AFRICAN MARKET TRENDS IN TECHNOLOGY SERVICES

COUNTRY PROFILES

International Trade Centre

In partnership with

AVASANT

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About the report

Few studies examine information technology and business process management in Africa. This report, based on research and interviews, analyses the tech sectors of 11 African countries and examines enabling factors such as information and communication technology infrastructure, government incentives and the regulatory environment. One key finding is that trade and retail, financial services, healthcare and agriculture offer the most opportunities for tech firms.

This publication shares insights that will guide companies interested in offering information technology and business process outsourcing services in Africa. The report is also valuable for stakeholders, including tech hubs and start-ups, investors and government organizations.

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Foreword

Information and communications technology, including information technology (IT) and business process management (BPM) companies, has played a central role in the fast-paced transformation of the African continent. It accounts for 6%–10% of service exports in most African economies.

While large economies such as Kenya, Nigeria and South Africa have made great strides in developing next-generation mobile and digital networks, many smaller African countries still have some way to go. Many of these countries have made rapid advances in mobile phone and mobile internet penetration, as this report shows. Yet overall tech infrastructure remains underdeveloped and the base of IT and BPM suppliers remains narrow.

Before the COVID-19 crisis, tech consultancy Gartner predicted that global IT spending would reach a record $3.9 trillion in 2020, led by software and applications development and related services. Because of the pandemic, the forecast has been revised downwards to $3.6 trillion, down by 5.4% from 2019. Nevertheless, experts expect a substantial rebound in 2021, given that enterprises that embrace digital technologies will be central to the recovery.

The pandemic has indeed acted as a digitalization booster. It highlights the importance of distributing risk geographically to cope with crises. And with social distancing, offsite delivery of services and outsourcing are more essential than ever. This gives African countries a chance to grab a bigger share of the highly competitive IT/BPM markets.

Firms across the continent are bringing ingenious business models and innovation to the digital technology sector, by adapting business models to new requirements and revamping their offerings.

This publication reviews the IT/BPM service offerings and conditions in 11 African countries, including enabling factors such as government incentives and the regulatory environment. The countries were selected for an overview of tech markets in sub-Saharan Africa, with factors such as maturity and regional diversity taken into account. The report finds that trade and retail, financial services, healthcare and agriculture promise the greatest opportunities for these tech markets.

The report showcases why investing in the tech sector makes economic sense. It consolidates analysis to support entrepreneurs eager to make the next export move. We hope that small African businesses, start-up founders and managers, and governments seeking to stimulate trade in services, will find value in the report.

This publication has been made possible through a joint effort by the International Trade Centre (ITC) and Avasant, a global management consultancy. We hope it inspires investment in an ecosystem that allows the tech sector to grow and prosper.

Pamela Coke-Hamilton
Executive Director,
International Trade Centre

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Martin Labbé and Milou van Bruggen (both ITC) coordinated the report, which was developed in cooperation with Avasant, a global management consulting firm. Srinivas Krishna, partner, UK & EMEA; Akshay Khanna, partner and global lead, Avasant Labs; Avijit Dixit, senior consultant; and Shael Roopchand, consultant, researched and wrote the report. Special thanks to Saurabh Sharma and Shola Adenekan of Avasant Africa for their valuable input.

Natalie Domeisen and Anne Griffin (both ITC) oversaw quality and production management. Jennifer Freedman edited the report. Franco Iacovino (ITC) provided graphic and digital printing support.

Contents

Master list of tables and figures

Each of the 11 country profiles includes tables and figures with information on the following:

- Gross domestic product composition
- Key facts about the country
- Highlights on domestic economics and key sectors
- ICT service export growth
- Highlights on the attractiveness of the domestic tech sector
- Tech hubs and parks
- Services offered by technology providers
- Talent and employability
- Telecommunications landscape
- Broadband landscape
- Power supply landscape
- Incentives to support business development
- Business registration procedure
- Regulatory and compliance policies for foreign investors
- Key associations in the technology sector
- Major industries with high potential to generate demand for IT/BPM services
- Market access opportunities and potential service areas

In addition, the country profiles on Kenya, Nigeria, South Africa, United Republic of Tanzania, Zambia and Uganda include:

- The sector share of GDP

The country profile on Côte d'Ivoire also includes:

- Networked Readiness Index ranking
- ICT environment subindex ranking

The country profile Mali also includes:

- Internet penetration

However, the Mali profile does not include:

- Country highlights on economics and key sectors, or market access opportunities and potential service areas

Acronyms

Unless otherwise specified, all references to dollars ($) are to United States dollars, and all references to tons are to metric tons. Percentages in figures and tables may not add up to 100% due to rounding.

BPM	Business process management
BPO	Business process outsourcing
CAGR	Compound annual growth rate
Fintech	Financial technology
GDP	Gross domestic product
GSMA	Global System for Mobile Communications Association
GVA	Gross value added
IT	Information technology
ITC	International Trade Centre
KM	Kilometre
kWh	Kilowatt-hour
MW	Megawatt
NGO	Non-governmental organization
SMEs	Small and medium-sized enterprises
USAID	United States Agency for International Development
VAT	Value added tax
WEF	World Economic Forum

Executive summary

The information technology (IT) and business process management (BPM) sectors have been instrumental in accelerating the economic growth of developing nations. Information and communication technologies (ICT) account for 6%–10% of total service exports in most African economies, underscoring that ICT already plays an important role in these countries. It creates many job opportunities for technical graduates, which is vital as education becomes more accessible across the continent and unemployment rates climb.

