

# THE DIGITAL SPRINTERS: THE CASE OF NIGERIA

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NIGERIA COULD UNLOCK AN ADDITIONAL USD175 BILLION OF ECONOMIC IMPACT FOR 2030 THROUGH SUPPORTIVE POLICIES THAT ENABLE FULL UTILIZATION OF DIGITAL TECHNOLOGIES.

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Globally, there has been a large increase in policy focus on the digital transformation of economy, society and government. This has led to significant uptakes in internet penetration (as evidenced by rising internet use). For example, from 2010 until 2018 Nigeria has successfully brought an additional 30 percent of its population online.<sup>1</sup> Initiatives likely to have contributed to this include the Nigerian government's "National Broadband Plan (2013-2018)" initiative launched in 2013 which involved expanding the geographical coverage of broadband infrastructure into unserved and under-served areas.<sup>2</sup> Going forward however, more than providing access to the internet may likely be required to fully leverage digital technologies for economic development. Nigeria could reach a potential annual (year-on-year) economic impact of up to **USD175 billion in 2030** through supportive policies that enable full utilization of digital technologies.<sup>3</sup> Given the need to rebuild economies following the

impact of COVID-19, the importance of capturing this potential digital dividend becomes ever more crucial. This research by economic strategy firm AlphaBeta (commissioned by Google) aims to understand how emerging economies can fully take advantage of digital technologies to achieve gains in economic development. The report focuses on 16 important emerging economies (which we dub the "Emerging-16"). These economies are Argentina, Brazil, Chile, Colombia, Egypt, Israel, Kenya, Mexico, Nigeria, Peru, Saudi Arabia, South Africa, Russia, Turkey, the United Arab Emirates and Ukraine. Together, these "Emerging-16" account for 13 percent of GDP, 16 percent of population and 19 percent of internet users globally.

Based on this research, a number of insights across the Emerging-16 emerged, that are of relevance to Nigeria and are summarized in this document. More details can be found in the full report.<sup>4</sup>

1. Based on World Bank, World Development Indicators.

2. Nigerian Communications Commission (2019), "Post-Nigeria National Broadband Plan 2013-2018 Forum".

Available at: <https://www.ncc.gov.ng/media-centre/news-headlines/483-atcon-hosts-post-nigeria-national-broadband-plan-2013-2018-forum>

3. These estimates refer to the value generated by 39 technology applications across 10 sectors in 2030, quantified based on a "Full adoption" scenario (i.e. 100 percent adoption). This implies that these ten sectors will become "Digital leaders" with significant leap-frogging. A "Full adoption" scenario is unlikely to be realistic but useful as a thought experiment and to frame the total opportunity.

Estimates do not represent GDP or market size (revenue), but rather a combination of economic impacts such as productivity gains, increased revenues and cost savings. The relevant technology applications by sector and their sources of value (e.g. reduced wastage in production, enhanced consumer offerings) were identified based on a detailed review of the academic literature. The exact sizing methodology is unique to each of the 39 technology applications, but estimates use a series of international and country-specific case studies for each technology application to quantify estimates. Across the 39 estimations economic indicators sourced from international organizations such as the World Bank, International Labor Organization, OECD and national statistics offices were used.

Detailed data sources and estimation methodologies for each of the 39 applications are listed in the Appendix to the main report, linked here <https://alphabeta.com/our-research/the-digital-sprinters-capturing-a-us34-trillion-through-innovative-public-policy/>

4. This research was prepared by AlphaBeta for Google. All information in this summary and the main report was derived from AlphaBeta analysis using both proprietary and publicly available research, data and information. Google does not endorse any estimates.

In Nigeria, as in most of the Digital Sprinters, fast growth in internet penetration has not translated into a faster pace of economic growth.

Historically, economic growth in Nigeria has not kept pace with internet adoption. For example, since 2013, Nigeria's internet population has grown by 25 percent annually, but real GDP has only increased by 2 percent annually.<sup>5</sup> Labor productivity has also declined by 0.3 percent annually during this same period.

