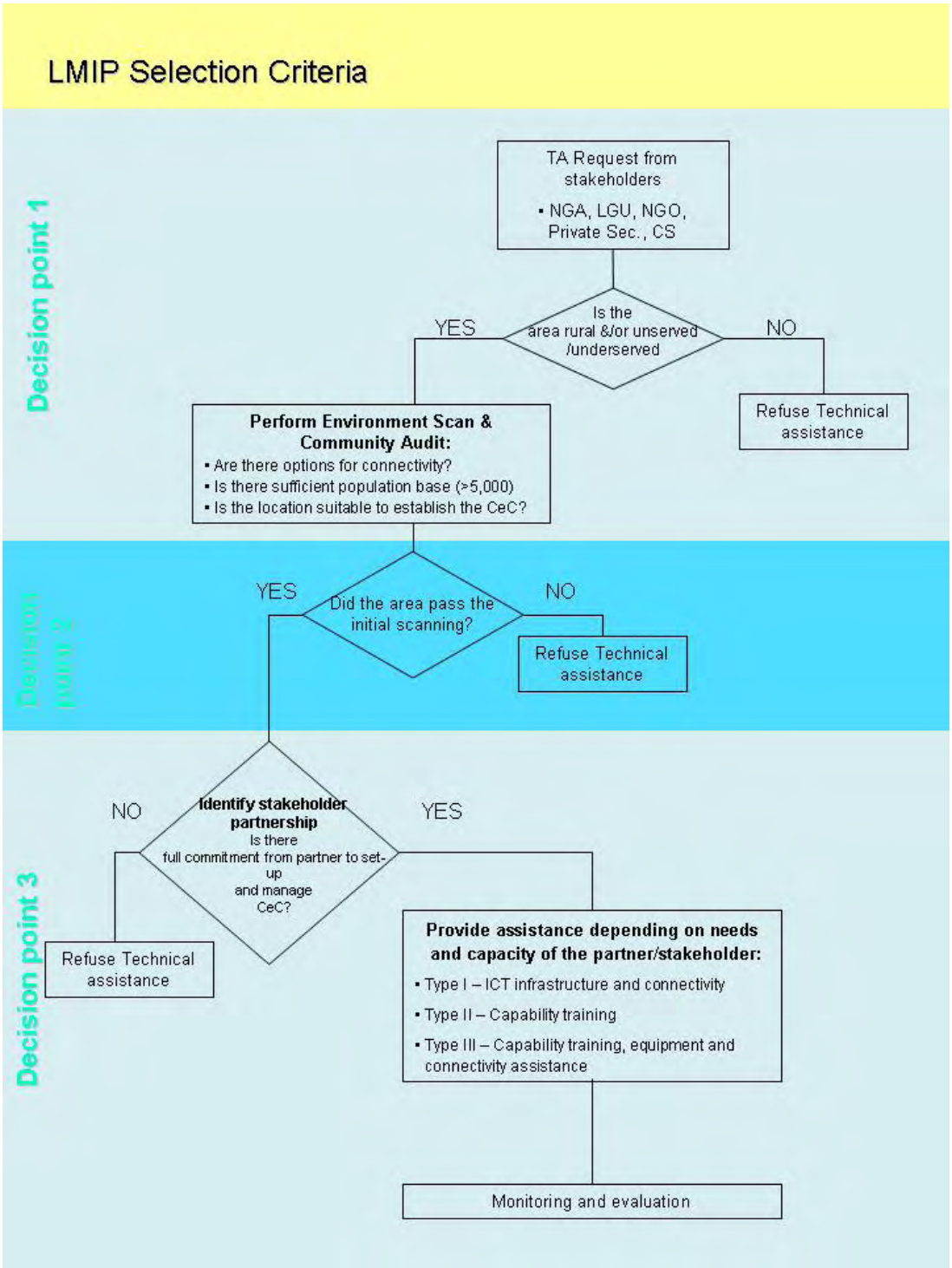
The third and final phase is to determine the role of the institution and the technical assistance to be given to the CeC. The LMIP will prioritize working with institutions that are willing to provide counterpart contributions in the CeC set-up. This demonstrates the full commitment and vision of the institution in using ICT for development and would indirectly contribute to the long term sustainability of the center. Areas of assistance will be in one or more of the following areas:

Type I – ICT infrastructure and/or connectivity assistance including provision of computer units, CeC equipment, software and applications, connectivity installation costs and/or subsidy for internet connection

Type II – Capacity building including staff training on operations management, enterprise development, financial sustainability, ecommerce, content development, and/or trainors' training.

Type III – ICT infrastructure, connectivity assistance and capacity building.

After providing the technical assistance in setting up the CeC, the LMIP will continuously monitor the developments and operations of the CeC to determine if further technical assistance is needed and to document the progress of the center and identify best practices and models in CeC operations.



ANNEX B

LMIP CeC Community Profile

a. Sogod

Community Profile

The coastal town of Sogod is located north of Cebu City. With almost twenty seven thousand residents from eighteen baranggays, this 4th class municipality derives income from fishing, corn and vegetable farming, and production of coconut products such as edible oil, hog feeds and "walis tingting" or broomstick. Blessed with pristine beaches and crystal clear waters, Sogod is home to a few world class resorts such as the Alegre Beach resort and New Club Pacific Resort. Being at the outskirts of metropolitan Cebu, infrastructure is relatively well developed. Major road networks are paved and well maintained, public markets are accessible via numerous forms of transportation, and all barangays are energized and have piped water supply. Postal and courier services have flourished given the strong influx of domestic and international remittances. Major mobile phone carriers have strong presence with DSL, wifi, GPRS and EDGE technologies. However, not all barangays have been reached by wireline telephony and broadband access. Areas without broadband capabilities can dial up to a number of ISPs present in the town such as Mozcom and Bonanza.

