

Mobile Government in Africa
Presentation Ethiopia
Feb 09
S Batchelor
Gamos

E-governance

E-governance can be described as the way in which the public sector uses ICTs to improve accountability, transparency, effectiveness, public service delivery, and citizen participation in decision-making.

Types of e-Governance

Government-to-Government (G2G) - the use of ICTs to improve or facilitate internal processes between government departments, ministries or authorities. This is seen as a prerequisite for delivery of public services through ICTs.

Government to Business (G2B) - the use of ICTs to deliver government services to the private sector.

Government to Citizen (G2C) - the delivery of public services from government to citizens. This is considered the primary objective of most e-governance initiatives.

Comparative studies

This powerpoint/paper draws on a the data from a number of comparative studies

UNECA, “An overview of M-Commerce in Africa, with specific reference to South Africa, Kenya and Senegal” S Batchelor, To be published 2009.

Nokia Siemens Network, in partnership with CTO and Gamos, a comparative study of Ghana, South Africa and India. “Towards effective e-governance: The delivery of public services through local e-content”, 2008

Ericsson, in partnership with CTO and Gamos, “Assessment of M-Content Requirements in India and Uganda”, 2008

And basic data from

International Telecommunications Union (ITU)

World Bank, 2008, Information Technology Statistics

Link Centre - South African Telecommunications Sector Performance Review 2006

Balancing Act, 2007, African Telecoms and Internet Markets

BMI-TechKnowledge Group

Comparative studies

The governments of the studies have developed e-governance plans that are intended to result in the successful delivery of public services to citizens. Yet, they have adopted different approaches to meet this goal.

For instance Ghana and South Africa have prioritised Government-to-Government e-governance (G2G). Developing robust G2G ICT infrastructure and processes may improve the chances of both countries' developing successful G2C services in the future.

In contrast the Government of India is taking a two-pronged approach. Its National e-Governance Plan (NeGP) has lead it to simultaneously implement effective G2G processes and ICT infrastructure and attempt to roll out services on a wide scale.

How will ICT, and in particular Mobile Phones, fit these strategies?

Radio is still top of the mind?

In the focus groups of the studies participants tend to suggest that radio remains the most effective ICT for stimulating the demand and supply of public services. Primary reasons tend to be:

- it has widest reach of any ICT and therefore largest number of potential users

- it delivers content in local languages

- it provides content that illiterate users can use

- it requires small amounts of electricity

- it is the traditional ICT for supply and demand of public information so governments and users have the capacity to use it.

Radio interactive?

However, while radio is the “top of the mind” ICT for general focus groups, there is considerable debate about its interactivity.

Phone in discussions can unlock debate and give voice to citizens. However, in general, radio does not offer the following which seem key to e-governance:-

- Provide interactive services and two-way communication.

- Support delivery of public services through local e-content to large user bases.

- Meet local e-content needs in a wide range of formats, to overcome issues such as such as illiteracy, blindness or deafness.

How about Broadband?

Enabling local e-content delivery in a range of formats (text, audio and video)

Enables users to specify the local e-content they want.

Broadband has the potential to be the most effective.

But we all know the realities of Broadband in Africa at the moment.

Small number of users and slow growth in usage means it will not be an effective for stimulating the demand and supply of public services in the short to medium term.

Internet Users (2007) Ghana 3.7%, Kenya 8%, Senegal 6.6%, South Africa 8.1%, Uganda 2.5%

Broadband Users (2007) Ghana 0.07%, Kenya 0.05%, Senegal 0.3%, South Africa 0.8%, Uganda 0.01%

Broadband not so Broad (yet)

In the studies stakeholders suggest that Broadband is hampered by:

The high cost of broadband - Examples of relatively low prices for entry-level broadband packages in India and South Africa are emerging

High cost of international bandwidth - We all wait with bated breath to see how the various East Africa international cables will affect prices

Failure to unbundle local loops - The continued failure to unbundle copper local loops controlled by incumbent operators has prevented competition, service roll-out and price reductions.

Low PC penetration - The PC has been seen as the “key terminal device” for accessing broadband services.

One approach is to create shared access,

Most governments and many NGOs have programmes to create shared access points, which provide users with access to broadband through PCs and PC like terminals.

