MAKING ICTS WORK FOR THE POOR: PURSUING THE MILLENNIUM DEVELOPMENT GOALS THROUGH ICTS

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Introduction

The 21st century has been defined as the "information era", basically because information is used to gain knowledge, which is the major source of advancement in society. This information is not only important for businesses, learning institutions and research centres but is has become vital for the development of communities. When one looks at information and communications technology (ICT) the question should not be whether it has impacted the day-to-day business and social life, but rather how equitable this impact is and how significant it is in addressing the main problems faced by society today.

According to UNICEF's *The State of the World's Children 2005* report,[1] half of the world's children are suffering extreme deprivations from poverty, war and HIV/AIDS. UNICEF also states in this report that more than one billion children are denied a healthy and protected upbringing. The report goes further to emphasize the important role governments can play in ensuring that these children's future is secured and that their livelihoods are not blocked, as well as upholding their human rights and supporting their economic advancement. These children grow up in environments that are inherently problematic to support their development. UNICEF Executive Director Carol Bellamy has stated that "Too many governments are making informed, deliberate choices that actually hurt childhood. Poverty doesn't come from nowhere; war doesn't emerge from nothing; AIDS doesn't spread by choice of its own. These are our choices."

Coupled with the above mentioned problems, access and affordability with regard to the use of ICTs are also a problem, especially in developing countries. According to Mark Malloch Brown - Administrator of the United Nations Development Programme (UNDP) from July 1999 to August 2005 - "Today, close to 600 million people use the Internet today and in least developed countries there is at least one telephone subscriber per 100 people, most likely a cell phone, which now outnumber landlines across Africa and in most poor countries."[2] With broadband and wireless technologies being rolled out worldwide, more and more people are getting connected using even cheaper devices than the traditional personal computers.

At the World Summit on the Information Society (WSIS) second phase[3] and through its implementation and follow-up processes, the governments must exercise a choice that will secure the future for today's generation.

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[1] UNICEF (2004), *The State of the World's Children 2005. Childhood under Threat*, www.unicef.org/sowc05/

[2] Brown, M. M. (2003), "Unleashing the Benefits of technology for the World's Poor", *Choices. The Human Development Magazine*, UNDP, www.undp.org/dpa/choices/2003/december/administrator.html

[3] www.itu.int/wsis/tunis/index.html

Several studies indicate that ICTs can indeed be used to address the social challenges that are faced today, if applied correctly and in the right developmental activities.[4] We agree with Brown when he states that ICTs have the potential to help poor communities to meet key development priorities, especially in the areas of poverty, health and education. If deployed correctly and where relevant ICTs can be leveraged for the benefit of the poor and can also play a catalytic role in accelerating their economic and social development.

The ICT framework for development

It is a well established fact that to achieve society's full potential all individuals should be able to participate in its development, irrespective of race, creed, physical ability or gender. The opportunities presented by ICTs,[5] in particular, require a conscious and deliberate push to ensure that the imbalances that exist today in terms of access are not only stopped, but also reverted. ICTs have made it possible for free information to flow and for new and alternative media to emerge, but the issue of access beyond market limits should be seriously taken into consideration if people's freedom to access this information, an essential human right, is to be safeguarded.

In this section we pose the following question: how can the unprecedented opportunities presented by ICTs be used in a manner that will bring about a revolution in development such that real and lasting change can be brought to the world's poor?

Many initiatives have been implemented and attempts have been made to answer this question and to make progress in this direction. While some of them have partially succeeded, the reason behind the failure of many others is that there are often many players - a combination of governments, civil society, private sector and academic and research institutions - without a clear strategy and proper ways of interaction. It does not matter how much money is thrown at a problem: without an instrumental strategy there is no possibility of success.

Incorporating ICTs into development should be founded on six axes: strategy, regulatory framework, implementation, capacity development, partnerships, and measurement. Below we succinctly explain the role of each of these elements.

Strategy

The first step for all governments is to develop a national ICT strategy document based on well researched information about the status of ICT relative to its citizens. This strategy document should express the country's vision with respect to ICTs and the specific development goals that would be achieved through its use.

A strategy document is essential to address the digital divide in general, but it also should clearly establish how capacity would be built in particular groups within the country's population.[6]

Regulatory framework

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[4] Please refer to WSISPapers' report *ICTD within the framework of the MDGs* for relevant information supporting this argument. www.choike.org/nuevo_eng/informes/3010.html

[5] When referring to ICTs, the importance of Free and Open Source Software (FOSS) needs to be stressed, in particular as an appropriate technological model in developing environments.

[6] For instance, it should state how women, physically challenged and impoverished citizens would be empowered through the use of ICTs.