Patnerships and LMIP Assistance

The Sogod CeC is a product of the commitment of various stakeholders involved, each one utilizing its strengths and core competencies. Computer units, a printer, scanner and airconditioning unit were provided by the World Vision Philippines. On the other hand, the World Corps was instrumental in mobilizing the community and providing technical assistance from project conception to project monitoring. The World Corps provided an extensive six month training for center operations and management and technical support in software installation, computer networking set-up and maintenance of computers. The baranggay LGU, on the other hand, provided space for the center, a room for training, office furniture and CeC security.

With the center recently upgrading to broadband connection, computers needed to be upgraded and additional computers needed to be set-up to recoup broadband cost and to maximize broadband potential. Realizing the benefits of broadband connectivity and to increase the viability of the center, the USAID, through the LMIP program, shouldered the purchase of a brand new server and peripherals to upgrade the center's current computer set-up. To further assist the center in shifting to broadband connection and assess demand for it, the USAID provided two months subscription to broadband connection.

CeC Services

The Sogod CeC offers a wide array of services. The center offers internet services, encoding and research, printing and photocopying, digital ID processing, VoIP through video chat, public calling payphone, office applications, desktop publishing, ink refill and cd burning. Aside from computer services, the CeC staff who is an out of school entrepreneur, offers free computer literacy training for the community and also assists the LGU in community development programs such as medical mission and feeding programs.

b. Borbon

Community Profile

The town of Borbon in north Cebu, a 4th class municipality, derive its income predominantly from farming and fishing activities. With a population of more than 30,000, the town produces corn, sugar, shell and stone craft and processed fish with a total annual income of 25 million. At the center of the town is Poblacion Borbon, the barangay where the CeC is located. With a population of nearly 5,000, the barangay's economic activities center around fishing, farming and labor for construction work.Major infrastructure including road networks, electricity, water and sanitation are well developed. ICT infrastructure consist of postal service, mobile pohones and landline phones with broadband capabilities.

Patnerships and LMIP Assistance

To make the CeC more viable, the LMI provided assistance in upgrading from dial-up connection to broadband connectivity. Based on experience of the center, internet access is very slow since the dial up bandwidth is being shared by five computers. This hamper revenue generation and also ties up the telephone line since the line is being used almost exclusively for dialing up to the internet. To jumpstart revenue creation and to assess the demand for broadband services, the LMI provided provide six months broadband connectivity through Globe DSL services.

The CeC in Borbon has five computers running under Linux open source operating system and open office applications provided by World Corps. The center is also equipped with a scanner, printer and photocopier and uses dial-up connection for internet connectivity. The CeC is housed inside the old barangay hall which was converted into a multipurpose hall for use of the Sangguiniang Kabataan. The multipurpose hall is situated near the marketplace and a small business center making it a strategic place for the CeC.

CeC Services

The Borbon CeC offers internet services, public calling payphone, printing, office applications, photocopying, encoding and desktop publishing. Further, the CeC staff which are out of school entrepreneurs trained by World Corps, offer free computer literacy training for the community.

c. Catmon

Community Profile

An agricultural and fishing town, Catmon is situated north of Cebu City. This 4th class municipality generates income from farming produce such as corn, coconut and bananas as well as sea water fishing. Tourism spots such as beach resorts and hot springs also contribute to the town's earnings. ICT infrastructure is good with access to mobile phones and land line telephony with broadband connectivity capabilities. The Catmon CeC is located in

baranggay Catmondaan, a fishing and farming community with approximately 2,500 residents with predominant age group of 15-29 years of age. The present CeC is housed in the old knowledge center of the barangay hall and is just a stone throw away from the local daycare and elementary school and the public market.

Patnerships and LMIP Assistance

Like all CeCs assisted by the LMI, the Catmon CeC is a product of collaboration among government, private sector and civil society. The CeC is housed in the knowledge center and library of the barangay which makes it ideal for research and learning. The CeC has five computers- one brand new server and four refurbished Pentium three units running on open source operating system and applications. Other equipment include a scanner, printer and photocopier. Trained by World Corps, the CeC is managed by an out of school youth and supervised by a steering committee from the LGU and the community.

To jumpstart the CeC operations, The LMI provided assistance in the acquisition of a brand new computer unit with networking peripherals which served as the center's server. Part of the assistance provided by LMI to jumpstart revenue generation and demand for broadband services such as VoIP was to shoulder the cost of broadband connection and initial six months subscription. However, to date, the CeC is still not connected to the internet as telco providers lack infrastructure to expand its subscriber base.

CeC Services

Currently, the CeC offers office applications, printing, desktop publishing, encoding, photocopying and free computer skills training for the community. The CeC has yet to offer internet services as it is still in the process of applying for a telephone line given the lack of available line from the telecoms provider.

d. Alcantara

Community Profile

Named after a place in Spain, the town of Alcantara is the smallest town and among the farthest towns of southern rural Cebu. Being the smallest town of Cebu, this fifth class municipality has only nine barangays with a total population of 12,000. With its mountainous terrain, the town's main income is derived from farming activities and forest products. Although situated among mountainous terrain, the town is being serviced by a telecoms company using wireline telephony.

Patnerships and LMIP Assistance

To facilitate the opening of the center to the public, the LMIP provided the CeC with a brand new computer server, networking peripherals and a printer. Further, to asses demand for services requiring broadband connectivity such as VoIP, audio and video streaming and downloading of multi media

files, the LMI will provide support for six months broadband connectivity. On the other hand, the World Corps provided training for the CeC administrator and provided technical support in the setting up of the center while the LGU provided space and office furniture. Various local private sector groups and civic organizations pooled resources to purchase four refurbished workstations, scanner and photocopier for the CeC.