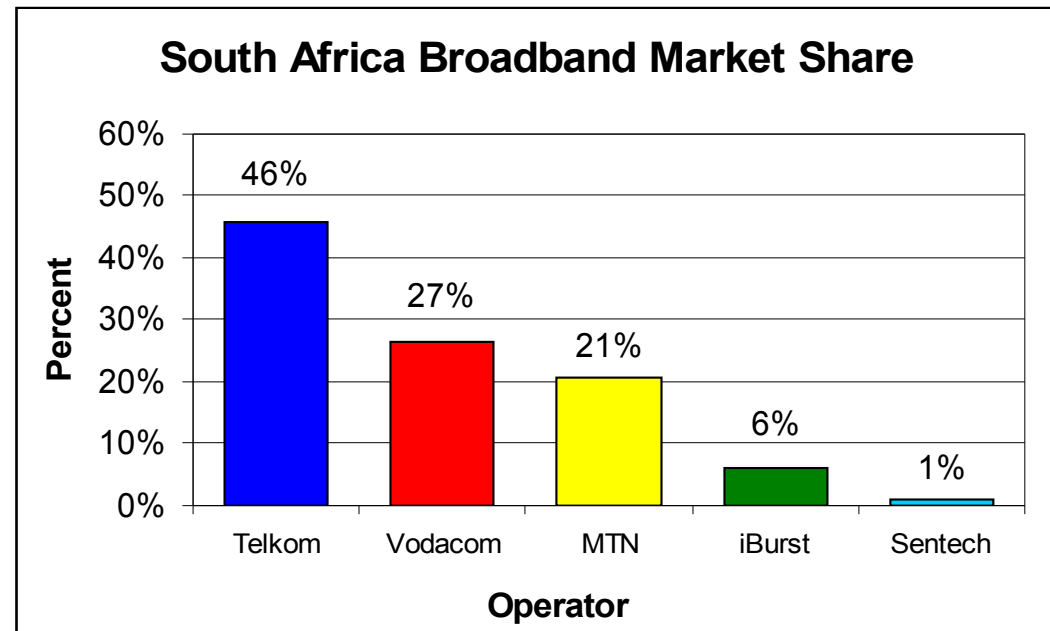
The Government of Ghana is in the process of introducing 220 Community Information Centres (CICs) as part of its efforts to achieve universal access. However, commercial Internet cafes, fell from 2,000 to 1,200 between 2003 and 2006.

The Government of South Africa has introduced around 500 Multipurpose Community Centres, 98 Tusong Centres, and 700 Public Information Terminals (PITs) to provide citizens with access to the Internet, emails and other services, which are regarded as capable of e-enabled delivery in future. However previous studies suggest that telecentres and cyberlabs implemented by the Universal Services Agency were considered expensive, dysfunctional, and are under utilised.

Alternative - Broadband becoming mobile...

Converged Licensing Regime - Electronic Communication Act (ECA) in South Africa 2005 introduced a single, platform-neutral licensing regime.

indications suggest that mobile operators have become the main providers of broadband services in South Africa due to faster roll out of services on 3G networks and cheaper costs than the incumbent. Telkom South Africa's entry level broadband package cost \$21.96 while Vodacom's cost \$12.73 (based on ZAR to US\$ exchange rate on January 7th 2007)



So what about mobile?

In the studies stakeholders suggest that Mobile as a channel is enhanced by:

Number of users and increasing penetration

Mobiles offer increasing interactivity - demand commercial content, and influence the creation and supply of content.

Mobiles connecting people to the Internet - In Ghana, urban users are using mobiles to receive an “Internet experience” through WAP services provided over GPRS

Mobility - enables people to access content wherever they are.

Inclusiveness - increasing inclusion of the most marginalised people in society

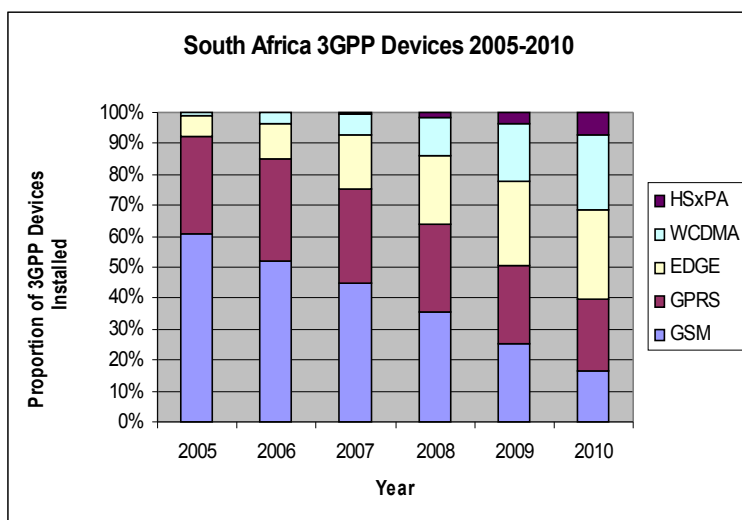
There are of course realities....

In a series of interviews in 5 countries, stakeholders suggest that Mobile had its challenges:

Bandwidth and download speeds

High cost of Internet over mobile - In Ghana, for example, it can cost a user \$532.48 to download one gigabyte of data over one operator's GPRS network.

