



Telecommunications infrastructure: Traditional and emerging challenges

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MainOne

Price of broadband internet in Africa's largest economies

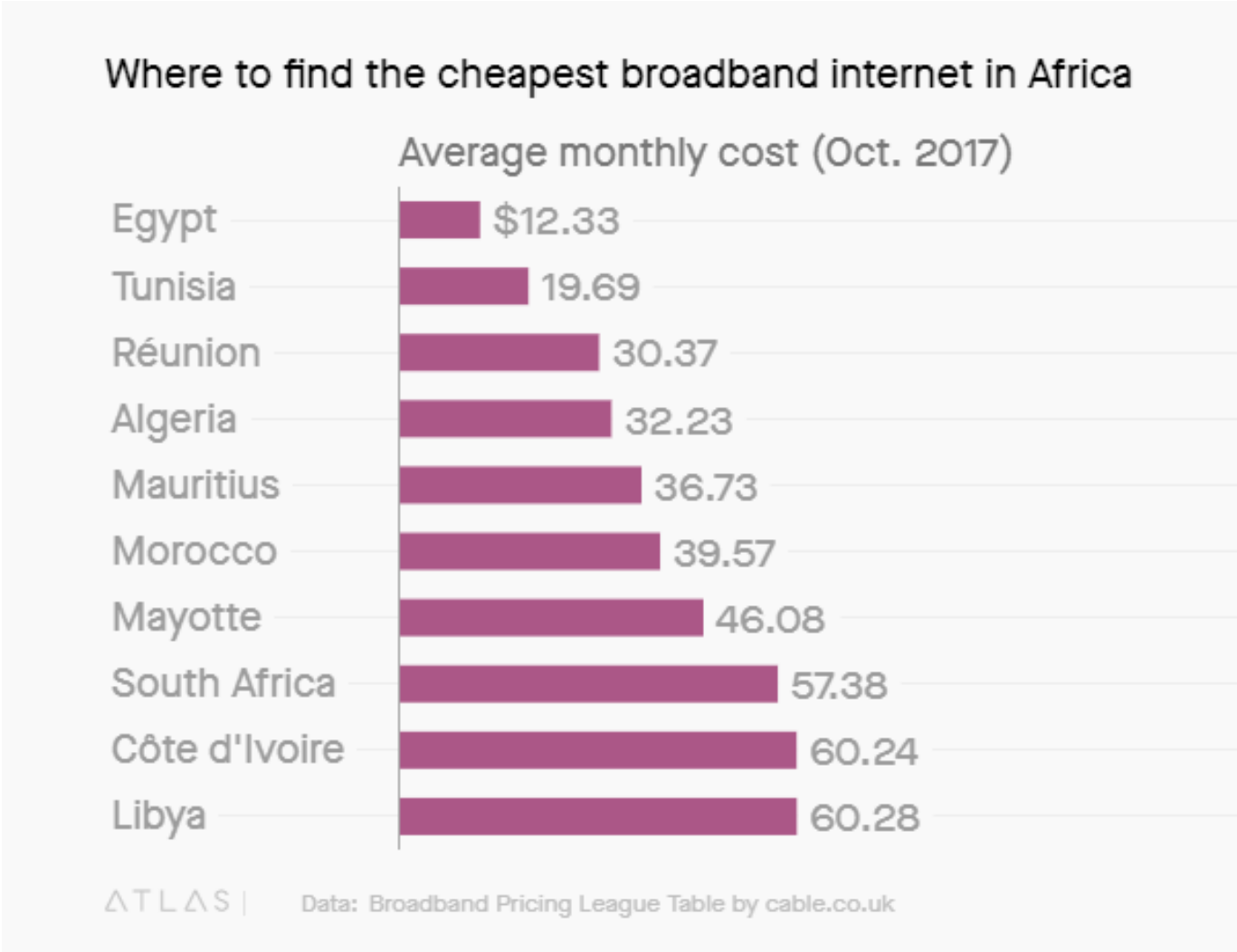


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A survey of 196 countries across the globe has shown consumers in these African countries pay the most for internet in the world. Even as the nations are among the poorest across the globe.