If the transition from digital penetration to economic growth could be fully leveraged, digital technologies could transform economic development in Nigeria.

The research identifies eight groups of digital technologies with significant potential to enhance economic development. In the hypothetical scenario where applications based on the eight digital technologies in ten sectors are fully adopted, the combined annual economic impact in Nigeria could reach up to **USD175 billion in 2030**, which is about 33 percent of the country's estimated GDP in 2030 (see Exhibit 1). About 61 percent of the **potential benefits of digital technologies accrue to traditional sectors, namely resources, infrastructure, and agriculture.**

12 policy levers linked to four strategic imperatives are crucial to go beyond digital penetration and capture the digital benefits linked to economic development.

A review of impactful, innovative and practical digital policies identified a number of important levers for capturing the digital-led economic development opportunity (see Exhibit 2).

While it is unlikely that all 12 policy levers will be applicable to the Nigerian context, a number of innovative policy levers could be considered.

#### **POLICY LEVER 1:**

##### ***DIGITIZE PAYMENTS TO CREATE INCENTIVES FOR ADOPTION AND PLUG LEAKAGES***

Governments around the world are increasingly allowing for online and mobile payment methods for government services and distributions. Doing so can drive top-down adoption of FinTech products in the population which can reduce the cost of handling and carrying cash. In many regions, in particular in Africa, digital financial services, such as mobile wallets, are often the first type of accounts individuals hold meaning it is a direct channel for financial inclusion. When Sierra Leone faced severe pressure to pay healthcare workers on time during the Ebola crisis in 2014 the government decided to test digital payment through mobile wallets of salaries to healthcare workers. The government reported savings of USD10.7 million in avoided payroll leakages.

**TO BE CONTINUED ON PAGE 4**

#### **POLICY LEVER 2:**

##### ***BUILD FUTURE-PROOF DIGITAL INFRASTRUCTURE WITH INTEROPERABILITY AND UPGRADING IN MIND***

In the fast-evolving technology landscape, challenges arise when digital infrastructure is created with a specific technology in mind that could potentially end up obsolete in the future. Similarly, if infrastructure is built with providers in mind, it could lead to interoperability issues that can drive fragmentation, transaction costs and give rise to competition issues. For example, a severe challenge to Nigeria's fast growing mobile-money industry is a fragmented agent network. Modular and open source approaches to digital infrastructure and early integration of third parties can address these challenges. The Central Bank of Nigeria is amending the country's Agent Banking Guidelines to allow the TELCOS and any other interested entities to build and manage a Shared Agent Network (SAN) for the provision of mobile money services.<sup>6</sup>

#### **POLICY LEVER 3:**

##### ***IMPLEMENT TARGETED TRAININGS, SOCIALIZATION AND BEHAVIORAL LEVERS FOR TECHNOLOGY ADOPTION***

Targeted training initiatives can be effective at exposing MSMEs to new sector-relevant digital technologies, as well as developing their skills, and driving adoption. Trainings can be developed in partnership with solution providers. Google's Digital Skills Africa is an example of how digital skills training, specifically designed with entrepreneurs, MSMEs and youth in mind, can be very effective. The program was initially rolled out across Nigeria, Kenya and South Africa in 2016 but has been expanded to 29 countries across Africa. According to Google, over 60 percent of Digital Skills for Africa trainees have confirmed recording business growth, starting new businesses, finding jobs or growing in their current jobs.<sup>7</sup>