Limited functionality in entry-level handsets



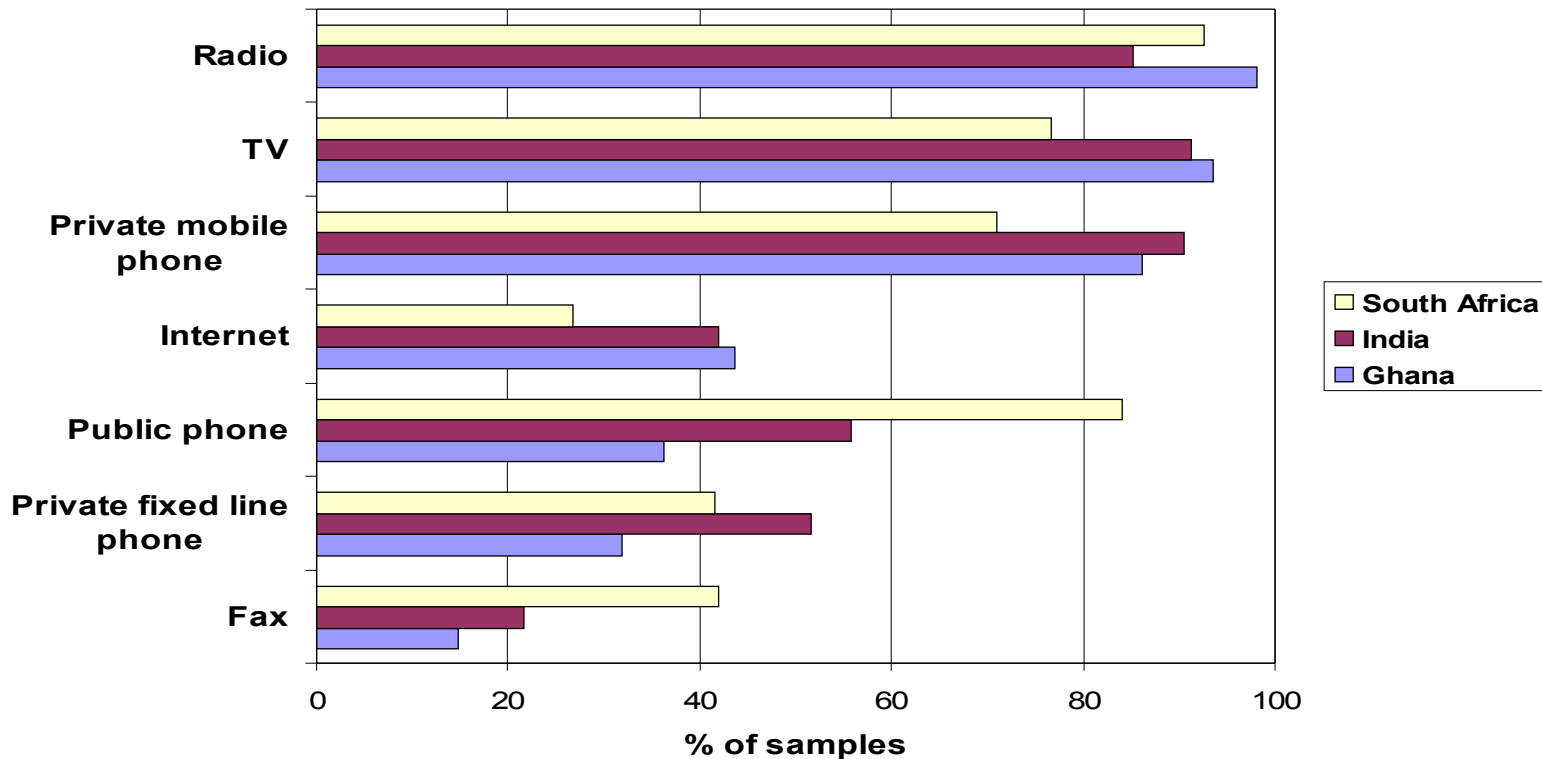
However, projections of mobile phone ownership in South Africa suggests the structure of phone ownership changes as mobile markets move towards maturity in terms of penetration and network capacity.

There are of course realities....

“Mobile devices have the potential to be the most effective ICT. The large and increasing number of users, the growing amount of content / value added services provided by the private sector, and the fact that the mobile devices are being used to give people an Internet experience justify why more must be done to realise their potential. Furthermore, there are pertinent benefits to be offered by mobile device “convergence” - the development of mobile devices to become more than complimentary ICTs to radio and the PC, but in fact provide access to these technologies. Increasingly, the mobile phone is equipped with a radio, camera, music and video player, and PC functionality. Even many entry-level handsets available today are equipped with features that make other ICTs unnecessary.”