CeC Services

Current CeC product offerings and services include internet services, scanning, cd burning, photocopying, word processing and spreadsheets, colored printing and basic telephony. Further, the CeC offers free basic computers skills training for the community.

e. and f. Manolo Fortich – LGU and Community College

Community Profile

The municipality of Manolo Fortich is the gateway to the vast province of Bukidnon. Manolo Fortich is predominantly an agricultural town producing a variety of agricultural products ranging from rice, corn, strawberries to pineapple produce from the vast plantation of Del Monte. Infrastructure has been continuously developing for the past years. Road networks are well paved, trading centers and the marketplace are strategically located, electricity is stable and communities have access to safe and potable water. Information and communications infrastructure is also well developed. Major wireless mobile carriers have strong presence in the area including access for GPRS and EDGE networks. Landline phones and broadband access through fiber optic cables are being provided by the Southern Telecommunications Company (Sotelco)

Patnerships and LMIP Assistance

The LMIP collaborated with the Manolo Fortich LGU and Representative Nerues Acosta of the 1st district of Bukidnon in setting up the two CeCs. The LMIP provided the training component and facilitated connectivity while the LGU and the Office of Rep. Acosta provided all the CeC equipment. Capacity building is a critical element in the sustainability of CeC operations, and particularly to promote the CeC's financial viability, service delivery and community acceptance. The LMIP provided a comprehensive training on enterprise development, community development, center management and trainors' training on computer skills courses for the community. In the future, the LMIP will develop e-government applications in the LGU CeC with focus on building an online automated jobs database for the LGU's public employment service office and the use of VoIP for interviews with overseas employers.

CeC Services

Two CeCs are being piloted in Manolo Fortich, one in the municipal hall and another one at the Northern Bukidnon Community College. The CeC established by the LGU has five workstations running on Windows XP operating system and MS Office applications. The LGU CeC also has a webcam and microphone for VoIP applications. On the other hand, the community college established a computer laboratory with twenty eight computers. Further, the college has six printers, ten web cams and microphones and an overhead projector. Both CeCs have DSL connection deployed by Sotelco through its fiber optic network.

The CeC began to offer internet services to the public ranging from surfing, chatting, to emailing and research last June 2006. The CeC is also planning to develop eLGU services such as a local website for Manolo Fortich, online jobs database posting, and online interview with overseas employers through VoIP. Apart from online services, the CeC also offers free computer literacy courses to the community. Other CeC services include encoding, printing, photocopying and digital ID layouting and processing.

g.and h. Kiangan – Save the Ifugao Terraces Movement (SITMO) and Kiangan LGU

Community Profile

Kiangan lies at the heart of Ifugao province in north Luzon. The town is characterized by mountainous areas being a part of a landscape of cordillera mountains. Kiangan, the oldest Ifugao town, is part of the province with vast rice terraces, a thriving ancient heritage carved from the base of the mountainsides to the top, which appear to be massive stairways reaching to the sky. The famous terraces had been inscribed in UNESCO's World Heritage List as "a continuing cultural landscape." Major source of income is derived from the rice terraces producing both commercial and organic rice. The town also produces local food and beverages, textiles and garments. Kiangan is accessible via numerous land based transportation systems. Although some auxiliary roads are still unpaved, major national roads are paved and well maintained. The town is being serviced by postal services, cellular phone companies, cable tv and internet through satellite.

Patnerships and LMIP Assistance

The Kiangan CeC is a product of collaborative efforts among local government, civil society, development organizations and the private sector. There are two CeCs assisted by the LMIP in the Ifugao area.

First, the LMIP partnered with the Save the Ifugao Terraces Movement (SITMO), an NGO based in Ifugao whose objective is to preserve the rice terraces heritage, in setting up a CeC within the training facility of the NGO. The SITMO provided the center space, CeC staff, one brand new workstation and three refurbished computers. On the other hand, the LMIP conducted training on enterprise development, center management, networking and troubleshooting. The LMIP provided capacity building for web and graphic design for the creation of the community web site which focuses on eco tourism and ecommerce. The LMIP provided a brand new PC server with networking peripherals and the one time connection cost of internet using VSAT. Intel Philippines shouldered one brand new PC workstation. Through the assistance of Canvas, an NGO committed to promoting broader awareness and appreciation for Philippine art, culture and environment and Microsoft Philippines, software including Windows XP and MS Office Suite were installed in all the workstations.

Second, the LMIP collaborated with the Kiangan LGU in strengthening the capacity of the CeC staff in managing the LGU CeC. The LMIP conducted training on center management and web and graphic design for the creation of the LGU website which will focus on strengthening the tourism programs of the LGU.

CeC Services

The Kiangan CeC utilizes internet not just for surfing, email and research but to build content and elearning modules on agriculture, forestry and livelihood development. The CeC is also home to the SITMO website which focuses on eco-tourism, community development and ecommerce. Apart from internet services, the CeC is also house the library of the SITMO which is opened to the public. The Kiangan CeC has also developed modules for basic ICT skills training and web development training which will be offered to the community and other LGUs and NGOs. Other services of the CeC include encoding, word processing, printing and desktop publishing.

i. Mountain Province

Community Profile

Bontoc is the capital town of Mt. Province, surrounded by mountains lined with rice terraces. Although it is an agricultural area, the main sources of livelihood for most of the people of Bontoc are government employment, business and agriculture for local consumption. Bontoc is accessible via land transportation only as it is located within the mountain terrain of the Cordilleras. Wireless telephone companies such as Globe and SMART provide communication needs of the town. Surprisingly, the SMART established wifi connectivity through its cell sites making almost all of the strategic areas in Bontoc internet ready.

