

UNLOCKING THE POTENTIAL: FINANCING AFRICA'S DIGITAL REVOLUTION

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INTRODUCTION

Digital revolution refers to the rapid shift from traditional industrial systems to digital technologies. This shift, which took root in the late 20th century is fundamentally reshaping how we interact with technology and each other. Africa, often seen as a rising star on the global stage, is experiencing its seismic digital metamorphosis with the rapid proliferation of digital innovation and the democratisation of services encompassing Digital Platforms, Data, Cybersecurity and Privacy, Digital Infrastructures, Financial Technology (Fintech) among others. This is evident in Nigeria, where a burgeoning fintech ecosystem has emerged, the African giant is not just catching up but is poised to leap ahead in several domains, mobile money operators and digital banks are not only revolutionising access to financial services for millions of unbanked and underbanked individuals but also redefining the very nature of financial transactions in the country. At the heart of this shift lies the critical issue of data ownership, which controls the vast amount of personal and financial data generated by these digital platforms. This includes landmark initiatives such as the installation of undersea broadband cables, which significantly enhance connectivity and foster seamless communication across the continent.

This revolution presents both opportunities and challenges for traditional service providers, compelling them to rethink their business models in an era where technology and data sovereignty are reshaping the future of finance.

THE RISE OF AFRICA'S DIGITAL REVOLUTION

As digital revolution has ushered in a new era of economic transformation across Africa, leading to the emergence of a vibrant and growing digital economy in Africa. A recent World Bank report highlights the ambitious digital infrastructure goals set by several African nations, with Senegal, Kenya, South Africa and Rwanda at the forefront in expanding 4G networks, fibre-optic connectivity, and e-government initiatives. The report underscores the following key points:

- Affordable and accessible internet is essential for active participation in the digital economy;
- Identification and verification systems are crucial for the extension of digital networks. Current estimates suggest that approximately 30% of Africans lack proper identification;
- Expanding internet access facilitates greater inclusion in formal financial services, particularly mobile money.

The report emphasizes that sub-Saharan Africa, with its dynamic entrepreneurial spirit and one of the youngest populations globally, is well-positioned to drive the adoption of digital technologies.

Nigeria, Senegal, Kenya, and Rwanda are leading efforts to enhance digital connectivity through the expansion of 4G networks and the deployment of fibre-optic infrastructure. In Nigeria, the government has prioritized the National Broadband Plan (2020-2025), which seeks to provide nationwide 4G coverage and increase internet penetration to 70%. Similarly, Kenya's Konza Technopolis, a flagship smart city project, is accelerating fibre-optic rollouts to support the country's growing tech ecosystem.

Senegal has also made substantial progress, with its Digital Senegal Strategy (2025) focusing on extending broadband access, particularly in rural areas. Rwanda, often hailed as a digital leader in Africa, has implemented a national fibre-optic backbone that covers most of the country, facilitating seamless connectivity and supporting its vision of becoming a regional ICT hub.

From the standpoint of E-Government Initiatives and Digital Transformation, Governments across Africa are leveraging digital tools to enhance public services and promote efficiency through e-government initiatives. Nigeria has launched several e-government platforms aimed at streamlining services such as taxation, public health and education. Rwanda's "Irembo" platform, for example, allows citizens to access a variety of Government services online, improving transparency and reducing bureaucracy.

UNLOCKING AFRICA'S POTENTIAL THROUGH THE DIGITAL ECONOMY: A SPOTLIGHT ON NIGERIA, KENYA AND SOUTH AFRICA

a. Nigeria

It is no gainsaying that the digital opportunities in Africa are large and growing, it is little wonder that Africa's digital economy is valued at \$115 billion as of 2023, and it is projected to increase six-fold to \$712 billion by 2050.

Nigeria being Africa's largest economy and home to one of the world's most significant youth populations is uniquely positioned to build a robust digital economy, with the potential to transform the nation. To fully harness this potential, Nigeria must prioritize advancements in five key pillars of the digital economy: digital infrastructure, platforms, financial services, entrepreneurship, and skills. The Nigeria Digital Economy Diagnostic report identifies both the challenges and opportunities involved in leveraging the digital economy to drive diversified and sustainable growth. It offers a comprehensive assessment of the current state of these foundational pillars and presents concrete, actionable recommendations for the government and private sector to support the development of each. This report is part of the Digital Economy for Africa (DE4A) initiative, led by the African Union and supported by the World Bank Group, which aims to digitally connect every person, business, and government in Africa by 2030.

