

Overcoming last-mile challenges and connecting rural education communities

By

Wole Abu, CEO, Pan African Towers Limited



Background

- Access to Life Enhancing Services such as health, education and financial inclusion continues to be one of the greatest challenges in SSA.
- SSA lags behind other regions considerably in terms of broadband penetration.
- Nigeria is a mobile first country with many people accessing the internet only through mobile phones. Unique mobile Subs of 97.5m is projected to grow to 130m in 5years, Mobile penetration will grow from 44% to 55% by 2025 and smartphone penetration from 53m to 144m .
- Infrastructure gap is estimated to be \$136b
- 4IR is imminent with MTN launching 5G trials already and about 50 nations already commercially launched.
- Regulatory challenges remain major obstacles



The Digital Landscape in Nigeria

© GSMA, 2018

NIGERIA MOBILE LANDSCAPE AT A GLANCE

SEPTEMBER 2018

UNIQUE MOBILE SUBSCRIBERS

97.5M,

RISING TO **130M**
BY 2025



Around half of unique subscribers also use **mobile internet services**

MOBILE PENETRATION

49%,

RISING TO **55%**
BY 2025



Compared to fixed-line penetration of **less than 1%**

TOTAL CONNECTIONS

151M,

RISING TO **210M** BY 2025



Of which 3.2m are cellular IoT connections

SMARTPHONE ADOPTION

53M

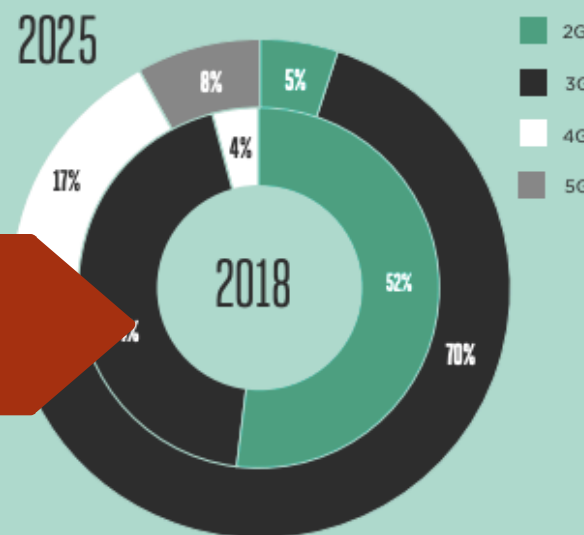
SMARTPHONE CONNECTIONS

RISING TO **144M**
BY 2025

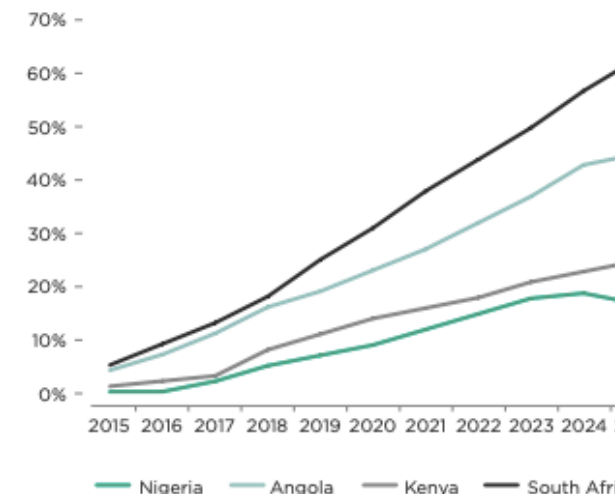


Smartphone adoption rate of **36%**

More Nigerians are getting access to mobile broadband...



...but the country lags regional peers in 4G adoption. Helping accelerate adoption would set the stage for more advanced services and bigger positive societal impact.



The Last-Mile Challenges



CAPITAL \$136b investment needed to bridge the infrastructure gap. Currently using about 10% of the international cable capacity. 40,000 Towers exist but about 40,000 more required to deliver



REGULATORY ENVIRONMENT :

Multiple Taxation, Permits, EIA, ROW, TAX, FAAN, Bureaucracy (Federal, State, Local)



POWER

Unreliable Grid, Diesel volatility, Renewable Energy Cost



VANDALISATION:

Insecurity, theft, fiber cuts, community issues

Overcoming the last-mile challenges: What we are doing at PAT

- Capital: Getting long term equity and debt funding
- Regulatory Environment: Ongoing engagement with regulators
- Other actions that can overcome the regulatory challenges include: Tax reduction on towercos, Implementing swift digital processes and systems to foster permits collection and licensing, RoW (Reopening shut down base stations and allowing operators to build more base stations, Updated EIA processes,