Patnerships and LMIP Assistance

Like many other CeCs which are outputs of partnerships between private and public sector, the MPGCHS is among the CeCs with numerous stakeholders and partners. ICT infrastructure such as PCs, printers, center space and furnshings were provided by Microsoft, SMART, Learn.ph, LGU, PCTA and Alumni Association. Further, SMART Schools and Microsoft equipped the center with Microsoft applications and other elearning programs. On the other hand, troubleshooting and technical support is being provided by the Xijen Institute of Technology, a technical vocational school. To further equip the center with management expertise and skills in web development, the LMIP provided a five day extensive training on enterprise development, center management, social preparation and community development, trainors' training and web development skills to allow the CeC to be more responsive to the community needs at the same time enhance their expertise to be able to offer innovative services such as website making.

CeC Services

The Mountain Province CeC is lodged inside the Mountian Province General Comprehenisve High School. During the school hours, the CeC is being used by the students and teachers for academic and training purposes. After school hours, though, the center is being opened to the community. The CeC

offers internet access via wirelss DSL, encoding jobs, word processing, spreadsheets, printing, VoIP and training for teachers and principals in other schools as well as ICT literacy training for government officials.

j. Casa San Miguel

Community Profile

San Antonio is one of the towns of Zambales. Predominantly a farming and fishing town, is also home to beautiful beaches in northern Luzon. It was also once home to a satellite naval base of the USA where it provided administrative jobs to the municipality. The town of San Antonio is accessible via land and sea transportation. In terms of telecommunications services, the municipality is serviced by major wireless telephone companies, a major landline telecoms and local cable operators.

Patnerships and LMIP Assistance

The Zambales CeC is a result of collaboration between the LMIP and Casa San Miguel. Casa San Miguel is an NGO organized to bring arts and culture to the Zambales rural communities and educate the affected communities on the wide spectrum of human development. Private sector partners such as the PLDT, Seimens, and Citigroup provided refurbished PCs, center space and funding for renovation of furnishings. MS Office and Windows XP were provided by the Microsoft Philippines through the Center for Arts, New Ventures and Sustainable Development (CANVAS). The LMIP, on the other hand, provided capability building for CeC operations management, enterprise development, financial management, marketing and trainors' training.

CeC Services

Launched in October 2006, the Zambales CeC offers internet use with specific focus on internet research for students, office applications such as spreadsheets and word processing, printing, digital copying and ICT skills training.

k. Malapatan

Community Profile

Situated at the southern part of Mindanao, Malapatan is one of the 7 municipalities of the Province of Sarangani. Main sources of livelihood are farming and fishing with corn, coconut, rice, fruit trees and sorghum as the town's major products. Like other towns in Saranggani, infrastructure in Malapatan in still underdeveloped. Out of the 12 barangays, only 9 barangays were energized. For its ICT needs, Malapatan is being served by the government postal service and voice communications through cellphones. There are no landline providers and ISPs in the area. Voice communications are provided mostly from handled radios which are also being used by the LGU and the local entrepreneurs.

Patnerships and LMIP Assistance

The Malapatan CeC is a result of cooperation from various stakeholders. The CICT through the NCC eLGU program provided four computer workstations with networking capabilities and training for online government services. The LGU on the other hand provided an additional computer, CeC staff, CeC space and will shoulder monthly recurring charges. The USAID GEM program assisted in the development of an ICT steering committee which will manage the CeC operations. The LMIP shouldered the installation cost of DSL connectivity. Given the presence of wireless broadband connection using DCTech as the ISP deployed over Globe network, the LMIP chose the wireless broadband option instead of satellite connectivity given the higher bandwidth capabilities for VoIP and cheaper acquisition cost.

CeC Services

Apart from internet connectivity, the connection will provide voice calls, free VoIP calls within the province and facsimile transmittal which are all vital in efficient LGU communications and operations. To date, the LGU is offering internet services such as email, surfing and research, telephony through VoIP, e-government services, photocopying services and word processing.

I. Maitum

Community Profile

Maitum is the last coastal town situated at the western most part of Saranggani in Mindanao. Agriculture is the primary contributor to the local economy. Fishing is another major source of income of the people through brackish fishpond and sea fishing. Infrastructure in Maitum is still in its infancy stage. Wooden bridges are still found in provincial and barangay roads. Out of the 19 barangays of the municipality, only 15 barangays were energized, other barangays used kerosene for lighting. Given its mountainous terrain, no land line telephony services exist and major communication services are mainly provided by cellphone networks and through the use of two way radios.

Patnerships and LMIP Assistance

The CeC in Maitum, launched during the 4th Mindanao ICT Congress, was established through the collaborative efforts of the LGU, the CICT, the USAID GEM and the LMIP. The CICT-NCC provided four computers with networking capabilities through its eLGU program while the LGU provided two additional computers, space, CeC staff and monthly recurring cost. The NCC also provided training for eLGU services which can be offered by the LGU to its constituencies. On the other hand the USAID GEM provided technical assistance in the creation of an ICT steering committee while the LMIP provided facilitation for internet services and shouldered the one time cost of VSAT connectivity. Due to the mountainous terrain, the only option for connectivity is through satellite broadband connection.

