



PARADIGM
INITIATIVE

Nigeria's National Broadband Plan

(2013 - 2018)

**A Review of Major Action Points
and Policy Recommendations**





Synopsis

This document seeks to undertake a review of Nigeria's Broadband Plan 2013 - 2018, in order to assess its achievements set against its targets, particularly with respect to broadband penetration and infrastructure targets. Given the reported plans of the Federal Government to review the Broadband plan in order to fashion out a new plan beyond 2018, this review seeks to ensure that the gaps identified in the 2013 - 2018 are identified and closed, thus enabling a better and more robust post 2018 broadband plan.

1. Introduction

The Federal Government of Nigeria, through the Ministry of Communications Technology (now referred to as the Ministry of Communications), had in 2012, set up a Presidential Committee on Roadmap for the Achievement of Accelerated Universal Broadband Infrastructure and Services Provision, with the former Executive Vice Chairman of the Nigerian Communications Commission, Dr. Ernest Ndukwe, as Chairman and the Chairman of Zenith Bank, Jim Ovia, as co-Chairman.

This committee set to work fleshing out the details of a National Broadband Plan for Nigeria, with input from experts and all relevant stakeholders. The publication of Nigeria's National Broadband Plan¹ was greeted with much aplomb and anticipation, given the strategic importance of broadband infrastructure to Nigeria's economy and development.

Nigeria's National Broadband Plan (2013 - 2018) set a host of targets for broadband coverage, penetration, policy formulation and implementation, local content and industry development, among others. The National Broadband Plan's headline target was to achieve 80% penetration of 3G mobile wireless broadband by 2018 and the five-fold increase of broadband penetration, from the 2013 penetration of 6% to 30%, by the end of 2018. Defining broadband within the Nigerian context as an Internet experience where the user can access the most demanding content in real time at a minimum speed of 1.5 Mbps, and without buffering of video content, the National Broadband Plan acknowledged that mobile broadband was the fastest route to the attainment of its objectives for coverage and penetration, while making detailed plans for the rollout of

¹ Nigeria's National Broadband Plan (2013 - 2018). Federal Ministry of Communications, Nigeria, <https://bit.ly/2N94bLn>

broadband fibre infrastructure from international broadband cable landing points off the coast of Nigeria (particularly Lagos) into the Nigerian hinterland as city and metro networks.

The table below shows the key targets of Nigeria's National Broadband Plan. As the broadband plan's target year (2018) winds to an end, there is a consensus among civil society² and industry professionals³ that the broadband plan has not achieved its aims. This policy brief seeks to re-examine the broadband plan's key targets, unearth gaps in their outcomes and propose recommendations to guide a revised National Broadband Plan beyond 2018.

²Prince Osuagwu and Emmanuel Elebeke, "Broadband Plan Debacle: 30% penetration target divides ICT sector. The Vanguard, July 11 2018 <https://bit.ly/2CXzOTp>

³"21% broadband penetration yet to be achieved in Nigeria — Teniola", The Punch, December 10 2017. <https://bit.ly/2pdvnKG>

Item	Description	Timeline	Responsible
Policy Formulation	Define the open access framework and secure ROW Waivers with states	2013	Federal Ministry of Communication Technology (FMCT), Nigerian Communications Commission (NCC)
	Enable expedited ROW permits for the rapid rollout of base stations	2013	Federal Ministry of Communication Technology, State Governments, Federal Ministry of Works (FMoW)
	Declare Critical National Infrastructure License new operators as required	2013	National Assembly, State Governments NCC
Enabling Infrastructure	Interconnect National and Regional Long Distance Operators	2013	FMCT, NCC, FMoW, Licensees
	Incentivise rollout of fibre infrastructure	2013-2014	FGN, NCC, State Govs

Item	Description	Timeline	Responsible
	Agree 3G Rollout Target implementation with operators	2013	NCC, Licensees
	Publish plan for freeing up more Spectrum for LTE rollout	2013	National Frequency Management Council (NFMC), NCC, National Broadcasting Commission (NBC)
	Conduct spectrum licensing for LTE in 2.5GHz, and 2.6GHz bands Release spectrum on the sub-40GHz bands for mobile backhaul	2014 – 2015 2014 – 2015	NCC NCC, NFMC
Costing and Pricing	Agree Financial Incentives for achieving rollout targets Agree Funding Options for accelerating broadband Infrastructure rollout	2013	FMCT, NCC, Ministry of Finance (MoFI), Licensees FMCT, NCC, Universal Service Provision Fund (USPF), Ministry of Finance

