

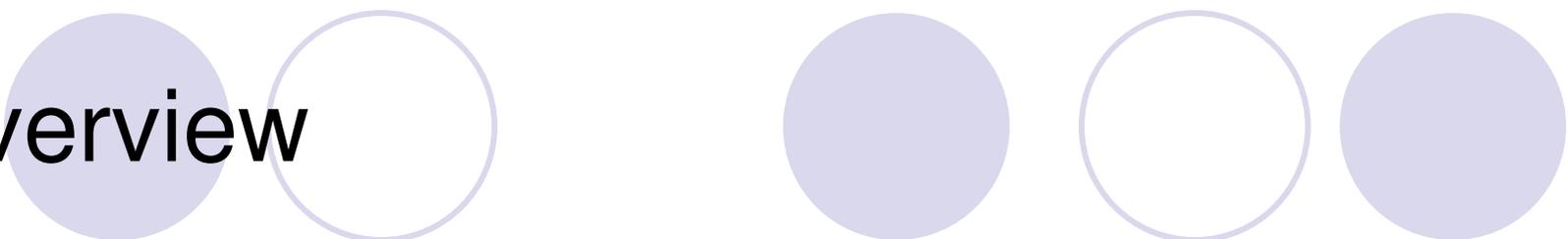
MUTI project

Eastern Cape tele-health

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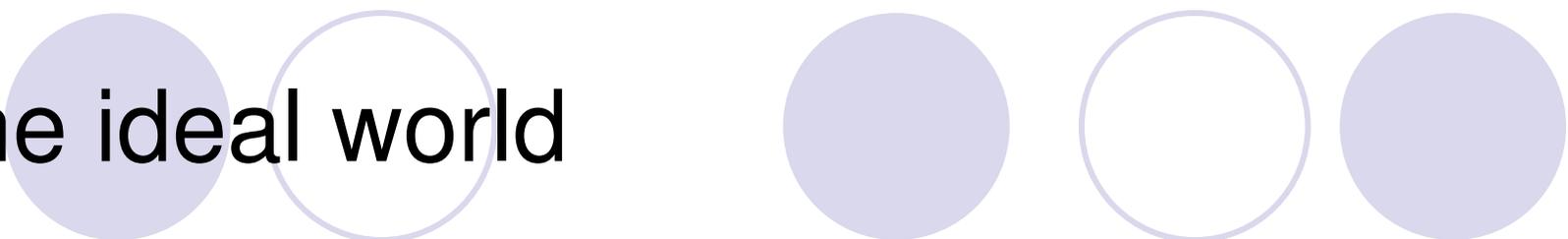
University of Cape Town

A decorative graphic consisting of two rows of circles. The top row has a solid light purple circle on the left and an outlined light purple circle on the right. The bottom row has a solid light purple circle on the left, an outlined light purple circle in the middle, and a solid light purple circle on the right.

Overview

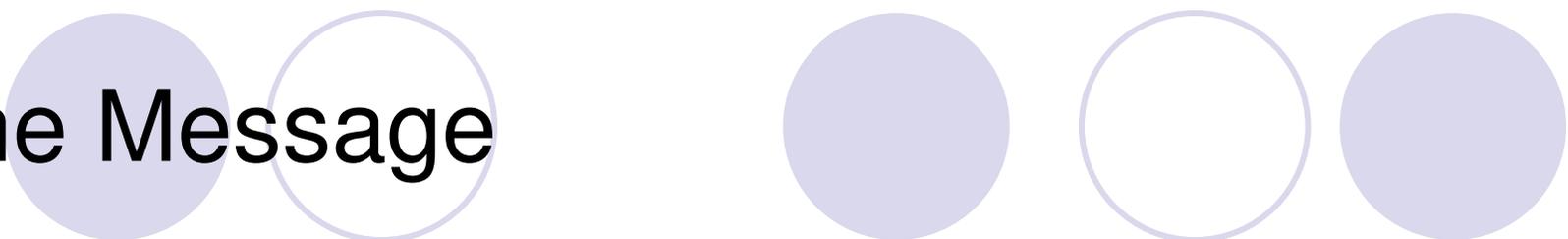
- The ideal world
- The message
- Challenges and lessons learned
- Recommendations