CeC Services

Currently the LGU is offering internet services, online national government services, photocopying, encoding and office applications such as word processing and spreadsheets.

m. Aleosan

Community Profile

The municipality of Aleosan in Cotabato, Mindanao is a progressive agricultural community that derives income from intensive rice and corn production, vegetables, mangoes, root crops and permanent crops such as coconut, rubber and coffee. This fourth class municipality, made up of 19 barangays, comprises several groups such as Ilongos, Magundanaos and Manobos. Transportation plays a vital role in the development and progress of an area. The municipality is accessible both from Cotabato City and Davao City by any land transportation. In terms of power infrastructure, there are only ten (10) out of 19 barangays that are energized. Telecommunications and broadband services are offered by wireless telcom companies through GPRS/EDGE and wifi.

Patnerships and LMIP Assistance

The CeC has been established by various stakeholders. The LGU provided for all CeC equipment, staff and recurring costs while the GEM program of USAID provided technical assistance in setting up the CeC management and connectivity. For its connectivity requirements, SMART meridian provided wireless connectivity via wifi DSL. The LMIP provided 2 brand new multimedia computer workstations and is planning to assist in the facilitation of VoIP applications and services

CeC Services

The Aleosan CeC, housed at the Aleosan Community College is being used for the school's literacy programs and elearning applications. Further, the CeC is open for community use after school hours and offers services such as internet, word processing, printing and ICT skills training.

Summary of Assistance

Model	CeC Setup	LMIP Assistance	Date assistance provided	Date CeC operational
Community/NGO based				
Alcantara CeC – Alcantara, Cebu	Hardware: 4 refurbished PCs, printer, scanner, webcam, copier Connectivity: broadband dsl Services: internet, ICT training, printing, copying, VoIP	Type I – ICT Infrastructure and Connectivity Assistance	November 2005 August 2006	December 2005
Borbon CeC – Borbon, Cebu	Hardware: 4 refurbished PCs, printer, scanner, webcam, copier Connectivity: broadband dsl Services: internet, ICT training, printing, copying, VoIP	Type I – ICT Infrastructure and Connectivity Assistance	August 2006 existing	
Catmon CeC – Catmon, Cebu	Hardware: 4 refurbished PCs, printer, scanner, webcam, copier Connectivity : offline Services: ICT training, printing, copying	Type I – ICT Infrastructure and Connectivity Assistance	October 2005	December 2005
Sogod CeC – Sogod, Cebu	Hardware: 5 multi media PCs Connectivity: Broadband dsl Services: internet, ICT training, printing, copying, VoIP, PC repair, ink refill, eload	Type I – ICT Infrastructure and Connectivity Assistance	January 2006 Existing	
ePuggo CeC – Kiangan, Ifugao	Hardware: 4 multi media PCs, 1 laptop, cable TV, printer	Type III – Capability training, ICT Infrastructure and connectivity	April 2006 and June 2006	July 2006

	Connectivity: VSAT Services: internet, ICT training, web design, printing, desktop publishing	assistance		
Casa San Miguel CeC – San Antonio, Zambales	Hardware: 4 multi media PCs, 2 laptops, printer, scanner Connectivity: wireless local loop (weroam) Services: internet, ICT training, printing, desktop publishing, multimedia copying	Type III – Capability training, ICT Infrastructure and connectivity assistance	September 2006	October 2006
LGU based				
Maitum LGU CeC – Maitum, Sarangani	Hardware: 6 multi media PCs, printer, other ICT Infrastructure Connectivity: VSAT Services: internet, printing, encoding, egovernment	Type I – Connectivity Assistance	November 2005	March 2006
Malapatan LGU CeC – Malapatan, Sarangani	Hardware: 5 multi media PCs, web cam, printer, other ICT Infrastructure Connectivity: wireless DSL Services: internet, printing, encoding, egovernment, VoIP	Type I – Connectivity Assistance	November 2005	March 2006
Manolo Fortich LGU CeC – Manolo Fortich, Bukidnon	Hardware: 6 PCs, printer, webcam, copier, scanner Connectivity: broadband dsl Services: internet, ICT training, printing, encoding, jobs application processing, egovernment, VoIP	Type II – Capability training assistance	February 2006	May 2006
Kiangan LGU CeC – Kiangan, Ifugao	Hardware: 4 multi media PCs, printer	Type II – Capability training assistance	April 2006	June 2006

	Connectivity: VSAT Services: internet, e-government			
School based				
Mountain Province General Comprehensive High School CeC - Bontoc, Mountain Province	Hardware: 10 multi media PCs, elearning applications, printer, scanner, webcam, copier Connectivity: wireless broadband Services: internet, elearning, VoIP, printing, desktop publishing, ICT training for teachers, LGU and community	Type II – Capability training assistance	April 2006 Existing	
Aleosan CeC – Aleosan, Cotabato	Hardware: 4 multi media PCs, web cam, printer, other ICT Infrastructure Connectivity: wireless DSL Services: internet, printing, encoding, egovernment, VoIP	Type I – ICT Infrastructure Assistance	June 2006	August 2006
Manolo Fortich Community College CeC – Manolo Fortich, Bukidnon	Hardware: 20 PCs, printer, web cam, copier, scanner Connectivity: broadband dsl Services: internet, ICT training, printing, encoding, VoIP	Type II – Capability training assistance	February 2006	May 2006
iSchools web board training	Hardware : Computer laboratory with 10 -12 PCs (average) Connectivity : dsl/dial-up/off line Services : internet, ICT training for students, printing	Type II – Capability training assistance	May – June 2006	

ANNEX C

Summary of LMIP Training Modules

a. Community Development

An understanding of the community is key in designing a demand driven CeC. As such, communities must be involved in all stages of the project cycle to develop a sense of ownership and hasten technology adoption and assimilation. CeC staff should be equipped with community development skills and should immerse themselves within the community to have a sense of what the community needs are. The following are the components of the community development module:

