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# **Last Mile: Approaches to Telecommunication Services**

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# Presentation Overview

- **Context**

- ICT 4 Socioeconomic Opportunity
- World Summit on the Information Society (WSIS)
- Digital Opportunity Index
- Next 4 Billion
- Mobile & Internet Expansion

- **Approach**

- Rural Orientation
- Public Private Partnerships
- Sustainable and Scalable
- Fit with Missions' Development Portfolio (33 Countries)

**Ensure** that all countries of the world have equitable and affordable access to ICTs

**Attain** the internationally agreed development goals and objectives, including the Millennium Development Goals

**Build** a people-centered, inclusive and development-oriented Information Society **w/** particular attention to the special needs of marginalized and vulnerable groups

**Adoption** of ICTs by enterprises plays a fundamental role in economic growth

**Stepping-stone** in the world's efforts to eradicate poverty

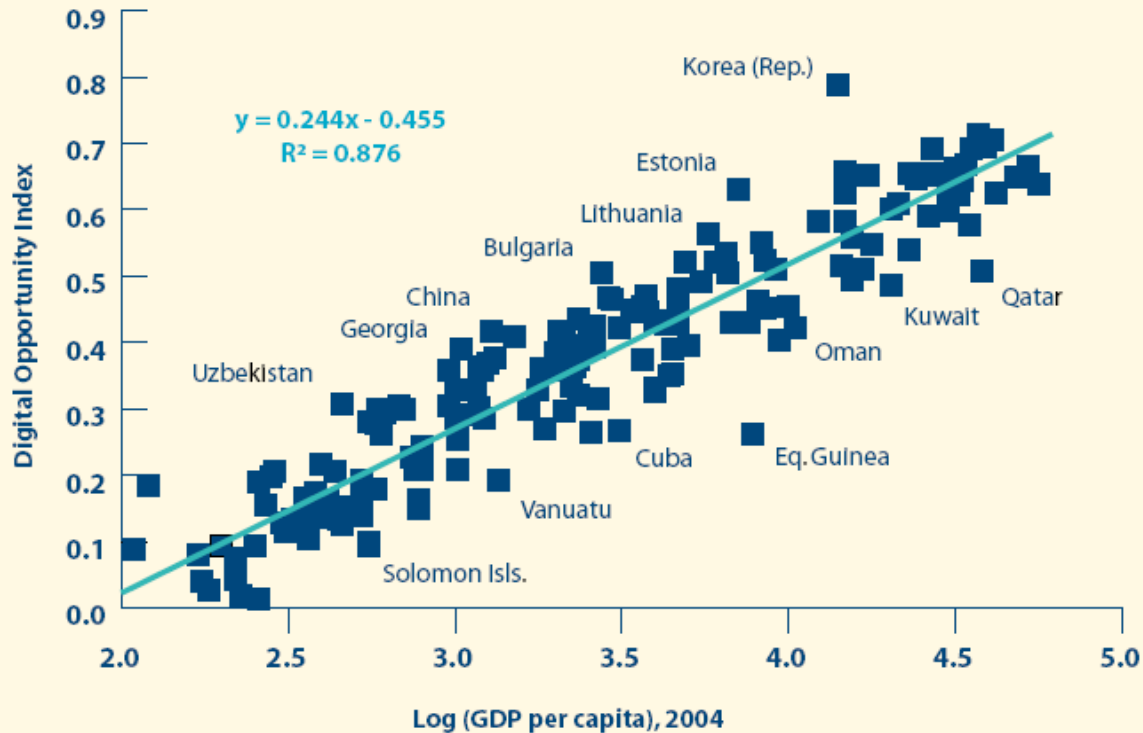
**Access** to information and sharing and creation of knowledge contributes significantly to strengthening economic, social and cultural development



# ICT = Economic Growth

**Figure 3.1: How Digital Opportunity relates to national economic performance**

*The chart shows the relationship between DOI and national wealth, as indicated by GDP per capita, using a logarithmic scale.*





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# N4B: Current Marketplace

- **Next 4 Billion Report**

- Done by IFC and WRI in 2007
- Available for free at

[http://www.wri.org/business/pubs\\_description.cfm?pid=4142](http://www.wri.org/business/pubs_description.cfm?pid=4142)

