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**Science and Technology**  
**...for Development**

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**Theme 2: ICTs for Inclusive Social & Economic Development**

13 May 2014  
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U.S. Agency for International Development

**Technology...**

**IS**  
**...for DEVELOPMENT**

- ❖ **Global Consensus**
- ❖ **Jobs & GDP**
- ❖ **Challenges**
- ❖ **Ecosystem**
- ❖ **Recommendations**

# ***Global Consensus***

***“Universal and affordable access to telecommunications/ICTs is essential for the world’s collective economic, social and cultural development, and contributes to building a global networked economy and information society”***

*WTDC-2014 Dubai Declaration*

## ***Jobs & GDP***

***“The bottom of the pyramid represents the greatest opportunity for capturing the gains in job creation and GDP growth associated with digitization...”***

Booz&Company: Digitization in  
Emerging Economies Report

## World Economic Forum

**Regional Impact: 2010-2011**

| Region                             | GDP Impact (US\$ billions) | Number of jobs created |
|------------------------------------|----------------------------|------------------------|
| Africa                             | 8.3                        | 618,699                |
| Commonwealth of Independent States | 11.8                       | 340,820                |
| East Asia and the Pacific          | 55.8                       | 2,370,241              |
| Eastern Europe                     | 7.0                        | 159,015                |
| Latin America and the Caribbean    | 27.0                       | 636,737                |
| Middle East and North Africa       | 16.5                       | 377,772                |
| North America                      | 25.3                       | 167,650                |
| South Asia                         | 9.4                        | 1,117,753              |
| Western Europe                     | 31.5                       | 213,578                |
| <b>Total</b>                       | <b>192.6</b>               | <b>6,002,266</b>       |

Advanced Economies: 29% 6%

**Emerging Economies: 71% 94%**

WEF's GITR 2013 – NRI - Readiness and Impact

## Booz and Company

### Digital Divide

- ❖ Bottom of the Pyramid (BOP)  
= 3.9 Billion People  
in Emerging Markets

### Digitization Challenge

- ❖ Digitization Costs for BOP is placed at:  
US\$ 1.4T over 10 years
- ❖ Funding Gap for Digitizing BOP is US\$ 1.2T

### Digitization Benefits

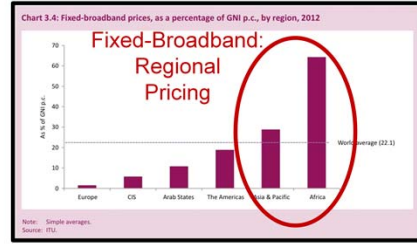
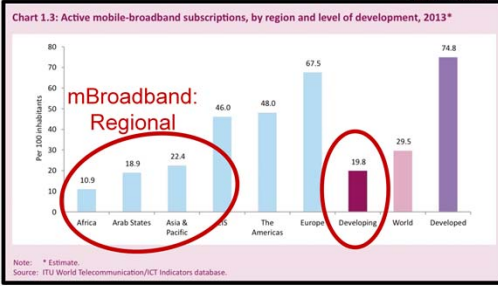
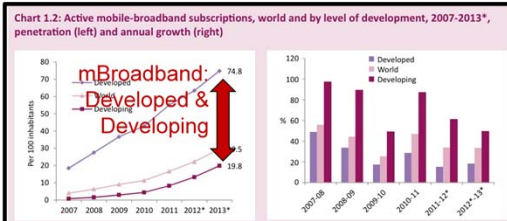
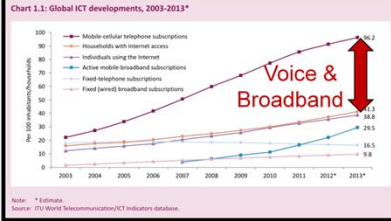
- ❖ For the BOP
  - ❖ US\$ 4.4T => 300% Return
  - ❖ 64M Jobs
  - ❖ Move 580M People Above Poverty Line
- ❖ For Emerging Economies
  - ❖ US\$ 6.3T => 300% Return
  - ❖ 77M Jobs
  - ❖ Unlocking >US\$ 700B Market for Private Sector

Booz&Company: Digitization in Emerging Economies Report

# *Challenges*

***“The Digital Divide continues to be the  
Development Divide”***

*Irina Bokova,  
Director-General, UNESCO*



Source: ITU's Measuring the Information Society - 2013





Chart 4.6: Digital natives as a percentage of youth (15-24), by region and level of development (left), and by income group (right), 2012