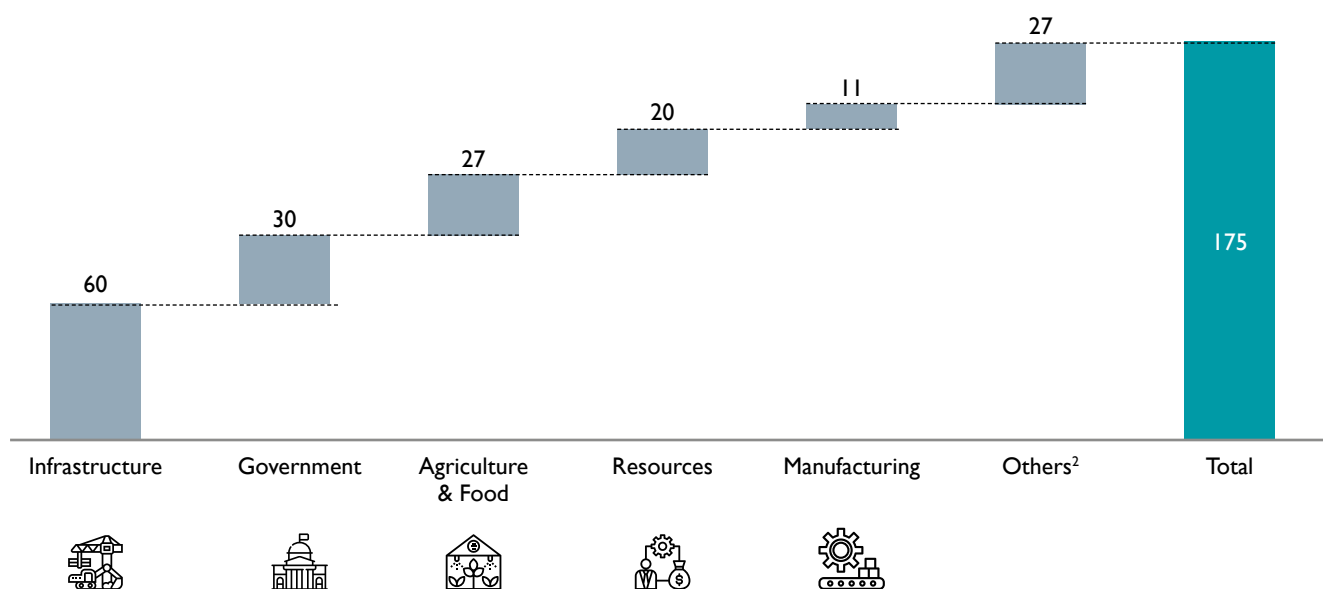
5. Based on World Bank, World Development Indicators.

6. Central Bank of Nigeria (2019), "Financial Service Providers". Available at: <https://www.cbn.gov.ng/FinInc/finsevpviders.asp>

7. Malinga (2020), "Google to train 20 000 women across Africa this year", ITweb. Available at: <https://www.itweb.co.za/content/o1Jr5Mx9mYKqKdWL>

