Identifying 'Killer' e-Governance Applications for Telecentres
Lessons from the Philippines

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Inside

APDIP e-Notes present an analytical overview of specific issues related to information and communication technologies for sustainable human development in the Asia-Pacific region. APDIP e-Notes are developed by the United Nations Development Programme's Asia-Pacific Development Information Programme (UNDP-APDIP) based at the UNDP Regional Centre in Bangkok, Thailand. For more information, visit http://www.apdip.net or contact info@apdip.net

Summary

Killer e-governance applications are applications and/or use of the telecentres that create a significant impact on a community, and are likely to have similar benefits when replicated in other similar communities.

This APDIP e-Note describes a methodology to identify 'killer' applications and models of e-governance that may be suitable for deployment and wide-scale replication in telecentres throughout the Philippines. The same methodology can be used to guide other telecentres around the world.

The Philippine Government, through the Commission on Information and Communications Technology (CICT) set up telecentres throughout the country as part of the Community e-Center (CeC) Program, to provide the general public with meaningful and affordable access to information and communications technology (ICT). The Philippine Government, particularly Local Government Units (LGUs), have utilized the CeC model to offer various e-governance services.

CICT recognizes that by using the right applications, services and models, CeCs can improve accountability and effectiveness of government services and operations, enhance government service delivery for industry and businesses, and more importantly, modernize and ensure the efficient delivery of services to citizens. As a result, CICT sought effective ways of attracting citizens (including the rural and urban poor) to the CeCs, and a framework for identifying killer applications that can be offered by CeCs, contributing to their sustainability, as well as to good governance in the Philippines.

Whether the killer applications come from: (a) above as government pushes applications and models through the CeCs; or (b) below as innovations and best practices that emerge from the experience of the communities themselves, their suitability for deployment can be assessed based on their ability to promote citizen empowerment; citizen participation; government accountability and transparency; and government efficiency and effectiveness.

Prior to the deployment of e-governance applications, this APDIP e-Note is of the view that communities around the CeCs should ideally have access to, and be familiar with basic ICT applications and services in order for community residents to fully appreciate and utilize the killer e-governance applications.

ICT and good governance

ICTs increasingly and demonstrably provide opportunities for governments to create innovative approaches in not only improving public service delivery that extends to the remotest areas, but also engaging citizens in government's decision-making processes. Today, more than 90 percent of all developing countries practice e-governance.[1] In South-East Asia, for example, the Association of Southeast Asian Nations has committed to employ ICT in the provision and delivery of services by the government.

CeCs as conduits for e-governance

One of the ICT development strategies used by a number of developing countries is a shared ICT resource model called the community telecentre or e-centre. CeCs are

[1] e-Governance defines the ways that government institutions, businesses and citizens are using electronic means for the purpose of enhancing good democratic governance processes and for achieving better public service delivery based on transparency, accountability and public feedback mechanisms. e-Governance services involve the interaction between the citizens and the democratic processes such as online public hearings, electronic voting, feedback systems, complaint registration, signature campaigns and participation in decision-making.

seen as effective and affordable tools for bridging the digital divide and harnessing the full potential of ICT on a shared basis rather than through individual household connections. They provide new opportunities for social and economic integration and can serve as a catalyst for synergies between development goals and good governance.

The Philippine Government, through CICT launched the CeC Program to provide the general public with meaningful and affordable access to voice and data services, e-commerce, and distance learning, among others, through CeCs.

CeCs can be conduits for e-governance at the local level. By making the right tools and applications available, it can improve accountability and effectiveness of government services and operations, enhance government service delivery for industry and businesses, and more importantly, modernize and ensure the efficient delivery of services to the citizens.

Equally important, e-governance applications and content can also provide citizens with additional incentives to use CeC services, thereby contributing to their sustainability.

What are the pre-conditions for incorporating e-governance applications in CeCs?