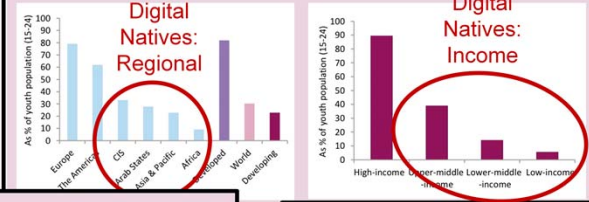


Chart Box 1.1: Men and women online, 2013\*

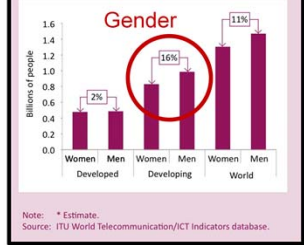


Chart 2.8: IDI ranges and averages, by region, 2012



Source: ITU's Measuring the Information Society - 2013

# ***ECOSYSTEM***

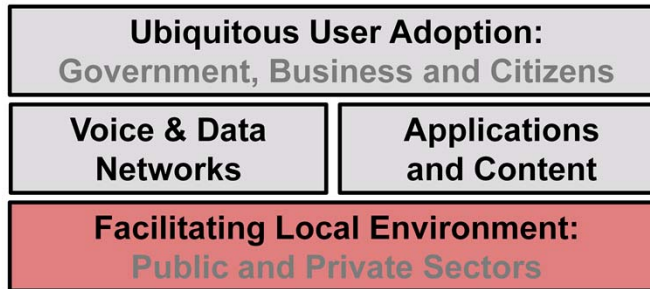
***“Digitization” - the mass adoption of  
connected digital services by  
consumers, enterprises, and  
governments***

Booz&Company: Digitization in  
Emerging Economies Report

## Digital Development: Ecosystem Model



## Digital Development: Facilitating Local Environment



### Public Sector

- Digital Development Plan
- Universal Service & Access Fund
- Spectrum Management & Allocation
- Cyber Security Laws
- Privacy Laws
- Electronic Financial Transactions Laws

### Private Sector

- Technical Skills
- Local Hosting of Content and Services
- International and Local Private Sector Partnerships
- Access to Capital

## Digital Development: Voice and Data Networks

**Ubiquitous User Adoption:**  
Government, Business and Citizens

**Voice & Data  
Networks**

**Applications  
and Content**

**Facilitating Local Environment:**  
Public and Private Sectors

- Affordable Access to Voice and Broadband
- Access for Urban and Rural Populations
- Shared Passive Infrastructure: Fiber Backbone, IXPs and International Gateways
- Adoption of New Technologies: High Capacity Satellites, LTE Small Cells and TVWS
- Access to Individuals, Households, Public Kiosks, Private and Public Sector Institutions
- Internet of Things

## Digital Development: Applications and Content

**Ubiquitous User Adoption:  
Government, Business and Citizens**

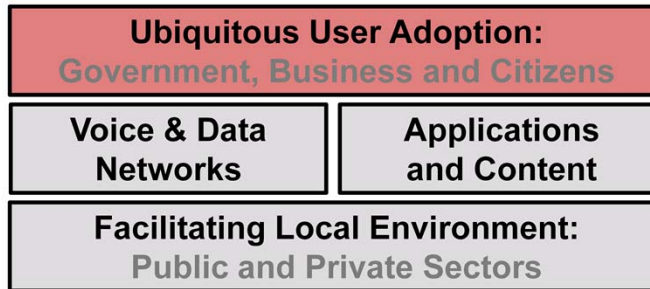
**Voice & Data  
Networks**

**Applications  
and Content**

**Facilitating Local Environment:  
Public and Private Sectors**

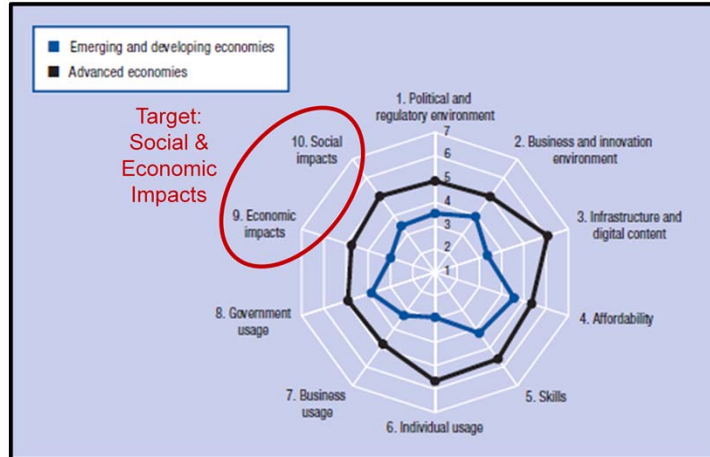
- Value-Added Locally-Developed Content and Services
- Locally Hosted Content and Services
- Local Language Content
- Content Support for: Education, Government, Health Services, Agriculture, Trade/Commerce, etc.
- Electronic-Based Financial Transactions
- Security and Privacy Issues Addressed
- Big Data & Analysis

## Digital Development: Ubiquitous User Adoption



- Affordable for All
- Available for All: Personal and Shared Access
- High Confidence: Security and Privacy
- Digital Literacy
- Early School Adoption
- Use by Individuals: Education, Government, and Private Sector Services
- Usable by those with Handicaps
- Gender Equality

## World Economic Forum



Source: WEF's GITR 2013 – NRI - Readiness and Impact



## ***Recommendations***

- ❖ **Digital Development IS accepted as a core OF Socioeconomic Development**
- ❖ **Ecosystem approach is *Essential* for Impact**
- ❖ **Need for executable Digital Development Plans**
- ❖ **For Beyond-2015, Digital Development should be included as a Sustainable Development Goal, *NOT as a separate add on***
- ❖ ***Future STIP Reviews should expand to include a stronger focus on Digital Development***

***Thank You!***

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