This study examines the IT/BPM sectors of 11 African countries: Benin, Burkina Faso, Côte d'Ivoire, the Democratic Republic of the Congo, Kenya, Mali, Nigeria, South Africa, Uganda, the United Republic of Tanzania and Zambia. These countries were chosen to ensure a comprehensive overview of the information technology and business process outsourcing (BPO) markets in sub-Saharan Africa. Maturity levels and regional diversity were taken into account during the selection process.

Five of these countries have experienced periods of instability in the last decade (Côte d'Ivoire, Democratic Republic of the Congo, Kenya, Mali and Nigeria). They are now realigning and seeking growth by attracting investments for rapid development.

Faced with the growing need to create jobs for youth and reduce reliance on traditional industries such as agriculture (Benin), mining (Democratic Republic of the Congo) and commodity exports (Côte d'Ivoire), governments are devising mechanisms to promote technical and digital sectors. At the same time, they are developing enabling ICT infrastructure, talent and service capacity, and working to bring in investments through incentives and concessions. The COVID-19 crisis has hindered these efforts, while at the same time accelerating the digitization process across the continent.

Smaller countries have far to go on tech infrastructure

While most African countries have made rapid advances in mobile phone and mobile internet penetration, overall ICT infrastructure is still not fully developed. The leading economies – Kenya, Nigeria and South Africa, which is piloting 5G connectivity – have developed next-generation mobile and digital networks. However, smaller economies still rely on legacy network technologies such as 2.5G.

Many countries are laying underwater fibre-optic cables and setting up national fibre-optic cable networks. The biggest African economies have created initiatives such as national broadband policy to promote development of the ICT infrastructure. Governments are investing heavily through innovative public-private partnerships (for instance, with Huawei in Mali and China International Telecommunication Construction Corporation in Democratic Republic of the Congo) to help the sector advance.

Governments focus on education and training

The annual population growth rate in the countries studied in this report is 2%–3% – well above the global rate of 1%. Youth (15-to-24-year-old age group) comprise 18%–20% of the population in all 11 countries. Given the magnitude of the African population, this translates into a rapidly growing labour pool that will require employment opportunities.

Policymakers are aware of this challenge and are targeting two areas:

1. Improving access to secondary and tertiary education
2. Training and upskilling graduates

Governments are also adopting measures that encourage the ICT sector and service providers to help develop talent and capacity. In Côte d'Ivoire, for instance, companies that pay foreign employees working in the country must contribute to the Fund for the Development of Vocational Training that is used for apprenticeships and to train employees. South Africa has adopted a public-private partnership approach through the Monyetla Work Readiness Programme, which gives participating employers about $1,150 for each unemployed learner that they train.

Competitiveness depends partly on infrastructure

The degree of competition in national IT/BPM sectors tends to mirror the availability of ICT infrastructure in a given country. In other words, tech companies are more competitive when they operate in a place with a sophisticated IT infrastructure.

Market activity and sector capabilities are more mature in countries that have developed capacities around contact centres, omnichannel help desks and customer support services, back-office operations and finance, and accounting process-related services. The African information technology services market is still developing. Today, it offers managed application development and maintenance services, infrastructure services and software solutions.

The IT/BPM sector in countries including Mali, Benin, Democratic Republic of the Congo and Burkina Faso is less mature, focusing largely on voice and non-voice BPM services and transactional services such as transcribing, administrative support, e-mail handling and telemarketing. Many freelancers and one-person businesses operate in the BPM sector in these countries.

What sectors offer market access opportunities?

The fastest-growing sectors in the 11 countries are trade and retail, financial services and healthcare. Agriculture has also expanded rapidly and presents opportunities for emerging IT/BPM markets. Table 1 shows a summary of growing market sectors and corresponding market access opportunities.

Table 1 Opportunities for service providers to enter new markets

Growing market segments	Market access opportunities (service offerings)
Trade and retail	• Supply chain solutions • Sales and after-sales support • Help desks and customer care • Inventory management, order fulfilment and logistics management

Banking, financial and insurance services	• Banking contact centre services
	• Finance and accounting services
	  ○ general accounting
	  ○ accounts receivable/accounts payable
	  ○ invoice processing and help desk
	• Software development and maintenance services:
	  ○ Customer relationship management and enterprise resource planning systems for bank branches
	  ○ IT security
	• Back-office operations

Healthcare	• Health and hospital information management services • Telemedicine • Insurance registration and claims systems • Mobile health solutions

Real estate	• Real estate accounting • Real estate analytics
Agriculture	• Supply chain management applications support • Market information system development and maintenance • Contact centre and helpline offerings for government agriculture departments
General	• Omnichannel contact centre services • Traditional customer interaction services across relationship management, customer acquisition and retention • Telesales

Who should read this report?

The information provided in this report should prove valuable to a range of stakeholders, namely:

- African IT/BPM service providers and technology companies seeking to expand in any of the 11 countries;
- Tech hubs and start-ups interested in understanding the demographics, ICT infrastructure and digital readiness in the 11 countries;
- Investment promotion agencies and government organizations working to improve the competitiveness of the IT/BPM sector in the 11 countries.

CHAPTER 1 A STORY OF GROWTH

Africa was the fastest-growing mobile economy in the world in 2019,[1] with several countries boasting more than 100 mobile subscriptions per 100 inhabitants. Almost half of all mobile money accounts in the world are African, with penetration of mobile-based financial services much higher than formal banking.