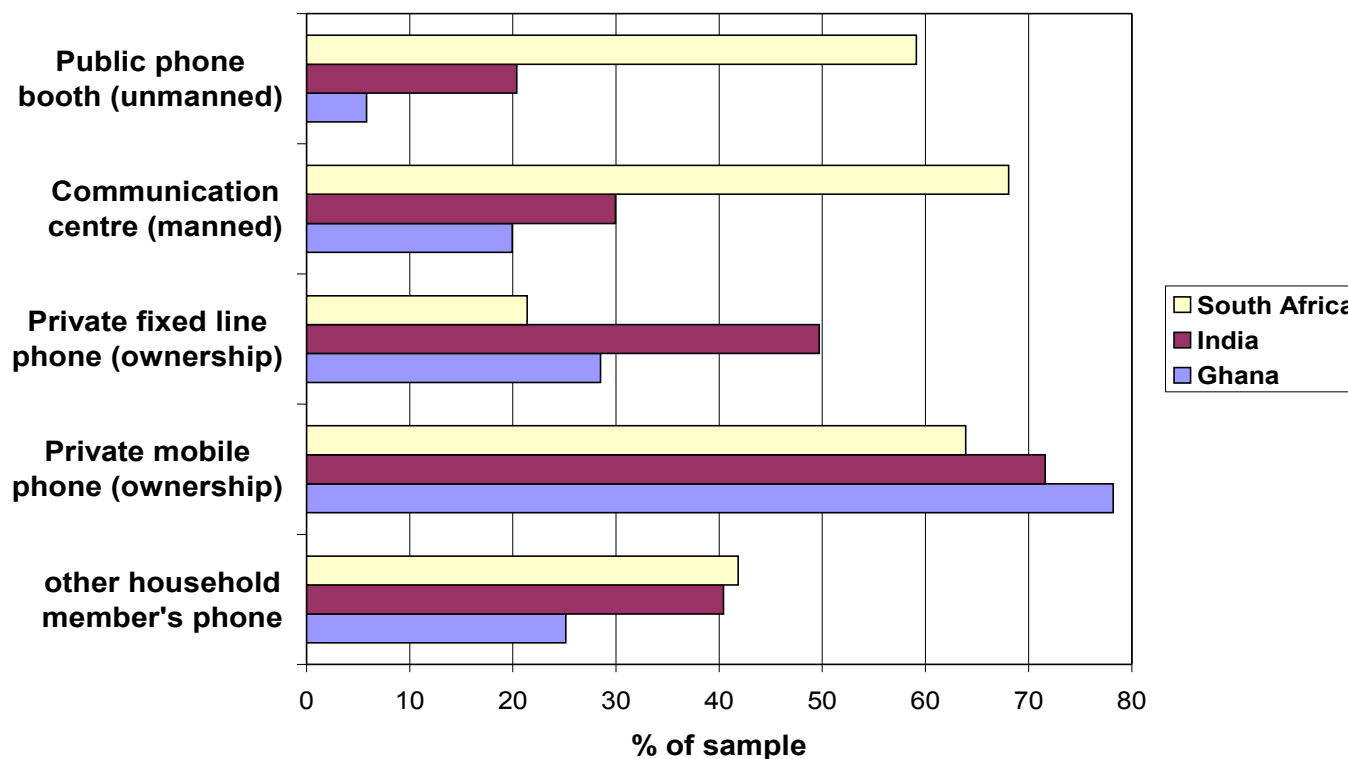
So who is using what at the moment?

The belief that a range of ICTs should be considered when attempting to stimulate the demand and supply of services is supported by the fact that respondents **use** a wide range of ICTs. The following graph is about **USING** ICT in the last year.



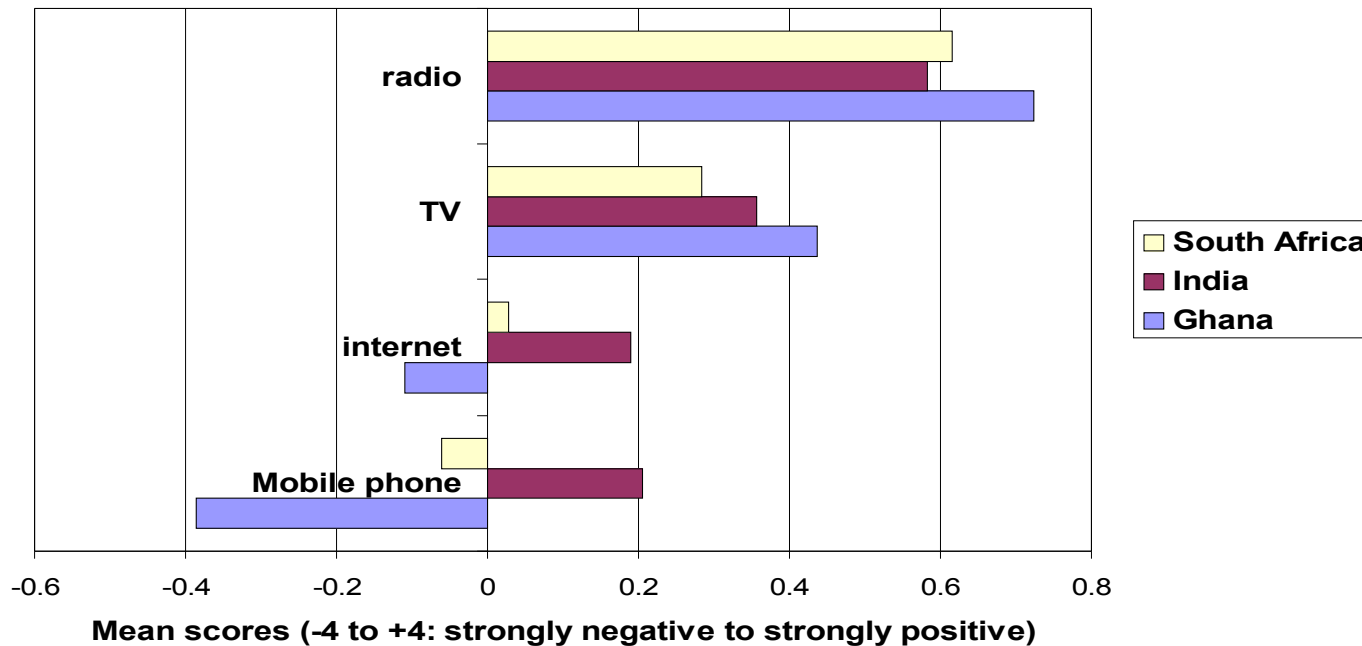
How people access the phone.

