

# Collaborative regulation: Accelerating Nigeria's digital transformation



# **Collaborative regulation: Accelerating Nigeria's digital transformation**

In partnership with:



## Acknowledgements

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This country review is part of a series of case studies and country reviews developed in the framework of the ITU work stream on collaborative digital regulation with the financial support of the United Kingdom Foreign, Commonwealth and Development Office (FCDO).

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# Foreword



I am delighted to present this new study in the series of collaborative digital regulation country reviews. The digital age has brought about unprecedented advancements in technology and connectivity, but with it comes a host of new challenges for regulators and policy-makers. The International Telecommunication Union (ITU) has made it one of our priorities to support countries in enacting effective, collaborative policy and regulation to ensure that the benefits of digital transformation are shared by all.

For over 20 years, ITU and our partners in the wider global regulatory community have made enormous progress in analysing, mapping and understanding the evolving role that regulation plays in society and in economies. Through this effort, we now have a clear-eyed view of the path ahead for all countries, no matter where they are, in their journey towards fifth generation collaborative digital regulation, or G5, that has emerged as the gold standard for regulators and policy-makers seeking to promote an enabling environment for digital transformation. The G5 framework marks a shift of scope beyond a narrow consideration of telecommunications/ICT to a far broader one of each country's readiness to exploit a fully enabled digital economy and society.

Taking the work one step further, ITU has developed a series of national country reviews on collaborative digital regulation, in partnership with government authorities, national stakeholders and recognized experts. Based on established evidence-based tools, the ITU ICT Regulatory Tracker and the ITU G5 Benchmark, the country reviews offer a comprehensive assessment of the regulatory and governance frameworks, policies, and practices in each studied country.

The country reviews are an important tool for regulators and policy-makers as they work to create an environment that promotes investment, competition, digital innovation, protects consumers, and ensures that the benefits of digital transformation are widely shared. They highlight diverse experiences and different policy and regulatory patterns while exploring good practices, challenges and lessons learnt by regulators in navigating digital transformation. The country reviews also help develop a better understanding of the role and impact of collaboration and collaborative governance, and the use of new tools for regulating ICT markets.

Each country assessment is unique in focusing on the specificities of national regulatory and institutional frameworks for digital markets to thrive and on collaborative governance. While all country reviews follow a similar methodology, the process of developing the study is necessarily highly collaborative and tailored to the country's specific needs and priorities. For each country, the reviews capture hard-won gains, and provide actionable insights and pointers of immense value to other countries eyeing a similar path as they navigate the rapidly evolving digital landscape. Equally they deliver a practical and inspiring message of empowerment, of overcoming resistance and securing acceptance of the value of the work and of what it can deliver.

First launched in 2021, the series of collaborative digital regulation country reviews has been leveraging country-specific experiences in moving the global digital agenda forward and aligning it with the 2030 Sustainable Development Goals (SDGs). The series also plays a central role in ITU efforts to measure the impact and benefits of G5 collaborative digital regulation, and support ITU Member States in their journey to achieving SDGs and inclusive, sustainable digital transformation through meaningful policy and regulatory reform that will benefit all.

I hope that this series will serve as a catalyst for further collaboration and the advancement of digital regulation globally. I recommend this study as an enlightening and practical tool together with our regulatory metrics to all national regulators and decision-makers as they work to achieve meaningful connectivity and accelerate an inclusive and sustainable digital transformation through regulation that is open, cross-sector, and above all, collaborative.



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# Abbreviations

Abbreviation / Acronym	Definition
AfDB	African Development Bank
CAC	Cybercrime Advisory Council
CBN	Central Bank of Nigeria
CSIRT	computer security incidence response team
DE4A	Digital Economy Initiative for Africa
DFS	digital financial services
ECOWAS	Economic Community of West African States
eGDR	e-government development and regulation
FCCPC	Federal Competition and Consumer Protection Commission
FIRS	Federal Internal Revenue Service
FMCDE	Federal Ministry of Communications and Digital Economy
FMCT	Federal Ministry of Communication Technology
FME	Federal Ministry of Education
FMOH	Federal Ministry of Health
G5	fifth generation
GDP	gross domestic product
GII	global innovation index
ICT	information and communication technology
InfraCorp	Infrastructure Corporation of Nigeria
IP	intellectual property
IT	information technology
ITU	International Telecommunication Union
Mbit/s	Megabits per second
MoU	Memorandum of understanding
MSME	Micro-, small and medium-sized enterprises
NBC	National Broadcasting Commission
NBIJC	National Broadband Infrastructure Joint Committee

(continued)

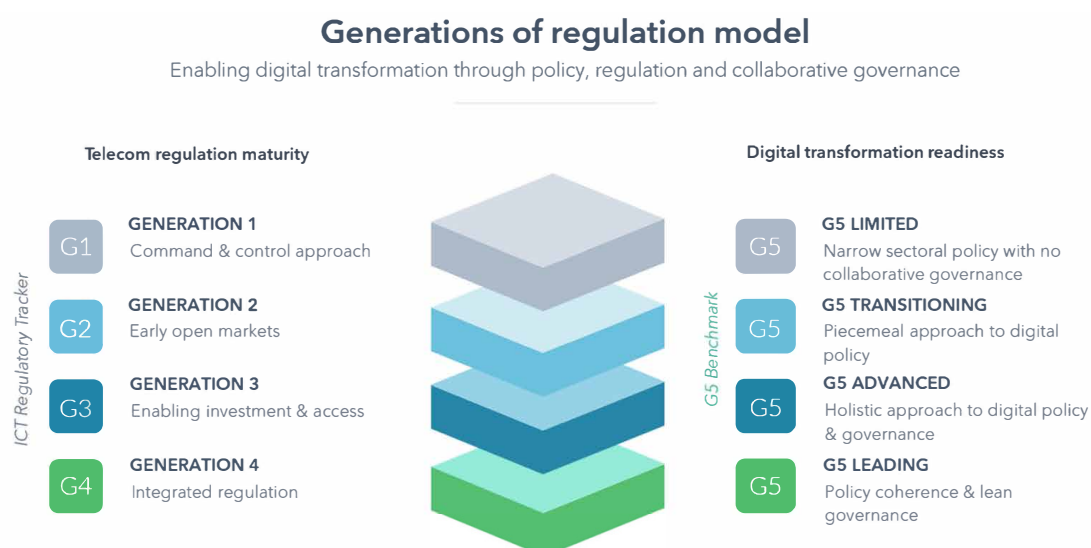
Abbreviation / Acronym	Definition
NCC	Nigerian Communications Commission
NDEPS	national digital economy policy and strategy
NDP	national development plan
NESREA	National Environmental Standards and Regulations Enforcement Agency
NFMC	National Frequency Management Council
ngCERT	Nigeria computer emergency response team
NGF	Nigerian Governors' Forum
NGN	Nigerian naira
NIMC	National Identity Management Commission
NIN	national identification number
NIP	national investment policy
NIPC	Nigerian Investment Promotion Commission
NITDA	National Information Technology Development Agency
NOTAP	National Office for Technology Acquisition and Promotion
NSCDC	Nigeria Security and Civil Defence Corps
ONSA	Office of the National Security Advisor
SDG	Sustainable Development Goals
SMP	Strategic management plan (ASPIRE 2024)
SPRM	states peer review mechanism
SVIP	strategic vision implementation plan
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations International Childrens' Emergency Fund
USPF	universal service provision fund
USSD	unstructured supplementary service data

# 1 Introduction

The ability to successfully collaborate is one of the key building blocks of a digital economy and a key marker of a fifth generation (G5) regulator. G5 regulation represents a paradigm shift for governments and regulators globally. As part of this shift, it forces the reconsideration of existing institutional frameworks and the harmonization of policy priorities and regulatory rules in recognition of the interplay between digital infrastructure, services and content across industries and national borders.

This paper considers developments in Nigeria's information and communication technology (ICT) and digital sector in the context of the 'generations of regulation' framework developed by the International Telecommunication Union (ITU). Although the process from G1 to G4 is linear, G5, the latest generation, can be considered complementary to the previous generations, highlighting the increased importance of more flexible and collaborative regulatory frameworks capable of addressing the broad impacts of the digital economy across sectors.

**Figure 1: Generations of regulation**

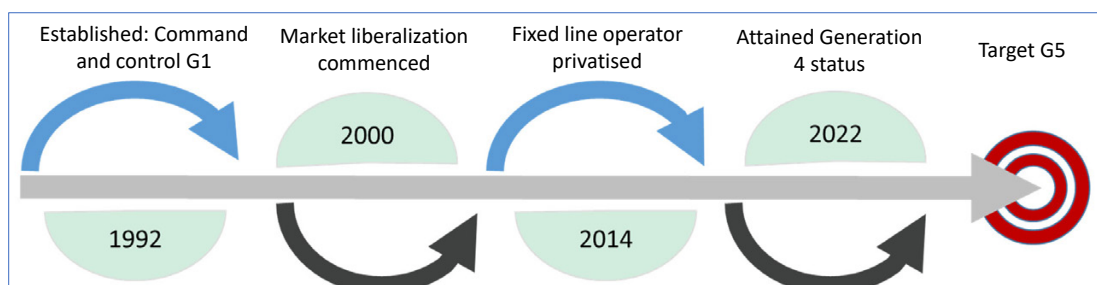


Nigeria has made significant policy and institutional changes that point towards a recognition of the centrality of the digital economy – as opposed to just the ICT sector – in socio-economic development (see also *Figure 2*). These changes facilitate the move away from considering matters in silos to collaboration to advance the digital economy. The country has taken the journey from command and control first generation regulation (G1) when the Nigerian Communications Commission (NCC) was established in 1992 through Decree no. 75 of 1992, to a market liberalization process that started in 2000, through to mobile competition which was introduced in 2001, while the fixed line operator Nigerian Telecommunications Limited (NITEL) and Mobile Telecommunications Limited (MTEL) that handles mobile telephony, were eventually privatized in 2014. By 2020, Nigeria was among the group of countries with G3 regulation.<sup>1</sup> Third generation regulation is marked by indicators such as the introduction of a unified licensing regime in recognition of convergence, an enabling environment for investment, innovation and access, and a clear competition and consumer protection regime. Nigeria is now classified as

<sup>1</sup> [https://www.itu.int/dms\\_pub/itu-d/opb/pref/D-PREF-BB.REG\\_OUT01-2020-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-BB.REG_OUT01-2020-PDF-E.pdf)

G4<sup>2</sup>, or fourth generation, which denotes integrated regulation led by socio-economic goals and objectives, such as those set out in the Nigeria national development plan (NDP) (2021 – 2025).

**Figure 2: Nigeria's journey towards Generation 5 regulation**



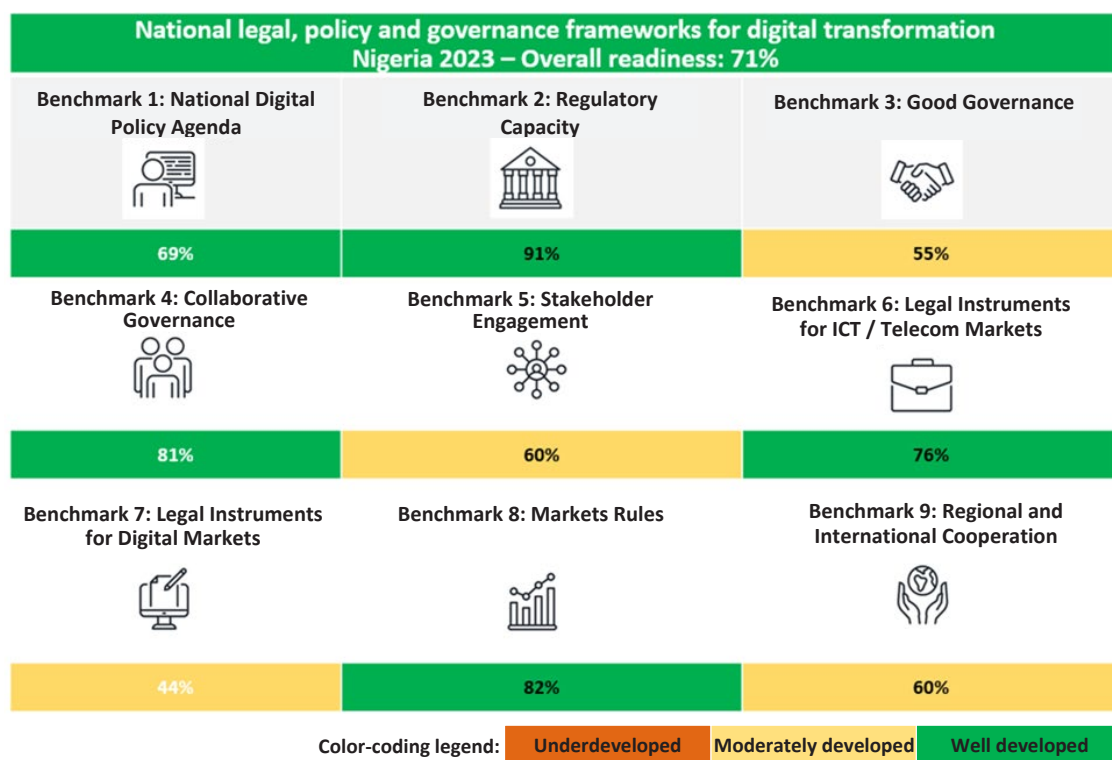
Nigeria is at the G5 advanced state of readiness for digital transformation given its holistic approach to digital policy and governance. This paper posits that with a few improvements, Nigeria could make progress towards a leading G5 status in the short term. This aligns with Nigeria's self-assessment on the ITU unified framework country board, which highlights strong regulatory capacity, but also shows some gaps in terms of collaborative governance and other areas (*Annex 1*).

According to the ITU G5 Benchmark, Nigeria is already a regional leader in terms of regulation. While most African countries are placed in the transitional benchmark threshold, Nigeria is amongst the five countries in the advanced benchmark threshold (alongside Ghana, Kenya, Rwanda, and South Africa).

With one of the largest economies and ICT sectors in Africa, and a fairly complex institutional framework for ICT, IT, and digital transformation, the Nigerian case, and its journey to G5 regulation, provides important lessons for regulators and policy-makers in the region and globally. A snapshot of the overall readiness of Nigeria's legal, policy and governance frameworks for digital transformation is depicted below (Figure 3).