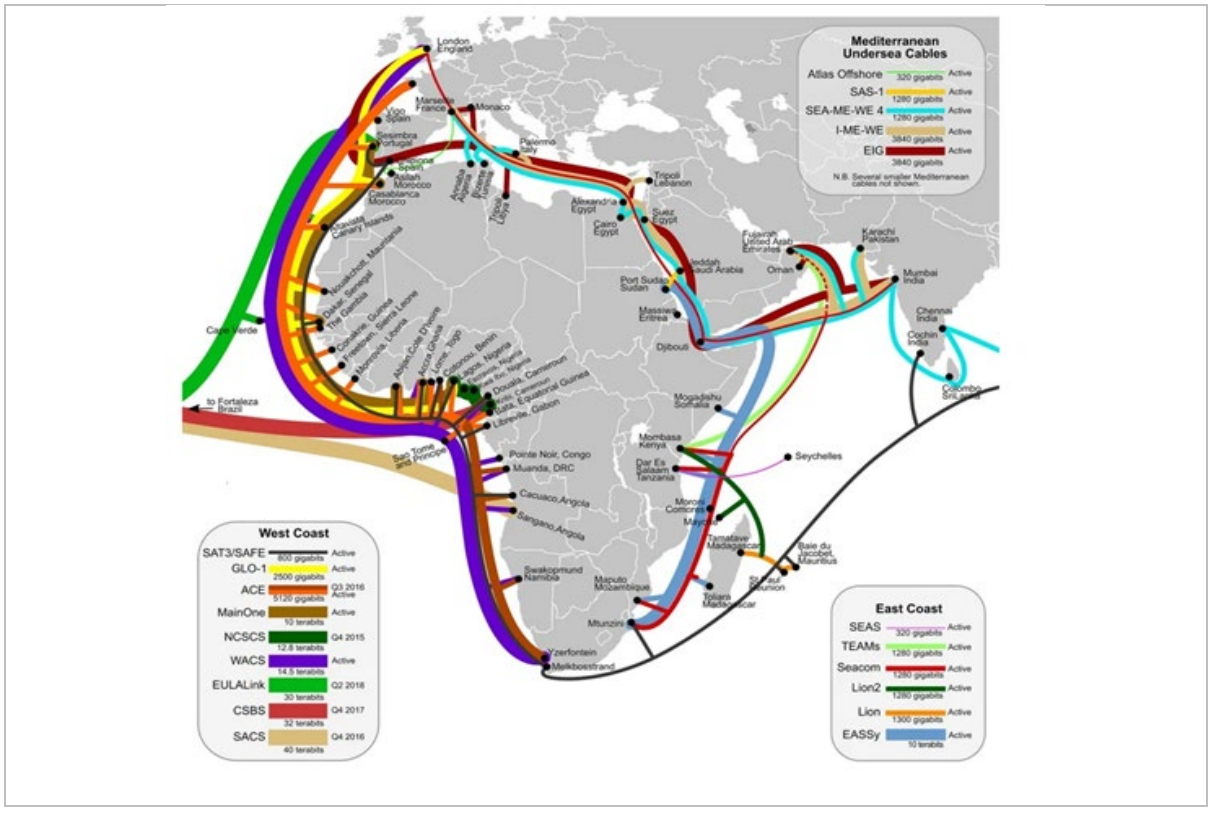
At least 239 million Africans were connected to the internet by 2019, according to the Global Systems for Mobile Communication Association. Before the Covid-19 crisis, the continent was forecast to grow more than any other region over the next five years, adding 167 million subscribers. The total subscriber base was expected to reach 600 million by 2025, representing a compound annual growth rate (CAGR) of 4.6%.[2]

Governments build up infrastructure

These figures reflect the efforts of African governments to build ICT infrastructure and the preference of African consumers for mobile technology.

Several underwater network cables connect the continent with the world and African economies with each other. Three networks of undersea cables connect the east coast, the west coast and the Mediterranean region of Africa. These networks have expanded internet access for all African countries, helping to reduce broadband internet costs by as much as 90%.

Figure 1 Most undersea cables are on Africa's west coast (2018)



Sources: International Telecommunication Union, ITU Association of Japan and South Atlantic Express.

[1] Mobile Economy Report 2019.
[2] https://www.gsma.com/mobileeconomy/sub–saharan–africa/

Governments have also updated their national telecommunication policies and framed new laws governing cybersecurity, data protection and special economic zones to underpin the growth of the ICT sector. Several, including Egypt, Ghana, Kenya, Mauritius, Nigeria and South Africa, have built technology parks to support ICT export-related businesses.

Technology and innovation hubs across Africa have flourished in recent years. The number of tech hubs across the continent grew nearly 40% in 2018–19, from 442 to 618. Africa is now home to 643 hubs,[3] led by Nigeria with 90, South Africa with 78, Egypt with 56 and Kenya with 50. These hubs play a pivotal role in shaping the next generation of ICT businesses in these countries by acting as incubators, accelerators and work spaces.

Improvements in internet speed and access and growing domestic demand have fuelled the development of data centres, some of which are funded by multinational companies such as Microsoft and Interxion. However, most cloud-based and colocation-based data centres are concentrated in South Africa, because other African regions lag behind in terms of internet access, power supply and other essentials.

Tech industry is very competitive

The African IT/BPM industry is highly competitive. Many countries (Ghana, Kenya, Madagascar and South Africa, for instance) are investing to build capacity and attract investment from multinationals.

Other factors also position the African region well. These include a favourable time zone with respect to the United States, the United Kingdom and Europe, and a young and educated population that speaks English or French.

Almost every African country is home to dozens of small and medium-sized enterprises (SMEs) that are involved in information technology. Some of the top IT/BPM vendors – including Accenture, DXC, Fujitsu, IBM, Infosys, iSon, Tech Mahindra and TCS – serve local clients in Africa.

Many of these vendors also outsource the non-core business functions of their global clients to sub-Saharan Africa. Mauritius, Morocco and South Africa have a thriving outsourcing industry, while Kenya, Nigeria and Ghana are catching up with a fast-growing ecosystem of tech parks, innovation hubs and a robust support infrastructure.

