



ITU-T Kaleidoscope 2009

Innovations for Digital Inclusion

Leveraging NGN for Human Development from the Bottom of South Africa's Development Pyramid

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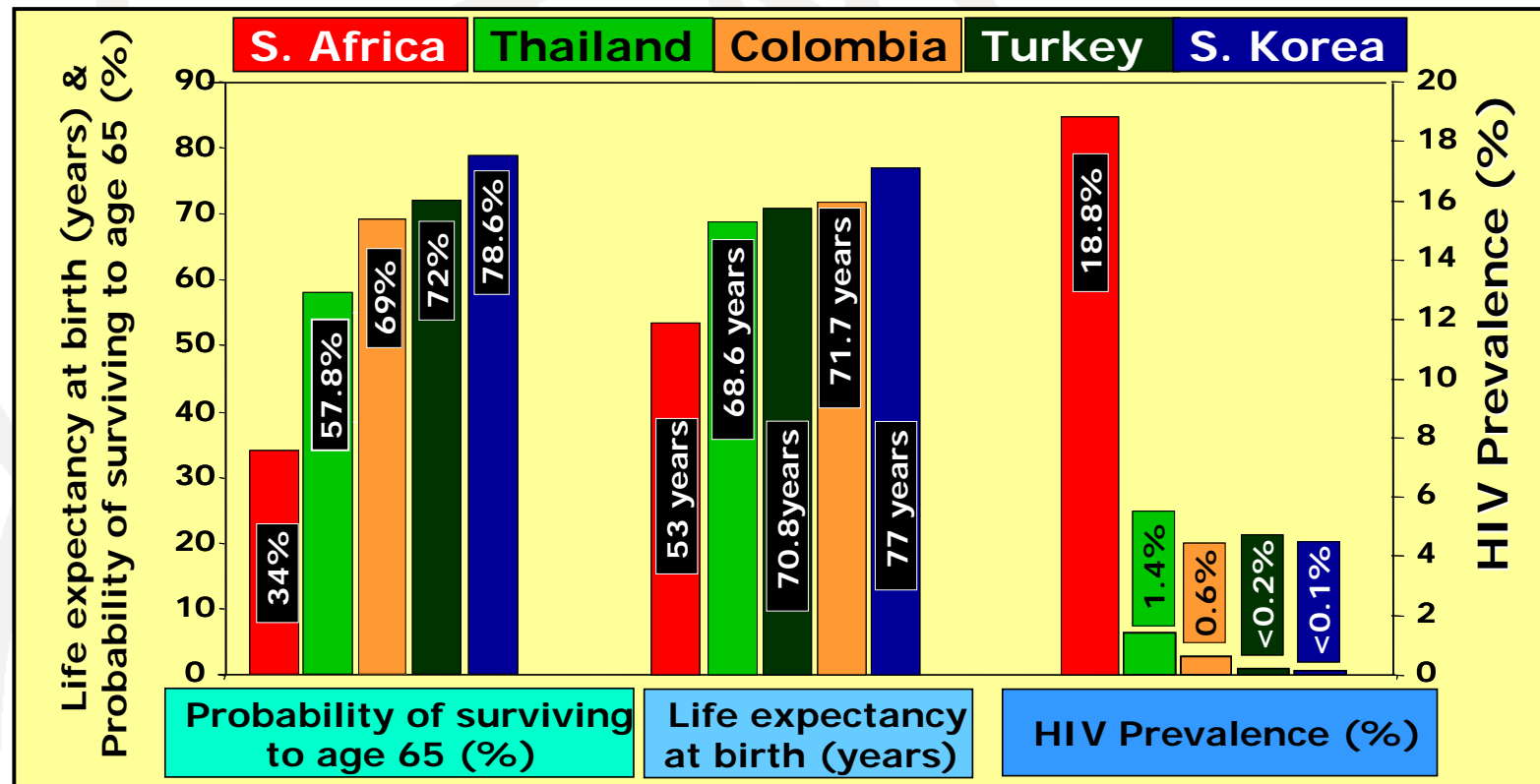
Mar del Plata, Argentina, 31 Aug – 1 Sep 2009

Human Development

- The process of enlarging people's three (four?) essential choices:
 - To lead a long and healthy life
 - To acquire knowledge
 - To have access to the resources needed for a decent standard of living
 - *(To anonymously upload / create PDFs?)*
- All development efforts can be reduced to these three choices
- Can the evolving NGN promote these and subordinate human choices?