The ideal world



- Tele-consultation so patients need not travel unnecessarily
 - Doctors examine patients remotely
 - Nurses can ask questions
 - Doctors consult with each other and specialists
 - Patients get test results back
- Administration
 - Remote clinics order supplies
 - Managers communicate with clinic sisters
 - Keep track of referrals, orders, etc.

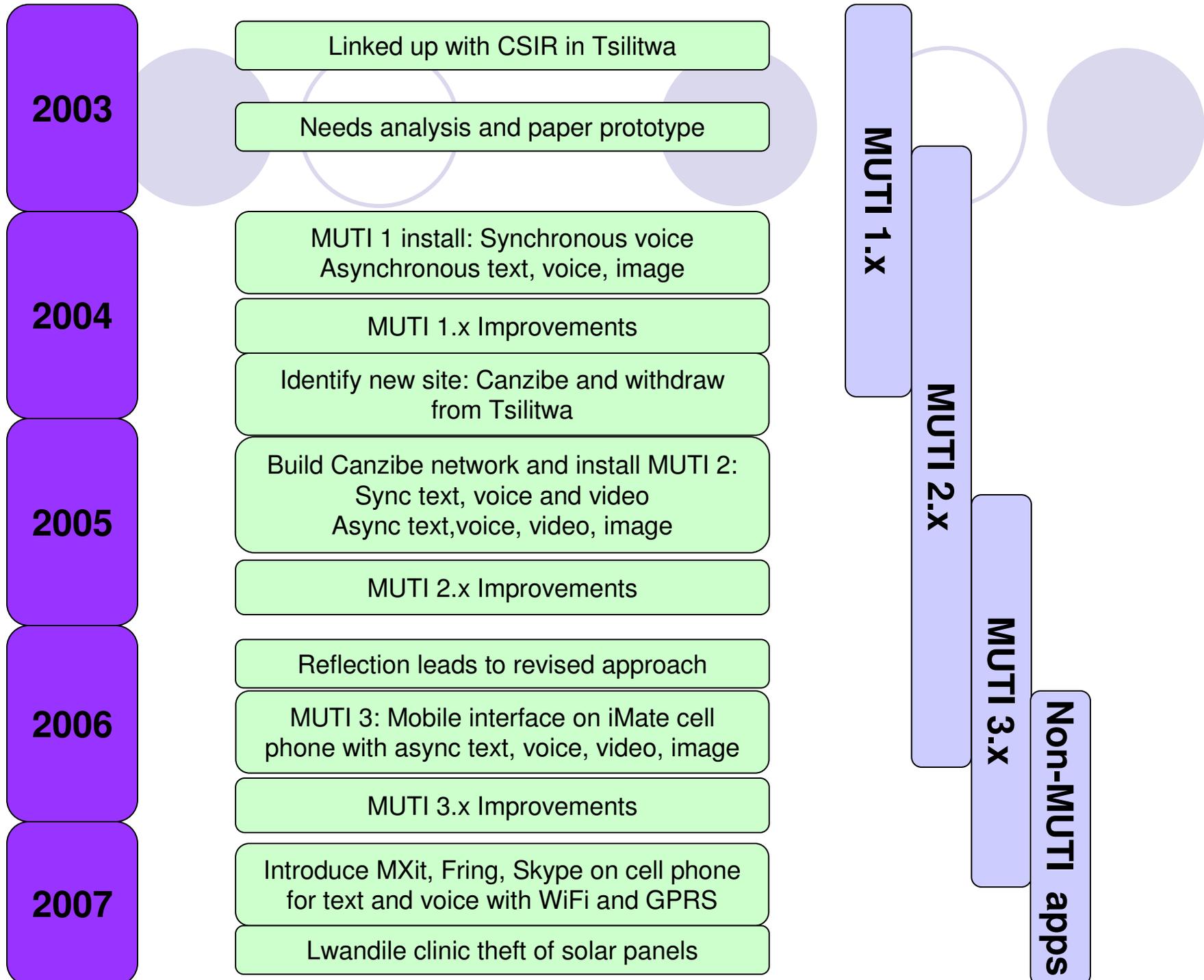
The Message



- Any solution no matter how well conceived cannot be imposed from above.
 - Technically difficult
 - Policy obstructions
 - And especially socially infeasible.

ICT is not the solution: It's an enabler

- A real solution takes into account:
