Shaping the Future of the Internet in Africa

Dawit Bekele

Director, African Regional Bureau

Internet Society

Outline

The state of Internet in Africa

The Internet of opportunity

Challenges

Working for a brighter future for the Internet

Conclusion

Internet Society

The state of Internet in Africa

How We Work

Operating at the intersection of policy, technology and development, allows the Internet Society to be a thought leader on issues key to the Internet's continued growth and evolution.

Our mission: Promoting the open development, evolution, and use of the Internet for the benefit of all people throughout the world.

TECHNOLOGY

DEVELOPMENT

POLICY

Internet Society

Global Presence

March 2015

Updated

108
Chapters Worldwide

More than
70k
Members and Supporters

145
Organization Members

6
Regional Bureaus

Africa before 2000

Less than 2% mobile penetration

International connectivity was using satellites for sub-Saharan Africa

National backbones were almost inexistent

Internet arrived in Tunisia and South Africa in 1991 and Egypt in 1993

Internet penetration was 0.78%

Broadband was almost inexistent

Growth of Internet penetration

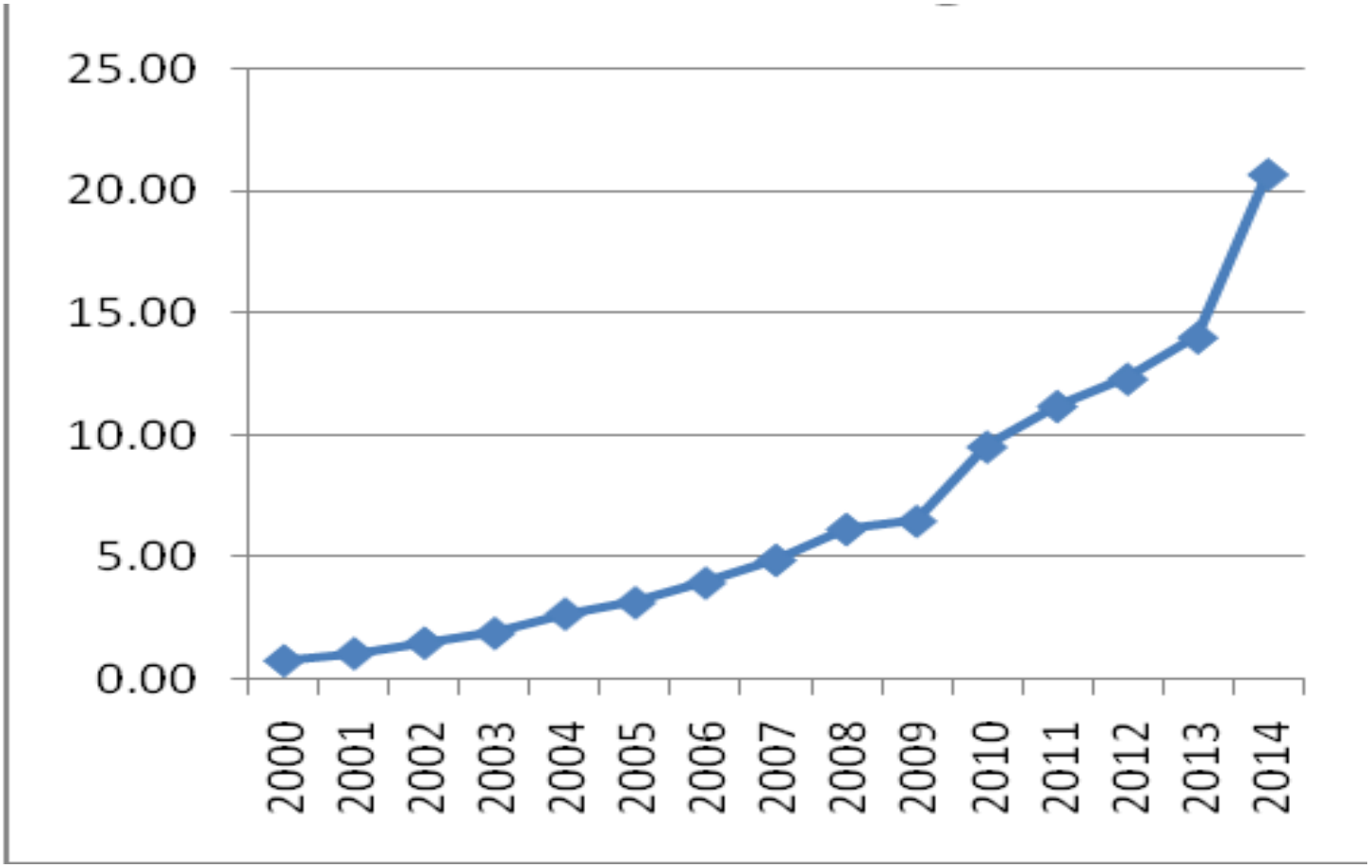
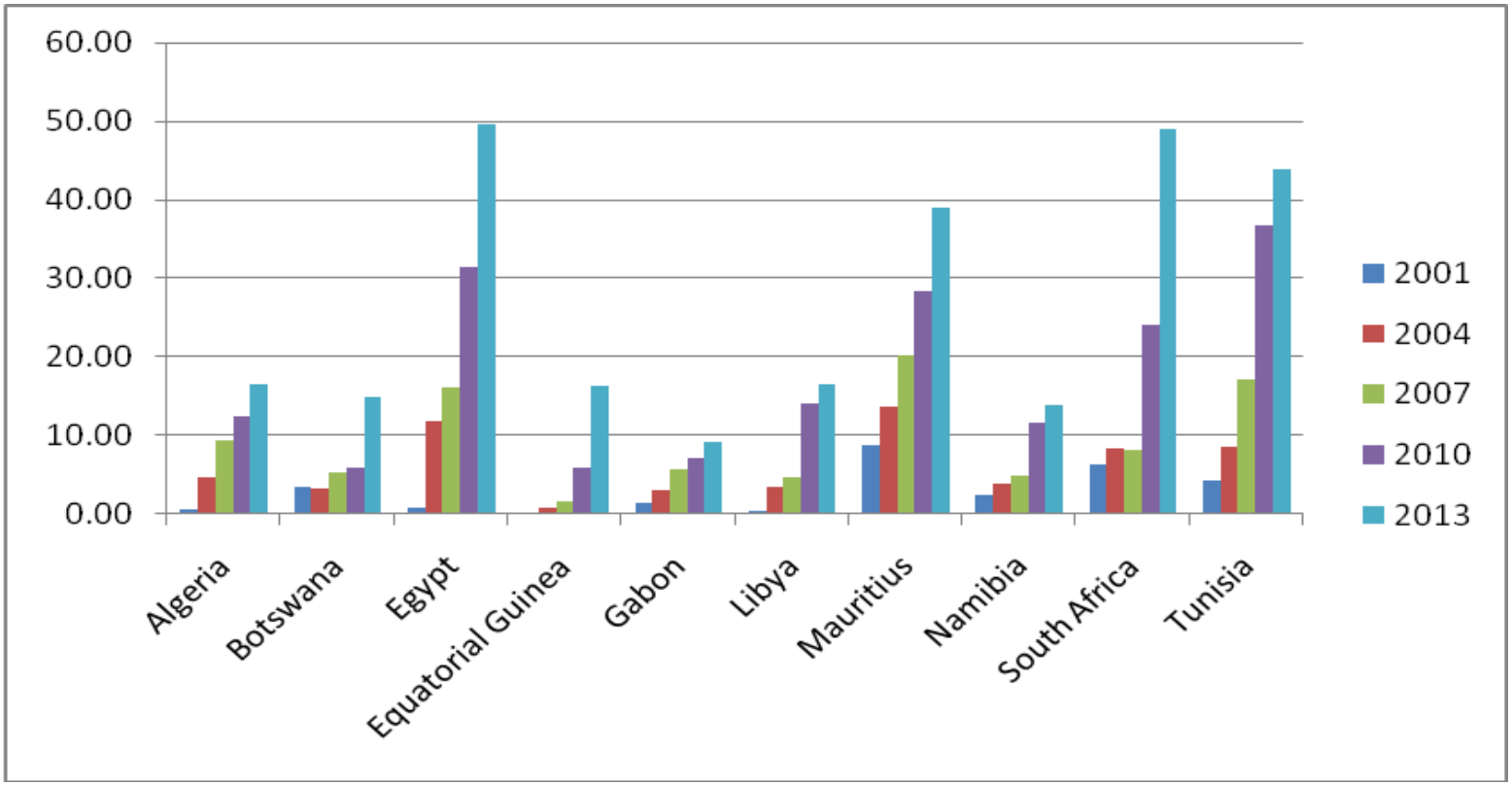


