



**WEST AFRICA  
COMPETITIVENESS PROGRAMME  
REGIONAL INVESTMENT PROFILE - SUMMARY**

# **ICT VALUE CHAIN**



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Implemented by:





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# ICT VALUE CHAIN

March 2022

## ACKNOWLEDGEMENTS

This investment profile has been prepared under the framework of the West Africa Competitiveness Programme (WACOMP) which is funded by the European Union. WACOMP is implemented by the International Trade Centre and the United Nations Industrial Development Organization (UNIDO) in collaboration with the Commission of the Economic Community of West Africa (ECOWAS). WACOMP covers all ECOWAS member States plus Mauritania. WACOMP focuses on four selected value chains, namely mango, textile/garments, information and communication technology and cassava. It aims to strengthen the competitiveness of West African Countries and enhance their integration into the regional and international trading system, through an enhanced level of production, transformation and export capacities of the private sectors in line with the regional and national industrial and SME strategies.



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# Table of Contents

FOREWORD	2
1. WHY INVEST IN ECOWAS?	5
1.1. ECOWAS MACROECONOMICS	5
1.2. ECOWAS INCENTIVES FOR INVESTORS	6
2. WHY AND HOW TO INVEST IN THE ICT VALUE CHAIN IN ECOWAS	7
2.1. POTENTIAL FOR CONTINUED GROWTH	7
2.2. RIDING THE WAVE OF DIGITALLY ENABLED GROWTH IN AFRICA	7
3. OPPORTUNITIES AND STRATEGIC ACTIVITIES	9
3.1. POTENTIAL FOR CONTINUED GROWTH	9
3.2. RIDING THE WAVE OF DIGITALLY ENABLED GROWTH IN AFRICA	9
3.3. POTENTIAL FOR CONTINUED GROWTH	10
4. KEY POINTS FOR A SUCCESSFUL INVESTMENT	11
4.1. POTENTIAL FOR CONTINUED GROWTH	11
4.2. RIDING THE WAVE OF DIGITALLY ENABLED GROWTH IN AFRICA	11
4.3. POTENTIAL FOR CONTINUED GROWTH	11
5. COUNTRY PROFILES	12
CABO VERDE	14
SENEGAL	16
MALI	18
NIGERIA	20
THE GAMBIA	22
GHANA	24



# FOREWORD

## ECOWAS COMMISSION



The regional investment profile on the Information and Communication Technology (ICT) value chain is being developed with the support of the International Trade Centre (ITC) within the framework of the West Africa Competitiveness Programme (WACOMP)

funded by the European Union and implemented by the United Nations Industrial Development Organization (UNIDO) and ITC Geneva.

The WACOMP programme aims to strengthen West Africa's economic competitiveness and develop various national and regional value chains, including cassava, mango, textiles and garments, and information and communication technology, and to improve the business climate in the region.

This investment profile is a compendium of information on the region's potential in the ICT value chain. It is designed to support the private sector in its search for new project ideas and facilitate investment decisions.

In this respect, its development contributes to the implementation of the West African regional industrialisation policy, the EU investment policy and the ECOWAS trade policy.

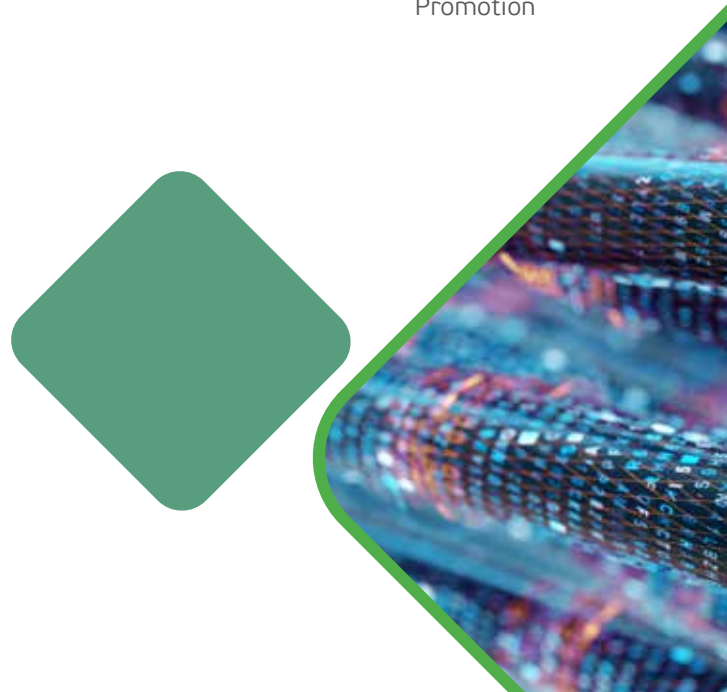
The ICT industry is growing in West Africa with significant potential. The contribution of this industry in managing the COVID-19 pandemic has enabled economic agents to adapt and demonstrate resilience to external shocks. Indeed, the use of digital solutions such as business and farm management software, e-commerce, e-payment and social media platforms have enabled economic agents to continue their activities and generate substantial revenues. These effects are all the more important as the use of optical fibre has enabled the various actors to benefit from high speed internet access allowing them to conduct commercial transactions at regional and international levels.

The population of West Africa now exceeds 397 million and the current supply of ICT services does not meet the needs of the market. With the implementation of the African Continental Free Trade Area (AfCFTA), the needs of an African market of over 1.4 billion people will be met.

The ECOWAS Commission welcomes the publication of this investment promotion tool for West Africa and takes this opportunity to thank its partners for their support and efforts in its design and drafting.

To the future users of these profiles, we wish a very good use.

**Mr. Mamadou TRAORE**  
Commissioner for Industry and Private Sector  
Promotion



## EUROPEAN UNION DELEGATION TO NIGERIA AND ECOWAS



At the EU, we are delighted at the dynamic cooperation between us, the Regional Economic Communities (RECs) and the private sector across the region. The investment profile study is being supported by West Africa Competitiveness Programme (WACOMP).

This is one of our flagship programmes implemented in West Africa. As a programme dedicated to improving the competitiveness of the region in several value chains, it becomes imperative to showcase the potentials of some of those developed value chains. In order to boost investment (local and international), create jobs especially for the youth in a world struggling and recovering from the COVID pandemic, there is no better time than now to promote the investment opportunities in West Africa/ECOWAS.

We are therefore, wholeheartedly in support of the publications of the ECOWAS Investment Profiles for Mango, Information and Communication Technology (ICT), Textile and Cassava. In the ICT sector, opportunities are driven by the deficit as Africa lags behind the rest of the world in the reach and quality of its ICT penetration.

Investment in the order of \$3 billion a year will be required to address this. The private sector has served the continent well in providing ICT infrastructure and this should be further encouraged.

