Global Perspectives on Broadband Policy And their implications for South Africa

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World Bank Group ICT Strategy, 2012-2015: Broadband is central

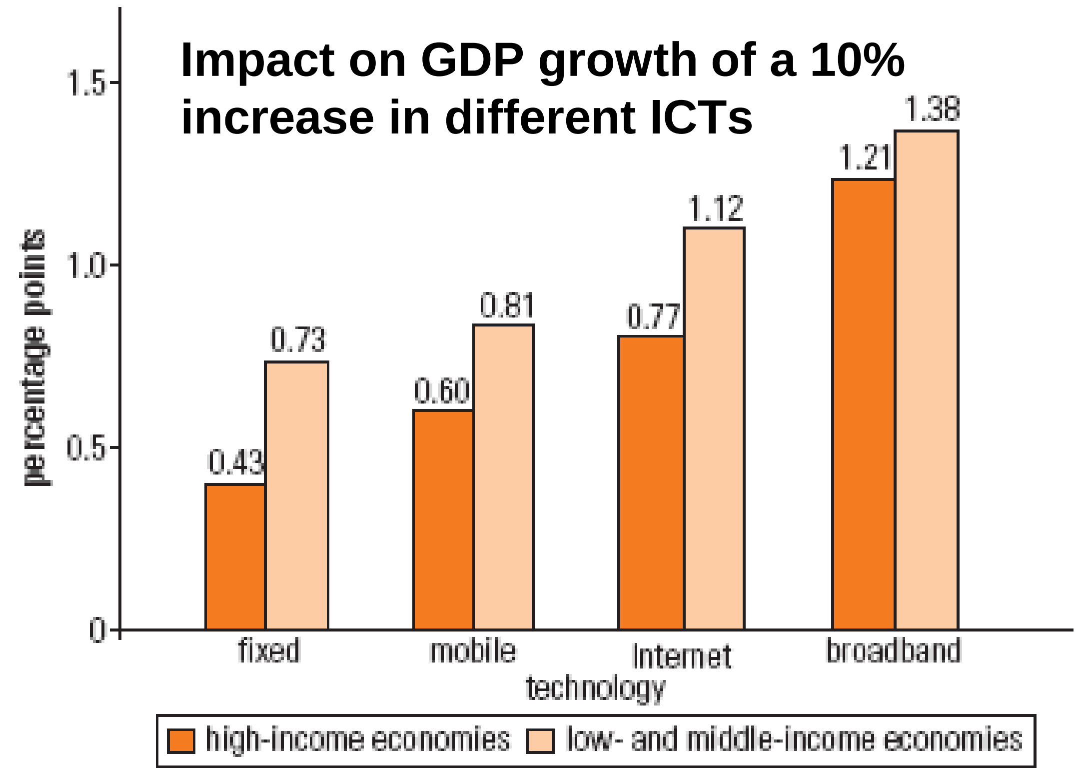
Three Pillars of Strategy

- ***Innovate*** – Support ICT innovation for jobs and competitiveness across industries
  - Promote ICT skills to develop competitive IT-based service industries in selected countries
  - Promote ICT-enabled productivity gains across industries
- ***Connect*** – Scale up affordable access to broadband internet
  - Support policy and institutional reforms for private investment in broadband
  - Selective support of PPPs to promote affordable access for all
- ***Transform*** – Use ICT to transform service delivery across sectors
  - Promote open and accountable development using open government, open data, and aid accountability
  - Transform service delivery using ICT applications in economic and social sectors, and establishing cross-sector foundations

Broadband is critical for competitiveness

Global

- A 10 % increase in Broadband is associated with a 1.4% increase in GDP in developing economies
- Impact may be even greater with mobile broadband
- Broadband is driving growth in employment and more flexible work patterns