According to the study conducted by the BDRC Continental and broadband comparison site, Cable.co.uk, Internet users in across sub-Saharan Africa pay well above \$100 per month for internet access. At the top of this rank are [Burkina Faso](#), [Nigeria](#), [Angola](#), [Gabon](#), [Mali](#), [Namibia](#), [Niger](#), [Somalia](#), [Tanzania](#) and [Zimbabwe](#).

Where to find the cheapest Broadband Internet in Africa



A comparative analysis of three African countries

SOUTH AFRICA

4 submarine cables

Broadband held back for many years by an expensive operating environment created by Telkom's dominance in the fixed-line market.

Deregulation and entry of Neotel as 2nd fixed-line operator and infrastructure operators like Vumatel, Dark Fibre Africa, FibreCo + MNOs such as Vodacom and Cell C

Government also funded ZAR1.4b to expand fibre network

FTTX Council: number of houses passed by fibre has grown from 439,000 in 2017 to 933,000 by March 2018: 112% YoY growth

South Africa remains the largest hub of foreign direct investment (FDI) on the continent. Microsoft announced plans to build 2 data centres in Africa

KENYA

4 submarine cables

Launched its Broadband Policy in 2013, planned 30k km expansion.

Converged regulatory authority: Communications Commission of Kenya (CCK)

67% internet population.

The Kenya government building its fibre optic submarine cable, "The East African Marine System (TEAMS)".

Government-funded National Optic Fibre Backbone Infrastructure (NOFBI) project has built 5000km. Operators have also built about 4000km fiber infrastructure in 24 of Kenya's 47 counties

NIGERIA

5 submarine cables

Broadband Plan, which set fixed broadband targets of 30% by 2018 delayed for 5 years.

Nigeria has 38,000 km infrastructure, mostly owned by MNOs. Country needs 120,000km

Underutilization of 3 submarine cables, \$7bn investment

To catch up, Nigeria needs to expedite actions and take steps to assure broadband targets are achieved

Smartphone costs still high. Nigeria ranks 143/176 in 2017 ITU ICT Index

Costs that still hinder broadband delivery in Nigeria

Infrastructure

- Proprietary dominance of infrastructure by some operators
- Infrastructure gap between rural/urban areas
- Lack of Infrastructure Protection
- Backhaul Capacity constraints
- Power and Road Networks
- Ineffective PPP Collaboration initiatives

Policy

- Multiple layers of regulation and bodies
 - Numerous taxes, red-tape
 - Average RoW costs still above N10k
 - Cost/Time of imports
- Absence of well-constructed policies to support local countries
 - South Korea as model
- Need for indigenous player protection and Data Domiciliation policies



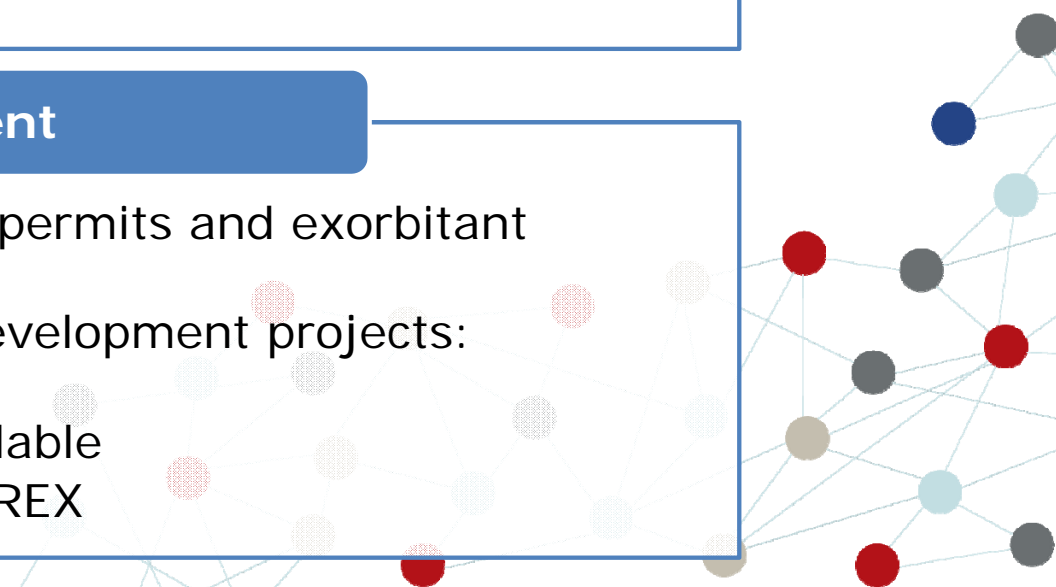
Costs that still hinder broadband delivery in Nigeria (2)