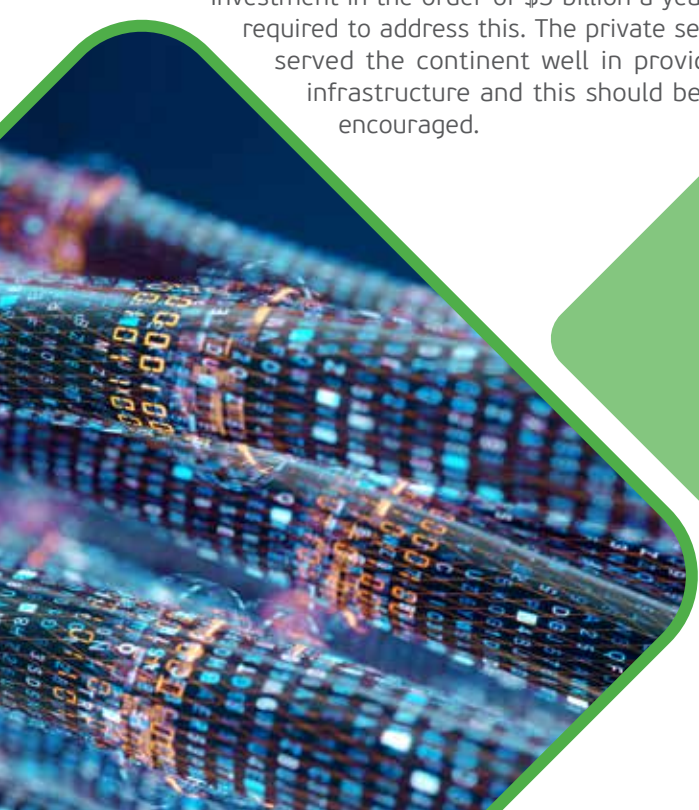
Attracting investment and creating a business enabling environment is key to the successful diversification and development of the economies in the region and indeed the whole continent. This is also true for the mango, ICT, textile and cassava value chains. Investment facilitation is at the heart of the EU Global Gateway initiative which aims at the EU institutions and EU Member States jointly mobilising up to EUR 300 billion of investments in selected sectors. The EU is also partnering with Africa under the EU External Investment Plan (EIP). With this, the EU is committed to creating jobs, boosting economies and offering people a brighter future.

This report will provide investors relevant information about how to take advantage of opportunities across the value chains, from production to the market. By taking strategic investment opportunities, investors will be contributing to the economic development of the region.

I would like to thank the ITC and our other WACOMP partners for undertaking this very useful study of the investment profiles in 4 critical sectors (Mango, ICT, Textile and Cassava) that will boost and support investment in the public and private sectors, the governments and the people of West Africa.

**Cecile TASSIN-PELZER**

Head of Cooperation, European Union Delegation to Nigeria and ECOWAS







# 1. Why invest in ECOWAS?

## 1.1. ECOWAS MACROECONOMICS

### A RESOURCE-RICH REGION WITH A STRATEGIC POSITIONING

One of the Economic Community of West African States (ECOWAS) region's advantages is its geographical location, as it is at the **crossroads of important routes** linking Europe, the Americas and the rest of Africa. The region also enjoys a **vast array of natural resources**, ranging from the northern arid and semi-arid Saharan Desert and the Sahel to the southern tropical monsoon and rainforest. This largely untapped wealth provides vast opportunities for economic development.

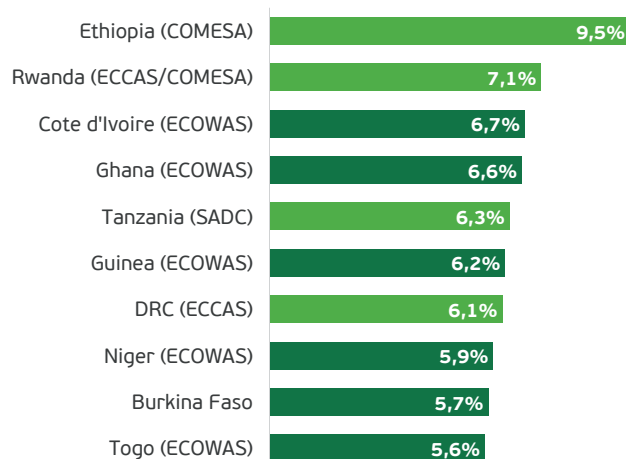
### A PEACEFUL, SECURE AND STABLE REGION

The region has become a more peaceful place to live and do business. Although some countries of the region have recently faced political turmoil, others have been ranked by the World Bank among the most **politically stable and less violent** on the continent. The June 2015 establishment of the Mediation Facilitation Division (MFD) constitutes an important instrument for conflict prevention, management, resolution, peacekeeping and security. The region is also consistently ahead of the rest of the continent when it comes to the World Bank's indicators that capture **governance quality**.

### LEADING TO A STRONG ECONOMIC PERFORMANCE

Overall, the region is home to six out of the 10 **fastest-growing African economies** in the last decade, with an average growth of 5.6% (Togo) to 6.7% (Cote d'Ivoire). The ECOWAS region has experienced the largest **increase in total exports**, with an average rate of 5.1% annually, to reach \$196.2 billion in 2018 at constant prices (the third-largest in the regional economic community). Moreover, the region has always been an **attractive place for foreign investment**, as shown by relatively large inflows of foreign direct investment (FDI) that have positively responded to the improving regulatory environment. The increase by a factor of 2.2 in the region, or equivalently, at an annual rate of 9% in 2019, is by far the largest in Africa.

### Real GDP growth of the fastest-growing African economies (2010-2019)



Note: Real GDP growth of the fastest-growing African economies (2010-2019)

Source: Author, based on World Bank data.

**36.8/100**

World Governance  
"Political Stability/No Violence"

**55.8/100**

World Bank  
Index of Economic Freedom

## 1.2. ECOWAS INCENTIVES FOR INVESTORS



### AN IMPROVING BUSINESS FRAMEWORK

The region is notably characterized by the free movement of goods and services through the removal of tariff and non-tariff barriers, a common external tariff, macroeconomic stability surveillance mechanisms and a single currency (CFA franc) for the subgroup of eight countries. The current **business environment** makes starting a business much easier and less costly in the ECOWAS region, on average, compared to other African regional economic communities (RECs). When it comes to physical (hard) **infrastructure**, according to the African Infrastructure Development Index, the region is trailing other RECs, but there is noticeable improvement that suggests it is catching up, as it has embarked on ambitious regional and national infrastructure development programmes.



### A THOUGHTFUL STRATEGY TO ATTRACT INVESTMENTS

As a way to attract FDI, increase exports, create jobs and generate productivity spillovers, each of the West African countries has developed at least one **special economic zone (SEZ)**. The general goal is to strengthen the tendency for manufacturing and service industries to geographically concentrate in cities and industrial clusters, as a way to 'build resilient infrastructure, promote sustainable industrialization and foster innovation'.<sup>1</sup> While the qualitative performance of SEZs in Africa tends to be limited, these schemes still remain attractive and viable instruments for industrial policies.<sup>2</sup> When it comes to investment promotion, especially FDI, one of the key frameworks at the regional level is the **ECOWAS Common Regional Investment Code (ECOWIC)**, which applies to the rights and obligations of member states and investors.



### WITH STRUCTURAL REFORMS TO KEEP ENHANCING THE BUSINESS AND INVESTMENT LANDSCAPE

Ongoing ambitious and profound reforms are rightly expected to structurally change the region's trade and investment landscape. These reforms are part of well-thought-out programmes. The **West Africa Competitiveness Programme (WACOMP)** seeks to strengthen the performance, growth and contribution of industry, regional trade and exports of selected value chains, and improve the business climate at national and regional levels. The **West Africa Common Industrial Policy (WACIP)** aims to accelerate the region's industrialization. The **West Africa Quality System Program (WAQSP)** seeks to strengthen the quality infrastructure for greater effectiveness, enhanced competitiveness and better intraregional and interregional trade participation. The Strategic Framework for Private Sector Development Strategy aims to make the private sector a vibrant engine of economic growth. At the continental level, the **African Continental Free Trade Area (AfCFTA)** will further reduce trade barriers, facilitate the free movement of people and labour and the right of residence and establishment, and increase investment.