<sup>2</sup> ICT Regulatory Tracker, 2022, <https://app.gen5.digital/tracker/country-cards/Nigeria>

Figure 3: Legal, policy and governance frameworks for digital transformation, Nigeria, 2023



## 2 Nigeria's digital economy

The government of Nigeria has long recognized ICT, and now digital services, as key enablers for developing other critical sectors across the economy including education, healthcare, finance/fintech, agriculture, and manufacturing. Although Nigeria is an economy that has traditionally been dependent on the resource sector, and specifically oil and gas, there has been a deliberate move towards digitalization by the government and use of ICTs as a means to diversify the economy. This effort, combined with the country's positioning as the continent's largest ICT market with the highest number of telecommunication subscribers and almost a quarter of sub-Saharan Africa mobile subscriptions,<sup>3</sup> has put Nigeria's potential growth trajectory at the centre of the sub-Saharan Africa digital transformation story. In this context, this section of the paper looks at the development of the digital ecosystem in Nigeria.

### 2.1 Broadband market developments

Digital transformation is dependent on high quality broadband infrastructure being available at affordable prices. The current status in Nigeria is assessed in terms of availability, affordability, and quality.

#### Availability, coverage, and penetration

Nigeria has one of the largest telecommunication markets in Africa, with a well-developed network infrastructure. According to the latest available ITU statistics (2021), approximately 93 per cent of the population was covered by mobile communication networks, with 4G networks reaching 62 per cent of the population.<sup>4</sup> Teledensity was estimated at 119 per cent in February 2023, with mobile GSM technology subscriptions dominating the market at 99.84 per cent of all subscriptions.<sup>5</sup> The high nominal mobile teledensity, however, masks significant divides between urban and rural areas. The mobile market is dominated by four operators: MTN Nigeria (40.9% of all subscriptions), Globacom (26.8%), Airtel (26.6%) and 9Mobile (5.8%).

This subscriber growth has been achieved despite challenges with SIM card registrations that resulted in 75 million subscribers (a third of the total registered lines) being partially disconnected in April 2022. Outgoing calls were disabled in order to compel individuals to link their national identity numbers to their SIM. In September 2022, MTN reported that about half of those initially restricted numbers submitted their identification numbers, and were being gradually verified and reconnected, while other subscribers had churned or opted to purchase new SIM cards.

Total fixed and mobile broadband penetration has increased in recent years, and according to NCC data (*Figure 4*), it reached 47.4 per cent at the end of 2022, and 48.5 per cent in February 2023, a significant step towards the government broadband goal of 70 per cent penetration by 2025.<sup>6</sup> Looking to the future, Nigeria is one of the more advanced African markets in the journey towards mass market 5G technology standard adoption giving regulators and policy-makers a unique opportunity to pioneer this technology in the region. In August 2022, MTN announced that it had begun its pilot test of 5G technology in Nigeria, with 190 5G sites in

<sup>3</sup> ITU World Telecommunication / ICT database, 2021. See <https://data.worldbank.org/indicator/IT.CEL.SETS?locations=ZG>

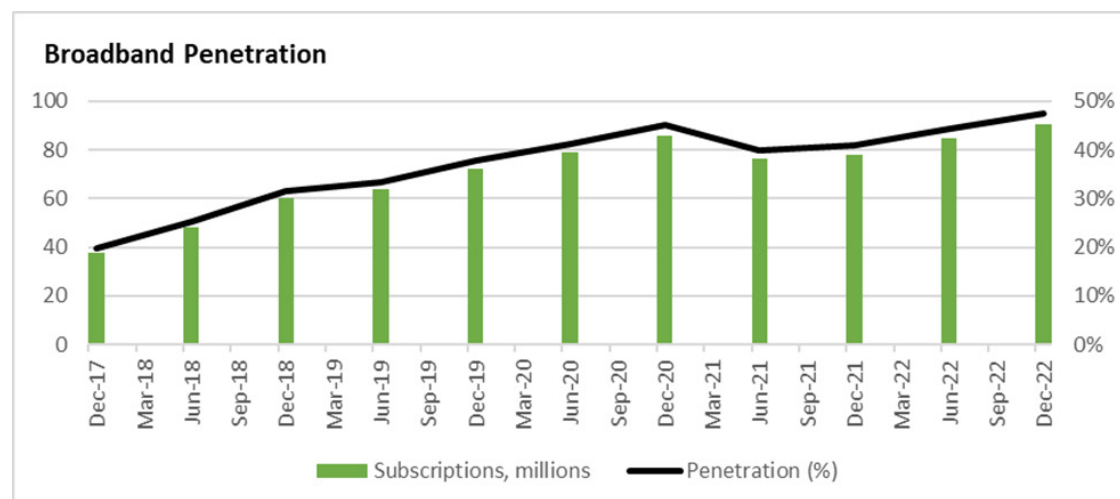
<sup>4</sup> <https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx>

<sup>5</sup> NCC statistics as at Mar 2022, <https://www.ncc.gov.ng/statistics-reports/subscriber-data#quarterly-subscriber-operator-data>

<sup>6</sup> <https://www.ncc.gov.ng/media-centre/news-headlines/1248-broadband-penetration-hits-44-5-as-ncc-reviews-short-code-services>

Lagos, Abuja, Port Harcourt, Ibadan, Kano, Owerri and Maiduguri.<sup>7</sup> The GSMA estimates that by 2025, Nigeria will be one of seven African countries where 5G is expected to have proliferated in the mass market.<sup>8</sup>

**Figure 4: Broadband penetration (December 2017 to December 2022)**



Source: NCC

Mobile broadband is the preferred method of accessing the Internet for many entities and citizens in Nigeria, and the total number of fixed broadband subscribers is small. Active fixed wireless / wired subscriptions have seen a steady decline over the years and, in March 2023, subscriptions stood at only 96 867 (a drop of 11% since March 2020).<sup>9</sup> National fixed-line infrastructure is poor, creating a significant digital divide, especially along gender and urban-rural lines. To address the underdeveloped fixed line infrastructure, in 2014 the Federal Government launched a programme to incentivize the development of fibre optic infrastructure announcing a framework for seven InfraCo licences to support an open-access and non-discriminatory network development. However various challenges, including lack of security in several parts of the country, have slowed their take-up and resulted in the licences only being issued in 2022.

Nigeria's underdeveloped national backbone network is among the key constraints to the expansion of high-speed Internet, which has meant that high-speed Internet connectivity has not been extended across the entire country. Despite the existence of some 60 000 km of fibre optic networks across Nigeria, only 28 per cent of the population is within a 10 km range of a fibre optic node.<sup>10</sup> This is compounded by effective market failure in rural areas, where high costs of operation, and the lack of reliable grid electricity supply reduce viability of services. On the demand side there are also constraints such as low consumer incomes, high price sensitivity, low digital literacy, and lack of local content. The digital literacy gap especially excludes the poorest from the benefits of the digital world.

As a result of the foregoing, Internet penetration in Nigeria is well below global standards, even though it compares favourably to the rest of the Africa region (*Figure 5*). This gap points

<sup>7</sup> GSMA, The Mobile Economy Sub-Saharan Africa 2022, <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/10/The-Mobile-Economy-Sub-Saharan-Africa-2022.pdf>

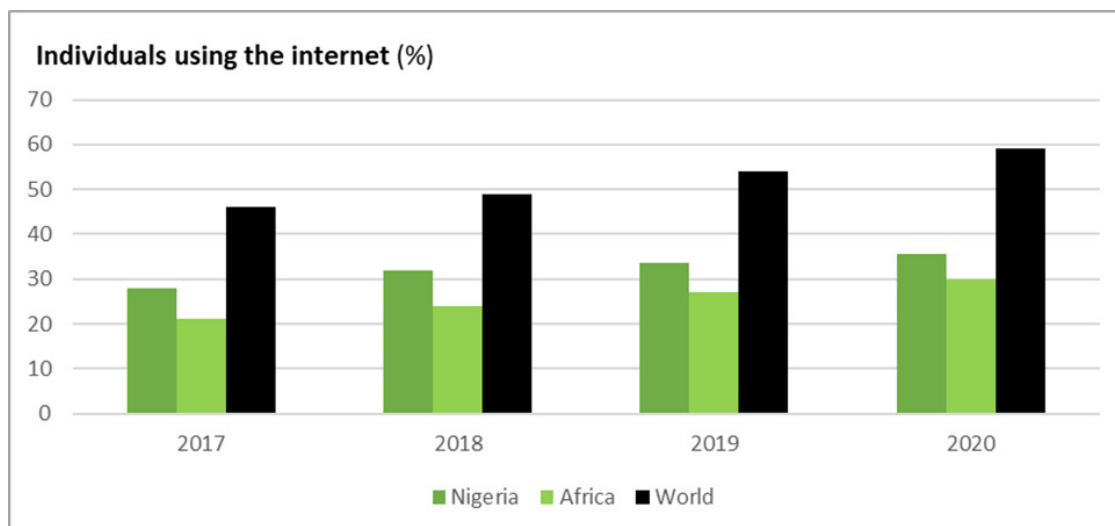
<sup>8</sup> <https://data.gsmaintelligence.com/api-web/v2/research-file-download?id=45121572&file=2796-160719-5G-Africa.pdf>

<sup>9</sup> <https://www.ncc.gov.ng/statistics-reports/subscriber-data>

<sup>10</sup> ITU Broadband Transmission Maps, Nigeria, <https://bbmaps.itu.int/bbmaps/>

to a significant opportunity to strengthen ICT adoption and telecommunication infrastructure in Nigeria to spur digital transformation.

**Figure 5: Number of people using the Internet in Nigeria, Africa, and globally (2017 to 2020)**

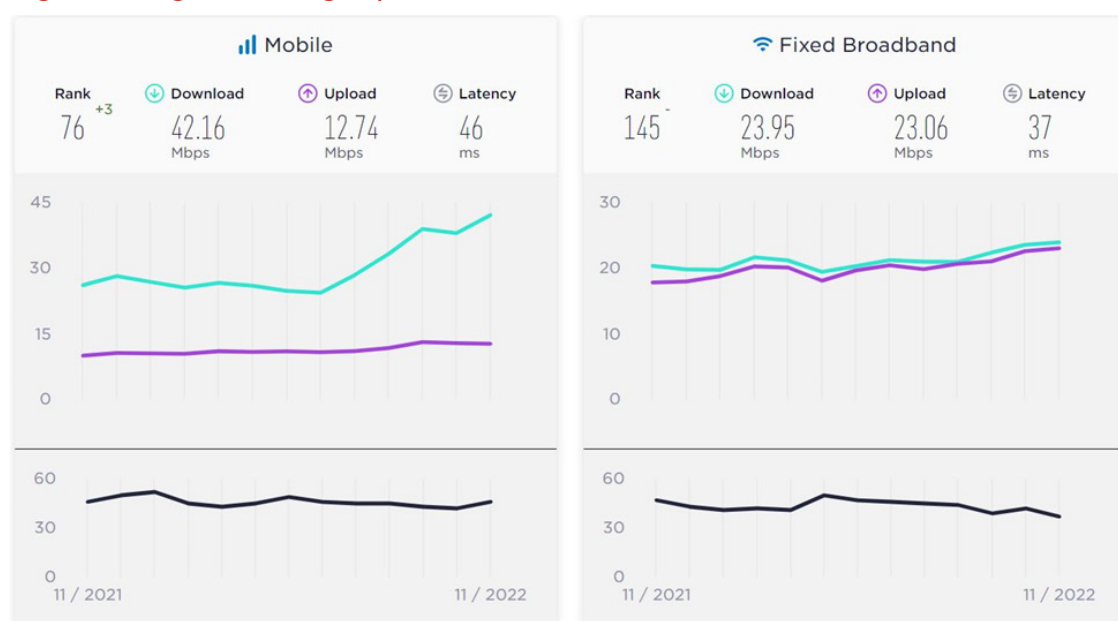


Source: ITU

### Average data speed

According to Speedtest global index, which provides a monthly comparison of Internet (data) speeds for a benchmark of 180 countries around the world, Nigeria's Internet speeds are below global averages (see *Figure 6*). Nigeria is ranked 76th in terms of mobile-broadband speed out of 142 countries, with mean download speeds of 42 Mbit/s compared to the global average of 87 Mbit/s. It is ranked 145th out of 180 countries in terms of fixed-broadband speed with average download speeds of 24 Mbit/s compared to global average of 148 Mbit/s.<sup>11</sup> Compared to continental peers in terms of mobile broadband speed, Nigeria outperforms countries such as Kenya (ranked 89), Egypt (99), and Ghana (139) but not South Africa (53).

<sup>11</sup> <https://www.speedtest.net/global-index>

**Figure 6: Nigeria average speeds of mobile and fixed broadband, November 2022**

Source: Speedtest global index

### Affordability and quality

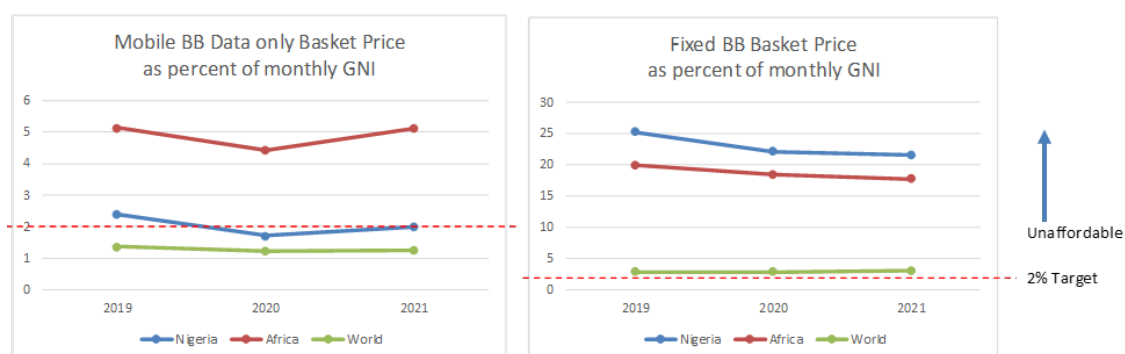
According to data from ITU and the Alliance for Affordable Internet (A4AI) collected for The affordability of ICT services 2022 policy brief<sup>12</sup>, Internet connectivity in Nigeria became less affordable from 2020 to 2021 in line with trends around the world due to the effects of COVID-19 on global supply chains, input costs, and inflation levels amongst others (see *Figure 7*).<sup>13</sup> Expressed as a percentage of median Gross National Income (GNI) per capita, prices for the data-only mobile-broadband basket increased from a previously competitive 1.7 per cent in 2020 to 2 per cent in 2021, placing Nigeria within the 2 per cent affordability target of the Broadband Commission for Sustainable Development. Nigeria outperforms the average of 5.1 per cent in Africa but falls below the global average of 1.25 per cent. For the fixed-broadband basket, despite some marginal improvement between 2020 and 2021, Nigeria remains at 21.45 per cent, well above the 2 per cent affordability target.