Once a strategy has been defined, a review of policies must be carried out to determine the kind of regulatory framework that is required to support this strategy. This is a very critical point since even with a clear strategy the lack of enabling policies in place would be a major obstacle for implementation. Although the regulatory framework should contemplate "pure" ICT policies, ICT development-oriented policies should be specifically addressed.

It can be argued that several initiatives have succeeded even within an appropriate regulatory framework but, for a comprehensive ICT-for-development strategy to be successful at national level, it is important to have clearly defined policies that can be enacted into law and supported by all stakeholders.

Implementation

Several actors are usually involved in the implementation of ICT policies - different players within governments, civil society organizations, private sector and academy. The most important elements for successfully implementing ICT policies in a multiskaholder framework are: coordination, integration and alignment:

- *Coordination* is necessary in order to avoid duplication and to track stocktaking activities.
- *Integration* is necessary in order to ensure that the different policies are in line with one another (e.g. the integration element will look at whether the ICT-for-development policy is in line with existing general development policies).
- *Alignment* is necessary in order to make sure that implementation follows the originally established objectives. The application of ICTs to realize major development objectives should be encouraged wherever possible but, for instance, a clear distinction must be made between using ICTs as an office automation tool and using ICT as an enabler of development objectives.

Capacity development

As ICTs become more accessible, the need for a pool of skilled technical individuals - for technical support, application development, etc. - increases.

It is at this stage where strategy and integration come into play - as well as standards and accreditation - since integrated policy-based strategies that are used to develop ICT skills should be implemented in accordance with the country's overall development strategy.

Governments should play a major role in this area, since they usually are responsible for the curricula and programmes of educational institutions.

Partnerships

Although governments can play a coordinating role in the implementation of ICT policies, all the other stakeholders - private sector, civil society and educational institutions - should be included both in the definition and the implementation of the country's ICT strategy.

Appropriate mechanisms for stakeholders' integral participation can determine the success of the strategy. For instance, remote and rural areas are often marginalised and under-serviced, and these communities often lack appropriate infrastructure. Grassroots civil society organisations can play an important role in supporting the deployment of ICTs in these areas.

In terms of practice, and so that projects may succeed, local context and culture issues should be considered as well as an operational participation. Operational constraints that pose an impediment for real participation and inherent problems that emerge even when participation does take place should be addressed.[7]

Measurement

It is indispensable that progress being made by ICT projects is traced in a very clear, concise and quantifiable manner, so projects can be fine-tuned and actions can be adjusted to make sure that the original development goals included in the national strategy are accomplished. It is necessary, therefore, to develop baseline studies of ICT indicators and continue to measure the impact of their interventions with respect to this baseline, throughout all the phases in the implementation of policies.

According to the International Telecommunication Union (ITU),[8] while some developed nations are racing ahead in information society measurement and tracking many factors including infrastructure, access and usage, most developing nations are struggling to generate even basic indicators. The international community should support these efforts.

ICTs to support the achievement of the MDGs

The UN ICT Task Force (UNICTTF) has stated that "the intersection of ICTs and the Millennium Development Goals (MDGs) forms a critical nexus for the future of sustainable human development and poverty eradication."[9] Yet, continues the UNICTTF, "the great paradox of the information age - the persistence of scarcity in a digital era of near-ubiquitous and superabundant capacity - remains the greatest single challenge to the networked and development-rich economy and society." The UNICTTF also argues that, with the strategic, intensive, widespread and innovative use of ICTs and media in development policies and programmes, the ambitious agenda of the MDGs becomes much more possible to realize. "Further, the scale of deployment and catalytic role played by ICTs and media can in turn help to make such investment in ICT sustainable", they claim.

The UNDP has expressed that, in spite of the enabling potential of ICTs in enhancing development, it is "yet to be widely mainstreamed to assist developing countries in addressing traditional development problems with innovative solutions and approaches that are both effective and more easily scalable and replicable."[10]

We also believe that, instead of merely catching up, the developing world could use the "digital divide" challenges as opportunities to leapfrog to cutting-edge technologies.[11] The combination of emerging technologies and innovative ICT strategies and policies could then be mainstreamed

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[7] Heeks, R. (1999a), "The Tyranny of Participation in Information Systems: Learning from Development Projects", Development Informatics Working Paper Series, www.sed.manchester.ac.uk/idpm/publications/wp/di/di_wp04.htm

[8] ITU (2003), *ITU World Telecommunication Development Report 2003*, www.itu.int/newsarchive/press_releases/2003/31.html

[9] UNICTTF, *Innovation and Investment: Information and Communication Technologies and the Millennium Development Goals*, www.unicttaskforce.org/perl/documents.pl?id=1519

[10] UNDP (2003), *ICT for Development and the MDGs. Concept Note*, "Towards an Open Information Society. UNDP Global Meeting on ICT for Development", Ottawa, 9-11 July 2003, http://ictd.undp.org/it4dev/gpm/background.html

[11] With cell phones becoming increasingly popular, for instance, there is the opportunity for innovative solutions to be built around mobile technologies.

for the achievement of the MDGs. Particularly those related to poverty reduction, education, health and HIV/AIDS.