Despite the high levels of mobile device ownership, respondents access phones in number of ways. The data indicates that people use public phone far more in South Africa and India than Ghana, where there are not as many public telephones. The implication for e-content provision is that services should be accessible via mobile devices and public access points.



Attitudes to ICT

The research assessed users' attitudes to things such as trust in the information received through the ICT, quality of service and the amount of content it provides in local languages.

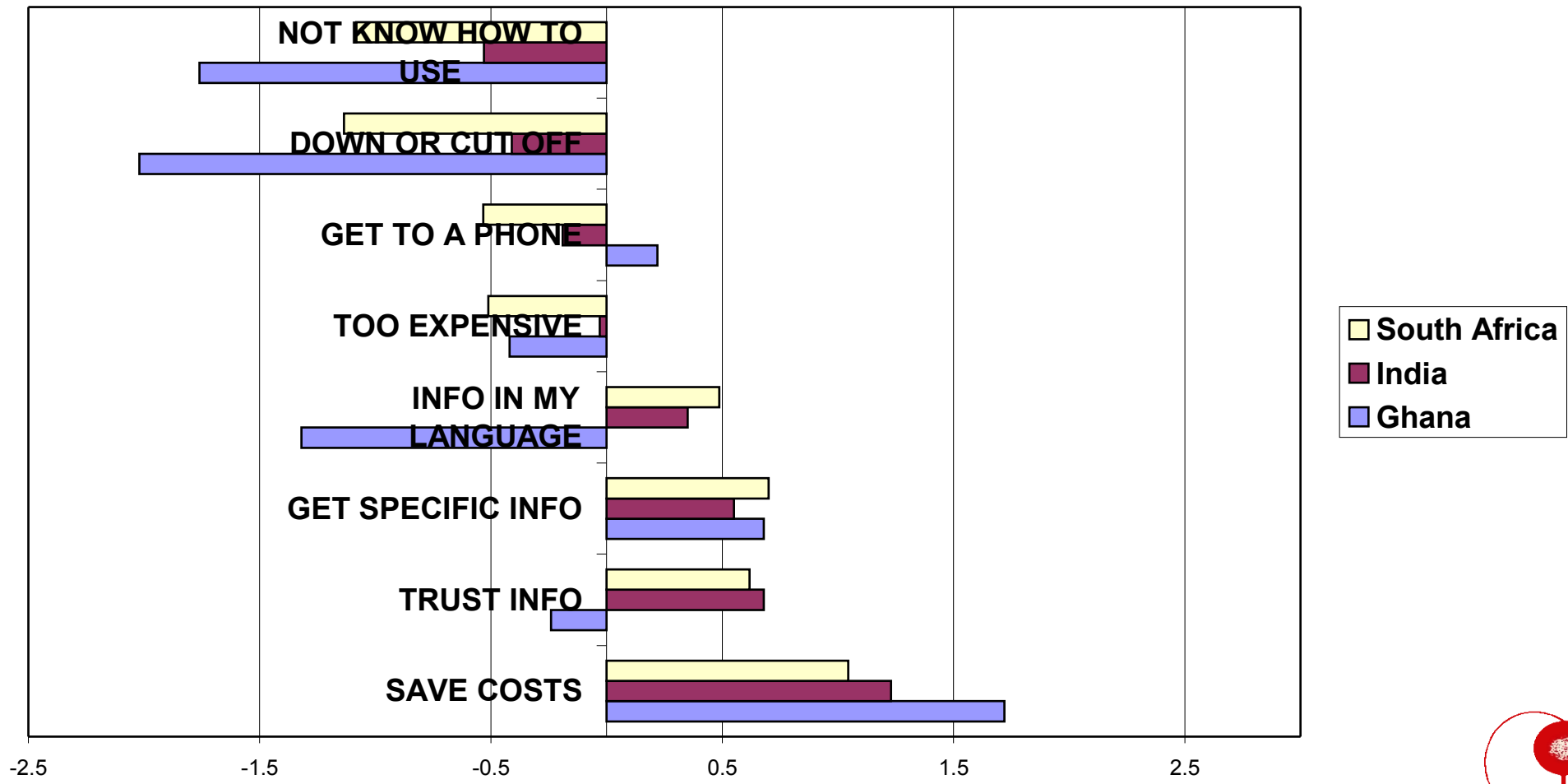


Surprisingly attitudes towards the mobile phone are most negative and can largely be attributed to poor quality of service and expense.

Attitudes to Mobiles

So why so negative towards mobiles?