To live a long and healthy life

- Benchmarking South Africa's Choices: Survivability; Life Expectancy; HIV/AIDS



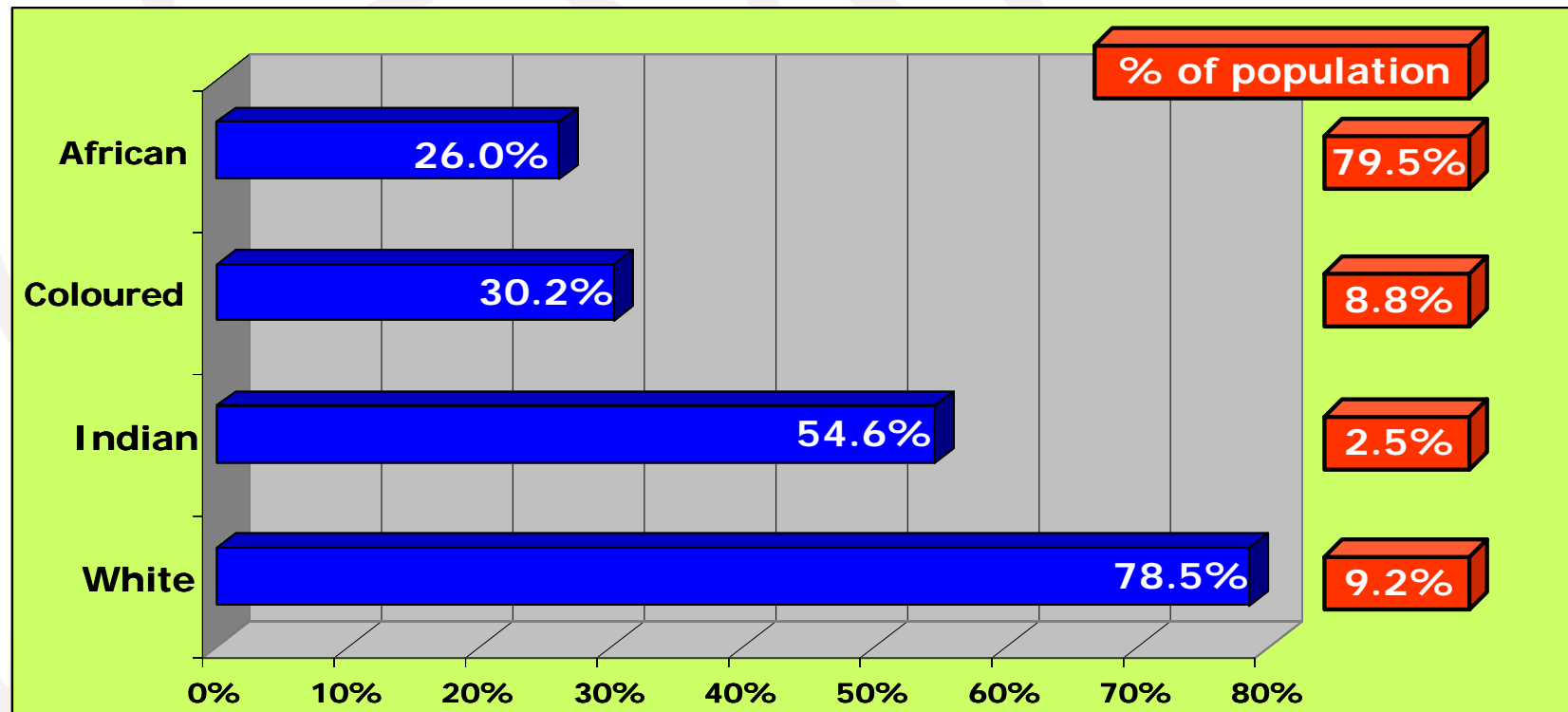
To acquire knowledge

- Benchmarking South Africa's choice of knowledge acquisition:
 - TIMSS 2003 Maths and Science Assessments
 - PIRLS 2006 Reading literacy

	Grade 8 Maths	Grade 8 Science	Grade 4 Reading
Highest (Score)	Singapore (605)	Singapore (578)	Russia (567)
Average (Score)	Romania, Norway (467)	Jordan, Moldova (474)	Moldova, Belgium (500)
Lowest (Score)	South Africa (264)	South Africa (244)	South Africa (306)

To acquire knowledge

- South Africa's challenge 1:
 - Deep ethno-cultural historical divisions
 - % South Africans with 12+ years of formal education