Figure 1 Internet penetration in Africa (Sources: http://www.internetworldstats.com/stats1.htm; ITU (2014), the World in 2014: ICT Facts and Figures)

Growth of Internet Penetration in Top 10 countries

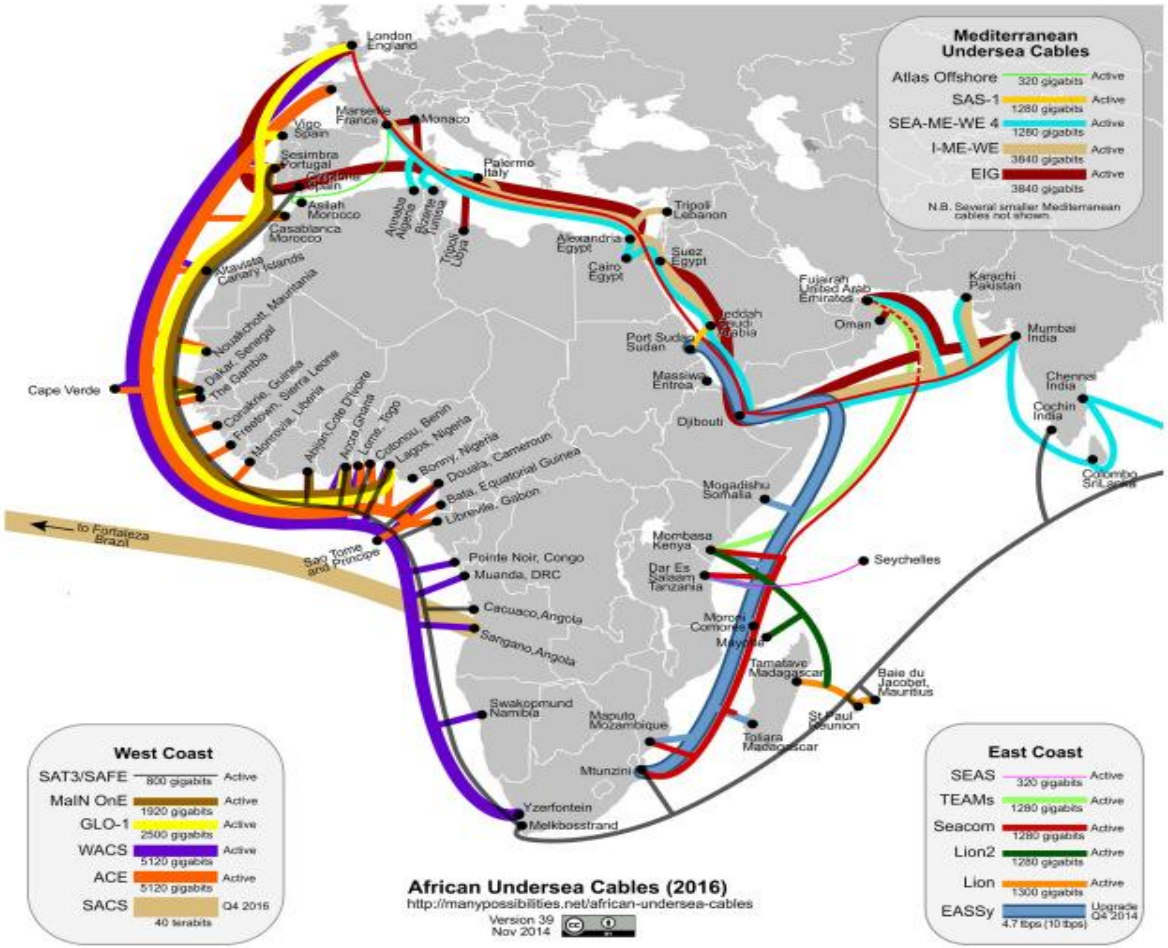


Source: ITU – the World in 2014: ICT Facts and Figures; 2014 World Bank Indicators on GDP per capita

