Capacity Building: is there a role for ICT Satcom Solutions?

WSIS Action Plan Objectives shall be achieved through following targets:

- Connect villages with ICTs and establish community access points;
- Connect universities, colleges, secondary schools and primary schools with ICTs;
- Connect scientific and research centres with ICTs;
- Connect public libraries, cultural centres, museums, post offices and archives with ICTs;
- Connect health centres and hospitals with ICTs;

Is “Connect” the real point?

WSIS Activity Report indications:

1. **Satcom systems, services and solutions can play an important role especially in the areas of:**
   - **infrastructure**
   - **applications and services**

2. **Initiatives should be conceived and carry out in partnership with main stakeholders of the specific field of action; this in order to maximise the effectiveness and impact of activities**

To which extent the “partnership” concept guarantees the success of the initiatives?

ICT Satcom Solutions
for
Strategic Development Actions

Potential action lines (ESA view):

1. **Capacity Building for communities development**
2. **Access to information**
3. **E-learning**
4. **E-Health**

Can ESA contribute in some way to Capacity Building Activities in the above areas?

If YES, how? (role to play, things to do)

Community Development (1)

Main issues:

1. Understanding of the environment (economical, technical, political and social)
2. Community involvement in the process of preparation/introduction of ICTs
3. Technological and organisational aspects (feasibility, usability, stability)
4. Applications and content developed along with the introduction of ICTs
5. Enabling actions for Community access to ICTs
6. Community responses to ICTs (indicators)
7. Impacts of ICT introduction for the Community development
8. Capacity building vs. different groups in the same Community

(Source IDRC – Canada)

Community Development (2)

Experiences show that ICTs for Community Development in Africa can be implemented through the following steps:

- **Raising awareness about the potential of ICTs for community development:** ***Who, how? With which specific relevance?***
- **Provision of specific products and content to meet local demands (e.g. materials in local languages, products tailored to the actual needs of Community population):** ***Availability/productions/licensing***
- **Actions to promote and encourage use of ICTs:** ***Incentives/Disincentive (risks to create artificial needs)***

Community Development (3)

Recurring Issues:

- External factors hampering access to ICT (e.g. inequality and discrimination, site location, income, age, language, education level)
- Gender equality: women barely use ICTs, and when they do they use it less than men (despite their level of literacy)
- Cost: level of subsidies vs. time, sustainability, pricing schemes

Access to Information (1)

Community Tele-centres

The primary goal of a tele-centre, is the public provision of tools and skills to enhance communication and sharing of information

The telecentre is one answer to uneven and unequal access to information and communication technologies in rural and or remote areas

The telecentre has economic and social justification. Owing to the levels of poverty of both governments and individuals, this compensates the lack of private access to ICTs

It therefore makes sense to provide equipment on a multi-user, multi-service basis as a means of spreading costs while simultaneously expanding access and benefits

Which barriers prevent the quick spreading of Telecentres?

Access to Information (2)

Community Tele-centres

- Through Acacia initiative, a total of 35 telecentres in seven countries in sub-Saharan Africa have been set up, five of which have been jointly funded with other international partners such as UNESCO and ITU among others

- A recent assessment has been done on the impact of these initiatives for what concerns the following issues:

  - Access
  - Relevance
  - Sustainability (ownership, management, etc)
  - Environments (technological, social, economic, and political).

Community Telecentres: Interim Outcomes

- Priorities should be given by Governments and Development Agencies to create and train a sufficient group of content developers
- To reach some sensible utilisation scale, investments should be encouraged into promotion of applications in TCs in the areas of health, education, governance
- Government policies that influence costs and service pricing need to be properly implemented. Import duties, taxes, broadcast operating licenses of for instance VSAT, software and hardware prices should take into account incentives for the adoption and operations of TCs

Which strategies or tactics can be adopted to overcome the above?

ICTs and Education

One of the primary international strategies that has been adopted to address the use of ICTs in the education system, in particular within the school sector, is the development of school-nets.

E-Learning (2)

SchoolNet

- A SchoolNet is an organisation that encourages the use of ICTs for learning and teaching. Therefore a SchoolNet can be defined as the entity that facilitates the collaboration between schools using ICTs for educational purpose

- At the hearth of the SchoolNet process lies a fundamental transformation in the way learning and teaching takes place
(at least in Western world)
Is this applicable to African countries as well? To which extent?

- SchoolNet involves also interschool collaborative projects at different levels to train teachers in the educational use of ICTs and content and curriculum development on ICT platforms

- Such a network facilitates the development of a stronger collaborative social network among learners, teachers and sometimes non-school community members who use the technologies for learning experiences at local, regional and global levels
- Possible alternative use of the same infrastructure outside school hours to help sustainability (e.g. Internet Café)

E-Learning (3)

SchoolNet

- It is estimated that more than 30 African countries are engaged in a school networking process and together they operate as a pan-African networks

- Most of African SchoolNet activities can be categorized according to three different development stages:
    1. pre-start-up
    2. start-up
    3. roll-out

  each of this stage has its differing organisational forms and resource models

- Schoolnet in Africa are concerned not only with technology issues, but also with educational, capacity-building and institutional issues, and in some cases in influencing national policy

Is there a scope for reusing existing educational resources to provide curriculum support and pave the way for national and even local production? Can this be used as a feasible shortcut?

E-Learning (4)

African SchoolNet: Organisational Forms

- Voluntary associations: this is often the case of SchoolNet in pre-start-up phase
- University outreach programmes: some SchoolNets are incubated within existing institutions in order to emerge later as independent organisations. This type of organisation is typical for pre-start-up and start-up phases
- Non governmental organisations: a number of SchoolNets are run by NGOs that have partnerships with government, Ministry of Education, Telecommunications, tertiary institutions, and the private sector
- Government-based institutions or International Networks

SchoolNet should not be implemented just in privileged centres (like major cities)

E-Health (1)

A range of different applications:

Tele-consultation, Tele-pathology, Professional Medical Education, Education for Chronic Patients and their families, basic health education/prevention for the population on the field

Major Trends

Two major trends seem to emerge for projects on eHealth:

- **initiatives that happens on a voluntary basis (this is mostly the case in Africa)**
- **projects planned at central level and aiming at long term utilisation of ICT satcom solutions for eHealth basic services nationwide (this is more the case of Latin America)**

E-Health (2)

Voluntary Basis Projects

They are typically the result of initiatives taken by a small group of forerunners (the user leaders) with strong capability to find funding and support through various donor and/or support organisations.

Major aspects:

- Projects are typically animated by strong users motivation: uptake rate and short terms risk are typically fairly easily manageable
- Projects strongly dependent on single persons capability to keep it running and alive: this generate a sort of "episodic" and "localised" characterisation of the activity, which is often difficult to export in other contexts or perpetuate beyond the original user leaders
- In many cases the offered services have narrow scope, strictly focussed on the expertise of the initiating users

What are the risks of this approach and possible mitigation?

- These projects typically lack of solid operational base: Logistic/maintenance/helpdesk are often treated in a rather unstructured, ad-hoc basis
- Sustainability of these models in real operational context appears questionable due to the difficult scalability

E-Health (3)

Centrally Planned E-Health Services

- Typically deployed in response to needs emerging in areas like South America, where it is very difficult to provide even basic health services to population outside big cities
- Conceived to avoid moving patients to cities' hospitals when not strictly needed
- Mexican authorities have calculated that by avoiding a relatively low number of transportation of patient to Mexico City per month they can afford satcom capacity for a real time eHealth system based on video-conference. A centrally planned approach has the following implications
- Same infrastructure is typically used for remote medical education