STATS SA 2006/2007

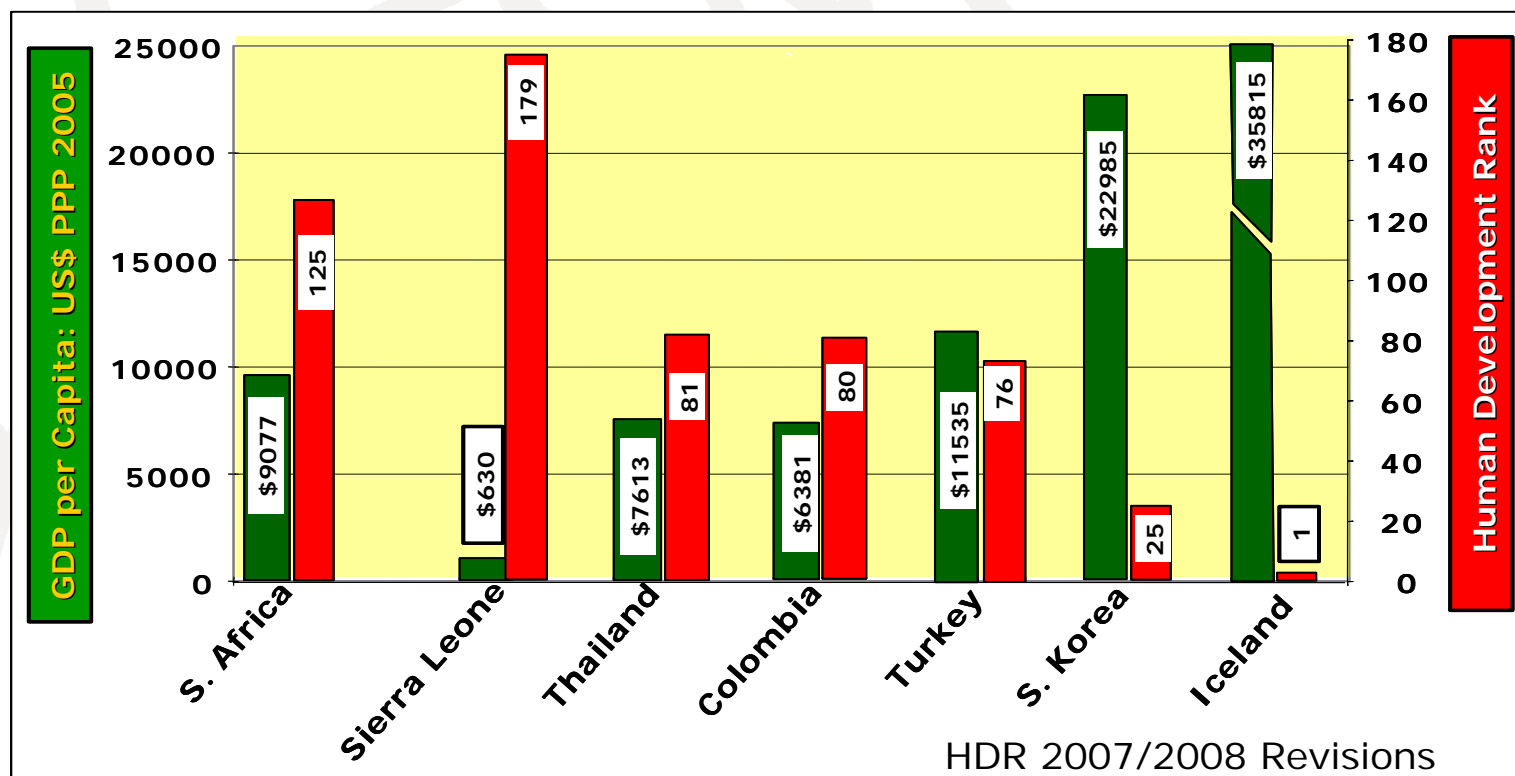
To acquire knowledge

- South Africa's challenge 2: Poverty
 - The stress of living in poverty affects children's brain development – perpetuating poverty
 - Empirical USA evidence: \$10,000 pa income increase [M. Farah, 2008]:
 - 16% increase in mid-income graduations
 - 600% increase in poor community graduations