Mobile broadband tariffs have significantly decreased over time due to Nigeria's connection to undersea international links and increased competition in the market. However, the affordability ranking is tempered by the digital divide and quality of service concerns. Significant numbers of people cannot afford to use the Internet in a meaningful way in Nigeria, while access to fibre optic networks is very limited and relatively expensive where available. There is significant network congestion, lack of adequate coverage, and varying network quality that often forces subscribers to own multiple SIM cards – inflating the overall number of individual mobile broadband subscribers.

<sup>12</sup> [https://www.itu.int/en/ITU-D/Statistics/Documents/publications/prices2022/ITU\\_Price\\_Brief\\_2022.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/publications/prices2022/ITU_Price_Brief_2022.pdf)

<sup>13</sup> <https://www.itu.int/en/ITU-D/Statistics/Pages/ICTprices/default.aspx>

Figure 7: Broadband prices as a percentage of monthly GNI per capita (2019-2020)



Source: ITU and the Alliance for Affordable Internet (A4AI), 2020

## 2.2 Key digital ecosystem developments

In addition to broadband and its availability, affordability, and quality, other aspects of the digital ecosystem are important in understanding Nigeria's level of digital development. These include an appreciation of Nigeria's competitiveness and the country's performance in terms of cybersecurity, digital financial services, e-commerce, e-government, digital entrepreneurship, mobile money, cloud services, and hosting amongst others.

Table 1: Nigeria's position in selected international indices

Index	Organization and year	Nigeria's ranking	Strengths	Weaknesses
<b>Global competitive-ness index 4.0<sup>14</sup></b>	<i>An annual assessment of the drivers of productivity and long-term economic growth with pillars that include institutions, infrastructure, ICT adoption, macro-economic stability, health, skills, products, labour, financial system, market size, business dynamism, and innovation capability.</i>			
	WEF, 2019	<b>116 of 141</b>	Market size (rank 30) Labour market (67) Business dynamism (79)	Financial system (131) Infrastructure, macro-economic stability (130) ICT adoption (rank 118)
<b>BEMECS 5G readiness index<sup>15</sup></b>	<i>Assessment of readiness for country to deploy and adopt mass-market 5G networks. The GSMA Basic, Economic, Market, Enterprise, Consumer, Spectrum (BEMECS) indicator framework assesses the 5G market readiness and covers more than 160 countries</i>			
	GSMA	Africa Top 7: By 2025, 5G mass market expected in 7 countries including Nigeria		

<sup>14</sup> [http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf) (latest available as 2020 special edition does not cover Nigeria)

<sup>15</sup> <https://data.gsmainelligence.com/api-web/v2/research-file-download?id=45121572&file=2796-160719-5G-Africa.pdf>

Table 1: Nigeria's position in selected international indices (continued)

Index	Organization and year	Nigeria's ranking	Strengths	Weaknesses
	Reflects state of e-government development. It is a composite of three dimensions of e-government: provision of online services, telecommunication connectivity, and human capacity.			
	UN, 2022	140 of 193	Online services index: high number of services	Telecommunication infrastructure / electricity
	Focusing on the use of online services to facilitate provision of information by governments to citizens ("e-information sharing"), interaction with stakeholders ("e-consultation"), and engagement in decision-making processes ("e-decision making").			
	UN, 2022	117 of 193	Qualitative evaluation, no details available	
UNCTAD B2C e-commerce index, 2020 <sup>18</sup>	The UNCTAD B2C e-commerce index measures the preparedness of an economy to support online shopping. The index consists of four indicators that are highly related to online shopping and for which there is wide country coverage.			
	2020, UNCTAD	94 of 152	Postal reliability index	Individuals using the Internet Secure Internet servers
Global innovation index <sup>19</sup>	Measures innovation performance in an economy.			
	2022, WIPO	114 of 132	Business sophistication	Market sophistication
Global cybersecurity index <sup>20</sup>	Measures the commitment of countries to cybersecurity.			
	2020, ITU	47 of 182	Legal measures	Capacity development
Corruption perception index <sup>21</sup>	Ranks 180 countries by their perceived levels of public sector corruption according to experts and the business community.			
	2021, Transparency International	154 of 180		

Source: ITU research

**Cybersecurity:** Similar to other developing economies and countries in sub-Saharan Africa, there are security threats to Nigeria's digital transformation, especially due to online and financial fraud, and more broadly the country's ongoing struggle with terrorism and armed conflict. The security and integrity of digital telecommunication networks, data, and systems therefore remains a key consideration. Nevertheless, while Nigeria is at a high risk of cybersecurity threats, its high cybersecurity readiness score (ranked 47 of 182) is commendable.<sup>22</sup> If the country's readiness

<sup>18</sup> [https://unctad.org/system/files/official-document/tn\\_unctad\\_ict4d17\\_en.pdf](https://unctad.org/system/files/official-document/tn_unctad_ict4d17_en.pdf)

<sup>19</sup> [https://www.wipo.int/global\\_innovation\\_index/en/2022/](https://www.wipo.int/global_innovation_index/en/2022/)

<sup>20</sup> <https://www.itu.int/en/ITU-D/Cybersecurity/Pages/global-cybersecurity-index.aspx>

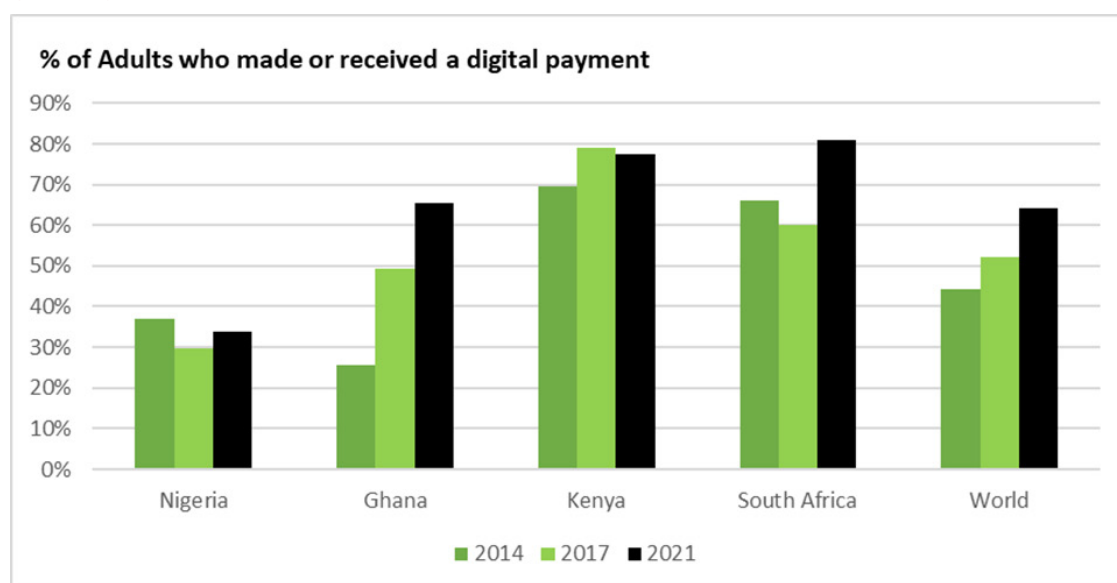
<sup>21</sup> <https://www.transparency.org/en/cpi/2021/index/nga>

<sup>22</sup> <https://www.itu.int/en/ITU-D/Cybersecurity/Pages/global-cybersecurity-index.aspx>

is backed by commensurate results, which is highly dependent on effective coordination of the agencies involved, it will greatly support the digital transformation journey of the country.

**Digital financial services (DFS):** Without a sustainable DFS ecosystem, e-commerce and digital businesses in Nigeria will not be able to grow. Despite the role of small business and entrepreneurship in the economy, digital financial services in Nigeria are currently inadequate for some segments of the population, the most excluded being predominantly women and young people, and those living in rural areas. According to the World Bank FINDEX survey 2021, only 34 per cent of adults in Nigeria used digital payments in the last 12 months (compared in 78% in Kenya and 66% in Ghana) (*Figure 8*).

**Figure 8: Penetration of digital payments in Nigeria, Ghana, Kenya, South Africa and globally (2014, 2017, 2021)**



Source: World Bank FINDEX Survey 2021, <https://www.worldbank.org/en/publication/globalindex>

There is significant opportunity to strengthen the digital financial system to spur broader digital transformation and overall business competitiveness, and to take better advantage of Nigeria's dynamism and market potential. Digital financial services provide the cost structures and economies of scale needed by other providers, including ICT providers and financial institutions, to better serve the poor. The benefits of digital channels can only be fully realized if digital entrepreneurs can seamlessly integrate their processes with related financial services.

**Mobile money:** A critical driver of digital financial services across sub-Saharan Africa has been mobile money, and Nigeria has lagged behind other countries in this area. According to the Findex 2021 survey, only 6 per cent of adults (over 15 years of age) own a mobile money account in Nigeria, compared to 69 per cent in Kenya and 60 per cent in Rwanda. This low penetration of mobile money is a key contributor to the low penetration of digital financial services.

**E-government:** Implementing GovTech in Nigeria is central to the fight against corruption and for improving the effectiveness of services to citizens, and the key to improving GDP. Nigeria ranked 140 out of 196 countries on the UN e-government development index and yet was noted as having a high number of e-government services available; it fared slightly better in the UN e-participation index, which measures e-information sharing, e-consultation, and e-decision making. In 2022 Nigeria ranked 117 out of 193 on the e-participation index.

At a federal level, the government has launched a central portal for government services ([www.services.gov.ng](http://www.services.gov.ng)), a one stop shop for citizens. Other important government services being digitized include taxation, with the Federal Internal Revenue Service (FIRS) introducing the Integrated Tax Administration System (ITAS). Some states have also followed suit and introduced similar systems.

Other e-government initiatives worth highlighting for their potential impact include:

- **e-education** where several states have introduced eMIS systems across the country, and initiatives in some states include upgrading the digital skills of their teachers. The Federal Ministry of Education (FME) work in the ICT sector is guided by its ICT in education policy of 2019, which outlines that a major challenge is effective implementation. The policy points to a need for more detailed sub-policies to guide implementation, and in response the FME has formulated a national digital learning policy (2022), also partly occasioned by the lessons learnt as a result of the COVID-19 pandemic. The policy hopes to entrench digital learning in all educational institutions, through various interventions spanning capacity building and advocacy, infrastructure and access to devices, and content and platforms. The policy seeks to ensure the emergence of robust e-learning platforms (*Box 1*), by leveraging open-source technology as much as possible, and by supporting the creation of an eContent ecosystem. Looking forward, the FME sees value in increased collaboration with other entities in the ICT space, particularly to ensure availability of suitable data plans for users in the education sector, end user devices, and ICT infrastructure.

### Box 1: Nigeria FME e-learning platforms

The Federal Ministry of Education has established three free e-learning sites as flagship projects. These sites, [inspire.education.gov.ng](http://inspire.education.gov.ng), [ignite.education.gov.ng](http://ignite.education.gov.ng), and [nlp.education.gov.ng](http://nlp.education.gov.ng) aim to enable quality, inclusive, and flexible learning in Nigeria. The ignite platform aims to help educators put lesson plans together, collaborate, and share easily. It provides ready tools, a knowledge base, materials, and templates that enable the educators to deliver learning in a more efficient way. The inspire platform on the other hand is aimed at primary and secondary schools and tertiary institution students, and includes lessons, eBooks, educational videos, and other learning resources.

The Nigeria Learning Passport (NLP) was launched in March 2022 by the Federal Ministry of Education, UNICEF, and partners, with a targeted reach of 12 million students by 2025. Developed by UNICEF and powered by Microsoft, the NLP is based on a platform that globally enables governments to deliver e-learning through a localized curriculum that is accessible both online and offline.

Source: ITU Research and interviews

- **e-Health:** There are many initiatives in the health sector to introduce technology for delivery of services, including through use of telemedicine pilots and household-level satellite data. The now lapsed Federal Ministry of Health, National Health ICT Strategic Framework 2015 - 2020 was developed to increase coordination in the e-health ecosystem. A new policy has recently been developed to replace the lapsed one, and with it a digital health technical committee established to further strengthen leadership, governance, and standards enforcement. While there has been collaboration with multiple stakeholders, including the National Information Technology Development Agency (NITDA) and the Federal Ministry of Communications and Digital Economy

(FMCDE), capacity building and awareness are still seen as key challenges going forward.

- **State level interventions including in the justice sector and in land management.**  
In response to the impact of the COVID-19 pandemic and associated lockdowns on the justice system, several innovations were introduced. The implementation of these innovations facilitated the development of a remote system across the entire spectrum of the litigation process in Nigeria such as<sup>23</sup>:
  - Guidelines of court sittings and related matters, which guide the courts in the implementation of remote justice systems, including the service and conduct of court proceedings and hearings. The Guidelines were issued by the National Judicial Council, which has oversight over the judiciary.
  - Practice directions issued by the courts, including the Lagos State Judiciary and the Federal High Court of Nigeria. The practice directions relate to remote hearing cases, and practice during the COVID-19 period.