ICT Indicators today

Indicator	Africa	World average
Internet penetration	28.7%	49.5%
Fixed telephone subscriptions	1.3%	15.8%
Fixed broadband	0.4%	9.8%
Mobile cellular subscriptions	69%	96%
Mobile broadband subscriptions	19%	32%

International connectivity



Terrestrial connectivity is moving in from coasts

Source: afterfibre.net

International connectivity

- **In just 5 years – from 2009 to 2014 Africa's**
  - **international bandwidth increased 20-fold**
  - **terrestrial network more than doubled.**

In 2011, inter-Africa Internet bandwidth was less than 2% of all the total international traffic

In 2015, it was about 10%

Rise of mobile communication

The primary means of Internet access is increasingly shifting towards wireless.

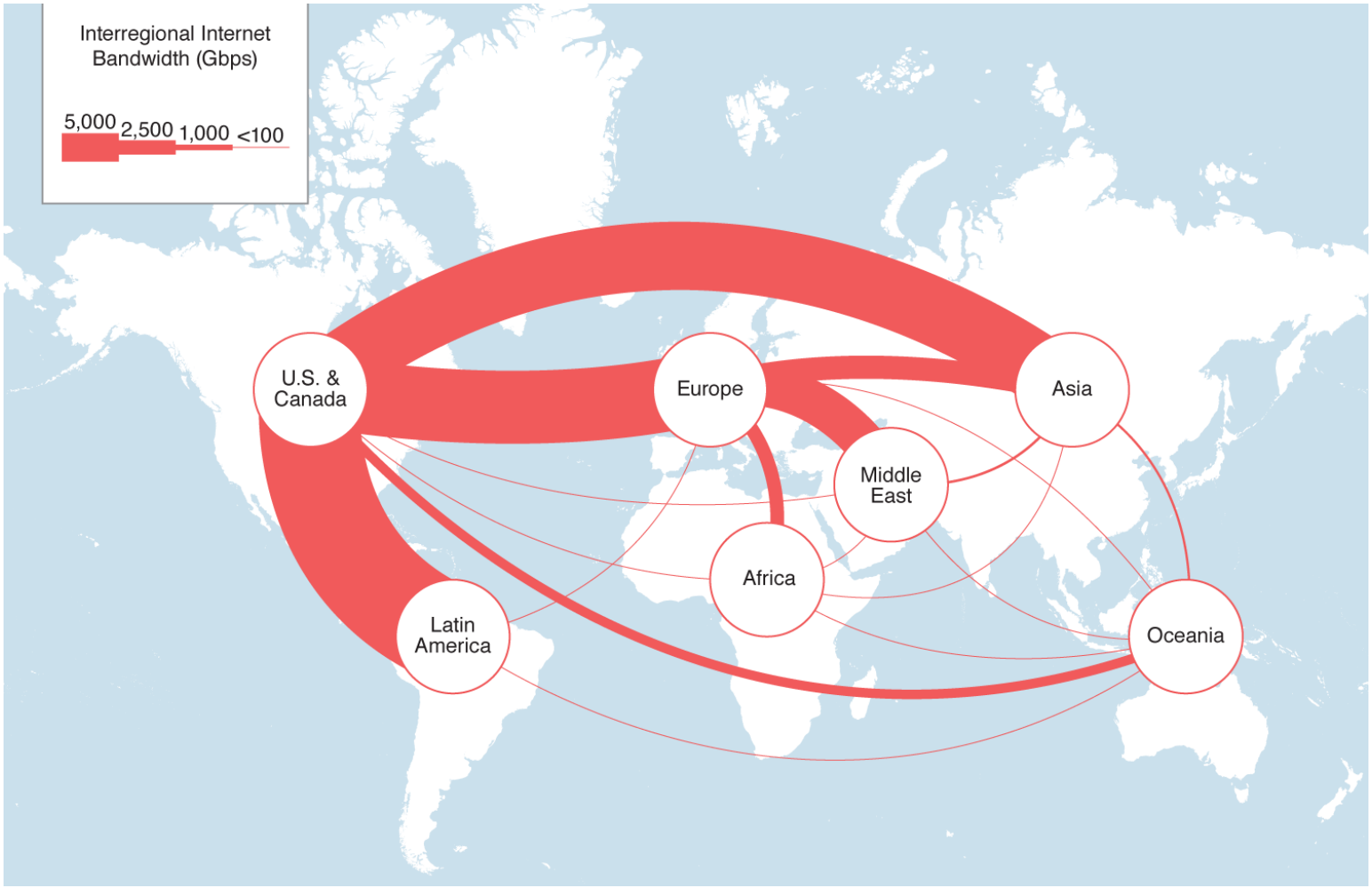
Wireless broadband

- **3G/4G mobile data plans for tablet or smartphones**
- **free or paid Wi-Fi services offered by businesses, hotels, Internet cafés, and others**