 - South Africa: 58% live on less than \$620 per annum
- Until poverty and inequality is reduced, education will remain in crisis

Access to resources for decent living

■ Human Development & Wealth

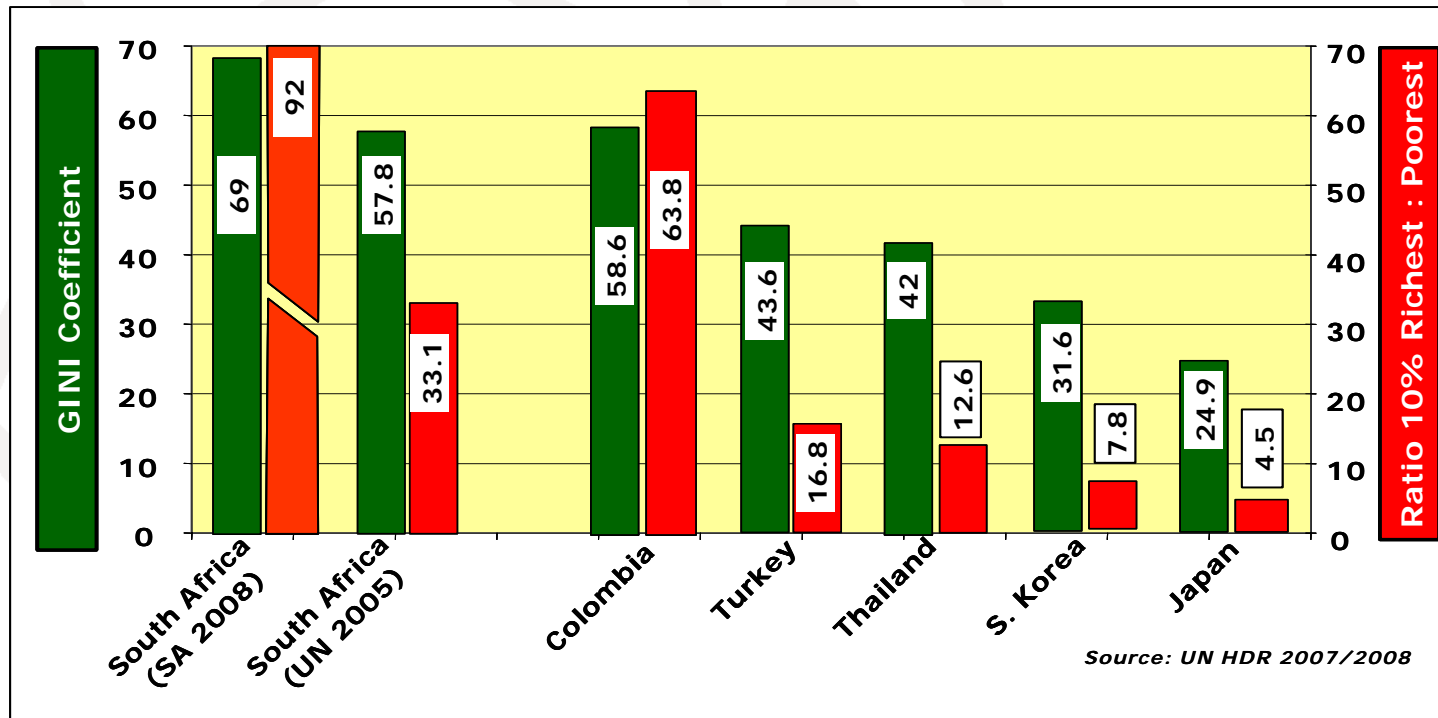
- South Africa: Relatively high wealth, low HD
- Colombia, Thailand: lower wealth, higher HD