Some measures to include ICTs into MDGs agendas

We include some points that could be used to initiate a multistakeholder discussion, within a country or region, about possible linkages between some of the MDGs and ICTs national strategies. ICTs can also be used to enhance the capacity to monitor, measure, and report on the progress of each of these goals.

Besides specific, goal-oriented measures, other more general ICT-related initiatives can also have an important impact on all development issues. ICT local research, for instance, should be encouraged, since it is through research that new, innovative ideas - suitable for local needs - are turned into concrete solutions.

Goal	Measure
Goal 1. Eradicate extreme poverty and hunger	Create economic opportunities that contribute towards reducing poverty by fostering local initiatives.[12] For example, supporting small, medium and micro enterprises (SMMEs), facilitating their adoption of ICTs to improve productivity and competitiveness[13] and promoting SMMEs participation in the telecoms sector. A specific case study in South Africa involves a FOSS solution that was developed by township youth to help the Traffic Department officials on the road to dial-in to their servers using cell phones and determine whether a motor vehicle owner has got outstanding traffic fines. Previously, motorists had to wait for a long time for the traffic officials to phone the office to get the same information. This specific solution gave the youth concerned an opportunity to earn an income, which was previously not possible.
Goal 2. Achieve universal primary education	Provide e-learning as an alternative education channel, according to poor countries' needs and realities. For example, by implementing educational programmes targeted at children heads of household or that cannot afford to go to school at all. The situation of children heads of household after the death of their parents from HIV/AIDS raises serious

[12] Richard Heeks has analyzed how serious inequalities constrain the use of ICT-based information by poor entrepreneurs. "Information and communication technologies may therefore have a greater role to play in giving 'voice' to the poor; that is, in making the poor information providers more than information recipients." Heeks R. (1999b), "Information and Communication Technologies, Poverty and Development", Development Informatics Working Paper Series, www.sed.manchester.ac.uk/idpm/publications/wp/di/di_wp05.htm

[13] There are promising experiences in different regions. See, for example: Tanburn, Jim and Alwyn Didar Singh (2001), *ICTs and Enterprises in Developing Countries: Hype or Opportunity?*, InFocus Programme on Boosting Employment through Small Enterprise Development, Job Creation and Enterprise Department, International Labour Office, Geneva.

	concern, in particular in Africa. Specific educational solutions for their situation could be implemented with the use of ICTs.
Goal 3. Promote gender equality and empower women	Define ICT policies that emphasize women empowerment and introduce ICT designs that take into account women's circumstances. Very often "gender equality" is a term used to pretend that the needs of women are being taken into consideration. Policies on ICTs and ICTs for development must be very clear on their position on empowering women and on follow-up evaluations, which must be done to determine progress. There is a wide range of social problems - like cross-border child maintenance administration, HIV orphans administration, etc. - that affect women directly and can be addressed through the use of ICT.
Goal 4. Reduce child mortality Goal 5. Improve maternal health	Introduce telemedicine and public health programmes to help in the clinical analysis of child health and pregnant women. There are already FOSS applications that can be used in this area. For example, "Care2X",[14] "OpenYaLim", and "Open EMR".[15] Most often the focus on health systems is about the administration side of hospitals. There is a need to develop systems that focus on the clinical side (doctor to patient relationship) because that is an area where particular value can be added in terms of patients' health.

Many other examples can be traced on ICTs application for each of the above MDGs. These experiences can be used as a basis to develop future strategies and policies.

Conclusion

ICTs have a vital role to play in development, not just in accelerating economic growth in local economies, but also in achieving Southern countries' development goals. To this aim, ICTs should be deployed correctly and ICT policies should be guided by a national strategy developed by consensus of all the relevant actors and with clearly defined goals.

The WSIS implementation should not only seek external and effective solutions to eliminate the ever-widening digital divide between developed and developing countries: it must also challenge participating countries to look internally and to examine what actions they have to take to ensure that access to ICTs is affordable to all.

A strong case exists for development initiatives to use ICTs as leverage at all levels: community, national and international. It is up to all stakeholders involved to show commitment to ICTs as a necessary factor in successful development efforts.

[14] Public Health Management System and HIV/AIDS Monitoring System, www.care2x.org/
[15] www.openemr.net/