Development of Broadband Infrastructure: Polices and Strategies

Regional Development Forum for the Americas Region:
Promoting Access to Broadband
Mexico City, Mexico
April 19, 2012

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Agenda

- World Bank Interventions: Past and Future (ICT Strategy)
- The Broadband Challenge and Opportunity
- The Approach: Fundamental Sector Reforms
- PPP's as a Key Policy Objective

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WBG's involvement in the ICT sector over the last ten years

• **The Bank has helped reform the ICT sector in more than 90 countries over the last ten years** by introducing competition, helping privatize incumbent operators, revamping regulatory frameworks, and building regulatory capacity, with a strong focus on low-income countries. **IFC** with investments of $2.3 billion in telecommunications and **MIGA** with political risk guarantees of over $550 million—supported private sector expansion of infrastructure for mobile telephony in difficult and high-risk markets

• **Mobile revolution triggered by reforms and private sector investment is helping alleviate poverty.** With 5 billion mobile phones in developing countries, mobile phones are today the largest delivery platform for services. They are being used to deliver banking, health and education services, among others. **ICTs are no longer a luxury good—they're an essential utility, including for the poor**.

Botswana: Quality reporting and m-payment of energy bills

Kenya: m-payments (15 million users)

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The 3 pillars of the new WBG ICT Strategy for the 10 years to come

ICT Sector Today: Opportunities and Issues

- 5 billion **mobile phones** in developing countries offer new ways to deliver services
- **Broadband** penetration is low but growing, and can be a foundation infrastructure for competitiveness and economic growth
- **IT-based industry** shows high growth (40% CAGR) with a bias towards youth & women
- Mobile-based and geo-spatial ICT tools offer new opportunities for greater transparency and citizen engagement, towards **open and accountable development**
- **IT applications** offer a high-reward but high-risk opportunity to transform the way services are delivered

WBG ICT Strategy

- ***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
- ***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 in frontier markets to promote affordable access for all**

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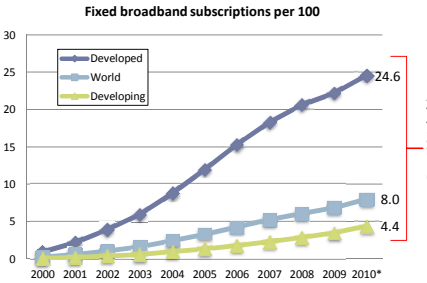
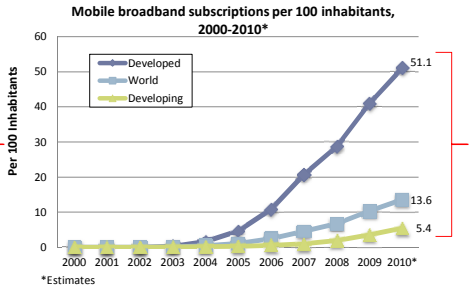
Broadband Gap: The Opportunity and the Challenge



*Estimates
The developed/developing country classifications are based on the UN M49, see: http://www.itu.int/ITU-D/ict/definitions/regions/index.html
Source: ITU World Telecommunication /ICT Indicators database



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Sector reforms can be very instrumental in attracting the private capital needed to close the gap

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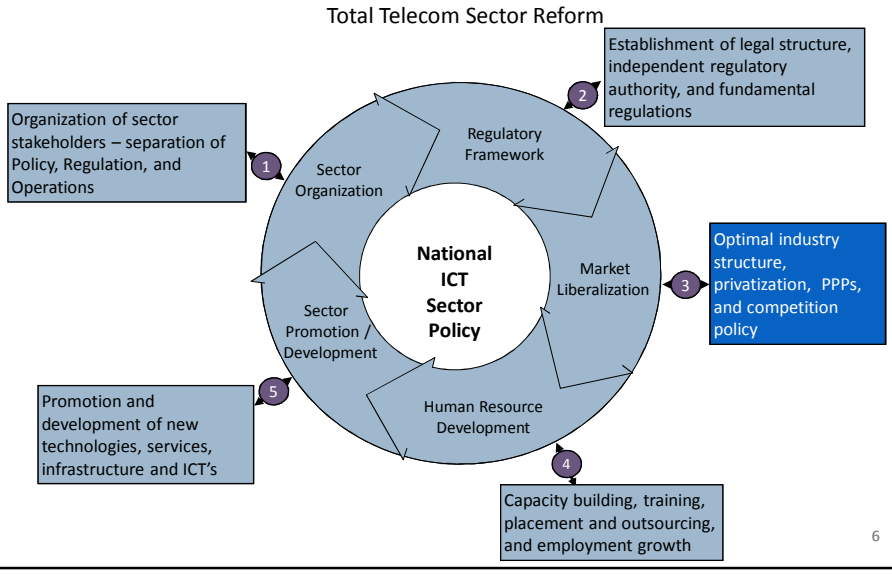
Fundamental Sector Reforms as the Key Driver



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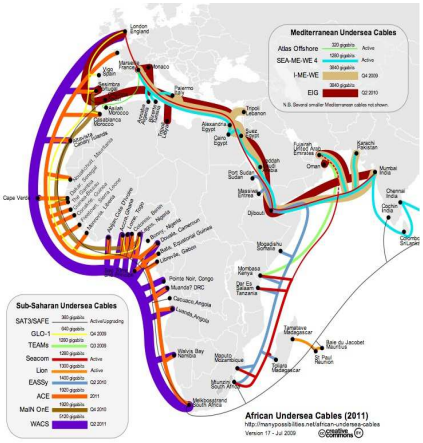
Scaling up affordable access to broadband Internet through national backbones roll out

• Since 2007 the Bank has approved regional connectivity programs (WARCIP, CAB, RCIP…) amounting to $1.2 billion involving more than 30 countries either approved or firmly in the pipeline.