Access to resources for decent living

■ Economic Inequality

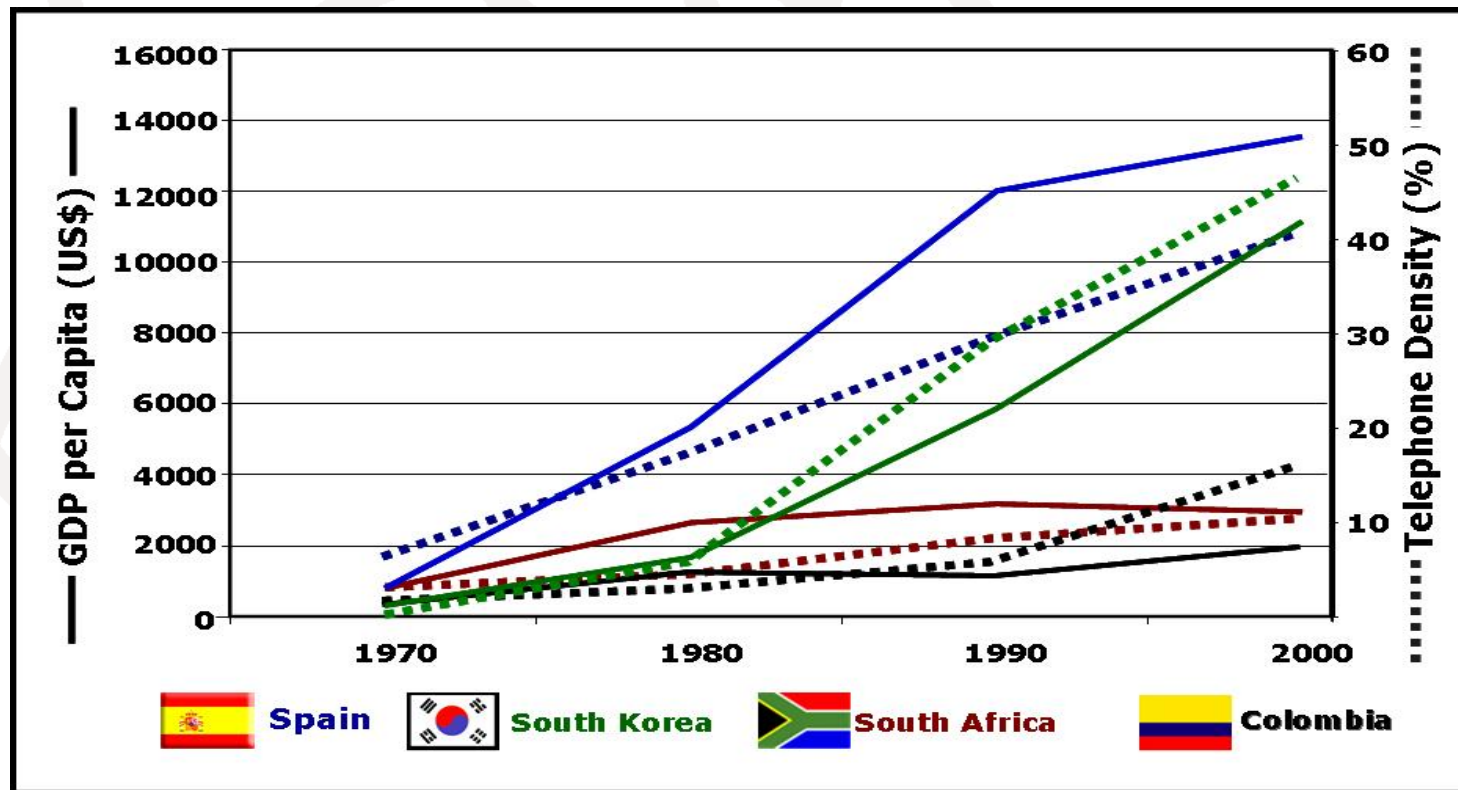
- A major threat to socio-political stability
- A major barrier to economic and human development