- **Base of the Pyramid**

- World wide there are 4 Billion people living on or below \$ 3,000/year PPP
- \$5 Trillion market
- There are approximately 1 Million Villages world wide
- There are an estimated 1.5-2.0 Billion people living in these 1 Million Villages



## BOP market—\$5 trillion

TOTAL BY INCOME SEGMENT

BOP3000



BOP2500



BOP2000



BOP1500



BOP1000

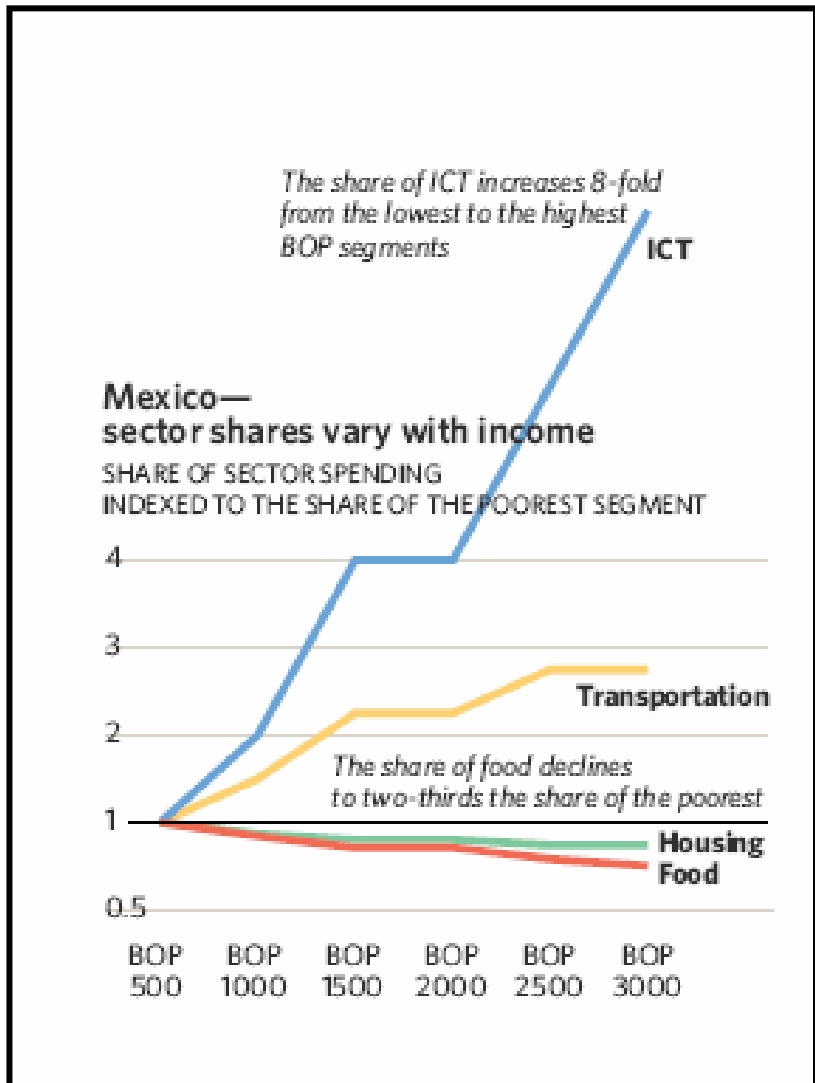
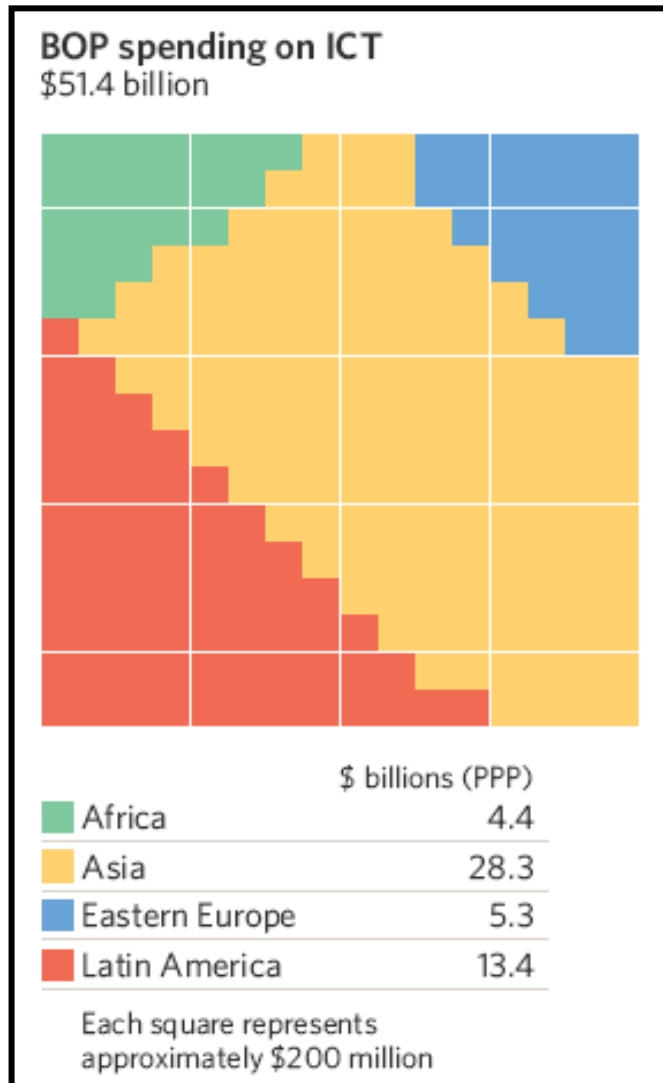