*In the face of increased competition to attract international businesses, West African countries arguably have a strong card to play. To the extent that investors are well aware of all of these positive developments, international businesses ready to settle in the region will undoubtedly enjoy great returns while being part of a collective journey towards greater economic and social vibrancy and the emergence of a dominant economic player in Africa and beyond.*

<sup>1</sup> This is one of the UN Sustainable Development Goals (SDGs, the 9th), and it is said to have been adopted at the urging of African delegations.

<sup>2</sup> Additional discussions can be found in Newman, C. and J. Page (2017). 'Industrial clusters: The case for Special Economic Zones in Africa'. Wider Working Paper 2017/15. Retrieved from <https://www.wider.unu.edu/publication/industrial-clusters-1#:~:text=The%20case%20for%20Special%20Economic,to%20learning%20and%20technology%20transfers.>

## 2. Why and how to invest in the ICT value chain in ECOWAS

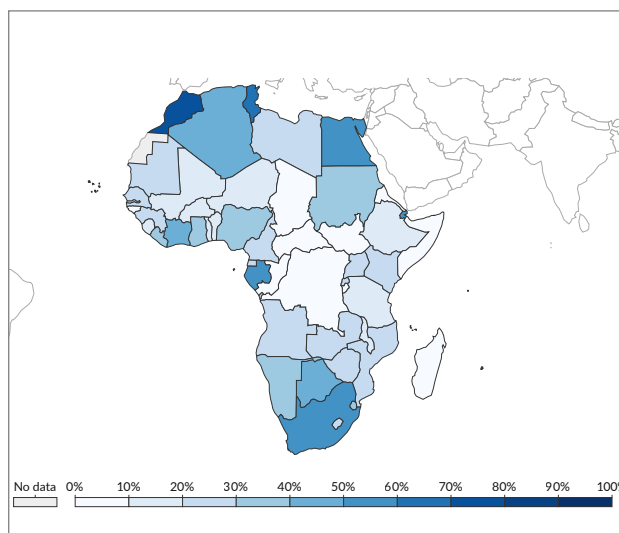
### 2.1. POTENTIAL FOR CONTINUED GROWTH

While information and communications technology (ICT) adoption has increased rapidly, large segments of the region are yet to access adequate digital connectivity services.

In 2010–18, the number of mobile cellular subscriptions grew by up to 60% in the region. In the same period, the percentage of the population using the internet grew drastically, with some countries seeing in excess of a 400% increase, which was among the highest in the world.

Despite the rapid growth and the market's demonstrated desire to embrace digital technology, the region – and much of the continent – still remains among the least connected globally. This suggests there is great potential for growth and much opportunity to capture this market for investors who are able to address challenges to connectivity.

2019 Average share of internet usage in Africa within three months



Source: Our World in Data <https://ourworldindata.org/technology-adoption>

### 2.2. RIDING THE WAVE OF DIGITALLY ENABLED GROWTH IN AFRICA

The African continent as a whole has witnessed significant digital growth and investment in the past decade.

The ECOWAS region has both benefitted and contributed to this growth in the region. A major development has been the increasing supply of internet bandwidth to the continent as a result of increased investment in submarine cable infrastructure in Africa. The ECOWAS region alone expects the completion of four major submarine cables in 2020–2024 (2Africa, Equiano, SHARE and EllaLink), connecting the region to the rest of Africa and the world. This added supply should go toward addressing bandwidth constraints further down the supply chain. It will ultimately allow last mile internet service providers more opportunity to compete and ideally lower costs to customers – which has traditionally been a major barrier to access.

**22%–45%**

Additional share of population using the internet in 2010–19 among focus countries.

**307.3 tbps**

Estimated added internet bandwidth to be landed by submarine cable projects in 2020–23.

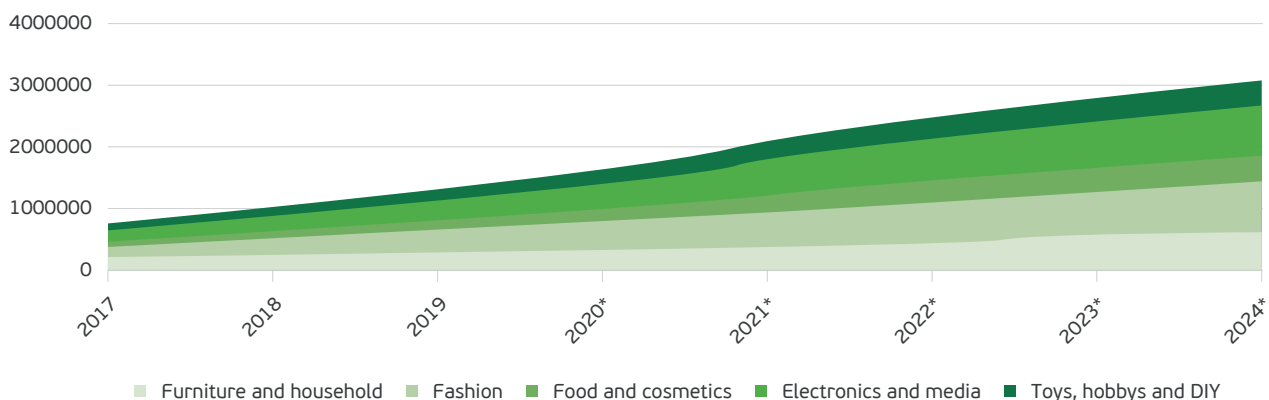
**>30 Bn**

E-commerce revenue in euro by 2024.

Businesses in Africa have also begun to embrace digital transformation in the way they trade and carry out operations in an increasingly digitally inclined modern market. The e-commerce sector is an important example of this, with revenues expected to more than triple to more than €30 billion in 2017–2024. Companies in the ECOWAS region have been among those driving this shift in

Africa. Examples include e-commerce outlets such as Jumia as well as digital payment solution provider Flutterwave. Of particular note are the small and medium-sized enterprises (SMEs) in the region that use such home-grown platforms to reach customers and facilitate transactions. As digital connectivity improves, this market is expected to grow significantly as more customers have access to such platforms.

### Segmented growth of e-commerce revenue in Africa by product type



Source: Statista.



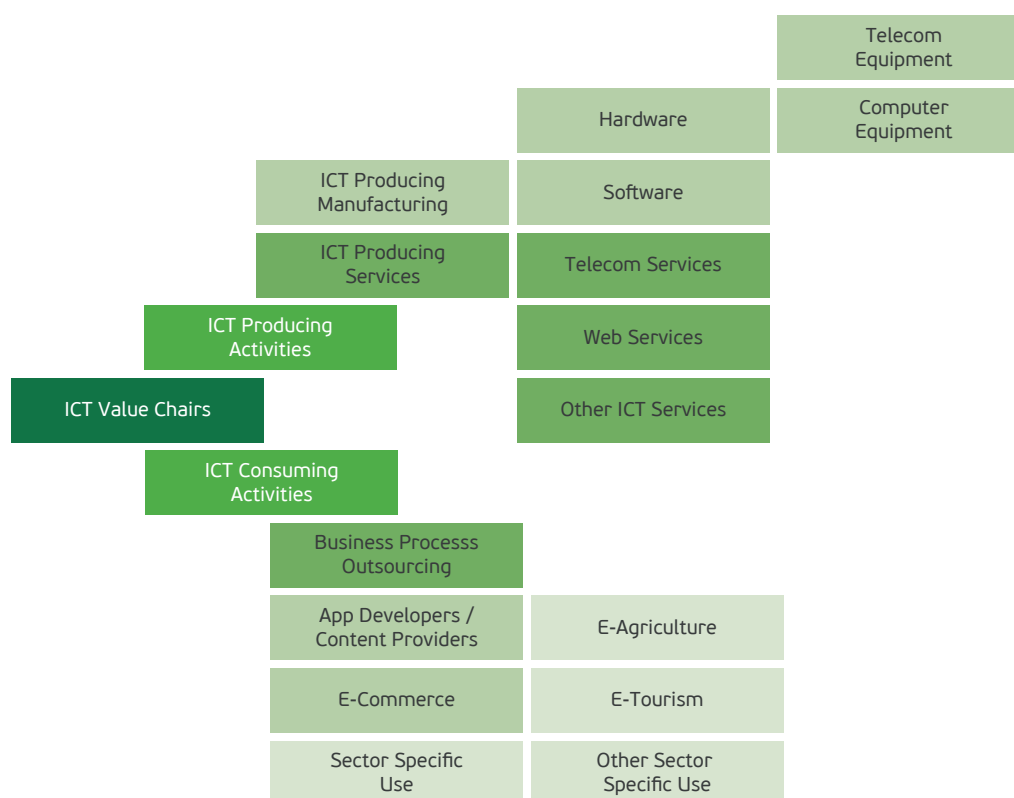
# 3. Opportunities and strategic activities