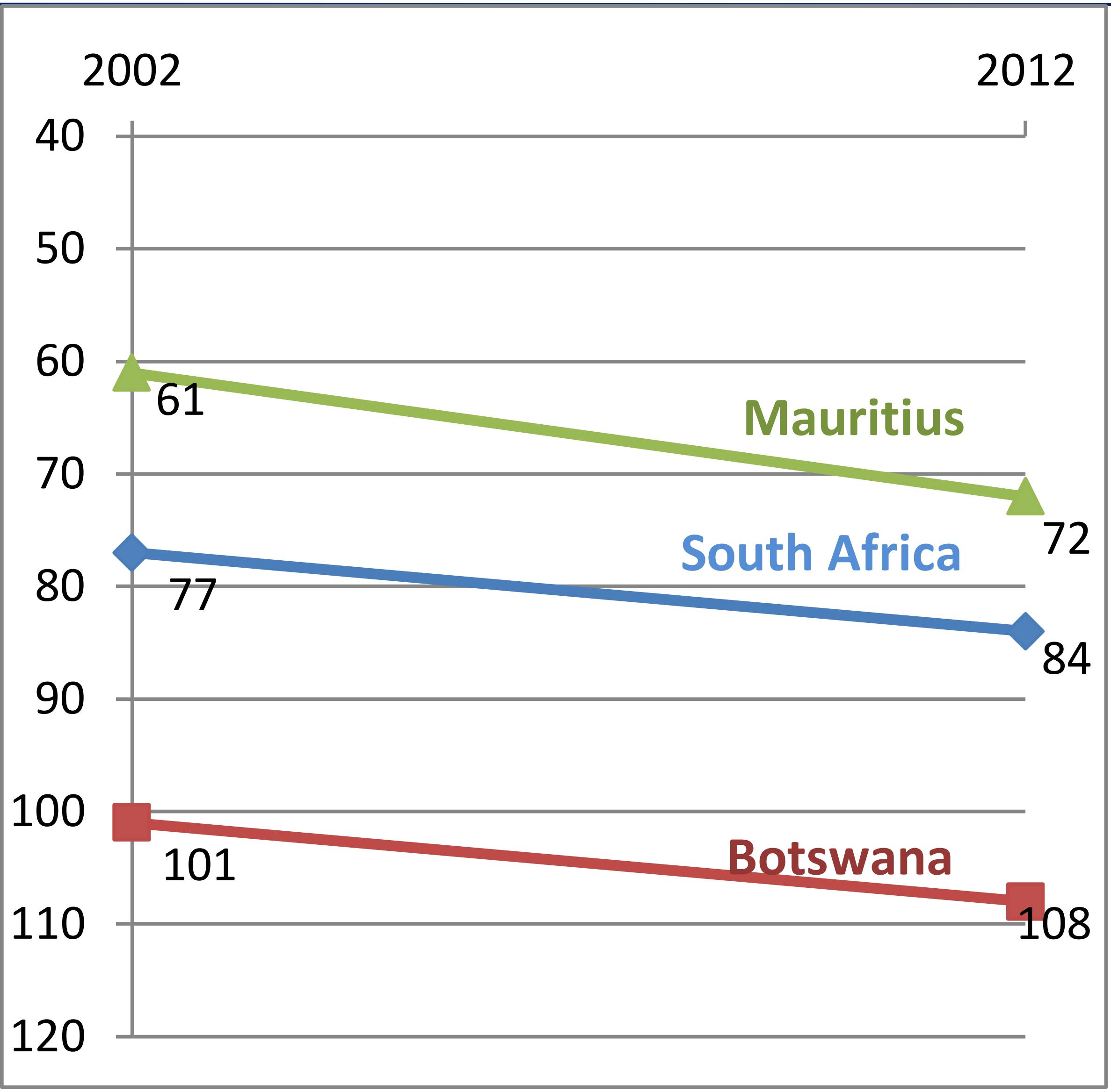
Source: Qiang 2008.