Item	Description	Timeline	Responsible
Funding and Investment	<p>Agree Financial Incentives for achieving rollout targets</p> <p>Agree Funding Options for accelerating broadband Infrastructure rollout</p>	2013	<p>FMCT, NCC, Ministry of Finance (MoFI), Licensees</p> <p>FMCT, NCC, Universal Service Provision Fund (USPF), Ministry of Finance</p>
Driving Demand	<p>Set up Public Access Points and ICT Training Centres</p> <p>Educate women on the use and benefits of ICT</p> <p>Interconnect all Internet Exchange Points</p> <p>Connect all universities</p> <p>Connect schools, colleges and hospitals</p>	2014	<p>NITDA, USPF, Digital Bridge Institute (DBI), State Govs</p> <p>FMCT, NCC, USPF</p> <p>NITDA, NCC</p> <p>GBB, NUC, FMCT, USPF</p> <p>State Govs, NCC USPF</p>

Item	Description	Timeline	Responsible
	Incentivise Original Equipment Manufacturers (OEM) sub \$30 smartphone devices		NCC, Local Manufacturers & Blackberry, Nokia, Samsung, Huawei, ZTE, etc.
Building Fibre Infrastructure	<p>Build Metro fibre networks in all the major cities and state capitals</p> <p>Incentivise building of last mile wireline infrastructure to homes, estates, and commercial premises</p> <p>Extend international cable landing points to other coastal states</p>	2014	<p>Licensees, State Govs</p> <p>NCC, Licensees</p> <p>FMCT, NCC, Licensees</p>
Wireless Broadband Infrastructure Upgrade and Expansion Phase 1	<p>All new cell sites to be LTE compatible</p> <p>Spread 3G to at least 50% of the population</p> <p>Complete Digital Dividend spectrum migration</p>	<p>2014</p> <p>2015</p>	<p>Licensees</p> <p>NCC, Licensees</p> <p>Licensees, NBC, NCC</p>

Item	Description	Timeline	Responsible
	Release more spectrum for LTE		NFMC, NCC
Wireless Broadband Infrastructure Upgrade and Expansion phase 2	Spread 3G/LTE to at least 70% of the population	2017	Licensees, NCC
Wireless Broadband Infrastructure Upgrade and Expansion phase 3	Spread 3G/LTE to at least 80% of the population	2018	Licensees, NCC

2. Key takeaways from a Review of the National Broadband Plan, versus its stated targets



2.1 The National Broadband Plan has not achieved its goal of 30% broadband penetration by 2018

When it was published in 2013, the headline target for Nigeria's National Broadband Plan was to achieve a fivefold increase in Nigeria's broadband penetration from 6% in 2013 to 30% in 2018. Although statistics from the Nigerian Communications Commission (NCC) suggests that broadband penetration in Nigeria is around 22 - 27% and should hit the 30% target by the

end of 2018, industry watchers in civil society⁴ and the private sector⁵ disagree with this assessment⁶. Conservative independent estimates for Nigeria's broadband penetration put the figure at around 10%⁷, about half the figure put forward by the NCC.

In the first instance, the fact that there is such dissonance within the industry about ICT statistics says a lot about the confidence of stakeholders over the statistics coming from the regulator. Although the International Telecommunications Union (ITU) statistics also place active mobile subscription in Nigeria at 22.9%⁸ - a figure very close to the NCC's figure for Nigeria's broadband penetration of between 22 - 27%, research by Paradigm Initiative has revealed the legitimate grounds for the Nigerian industry's dissonance on ICT statistics.