From a sustainability standpoint, it is important to remember that the effort to identify and successfully deploy e-governance applications – which generally are relatively advanced tools – is best pursued only when the foundations for such deployment and use are already in place.

In many parts of the Philippines, especially rural and remote areas, the challenges facing CeCs are much more basic. Many constituents could be seeing computers for the first time. They could be intimidated or uncomfortable with new technologies, or might not have a good grasp of how ICTs can tangibly affect their daily lives.

The community concerned should ideally have access to, and be familiar with basic applications and services such as Internet browsing, and key productivity software (for word processing, spreadsheet applications and presentation, among others), before deploying e-governance applications in the respective CeCs.

e-Governance applications can of course be deployed even without such 'basic' applications and services in place. For instance, CeCs can certainly be outlets for obtaining birth certificates or police clearances.

But e-governance applications, by themselves, will not ensure CeC sustainability, or, more importantly, necessarily increase individuals' awareness on the potential of ICTs. CeCs need to provide basic and more frequently/regularly-used services to ensure their viability and sustainability, as well as increased relevance in the community.

Thus, infrastructure and connectivity are also issue of paramount importance, and are preconditions for the deployment of e-governance and indeed, other more advanced applications and services. Moreover, basic training should be provided on how to manage and run the CeC effectively, in order to ensure its sustainability.

How will the CeCs be funded? What is the business model? How will it pay for set up and recurring costs? These should be addressed by CeCs first, before they can truly be used as conduits for e-governance on an effective and sustained basis.

These basic components should be considered as pre-conditions for more advanced CeC uses such as e-governance, and will provide the foundations for the use and appreciation of e-governance applications by community residents. Rather than e-governance applications per se, it is the demand for these basic applications that are more likely to drive the set up and development of CeCs throughout the Philippines.

How to identify killer e-governance applications for CeCs: A proposed framework

Killer e-governance applications can loosely be defined as applications and/or uses of the CeC in a particular community that: build on the delivery of e-governance services; create a high and pro-poor developmental impact that measurably benefits residents; and encourage replication as best practice models in other similarly situated communities.

In other words, this *APDIP e-Note* do not limit the term 'killer' to applications that will likely have universal impact (in the way that email was a killer application for the Internet). Rather, it encompasses applications that could have a significant impact on a given community, and are likely to have similar beneficial effects in similar communities.

The effort to provide killer applications and best practice models can come from: (a) above as government pushes applications and models throughout the CeCs; and (b) below as innovations and best practices that emerge from the experience of the communities themselves. Depending on the flow (top-down or bottom-up), what factors and issues need to be clarified to ensure the successful deployment of such killer applications?

Choosing to push or promote a particular service, model or application inevitably requires investments and costs that government – whether at the national or local level – must be able to justify. If government is to push, or if a local government is to invest, in particular applications or models, what steps can government take to ensure that the selected applications will have the desired impact? Given the perceived needs and capabilities existing within the community, what applications or models will yield the greatest benefit for the constituents?

e-Governance applications, like all other applications to be deployed through CeCs, should be evaluated based on its value, impact and replicability. As a framework of analysis, potential application, model or service is considered in the context of broader social goals that are intended to be met through e-governance:

Citizen Empowerment

- Does it provide citizens with more tools to participate in the global economy?
- Does it help citizens identify new opportunities, challenges, useful information, etc. that will improve their quality of life?

Citizen Participation

- Does it encourage and increase citizens' involvement in and awareness of government policies, goals, programmes and services?
- Does it make it easier for citizens to transact with government and provide government with feedback, comments, suggestions and criticisms?

Government Accountability and Transparency

- Does it promote greater transparency in the delivery of government services?
- Does it deter, if not prevent, corruption and fraud in government transactions?

Government Efficiency and Effectiveness

- Does it help government deliver services more effectively and efficiently?
- Is it more responsive, both in substance and in time of delivery?