South Africa

- Fixed-line connections have fallen by around one million since peak
- Fixed-line broadband penetration only 2.2 per 100 in 2012 compared with average of 10.0 for upper-middle income economies
- Mobile broadband doing much better, but still relatively expensive

Long history of bit-capped broadband in SA has stunted growth in this sector

ICT sector is failing to promote competitiveness in Southern Africa



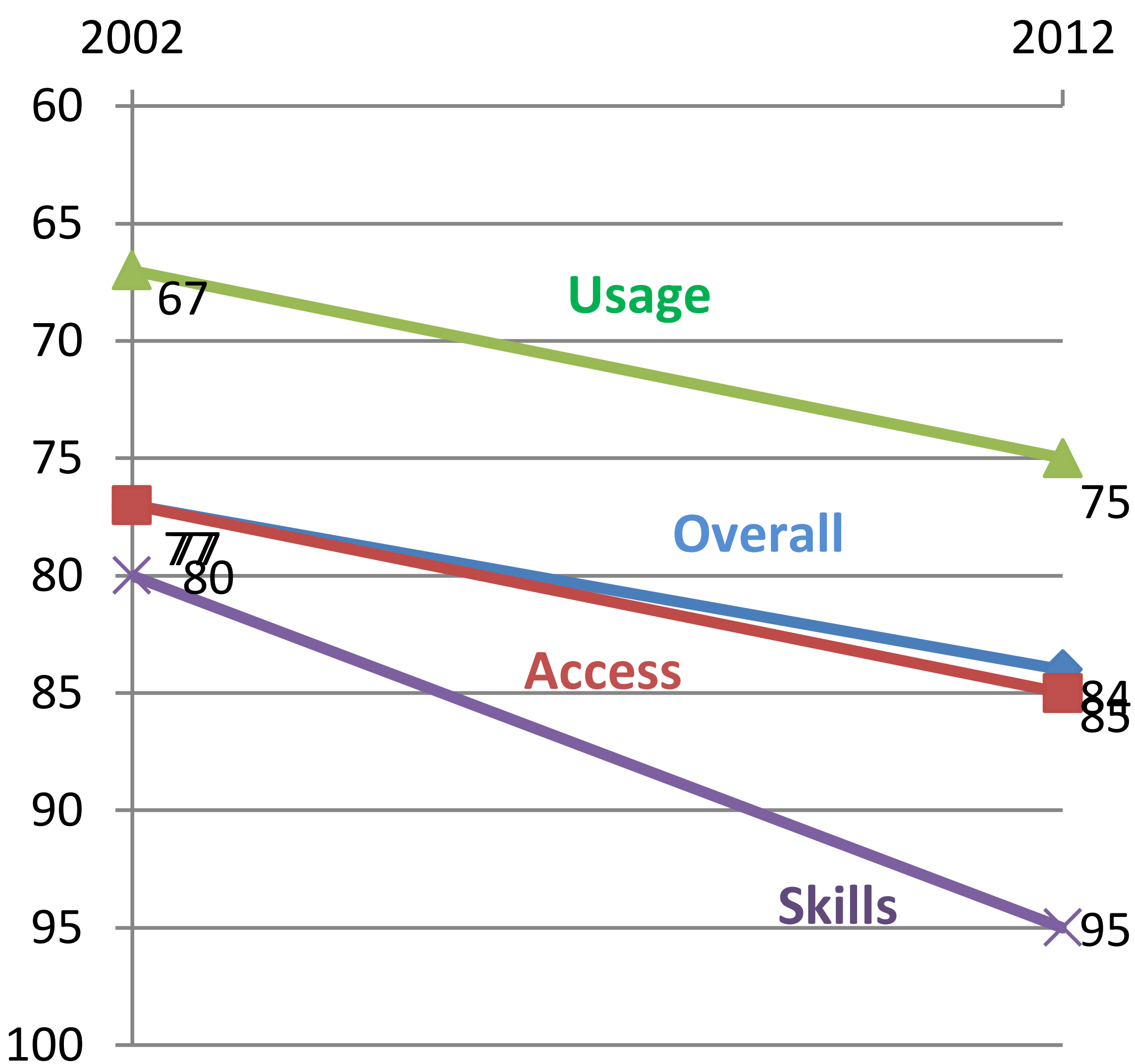
"South Africa has lost its status as continental leader in broadband and internet, and the last two decades have seen our steady decline on global ICT indices"