The first basis for the Nigerian ICT industry's dissonance is that the NCC sweepingly equates mobile broadband penetration with broadband penetration, as though mobile broadband were the only vehicle of broadband delivery envisaged in the development of the National Broadband Plan in which the NCC was a key stakeholder. Simply put, mobile broadband penetration is not the same thing as broadband penetration, a fact even acknowledged by data by the ITU, when it disaggregated its data for Nigeria by distinguishing mobile from fixed, and correcting placing mobile broadband penetration for Nigeria at 22.9%. Fixed broadband penetration for Nigeria is 0.1%. In essence, Nigeria's National Broadband Plan did not set a target of achieving a 30%

⁴ Prince Osuagwu and Emmanuel Elebeke, "Broadband Plan Debacle: 30% penetration target divides ICT sector. The Vanguard, July 11 2018. <https://bit.ly/2CXzOTp>

⁵ "21% broadband penetration yet to be achieved in Nigeria — Teniola", The Punch, December 10 2017. <https://bit.ly/2pdvnKG>

⁶ "Despite massive investment, broadband plan totters", The Punch, December 21 2017. <https://bit.ly/2BqNKnN>

⁷ Prince Osuagwu and Emmanuel Elebeke, "Broadband Plan Debacle: 30% penetration target divides ICT sector." The Vanguard, July 11 2018. <https://bit.ly/2CXzOTp>.

⁸ "Measuring the Information Society Report 2017 volume 2: ICT Country profiles, <https://bit.ly/2i7NGxc>

mobile broadband penetration by 2018. Rather, it set a target of achieving a 30% penetration for broadband in its entirety. And although the Broadband Plan envisaged that mobile broadband will be the fastest mode of broadband delivery across Nigeria, the plan also set detailed and well reasoned plans for other important modes of broadband delivery such as fixed (fibre) access. This can be seen from the summary plan as reproduced in table 1.

The second basis for the industry's skepticism towards the NCC's broadband penetration data can be found in the definition of broadband in the National Broadband Plan (2013 - 2018). The National Broadband Plan clearly defined broadband within the Nigerian context as "an Internet experience where the user can access the most demanding content in real time at a minimum speed of 1.5 Mbit/s". It is interesting to also note that the Broadband Plan also stated the possibility of revising this threshold speed upward, in light of new technologies, acknowledging that the threshold speed for broadband was once only 256 kbps. As a respected industry association's leader noted recently, there are really only a handful of locations in Nigeria's major urban centres where the broadband experience described by the Broadband Plan is a reality. By this definition of Broadband, the industry expert revised Nigeria's broadband penetration to around 10%⁹.

Moreover, industry skepticism towards ICT statistics churned out by the NCC isn't restricted to broadband penetration alone. There have been doubts over the correct figures for teledensity and Internet penetration in Nigeria. The statistics from the NCC seemingly stems from counting numbers of SIM cards registered

⁹. Prince Osuagwu and Emmanuel Elebeke, "Broadband Plan Debacle: 30% penetration target divides ICT sector. The Vanguard, July 11 2018 <https://bit.ly/2CXzOTp>

and the numbers of active SIM cards with data subscriptions for teledensity and Internet penetration respectively. For instance, subscriber data¹⁰ obtained from the NCC website records 238,219,577 connected GSM lines in Nigeria, and gives Nigeria's teledensity as 115.57%, using Nigeria's 2016 census figure of 140 million Nigerians. Similarly, NCC data suggests that there are 103.6 million Internet users in Nigeria, which means whether we use the 2014 census figure for Nigeria's population, or our most recent population estimate from the National Population Commission which is 198 million, we arrive at an Internet ~~penetration~~ which many industry experts see as suspect. This is because it is a well established fact that many Nigerians use multiple SIM cards. It is estimated that up to 66% of Nigerians use two or more active SIM cards¹¹, so using absolute SIM card numbers to measure Internet penetration can result in inaccurate data. The NCC and all GSM companies have invested heavily in the registration of SIM cards so it is possible to count subscribers and not just SIM cards when computing either Nigeria's teledensity or Internet penetration.

Recommendation

As the coverage period for Nigeria's Broadband Plan (2013 - 2018) comes to an end and plans are being made for a new plan, it is important to reflect that unless there are accurate measurement methodologies in place, which correctly capture the real penetration of broadband services, plans cannot be effectively monitored and evaluated. This eventually leads to policy failure.