Capacity Building

- ICT curriculum yet to catch up with Digital Economy
- Minimal Digital Literacy
- ICT clusters engaging academia collectively
- Encourage cluster ecosystems powered by tech

Financing and Investment

- Multiple Taxes, delays in permits and exorbitant RoW
- High costs of loans for development projects: NIBOR
 - NCC N3bn funding available
- Capital and Access to FOREX



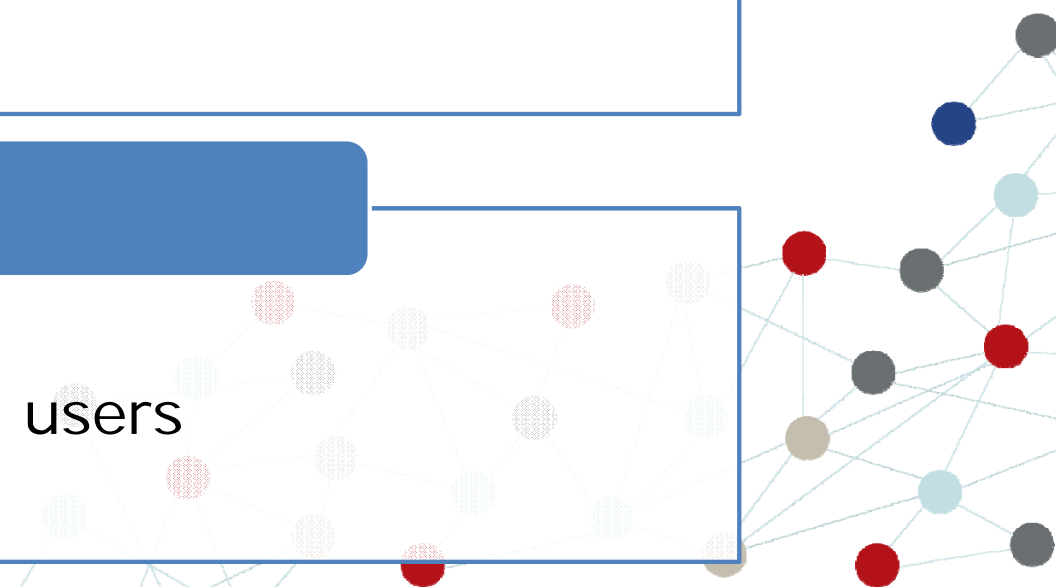
How this affects Consumers

Pricing & QoS

- \$80 average cost of monthly broadband packages is nearly double national minimum wage of \$55 (N20,000)
- Quality of Service dips