Source: DOC (2013) South Africa Connect

Change in global rankings in ITU ICT Development Index (IDI), 2002-2012

Source: ITU (Annual) *Measuring the Information Society*

Diagnosing South Africa's performance



Change in global rankings in ITU IDI Sub-indices, 2002-2012

Source: ITU (Annual) *Measuring the Information Society*

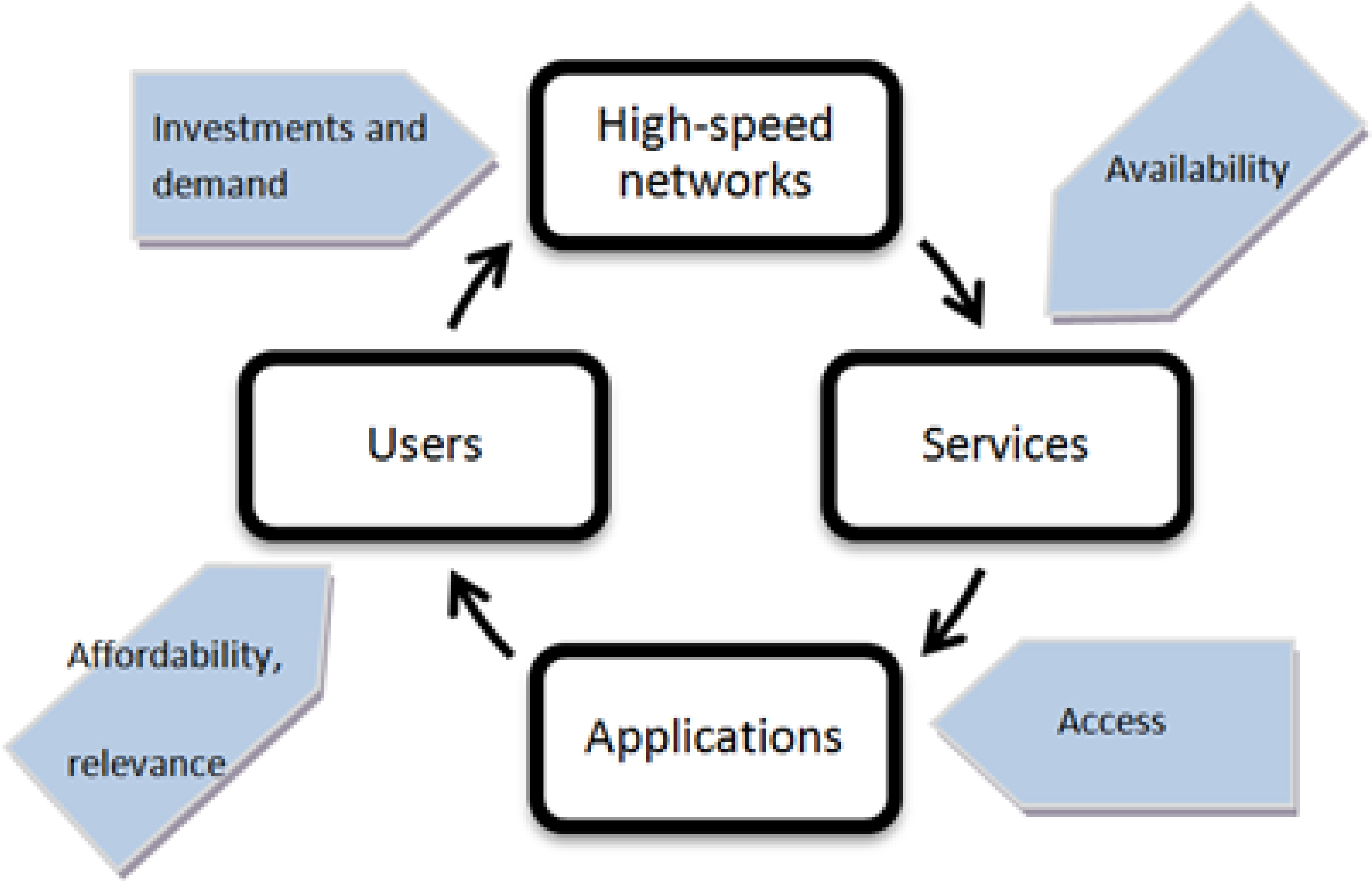
Prognosis

- South Africa's ICT ***Usage*** is above average
- ***Access*** is about average
- ***Skills*** are below average
- All areas in relative decline internationally, especially skills

