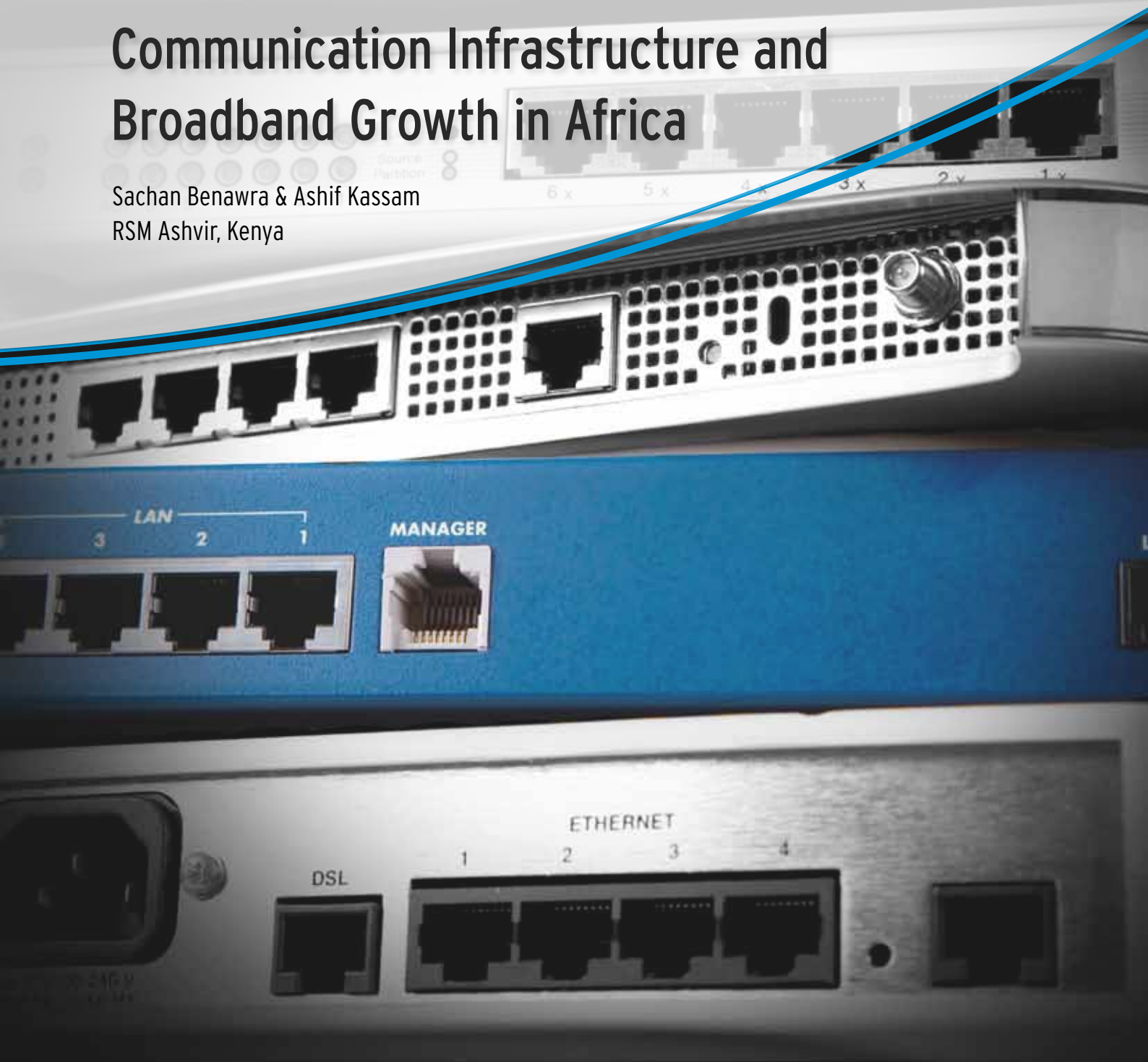


# Talking Points

## Communication Infrastructure and Broadband Growth in Africa

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As the growth of Africa's ICT (Information and Communications Technology) infrastructure proceeds, industry players are placing greater emphasis on mobile data and other value added services such as mobile banking and funds transfer. As a result of these innovations, African countries (particularly Kenya) are extending ICT services to both urban and rural populations on the continent.