- Social mobilization
- Community audit
- Needs assessment
- Impact of technology to the community
- Bringing technology to the community
- Linking CeC to community

b. Enterprise Development

An important skill in managing a CeC is having creativity and innovative skills in designing products and services. CeCs should be run like a business and should be able to generate revenues based on profits generated by its products and services. The enterprise development module teaches CeC staff to develop entrepreneurial skills to be able to turn demand into services. Additionally, this module teaches staff how to use business development tools necessary in sustaining the CeC operations. The following are the components of the enterprise development module:

- Entrepreneurial competencies, knowledge, skills and abilities
- Establishing an enterprise
- Service and product selection
- Market research and survey tools
- Cost and pricing analyses
- Strategic planning and business development tools
- Time management

c. CeC operations management

Like any other profitable business, the CeC should have a definite structure and should be governed by policies, rules and responsibilities. A CeC should have policies and guidelines on staffing, daily operations, center use, among others. Further, the CeC should be

able to develop accounting systems, feedback schemes and performance monitoring system in order to track the health of the center. The following are the modules for operations management:

- Roles and responsibilities
- Operations
- Staffing
- Monitoring, feedback and evaluation

d. Computer & Internet Trainors' Training

One of the goals of the center is to bridge the digital divide and equip the community with skills on how to use a computer and how to use the internet. This approach not only builds skills in ICT tools but equip the community to actually use the CeC services thereby creating demand for CeC products. Staff are taught how to create appropriate training modules that are relevant to the community. Basic courses include:

- Computer components
- basic internet usage including setting up of emails
- basic office applications including word processing and spreadsheet digital editing, among others.

e. Web and Graphic Design

Web presence is a powerful tool to broadcast to the world information about the community. It can be used to post community profiles, geographical conditions, scenic spots, and the rich cultural traditions of the community. Civic organizations can use it to disseminate information about its advocacies while LGUs can utilize it to post its political profile and community projects and services. Moreover, a website can be used to market products, services and tourism and even perform trade using the internet. The LMIP developed a web development and graphic design module in an effort not just to bring information to the community but to enable and empower the community to transmit to the world its rich cultural heritage at the same time benefit from ecommerce transactions. The module contains the following components:

- Basics of digital image creation, editing, lay outing and publishing
- Basics of Website Conceptualization and Design
- Basics of using web authoring tools
- Content Development and Execution
- Hands on web designing
- Advanced Web Development Training and actual uploading of web site

f. elearning module – the Ischools Web Board

As a CeC project, the CICT i-Schools program establishes internet-connected computer laboratories in public schools without computer equipment and/or access to online information and e-learning applications. In 2006, i-Schools seeks to provide such laboratories in at least 140 public high schools throughout the Philippines. The LMIP provided technical assistance in the development and packaging of a set of teaching and e-learning resources that can support the skills development of teachers and students in public high schools throughout the Philippines. These e-learning tools include various online learning materials and teaching guides such as

- how to create web board and web sites for teachers
- how to create forum, discussion groups, online test guidelines
- resources on e-learning instructional design and lesson plans
- online publications and articles

All of these resources will then be made available to all i-School CeCs through a web portal, as well as through CDs that can be distributed to i-School and CeCs that have not yet been able to connect to the Internet. Updates and additions to these e-learning resources can then be made through the i-Schools web portal. The elearning resources will also be made available to all the pilot CeCs.

g. Free and Open Source Software

To further equip CeCs and schools with relevant software which are free/ open source and comparable to commercial industry standards, the CICT and LMIP developed a compilation of free and open source program/software. This is in line with the government thrust to prohibit piracy of software and promote open standards. Applications included in the FOSS kit were:

- Linux OS
- OpenOffice
- Internet browser and email tools
- Web authoring tools
- Project planner
- Graphic editing tool
- Business Accounting

ANNEX D

Last Mile Initiative Community e-Centers Set-up Cost

Area/Profile	Partners/Counterpart	LMIP Assistance
Luzon		
Mountain Province General Comprehensive High School CeC - Bontoc, Mountain Province	▪ MPGCHS provided management support ▪ Microsoft and SMART provided PCs, software and connectivity ▪ Alumni Assn provided PCs and equipment ▪ Total cost : Php 385,000	▪ Technical assistance in web development training and CeC management ▪ Training software ▪ Total Cost : Php 120,000
ePuggo CeC – Kiangan, Ifugao	▪ SITMO provided CeC staff, 3 PCs, equipment, monthly recurring cost ▪ Philippine Rural Reconstruction Movement provided space ▪ Intel provided 2 PCs ▪ Microsoft provided software ▪ Total Cost: Php 474,000	▪ Technical assistance in web development training and CeC management ▪ Multimedia PC ▪ VSAT installation cost ▪ Training software ▪ Launching cost ▪ Total cost : Php 280,000
Kiangan LGU CeC – Kiangan, Ifugao	▪ LGU provided CeC staff, PCs, equipment and connectivity	▪ Technical assistance in web development training and CeC management ▪ Training software ▪ Total Cost : Php 120,000
Casa San Miguel CeC – San Antonio, Zambales	▪ Casa San Miguel provided staff, PCs, equipment, connectivity, space ▪ PLDT provided PCs ▪ CANVAS and Microsoft provided software ▪ Total cost : Php 298,000	▪ LMIP provided CeC staff training ▪ Support for program launching ▪ Total cost : 20,000
Visayas		
Alcantara CeC – Alcantara, Cebu	▪ World Corps provided Pcs, social preparation and staff training ▪ Community provided PCs ▪ LGU provided space ▪ Total cost : 200,000	▪ 6 months support for broadband connection ▪ 1 multi media PC ▪ Facilitated VoIP applications ▪ FOSS