¹⁰. Nigerian Communications Commission Subscriber statistics, <https://bit.ly/2MwkeOd>

¹¹. Bankole Oluwafemi, "How Nigeria became the world's dual SIM-card superpower", Quartz, February 18 2015. <https://bit.ly/2wM2WHW>

2.2 Although the National Broadband Plan emphasized mobile wireless broadband, it could not have foreseen the abysmal development of fixed broadband

The Nigerian National Broadband Plan's headline target was to achieve a fivefold increase in broadband penetration in Nigeria, from the 2013 level of 6% to 30% in 2018. The plan acknowledged that the fastest route to the achievement of this goal was through the development and expansion of 3G mobile wireless networks across the country. Nevertheless, the National Broadband Plan also mandated the development of a broadband network which could help deliver the most engaging content enabling diverse applications in fields such as telemedicine and entertainment. It is an established fact globally that fibre broadband is the best option in delivering such reliable and fast broadband access to households, organizations and communities, as envisaged in the National Broadband Plan.

In realization of this, the National Broadband Plan set out ambitious and detailed plans for the rollout and expansion of fibre broadband infrastructure in the country (Table 1). These plans have failed largely because of the difficulty encountered in implementing some of the agendas noted in the table above. Fixed broadband penetration in Nigeria is 0.1%.

Despite the presence of terabytes of capacity at the coastal landing points of the international fibre backbone in Nigeria, further inland development through metro networks have been hindered by a host of factors, many already anticipated in the broadband plan as shown in the table above.

Perhaps the most important of these limiting factors has been the exorbitant right of way charges for laying broadband fibre infrastructure in Nigeria. It has emerged over the years that state and local governments have required right of way charges over and above what is officially stipulated (N145 per metre for fibre)¹², thus driving up the cost of investment required to expand Nigeria's Fibre broadband network. States charge between N1,500 and N6,000, per metre, for right of way charges. This fact alone has even constituted a deterrent to investors in Nigeria's broadband network, who have been discouraged by the bad business case occasioned by very high right of way charges. As a result, it is reportedly four times cheaper to transmit fibre Internet from Lagos to London than from Lagos to Abuja¹³. According to the Nigerian Communications Commission, Nigeria needs 120,000km of metropolitan fibre networks, but currently has 38,000km. We can learn a lesson from the rapid development of Nigeria's Global System of Mobile Telecommunication (GSM) which was aided largely by foreign investment, to understand that removing barriers to foreign investment can greatly stimulate the development of fibre broadband infrastructure in Nigeria.

Right of way charges and multiple taxation by different tiers of government have been acknowledged by industry experts as the greatest obstacle to fibre broadband infrastructure in Nigeria. Nevertheless, solutions have to be found too for the insecurity of telecommunications infrastructure across the country. Telecommunications infrastructure have often become the target of economic vandals, a fact which does not bode well for broadband deployment in Nigeria. Another related challenge to broadband development in Nigeria is the poor electrical power grid. As with right of way charges and multiple taxation across the nation, this was also anticipated in the 2013 National Broadband Plan by proposing the use of green energy solutions in Nigeria. More investment

¹²Adeyemi Adepetun, "What Nigeria needs for effective broadband penetration, by Dambatta". The Guardian, 22 January 2018. <https://bit.ly/2NPMgsD>

¹³ibid

is needed in green energy solutions to amplify its impact on broadband and telecommunications services delivery in the nation

Recommendation

Giving the centrality of the challenge posed by right of way charges to the deployment of fibre broadband infrastructure in Nigeria, perhaps the time has come to convene an emergency stakeholder summit on this need. Governments at local, state and federal levels need to see broadband as a long game, where the rewards are in the future, but will eventually come.

2.3 A broadband Plan isn't one without customer experience measurement

Nigeria's National Broadband Plan sought the expansion of broadband access and use across the nation to stimulate national development. The Broadband Plan acknowledged the importance of fast broadband networks to development in all sectors of national life, citing a World Bank study¹⁴ on the economic gains of broadband connectivity for mid and low level income countries.