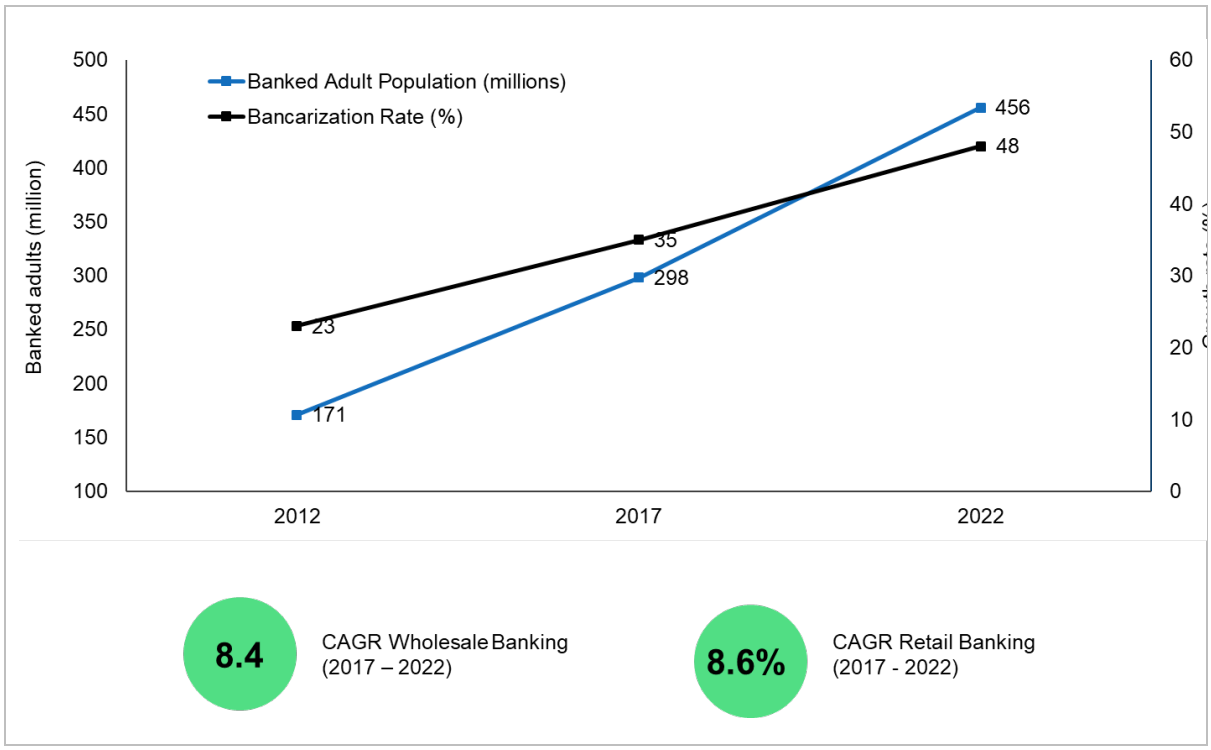
Three industries drive demand for tech services

Three industries are largely responsible for demand in the African IT/BPM industry: banking and finance, telecommunications and healthcare. The fast-growing banking and finance sector has needs for data management, data storage, security and customer service, which creates a sustainable and growing demand for IT/BPM services.

Similarly, the African telecommunications sector is expanding rapidly and is highly competitive, requiring cost-effective technology and business process solutions. The healthcare sector is also growing steadily, and it needs information systems, data centres and customer support to help sustain this growth.

[3] https://www.forbes.com/sites/tobyshapshak/2019/10/30/africa–now–has–643–tech–hubs–which–play–pivotal–role–for–business/#178f1d594e15

Figure 2 Growing number of Africans use banking services



Source: World Bank Findex.

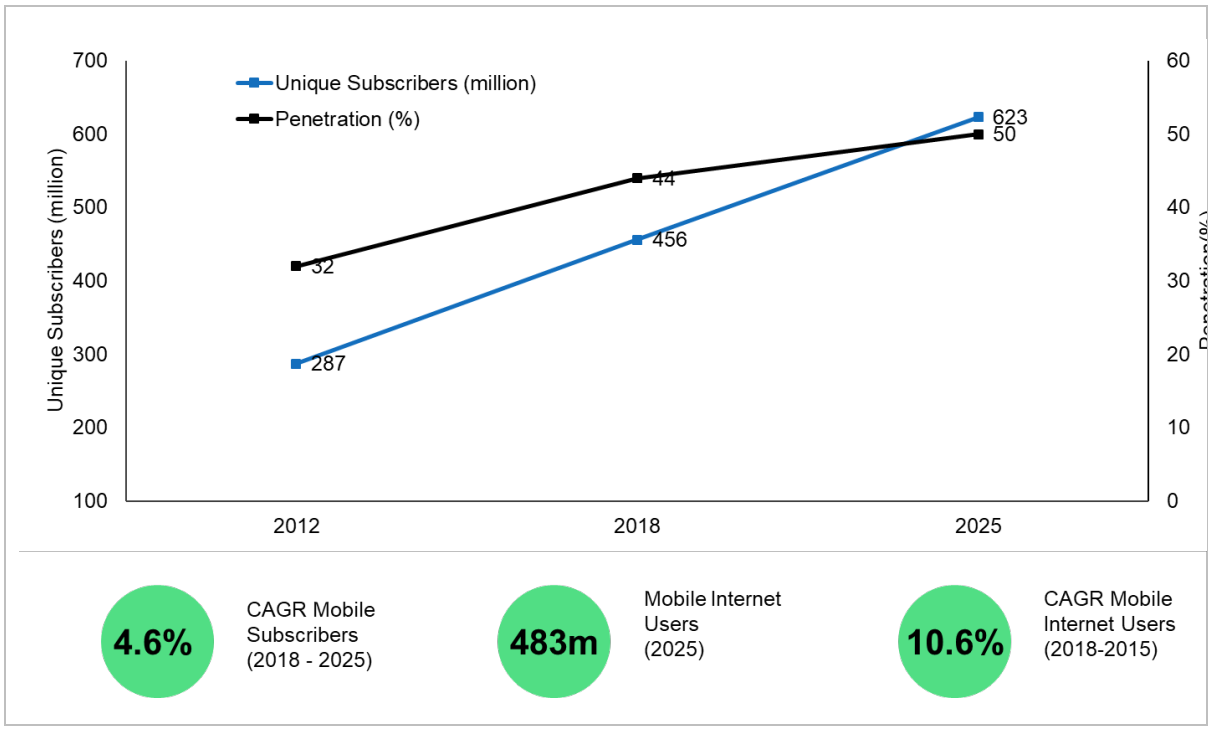
The African banking ecosystem has expanded quickly in the last decade. The number of adults who not use or have access to any traditional financial services – known as banked adults – climbed to almost 300 million in 2017 from 170 million in 2012. The figure is projected to exceed 450 million in 2022.