## 3.1. TERRESTRIAL, RURAL, AND FIXED BROADBAND CONNECTIVITY

Despite the increased internet bandwidth reaching African shores in the past decades, and much more still in deployment, connectivity in the ECOWAS region is far from homogenous. Coastal and urban areas near cable infrastructure still experience far greater connectivity than interior and rural parts of the region. As submarine cables bring bandwidth, the next opportunity would be for telecommunication companies to invest in terrestrial networks to connect the interior where significant portions of the market still remain underserved.

In addition, much of the population accesses the internet through mobile internet services, with only a small minority accessing the internet through fixed broadband services, which can offer greater stability and performance. For telecommunication investors, being an early mover in this space would mean a significant advantage, as businesses in particular would seek such performance and reliability to gain an upper hand in the market.

Various general categories of value chains for ICT investment.



Source: Author's adaptation of the ICT value chain analysis framework by McCormick & Onjala (2007).

### 3.2. ICT SERVICES AND DIGITAL SOLUTIONS INDUSTRY

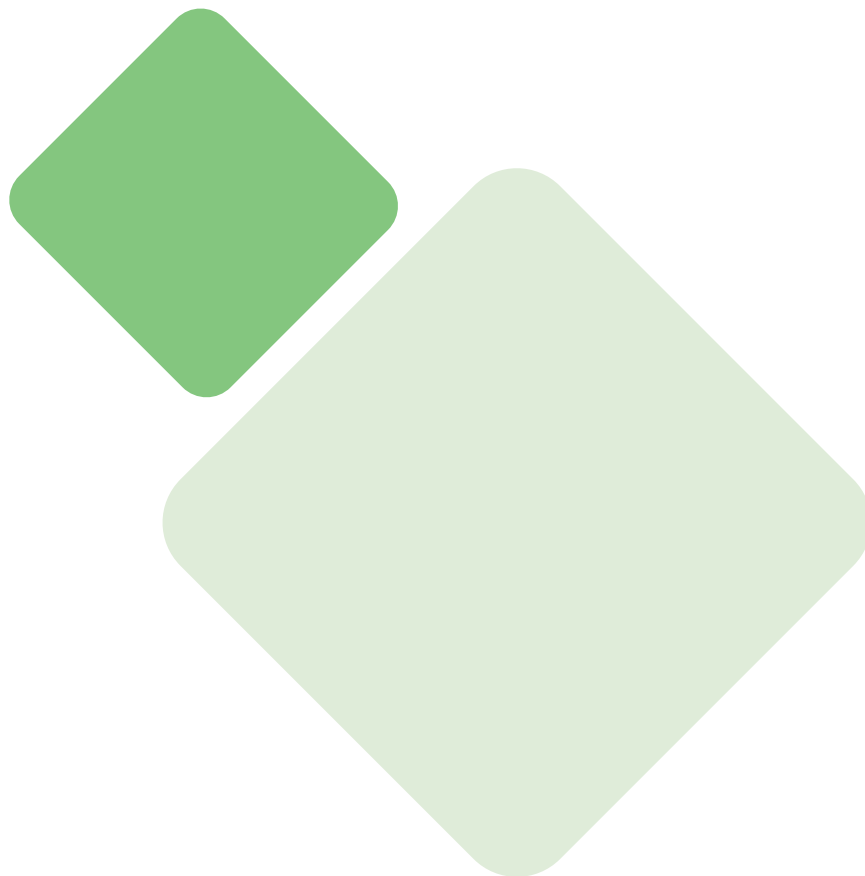
Aside from enabling the customer-facing side of businesses, digital technology is also being used to enhance businesses' operational activities. Examples include automation in manufacturing, digital solutions in e-agriculture, and ICT deployment in tourism and other service sectors.

As such digital transformation activities gain further momentum, an increased demand for ICT services and solutions can be expected as businesses seek to gain a digital advantage. Being a largely nascent industry in the region, ICT services would, hence, represent an attractive investment opportunity given such market conditions.

### 3.3. BUSINESS PROCESS OUTSOURCING (BPO)

In addition to new ways of doing business, entirely new business opportunities can be opened up as a result of increased connectivity. One such example is that of business process outsourcing services such as call centres, human resources (HR) and payroll services, as well as higher-skilled professional services such as accounting and financial management. With a large, young and increasingly educated population, there is a healthy labour market to draw from in the region.

As labour costs increase in other BPO destinations such as those in Asia, ECOWAS countries are well positioned to capture some of the global BPO market, with the expected roll-out of upcoming ICT infrastructure enabling further expansion in this sector.



## 4. Key points for a successful investment

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### 4.1. EARLY MOVER ADVANTAGE