As part of the Federal Government of Nigeria's ambition to cement Nigeria's place in the digital age, the Federal Government has unveiled a comprehensive plan aimed at propelling the nation into the ranks of global digital economies. This strategic blueprint spans five critical pillars, with the potential to transform Nigeria's economic landscape and drive sustainable development. This four-year plan is set to serve as a catalyst for the nation's technological advancement by focusing on five essential pillars: *Knowledge*, *Policy, Infrastructure, Innovation*, and *Trade*.

b. kenya

Kenya has emerged as a pivotal player in Africa's digital revolution, becoming a driving force of innovation with its dynamic tech ecosystem, forward-thinking policies, and a youthful tech-savvy population. The country's journey to establishing robust internet infrastructure reinforces a compelling story of resilience, strategic investments, and transformation, which in itself positions Kenya as a digital powerhouse. This digital evolution is enabling the nation to leverage technology as a key catalyst for economic growth, community empowerment, and the improvement of its citizens' lives.



Kenya's internet infrastructure journey has been an interesting tale, considering its antecedents. It has been overcoming considerable one of connectivity challenges, including limited access and high costs. In response to these challenges, a highly strategic partnership between the government and the private sector emerged, leading to the successful implementation of the National Optic Fibre Backbone Project and the introduction of international submarine cables. These initiatives marked critical milestones, significantly expanding internet access in both urban and rural areas, thereby effectively reducing the digital divide.

The real game-changer, however, has been mobile technology. The widespread adoption of affordable smartphones, combined with the expansion of 3G and 4G networks has brought internet access to millions of Kenyans. Telecommunication giants like Safaricom, Airtel Kenya, and Telkom Kenya have been pivotal in extending coverage and boosting connectivity speeds. This surge in mobile internet usage laid the foundation for a burgeoning digital entrepreneurship ecosystem, where tech hubs, innovation spaces, and incubators now foster startups and drive cutting-edge innovation.

Kenya's improved internet infrastructure has catalyzed the growth of digital services, particularly in the areas of e-commerce and digital finance. Online marketplaces are flourishing, providing Kenyans with greater access to goods and services, while the expansion of digital financial platforms, such as M-Pesa, has revolutionized financial transactions, driving unprecedented levels of financial inclusion and stimulating economic activity.

Additionally, digital education has made notable strides. The rise of e-learning platforms, virtual classrooms, and online courses has broadened educational access, especially in remote regions. Government-led initiatives, like the Digital Literacy Program, have equipped students with essential digital skills, preparing them for active participation in the digital economy while fostering a digitally literate society.

c. South Africa

South Africa's digital infrastructure has witnessed remarkable growth over the years, positioning the country as a leader on the African continent in terms of connectivity and digital accessibility. Its robust technological framework has facilitated progressively better market outcomes for consumers, contributing significantly to its development within the global digital economy.

In the 2016 World Economic Forum (WEF) Networked Readiness Index, South Africa emerged as the second-best performing African nation, boasting the fastest mobile download speeds on the continent. Over the past decade, the nation has transitioned from a monopolistic approach to an open and competitive regime, particularly in the realm of international connectivity. This transformation has been largely driven by the deployment of multiple submarine cables, connecting South Africa to the rest of the world, sparking a significant increase in international bandwidth usage and resulting in faster, more reliable internet access.

The role of Mobile Network Operators (MNOs) in this progress cannot be overstated. These operators have been instrumental in expanding 3G and 4G network coverage across the country, enabling a large portion of the population to enjoy the benefits of mobile broadband. International connectivity, which was previously stifled by a monopolistic framework, has flourished since 2009 due to increased competition, resulting in enhanced network performance and lower prices for consumers. The country is nearing its target of achieving mobile broadband network coverage for 100% of the population, as outlined by the Digital Economy for Africa initiative. Additionally, fixedline internet, particularly fibre-optic connections to homes and businesses (FTTX), has grown rapidly, showing significant promise for the future.

South Africa's international connectivity has also seen substantial improvements, with five international submarine cables already in operation and more planned for the near future. This has translated into a doubling of international bandwidth usage between 2016 and 2018. The country boasts of the most extensive backbone infrastructure in Africa, with approximately 200,000 kilometres of fibre optic cable laid out, though much of this infrastructure remains concentrated in urban areas. The rapid expansion of commercial fibre operators has driven this growth, although the state continues to play a prominent role in the sector. South Africa is also home to SANReN, a national research and education network that supports non-profit initiatives in digital access and education.



CHAPTER THREE

THE ROLE OF GOVERNMENTS AND REGULATORY FRAMEWORKS

African governments must take the lead in creating an enabling environment for digital transformation. This begins with sound policies and regulatory frameworks that provide stability and predictability, essential factors that can attract both domestic and international private-sector investment. Political commitment at the highest levels is necessary to drive this agenda, ensuring that digital initiatives receive consistent support and are protected from political instability, which often hampers long-term investment prospects.