This can be partly attributed to the emergence of financial technology (fintech) companies. African fintech start-ups have received more investment than other sectors every year since 2016.[4] This industry is driving demand for IT/BPM services across the continent, as it traditionally has done elsewhere.

The telecommunications sector has also flourished across sub-Saharan Africa. From a mobile phone subscriber base of just 6% of the total population in 2004, penetration surpassed 44% (456 million subscriptions) in 2018.[5] The sector is highly competitive, with multinational players such as Airtel, MTN, Safaricom, Tigo and Vodafone offering mobile services. The rapid growth of the customer base has fuelled demand for IT/BPM services offered by major providers such as iSon, Tech Mahindra and Wipro.

[4] https://qz.com/africa/1751701/everything-you-need-to-know-about-african-fintech/
[5] https://www.gsmaintelligence.com/research/?file=36b5ca079193fa82332d09063d3595b5&download

Figure 3 Mobile phone subscriptions surge



Source: Global System for Mobile Communications Association.

With the African population growing by 2.5% a year on average, the healthcare sector is developing rapidly to accommodate that growth. The industry is expected to grow at a compound annual rate of 6% in 2016–2024, reaching a value of $56 billion by 2024.

CHAPTER 2 COMPREHENSIVE COUNTRY ANALYSES

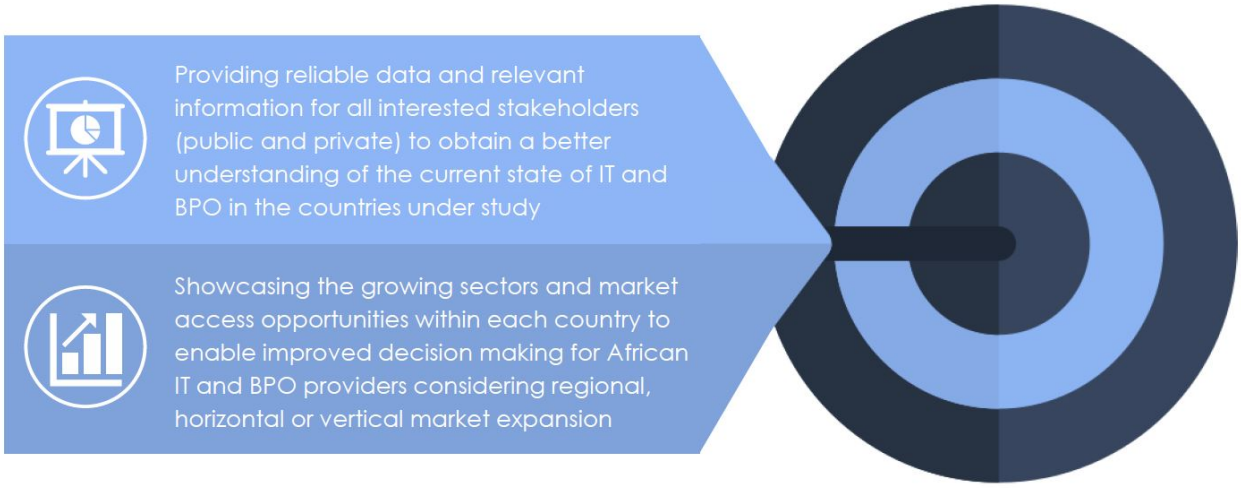
This report examines IT/BPM sectors in Kenya, Nigeria, South Africa, Côte d'Ivoire, Democratic Republic of the Congo, United Republic of Tanzania, Zambia, Uganda, Benin, Mali and Burkina Faso. It considers enabling factors such as ICT infrastructure, government incentives and policies, as well as regulatory and compliance-related information.

The country analyses in this chapter aim to provide market information that IT and BPM exporters need, but are unable to find. They are designed to broaden our understanding of the relevant conditions in the selected countries so providers that are keen to expand will be able to make better-informed decisions.

Each country profile encompasses 12 specific areas.