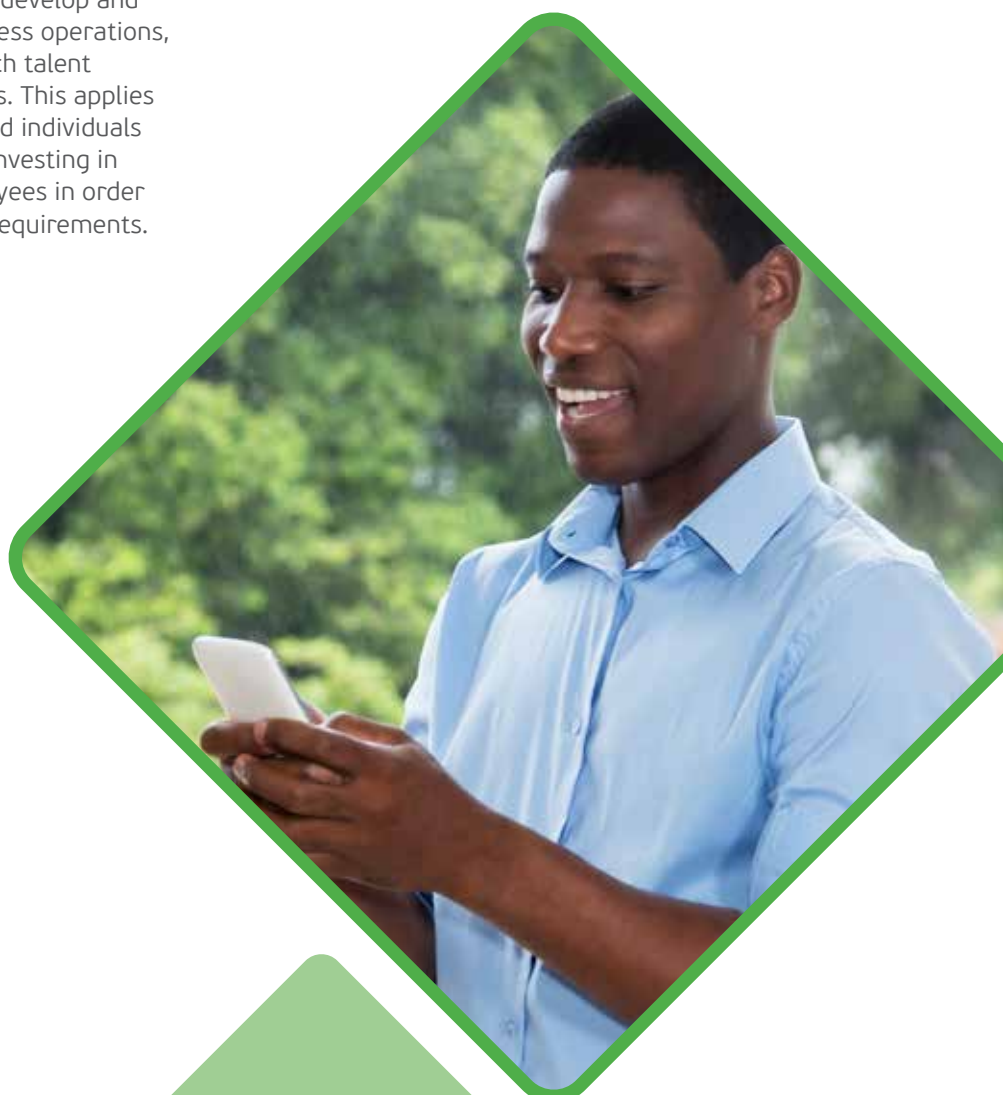
The very nature of the region being less digitally connected than others globally means there are fewer players operating in digital value chains. Therein lies the opportunity to capitalize on a market that is not yet saturated. While there are risks in entering a market prematurely, there are significant advantages of being an early mover in a market that is rapidly maturing, particularly in technology-driven industries.

### 4.3. A FOCUS ON TALENT AND SKILL DEVELOPMENT

Due to the technical skills required to develop and implement digital technology in business operations, organizations that attract the best tech talent would be better positioned for success. This applies not only in terms of recruiting qualified individuals from education institutions, but also investing in developing digital skills among employees in order to meet the ever-shifting digital skill requirements.

### 4.2. INNOVATION AND ADAPTABILITY

Every market is unique and requires a unique implementation of business practices in order to achieve success. The ECOWAS region is no different and presents a unique set of opportunities and challenges. A company's ability to innovate and respond to such challenges will see them capitalize on these opportunities.









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WEST AFRICA  
COMPETITIVENESS  
PROGRAMME

**COUNTRY  
PROFILES**

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## COUNTRY FOCUS:

# CABO VERDE



## ECONOMIC INDICATORS

Demographics and territory	
Population	0.557 million
Area	4 033 km <sup>2</sup>
Currency	Cabo Verdean escudo (CVE)
Languages	Portuguese, Crioulo

Trade	
Main exported products	Fish products; clothing
Main imported products	Food products; fuel; machinery

Economic dynamism	
GDP, nominal	\$1.98 billion
GDP growth (real, 2014–19)	4.6%
FDI, inflows	\$0.107 billion
Domestic credit to private sector (% of GDP)	51.3% in 2019, 66.4% in 2020 and 66.3% in 2021

After 20 years of sustained growth, Cabo Verde was one of the first countries in Sub-Saharan Africa to achieve middle-income status in 2007. The country has long been an attractive tourism destination, with the industry contributing up to 40% of the overall economic performance. The revenue from the significant service industry as well as high remittances from the diaspora community supports the consistent trade deficits the country experiences due to dependency on food and other imported products.

## ICT SECTOR



Source: Shutterstock.com

Continued government investment and promotion of a digital economy for more than a decade have seen accelerated growth in the sector. With the completion of multiple submarine cable projects and other national infrastructure initiatives, Cabo Verde now experiences some of the highest digital connectivity in the region across various metrics.

Mobile subscriptions per 100 population	93 in 2020 and 100 in 2021
Internet users per 100 population	62%
Fixed broadband subscriptions per 100 population	5.19% in 2021 and 4.26% in 2020

Source: World Bank data.

### 3. SWOT

Cabo Verde's ICT sector	
<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>Political commitment by the government to drive digital transformation in the country;</li> <li>Geolocation in the Mid-Atlantic with proximity to the rest of Africa, Europe and transatlantic proximity to the Americas;</li> <li>Established and upcoming resilient submarine optical fibre connectivity to Europe, Asia and Africa;</li> <li>Growing penetration rate of mobile/cellular and active mobile broadband subscriptions;</li> <li>Large diaspora with available pool of talents and advanced digital skills;</li> <li>Active financial sector engagement in ICT development; increasingly educated young population.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>Limited availability of large-scale financial resources;</li> <li>Limited immediate availability of qualified human resources in the digital area;</li> <li>High costs of energy;</li> <li>Limited size of local market;</li> <li>Limited number of digital training centres in the country;</li> <li>Regulatory environment evolving and still under development;</li> <li>Limited regional integration due to lack of digital infrastructure with ECOWAS countries.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Availability of data centre infrastructure and conditions for expansion;</li> <li>Growing demand for e-government solutions and some business solutions;</li> <li>Financial partners engaged in the construction of the regional ICT hub;</li> <li>Improved digital infrastructure due to the operation of the Cabo Verde Technology Park;</li> <li>Improved international connections and regional integration – regional ICT hub;</li> <li>Increasing interest from international digital companies in outsourcing in Africa;</li> <li>Expansion of the services sector in alignment with the digital strategy;</li> <li>Online education and training opportunities.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Reduced business sector dynamism and entrepreneurial culture;</li> <li>Competition from other regions;</li> <li>Fast-paced technological progress in the world.</li> </ul>

### 4. INVESTMENT OPPORTUNITIES

Telecommunication infrastructure	E-tourism	ICT-enabled financial services
Due to Cabo Verde's strategic location, the country can be a major telecommunication hub for the region. Locally, there is significant potential for investment in fixed broadband infrastructure.	Cabo Verde's economy benefits greatly from the tourism sector. Greater value could yet be extracted from the sector through digitization as consumer preferences shift with technology.	As one of the more connected countries in the region, financial service providers are better positioned to reach consumers by digital means. With a significant part of the economy being driven by remittances, there is an equally significant opportunity for fintech.

### 5. CONTACTS

Directorate-General for Telecommunications and Digital Economy	The central agency for promoting technological development in Cabo Verde	Director: Aruna Handem E-mail: aruna.handem@mf.gov.cv Website: <a href="https://mf.gov.cv/dgted">https://mf.gov.cv/dgted</a>
Multisectoral Economic Regulation Agency	Government agency tasked with administration of technical regulation in communication, energy, water and transport sectors	Telephone: (+238) 260 44 00/01/02/03 E-mail: info@arme.cv Website: <a href="https://www.arme.cv/">https://www.arme.cv/</a>

**COUNTRY FOCUS:**  
**SENEGAL**



**1. ECONOMIC INDICATORS**

Demographics and territory	
Population	16.3 million
Area	192 530 km <sup>2</sup>
Currency	CFA franc (XOF)
Languages	French (official), Wolof, Mandinka, Jola (Diola), Pular, Serere

Trade	
Main exported products	Mineral fuels and oils; pearls, precious stones and metals; fish and crustaceans
Main imported products	Mineral fuels and oils; cereals; vehicles

Economic dynamism	
GDP, nominal	\$23.6 billion
GDP growth (real, 2014–19)	6.4%
FDI, inflows	\$4.2 billion
Gross domestic private investment	\$5.8 billion

Senegal is the 10th most competitive economy in Africa and 3rd in West Africa, largely thanks to its strong and historically renowned institutions. The competitiveness and innovative drive of the Senegalese economy, the strength and stability of the institutional and legal framework, and the conduciveness of the business climate contribute to making the country a viable destination for foreign investors.