This article examines the development of Africa's ICT sector. While Africa faces major obstacles to infrastructural modernisation, continuing technological advances augur favourably for the future of ICT in the Sub-Saharan region.

### ICT Investments in Africa

During the past two to three years, African ICT investments have focused on upgrading communications infrastructure to new generation mobile technology (first 3G and now 4G) and enlarging the region's fibre optic connectivity footprint.

But the Average Revenue Per User (ARPU) in Africa has fallen as a consequence of an expanding number of industry players and growing subscriber recruitment. The fact that the incremental increase in Africa's subscriber base comes primarily from low income households exerts further downward pressure on ARPU. The continuing decline in ARPU lowers return on capital (a key driver for new investments in the communication sector) and threatens the long-term stability of the ICT sector.

Regulations governing African ICT play a vital role in promoting the stability of the sector and allowing the full benefits of technology modernisation to be passed to the population. However, many tax regimes in Africa consider the use of ICT (including computers and mobile phones) as a luxury item subject to high tax rates, whose costs are ultimately passed on to the consumer. Deficient regulation of competition and poor enforcement of anti-vandalism laws further hinder the industry's development. Sabotage of ICT infrastructure remains common in Kenya and other African countries.

Neither national governments nor regional organisations have created strong incentives for local service providers to migrate from established legacy systems to advanced technologies. Moreover, the lack of localised production of ICT hardware and software in Africa raises equipment costs above levels prevailing in other continents.

### Connect Africa Goals

In October 2007, regional stakeholders convened in Rwanda for a Connect Africa Summit organised by the International Telecommunications Union, the African Union, the African Development Bank and the World Bank. This conference issued the "Connect Africa Goals" to bolster ICT links within Africa and connect the region with the rest of the world.

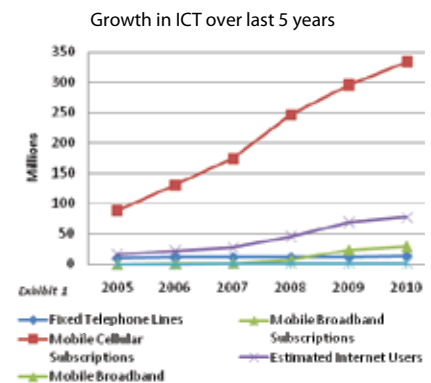
The Rwanda conference addressed the role of African governments in the installation of fibre optic infrastructure. Fibre optic deployment is underway in Kenya, where the national government has commissioned the East African Marine Systems (Teams) cable. The Connect Africa project further aims to strengthen coordination between the East and Central African countries to promote development of a pan-regional ICT infrastructure.

The summit also brought together various regional and non-regional players from both the ICT and non-ICT sectors. For instance, EASSy (one of the firms implementing the fibre optic cable across the East African region) is owned and operated by a group of African and international stakeholders holding 92 and eight percent respectively equity ownership. Non-ICT companies are major investors in Seacom Cable, another fibre optic developer.

These investments in ICT infrastructure require large-scale financing. According to the Infrastructure Consortium for Africa (ICA), ICT investments in Africa increased from US \$275 million in 2008 to \$697 million in 2009. 85 percent of Africa's ICT investment has been financed by the International Finance Corporation, the World Bank and the African Development Bank.

### Growth of African ICT

These investments have boosted penetration of ICT technologies in Africa. Exhibit 1 reports growth rates and trends in key ICT sectors in the region.



Source: Data obtained from the International Telecommunications Union, October 2010

Mobile cellular subscriptions lead Africa's ICT sector, with the subscriber base increasing from 88 million in 2005 to 333 million in 2010. The expansion of the mobile subscriber base results from increased price competition that makes mobile phone services more affordable for ordinary Africans.

During this period Internet penetration increased from 16 million to 77 million users. The parallel expansion of mobile cellular use accelerates the growth of Internet usage, broadening access to mobile Internet services.

Fixed broadband subscriptions and fixed telephone lines lag behind the mobile cellular and Internet segments of Africa's ICT sector, reflecting Africa's challenging topography and poor line infrastructure.

### Conclusion: Future of African ICT

While the modernisation of Africa's Information and Communications Technology faces a number of obstacles, continuing technological advances bode favourably for the future of African ICT. For example, the advent of "cloud computing" presents important opportunities for Africa to migrate up the international technology curve. Meanwhile, the One Laptop Per Child (OLPC) project promises to extend the reach of ICT into rural communities on the continent.

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