MOBILE PHONE - attitude scores



A word about SMS

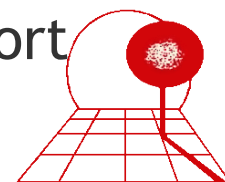
SMS is potentially the main way of demanding content with the current crop of handsets and bandwidth.....however

Taxes on mobile services are generally considered too high and make SMS relatively expensive. The high price acts as a disincentive to usage.

There is currently a culture of Voice (except in Senegal). Users in the studies have a preference for voice-based services over SMS and other technologies.

Large sections of the population are not literate and cannot engage with text-based content (which might also be a challenge for Broadband multi media content)

Many users will require m-content in local languages, moreover, they may have a preference for local content. At present, little content is created in local languages and few handsets support the content that is.



Understanding the consumer

“Despite negative attitudes toward mobile devices overall, users in all three each countries are positive about their ability to provide the specific information people want and save costs. The consistently negative attitudes across the countries concerning ease of use, quality of service and expense highlight some key issue stakeholders must tackle when trying to stimulate demand for services through mobile devices.”

NSN/CTO “Towards effective e-governance: The delivery of public services through local e-content” 2008

Understanding the consumer

Understanding what types of information are most important to people is critical if sustainable services are to be developed. The research indicated the most important types of information to users are:

News (local and international).

Health - how to prevent and treat illness and diseases.

Education - education and training opportunities.

Income generation - job opportunities; market information; availability and price of resources; information on new products and services.

This indicates generic areas in which e-content services should be developed.

Where do people get info at the moment?

Radio and TV are the most commonly used ICT for accessing information in all research countries.

Radio is currently the most important channel, but TV is not far behind.

It is likely that the impact of TV is restricted simply by signal coverage.

In each country, mobile devices are less commonly used.

In Ghana, mobile devices are most used for accessing information on remittances and job opportunities.

In South Africa they are used most for emergency support and remittances

In India they are important for emergency support.

What about supporting poverty?

At present, radio and TV are of greatest value for most aspects of livelihoods - civic duties, entertainment, education, health (TV is valued more than radio in India).

When it comes to social and business matters, mobile devices are of greatest value.

To an extent, mobile devices' relatively poor scores in health, education and civic matters support key stakeholder arguments about the current lack of socially orientated content on mobile devices.

What about supporting poverty?

The livelihoods issues that are most important (Uganda and India) are as follows:

Reducing vulnerability (or responding to shocks) e.g. contacting people in emergencies, finding medical experts, prevention of illness

Human capital - health, education and training

Wellbeing - although not obviously an economic benefit, people place high importance on entertainment and news

Unfortunately, many of the livelihoods issues that users consider most important are not fulfilled by the current range of m-content services available in either country.

Willing to pay?

User priorities in terms of e-content services received through the mobile phone and Internet were similar across the three research countries and were closely related to the priority types of information. They are:

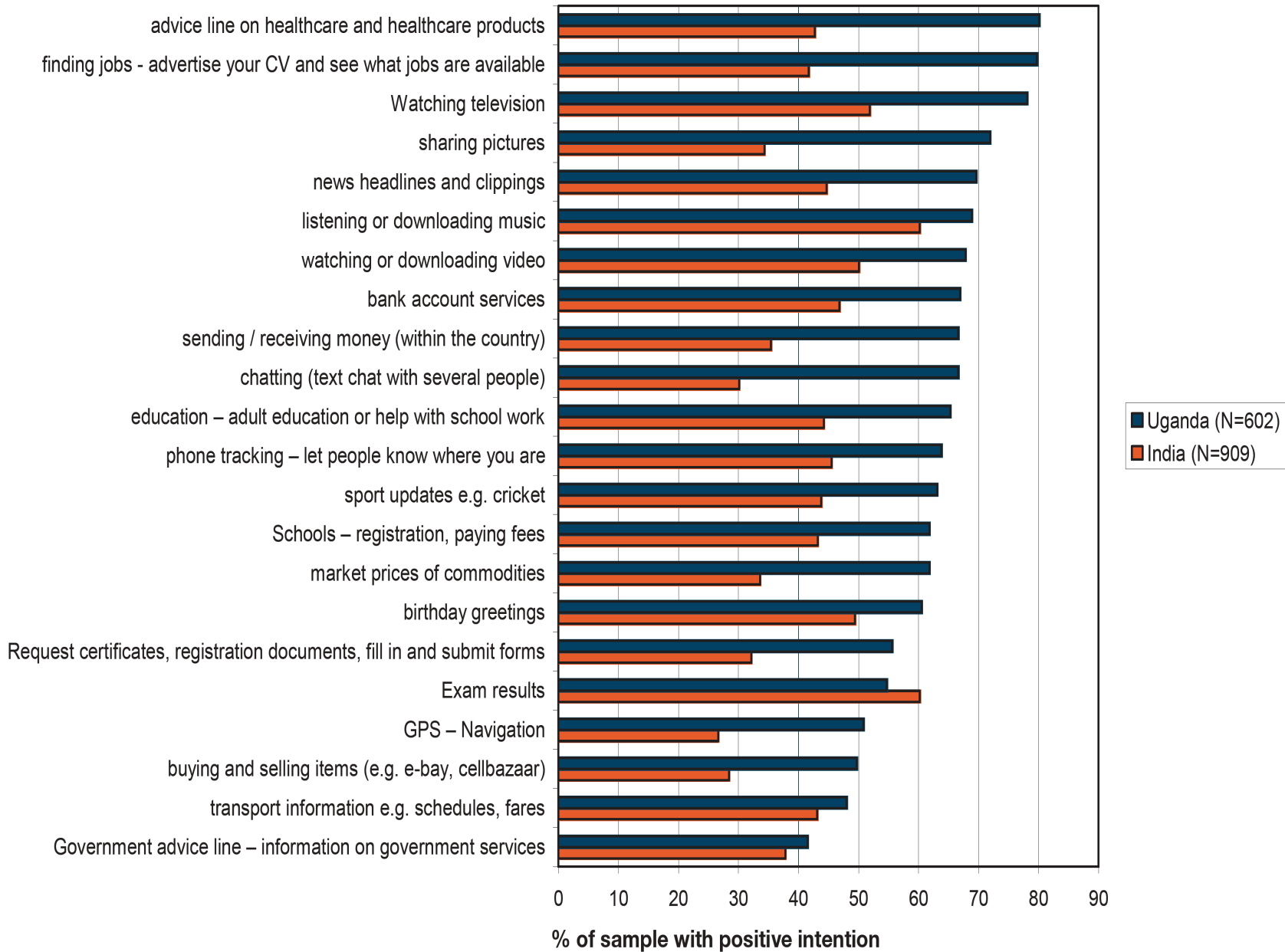
Income generation - seeking and offering job opportunities; banking transactions.