 - Technical challenges
 - Policy challenges
 - Social challenges
- We have learned from making mistakes



Intermittent and dirty power

- Solutions

- Solar power
- Battery powered
- Laptop and cell phones



Theft and vandalism

- Solutions

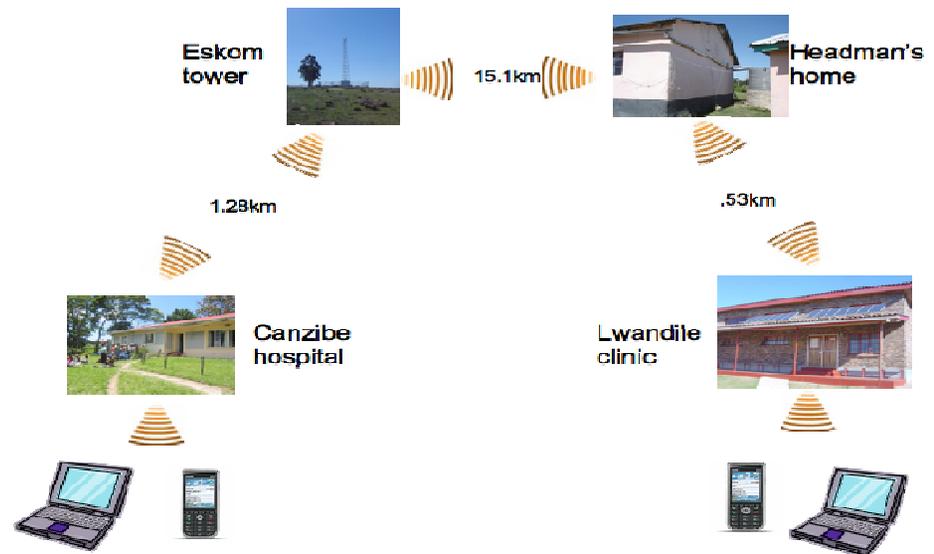
- Use existing infrastructure
- Use village headman's home!



Costly or non-existent networks

● Solutions

- WiFi broadband Networks
 - Longest link 15km (illegal!)
 - Open source (Linux)
- Low cost
 - R4000/node (2005)
 - Purchased locally
- Satellite Internet



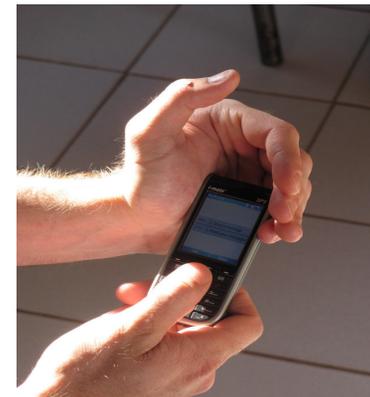
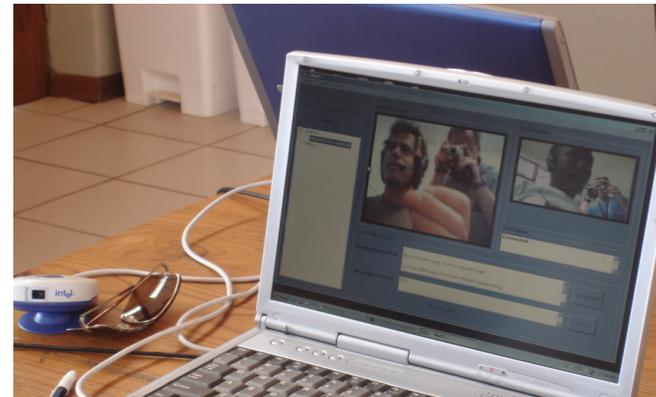
Software/hardware difficult to use

