Options for Healthcare Delivery in Africa. Using Applied ICT: Practical Realities, Potential Futures

Assessment of Successful Interventions and Obstacles in the African context

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Who is bridges.org?

...and why should you care what we have to say?

- International, non-profit organisation based in Cape Town, South Africa
- Mission to promote the effective use of information and communications technology (ICT) to improve people's lives
- Practical and policy work
- International, regional, national, and local
- Technology not development background
- Civil society organisation, committed to working with business and government

What is bridges.org doing to foster effective ICT-based development?

- Looking at **realities and implications** of ICT choices and promoting *Real Access* to ICT
- **Social consulting** to help African organisations integrate ICT into what they do
- Planning and running **field tests of practical ICT use** at groundlevel, **evaluating, and raising awareness**
- Explaining **crossroad of legal/regulatory environments** and ICT use: e.g. Open content copyright, WiFi, VoIP
- **Engaging African stakeholders** in ICT policy-making processes that affect them
- Exploring **scenarios and trends**: e.g. imagining the possibilities for ICT use

What do we mean by Real Access to ICT?

- Going beyond computers and connections – 12 factors that determine whether people, organisations, and businesses can really, effectively, use ICT
- Some of these are "soft issues" – on the surface they may not look like the key factors determining success and scale of ICT-based development projects, but they can be show-stoppers if not addressed

Real Access to ICT = Real Impact

- In order for ICT to have a Real Impact on people's lives, people (and organisations) must have Real Access to it.
- The factors determine whether ICT can be used effectively in ground-level initiatives in the long-term

… These are the show-stopper issues…

- Available infrastructure and physical access to it: there must **physical access** to basic ICT

- The ICT must be **appropriate** to the local needs and conditions

- The ICT must be **affordable** for people and organisations to own and use, right now

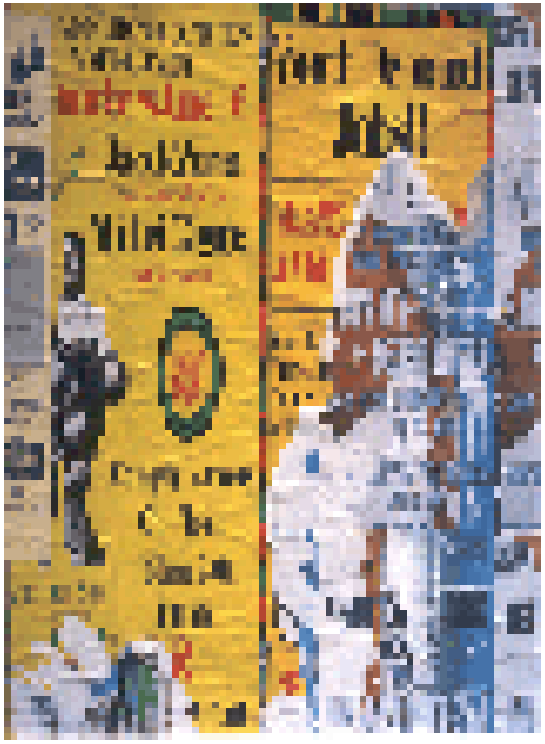
- There must be locally-relevant **applications, content, and services** available, especially in terms of language

- ICT use must be **integrated** into people's lives and work so that it makes it faster, easier, or cheaper to do something they need to do instead of adding additional burdens onto doing business

- People must be able to **imagine the possibilities** for how ICT can be used to improve their lives and work

  And they must be **trained** to use ICT effectively

- ICT use must be **sustainable** over the long term within the context of local economic conditions



- The government must create a **macro-economic environment** that fosters widespread ICT use

- The government must implement a **legal and regulatory framework** that enables (and does not limit) widespread ICT use

- People and organisations must **understand the threats** they face in doing communicating and transacting in an electronic environment **and their responsibilities** with respect to privacy, data protection, and security

And people must be **confident** in their use of ICT

- There cannot be **socio-cultural factors** that inhibit ICT use, such as when people are discouraged from using ICT on the basis of their age, race, religion, or other factors

- The government must enjoy sufficient **public support** for its plans in order for it to have the **political will** to drive the needed changes

How can Real Access concepts be used?

- Evaluation criteria to identify the key external challenges that are limiting ICT use
- Planning tool for initiatives and policy-makers that want to encourage ground-level use of ICT
- Helping policy-makers understand the effects of their decisions on ground-level efforts

…But sometimes an ICT project can get all this right and still fall short because of poor project management….

8 Habits of Highly Effective ICT-Enabled Development Initiatives

1. Implement and disseminate best practice
2. Ensure ownership, get local buy-in, find a champion
3. Do a needs assessment
4. Set concrete goals and take small achievable steps
5. Critically evaluate efforts, report back to clients and supporters, and adapt as needed
6. Address key external challenges
7. Make it sustainable
8. Involve groups that are traditionally excluded on the basis of gender, age, religion, race, etc.

Recipe for success in Africa

- Small
- Simple
- Local
- Cheap

Case study: On-Cue Compliance Service

- Small company based in Cape Town
- SMS messages to patients reminding them to take their TB medication at pre-determined times
- Affordable solution to improve patient adherence to TB treatment and reduce the associated costs of the DOTS system for both patients and clinics

The bridges.org evaluation

- Informs decision-making about future rollout and other uses of cellular technology in the healthcare sector:
  - Determine the effect that the use of the Compliance Service had on **TB cure rates and treatment completion rates**
  - Identify and describe any **related social and economic impacts** that may result from the use of the technology in this context
  - Whether, and how, best practice principles for **project management** have been implemented

Overall finding

- Compliance Service has **potential as a cost-effective system** that would be appropriate to complement DOTS in Cape Town clinics and beyond
- However, a **number of obstacles** to the use of the Service have been identified, which need to be overcome in order to make this system work effectively

Findings

- Mobile phones and SMS have proven to be effective tools for healthcare in SA: **accessibility, appropriateness and cost**.
- But healthcare workers cannot rely on the technology alone to solve the problem of patient adherence.
- The **project management issues** are so inherently intertwined with the technology that it is difficult to separate them.
- **Project implementation** clearly limited the effectiveness of the Compliance Service, but it is not a reflection on the usefulness of the technology itself.

Obstacles

A number of obstacles to widespread rollout exist:

- An overall **lack of ownership** of the project at the clinic limits the proactive participation of the staff, and no one on-site takes responsibility for ensuring the Service is implemented effectively.
- A **lack of regular feedback and interaction** between the City, On Cue, and the clinic creates a "disconnect" that hinders success in a number of ways.

Obstacles (2)

- A number of practical implementation issues limited the effectiveness of the pilot:
  - Clinic **staff schedules** are tight and many staff members feel that they are over-worked.
  - City and clinic **bureaucracy** limits the add-on functionality that would expand the usefulness of the Compliance Service.
  - Issues of **privacy, data protection, and security** will affect the widespread use of technology in healthcare in Africa over the long-term.

Recommendations

- Pilot should be re-implemented and re-evaluated
- According to **clear, written procedures** for running the Service, and recording data derived from it
- **Criteria for patient selection** must be clearly defined
- Patients must be **educated** about health issues and adherence
- Make the most of the **few opportunities healthcare workers have to see patients**

Conclusions

- **Trade-off** between the gains made on cost and convenience and the losses from having to put extra efforts into getting to know, and monitor self-supervised patients
- This technology is not a silver bullet to solve the problem of patient adherence: **implementation is key**
- Key to the success of the Compliance Service is an understanding of **where the use of the technology ends and care giving begins**