**E-commerce:** Private sector e-commerce has been an area of strength for Nigeria, and the UNCTAD business to consumer e-commerce index for 2020 ranked Nigeria 94th globally, and among the leaders in Africa.<sup>24</sup>

**Digital Entrepreneurship:** Given its large, young, and entrepreneurial population, digital entrepreneurship has the potential to become an engine of economic transformation, and Nigeria is home to several high-growth digital companies. Lagos is a mature and active ecosystem with dynamic incubators, venture capital companies, and digital start-ups. Other digital entrepreneurship ecosystems are also growing in Abuja and Port Harcourt. Digital technologies are forecast to be a major driver of productivity, but for young people in Nigeria, to successfully perform digital work, they must develop adequate digital skills. In addition, access to digital infrastructure, services, and platforms should be widely available and affordable.

**Innovation:** Boosting innovation is important for the development of the local digital economy. Nigeria ranks 114 of 132 in the global innovation index (GII)<sup>25</sup> and fairs relatively well in terms of the GII business sophistication pillar, i.e., it has a fair number of knowledge workers, and there are innovation linkages across the public sector, business, and academia. However, the country lags behind other countries in terms of 'market sophistication', which refers to an environment that supports investment, availability of credit, access to international markets, competition, and market scale. These are critical for businesses to prosper and for domestic firms to be exposed to global good practices, thus facilitating innovation.

**Cloud Services:** Nigeria currently has four enterprise-grade and multi-tenant data centres categorized as tier III and tier IV respectively. These provide data centre offerings including software as a service (SaaS), platform as a service (PaaS), infrastructure as a service (IaaS), and back-up as a service (BaaS).<sup>26</sup> The Government of Nigeria, through NITDA, is promoting local hosting and the use of the .gov.ng domain as a means of protecting data. This is an area for increased development and investment.

<sup>23</sup> <https://www.ibanet.org/article/BA479B88-55BA-43EA-9DF6-80A0FB6C3668>

<sup>24</sup> [https://unctad.org/system/files/official-document/tn\\_unctad\\_ict4d17\\_en.pdf](https://unctad.org/system/files/official-document/tn_unctad_ict4d17_en.pdf)

<sup>25</sup> The seven GII pillars are: (1) institutions, (2) human capital and research (HC&R), (3) infrastructure, (4) market sophistication, (5) business sophistication, (6) knowledge and technology outputs, and (7) creative outputs.

<sup>26</sup> <https://www.trade.gov/country-commercial-guides/nigeria-information-and-communications-technology>

## 2.3 Impact of COVID-19

COVID-19 interrupted economic growth in Nigeria, in common with other markets, disrupting investment, growth, as well as health systems. Investment levels in the telecommunication sector have fallen since the beginning of COVID-19 and are yet to recover to 2019 levels. Nevertheless COVID-19 has accelerated adoption of digital platforms as seen from the e-justice developments discussed earlier.

Globally, the transition to digital payments, such as contactless card payments and digital payment apps occurred rapidly, although less pronounced in countries with higher mobile money penetration.<sup>27</sup> In Nigeria, retail e-payments grew 269 per cent between 2019 and 2020 to 10.7 billion transactions, while the value of transactions grew 288 per cent to NGN 470 billion. However, this growth in retail e-payments did not significantly extend beyond already served customers, and the country thus failed to take full advantage of the COVID-19 crisis to digitize payments.<sup>28</sup>

Nigeria's path to post-COVID-19 economic recovery will have to be premised upon building a digital and knowledge economy using ICTs to transform the country. The economic losses of the COVID-19 pandemic during 2020 affected some countries more than others. Countries with better broadband infrastructure and with broad use of ICTs among the population were able to mitigate part of the negative economic impact of the COVID-19 pandemic, allowing households, enterprises, and governments to carry on functioning.<sup>29</sup> Nigeria has the basic infrastructure in place, but much is needed to enable digital transformation across the country and its economy. Increased market player innovation, infrastructure especially ICT and digital financial infrastructure, digital literacy, and shifting consumer attitudes are all needed to better take advantage of the digital economy.

COVID-19, and to some extent the elections that were held in Nigeria in February 2023, led to significant slowdowns, and a number of policies and strategies were delayed or expired and have not been renewed. It is hoped that key policies affecting the ICT sector and digitalization will be addressed under the new administration.

The analysis of market developments carried out above shows that although Nigeria exhibits market performance that is in line with or exceeds regional peers, its performance against some of the dimensions and indicators discussed in this section and measured in *Table 1* is below global standards. Areas such as local hosting of cloud services and increasing mobile money and broader digital financial services penetration require further attention in order to maximize the country's digital potential. The sector and non-sector related challenges demand collaborative approaches with other policy-makers and regulators, including addressing broader gaps in the financial sector, infrastructure, addressing corruption, ensuring macro stability and ensuring cybersecurity capacity across multiple sub sectors.

<sup>27</sup> Auer R, Cornelli, G and Frost J, The pandemic, cash, and retail payment behaviour: insights from the future of payments database, BIS Working Paper No 1055, 2022. <https://www.bis.org/publ/work1055.pdf>

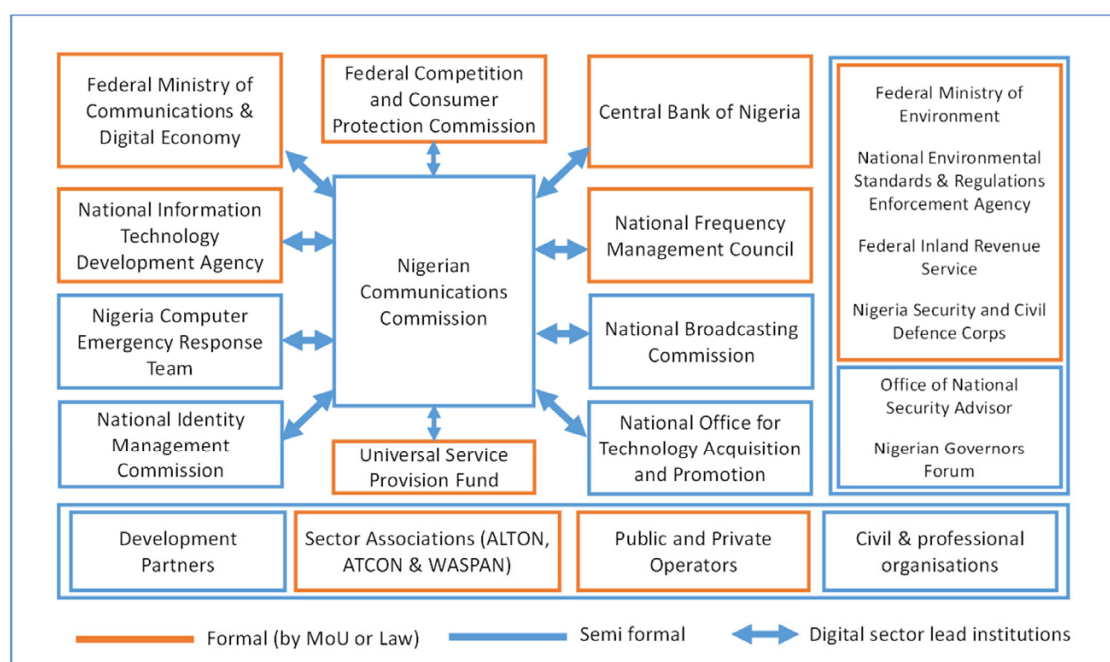
<sup>28</sup> CBN National Financial Inclusion Strategy 2022 – 2024 (forthcoming)

<sup>29</sup> ITU, The economic impact of broadband and digitization through the Covid-19 pandemic – Econometric modelling, 2021

### 3 Collaborative governance framework

Institutional frameworks for ICT regulatory governance are determined by traditional areas of government and institutional responsibility. Traditional institutional designs are largely expected to continue in the digital environment,<sup>30</sup> however some level of evolution is to be expected in order to accommodate digital developments. This is true globally but is particularly important in the Nigeria context where there are several agencies that have potentially competing or duplicative functions. Particularly as previously separate sectors such as broadcasting, IT, and ICT converge in the digital space, and as functions such as licensing, spectrum management and competition oversight, although housed in different institutions, need to be considered in unison. This has and will continue to necessitate increased coordination among various sector-specific agencies and government institutions, in addition to coordination between institutions with differing functions across the economy. To that end, this section analyses the existing institutional framework in Nigeria (summarized in *Figure 9*) and reflects on its collaborative nature.

**Figure 9: Institutional framework for ICT regulation in Nigeria**



Source: ITU

#### 3.1 ICT and digital sector institutions

The Federal Ministry of Communications and Digital Economy (FMCDE) was created in 2019. Its predecessor, the Federal Ministry of Communications Technology, focused on the more traditional ICT sector whereas the FMCDE mandate focuses on digitalization and the facilitation of the digital economy to:

- facilitate universal, ubiquitous, and cost-effective access to communications infrastructure throughout the country;

<sup>30</sup> <https://digitalregulation.org/regulatory-governance-and-independence/>

- promote the utilization of ICT in all spheres of life to optimize the communications infrastructure – digital content creation, domestic software applications and the delivery of private and public services over the Internet;
- promote and facilitate the development of the ICT industry and increase the contribution of the ICT industry to GDP; and
- utilize ICT to drive transparency in governance and improve the quality and cost effectiveness of public service delivery in Nigeria.

The FMCDE facilitates ICT as a key tool of the digital transformation agenda for Nigeria in the areas of job creation, economic growth, and transparency of governance. It is also responsible for ICT policy development.

Seven agencies fall under the FMCDE, including:

- the Nigerian Communications Commission (NCC);
- the National Information Technology Development Agency (NITDA);
- the Nigerian Postal Service;
- the National Identity Management Commission (NIMC);
- the Universal Service Provision Fund (USPF); and
- two public sector providers, Galaxy Backbone Limited and the Nigeria Communications Satellite Limited.

These entities are crucial in driving digital transformation from regulation, governance, and implementation perspectives. To address cybercrime, a key factor that impacts the take up of ICTs, and can potentially deter digital adoption, the FMCDE coordinates closely with the Office of the National Security Advisor (ONSA), which is responsible for coordination of cybersecurity strategy in the country.

The FMCDE also houses the National Frequency Management Council (NFMC), chaired by the Minister of Communications and Digital Economy. NFMC is a separate agency responsible for the planning, coordination, and bulk trans-sector allocation of radio spectrum to NCC, the National Broadcasting Commission (NBC), and the FMCDE, which then assign the resource to licensees such as telecommunication operators, broadcasters, and the military. While NFMC is effective in its core mandate, a concern remains regarding the length of time taken to allocate spectrum and the fact that it is housed within a political office.

The responsibilities of FMCDE are broad and place the institution in a strong position to facilitate collaboration between the 'internal' stakeholders of the digital economy, i.e., stakeholders within the FMCDE. Coordination of these stakeholders is done within the ministerial structures, through circulars and council meetings. Collaboration between the seven agencies and companies in the FMCDE portfolio, and with other agencies with roles in digitalization, such as those in finance, education, health, agriculture, and transport – is typically done through the agencies, mainly NCC and NITDA. FMCDE is in process of reviewing both the NITDA and NCC Acts, the former in parliament, and the latter at draft stage.

The NCC is the independent communications sector regulator with powers derived from Section 3 of the Nigerian Communications Act of 2003. The Commission creates an enabling environment for competition among operators in the industry and ensures the provision of qualitative and efficient communications services throughout the country. In terms of digital transformation, NCC regulates activities in the sector, ensures the implementation of sector strategies, and sits at the helm of facilitating and enabling all the objectives outlined in the

national development plan (NDP), the national digital economy policy and strategy (NDEPS) and the Nigerian Broadband Plan<sup>31</sup> insofar as they relate to communications and its mandate.

The NCC mandate is established in law and part of its powers, functions, and objectives are to<sup>32</sup>:

- licence and regulate operators in the sector;
- consult with consumers, commercial and industrial organizations in fulfilling its mandate;
- review new services and undertakings eligible for licensing from time to time;
- ensure the protection and promotion of the interests of consumers against unfair practices;
- ensure the promotion of fair competition in the communications industry and protection of communications services and facilities providers from misuse of market power;
- manage frequency spectrum for the communications sector and assist the National Frequency Management Council in developing a national frequency plan; and
- lead in proposing, adopting, publishing, and enforcing technical specifications and standards for the importation and use of communications equipment.

In fulfilling its tasks, NCC collaborates with relevant institutions and agencies, for which the roles, responsibilities, and jurisdictions are set out in law. It is fully aware that its role cannot be fulfilled without the cooperation of new and existing players in the ICT and telecommunication markets. NCC has thus developed a strategic management plan (SMP) 2020-2024 (ASPIRE 2024)<sup>33</sup> and strategic vision implementation plan (SVIP) 2021-2025 as roadmaps towards accomplishing its mandate, with collaboration and partnerships as one of the focus areas.

NITDA was established in April 2001 to implement the Nigerian information technology policy and co-ordinate general IT development in the country through issuing guidelines, policies, and standards. It creates awareness and ensures universal access to promote IT diffusion in all sectors. NITDA is governed by the National Information Technology Development Act (2007) which mandates it to, amongst other things, create a framework for the planning, development, standardization and coordination of IT practices, activities, and systems in Nigeria. There is currently a proposed NITDA Amendment Bill (2022), which is expected to repeal the 2007 Act. An overriding objective of the NITDA Amendment Bill is "to create an effective, impartial, and independent regulatory framework for the development of the Nigerian information technology sector and support the development of the digital economy" including through promoting access, research, consumer protection, and innovation, amongst others.<sup>34</sup>

In line with its digital economy related mandate, the e-government development and regulation (e-GDR) department under NITDA was established in 2017 to facilitate digital transformation in the public sector. It is responsible for facilitating, coordinating and overseeing deployment of IT systems at all levels of government to support the creation of innovative, responsive, efficient, effective, and accessible digital services delivery. It also ensures coordination and implementation of the national e-government master plan.

<sup>31</sup> <https://www.ncc.gov.ng/documents/880-nigerian-national-broadband-plan-2020-2025/file>

<sup>32</sup> <https://www.ncc.gov.ng/the-ncc/mandate#powers-of-the-ncc>

<sup>33</sup> <https://www.ncc.gov.ng/docman-main/industry-statistics/policies-reports/886-ncc-2020-2024-strategic-management-plan-aspire-2024/file>

<sup>34</sup> NITDA Amendment Bill, 2022. Part I, Section 1.