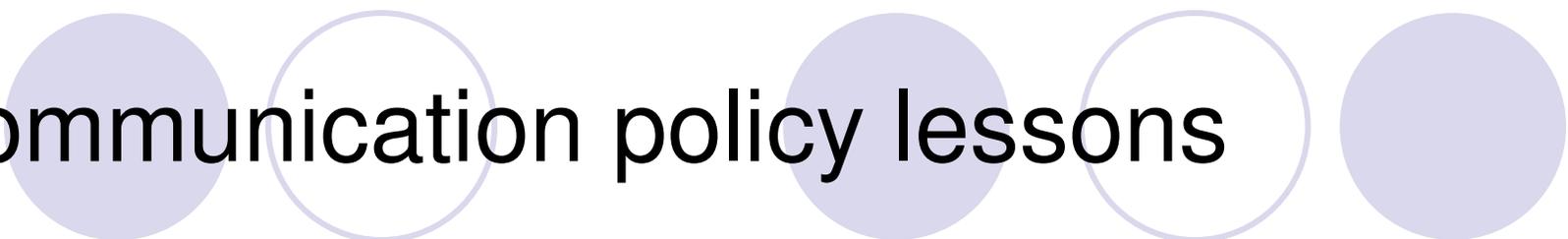
- Solution

- Laptops use specially designed user interface
- Better, use cell phones instead

- Ease of use comes together via store-and-forward

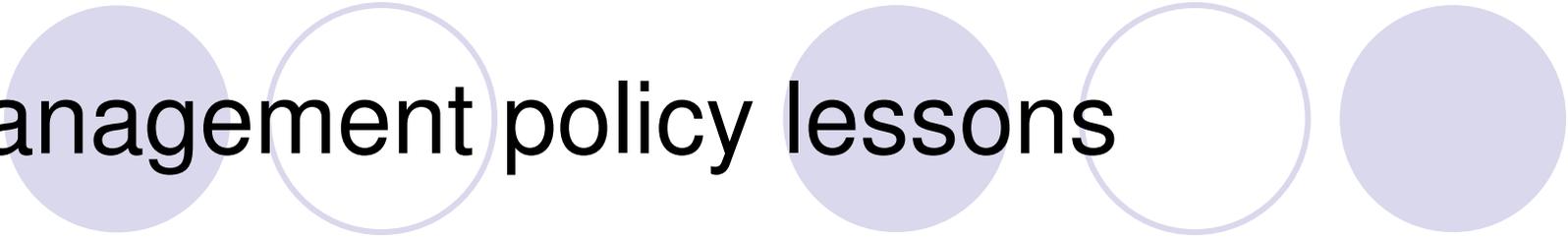
- Solves power & network problems
- Solves scheduling problems