Education - applying to schools.

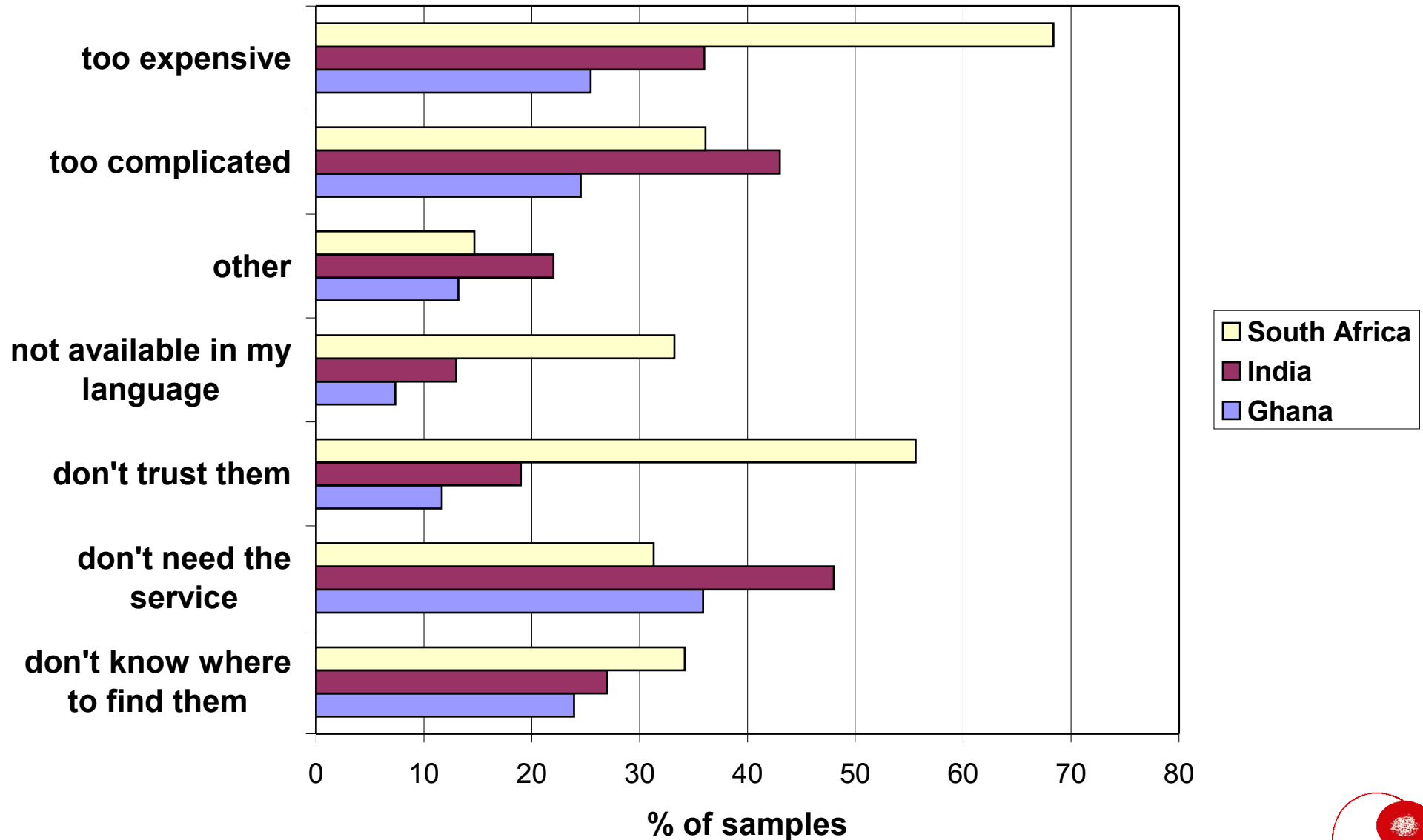
Health - diagnosing and prescribing health treatments.