The result of the process flow should be a narrowed-down list of potential high impact e-governance applications to be pilot tested in CeCs. These applications can then be matched with specific CeCs' needs that can be addressed by the identified e-governance solution.

Government Push: What are the steps and issues to consider?

Government can proactively push certain models and applications as part of its implementation of strategic plans to promote, deploy and use ICT for development. Through its agencies, such as the CICT, the Philippine Government can and does deploy tools for e-governance, such as ICT tools to facilitate business registration and real property tax collections, or simply requiring government agencies to have an online presence that allows for web-based transactions.

In this top-down approach, government starts by identifying the priority needs to respond to, and that can be addressed by using ICT and particularly, CeCs. Data can come from sector needs identified by the government, aggregated needs from CeCs, or government thrusts based on consultations with various stakeholders. Additional data can be sourced from national and regional plans, as well as relevant information on population and ICT literacy, international best practices, and through the conduct of surveys and need assessments.

Once these needs are identified, a broad list of applications can be made based on innovative ideas from government and other stakeholders, international best practices, and CeC experiences on what works. It is therefore important to develop a databank of local best practices of CeCs to serve as repositories of ideas for benchmarking and formulation of innovative ideas.

Each of the potential applications can then be evaluated against the government's goals and objectives, and their capacity to actually implement them.

- Does it support existing national/local development plans and goals?
- How much investment is needed, and how will this investment be sourced (grants, loans, savings)?
- Is this something government should push, or is it better left to the private sector? Are there openings for public-private partnerships?
- How can government deliver the services on a sustained basis?
- Does ICT, in this case, promote cost-effective delivery?
- Is the technology/software/infrastructure needed, affordable and/or available?

iSchools Web Board: An example of a killer application identified using the top-down approach.

The iSchool Program is an initiative of the CEC Program to help the Department of Education provide computer laboratories, e-learning resources and trainings to teachers in more than 5,000 public high schools by 2010. One of the components of the iSchool Program is to help public school teachers develop their own web boards, thus enabling the development and sharing of e-learning resources.

"I always thought that building a website for the schools and the regional office is such an expensive endeavour that requires technical know-how and huge funding. This is partly why we haven't really used ICT for improving education," said Mr. Alfonso Estolas, a Regional ICT Coordinator of the Department of Education. "The training (iSchools Web Board) taught us how to use free online resources which are all useful in improving the educational system in public schools."

"This is the first technical training we attended that really equipped us on how to maximize the potential of Internet resources for learning. Now, we have a digital space where we can share lesson plans, multimedia materials, educational content and even monitor web boards and ICT competencies of teachers," said Dr. Cathy Petilos, Regional ICT Coordinator from Region VIII.

The training seeks to build a regional web board where individual teacher web boards are integrated for interaction, sharing of best practices in teaching and development of educational materials.

The iSchools Program is a good example of a government-led identification of a killer application deployed through CeCs that supports government's larger development goals for education. Its successes has solidified the plan to deploy the web board model in all of the education's organizational structure levels, including more than 5,000 planned iSchool CeCs throughout the country.

Potential benefits of the applications should also be fleshed out, and measurable parameters identified that will allow for objective evaluations of their respective development impact. For instance:

- Who are the target users/beneficiaries of the application?
- How will they benefit constituents (e.g. Increased income? Increased exports? Increased literacy levels? Lower incidence of disease? More jobs?)
- Does the potential benefit outweigh the expected cost?

Community Pull: What are the steps and issues to consider?

The bottom-up approach or a demand-driven approach recognizes and celebrates the fact that many, if not most, of the truly transformative innovations are unanticipated, serendipitous and emerge in the communities. Such practices result from the new-found ability of people to explore and push the applications of ICT that they can now access through CeCs.

CeCs provide an invaluable starting point to introducing ICT tools; demonstrating their convenience, relevance, affordability and usefulness; making community residents comfortable in using new technologies; and initially providing, but ultimately allowing users themselves to find and make useful content to add value to the CeC.