Use

- The 'Hotspot' Effect
- Offline first internet users



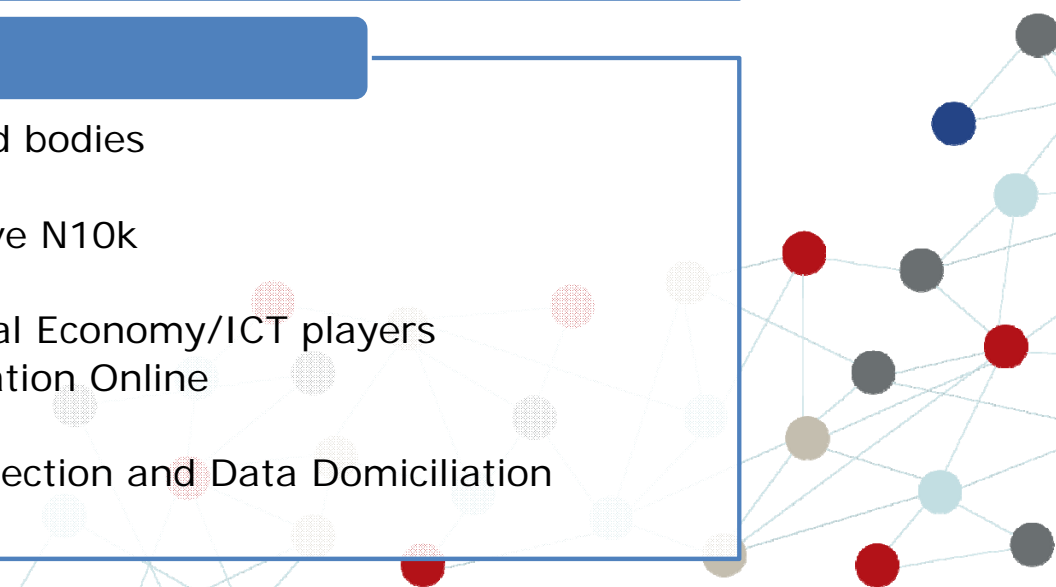
Solutions to the Broadband Conundrum

Infrastructure

- Infrastructure Sharing
 - Emulate FCC's One-Touch, Make Ready
- More effective spectrum management framework + Secondary Spectrum Market
- Execute InfraCo model
- PPP Collaboration + Smart City
- Infrastructure Protection

Policy

- Multiple layers of regulation and bodies
 - Numerous taxes, red-tape
 - Average RoW costs still above N10k
 - Cost/Time of imports
- Prioritized FOREX pool for Digital Economy/ICT players
- Government, Healthcare, Education Online
- Locally relevant Content
- Need for indigenous player protection and Data Domiciliation policies



The world is leaving us behind



26 JULY 2018

Kenya: Software Skills Firm Andela Picks Kigali for Its Pan-African Hub

Tagged: Business • Central Africa • East Africa • ICT • Kenya • Rwanda

AP July 21, 2017, 4:39 AM

China announces goal of leadership in artificial intelligence by 2030

Social Media

Facebook brings first African tech hub to Nigeria

By Adeyemi Adepetun
23 May 2018 | 4:26 am

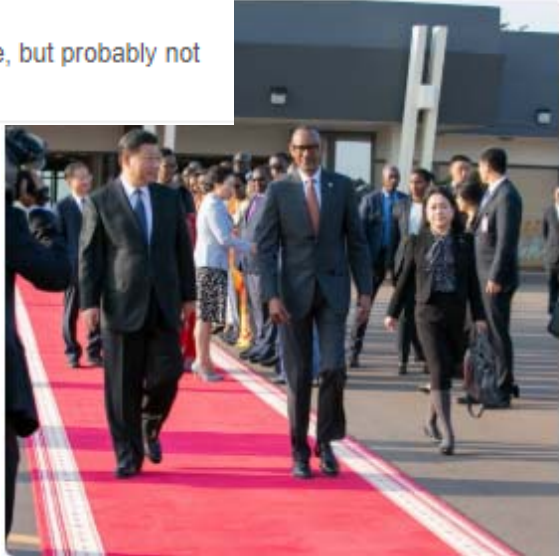


Microsoft to deliver Microsoft Cloud from datacenters in Africa

Rwanda is becoming a hub for expanding tech companies - CN
<https://edition.cnn.com/2016/07/14/africa/rwanda-tech-hub/index.html>
 Jul 19, 2018 - You would expect to see the words 'Made in Rwanda' on a jar of coffee, but probably not on a laptop.

President Paul Kagame hosts Chinese President, President Xi Jinping and India Prime Minister, Rt. Hon. Narendra Modi same week.

Both world leaders are visiting Africa for the first time



'Ghana is the future of Africa': Why Google built an AI lab in Accra

Yaba iHQ Case Study: 100,000 jobs and counting



We put Lagos on the global map

Lagos is not only Nigeria's commercial hub; it is the seat of technology innovation. MainOne's infrastructure investments in Yaba's Innovation Headquarters has helped attract foreign direct investments and generated over 3000 direct jobs. And we have only just started.



About MainOne

We are West Africa's **preferred** communication solutions

Provider and parent company of MDXI Data Centres, an ecosystem of data centres across West Africa

The logo for MainOne, featuring the company name in white text on a blue trapezoidal background. Above the letter 'i' in 'One', there are three small white dots arranged in a slight arc.

MainOne