Increasing number of smartphones

- **Nigeria (25%), Egypt (22%), Ghana (18%), Cameroon (17%), Kenya (13%) and Senegal (11%).**

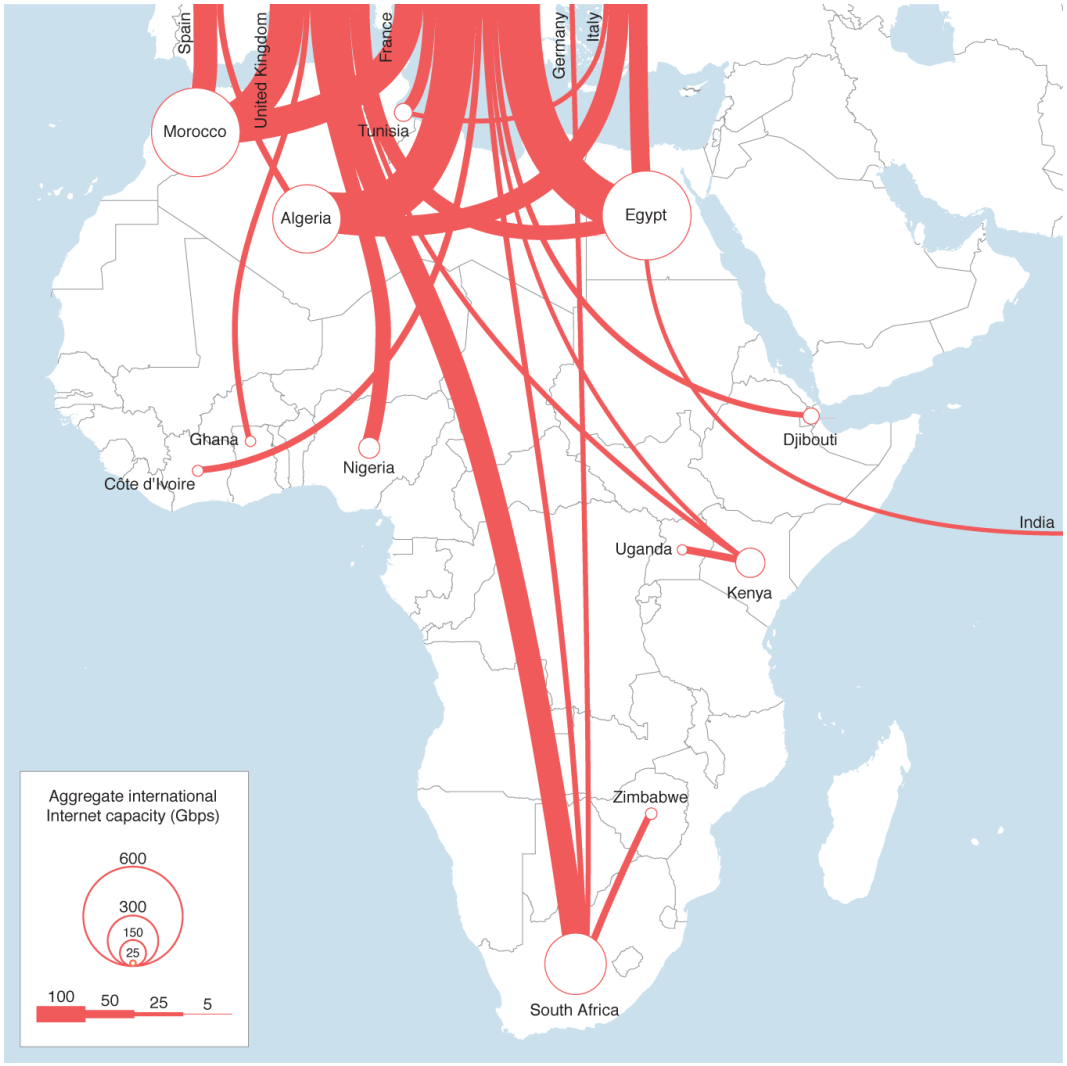