		▪ Total cost : Php 37,000
Borbon CeC – Borbon, Cebu	▪ World Corps provided PCs, social preparation and staff training ▪ LGU provided space ▪ Total cost : 200,000	▪ 6 months support for broadband connection ▪ Facilitated VoIP applications ▪ FOSS ▪ Total cost : Php 12,000
Catmon CeC – Catmon, Cebu .	▪ World Corps provided Pcs, social preparation and staff training ▪ Community provided PCs ▪ LGU provided space ▪ Total cost : 190,000	▪ 6 months support for broadband connection ▪ 1multi media PC ▪ Printer ▪ FOSS ▪ Total cost : Php 25,000
Sogod CeC – Sogod, Cebu	▪ World Corps provided PCs, social preparation and staff training ▪ World Vision provided PCs, equipment ▪ LGU provided space ▪ Total cost : 310,000	▪ 6 months support for broadband connection ▪ 1 multi media PC ▪ Facilitated VoIP applications ▪ FOSS ▪ Total cost : Php 27,000
Mindanao		
Aleosan CeC – Aleosan, Cotabato	▪ LGU provided 4 PCs, training ▪ Aleosan Community College provided staff, space, recurring costs ▪ SMART provided connectivity ▪ USAID GEM provided technical assistance organizational setup ▪ Total cost : Php 212,000	▪ LMIP provided 2 multi media PCs ▪ Total cost : Php 50,000
Maitum LGu CeC – Maitum, Sarangani	▪ National Computer Center provided 4 PCs, training ▪ LGU provided 2 PCs, staff, space, recurring costs ▪ USAID GEM provided technical assistance organizational setup ▪ Total cost : Php 444,000	▪ LMIP provided VSAT installation ▪ Total cost : Php 31,000
Malapatan LGU CeC – Malapatan, Sarangani	▪ National Computer Center provided 4 PCs, training ▪ LGU provided1 PC, staff, space, recurring costs ▪ USAID GEM provided technical assistance organizational setup ▪ Total cost : Php 420,000	▪ LMIP provided dsl installation ▪ Facilitated VoIP solutions ▪ Total cost : Php 31,000

Manolo Fortich LGU CeC – Manolo Fortich, Bukidnon	▪ LGU provided PCs, equipment, space, staff, recurring costs, connectivity ▪ Total cost : Php 780,000	▪ LMIP provided CeC staff training ▪ Facilitated VoIP solutions ▪ Total cost : Php 200,000
Manolo Fortich Community College CeC – Manolo Fortich, Bukidnon	▪ School provided PCs, equipment, space, staff, recurring costs, connectivity ▪ Total cost : Php 762,000	▪ LMIP provided CeC staff training ▪ Facilitated VoIP solutions ▪ Total cost : Php 200,000
iSchools web board training	▪ School assigns teacher as internet lab managers ▪ School shoulders connectivity, recurring costs ▪ PCPS, GILAS, SMART, Microsoft, Intel provided PCs, teacher training, connectivity, software ▪ Deped provided training laboratory and admin support for ischools web board ▪ Intel provided funding support for training ▪ Total cost : (average per school of Php 500,000 at 20 schools) Php 10,000,000	▪ Developed the ischools web board program ▪ Provided a 5 day intensive training for 20 public high schools ▪ Total cost : Php 370,000

Note: Total costs are estimated based on information from counterparts. Total costs include annual total of recurring costs including staff salary, utilities, connectivity

ANNEX E

Community eCenter Client Usage

	Internet and Computer Usage			Skills Training			Cash Flow		
	Aug	Sept	Oct	Aug	Sept	Oct	Aug	Sept	Oct
Alcantara	65	85	90	6	5	5	breakeven	+	+
Aleosan	ND	300	270	na	na	na	na	na	na
Borbon	8	10	6	4	4	4	breakeven	breakeven	breakeven
Catmon	2	4	4	5	5	na	breakeven	-	-
Kiangan	8	10	10	na	na	na	breakeven	+	+
Maitum	ND	94	138	ND	ND	ND	+	+	+
Malapatan	ND	ND	ND	ND	Nd	ND	ND	ND	Nd
Manolo Fortich	100	120	110	20	20	20	na	na	na
Mt. Province	350	310	280	80	50	na	+	+	+
Sogod	258	280	262	5	6	na	+	+	+
Zambales			15	na	na	na	na	na	-

ANNEX F. Interview Form

Respondent: _____ Age : _____

Position/Designation: _____ Office/Company: _____

Address: _____ Contact Information: _____

Focus Areas:

1. **Organizational Structure and Management**
   a. Who is in charge of the daily operations of the CeC? What are his or her specific roles and tasks:

   _____

   _____

   b. Does the operator have any assistants? (such as administrative assistant, technical personnel, and finance personnel)? Do you/they receive any form of compensation?

   _____

   _____

2. **Policies**
   a. Does the center abide by a mission, vision, goal (VMG) document? What is it?

   _____

   _____

   b. Does the CeC have specific policies on the following:
      i. product features and enhancements _____ yes _____ no

ii. human resource development (i.e., hiring qualificiations, personnel evaluation, and training)

_____ yes _____ no

iii. usage of CeC and its products _____ yes _____ no

iv. information security and intellectual property _____ yes _____ no

v. usage quota and revenue targets _____ yes _____ no

3. CeC Products and Services

a. What are the specific products and services that the CeC offer?

_____

_____

b. Does the center offer training courses? Please identify them.