There are some overlaps between the mandate of NITDA with NCC, the National Office for Technology Acquisition and Promotion (NOTAP) and potentially other entities. Such areas include responsibility in the development of sector specific ICT policies, data protection, content regulation, and others brought about by ongoing sector convergence. NCC and NITDA have therefore established ongoing engagement forums, with the objective of erring towards “over regulation” instead of leaving gaps. Similarly, there is a standing committee between NOTAP and NITDA that considers acquisition, promotion and development of software and technology in the telecommunication sector.

With increasing convergence between telecommunications, IT, and ICTs generally, there is a need to increase collaboration between NITDA and NCC and for a clear understanding of where the delineation of their roles lies, to the extent that NITDA creates its own licensing frameworks and collaborative relationships with other stakeholders. The NITDA mandate in policy-making and regulation, i.e., whether it is a standards body, a regulatory authority, or a policy-making institution, is unclear, and stakeholders currently differ on what the role should be.

The NITDA Amendment Bill should clarify the mandate and role and affirm its regulatory powers by establishing a regulatory framework for the growth of Nigeria's IT sector and digital economy, which is an important issue that requires careful management given the multiplicity of institutions potentially impacted. This may overlap with the pillar in the NCC ASPIRE 2024 strategy, which seeks to promote the development of the digital economy. While the Bill seeks to clarify the position of NITDA, it may inadvertently cause conflict between NITDA and other sector regulators including NCC given the NITDA broad mandate in relation to the ‘digital economy,’ and the lack of clarity in the distinction between the IT sector and the ICT sector. This distinction seems counterintuitive in a digital economy.

Should NCC and NITDA roles not be streamlined or clarified, it opens the possibility for forum shopping, and the duplication of roles, licences and fees levied by public agencies, and payable by ICT sector companies. Similarly, as further explored in Section 4.3, there are some potential overlaps in the role of NITDA with its cross-sector counterparts. Closer coordination and greater awareness between NITDA and stakeholders such as the departments of education, health, and agriculture is needed to avoid duplication.

**The National Broadcasting Commission (NBC)** is Nigeria's broadcast regulator, operating under CAP N11, Laws of the Federation, 2004.<sup>35</sup> NBC is responsible for receiving, processing, and considering applications for the establishment, ownership or operation of radio and television stations. These include cable, direct satellite broadcast and any other medium of broadcasting at the federal, state, and local government levels, as well as under private sector ownership. Unlike many other countries that have merged their broadcasting and telecommunication regulators over the last twenty years, and despite a merger between NCC and NBC being mooted for several years, this has not happened in Nigeria. Instead, a semi-formal relationship between NCC and NBC is in place, including a joint committee on TV white space. The collaborative arrangement between the two entities is appropriate and useful, however given the impact of digitization on broadcasting, a more long-term institutional arrangement may need to be considered.

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<sup>35</sup> <https://nbc.gov.ng>

**The Nigeria computer emergency response team (ngCERT).** In a bid to promote security in Nigeria, ngCERT serves as a coordination centre responsible for managing cyber incidents in the sector and coordinates the establishment and operation of sector-based Computer Security Incidents Response Teams – it appears however that not all of the key economic sectors have established such teams. NCC itself has established the computer security incidence response team (CSIRT) with state-of-the-art equipment to serve the communications sector on cybersecurity. The NCC-CSIRT is working closely with ngCERT, which is under the auspices and management of ONSA. ngCERT is supported by a Cybercrime Advisory Council (CAC) comprising representatives from the public sector involved in the cybersecurity space.

**National Identity Management Commission (NIMC).** Established by the NIMC Act No. 23 of 2007, NIMC is the lead agency for the national identity system, issuing the national identification numbers (NINs), and the national electronic identity card (e-ID card), which is a chip-based card with multiple functions. NIMC services, especially NIN enrolment and issuance, national e-ID card issuance, identity verification and data harmonization and authentication, are all critical to NCC fulfilling its mandate, particularly in respect of ensuring that consumers are properly identified. Collaboration between NCC and NIMC was initially necessitated by the SIM registration process, and the two organizations collaborate in terms of the collection, processing, and storage of such data.

**The National Office for Technology Acquisition and Promotion (NOTAP).** NOTAP tracks the inflow of technology into Nigeria and strategizes for its adaptation and the localization of global and regional good practices. It also coordinates Nigeria's initiatives in technology transfer, manages patents and intellectual property (IP), and promotes innovation and locally generated technologies. For example, NOTAP requires that all NCC licensees report the foreign software and technology that they use, and that they only procure the same if it is not available locally. Where technology is not sourced locally, NOTAP requires that foreign technology transfer agreements are registered, and it monitors the transfer of the affected technology.

A key promoter of innovation, research, and development, NOTAP works with other agencies, notably NITDA, to ensure that they complement each other's roles.

Finally, **the universal service provision fund (USPF)** is a key funding and implementation partner to both the ICT and digital institutions as well as the cross-economy collaborators identified in the next section. The USPF is concerned with the achievement of universal service and access goals in the ICT and digital space from both an access and connectivity perspective.

## Box 2: Edo State case study

Edo State provides a good case study of how states in Nigeria can promote digital transition to complement federal activities. The Edo State ICT Agency coordinates all state-wide implementation, while the State Ministry for ICT is the main policy-making body.

Edo State has a bold ICT-enabled vision to create a globally competitive state, to provide efficient and effective public services, and to become Nigeria's technology hub. Some key initiatives include:

### Box 2: Edo State case study (continued)

1. Structured ICT training programmes for staff.
2. All 72 ministries, departments and agencies are already on the edo.gov e-government platform.
3. Memorandum of understanding (MoU) with a fibre optic company to cover 18 local governments, including government facilities along the route (hospitals, schools, etc.).
4. Currently 1 872 km rolled out, with zero rated rights of way for fibre optic operator.
5. Three data centres, with co-hosting provided for SMEs.
6. Establishment of Edo State Park, targeting 15 000 software engineers within five years.
7. Digitized records, including all land registration records.
8. Key challenges include changing entrenched civil service culture and funding.

Source: ITU research and interviews

## 3.2 Cross-economy collaborators

### Federal Competition and Consumer Protection Commission (FCCPC)

FCCPC is the competition and consumer protection authority in Nigeria. It was established by the Federal Competition and Consumer Protection Act (FCCPA) 2018 to develop and promote fair, efficient, and competitive markets in the Nigerian economy, facilitate access by all citizens to safe products, and secure the protection of rights for all consumers in Nigeria. FCCPC safeguards and advances the interest and well-being of consumers, initiating broad based policing and review of activities to identify and eliminate anti-competitive and restrictive practices that may distort competition or constitute an abuse of a dominant position of market power in Nigeria.

NCC having a similar mandate within the telecommunication sector, works closely with the competition and consumer protection commission and a memorandum of understanding (MoU) is in place to regulate the relationship. The MoU ensures efficient enforcement of competition law. As the digital transformation gathers pace the definition of telecommunication, digital, and financial/fintech markets will become more blurred, and NCC and FCCPC - together with the financial sector regulators - will need to adapt and collaborate ever more closely to ensure that innovation is not stifled, even as competition is encouraged. New risks are also emerging for consumers, and again, the regulators will need to collaborate to address these emerging challenges.

### Central Bank of Nigeria (CBN)

CBN is the foremost financial sector regulator, responsible for licensing and supervising financial institutions including fintech players, payment, and remittance platforms, and setting out financial sector policy. CBN works closely with NCC in a number of areas, including digital payments with a level of co-regulation in mobile money, on cybersecurity issues, on financial inclusion and on fintech regulation. The two regulators have an MoU in place that governs their relationship.

## Other collaboration partners at the federal level

In carrying out its mandate, NCC coordinates with several other bodies responsible for critical elements of the digital economy. A formal relationship exists between NCC and the following entities:

- **National Environmental Standards & Regulations Enforcement Agency (NESREA)** is charged with the enforcement of environmental laws and regulations, including the handling of e-waste. NESREA has mandate to control and prevent processes or technology that could undermine environmental quality, develop guidelines and standards, and enforce compliance. Nigeria currently does not have regulations that specifically address e-waste, however existing waste regulations are applicable to any waste. A formal agreement exists between NCC and NESREA.
- **Federal Inland Revenue Service (FIRS)** is responsible for taxes. FIRS collaborates with NCC to facilitate the exchange of information, and to support the oversight of mobile money related taxes. In addition, players in the sectors regulated by NCC need to pay taxes and licence fees, and both authorities can share and verify information that help them to monitor compliance with requirements. Post COVID-19, at the start of 2022, Nigeria introduced a 6 per cent digital services tax. The tax is based on significant economic presence across the dimensions of revenue, local digital presence, and user-base. It is one of ten African countries that have proposed some form of tax regime for digital goods and services.
- **Nigeria Security and Civil Defence Corps (NSCDC)**. The primary function of the NSCDC is to protect lives and properties in conjunction with Nigeria police. NSCDC is critical in protecting communications infrastructure from theft and vandalism. The NSCDC has entered into an MoU with the NCC on protection of communications infrastructure across Nigeria.
- **The Office of National Security Advisor (ONSA)** is responsible for providing advice to the President on issues of national security. ONSA has established the National Cybersecurity Coordination Centre (NCCC) as a directorate under ONSA, to coordinate all national cybersecurity programmes in line with the provisions of the National Cybersecurity Policy and Strategy 2014. It works closely with ngCERT, which is also situated under ONSA. In addition, the Cybercrime Advisory Council (CAC) was established in ONSA under the chairmanship of the National Security Adviser. CAC has responsibility for the formulation and provision of general policy guidelines for preventing and combating cybercrimes, the promotion of cybersecurity in Nigeria, and providing strategic direction to cybersecurity policy-makers in Nigeria. CAC comprises of representatives of various ministries, departments, and agencies listed under the First Schedule of the Cybercrimes Act 2015 including NCC and NITDA.
- **The Nigerian Governors' Forum (NGF)** is a non-partisan platform that was created to enhance collaboration among the executive governors of states in Nigeria (Box 3). The forum is an important mechanism for NCC and other stakeholders to engage with state governments, which are in turn responsible for various activities in their states including through state ministries, and digitization of activities such as e-government.

In addition, a semi-formal relationship is in place with the Office of National Security Advisor (ONSA), and the Nigerian Governors' Forum (NGF), Ministry of Health, and Ministry of Education.

## State coordination

States across Nigeria have different arrangements for managing their ICT rollout and digital transformation. The linkage between federal level regulators and state level ICT authorities could be improved, as there is currently very limited presence of federal regulators in the states. Edo State is a potential example of a successful model that could be considered for wider rollout by other states (Box 2). In Edo State, the state government has set out a clear vision for

the role of ICT in the state and established a stand-alone ICT agency reporting to the office of the governor to oversee all state level implementation.<sup>36</sup>

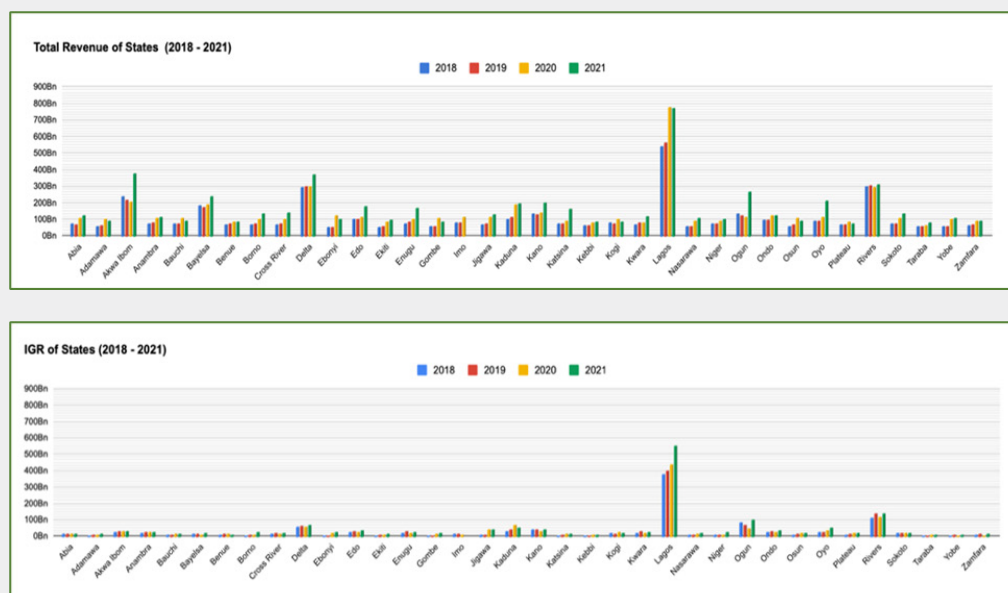
The above sections have reviewed the collaborative governance frameworks in Nigeria, which in general are found to be well developed. However, as indicated above, and further set out in the recommendations in Section 6, there is a need to address identified gaps and overlaps between the mandates of some institutions.

### Box 3: The Nigerian Governors' Forum as an instrument of state coordination

Nigeria is a federal state, and the formation of the NGF in 1999 and its revitalization in 2009 has served as a platform for States to collectively influence policies at the national level. The NGF mission is to be a credible, non-partisan body respected both nationally and internationally, for sub-national governance and development. Its vision commits states to "collaborative development ensuring excellence in governance at sub-national levels."

Some example NGF initiatives include:

- The states peer review mechanism (SPRM) has been designed to foster good governance and assist states to accelerate their pace of development through information sharing and reviews of the progress of their policies, plans and programmes.
- The internally generated revenue dashboard (IGR dashboard) supports state governments to raise domestic revenues. The dashboard provides real time access to internal revenue services (SIRS) for all 36 states to regularly maintain and track data on tax administration, tax processing, tax procedures, tax enforcement, and monthly internally generated revenues. The NGF secretariat drives the operation of the programme and supports the implementation and monitoring of recommended actions of the IGR dashboard.