BOP500





# N4B: ICT-Related Spending





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# Current Realities: Industry Data

## ■ **Mobile**

- 1994: 1 Million; 2004: 1.8 Billion; 2007 EOY: 3.25 Billion
- 50% World's Population
- 65% in Developing Countries
- Key 1: Market Liberalization is Working
- Key 2: Voice Gap is Rapidly Narrowing

## ■ **Internet**

- 13% with Access to Internet;
- Only 5% with Broadband Access;
- Only 1% of Broadband Access is in Developing Counties
- Key 1: Broadband is Essential for WSIS Commitments
- Key 2: Broadband Internet Gap is Growing





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# Context: Platform for LMI

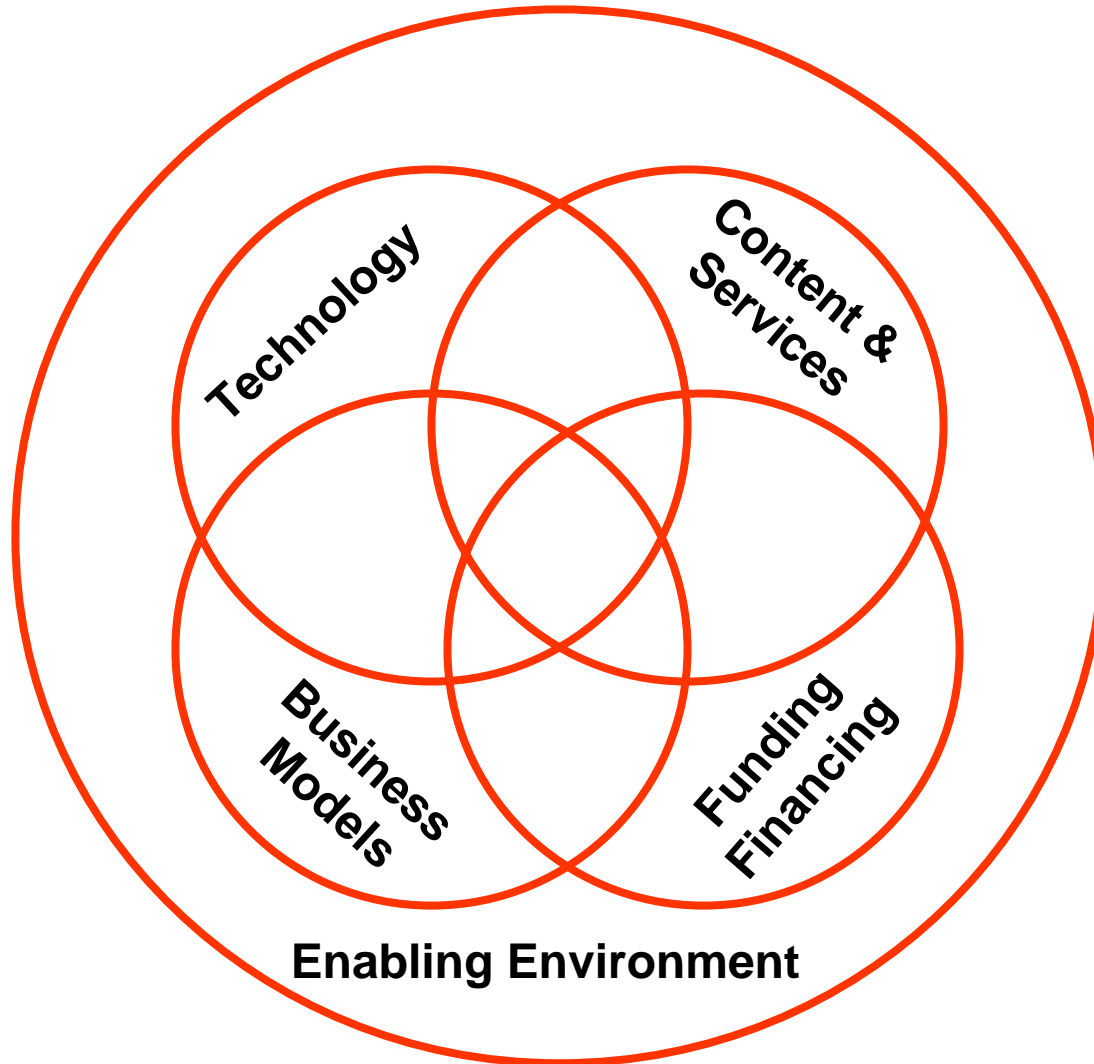
- There is a Global-Wide Commitment on Leveraging the power of ICTs, and this is at the highest level of Governments...and requires broadband access
- The reason for this focus is predominantly Socioeconomic
  - Where governments (public sector) have acted to liberalize the telecom environment, Businesses (private sector) have responded with investment and build-out...mostly in mobile arena to date
- There is a marketplace even amongst the poor...and this grows as income levels increase
- But there is also the need for continuing government support—enabling environments and universal access-service funding
- There's a lot of work to do in the area of expanding Broadband Internet...especially in rural areas