_____

_____

c. Is there a local content developed specifically for the telecenter (i.e., local website of the town or community, customized portal that allows access to other portals, job posting, VoIP, etc)

_____

_____

4. Operations

a. What is the operating time of the center? _____

b. Is it open on weekends and holidays? _____

5. Cost of Products and Services

a. How do you price your products and services?

_____

b. Is the CeC making money based on the price of its products and services?

_____

c. What is the largest cost of the CeC? _____

d. What service/products bring the highest revenue? (please identify the top 3)

_____

_____

e. Do you set aside a certain percentage of revenues every month as savings? _____

_____

f. For the past 2 months, what is the center's average revenue? _____

g. For the past 2 months, what is the center's average cost? _____

h. Where do you source additional funds to cover costs if costs are larger than revenues ?

_____

6. Beneficiaries and/or Clientele

a. Who are the target clients/beneficiaries?

_____

_____

b. Who commonly uses the center? What products or services do they utilize?

_____ - _____

_____ - _____

c. What is the most utilized CeC service or product? (please list the top three)

_____

_____

d. What are the top 3 websites/online program your clients access?

_____

_____

_____

Notes:

_____

_____

_____

THANK YOU VERY MUCH FOR YOUR TIME

Annex G

Client Exit Survey

Gender

Male	7
Female	14

Civil Status

Single	15
Married	5
Widowned	1

Employment Status

Student	8
Seeking employment	4
government	5
self employed/entrepreneur	2
private company employee	2

1. How long have you been using the Internet Center?

less than 1 month	2
1 month	3
2 months	7
more than 2 months	9

2. How often do you go to the Internet Center?

daily	3
twice a week	8
twice a month	6
monthly	4

How long do you use the internet

30 mins	2
1 hour	14
2 hours	5
more than 2 hours	0

3. What are the Internet Center services that you use? (check all appropriate boxes)

research	15
email/chat	14
general internet	10
encoding	10
printing	10
games/entertainment	4
online search	4
phone call	3
scanning	3
sendfax	2
others	

4. How did the center help you? (check all appropriate boxes)

I am able to communicate with my friends and relatives	16
I am able to find information that I need	14
I am able to complete my school requirements	8
I am able to download, watch videos, play games	6
I was able to apply for a job	4
I get to read news	4
I am able to transact with the government	3
I am able to create documents, spreadsheets, presentations, pictures, etc.	1
Others: _____	0

5. How do you find the internet speed?

slow	1
good enough	9
fast	6

6. How do you find the prices of the services?

too low	0
just right	15
too high	1

7. How do you find the service by the staff

excellent	10
fair	11
poor	0

8. If you were part of management, what other services do you think should the Internet Center offer to help the community?

9. How did you first learn about the Internet Center

friends	15
on-air advertisement	0
flyers/banners	5
neighbors	1
local government	1
family	0

ANNEX H

Ischools Web Board School Profile

School/Location	Participants	Computer laboratory/ description
Bukidnon National School of Home Industries Bukidnon - Mindanao	Lilibeth Lanoy Josefina Cornito	20 PC units with 10 connected to the net via SMART DSL
Misamis Occidental National High School Oroqueta City	Esther Omongos Christine Boniao Melma Lendio	50 PC units with 18 connected to the net
Manolo Fortich National High School Manolo Fortich - Bukidnon	Eva Nilda Meniano Rosana Dalmento John Urbina	10 PC units with 10 connected to the net via DSL
Misamis Oriental General Comprehensive High School	Editha Valmoria Faith Pasilan Maria Alonsabe	40 PC units with 40 connected to the net via Smart
Abellana National School Cebu City	Jocelyn Magdalaga Elleanor Gallardo Cresmen Terol	40 PCs units with 0 connected to the net
Cabungahan National High School Danao City	Leonisa Montes Lalaine Sampan Ericson Batulan	20 PC units with 0 connected to the net
Pedro Guevara Memorial National High School Laguna	Merlen Sancha Maureen Quesea Al Gapud	10 PC units with 10 connected to the net
Quezon National High School Lucena City	Maria Mariden Lavares Maria Puno Abigail Zoleta	20 PC units with 20 connected to the net
Juan Sumulong High School Quezon City	Maria Lourdes Coronacion Wilfredo Rosario Edna Inac	60 PC units with 45 connected to the net
Cor. Lauro dizon Memorial National High School San Pablo City	Sarah Sario Arnold Sinen	10 PC units with 10 connected to the net

Bauan National Agricultural and Vocational High School La Union	Bernadette Corona Lina Bejer Rebecca Buenviaje	20 PC units with 0 connected to the net
Don Cecilio Putong National High School Bohol	Reuben Alturas Roselle Nisnisan Raflyn Salutan	20 PC units with 20 connected to the net
San Pablo City National High School San Pablo City	Elmon Cornista	20 PC units with 10 connected to the net
Iligan City National High School Iligan City	Frolian Escalante Eugune Daguio Annallee Aron	35 PC units with 27 connected to the net
Regional Pilot School for the Arts Rizal	Marilou Calderon Alicia Lipio Edraline Muni	1 PC unit
Cabancalan National High School Mandaue City	Sheila Carpela Janeth Seno Joy Leopoldo	40 PC units with 20 connected to the net
Batangas National High School Batangas	Merced Liwag	67 Pc units with 55 connected to the net
Gusa National High School Cagayan de Oro	Chenita Illana Gasiana Maputol Cecille Cespedes	11 PC units with 1 connected to the net
Mayor Tuazon National School of Fisheries	Lorna Abellana Marcial Cuya Pamela Mae Geniston	20 PC units with 1 connected to the net
Deped Supervisors		