Although the Broadband plan was couched in terms of the benefits broadband access brings to individuals, households and organizations, a major omission of the broadband plan was its failure to plan for a customer satisfaction survey. In the final analysis, the benefits of broadband to Nigerian citizens, households and organizations boils down to user experience. Without an official consumer

¹⁴Qiang et al, "Economic Impacts of Broadband", <https://bit.ly/2xfhNdY>

satisfaction survey, which ascertains the experience of users in Nigeria set against broadband targets, the National Broadband Plan left a huge gap in its set-up.

The last official Customer Satisfaction Survey¹⁵, mandated by the Nigerian Communications Commission (NCC), was in 2012, a year before the plan was published. Amongst other findings, that survey suggested that only 40% of Nigerians thought their Internet connection was fast or very fast. The survey discovered also that 40% of Nigerians thought their Internet connection was slow or very slow. The absence of another survey gauging broadband user experience within the timeframe of the National Broadband Plan shut out the possibility of measuring the effectiveness of the Broadband Plan.

Recommendation

As plans are being finalized on a new Broadband Plan beyond 2018, there is a need to incorporate within this new plan a customer survey. The survey will ensure that the user experience of broadband users all across the country are captured and will reveal whether broadband expansion targets are being met.

¹⁵Nigerian Communications Commission Nigeria Consumer Satisfaction Survey: Final Report Part 2 Data Analysis <https://bit.ly/2DeLeT9>

2.4 Stakeholders must do more to bridge the Gender divide

The items under the “Driving demand” section of the National Broadband Plan include targets such as “Set up Public Access Points and ICT Training Centres”; “Educate women on the use and benefits of ICT”; “Interconnect all Internet Exchange Points”; “Connect all universities”; “Connect schools, colleges and hospitals” and “Incentivise Original Equipment Manufacturers (OEM) sub \$30 smartphone devices”.

The Nigerian Universal Service Provision Fund (USPF) has made progress in areas such as setting up public access points and connecting universities and colleges. Nevertheless, concerns have been expressed about operational inefficiencies in the administration of the USPF¹⁶, one of which was identified as the lack of consultation of local communities concerning their needs before facilities for Internet and digital connectivity are provided¹⁷.

An ignored area, of gaping need, is in the education of women and girls on the benefits of ICT. In a lot of Nigerian societies, women are traditionally marginalized and are less likely than men to have access to ICT tools and connectivity. An authoritative study on Gender gaps in ICT access in developing countries by the World Wide Web Foundation in 2015 found that women are about 50% less likely to be connected than men in the same age group with similar levels of education and household income¹⁸. This global study, conducted in partnership with Paradigm Initiative in Lagos, Nigeria, gives an indication of the need and work to be done, including really understanding the current situation on ICT gender gap. The 2015 study by the World Wide Web Foundation cast a spotlight on the gender gap in ICT access, but there is a need

¹⁶ “Universal Service Provision Fund: Operational and Fund Management Analysis”, BudgIT Nigeria.

¹⁷ Universal Service Provision Fund: Operational and Fund Management Analysis, Side-session at Internet Freedom Forum 2018 Abuja Nigeria.

¹⁸ “Women’s Rights Online: Translating Access into Empowerment, <https://bit.ly/2GMMSfR>

for nationally available data disaggregated for gender, which aids monitoring and evaluation efforts in this area of need.

Recommendation

Although included in the National Broadband Plan (2013 - 2018), in light of its importance for household and national development, efforts to bridge the digital gender divide should be intensified and given more prominence. Government is encouraged to work with local and international partner networks, who are experts in development practice.

Conclusion

Nigeria's National Broadband Plan (2013 - 2018) brought with it the prospect of meeting great developmental goals occasioned by access to ultrafast broadband access to households, towns and cities of the nation. With four months to the end of its planning cycle, the consensus amongst stakeholders in civil society and industry is that the plan has failed in achieving its key targets.

The years 2019 and beyond provide another opportunity for stakeholders to learn from the shortcomings of the broadband plan (2013 - 2018) towards ensuring that a revised broadband plan, which delivers on its promises, is drafted, published and implemented. Access to affordable and fast broadband networks is now linked to important developmental goals in society, including in education, healthcare, environment management and industry, amongst others. All stakeholders in government, private sector and civil society are therefore urged to work together to ensure that Nigeria's prosperous digital future is secure through nationwide access to fast broadband services at affordable prices.