ICT: South Africa benchmarked

■ ICT: Potent Economic Driver (1970 to 2000)

- ➔ S. Korea: Tele-growth: X37: GDP/Capita growth: X40
- ➔ S. Africa: Tele-growth: X2.7: GDP/Capita growth: X4



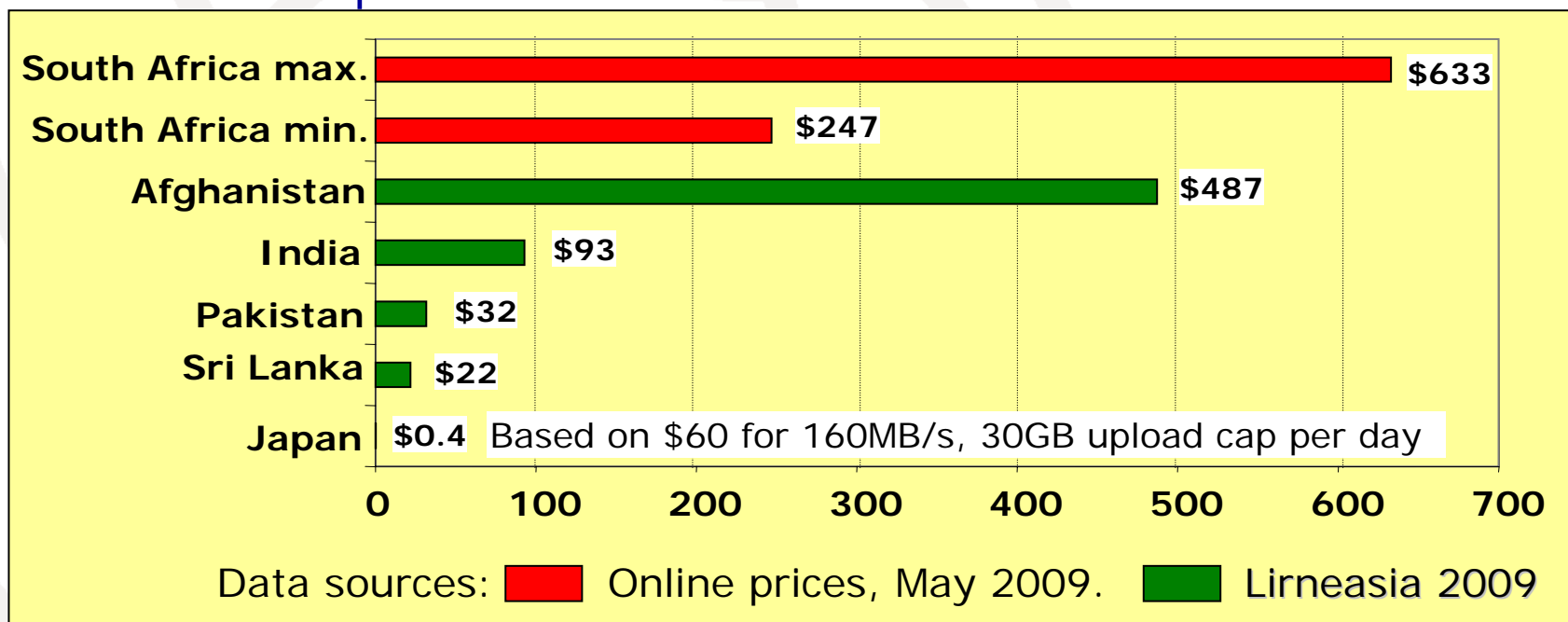
High ICT Prices Suppress Human Development