Diagnosis

- Focus policy interventions more on the ***demand side***
- ***ICT in education*** is likely to produce the biggest boost to South Africa's long-term performance

The Broadband Ecosystem

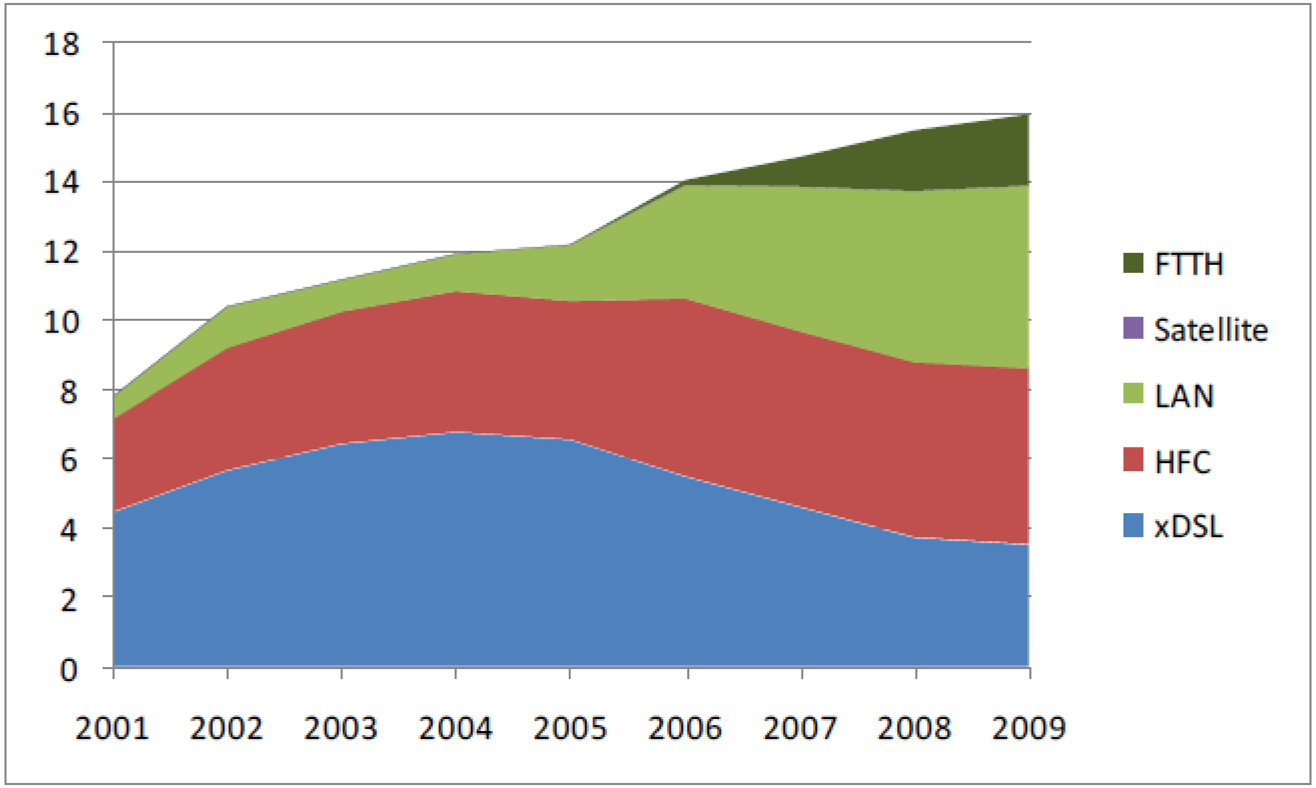


Source: Kim, Kelly and Raja (2010) “Building Broadband”

How did Korea become #1 in Broadband?