Source: <https://www.nggovernorsforum.org>

<sup>36</sup> <https://aficta.africa/images/stories/resources/ICT%20-%20Edo%20story.pdf>

## 4 Digital policies and strategies

Digital policies and strategies are critical in setting the tone for digitalization. This section analyses the existing policy framework in Nigeria and reflects on its potential to address the various elements of the digital ecosystem at federal and state levels, within the ICT sector, and also across key sectors such as finance, education, health, agriculture, and transport. This section reflects on whether the policy and regulatory framework facilitates a move beyond ICT policy to having an effective digital policy agenda. It considers collaboration – both its depth and breadth – and whether Nigeria's policy framework facilitates the necessary synergies and relationships to promote digital transformation.

### 4.1 Key economic development policies

Nigeria's medium-term development plan is set out in the national development plan (2021 - 2025) (NDP) with the vision to unlock the economic potential in all sectors for a sustainable, holistic, and inclusive national development. The mission of NDP is to promote rapid multi-sector growth and development of Nigeria's economy. The associated broad objectives of the plan are to: (i) establish a strong foundation for a diversified economy, with robust micro-, small and medium-sized enterprises (MSME) growth and a more-resilient business environment; (ii) invest in critical physical, financial, digital, and innovation infrastructure; (iii) build a solid framework and enhance capacities to strengthen security and ensure good governance; (iv) enable a vibrant, educated, and healthy population; (v) invest in the social infrastructure and services required to alleviate poverty; and (vi) promote development opportunities across states to minimize regional economic and social disparities.

The multi-sector and diversified growth objectives and targets outlined in the NDP are built upon in various sector strategies and policies. For the ICT sector the NDP objectives are elaborated primarily through the National Digital Economy Policy and Strategy 2020 - 2030 (NDEPS) discussed further in Section 4.2 below.<sup>37</sup>

Other national development plans include the national social protection policy (NSPP)<sup>38</sup> which is a key policy geared to invest in the 'people side' of the digital transformation equation. It provides a framework for promoting social justice, equity, and inclusive productive growth. Its objectives include tackling poverty, unemployment, social and economic vulnerabilities, inequality, exclusion, and other socio-economic challenges that threaten sustainable development.

The soon to be published national investment policy (NIP) will facilitate investment in and across the economy with a specific focus on three pillars – investment protection, investment facilitation, and sustainable development. These pillars will influence the pace of Nigeria's digital transformation in a global economy. NIP clarifies the country's investment roadmap and seeks to address past challenges faced by investors; in so doing, NIP harmonizes, updates, and modernizes existing regulations. NIP will be overseen by the Nigerian Investment Promotion Commission (NIPC<sup>39</sup>), a specialized agency established through the Nigerian Investment Promotion Act Chapter N117 of 2004.

<sup>37</sup> <https://www.ncc.gov.ng/docman-main/industry-statistics/policies-reports/883-national-digital-economy-policy-and-strategy/file>

<sup>38</sup> <https://www.social-protection.org/gimi/RessourcePDF.action?id=55768>

<sup>39</sup> <https://www.nipc.gov.ng/about-nipc/>

A key observation is that the Nigerian economic policy framework does not go beyond 2030 and no long term national or economic vision and development plan exist. Countries with successful digitalization agendas tend to have a future plan that includes the development and use of digital infrastructure and services – this is true for example in the case of Rwanda's Vision 2050 and Singapore's 2050 Masterplan. This gap, i.e., the lack of longer-term planning poses a risk to the country's ability to plan properly and inclusively. Nigeria can be guided by global and regional development agendas such as the Sustainable Development Goals (SDGs) 2030, the African Union Agenda 2063, ECOWAS Vision 2050, as well as nationally determined contributions on the Paris declaration on climate change among other instruments.

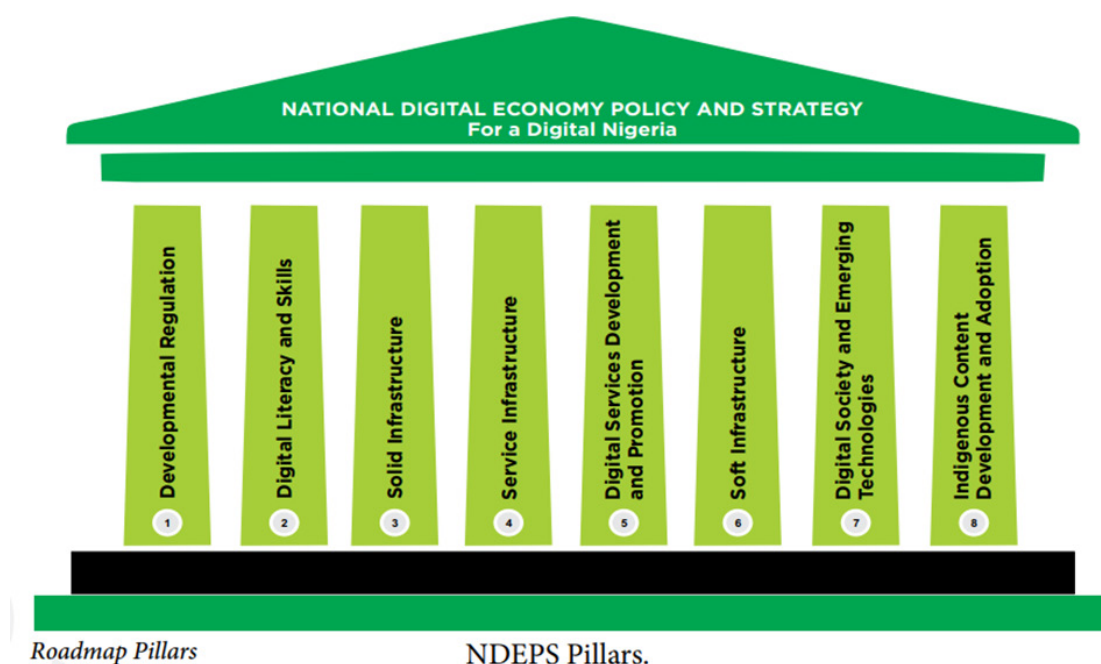
## 4.2 Key ICT sector and digital policies

The 2000 National Telecommunications Policy was aimed at achieving the modernization and rapid expansion of Nigeria's telecommunication networks and services and led to the liberalization of the communications sector. It dealt with the early stages of restructuring and privatization and addressed fundamental issues of competition and economic regulation. The National Telecommunications Policy was followed by the 2012 national ICT policy which was made in the context of achieving Nigeria's Vision 2020 and became the key policy guidance for the ICT sector. Over the past few years, a digital agenda has been embarked upon, with the national digital economy policy and strategy (NDEPS or the strategy)<sup>40</sup> having taken effect. Incidentally, the period of NDEPS, 2020 – 2030, aligns with the UN Sustainable Development Goals Decade of Action.

At the outset, NDEPS promotes the shift from an ICT policy approach to a digitization paradigm. It recognizes that digital technologies are transforming every aspect of people's lives and carries the vision and mission of "transform(ing) Nigeria into a leading digital economy providing quality life and digital economies for all". It also aspires to "build a nation where digital innovation and entrepreneurship are used to create value and prosperity for all". NDEPS is aligned with global best practice and its eight guiding pillars for accelerating the digital economy include the promotion and increase in infrastructure, digital literacy and skills, digital services development, and local content development and adoption (*Figure 10*). The strategy seeks to achieve a 95 per cent digital literacy level by 2030, thus ensuring that the population is able to utilize and directly benefit from the ICT infrastructure, services, technologies, and platforms that are to be rolled out. Specifically, the strategy targets 70 per cent broadband penetration within four years, a target that is taken forward in the Broadband Plan goals.

<sup>40</sup> <https://www.ncc.gov.ng/docman-main/industry-statistics/policies-reports/883-national-digital-economy-policy-and-strategy/file>

Figure 10: Pillars of the national digital economy policy and strategy



Source: NDEPS

The Nigerian National Broadband Plan 2020 – 2025<sup>41</sup> notes that for every 10 per cent increase in broadband penetration a GDP growth of between 2.6 per cent and 3.8 per cent can be realized.<sup>42</sup> It also recognizes the need for ubiquitous high speed broadband networks and services to transform the economy. Bearing this in mind, the national broadband plan sets a target of data download speeds of about 25 Mbit/s in urban areas and 10 Mbit/s in rural areas. It commits the country to a target of 90 per cent broadband population coverage, and 70 per cent broadband penetration by 2025. This is in addition to targets that have been set in relation to affordability and costs.

In 2022, two years into the implementation of the national broadband plan and following the COVID-19 pandemic and associated lockdowns, broadband penetration in Nigeria had increased by just over 5 percentage points. This brought Nigeria's total broadband penetration to 45 per cent – and leaves the country to cover the large remaining gap of 25 percentage points within the next three years to meet its goals<sup>43</sup>.

Other digital pillars other than infrastructure do not appear to have detailed plans, i.e., digital skills or digital adoption. While infrastructure is the first and most tangible barrier to be addressed, with clear institutional ownership, it is critical that the entire digital ecosystem is addressed to ensure that the benefits of broadband are fully realized.

<sup>41</sup> <https://www.ncc.gov.ng/documents/880-nigerian-national-broadband-plan-2020-2025/file>

<sup>42</sup> Published after the finalization of the Nigerian national broadband plan, the ITU report on the economic impact of broadband and digitization through the COVID-19 pandemic (econometric modelling, June 2021) confirms that an increase of 10 per cent in mobile broadband penetration in Africa yields an increase of 2.6 per cent in GDP per capita. Additional ITU research suggests that a 10 per cent drop in prices will boost adoption of mobile broadband technology by more than 3.1 per cent. [https://www.itu.int/hub/publication/d-pref-ef-bdt\\_afr-2019/](https://www.itu.int/hub/publication/d-pref-ef-bdt_afr-2019/)

<sup>43</sup> NCC Annual Report

There are other key digital policies and regulations in place that have their origin in the ICT sector, but their application is across the economy. These include the 2015 Nigerian Cybercrime (Prohibition, Prevention) Act<sup>44</sup> and the 2021 National Cybersecurity Policy and Strategy;<sup>45</sup> the 2023 Nigerian Data Protection Act<sup>46</sup> and the NCC 2007 Code of Practice regulations,<sup>47</sup> which apply to all licensees including those providing services such as mobile money.

### 4.3 Cross-sector policies

In Nigeria, cross sector policies that relate to education, health and fintech, amongst others, have been developed either by the lead sector specific ministry or by NITDA. A few of the key cross-sector policies are summarized below:

- The National Policy on ICT in Education (2019)<sup>48</sup> standardizes and coordinates deployment of ICT in the sector and defines the role of ICT to achieve the national vision, the national policy on education, the ICT policy, the information technology education framework, and the Sustainable Development Goals 2030. The national policy on ICT in education is aimed at achieving education that is universally accessible, empowering, inclusive, and enriching. It does this by focusing on seven areas, namely human capital development, infrastructure, research and development, awareness and communication, governance, financing, and monitoring and evaluation. The policy is further supported by the recently developed national digital learning policy (2022) that seeks to entrench digital learning in all educational institutions.
- **National health information and communication technology (Health ICT) strategic framework (2015 – 2020):** The Nigerian Federal Ministry of Health (FMOH) and the Federal Ministry of Communication Technology (FMCT) led the multi-sector and stakeholder development of the strategic framework. The framework provides a vision and guide for aligning current investments in technology within the health system towards a digitalized system that will help Nigeria achieve universal healthcare by 2020.<sup>49</sup> Since the policy has now lapsed, in 2021 the Federal Ministry of Health embarked on, and developed a new policy for the period post 2020 (although this is not yet available at the time of publication).
- **Other real economy sector ICT strategies:** NITDA has commenced a process to develop sector specific strategies. As an example, with respect to agriculture, the **draft digital agriculture strategy (2020 – 2030)**<sup>50</sup> developed by NITDA has a vision of increasing food security and exports of standard agricultural products. The strategy seeks to support digitization in agriculture and is reportedly informed by the agriculture promotion policy (2017 – 2020) and the Nigeria digital economy policy and strategy. Other similar interventions are underway in respect to e-health, e-education and data protection but are yet to be formally promulgated. This is an area in which NITDA should ensure that it is on the same page as sector specific agencies and departments to ensure policy ownership and implementation and to avoid duplication.

<sup>44</sup> [https://www.cert.gov.ng/ngcert/resources/CyberCrime\\_Prohibition\\_Prevention\\_etc\\_Act\\_2015.pdf](https://www.cert.gov.ng/ngcert/resources/CyberCrime_Prohibition_Prevention_etc_Act_2015.pdf)

<sup>45</sup> [https://www.cert.gov.ng/ngcert/resources/NATIONAL\\_CYBERSECURITY\\_POLICY\\_AND\\_STRATEGY\\_2021.pdf](https://www.cert.gov.ng/ngcert/resources/NATIONAL_CYBERSECURITY_POLICY_AND_STRATEGY_2021.pdf)

<sup>46</sup> [https://www.dataguidance.com/sites/default/files/data\\_protection\\_act\\_2023.pdf](https://www.dataguidance.com/sites/default/files/data_protection_act_2023.pdf)

<sup>47</sup> <https://www.ncc.gov.ng/docman-main/legal-regulatory/regulations/102-consumer-code-of-practice-regulations-1/file>

<sup>48</sup> <https://education.gov.ng/wp-content/uploads/2019/08/NATIONAL-POLICY-ON-ICT-IN-EDUCATION-2019.pdf>

<sup>49</sup> <https://www.health.gov.ng/doc/HealthICTStrategicFramework.pdf>

<sup>50</sup> [https://nitda.gov.ng/wp-content/uploads/2020/11/Digital-Agriculture-Strategy-NDAS-In-Review\\_Clean.pdf](https://nitda.gov.ng/wp-content/uploads/2020/11/Digital-Agriculture-Strategy-NDAS-In-Review_Clean.pdf)

- **Fintech policy:** In terms of fintech and digital financial inclusion, the main regulatory responsibilities sit with the Central Bank of Nigeria (CBN), shared with a number of other related regulators including NCC and to some extent NITDA (as described in section 3). The approach taken, both to mobile money and cryptocurrency is bank-led, as opposed to telco-led, which could explain the low uptake, particularly of mobile money, when compared to peer countries such as Kenya and Ghana. This raises questions about the quality of collaboration between NCC and CBN, which has the potential to negatively impact financial inclusion and could cause stagnation in the market. A recent intervention by the regulators in 2018 to license Payment Service Banks<sup>51</sup> may alleviate the situation, and operators were issued licences by 2022. NCC and CBN have also had to collaborate closely to manage access to and affordability of unstructured supplementary service data services (USSD services), where revenue sharing between various institutions is a key issue that affects financial inclusion.