- Mobile telephony:
 - An essential luxury for haves
 - A costly survivalist tool for have-nots
 - South African Prices: 0.8% of “First Economy” income; 10.5% of average income for 70% “Second Economy”
 - High mobile prices driving already poor people deeper into poverty (Skuse & Cousins, Heeks)
- Mobile prices in percent of GDP/Capita range from 0.9% in South Korea to 4.2% in Colombia

High ICT Prices Suppress Human Development

- Broadband: The emerging integrated information transport medium

Prices per month for 1MB/s unlimited downloads



Connecting have-nots to global knowledge

- Address Global Challenges 5, 6, 9:
- Global Challenge 5:
 - How can policymaking be made more sensitive to global long-term perspectives?
- Global Challenge 6:
 - How can the global convergence of ICT work for everyone?
- Global Challenge 9:
 - How can the capacity to decide be improved as the nature of work and institutions change?

(Millennium Development Project: "2008 State of the Future")

Connecting have-nots to global knowledge: How?

- Leverage NGN for Bottom of the Pyramid (BOP) ICT market:
 - BOP: The 4 billion+ people surviving on less than US\$ 3000 per annum
 - BOP in South Africa: 33.6 million people, 70% of the population
- Develop specific BOP networks, applications, services based on NGN

(<http://www.wri.org/publication/the-next-4-billion>)

Connecting have-nots to global knowledge: How?

- **Research ICT4HD@SA'sBOP:**
 - From the Bottom Up: Where the challenge lies
- **Using Interdisciplinary Teams:**
 - Human development is Complex: Health, Wealth, Knowledge, Politics, Society, Security, Technology;
- **Simultaneously:**
 - HD Issues are Interrelated, Interdependent, Interconnected;
- **With Multi-institutional Partners:**
 - Human Development is a Global Challenge: 4.5 Billion BOP Citizens; 36.6 million South Africans!

Research and Develop BOP ICT

- A Bottom-up R&D Strategy
- Participative:
 - Interdisciplinary academics;
 - Multi-institutional partners;
 - ICT industry partners
 - NGOs, Civil Society, BOP citizens;
- Action oriented
 - Research → Develop → Implement → Revise
→ Integrate
 - Bottom-up R&D; Top-Down Integration
 - National, Regional, Global Scalability

Risks; Barriers; Opportunities

■ Policy & Regulatory Barriers:

- 181 years of failed policy & regulation in Africa (1828-2009);
- Critical focal element of research;

■ Commercial Interests:

- Dominant ICT Industry resistance to change, strong influence on policy/regulation;
- Massive Market: African BOP spends US\$4.4 Billion on ICT;

■ Complexity:

- Multidisciplinary partnership formation, management;
- Few alternatives; Increasing recognition of imperatives

■ Funding:

- Donor fatigue; Global economic challenges
- Global threat of inaction: Climate/Environment, Global Security

Conclusions

■ There are no alternatives: Too few options:

- Population growth, global poverty & inequality threats, global/national security
- Climate change, environmental sustainability

■ Thank you for your attention

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