Inter-Regional Internet Bandwidth, 2015



Source: Telegeography

Internet Society

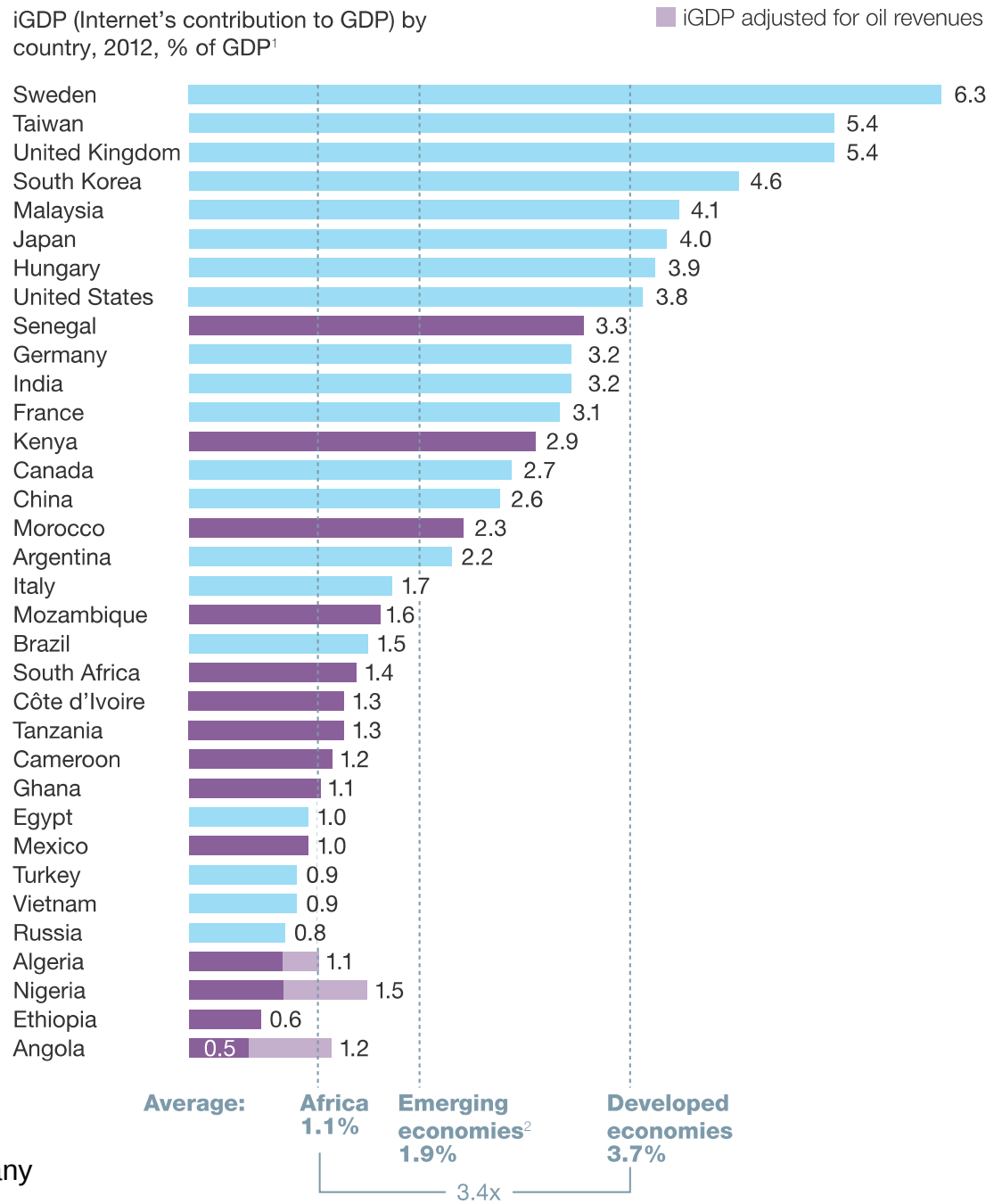
Major International Internet Routes in Africa, 2015