## EXHIBIT 1: THE VALUE OF DIGITAL TECHNOLOGIES

## POTENTIAL ANNUAL ECONOMIC IMPACT IN THE FULL ADOPTION SCENARIO

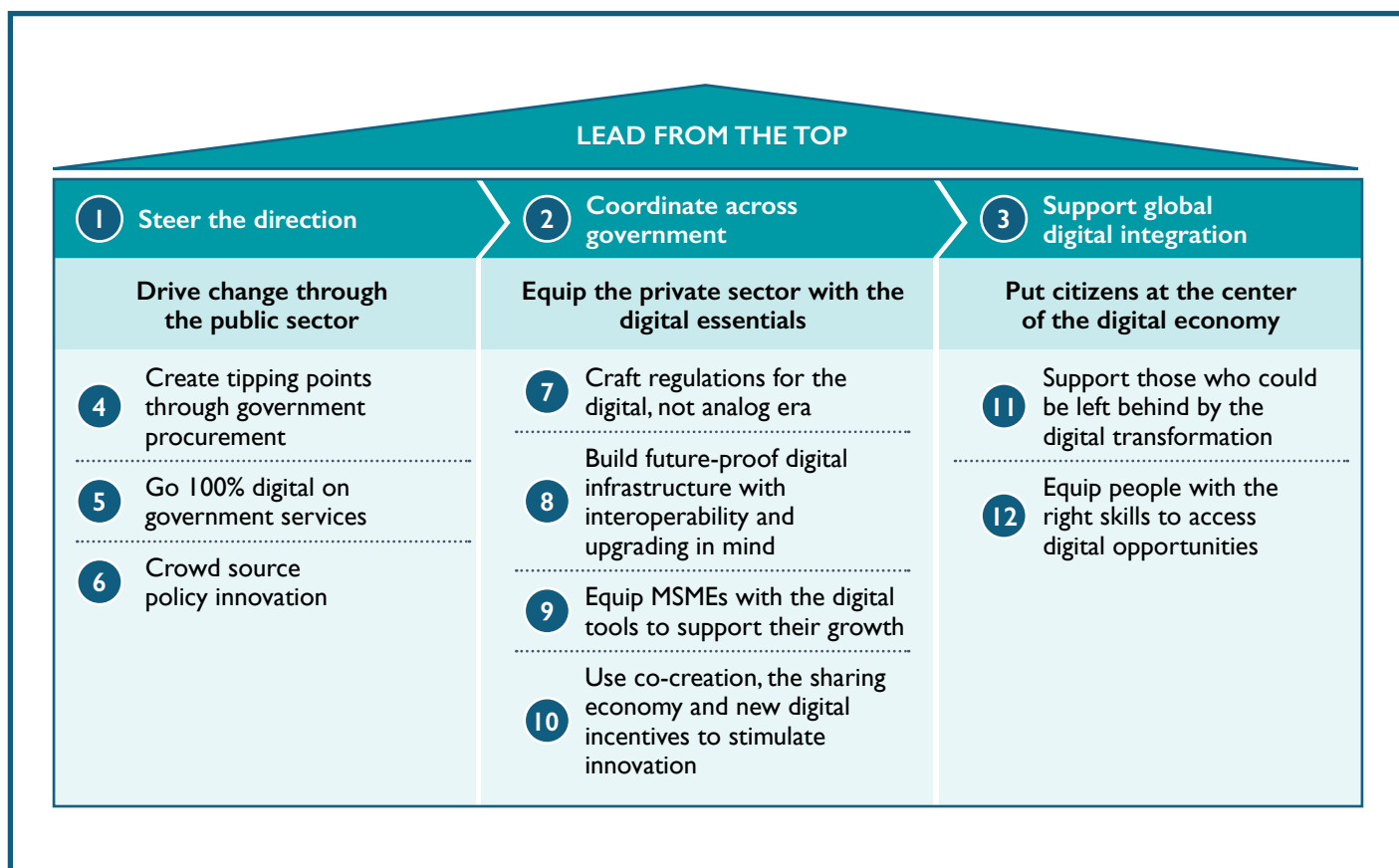
USD BILLION, 2030 (HIGH-END ESTIMATES)<sup>1</sup>

1. These estimates do not represent GDP or market size (revenue), but rather economic impact, including GDP increments, productivity gains, cost savings, time savings, increased revenues, increased wages and increased tax collection.

2. Others include Consumer, Retail & Hospitality; Education & Training; Financial Services; Health, and Mobility.

SOURCE: AlphaBeta analysis

## EXHIBIT 2: POLICIES TO CAPTURE THE VALUE OF DIGITAL TECHNOLOGIES



While it is unlikely that all 12 policy levers will be applicable to the Nigerian context, a number of innovative policy levers could be considered.

#### **POLICY LEVER 4:**

##### **LEVERAGE CLOUD COMPUTING FOR EFFICIENCY GAINS ACROSS THE GOVERNMENT**

Cloud technology, in particular cloud storage and cloud computing power, is an enabling technology that could be utilized for different applications. Cloud computing technologies across government could lead to significant efficiency gains and cost savings for governments' ICT budgets. Peru's government, as an example, had used the cloud to increase citizen engagement by developing a cloud-native app that located the nearest polling station for voters. Some research has attributed a reduction of nearly 60 percent in voter absenteeism in 2016 compared to the 2011 presidential elections.