Governments should focus on establishing regulatory best practices that promote sustainability, encourage innovation, and facilitate the adoption of digital solutions across key sectors. Furthermore, policymakers and regulators need to stay ahead of the curve by anticipating the challenges posed by emerging technologies like Artificial Intelligence (AI), the Internet of Things (IoT), Machine-to-Machine (M2M) communication, and 5G. These technologies represent significant opportunities for transforming industries such as agriculture, healthcare, financial services, and education, but also require robust frameworks to address issues such as data privacy, cybersecurity, and infrastructure readiness.



CHAPTER FOUR

BRIDGING REGULATORY AND TECHNOLOGICAL GAPS

Many African nations currently lag in adopting the legal and regulatory frameworks necessary to harness the full potential of digital transformation. It is no News that the status of e-commerce legislation across African regions, and the presence of laws governing e-transactions, consumer protection, privacy, data protection, and cybercrime remains uneven across the continent. This lack of uniformity in digital legislation hinders cross-border e-commerce, increases transaction risks, and slows the development of trust in online services.

Addressing these gaps requires a harmonized approach to digital policy development across African countries. Policymakers must collaborate across borders to ensure interoperability, while simultaneously localizing regulatory frameworks to meet unique regional needs. This will involve updating laws to address the ever-evolving challenges posed by digital technologies, ensuring they are flexible enough to adapt to future technological shifts. CHAPTER FIVE

FINANCING AFRICA'S DIGITAL REVOLUTION

To unlock the full potential of digital revolution in Africa, investment must be concentrated on several foundational pillars:

- a. **Digital Infrastructure:** Financing must be directed toward building robust and scalable digital infrastructure, including high-speed internet access, cloud services, and data centres. Without reliable infrastructure, large-scale adoption of advanced technologies like 5G and AI will remain limited.
- b. Human Capital Development: Africa needs to invest heavily in education and digital skills training to prepare its workforce for the new demands of the digital economy. By developing a pipeline of talent proficient in emerging technologies, African countries can build local capacity and reduce reliance on foreign expertise.
- c. **Digital Inclusion:** Bridging the digital divide is essential to ensure that all citizens, regardless of socio-economic background or geography, can participate in the digital revolution. This includes financing initiatives that expand access to affordable internet, promote digital literacy, and create inclusive platforms for innovation.
- d. **Legal and Regulatory Modernization:** Modernizing Africa's legal frameworks will enable digital markets to thrive. The focus should be on creating adaptable, marketdriven policies that support innovation while protecting consumers and fostering competition. Additionally, targeted efforts must be made to regulate areas like data privacy, cybersecurity, and cross-border data flows to ensure trust and security in digital systems.
- e. **Private Sector Engagement:** The private sector will play a critical role in financing Africa's digital transformation. Governments must incentivize private investments through public-private partnerships (PPPs), tax breaks, or grants targeted at high-impact digital sectors. By creating a clear and predictable business environment, governments can spur innovation and entrepreneurship, particularly among the continent's growing population of tech-savvy youth.

RECOMMENDATIONS

In light of the challenges surrounding digital transformation across Africa, governments bear the critical responsibility of fostering an enabling environment through sound policies and regulatory frameworks. Political commitment at the highest levels is essential to ensure stability and predictability, thereby encouraging private sector investment. Establishing regulatory best practices, promoting sustainability, and driving demand for digital solutions are all crucial components of this conducive environment. A well-established ecosystem across foundational pillars and key sectors is fundamental to unlocking the full potential of digital transformation.

Policymakers and regulators must keep pace with rapid technological advancements, addressing emerging regulatory frontiers and laying the groundwork for transformation. Preparedness for the integration of emerging technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Machine-to-Machine (M2M) communication, and 5G is paramount to this effort.

Public policy and legal frameworks must be modern, adaptable, and incentivize innovation while being market driven. This approach will support the widespread adoption of digital transformation across all sectors and regions on the continent. The following figure illustrates the current status of e-commerce legislation in Africa, segmented by region, highlighting the presence of laws governing e-transactions, consumer protection, privacy, data protection, and cybercrime.

Financing Africa's digital revolution will play a pivotal role in addressing many of the continent's socio-economic challenges while positioning it for long-term growth in the global digital economy. However, achieving this transformation requires a multi-layered approach involving governments, policymakers, regulators, and the private sector working collaboratively to establish a well-defined ecosystem that supports technological growth and innovation.



In summary, financing Africa's digital revolution requires a strategic and collaborative approach. Governments, policymakers, and the private sector must come together to create a comprehensive ecosystem that supports digital innovation, infrastructure development, and regulatory modernization. With the right investment in infrastructure, skills development, and regulatory frameworks, Africa can overcome its digital challenges and harness the transformative power of new technologies to drive economic growth and improve the quality of life for its citizens.

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