From a policy and regulatory perspective, several other instruments govern the fintech space. These instruments include the 2021 regulatory framework for mobile money services published by CBN, which develops the 2015 mobile money guidelines, and defines CBN and NCC as the regulators of mobile money services and requires that providers are licensed by both entities.<sup>52</sup>

The fintech regulatory framework includes the Risk-based Cybersecurity Framework and Guidelines (2022)<sup>53</sup>. It further includes the 2020 Blockchain Adoption Strategy<sup>54</sup> issued by NITDA which sets out the rules around blockchain, digital currencies, and cryptocurrency; the Securities Exchange Commission 2021 Statement on Digital Assets and their Classification and Treatment;<sup>55</sup> and the Central bank of Nigeria 2021 Circular on Cryptocurrencies<sup>56</sup>. These instruments take different tones and nuanced positions to cryptocurrency regulation in Nigeria from the ICT sector regulator and the two financial services regulators.

Fintech and financial inclusion are at the forefront of Nigeria's digital development. In line with this, CBN has launched a regulatory sandbox framework for the Nigerian payments system early in 2021.<sup>57</sup> The objective of the framework is to promote effective competition, embrace new technology, encourage financial inclusion, and improve customer experience, with a view to engendering public confidence in the financial system. Through the sandbox, CBN can keep abreast of innovation, while upholding its mandate of promoting a safe, reliable, and efficient payments system. The sandbox went live in December 2022. While it is too early to assess the success of the sandbox, CBN and NCC will need to closely work together in reviewing the potential opportunities and risks emanating from the sandbox licensees.

<sup>51</sup> Guidelines for licensing and regulation of payment service banks in Nigeria, CBN, 2018.

<sup>52</sup> <https://www.cbn.gov.ng/Out/2021/CCD/Framework%20and%20Guidelines%20on%20Mobile%20Money%20Services%20in%20Nigeria%20-%20July%202021.pdf>

<sup>53</sup> 2022 Guidelines for Other Financial Institutions are at <https://www.cbn.gov.ng/Out/2022/OFISD/Letter%20to%20all%20OFIs%20Issuance%20of%20Risk-Based%20Cybersecurity%20Framework%20and%20Guidelines%20for%20Other%20Financial%20Institutions.pdf>

<sup>54</sup> <https://nitda.gov.ng/wp-content/uploads/2020/10/DRAFT-NATIONAL-BLOCKCHAIN-ADOPTION-STRATEGY.pdf>

<sup>55</sup> <https://sec.gov.ng/statement-on-digital-assets-and-their-classification-and-treatment/>

<sup>56</sup> <https://www.cbn.gov.ng/Out/2021/CCD/CBN%20Press%20Release%20Crypto%2007022021.pdf>

<sup>57</sup> <https://www.cbn.gov.ng/Out/2021/CCD/FRAMEWORK%20FOR%20REGULATORY%20SANDBOX%20OPERATIONS.pdf>

#### Box 4: Central Bank of Nigeria regulatory sandbox

In December 2022, the CBN launched a sandbox with a four-stage application process. There are five criteria for eligibility of CBN sandbox participants, namely:

- 1 Innovative product with clear potential to improve accessibility, efficiency, security, and quality of financial services; enhance efficiency and effectiveness of financial institutions management of risks; or address gaps or create new opportunities in the Nigerian economy.
- 2 The proposed project will have transaction limits, in terms of value and volume, for risk management and mitigation, during testing.
- 3 Adequate and appropriate assessment to demonstrate usefulness and functionality of the product without an adverse effect on existing structures and consumer experience.
- 4 Necessary resources to support testing in the sandbox.
- 5 A business plan to show that the product can be successfully deployed after exiting the sandbox.

Source : CBN, <https://sandbox.cbn.gov.ng>

- **Financial sector policies:** CBN launched four new policy documents in 2022 that focus on the use of digital models and transformation in the financial sector to accelerate financial inclusion. These policy documents emphasize the use of fintech and digital strategies to reach excluded segments of the market, including young people, women, MSMEs, rural households, and the geographically excluded north-east and north-west geopolitical zones of the country. They include:
  - The national financial inclusion strategy (NFIS 3.0) adopted in 2022 which aims to increase adoption and usage of financial services especially by ensuring robust enabling infrastructure, and expansion of digital financial services and platforms. It also recognizes the centrality of collaboration and seeks to promote a stronger handshake between the NCC and CBN to ensure all players in the sector play a bigger role in driving inclusion.<sup>58</sup>
  - The national fintech strategy 2024 that recognizes and seeks to remedy the fact that the Fintech sector so far has had a limited impact beyond well served segments and envisages the licensing of fintech actors who can scale and stimulate financial inclusion in underserved segments.<sup>59</sup>
  - The 2022 strategy for leveraging agent networks to drive women's financial inclusion, which is an offshoot of the framework for advancing women's financial inclusion adopted in 2020, and advocates for the expansion of delivery channels to reach women customers closer to home. It also promotes innovation and deployment of gender-centric financial products. In both aspects, digital platforms will be a key enabler.<sup>60</sup>

<sup>58</sup> <https://www.cbn.gov.ng/Out/2022/CCD/NFIS1.pdf>

<sup>59</sup> <https://www.cbn.gov.ng/Out/2022/CCD/NFS%20final%20CORRECTION.pdf>

<sup>60</sup> [https://www.cbn.gov.ng/Out/2022/CCD/National%20Strategy%20Leveraging%20Agent%20Networks%20for%20Womens%20Financial%20Inclusion\\_Final\\_Nov%202022.pdf](https://www.cbn.gov.ng/Out/2022/CCD/National%20Strategy%20Leveraging%20Agent%20Networks%20for%20Womens%20Financial%20Inclusion_Final_Nov%202022.pdf)

- **Nigeria Payment System Vision 2025**, focuses the attention of critical stakeholders on contemporary developments to drive digital innovations and payments in the future, including contactless payments, big data, open banking, distributed ledger technology, artificial intelligence, machine learning, and digital identity and user authentication.<sup>61</sup> In particular, the ability to analyse massive datasets should provide insights on economic activity, fraud detection, anti-money laundering, and real-time risk management, while artificial Intelligence has the potential to transform customer experiences and establish entirely new business models in banking. CBN is looking to initiate a workstream to identify and implement opportunities from these technologies in the payments system.
- **Central Bank Digital Currency and the eNaira**: CBN has been among global pioneers in its attempts to expand the use of the eNaira in the promotion of financial inclusion<sup>62</sup> – although take up so far has been lacklustre.

The analysis of policies and strategies presented above has brought to the fore key areas for action to promote policy coherence in the short to mid-term, these include:

- Putting in place long-term strategy and policy frameworks that will anchor digital transformation regulation and guide its implementation.
- Ensuring that the implementation of policies is not carried out in silos and that it supports a digital ecosystem approach. While this is done through the existing MoUs and semi-formal arrangements, they need to cover all stages of policy development from needs analysis to implementation and impact assessment.
- Clarifying institutional roles, in particular the role of NITDA, especially whether it is a standards body, regulatory authority or a policy-making institution, to avoid overlap, and coordination or implementation challenges.
- Improving the quality of coordination and collaboration between institutions.

These observations are further developed in the recommendations in section 6.

<sup>61</sup> <https://www.cbn.gov.ng/Out/2022/CCD/PSMD%20vision%202025%20EDITED%20FINAL.pdf>

<sup>62</sup> <https://enaira.gov.ng/>

## 5 Policy and regulatory design principles

A key element of fifth generation digital regulation is consultation and collaboration with stakeholders beyond the public sector stakeholders, by design. Engagements and interactions with private sector, academia, consumer and end-user associations, development agencies and NGOs perform an important role. Private and financial sector players' involvement is key to investment, while academia has a specific role to play in developing digital skills and promoting innovation. Consumers and end users, at the other end of the spectrum, are at the core of a people-centred digital economy. The involvement of these various stakeholders is important as digital transformation is highly dependent on the alignment and common vision between government and stakeholders across the digital ecosystem. This section looks at some of the key initiatives in this regard.

Policy and regulatory framework design is of primary importance because together they can trigger a digital multiplier effect by providing predictability and direction to stakeholders with differing interests. This is reflected in Pillar II (policy design principles) of the G5 Benchmark which considers:

- **Regulatory design procedures:** how regulation is prepared and adopted, if there is any public consultation, if there is any assessment on regulatory impact, if the regulatory decisions are reviewable, if regulatory frameworks are technology- and service-neutral, if there is innovation and regulatory experimentation, such as sandboxes, and if regulation and policy are subject to revision and updates.
- **Transparency:** setting a standard of transparency, by which the public has access to information and regulations, and a focus on ethical standards for national regulatory agencies.

### 5.1 Regulatory design procedures

NCC is a mature regulator with clear approaches to regulation making, which include public consultation and the setting up of multiparty task forces to deal with pressing regulatory matters. The quality of consultation, which is an important aspect of collaboration, is best measured from the lens of both the regulator and its stakeholders. Although clear, the relationship between NCC and its licensed stakeholders seems to be one in which ICT sector licensees appear to be reactive in addressing their concerns. Their engagement tends to be in the form of a response to a document or process. Frequent gap analysis, and tracking of convergence trends by NCC, perhaps in collaboration with the licensees, could allow faster and forward-looking interventions. In the case of TV white space regulation, such an approach allowed stakeholders access to spectrum faster than would otherwise have been possible. This collaborative approach can be taken in other areas where geographic, technology or legal boundaries are blurred. The state-based money lenders framework is one such example. Collaboration between the regulator and its stakeholders can reduce unintended risks and delays associated with political intervention, which is sometimes the alternative relied upon when agencies are deadlocked.

In terms of the quality of collaboration across and between regulators, this is an area that needs improvement. However, there have been success stories. For example, the NCC set up a cross-sector and cross-industry national communications backbone project to fast-track broadband infrastructure deployment across the country in pursuit of the 70 per cent broadband penetration and other targets set in the national broadband plan. There is also a National Broadband Infrastructure Joint Committee (NBIJC), which adheres to principles of good regulatory design (see Box 5).

### Box 5: Regulatory design: National Broadband Infrastructure Joint Committee

The industry-wide National Broadband Infrastructure Joint Committee (NBIJC) was established and designed to oversee the rollout of national broadband infrastructure, with transparency and collaboration built into the design, and it is chaired by the NCC Director of Digital Economy who drives this project.

The composition of the committee includes mobile network operators, infrastructure companies, and tower companies, facilitating a collaborative approach to addressing the challenges and opportunities of broadband rollout and financing. Accordingly, the NBIJC mandate includes engaging with potential funders, such as the Nigeria Sovereign Investment Authority (NSIA), Infrastructure Corporation of Nigeria (InfraCorp), Africa Development Bank (AfDB), and the Central Bank of Nigeria (CBN).

Source: ITU research and interviews

Other elements of regulatory design in Nigeria include regulatory impact assessments and an opportunity for the public to review decisions taken by the NCC when they are not satisfied with either the outcomes or the process followed. In line with more advanced regulators, as discussed earlier, regulatory sandboxes are being tested in Nigeria, although not by NCC, and these can encourage innovation and contribute to digital development.

## 5.2 Transparency

Transparency is also a feature of Nigeria ICT regulation. The legislation governing NCC requires that the regulator is transparent in how it conducts its affairs and reaches decisions. This is embedded in public consultation processes, and in access to information and regulations. The NCC approach to transparency is evidence of a developed and experienced regulator. The example of the multi-stakeholder NBIJC mentioned above is also an example of transparent design, laying the ground for locally led and stakeholder-informed regulatory frameworks and concerted policy implementation.

In summary, the analysis of the policy and regulatory design principles highlights that there is some room for improvement, although existing regulatory frameworks already include key elements of regulatory design such as transparency, accountability and consultation as part of the NCC regulatory posture. The analysis also underlines the benefits of improved quality of coordination where relationships between institutions exist and that the principle of enabling innovation, such as the use of sandboxes, should be built into regulatory design.

## 6 Nigeria's journey to G5 regulation and digital transformation: future steps for consideration

This section revisits the key themes explored in this report and proposes the steps that the NCC and its stakeholders can take to strengthen coordination and collaboration, to improve the readiness of legal, policy and governance frameworks and to facilitate digital transformation in Nigeria. The following steps may be carried out in parallel:

**Step 1: Promote locally driven digital transformation.** Market development with a locally relevant developmental impact should be at the forefront of Nigeria's digital transformation strategy. Areas that could be considered for intervention include the promotion of local hosting of cloud services, the wider adoption of mobile money, and broader digital financial service innovation and uptake. Improvements in those areas will have an impact across the economy.

**Step 2: Provide policy certainty and predictability.** A long-term policy framework will help to create certainty for policy-makers, regulators, and market players alike. This needs to be complemented by a keen focus on associated implementation plans for such a framework, the legal and regulatory instruments supporting it, and a reduction in legal and regulatory lags. Certainty and predictability will be enhanced by:

- **Development of long-term policies:** As noted in section 4, Nigeria's national economic, digital, and ICT policy frameworks are clear and robust, however, they tend to be short- to medium-term and currently extend to 2030. Consideration should be given to developing a longer term, for example a 30-year national plan and digital agenda, to guide the medium-term strategies.
- **Constant and consistent implementation monitoring and evaluation.** Once the policy framework is in place, there is a need to focus on policy implementation to ensure impact.<sup>63</sup> Implementation needs to be measured through effective monitoring and evaluation frameworks, which includes reporting and public accountability. Nigeria's broadband penetration at 45 per cent is still 25 percentage points short of its target, which it wants to meet within the next three years, and successful implementation of the national broadband plan will be crucial to drive digital transformation. Similarly, adopting strategies to reduce the digital divide will be critical, such as the 2022 strategy for leveraging agent networks to drive women's financial inclusion.
- **Reducing policy and regulatory lag:** Policy and regulatory instruments should be up to date and keep up with market developments. In order to reduce regulatory lag, the drafting and promulgation of legislation and regulations that support existing policy in a timely manner is important. A number of key medium-term policies have lapsed (2020) or are due to come to an end in the next two years. Notwithstanding the impact of COVID-19 and the recent national elections, it is important that these policies are updated, and their implementation reviewed to ensure their success. NITDA has reported that it has taken steps to put in place frameworks to facilitate e-health, e-education and data protection, but awareness of these is limited, even amongst affected stakeholders and these are yet to be formally promulgated. Delays and/or overlaps will only serve to reduce the impact and potential relevance of these policy and regulatory instruments.