✓Growing widespread acceptance of the benefits of broadband infrastructure matched by low levels of coverage and take up has unleashed a **global race to deploy broadband**.

✓ **ITU's Broadband Challenge to the world** (raising broadband penetration - broadband for all - in developing countries from 10% to 50% by 2015) is **widely endorsed** by governments and private sector.

✓ The "easier" submarine cable international connectivity projects are being completed, leaving the **more challenging terrestrial backbone networks** ("missing links") to be financed and operated.



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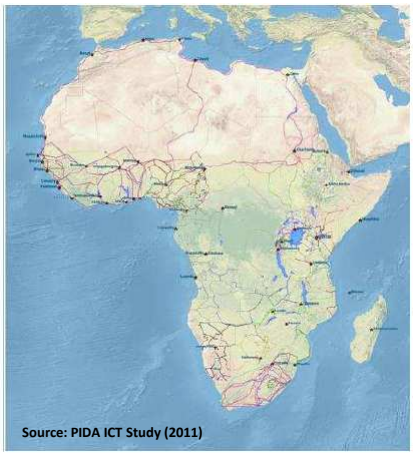
The need for national backbones in Africa

• National backbones include (i) **cross border links** to ensure seamless and redundant regional connectivity and (ii) **national links** to deliver broadband Internet to all provincial capitals (leveraging when possible infrastructure established by other utilities such as power companies) as well as secondary cities (often in combination with revised universal access strategies).

• The lack of nationally competitive infrastructure compared to the extent of supply and competition in submarine cables, is demonstrated by the fact that capacity from an African submarine landing station to Europe ($100-$300/Mbps/month) is usually cheaper than the in-country national backbone capacity ($500-$2000/Mbps/month). This trend is accentuated considerably for landlocked countries, which have to pay terrestrial transit across their neighbors to get to the coast. **National backbones are insufficient to take advantage of the available submarine capacity.**



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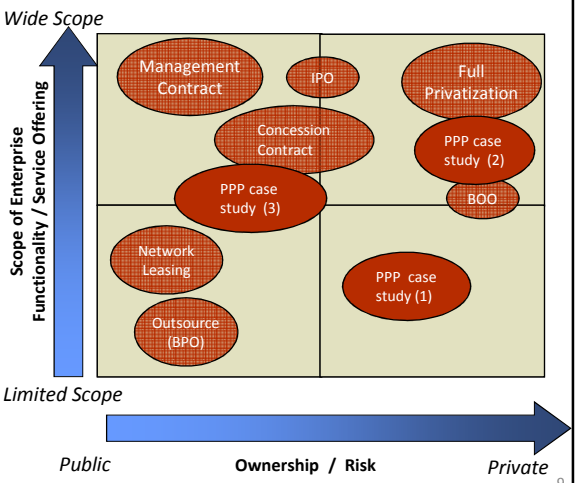
Why PPP to accelerate backbone networks roll out?

• **A Public Private Partnership (PPP)** is defined as an agreement between the government and private organizations to **develop, operate, maintain and market a network** by **sharing risks and rewards** (there are several forms).

• **Emerging international experience in the telecom sector shows that the use of PPP is the best solution to guarantee the interests of the government, private partners and consumers in frontier markets.**

✓ Reducing operational risk for the public sector
✓ Reducing capital risk for the private sector
✓ Lowest cost solution and highest quality of service
✓ Faster delivery/time to market and expert project management skills
✓ Access to private capital
✓ Enables high risk /low return projects



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Innovative and best practices PPPs are being implemented that balance public and private interests to the benefit of citizens (low cost access)

- **The ICT Unit approach includes a range of PPP models:**
  1. ***Cooperative Model*** - Burundi national backbone (an international best practice):
     - Cooperative solution in which users (mobile operators and ISPs)are owners ($ 10 million investment) , enabling "self –regulation" of the network (open access, non-discrimination, low cost oriented pricing, high quality)
     - Government provides subsidy ($ 10 million) with no ownership (national backbone would not be feasible without, nor backbone extensions to rural areas)
  2. ***SPV Share ownership model*** - Sao Tome Principe, Liberia, Sierra Leone, Gambia, Guinea (Bank financing of $125 million)
     - SPV created with Government and private operators as equity shareholders
     - Ownership reflects capacity uses and provides for government shares (warehoused) to be divested in future to new operators or investors
  3. ***Bulk purchase model*** (international connectivity) – Rwanda and Malawi (Bank financing of $ 20 million)
     - Stimulate investment through aggregating demand (anchor tenant approach)
     - Competitive tender to supply fiber-based connection to submarine cables
     - Long-term supply contract to government
     - Operator acts as wholesaler in the market
     - No government ownership in project
  4. ***Concession Model*** – Congo, traditional BOT approach whereby assets transferred to the client government at the end of the concession period (e.g. 20 -25 years)
  5. ***Management Contract (O&M)*** – Gabon, private sector operator contracted to manage and operate the network during a finite contract period (3-5 years) with core assets remaining the property of the state

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