Using this approach, the starting point is to make CeCs relevant and immediately useful to community residents, believing that with repeated and collective use, the community will eventually call for, identify or even discover the e-governance applications that will best address their needs and the needs of different stakeholders the CeC is serving.

Proactively, a needs assessment of the citizens and different stakeholders can be undertaken by the CeC as the initial step in identifying high impact e-governance applications. ICT needs can be obtained from consultations with various sectors, surveys, group discussions and client exit interviews.

Government's role is to put into place a programme that encourages the development of community-based innovation; enables communities to learn from best practices that emanate from the ground; and systematically document and share these with other communities for appropriate scaling and replication.

The proposed framework outlined above (p. 3) can be used to evaluate such community-discovered models, and for classifying them as 'killer applications' or best practice models.

Conclusion

It should be emphasized that there is no single CeC model or set of e-governance applications that can be considered as the most effective, efficient or the one that provides the greatest impact. Each community would have to determine for itself what needs and opportunities their respective facilities will seek to tap. The word 'community' needs to be stressed, as the success of the endeavour will be greatly enhanced if everyone in the community – from government, the private sector, civil society, and the residents – truly consider themselves as stakeholders in the CeC.

Using CeCs for job interviews: An example of a killer application identified using the bottom-up approach

It all started with a simple idea of providing the municipality of Manolo Fortich, in the province of Bukidnon, Mindanao, with a CeC that local residents could use. As Congressman Nereus Acosta related, "we wanted Manolo Fortich to serve not only as a gateway to central Mindanao but also as *the* gateway of Mindanao 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," Congressman Acosta said.

The set up was very basic: The local government and private sector providers worked to create the CeC – providing five computers in a room set aside in the municipal hall. Broadband connectivity and business development trainings were provided by private and non-government partners.

The municipal government involved its Public Employment Service Office, and soon, citizens were going online to find jobs being offered by Manila-based Internet jobsites. Interviews with Manila-based employment agencies using webcams and Voice over Internet Protocol (VoIP) facilities of the CeCs were later arranged by local government employees.

Mayor Socorro Acosta spoke with pride over the immediate impact of the CeC, as she relates how numerous job interviews between locals and Taiwan-based firms were made possible by access to VoIP and webcam facilities. This resulted in the successful placement of ten applicants on their very first try at online job interviews.

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

News of the services and benefits being provided by the CeC in Manolo Fortich traveled fast, and nearby municipalities in Bukidon and provinces such as Misamis Oriental have already inquired with Mayor Acosta on how they can participate in or replicate this mdel in their CeC.

This early success and the interest shown by other local governments and communities provide encouraging signs for replicating and scaling up the model to other CeCs throughout the country.

In this light, it is important to realize that killer e-governance applications, like all other applications, should be understood in the context of specific community needs.

Government must therefore actively and consciously play its role, not only in replicating and deploying killer applications, but also in ensuring that an effective system for documenting and sharing of these best practices and lessons exists – precisely to ensure that communities are able to sift through as many options as possible, as they move to enhance the relevance, use and capabilities of their respective CeCs.

It is hoped that lessons learned from the Philippine experience will ultimately serve as a model for other developing countries that are struggling with similar challenges.

Identifying killer or high-impact e-governance applications is one of the seven building blocks of pro-poor e-governance - making services work better for the rural poor in the Asia-Pacific region. More information on the seven building blocks of pro-poor e-governance can be found in APDIP e-Note 11.

~ Gigo Alampay and Joel Umali, The Center for Art, New Ventures & Sustainable Development (CANVAS) http://www.canvas.ph

This *APDIP e-Note* is based on a paper written by Gigo Alampay and Joel Umali entitled, *High Impact, Pro-Poor e-Governance Applications: Identifying Killer Applications and Best Practice Models of e-Governance through Community e-Centers in the Philippines.* Read the full paper at http://www.apdip.net/resources/e-governance/killerapps

Additional Reading

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