**Step 3: Maintain a high level of regulatory maturity in the fast-evolving digital environment.** In order for NCC to lead the required collaboration effectively, it needs to be sufficiently mature and agile. As discussed in section 5, regulatory maturity can be measured by regulatory

<sup>63</sup> See ITU GSR-21 Best Practice Guidelines: [https://www.itu.int/en/ITU-D/Conferences/GSR/2021/Documents/GSR-21\\_Best-Practice-Guidelines\\_FINAL\\_E\\_V2.pdf](https://www.itu.int/en/ITU-D/Conferences/GSR/2021/Documents/GSR-21_Best-Practice-Guidelines_FINAL_E_V2.pdf)

independence and accountability, transparency and predictability, expertise, proactivity, and future orientation, as well as by a wide network of collaborating agencies delivering concrete solutions to ICT and digital market challenges. Nigeria's NCC fares well in terms of its maturity and is encouraged to continue to manage the 'basic' telecommunication regulatory processes and standards that it mastered on its path to G4 regulation, such as transparent public consultation processes, impact analysis and research.

**Step 4: Enhance the quality of collaboration.** Strategic partnership and collaboration is a key pillar in the NCC vision implementation plan (SVIP) and its strategic management plan (SMP). The implementation of this pillar, and the facilitation of inter- and cross-sector collaboration by NCC has been confirmed by interviews carried out in support of this research. It is further evidenced by the formal and semi-formal relationships that exist across institutions. Notwithstanding this inter-agency collaboration, it is important to note that the international benchmarks in section 2 (Table 1) generally place Nigeria's performance in the third quartile. This implies that while in many instances substantial steps have been taken to collaborate, the depth and quality of collaboration between regulators and with other stakeholders needs to continue to improve. This will strengthen the shift from consultation to collaboration and will improve implementation outcomes. In addition, it is crucial to be mindful of the digital ecosystem and the roles that various institutions play in it. Nigeria needs to be flexible and forward looking to take full advantage of the emerging benefits brought about by ICTs and digital transformation.

**Step 5: The institutional frameworks should support role clarity, policy coherence, and lean governance.** While responsibility for digital transformation at the federal level is shared between the Federal Ministry of Communications and Digital Economy agencies (such as NCC, NBC, and NITDA), there are a large number of other government agencies that impact digital transformation and e-government implementation, which leads to issues of responsibility overlaps and ineffective coordination. In instances where there are overlaps, gaps or a lack of clarity, as in the case of NCC and NITDA, there is a need to clarify uncertainty, take steps to reduce forum shopping, and address ineffective policy implementation.

The findings of this report are aligned with the World Bank Nigeria Digital Economy Diagnostic Report that recommended improvements to the legal framework to streamline overlapping responsibilities between agencies, both horizontally in the ICT sector, and vertically between state and national levels, and improve coordination at a policy level.<sup>64</sup> To facilitate this, it is recommended that there is a focus on two key issues:

- 1 Coordination between the different agencies that govern ICT policy, regulation, and implementation can be achieved through the merger of agencies where the overlap warrants it, or when external factors and trends, such as convergence, necessitate it. The potential merger of NCC and NBC is one such example. Where there is not enough similarity between institution mandates to warrant a merger, the establishment of formalized inter-ministerial and inter-agency structures, such as the National Broadband Infrastructure Joint Committee and the Joint Tax Board, would be a useful means to facilitate coordination.
- 2 Coordination at the national level is important where there is a wide variation of institutional arrangements, particularly evident in Nigeria, and where the objective is to facilitate a digital economy. Linkages between federal and state level institutions and between sector specific ministries, departments and agencies are necessary for an effective and outcome-driven collaborative governance framework to exist.

<sup>64</sup> World Bank Group. 2019. *Nigeria Digital Economy Diagnostic Report*. Washington, DC: World Bank. Licence: Creative Commons Attribution CC BY 3.0 IGO

The example set by the Edo State model, where a stand-alone ICT agency has been established with responsibility for overseeing state level implementation, and which reports to the Governor in a way that aligns with national policy, has been found to be very effective. This model could be considered for adoption by other states.

**Step 6: Expand collaboration and create new partnerships.** Whole-of-government collaboration and cooperation should be encouraged as described in the ITU GSR-21 Best Practice Guidelines<sup>65</sup>. For many agencies, a more formal engagement could be considered where NCC currently has informal or non-existent collaborative relationships. These institutions and other stakeholders could be considered as future partners. In addition, consideration should be given to:

- Collaboration with ministries of health and education could be improved and strengthened through a more formal engagement mechanism than is currently in place between NCC and these ministries.
- At a sector-specific level, it should be recognized that IT and digitization knowledge lies better with NITDA (and more broadly the ICT ministry), however the subject matter expertise resides with the relevant ministry or agency that has little ICT knowledge. This should be acknowledged and reflected in how sector ICT strategies are developed and implemented, with ministries and NITDA setting up collaborative structures co-led by the two institutions. With regard to the implementation of the new e-health policy and the e-education policy developed by NITDA, practical next steps to facilitate successful implementation include, ensuring stakeholder buy-in, increasing awareness across government and other stakeholders, and in the case of education, the relevant agencies developing further sub-policies to support the ICT in education policy.
- Collaboration between NCC and the transport regulatory authority, energy regulatory authority and the postal regulation authority is currently minimal, and increasing collaboration opportunities should be considered. For example, collaboration and/or coordination will strengthen the response to innovations such as e-hailing and communications technologies that require the evolution of traditional postal services. In addition, collaboration will enable a proactive and supportive approach to innovation that occurs across sectors, again cross-sector regulatory sandboxes could be a good way of facilitating this.
- Federal and state level ICT policy and regulatory authorities could increase their level of collaboration and coordination and, through the Nigerian Governors' Forum or another mechanism, a way could be found to share lessons learned and best practices between states.

**Step 7: Promote innovation:** The policy and legal framework should build space for regulatory experimentation and incentives for digital innovation. Where innovation has occurred and new and innovative applications of technology have been evidenced, Nigeria's regulators across sectors have been faced with challenges. For example, e-hailing services have received mixed policy and regulatory signals from government. Local platforms such as those cutting across sectors or state boundaries require regulatory certainty to thrive and to provide safe services to consumers. Rather than a re-active approach, the approach taken by CBN in developing a sandbox framework may prove useful for other digital services across other sectors of the economy as well. This will facilitate the development of a more deliberate approach to support innovation and to facilitate financing and ultimately market entry by entrepreneurs and small businesses with locally relevant ideas. It is key that a regulatory mindset that facilitates innovation, and the changes that it may bring about, is encouraged.

<sup>65</sup> [https://www.itu.int/en/ITU-D/Conferences/GSR/2021/Documents/GSR-21\\_Best-Practice-Guidelines\\_FINAL\\_E\\_V2.pdf](https://www.itu.int/en/ITU-D/Conferences/GSR/2021/Documents/GSR-21_Best-Practice-Guidelines_FINAL_E_V2.pdf)

**Step 8: Improve the cybersecurity framework:** While various instruments and institutions are in place to combat cybercrime and enhance cybersecurity capacity and capabilities, efforts of different stakeholders need better coordination and communication. The National Cyber Security Policy 2022 prescribes a single national CERT and sector CSIRTs. Only a few sector specific CSIRTs and focal points are active. This needs to be remedied given the cross-sector impact of cyber-crime.

**Step 9: Develop detailed plans or roadmaps for digital skills and adoption.** A total ecosystem approach should be taken to drive digital transformation. While high-level policies to facilitate digital skills and to encourage broadband usage and uptake are in place in Nigeria, these are not sufficient for effective implementation. The national digital economy policy and strategy clearly identified a digital literacy and skills pillar and an indigenous content, development, and adoption pillar that would both facilitate the achievement of the goal of a 95 per cent digital literacy level by 2030. However, detailed plans are needed to give effect to this goal, and where they already exist monitoring and evaluation is critical. Supporting policies, such as the NITDA draft national digital literacy framework (2022) should have buy in from all affected ministries, agencies and departments and be quickly followed by detailed implementation plans monitored by the relevant institutions.

#### **Box 6: World Bank Digital Economy Initiative for Africa (DE4A) Diagnostic Report**

The 2019 World Bank Nigeria Digital Economy Initiative for Africa Diagnostic Report summarized a number of areas for improvement with respect to policy coordination that complement the recommendations in this report, including:

- Improving the legal framework and streamlining responsibility overlaps between the different entities responsible for development and regulation of the ICT sector in Nigeria, both at the state and federal levels.
- Strengthening coordination between the different agencies that govern ICT policy, regulation, and implementation, and consider:
  - (i) establishing a technical working group to bring all ministries/agencies involved in the ICT sector together to better coordinate future interventions;
  - (ii) providing more clarity on last mile regulation of the fixed broadband market; and
  - (iii) considering merger of some agencies/ regulators to adapt to increasing technological convergence.
- Establishing a coordinated policy approach to provide public access, to build synergies and efficiencies, as a number of programmes currently provide access points (Rural Broadband Initiative (RUBI), incubators, etc.).

Source: World Bank Group. 2019. Nigeria Digital Economy Diagnostic Report. Washington, DC: World Bank. Licence: Creative Commons Attribution CC BY 3.0 IGO

## 7 Conclusion

Nigeria's institutional, policy, and regulatory frameworks are evidence of a country that appreciates the value of a clear digital agenda and has embraced the collaborative mindset necessary to implement that agenda. It is worth noting that there are a multitude of institutions with the potential for duplication of functions if collaboration is not fully embraced or appropriately managed. However, this risk is mitigated by the fact that each institution has an appropriate legal mandate and clear decision-making powers. Importantly, collaborative digital governance is built into the policy and regulatory design.

Accelerating digital transformation requires critical enablers to ensure that the policy framework is kept up to date, is owned by lead agencies, has suitable long-term anchors, as well as ensuring implementation, and monitoring and evaluation. There is also a critical need for awareness by all 'responsible' agencies, as well as all affected public and private stakeholders of policy and regulatory interventions. While Nigeria has the requisite development-oriented strategies, policies and regulations in place, and integrated regulation – both characteristic of fourth generation regulation – there is a gap in terms of implementation and monitoring and evaluation, or at least in terms of evidence thereof.

Policy implementation, as well as the implementation of policy design principles, which need to be maintained and protected, will ensure the participation of the industry, academia, and other non-governmental stakeholders. This will complement the already existing collaboration across government and will assist the Government of Nigeria to achieve its national policy objectives as set out in Nigeria national development plan and elsewhere.

As a leader in the region, already a G4 regulator, and at the G5 advanced state of readiness for digital transformation, Nigeria has the opportunity to pave the way to becoming a leading G5 country, embracing policy cohesion and lean governance, and unlocking the potential of digital transformation to deliver on the national development agenda. The recommendations in this paper, the continuation of the implementation of good regulatory design principles, and the adoption of best practice regulatory principles as outlined in the ITU GSR-20 Best Practice Guidelines,<sup>66</sup> will turbo-charge the country's progress on its regulatory journey and will propel Nigeria towards the 'gold standard of digital regulation'.

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<sup>66</sup> <https://gen5.digital/best-practices/the-gold-standard-for-digital-regulation/>

## Annex: National legal, policy and governance frameworks for digital transformation based on the ITU Unified Framework, Nigeria, 2023

Nigeria Policy, governance and legal frameworks for digital transformation, 2022						
<b>% of Benchmark achieved</b>  <b>NATIONAL DIGITAL POLICY AGENDA</b>  <b>69%</b>	National broadband plan	National digital strategy	Digital strategy is SDG-oriented	Digital strategy for multiple sectors	Policies for sustainable consumption and production	National strategy for youth employment
	Yes	Yes	Yes	Yes	No	Partial
	Digital strategy has implementation mechanisms	Broadband is part of UAS definition	Broadband plan promotes access of women, girls	Broadband plan promotes access for persons with disabilities	Broadband plan promotes access for youth	Innovation policy
	Partial	Yes	No	Yes	No	Yes
	UAS definition includes telecentres, schools	USF financed school, telecenter connectivity	Digital strategy include education			
<b>REGULATORY CAPACITY</b>  <b>91%</b>	Separate telecom/ICT regulator	Autonomy in decision making	Accountability	Percentage of diversified funding	Enforcement power	Sanctions or penalties imposed by regulator
	Yes	Yes	Partial	Yes	Yes	Yes
	Entity in charge of QoS	Entity in charge of licensing	Entity in charge of interconnection rates and price regulation	Entity in charge of radio frequency allocation and assignment	Entity in charge of Spectrum Monitoring and Enforcement	Entity in charge of universal service/access
	Yes	Yes	Yes	Yes	Yes	Yes
	Entity in charge of broadcasting (radio and TV transmission)	Entity in charge of broadcasting content	Entity in charge of Internet content	Entity in charge of IT	Entity responsible for consumer education and consumer complaints	
<b>GOOD GOVERNANCE</b>  <b>55%</b>	RIA required before regulatory decisions	Decisions of ICT regulator subject to a general administrative law	Appeals to regulatory decisions allowed (all sectors)	Dispute resolution mechanism for ICT sector	Appeals to decisions of ICT regulator allowed	Policy, regulations are technology and service-neutral
	Partial	Yes	No	Yes	Yes	Partial
	Ex-post policy reviews required	Rolling policy reviews required	Laws (all sectors) available on a single government website	Access to information and fundamental freedoms protected	Ethics rules apply to ICT regulator's staff	
			No	Yes	Yes	

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