**2. ICT SECTOR**



Source: Shutterstock.com

Senegal is one of the increasingly attractive ICT and technology investment destinations in Africa. The World Bank Doing Business report ranks it as among the Top 10 business environment improvers. Having landed a number of submarine cables and invested in other national ICT infrastructure, the ICT sector is now estimated to contribute as high as 5.1% of the country's GDP. Significant potential remains in nascent e-commerce and BPO industries.

Mobile subscriptions per 100 population	112 in 2019, 116 in 2020 and 118 in 2021
Internet users per 100 population	36% in 2019, 47% in 2020 and 58% in 2021
Fixed broadband subscriptions per 100 population	0.95% in 2019, 1.08% in 2020 and 1.23% in 2021

Source: World Bank data.

### 3. SWOT

Senegal's ICT sector	
<b>Strengths</b> <ul style="list-style-type: none"> <li>▪ Robust telecom infrastructure;</li> <li>▪ High internet penetration rate;</li> <li>▪ Educated and competitive young workforce;</li> <li>▪ High telephony penetration rate (+109%).</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>▪ Despite relatively robust access, electricity supply in Senegal is expensive;</li> <li>▪ Digital and physical connectivity needs to be improved;</li> <li>▪ Complex administration of taxation;</li> <li>▪ Insufficient appropriation of technological developments and innovative technical production;</li> <li>▪ Lack of reliable internet connection in rural areas.</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>▪ 700 km of coastline, allowing multiple landing points for submarine cable infrastructure;</li> <li>▪ Preferential access to the European Union (EU) market for product and service export;</li> <li>▪ Rapidly increasing uptake in digital technology and digital goods and services.</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>▪ Limited sharing of infrastructure and a relatively high cost of radio frequencies;</li> <li>▪ Difficult access to Agence pour la Promotion des Investissements (API) from telecommunication operators;</li> <li>▪ Lack of research and development (R&amp;D) funds in the ICT sector.</li> </ul>

### 4. INVESTMENT OPPORTUNITIES

ICT-enabled financial services	Business process outsourcing (BPO)	E-agriculture
Mobile banking is a major form of financial service following the growth of mobile subscription. Online banking is still underdeveloped. Increasingly, the unbanked are choosing digital forms of banking over traditional ones.	With relatively lower labour costs, a young (increasingly urban) population and more affordable telecommunication services, BPO holds great potential in Senegal, particularly for the French-speaking parts of the world.	Agribusiness has been on the rise in Senegal. As the business aspect of agriculture advances, so will the technology that is required. An increased demand for digital technology in agriculture is being witnessed in Senegal.

### 5. CONTACTS

State IT agency	E-mail: <a href="mailto:cheikh.bakhoum@adie.sn">cheikh.bakhoum@adie.sn</a> Website: <a href="https://www.adie.sn/">https://www.adie.sn/</a>
National Agency for the Promotion of Investments and Major Works (APIX)	Telephone: (+221) 33 849 05 55 E-mail: <a href="mailto:infos@apix.sn">infos@apix.sn</a> Website: <a href="http://investinsenegal.com">http://investinsenegal.com</a>

## COUNTRY FOCUS:

# MALI



## 1. ECONOMIC INDICATORS

Demographics and territory	
Population	19.7 million
Area	1,2 million km <sup>2</sup>
Currency	CFA franc (XOF)
Languages	French (official), Manding, Soninke, Bomu, Bozo, Dogon, Fula and Senufu, etc.

Trade	
Main exported products	Pearls, precious stones and metals; cotton; live animals and animal products
Main imported products	Mineral fuels and oils; vehicles; electrical machinery and equipment

Economic dynamism	
GDP, nominal	\$17.5 billion
GDP growth (real, 2014–19)	5.2%
FDI, inflows	\$494 million
Domestic credit to private sector (% of GDP)	24.5% in 2019, 26% in 2020 and 28.3% in 2021

Mali's economy has been on a sustained growth trajectory, with rates averaging more than 5% in the last five years. This is largely thanks to a robust agricultural sector and a thriving mining sector. The readily available skilled labour force and energy at a competitive cost, the economy's dynamism, strong government incentives, its pivotal cross-border trade position in the subregion and its sound and open banking and financial system represent key elements in Mali's attractiveness for foreign capital seeking favourable business destinations in West Africa.

## 2. ICT SECTOR



Source: Shutterstock.com

Mali places a strong emphasis on ICT as part of its strategy for economic growth and poverty reduction. ICT's estimated contribution to the national economy increased from 3.2% in 2013 to approximately 5% of GDP in 2020.

Mali is one of the region's landlocked countries, so it does not have direct access to submarine cables. The country has, however, invested in a national fibre-optic backbone, linking the country to submarine cables via Cotê d'Ivoire, Senegal and Mauritania.

Mobile subscriptions per 100 population	111 in 2019, 119 in 2020 and 111 in 2021
Internet users per 100 population	22% in 2019, 28% in 2020 and 34% in 2021
Fixed broadband subscriptions per 100 population	0.69% in 2019, 1.15% in 2020 and 0.66% in 2021

Source: World Bank data.

### 3. SWOT

Mali's ICT sector	
<b>Strengths</b> <ul style="list-style-type: none"> <li>▪ The national fibre-optic backbone provides access to submarine continental cables;</li> <li>▪ A well-developed digital development policy and strategy;</li> <li>▪ Telecom/ICT texts in line with those of ECOWAS after transposition of ECOWAS supplementary Acts into the Malian legal system;</li> <li>▪ Public telecom/ICT structures in place;</li> <li>▪ Rapid development of local start-ups.</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>▪ Low rural connectivity;</li> <li>▪ Cost of the internet is still relatively high;</li> <li>▪ Insufficient regulation on ICT wholesale operators;</li> <li>▪ Universal Access Fund not performing as it could;</li> <li>▪ The high cost of energy;</li> <li>▪ Limited resources of public structures in charge of developing digital strategies;</li> <li>▪ Limited number of certified professionals domestically and digital training centres of excellence in the country.</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>▪ A vibrant telecom market with little competition;</li> <li>▪ Rapid development of mobile money in Mali, with 24% of Mali above the African average;</li> <li>▪ Potential for electronic transactions and electronic commerce with only 5% of the adult population using digital banking;</li> <li>▪ Enhanced access to new markets through digital delivery and electronic platforms;</li> <li>▪ Online education and training opportunities.</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>▪ Geopolitical instability in the northern part of the country;</li> <li>▪ Two-thirds of the country in insecurity and telecom infrastructure destroyed regularly in the northern part of the country;</li> <li>▪ Major telecom infrastructure development plans halted in two-thirds of the country (optical fibre) (northern part);</li> <li>▪ Telecom staff at risk in two-thirds of the country (northern part).</li> </ul>

### 4. INVESTMENT OPPORTUNITIES

Telecommunication infrastructure	ICT-enabled financial services	E-commerce
More than 60% of Mali's landmass remains vulnerable to vandalism of infrastructure by terror groups. Investors who are able to accommodate with innovative solutions would be well positioned to capture this large market.	Of the population, 47% hold a mobile money account compared to 23.3% who hold a traditional bank account. The market appears to favour digital banking. With a large diaspora transferring remittances home, this space has significant potential.	Given consumers' increasing confidence in the use of ICT-enabled financial services, the e-commerce market has grown significantly. The market is still in its infancy, though, and investors can capitalize on this growing market.