	1995-1997	*1998-2000*	*2001-2005*	*Total*
Main objective	Construct backbone network	Broaden access	Upgrade the backbone and access networks	
Government funding (US$ million)	173	262	371	806
Total investment (public+private, US$ million)	1'982	6'964	23'581	32'527
Share of public investment in total (%)	8.73%	3.76%	1.57%	2.48%

- Greater Gov't involvement in early stages
- US$32bn (1995-05) investment (2.5% from Government)
- Progressive shift to higher performance infrastructure
- Demand-side focus



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(Personal) critique of SA draft policy

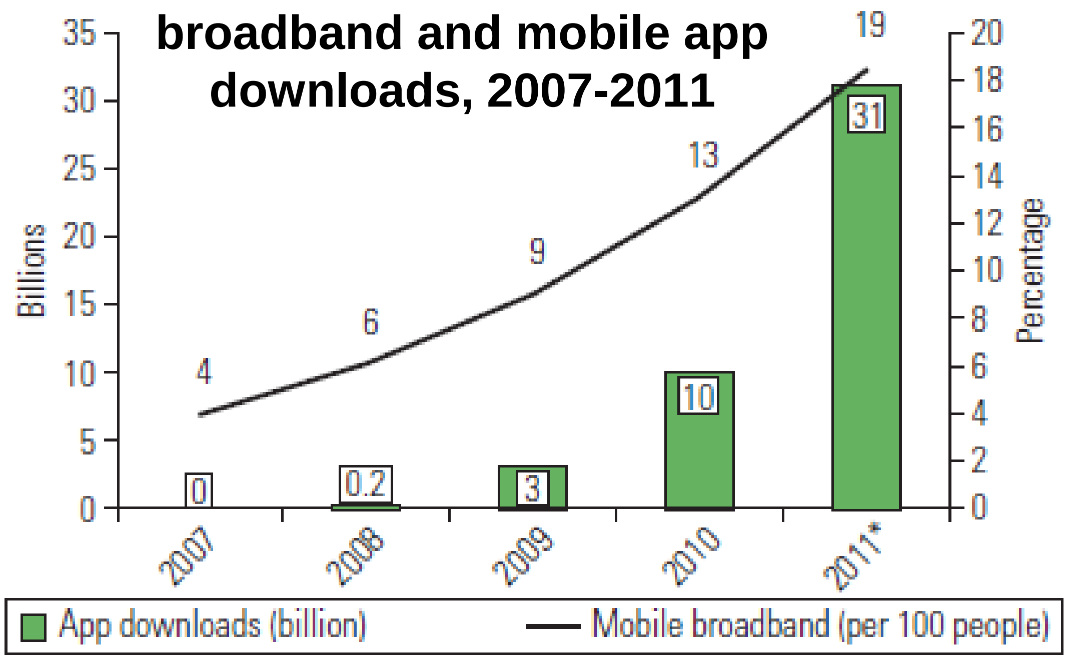
- **Right "answer" (Open Access), but wrong "question"**
  - The policy should be asking how to achieve open access in existing networks, principally Telkom, not how to construct new market structures
  - This will require a tougher stance on functional separation / local loop unbundling, principally relating to Telkom's access network
  - Open access policy requires regulatory vision and clear definition of Open Access
- **Policy document is stronger on the supply side than the demand side**
  - "Digital Opportunity" has less than 1% of total projected funding (should be >70%)
  - Broadband in education targets insufficiently ambitious (should be 100% connectivity and a minimum of 10 Mbit/s per class by 2016, not per school)
  - Demand-side focus could include content, eg mobile applications and open data
- **Policy document lacks detail on infrastructure sharing**
  - Policy recognises the need to map current broadband deployments and coordinate deployment plans of operators, but it doesn't specify who should do this, how and by when
  - Does not specifically mandate infrastructure sharing between utilities (eg roads, rails, power lines, pipelines etc)

Mobile applications are driving value creation

Global

- More than 100 billion mobile applications downloaded in 2012
- Mobile Money and mHealth applications especially popular in Africa
- Apps such as Facebook, Mxit, WhatsApp, Twitter becoming a platform for developers

Growth of mobile broadband and mobile app downloads, 2007-2011



Source: Adapted from Apple, Google, and Wireless Intelligence.
Note: * Estimate.