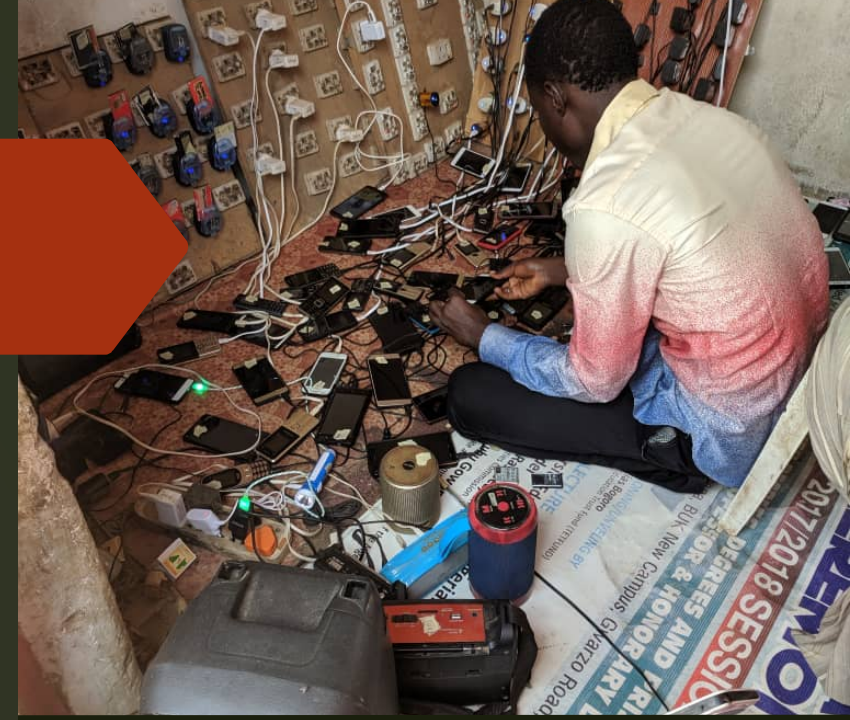
© Bonhill Group, 2019



© OECD, 2019

Overcoming the last-mile challenges

- Vandalisations: Engaging government to implement the Critical National Infrastructure (CNI) Bill, Interfacing with security agencies, Engaging and interfacing with security men. At PAT we have started the Mobile Phone Charging Initiative in Kano as part of our CSR initiative to let security men charge phones of community members so they see our sites as their sites and protect it
- Power: Transitioning to hybrid renewable energy, Reducing Fossil Fuel usage and Greenhouse Gas Emissions



© Watt Renewables, 2019

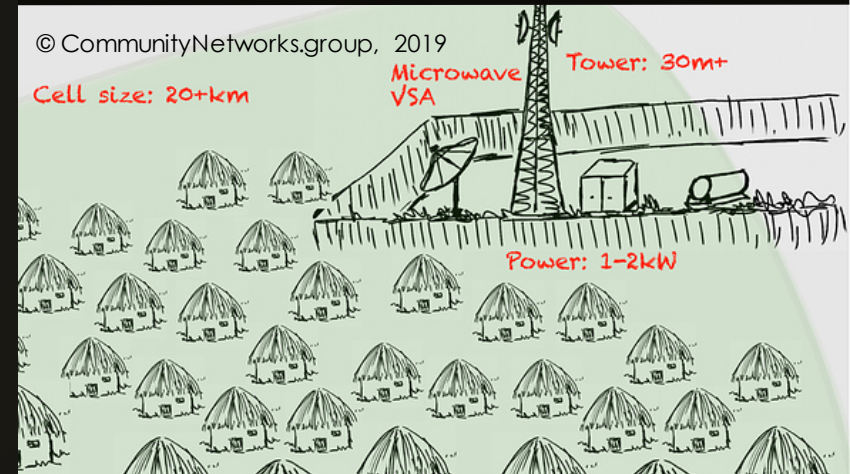


Community Networks: Connecting schools

- Community Networks (CNs) come as autonomous connectivity solutions to narrow down connectivity lacks
- CNs have been focusing on building human-centred solutions, rather than technology-centred solutions.
- CNs use broadband, internet, radio frequencies to link computers in rural educational institutions



© Dailymotion, 2014



© CommunityNetworks.group, 2019

What we are doing to connect rural education communities

- ▶ Because education is important, We are partnering with Eko-Konnect and WACREN as part of our Corporate Social Responsibility to connect schools through CNs to foster education and research
- ▶ Our towers are made available for Eko-Konnect to mount their Raspberry Pi's, a little computer chip designed to build community networks
- ▶ These Raspberry Pi's is helping us establish community networks in higher institutions in Enugu and its environs under the project "Zik Konnect"
- ▶ The schools would have open access to e-libraries, data repositories and information hub

5G Changes Everything

► Thank You