### 5. CONTACTS

Ministry of Digital Economy (MEN)	Telephone: +223 20 21 90 04 Website: <a href="https://communication.gouv.ml">https://communication.gouv.ml</a>
Investment Promotion Agency of Mali	Telephone: +223 20 22 95 25 E-mail: <a href="mailto:info@apimali.gov.ml">info@apimali.gov.ml</a> Website: <a href="https://apimali.gov.ml/">https://apimali.gov.ml/</a>

**COUNTRY FOCUS:**  
**NIGERIA**



**1. ECONOMIC INDICATORS**

Demographics and territory	
Population	213 million
Area	911 000 km <sup>2</sup>
Currency	Nigerian Naira (NGN)
Languages	English (official), Hausa, Yoruba, Igbo, Fulfulde, Ibibio, Kanuri, Tiv

Trade	
Main exported products	Crude petroleum; natural gas; cacao
Main imported products	Refined petroleum; wheat; rubber tyres

Economic dynamism	
GDP, nominal	\$448 billion
GDP growth (real, 2014-19)	1.18%
FDI, inflows	\$3.299 million USD in 2021
Domestic credit to private sector (% of GDP)	12.13% in 2020 and 13.6% in 2021

Nigeria is the largest economy in Africa in terms of nominal GDP. Much of the country's revenue is generated from its oil exports, for which it is the largest exporter in Africa. The country also boasts the largest natural gas reserves on the continent. Beyond petroleum, Nigeria maintains an important agriculture sector that supports up to 70% of the population at least partly. Key agricultural produce includes palm oil, cacao, sorghum and pineapple.

**2. ICT SECTOR**



Source: Shutterstock.com

Recent submarine cable infrastructure has led to an increase of more than 2,705% in available wholesale internet bandwidth in Nigeria. However, the higher costs of inland data traffic limits access for many Nigerians, but presents an opportunity for investors to close this gap of terrestrial connectivity. Nigeria's ICT market has grown so much that the Ministry of Communications and Digital Economy estimates that ICT contributes 17% of national GDP, and could rise to as much as 45%.

Mobile subscriptions per 100 population	99 in 2020
Internet users per 100 population	45% in 2019, 51% in 2020 and 55% in 2021
Fixed broadband subscriptions per 100 population	0.03%

Source: World Bank data.



### 3. SWOT

Nigeria's ICT sector	
<b>Strengths</b> <ul style="list-style-type: none"> <li>▪ Largest mobile market in Sub-Saharan Africa and high mobile phone ownership rate;</li> <li>▪ International connectivity;</li> <li>▪ Telecom market competition;</li> <li>▪ Tower infrastructure sharing;</li> <li>▪ Lagos (and other large cities) digital ecosystem;</li> <li>▪ Some strong digital service developments and successes (e.g. in digital financial services).</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>▪ Poor fixed broadband infrastructure and penetration;</li> <li>▪ 3G mobile broadband lack of coverage in rural areas; low 4G coverage nationwide;</li> <li>▪ Variable quality of telecom service;</li> <li>▪ Variable electricity availability;</li> <li>▪ Limited digital literacy and skills.</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>▪ Growing demand and economies of scale from the large and young population;</li> <li>▪ Entrepreneurial culture;</li> <li>▪ Developing mobile broadband infrastructure (2G in the entire country; 3G only in urban areas, capitals and main corridors); 4G roll-out;</li> <li>▪ Access to international financing (mainly at growth stage, increasingly at earlier stages);</li> <li>▪ Diaspora's economic power and education level;</li> <li>▪ Government sponsorship of digital agenda and digitalization of government services.</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>▪ Poverty/low bank account ownership, especially in the north;</li> <li>▪ Access to 4G limited by low-cost smartphones;</li> <li>▪ Business informality;</li> <li>▪ Mental barriers against the use of digital services (lack of trust from potential users);</li> <li>▪ Difficult access by digital entrepreneurs to early-stage financing and bank credit;</li> <li>▪ Cyber security issues;</li> <li>▪ Complex, restrictive regulations for Nigerian Digital Financial Services (DFS) (e.g. licensing requirements and bank verification numbers);</li> <li>▪ Fluctuating currency exchange conditions.</li> </ul>

### 4. INVESTMENT OPPORTUNITIES

Telecommunication infrastructure	E-tourism	ICT-enabled financial services
Being the largest population in Africa, there is immense potential for growth, with more than one-quarter of the population living within range of 3G coverage. 4G and fixed broadband infrastructure are the next frontiers as income levels also increase.	Nigeria is Africa's largest business-to-consumer (B2C) market in both size and revenue. Estimated e-commerce spending is \$12 billion, and is projected to grow to more than \$75 billion by 2025. The market is not yet as efficient, and there are various opportunities to improve service and capture value in return.	A lot of activity including foreign investment has taken place in the Nigerian fintech space in recent years. As e-commerce and other businesses embrace digital technology, transaction, saving and other financial service solutions are going to be needed.

### 5. CONTACTS

Federal Ministry of Communications and Digital Economy	Ministry established to foster growth in digital and knowledge economies	E-mail: <a href="mailto:info@commtech.gov.ng">info@commtech.gov.ng</a> Website: <a href="https://www.commtech.gov.ng/">https://www.commtech.gov.ng/</a>
National Information Technology Development Agency	Agency established to implement Nigeria's ICT development policies	E-mail: <a href="mailto:info@nitda.gov.ng">info@nitda.gov.ng</a> Website: <a href="https://nitda.gov.ng/">https://nitda.gov.ng/</a>

## COUNTRY FOCUS:

# THE GAMBIA



## 1. ECONOMIC INDICATORS

Demographics and territory	
Population	2.3 million
Area	11 295 km <sup>2</sup>
Currency	Gambian dalasi (GMD)
Languages	English (official), Mandinka, Pulaar, Wolof, Serer, Diola, Soninke

Trade	
Main exported products	Peanuts; cotton; fish
Main imported products	Light pure woven cotton; refined petroleum; rice

Economic dynamism	
GDP, nominal	1.902 billion
GDP growth (real, 2014-19)	4.7% (6.2% in 2019)
FDI, inflows	\$32.27 million
Domestic credit to private sector (% of GDP)	7.1% in 2018, 8.2% in 2019 and 2020 and 8.9% in 2021

With significant portions of arable land and predictable rainfall, the Gambia's economy has traditionally been reliant on agriculture, which supports up to 75% of the population. In addition, the fishing industry contributes up to 2% of the country's GDP. A growing tourism sector in the country has also contributed more than 5% of employment in the country and was continuing to grow prior to the COVID-19 pandemic.

## 2. ICT SECTOR



Source: Shutterstock.com

The Gambia established the Gambia Submarine Cable Company to manage international links to the country as well as drive national connectivity by laying 947 km of fibre-optic cable along the Gambia River. Efforts such as these and others have led to an internet penetration rate of 70% in the country, and has positioned the Gambia well to maximize the potential of its emerging digital economy.

Mobile subscriptions per 100 population	130 in 2018, 103 in 2019, 104 in 2020 and 101 in 2021
Internet users per 100 population	29% in 2019, 32% in 2020 and 33% in 2021
Fixed broadband subscriptions per 100 population	0.194% in 2021

Source: World Bank data.