Table 2 Country analysis in 12 areas

Subsection	Description
Macroeconomic and country data	Details and statistics on a country's economy, key sectors, demographics and significant socioeconomic highlights
ICT landscape	Growth trends and other highlights on the sector
IT/BPM sector overview	Snapshot of the sector with details on parameters such as market size, service offerings, important IT and BPM associations and agencies, and location attractiveness factors
Key cities and IT/BPM centres	Key IT/BPM centres and ICT hubs/tech parks/start-up hubs
The state of competition – understanding the IT/BPM service provider landscape	Major players and their service offerings
Service capacity and capability	Details on talent and skill availability, quality and employability of talent, scalability and training of talent
ICT infrastructure	Details on enabling ICT infrastructure – telecoms, broadband and power
Government incentives and policies	Investment incentives and business registration procedures
Regulatory and compliance	Details on labour laws, visa and immigration policies, current cybersecurity and data privacy-related regulations
Key IT and BPM associations/agencies	Contact information of important agencies and associations
Growing market segments	Demand trends and details about growing market segments
Market access opportunities	Potential opportunities in the growing market segments



Defining indicators

Below are indicators used in the country profiles.

*ITU – International Telecommunication Union

*WEF – World Economic Forum (Global Comptetiveness Index)

Table 3 Definition of terms

Indicator	Source	Definition
Economy		
Gross domestic product (GDP)	World Bank	The sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.
Real GDP growth rate	World Bank	Annual percentage growth rate of GDP at market prices based on constant local currency.
IT/BPM sector competitiveness		
ICT service exports	World Bank	These include include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).
ICT Infrastructure		
ICT infrastructure – telecom		
Fixed telephone subscriptions (per 100 people)	World Bank	These are the sum of active numbers of analogue fixed telephone lines, voice-over-internet-protocol subscriptions, fixed wireless local loop subscriptions, ISDN voice-channel equivalents and fixed public payphones.

Mobile cellular subscriptions (per 100 people)	World Bank	These are subscriptions to a public mobile telephone service that provide access to the public switched telephone network using cellular technology. The indicator includes (and is split into) the number of postpaid subscriptions, and the number of active prepaid accounts (those that were used during the last three months). The indicator applies to all mobile cellular subscriptions that offer voice communications.
ICT infrastructure – broadband		
Fixed broadband subscriptions (per 100 people)	World Bank	These are fixed subscriptions to high-speed access to the public internet (a Transmission Control Protocol/Internet Protocol connection), at downstream speeds of 256 kbit/s or more. This includes cable modem, DSL, fibre-to-the-home/building, other fixed (wired) broadband subscriptions, satellite broadband and terrestrial fixed wireless broadband.
Active mobile broadband subscriptions (per 100 people)	ITU database	These are the sum of standard mobile broadband and dedicated mobile broadband subscriptions to the internet. They cover actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets.
People using the internet (% of population)	World Bank	Anyone who has used the internet (from any location) in the last three months. The internet can be accessed by computer, mobile phone, personal digital assistant, games machine, digital TV, etc.
International internet bandwidth per user (kilobits per second)	ITU database	This is the total used capacity of international internet bandwidth. It is measured as the sum of used capacity of all internet exchanges (locations where internet traffic is exchanged) offering international bandwidth.
ICT infrastructure – energy and power		
Electric power consumption (kilowatt hour/kWh per capita)	World Bank	Measures the production of power plants and combined heat and power plants minus transmission, distribution and transformation losses and own use by heat and power plants.
Quality of electricity supply	WEF, International Energy Agency, Energy Data Centre	Electric power transmission and distribution losses as a percentage of domestic supply (2016 estimate). These are losses in transmission between supply sources and points of distribution and in the distribution to consumers, including pilferage.
Service capacity and capability		
Talent and skill availability		
Youth unemployment	World Bank	This is the share of the labour force aged 15–24 without work, but available for and seeking employment.

Tertiary gross enrolment ratio	World Bank	The gross enrolment ratio is the ratio of total enrolment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Tertiary education, whether or not to an advanced research qualification, normally requires the successful completion of education at the secondary level.
Secondary gross enrolment ratio	World Bank	Secondary education completes the provision of basic education that began at the primary level, and aims to lay the foundations for lifelong learning and human development, by offering more subject- or skill-oriented instruction using more specialized teachers.
Quality and employability of talent		
Quality of vocational training	WEF	Response to the survey question 'In your country, how do you assess the quality of vocational training?' (1 = extremely poor/among the worst in the world; 7 = excellent/among the best in the world). Based on 2018–2019 weighted average or most recent period available.
Skillset of graduates	WEF	Average score of two Executive Opinion Survey questions: 'In your country, to what extent do graduating students from secondary education possess the skills needed by businesses?' and 'In your country, to what extent do graduating students from university possess the skills needed by businesses?' In each case, the answer ranges from 1 (not at all) to 7 (to a great extent). Based on 2018–2019 weighted average or most recent period available.
Ease of finding skilled employees	WEF	Response to the survey question 'In your country, to what extent can companies find people with the skills required to fill their vacancies?' (1 = not at all; 7 = to a great extent). Based on 2018–2019 weighted average or most recent period available.
Digital skills in active population	WEF	Response to the survey question 'In your country, to what extent does the active population possess sufficient digital skills (e.g. computer skills, basic coding, digital reading)?' (1 = not all; 7 = to a great extent). Based on 2018–2019 weighted average or most recent period available.
Youth literacy	World Bank	The percentage of people aged 15–24 who can both read and write with understanding a short, simple statement about their everyday life.
Adult literacy	World Bank	The percentage of people aged 15 and above who can both read and write with understanding a short, simple statement about their everyday life.

Kenya

Kenya's information technology and business process management sector is well-developed, with plenty of highly skilled labour. Competition is intense and is further fuelled by the presence of large international outsourcing providers.