Communication policy lessons

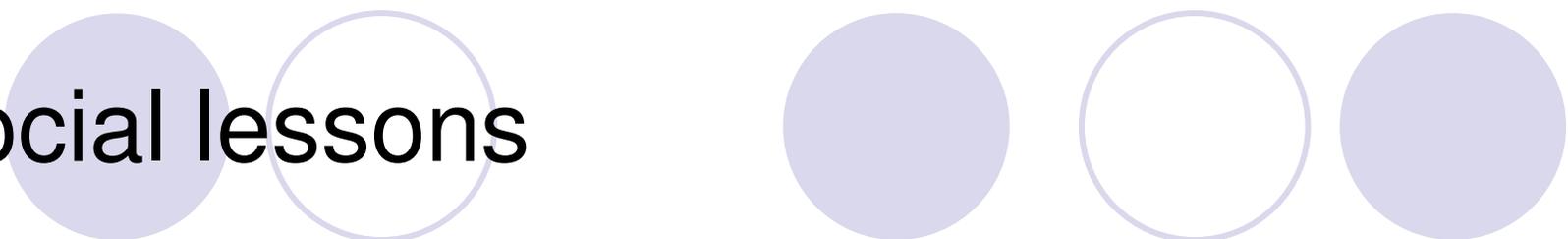
- Policy can change! VoIP is prime example!
- Communications policy should open up
 - 2.4GHz
 - 5.8GHz
 - To enable free and open wireless communication over long distances



Management policy lessons

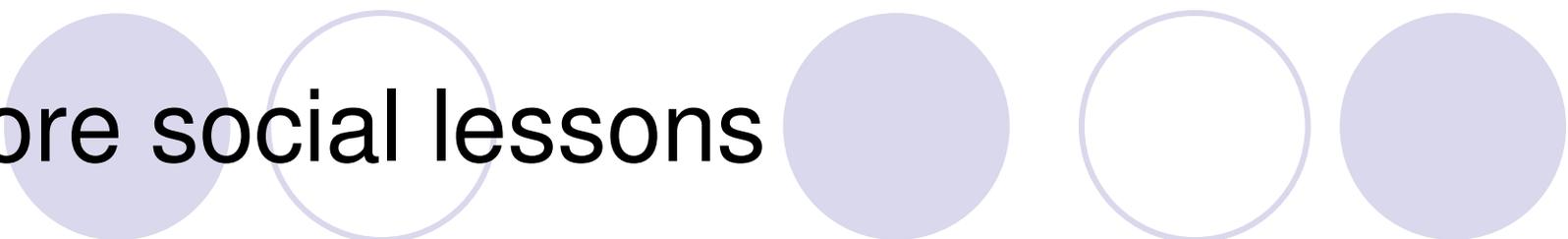
- Allow greater flexibility
 - If doctors want to use Internet for private use, let them!
 - If nurse wants to work in a particular clinic near her village, let her!
- Open up job descriptions
- So that workers use the technology flexibly

Social lessons

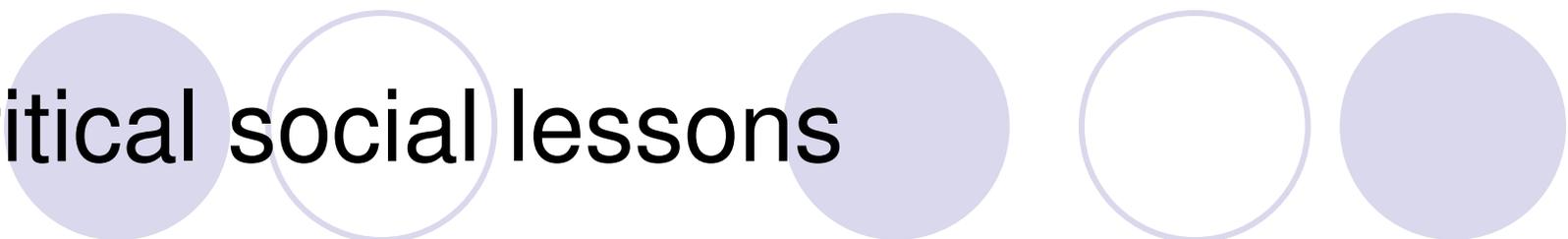


- Solutions to social challenges lie in the people (Onno Purbo)
 - Consult widely, locally, and respect local decision makers
 - Village headman
 - NGO
 - Find and nurture champions
 - Address their needs (not limited to the system)
 - Try to find people who have left and returned