### 3. SWOT

Gambia's ICT sector	
Strengths	Weaknesses
<ul style="list-style-type: none"> <li>High mobile phone penetration, with 93% of all households owning a mobile phone;</li> <li>Among the highest urbanization rates in Africa;</li> <li>Conducive to achieving cost-effective universal coverage;</li> <li>Competitive telecom market with four mobile operators and seven internet service providers (ISPs);</li> <li>Strong policies for enabling ICT investment;</li> <li>Single business registration allows to establish a legal business entity;</li> <li>Mobile money transactions growing at a good rate (since data collection started – 20% growth from June to September 2020).</li> </ul>	<ul style="list-style-type: none"> <li>Last mile: Lack of connection to national broadband nationwide; low adoption and affordability of mobile broadband (particularly 4G in rural areas);</li> <li>Lack of mapping of digital enablers: Few aware of number of data centres in country or usage of internet exchange point, etc.;</li> <li>Electricity is a major concern, although improvements have been made, with the cost of power still high.</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>Increasingly tech-savvy market who are embracing digital products and services;</li> <li>Upcoming e-government portal is expected to migrate more services online;</li> <li>Country's unique geography allows for greater ease of terrestrial connectivity;</li> <li>The e-commerce sector is still in its infancy with a largely cash-based economy.</li> </ul>	<ul style="list-style-type: none"> <li>First mile: Dependence on one submarine cable (that usually experiences 6–7 disruptions a year) and overly expensive alternative terrestrial route to Senegal;</li> <li>Middle mile: Limited access to and poor maintenance of the wholesale national fibre-optic backbone infrastructure (ECOWAN);</li> <li>Narrow, heavily trafficked coastline and river links leads to a concentration of international connectivity infrastructure and is a significant point of failure.</li> </ul>

### 4. INVESTMENT OPPORTUNITIES

Telecommunication infrastructure	Business process outsourcing	ICT-enabled financial services
<p>With the country currently having only a single submarine cable link, there is a need for additional international links and relevant accompanying local infrastructure. Like other parts of the region, investment in terrestrial connectivity is needed. The Gambia's narrow geography is favourable for such investments.</p>	<p>With a young and educated class emerging in the Gambia, and one that is likely to speak multiple languages such as English and French, BPO services such as call centres, make for sound investment in the Gambia. The favourable time zone to European markets and the relatively affordable labour costs also enhance the potential for BPO services.</p>	<p>As with other parts of the region, digital financial services are becoming popular alternatives or complements to traditional financial services. The sector is still in its infancy, with regulatory guidelines also still being developed. This makes for an excellent opportunity to capitalize on a market that is not yet saturated.</p>

### 5. CONTACTS

Gambia Investment and Export Promotion Agency (GIEPA)	Agency mandated with facilitating investment in the Gambia	Hamey B. Jawara Senior manager, Investment Promotion and Facilitation E-mail: hbjawara@giepa.gm
Ministry of Information & Communication Infrastructure	Overall ICT governmental policies and strategy	Telephone: (220) 4373398 Website: <a href="https://moici.gov.gm/">https://moici.gov.gm/</a>

## COUNTRY FOCUS:

# GHANA



## 1. ECONOMIC INDICATORS

Demographics and territory	
Population	30.4 million
Area	227 540 km <sup>2</sup>
Currency	Ghanaian cedi (GHS)
Languages	English (official), Akan, Ewe, Dagbani, Dangme

Trade	
Main exported products	Pearls, precious stones and metals; mineral fuels and oils; cocoa
Main imported products	Vehicles; electrical machinery and equipment; cereals

Economic dynamism	
GDP, nominal	\$67 billion
GDP growth (real, 2014–19)	6.1%
FDI, inflows	\$2.3 billion
Domestic credit to private sector (% of GDP)	12.2%

Ghana is the most competitive economy in West Africa and 8th in Africa. This performance owes to its strong institutions and the largest extent of ICT adoption in West Africa, in addition to the depth of skills and innovation capacity. Along with the high quality and low cost of labour and energy, the business environment's friendliness and conduciveness make Ghana one of the most favourable African destinations for foreign investors.

## 2. ICT SECTOR



Source: Shutterstock.com

Propelled by the government's commitment to promoting a digital economy, Ghana's ICT sector has grown rapidly in the past decade. Mobile data traffic, for example, grew by more than 15 times in 2016–20. Various submarine cable, data centre, cyber security and technology hub initiatives have also contributed to making Ghana an important telecommunication centre for the region.

Mobile subscriptions per 100 population	130
Internet users per 100 population	45% in 2019, 57% in 2020 and 68% in 2021
Fixed broadband subscriptions per 100 population	0.25 in 2020 and 0.35 in 2021

Source: World Bank data.

### 3. SWOT

Ghana's ICT sector	
<b>Strengths</b> <ul style="list-style-type: none"> <li>▪ Relatively stable internet in cities across the country;</li> <li>▪ Increasing number of hubs and co-working spaces for the industry;</li> <li>▪ Stable political environment characterized by democratic elections and transitions every four years;</li> <li>▪ Government incentives to attract FDI into ICT (ICT village, free zones and one District One factory);</li> <li>▪ Prototyping and designing of ICT products and services;</li> <li>▪ Young and energetic workforce;</li> <li>▪ Supportive macroeconomic and legal environment.</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>▪ Skills gaps (caused by curriculum mismatch, low industry involvement, low financing, late start of ICT training, shortage of qualified ICT trainers and inadequate learning resources);</li> <li>▪ Hard-to-fill vacancies (such as product managers, infrastructure engineers, cyber security experts and mobile development (iOS));</li> <li>▪ Expensive internet data;</li> <li>▪ Lack of investor support for IT start-ups;</li> <li>▪ Large gender gap;</li> <li>▪ Power generation and distribution challenges.</li> </ul>
<b>Opportunities</b> <ul style="list-style-type: none"> <li>▪ National digitization drive creating opportunities for public-private partnerships;</li> <li>▪ Fintech, e-agriculture and e-education;</li> <li>▪ Broadband wireless access services;</li> <li>▪ ICT training institutions.</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>▪ Privacy and data protection concerns;</li> <li>▪ Depreciation of the local currency as a result of little local content;</li> <li>▪ Job losses for unskilled labourers.</li> </ul>

### 4. INVESTMENT OPPORTUNITIES

Telecommunication infrastructure and services	Software development and services	Business process outsourcing
<p>Telecommunication is the largest ICT subsector in the country. With as much as 130 mobile subscriptions for every 100 people, the market is shown to embrace digital products. However, internet penetration is more than 50%, with fixed broadband being less than 1%. Innovation to lower service costs will be significant in capturing added market share.</p>	<p>Ghanaian industries have been among the early adopters of digital technology within the region and, as such, software development services have existed, and the market is shown to embrace the value they bring. Bespoke software solutions and software consulting for business improvement are among the services with great potential.</p>	<p>As with other economies within the region, Ghana has a young and increasingly educated population whose labour costs are lower than in more industrialized countries. This population is likely to be tech savvy, speak English well and live in a suitable time zone for not only European markets, but also African markets.</p>

### 5. CONTACTS

Ministry of Communications and Digitalisation	Ministry responsible for ICT policy and strategy development and implementation	Telephone: +233 302 666 465 E-mail: info@moc.gov.gh Website: www.moc.gov.gh
Ghana Investment Promotion Centre	Central agency for investment promotion and facilitation	Telephone: +233 302 665 125/6 E-mail: info@gipc.gov.gh Website: www.gipc.gov.gh