Macroeconomic and country data

Capital: **Nairobi**

GDP: $87.9 billion

GDP per capita: $1,710

Real GDP growth rate (2018–19): 5.7%

Inflation rate: 4.4%

Population: 53.3 million
- 0–14 years: 38.6%
- 15–24 years: 20.9%

Population growth rate: 2.3%

Major business sectors: Agriculture, manufacturing, information and communication technology, transportation, finance

Unemployment rate: 9.3%

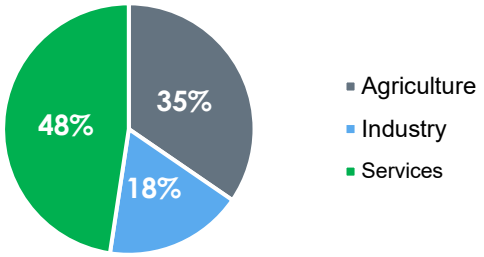
Literacy rate: 81.5%

Urbanization: 28%

Major trade associations:
- Kenya National Chamber of Commerce & Industry
- Kenya IT and Outsourcing Service

Sources: World Bank and Avasant Research.

Gross domestic product composition



Key facts

Currency: Kenyan shilling (KES)

Exchange rate (per $): KES 100.4

Foreign direct investment inflow: $1.6 billion

Major languages: English (official language)

Major religions: Christianity, Islam

Major exports: Agri-based products and refined petroleum

Country highlights

Kenya is considered the economic, financial and transportation hub of East Africa. It operates a service-oriented economy led by tourism, which contributes about 15% of Kenyan exports.

The banking and financial sector is relatively well developed and serves both the domestic and regional markets. Almost 83% of the population has access to formal financial services and products.

The telecom sector is well developed. Mobile subscriptions reached 49.5 million in 2018 from 46 million in 2016.

Agriculture contributes about 35% of gross domestic product. Roughly 75% of the population work at least part of the time in the agricultural sector.

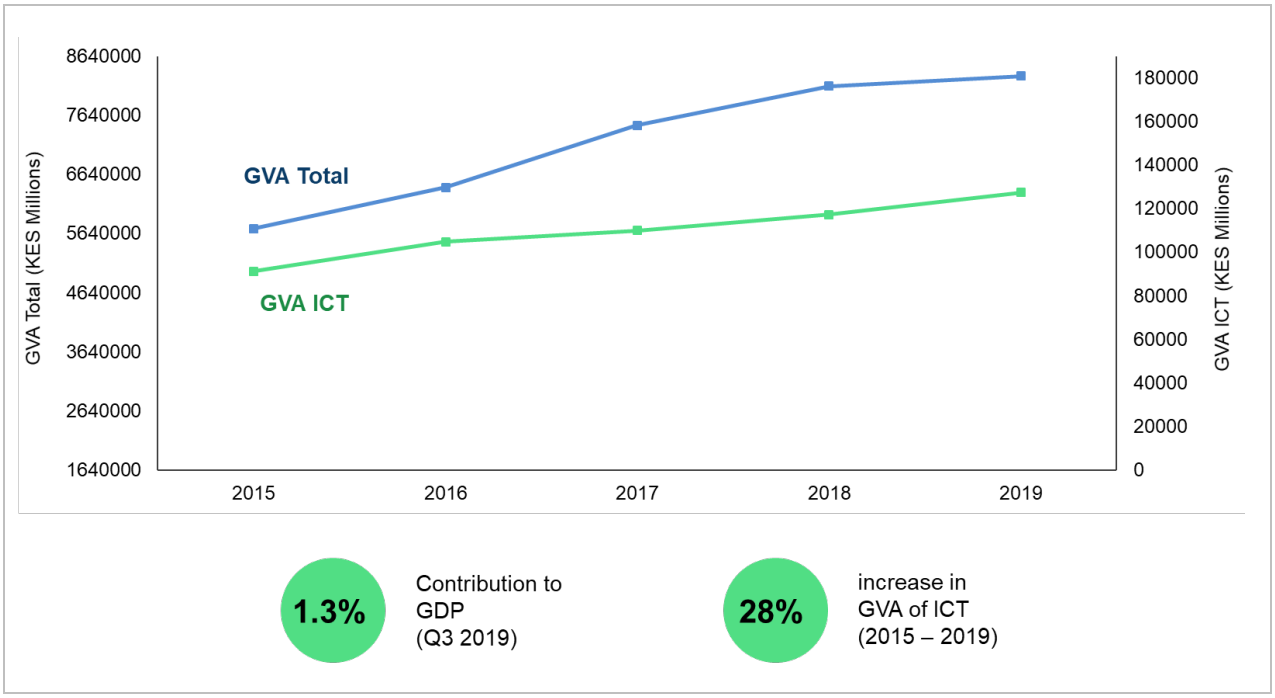
Information and communications technology landscape

Kenyan tech sector seeks to solidify its regional role

Kenya has clearly emerged as a central ICT hub in East Africa. A robust telecom infrastructure, coupled with the availability of talent, is helping the country progress in the tech sector.

Popularly known as the Silicon Savannah, Kenya's $1.2 billion[6] ICT sector accounted for an estimated 1.3% of GDP in 2018. The sector has grown at an annual average rate of 10% since 2015.