- **30+ countries**
- New **technical** and **business models** used to extend telecom access to the un-served or under-served for socioeconomic development gains.
- **Criteria:**
  - Sustainable & Scalable
  - Public Private Partnerships (International High Tech; Local Firms)
  - Leverage mission portfolio, other people's money
- **Diverse Approaches**
  - Peru and Guatemala: Franchised Microtelco's
  - Ethiopia: Telecom cooperatives leveraging government's fiber backbone investment
  - Macedonia: wireless country
  - Vietnam: Universal Access Program & Rural Broadband Community
  - Ghana and India: Mobile computing, telecom for farmers



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# LMI: Model & Components



- **Current Models: Shared Access**
  - TeleCenters
  - One or Two Phones per Rural Community
  - Sector-Specific Connectivity (Education, Health, etc.)
  - Obvious Issue: Frequently Lack Sustainability
  - Hidden Issue: Limited Access to Value-Added Services
  
- **Emerging Model: Community-Wide Network**
  - Last Mile Best Solved by Focusing on the First Mile!
  - Aggregate & Meet Community-Level Demands
  - microTelco: Expands upon TeleCenter and 1-2 Phones
  - microTelco: TeleCenters plus Community Network
  - Voice provides Financial Base for Sustainability & Internet
  - Add Content & Services Focus

- **Focus: Enhancing Socioeconomic Opportunity**
  - Support of WSIS Commitment and Agenda
  - Strong Role for Private Sector
  - With Support from Public Sector
  - Strong & Vital Links with Development Portfolio
- **Key Enabling Technologies**
  - Internet but also Voice (Mobile & VoIP)
  - IP-Based Wireless (Satellites, WiMAX & WiFi)
- **ICT-Enabled Services**
  - Voice and Broadband Internet as Base
  - Adding Range of Value-Added Content & Services



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# TaVan Village - Vietnam

- **6 Tourist Guest Houses**
- **Communal Post and Culture House**
- **Village Healthcare Centre**
- **Village People Committee Office**
- **Ta Van Secondary School**
- **Farmer Household**







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# TaVan Village - Vietnam

**WiMAX  
Antenna**

**WiMAX  
Basestation**



**Satellite  
Dish**





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**THANK YOU**

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