Source: Telegeography

The Internet of opportunity

Economic opportunity



Source: McKinsey and company

Social Opportunity

- **Increase reach, access and quality of education**
- **Inclusion of disadvantaged communities**
  - **Remote areas**
  - **Women**
  - **Sidelined communities**
- **…**

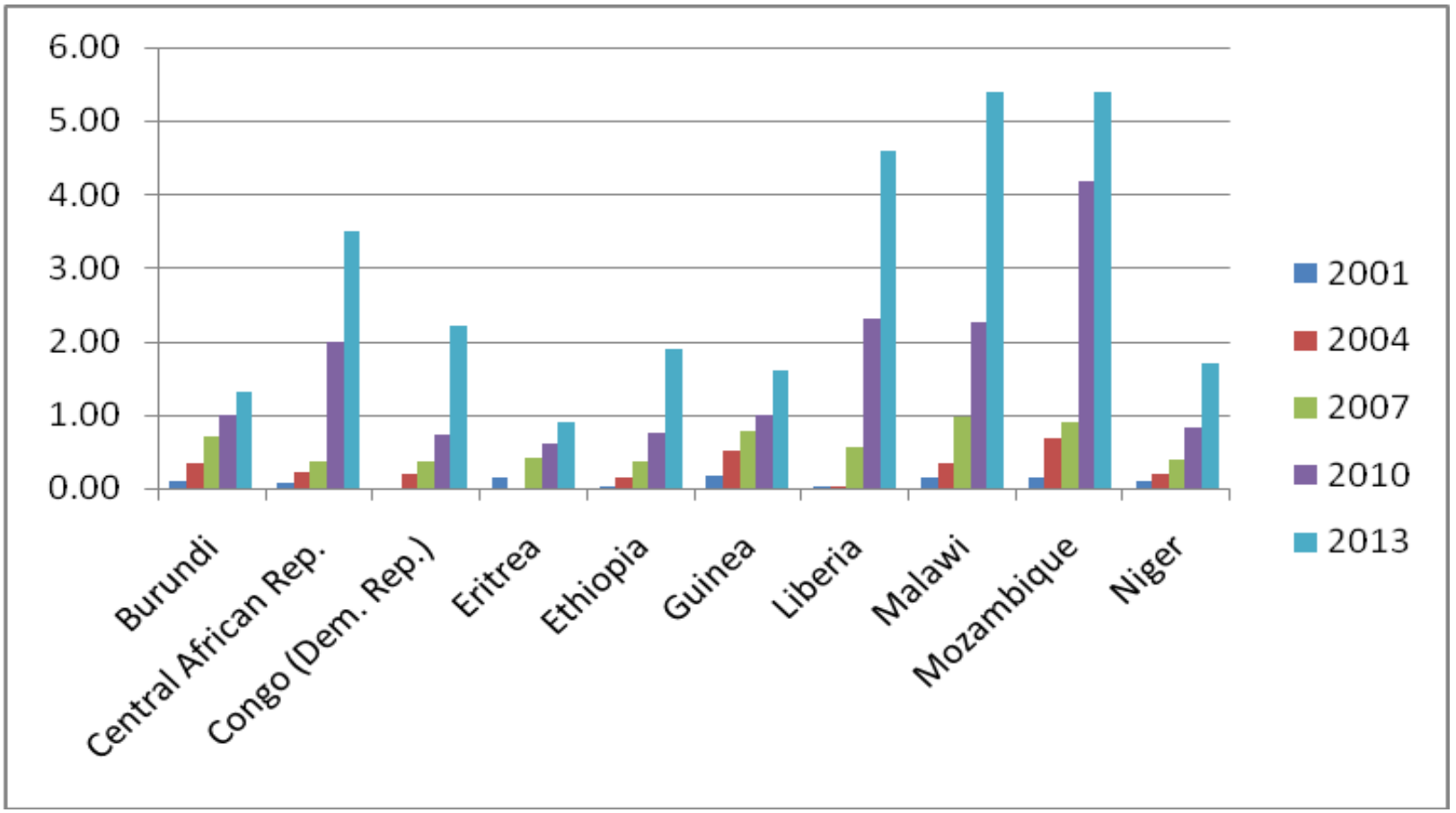
Political Opportunity

- **Africa is poor because it has been looted by its leaders and associates**
  - **Mobotu Sesse Seko 1-5 Billion USD**
  - **Sani Abacha 3 Billion USD**
- **The Internet makes despotism, corruption, injustice more difficult**