#### **POLICY LEVER 5:**

##### **CREATE "TIPPING POINTS" THROUGH GOVERNMENT PROCUREMENT**

Many technologies provide economies of scale or network effects that only kick in once there is a sufficient number of users – or past the "tipping point". Governments can accelerate the uptake of technologies to reach tipping points faster by directly procuring technology through government tenders. There are a number of pitfalls to avoid. First, any procurement process should be conducted as transparent as possible and be based on rigorous analysis to understand the cost-benefit of technologies. Second, contracts should be flexible and time constrained and technology if possible modular, open source and interoperable in nature. This is to avoid "lock in" with particular providers or outdated, expensive technologies. Finally, not only the purpose of the technology but also capabilities of governments to leverage the technology should be considered and weighed against each other.

#### **POLICY LEVER 6:**

##### **LEVERAGE DIGITAL SERVICES FOR ACCESS TO ECONOMIC NECESSITIES**

Providing a tangible service (such as access to energy) that requires customers to sign up for and start using a digital platform (for example e-money, i.e. mobile money and prepaid cards) can demonstratively drive digital inclusion. Nigeria's pay-as-you-go solar scheme provides one such example, where government-led pilots tested innovative mobile payment solutions to include rural customers. Digital technologies can also help to transform the efficiency of government delivery of services and spending. In Kenya, the World Food Program found that the use of electronic transfers to support food insecure households, rather than in-kind payments, lowered delivery costs by 15 percent.<sup>8</sup>

#### **POLICY LEVER 7:**

##### **BE CLEAR ON WHO IS THE LEAD AGENCY IN EACH STRATEGY**

It is important that there are clear government agency leads for different aspects of the digital agenda. Some of the common success factors include clear leadership from the highest levels of government and finding ways for different departments to lead relevant elements. In Chile, the governmental organization Production Development Corporation (CORFO) leads the implementation of the national I4.0 strategy, known as the 'Programa Estrategico Industrias Inteligentes 2015-2025'. As part of this, CORFO undertakes all coordination efforts with different government bodies overseeing the different industry sectors prioritized for I4.0 implementation.<sup>9</sup>

#### **POLICY LEVER 8:**

##### **ENCOURAGE A SHARING ECONOMY FOR NON-SERVICES SECTORS**

Sharing of fixed assets (e.g. equipment, warehouses) that reduces fixed costs by transforming them into ongoing variable costs is enabled by digital technologies such as the Internet of Things. However, much of the innovation to date has been in service sectors (e.g. car sharing, home sharing), with limited traction in traditional sectors such as manufacturing and agriculture. An example is Hello Tractor which works with smallholder farmers in Africa by aggregating smallholder farmers' requests for tractor service on behalf of tractor owners, while providing enhanced security through remote asset tracking and virtual monitoring.<sup>10</sup>

#### **POLICY LEVER 9:**

##### **REPURPOSE EXISTING PUBLIC INFRASTRUCTURE TO PROVIDE DIGITAL ACCESS**

Public infrastructure can be repurposed to provide access to the internet for underserved communities. This requires a network of public infrastructure (e.g. public buildings, transport, utilities or ICT infrastructure) that can be leveraged for people to access the internet. One example is Biblionet which is a national program that tackled Romania's "broadband divide" between urban and rural areas by providing hardware, software and IT support for 2280 public libraries which had well established infrastructure and geographical coverage.<sup>11</sup>

8. CGAP (2013). *World Food Programme's exploration of the in-kind to e-payments shift for food assistance in Kenya*.

9. UNIDO (2018). *You say you want a revolution: Strategic Approaches to Industry 4.0 in Middle-Income Countries*.

Available at: <https://www.unido.org/api/loptext/documents/download/10031392/unido-file-10031392>

10. Hello Tractor, Available at: <https://www.hellotractor.com/about-us/>

11. European Union (2018) "Biblionet", *Shaping Europe's digital future – Projects*. Available at: <https://ec.europa.eu/digital-single-market/en/content/biblionet>

FOR MORE DETAILED INFORMATION ON THE RESEARCH,  
PLEASE REFER TO THE FULL REPORT AT:

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