More social lessons



- Things take time
- Theft and vandalism will happen
- Train locals
 - As users: ICT literacy
 - As maintainers: Installation of hardware and software
- Understand workflow
 - So we help them do what they already do
 - Convey that some things can change



Critical social lessons

- Appreciation of power dynamics
 - Nurses and doctors
 - Nurses in their own communities (face)
 - Nurses and managers (meetings)
- Doctors are able to see wider implications
 - Likely to have an ICT mindset
 - Private use to stay connected to family, friends and colleagues.



Recommendations and conclusions

- Bridges.org's Real Access/Real Impact
 - 12 cross-cutting issues for ICT4D
 - Help tease out lessons and recommendations

Recommendations and conclusions

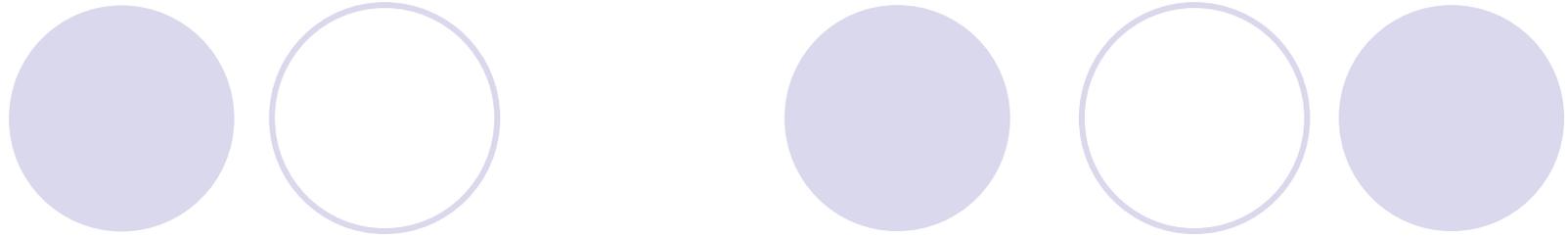
- *Physical access to technology*
 - WiFi hotspots in the hospital and clinic and GPRS elsewhere
- *Appropriate technology*
 - PCs vs. laptops vs. **cell phones** (best)
- *Affordability of technology and technology use.*
 - Internet communications cheaper than cellular and Telkom
- *Human capacity and training.*
 - NGO trains nurses weekly.

Recommendations and conclusions

- *Locally relevant content and services.*
 - Content is communication by the users.
- *Integration into people's daily routines.*
 - Health practitioners are overworked and ICT for rural telehealth is a burden.
- *Socio-cultural factors.*
 - Many! e.g. Demotivation in the remote clinics.
- *Trust in technology.*
 - Bulletproof systems.

Recommendations and conclusions

- *Legal and regulatory framework.*
 - Long-range WiFi is still illegal although VoIP is now legal.
- *Sustainability and local economic environment.*
 - Government support needed.
 - Integration into people's lives provides sustainability because they become willing to pay for it themselves.
- *Macro-economic environment.*
 - Cell phone usage too expensive.
- *Public support and political will.*
 - Leverage people's knowledge of cell phones.
 - Government's ICT4D policy appears contradictory.



ICT is an enabler of the solution

Collaborators and funders

- William D. Tucker



- Edwin H. Blake



- Gary Marsden



- Murray Pearson



- Rudi Westerveld



- Marshini Chetty



- Xolisa Vuza



- Andrew Maunder



South Africa - Netherlands Research Programme on Alternatives in Development



Project background

- Rural Eastern Cape
- Site 1: Qumbu
 - Nessie Knight hospital in Sulenkama
 - Tsilitwa clinic
- Site 2: Libode
 - Canzibe hospital
 - Lwandile clinic