Challenges

Internet Society

Disparity of Access



Percentage of Internet users: bottom 10 countries based on GDP per capita (Source: ITU – the World in 2014: ICT Facts and Figures; 2014 World Bank Indicators on GDP per capita)

Cost of access

Cost of access of country's average GDP per capita

- less than 2% in most of Europe
- 6.1% in South Africa
- 7.4% in Sudan
- 15.7% in Kenya's average GDP
- 31% in Uganda
- 60.4% in Ethiopia

Quality of access

- **Interruptions**
  - **Lack of redundancy**
  - **Vandalism**
  - **Government shutdowns**
- **Bandwidth**
  - **Last mile**
  - **Content hosted outside the continent**

Trust

- **Security is the most important policy concern**
- **Personal data protection is a major concern**
- **Businesses and governments are vulnerable**
- **Children are targeted**

Governance

- **Major victory with the IANA transition**
- **Africa not always present in global forums**
- **Lack of strong multistakeholder governance at local level**

Working for a brighter future for the Internet

Interconnect Africa

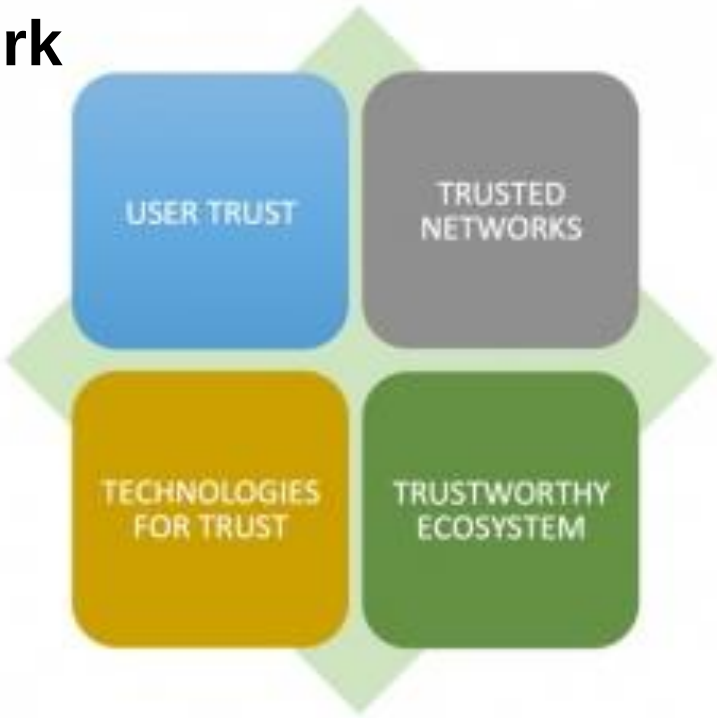
- **Domestic connectivity**
  - To connect landing stations, POPs, IXPs, etc.
  - Rights-of-way policies raise costs
- **Cross-border**
  - 16 land-locked countries and others without landing station
  - Often difficult to coordinate

Access …

- **Promoting African content and applications**
- **Keeping African content local to Africa**
- **Meaningful access: access should change the lives of Africans**

Trust

- **Collaborative security**
  - Fostering confidence and protecting opportunities:
  - Collective Responsibility
  - Fundamental Properties and Values
  - Evolution and Consensus
  - Think Globally, act Locally
- **Trust framework**



Governance

- **Build strong regional and national institutions**
  - **AFRINIC**
  - **AFNOG**
  - **AFTLD**
  - **Internet Society**
  - **APC**
  - **NIC**
  - **CERT**
- **Increase presence in International governance**
  - **Ex: IETF, ICANN**

Conclusion

Internet Society

- **The Internet has already transformed Africa**
- **However there is much more benefit that Africa can get from the Internet**
- **We all have responsibilities to shape it so that Africa reaps the benefits**
- **AFRICA NEEDS THE INTERNET AS MUCH AS THE INTERNET NEEDS AFRICA**

Internet Society™