South Africa

- There is an active domestic mobile application developer community in the Cape Town area, but hasn't developed so well elsewhere
- Entertainment and social apps dominate market (eg Mxit)

***info*Dev-funded mLab Southern Africa, at Innovation Hub in Pretoria, will help**

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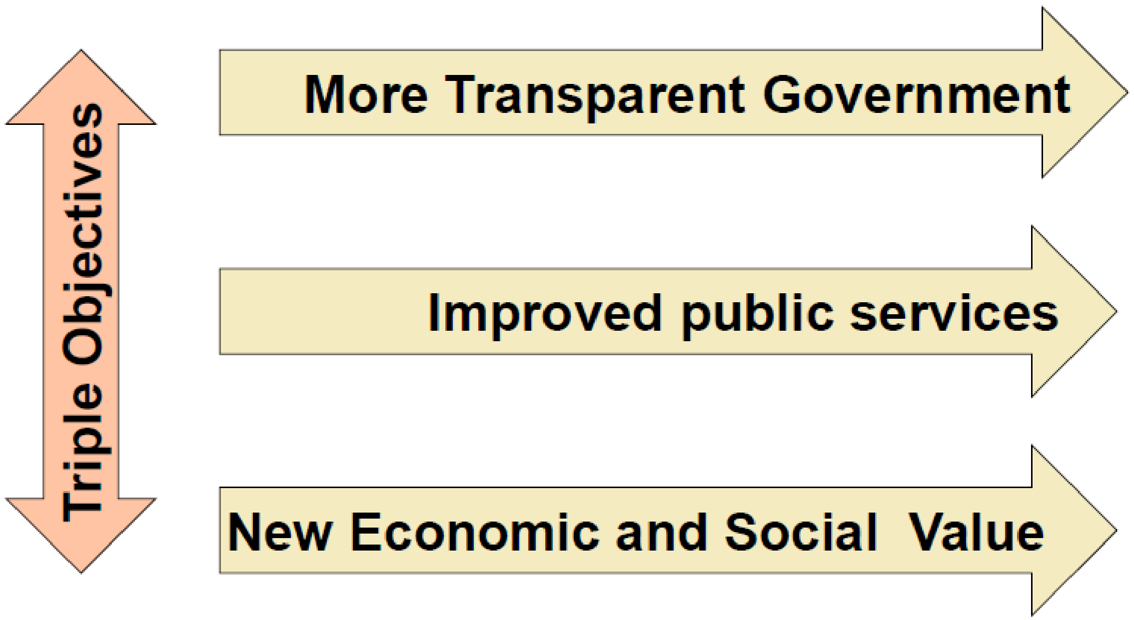
Open Government, Open Data

Global

- Open data is data that can be freely used, reused and redistributed, by anyone for any purpose
- In the UK, London transport released its data, creating an industry with 500 apps and 5’000 developers
- Critical data includes spatial, business registry, addresses etc

Objectives and benefits of open government data



South Africa

- SA ranked 51 out of 70 countries in Open Data Index 2013
- SA scores high for openness in national stats, but poorly on open budget data

Commissioning an Open Data Readiness Assessment for South Africa could help

Lessons from international Broadband roll-outs

- Infrastructure competition is the most effective way of promoting investment and competition (fear about duplication is a red herring)
- Competition is viable at some level in many segments of the international/domestic backbone infrastructure. If government supports competition through providing easy access to rights of way, alternative infrastructure (e.g. railways, power lines) and through direct support to passive infrastructure, infrastructure competition will develop.
- But full infrastructure competition not possible in all areas of a country and in all segments of the market, and public/private ventures may help
- Regulated access to dominant operators' infrastructure is the second-best solution where competition is not yet effective. Regulation is always difficult because of information and skills asymmetries. Operators fight regulation, sometimes for years.
- Government's attempts to supply infrastructure directly have been expensive and usually not fully effective.

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Resources available

- IC4D 2012: Maximizing Mobile report (www.worldbank.org/ict/IC4D2012)
- ICT Regulation Toolkit (www.ICTregulationtoolkit.org)
- eTransform Africa Report (www.etransformAfrica.org)
- Broadband Strategies Toolkit (www.broadbandtoolkit.org)