Importantly, willingness to pay either for services matches the importance attributed to services, confirming the level of interest in these priority types of e-content services.

Willing to use?



So why dont they use e/m-services?



Opportunities

Resolving problems of low Internet usage with mobile networks

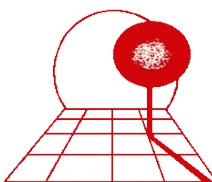
Policy environment is not focused on m-content (Taxes on mobile services are considered too high and make SMS relatively expensive.)

Increasing and strengthening the PPPs needed for the development and delivery of public services through ICTs

Lack of consultation and collaboration between industry players

Developing strong business models for the sustainable provision of services (Regulators do not have employees that have worked in the content industry and therefore do not fully understand how it works.)

Continuing to develop and supply higher functionality and affordable mobile devices



Opportunities

Raising awareness of mobile devices as tools for delivering socially-orientated content and not just commercial services (High levels of bureaucracy have stifled the development of government-related mobile services)

Continue to improve access to mobile communications to eradicate urban / rural digital divides

Incentivise mobile content producers with improved revenue share for the content they produce

Scale up examples of successful education e-content initiatives to improve socio-economic development and increase demand for services

Literacy and local language

Who needs to get involved?

Government

Provide an enabling policy environment

Political commitment to deliver public services through ICTs, and wireless channels in particular

Establish consultative processes

Establish Public Private Partnerships

Legislate for the production of digital content

Regulator

Provide an enabling regulatory environment for increasing access to ICTs

Who needs to get involved?

Private Sector

Increase access to ICTs

Enhance the capacity of mobile networks

Provide platforms for public service to be delivered through local e-content

Identify markets for services

Create / Convert content for dissemination as public services

Assist government in PPPs

Produce higher specification handset at lower cost

Civil Society

Identify stakeholders' needs

Raising user awareness and demand for public services through ICTs

Providing services as government infomediaries

Who needs to get involved?

“Government must take the lead in stimulating the demand and supply of public service through local e-content through the development of policy, but policy development must be done in a consultative process so that the demands of stakeholders are taken into account.”

Mr Issah Yahaya,

Director of Policy and Planning, MOC, Ghana

Who needs to get involved?

“To date, the policy makers and regulators in both countries have justifiably focused on increasing the use of voice services. Policy and regulatory tools have proved successful and both countries have witnessed strong growth in mobile penetration. There is, however, merit in paying some attention to m-content, especially because it has the potential to contribute to achieving socio-economic development.”

“Policy makers and regulators could appoint an m-content champion in their respective institution who would be responsible for ensuring that policy and regulatory measures recognise the need to increase the use of m-content.”

Ericsson/CTO “Assessment of M-Content Requirements India and Uganda”

Possible priorities Short to Medium Term (6 Months to 1 year)?

Government

Fully explore the use of mobile telephony communications for public service delivery

Assess and rationalise current decision making processes for creation of enabling environment

Evaluate and where necessary improve consultative processes

Private Sector

Improve revenue share for content producers (mobile operators)

Make platforms available for public service delivery (mobile operators)

Approach government with innovative ideas for public service delivery

Possible priorities Short to Medium Term (6 Months to 1 year)?

Regulator

- Re-evaluate role in stimulating the demand and supply of services
- Assess benefits of introducing quotas for local e-content.

Civil Society

- Improve collaboration between CSOs in order to effectively articulate user needs to government
- Increase Knowledge of services which can be supplied via mobile devices

Possible priorities Medium Term (1 year to 3 years)?

Government

Establish strong framework for PPPs in which role of the private sector is well defined

Legislate and incentivise for the production of digital content.

Increases resource for training of content producers

Private Sector

Enter into effective PPPs with government

Identify markets and develop services that can be sustainably supplied

Upgrade networks in urban and rural areas for additional data demands

Possible priorities Medium Term (1 year to 3 years)?

Regulator

Increase scope and improve efficiency of Universal Service Funds to increase rural access for voice and data

Civil Society

Raise awareness and demand for e-content services amongst users

Provide services as on behalf of government

A final observation - Financial Services

There is always a need to pay for things!

In e and m-government outside Africa, the presence of credit cards makes internet charging possible. (eg Land registry requires a small fee).

Mobiles have the ability to charge “built in”. Downloading ring tones can be charged by taking money directly off the phone.

However, from a poverty angle, people would greatly benefit from financial services - opportunities to save, access credit, manage their finances.

The new crop of innovations, such as MPesa (now 4 Million users), offers new opportunities for integration with m-governance

Financial transactions over mobile phones will require new regulations and legislation (cyber laws), which are now in the main being implemented - however one of the key challenges is the convergence of Financial regulation and Telecommunication regulation.