Figure 4 Technology outpaces other Kenyan sectors



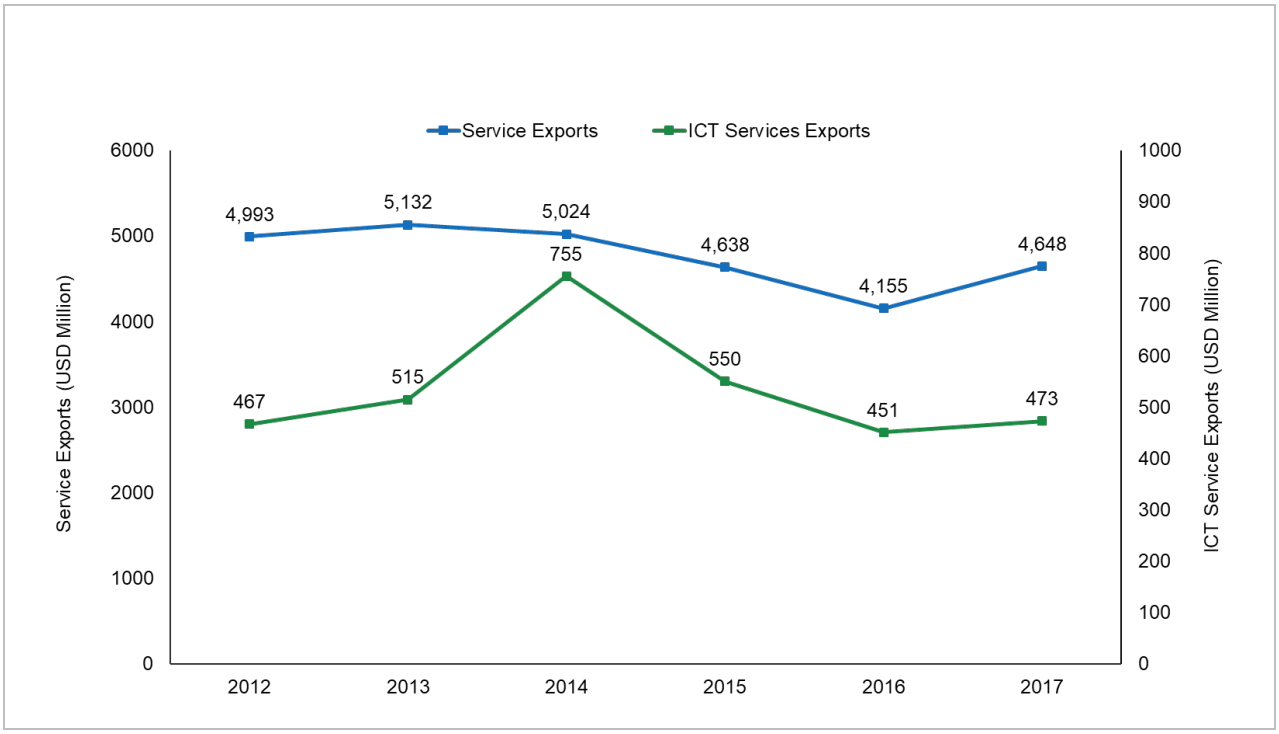
Note: Gross value added refers to the value of services produced in the ITC sector.

Source: Kenya National Bureau of Statistics.

Kenyan ICT service exports have picked up steadily following a steep decline in 2015 and 2016. The latest data show that in 2017, the country exported about $470 million in ICT services – a key measure of information technology and business processing management services – accounting for 10.2% of total service exports.[7]

[6] https://www.theelephant.info/documents/kenya–national–bureau–of–statistics–economic–survey–2019/
[7] https://data.worldbank.org/indicator/BX.GSR.CCIS.ZS?locations=KE

Figure 5 ICT service exports are recovering



Source: World Bank.

Why is the Kenyan technology sector appealing?

Attractiveness factors

Proximity to British and European markets with frequent flights to important Kenyan cities and flight times of 8.5–10.5 hours

Favourable time zone

A difference of 2–3 hours with the United Kingdom and most European countries

Native English talent
Kenya has the strongest English-speaking skill base in East Africa

Young workforce with more than 19 million people between 15 and 34 years of age[8]

Strong government focus on technology

as part of Kenya's Vision 2030 development goals

Main highlights

Market size: ~ $200 million[9]

Workforce: ~ 15,000[10]

Entry-level salary (monthly): ~ $150–$200[11]

Principal IT/BPM service offerings: Contact centre services, managed services, human resources outsourcing, market research, digital marketing, data centre and infrastructure hosting, cloud services, software development, cybersecurity

Key industries served: Government, energy and utilities, financial services, manufacturing, logistics, healthcare, telecommunications, tourism and hospitality, mining, retail, food processing, real estate, education

Major markets served: United Kingdom, United States and the European Union

Examples of buyers:

Key IT/BPM associations and agencies:

- Kenya ICT Authority
- Kenya IT and Outsourcing Services
- ICT Association of Kenya
- Kenya ICT Action Network

[8] https://www.populationpyramid.net/kenya/2019/
[9] Avasant Research
[10] *Ibid.*
[11] *Ibid.*

Key cities and technology centres

Most tech firms are in Nairobi, Mombasa and Eldoret

The major Kenyan ICT centres are Nairobi, Mombasa and Eldoret. The biggest city is the capital, Nairobi, with 4.3 million people,[12] followed by Mombasa with about a million residents.

Most innovation hubs, incubation centres and accelerators are in Nairobi, making it an attractive spot for both tech specialists and investors. Hubs have sprung up in Mombasa and Eldoret as well as smaller cities and towns including Kisumu.

Figure 6 Eldoret gains a foothold as a key tech hub

Source: Avasant Research.

Table 4 Nairobi has the most tech hubs and parks in Kenya

City	ICT hubs, tech parks and start-up hubs
Nairobi	• Nairobi Industrial and Technology Park • iHub • NaiLab • University of Nairobi Science and Technology Park • C4DLab • iBizAfrica • Villgro • FabLab • mLab East Africa • Cisco EDGE Incubation Centre • GrowthHub • The Hub East Africa

[12] https://www.knbs.or.ke/?wpdmpro=2019-kenya-population-and-housing-census-volume-i-population-by-county-and-sub-county

	• MEST Nairobi • Chandaria Business Innovation and Incubation Centre • Mara Launchpad Incubation Centre
Mombasa	• SwahiliBox • SwahiliPot • MakersHub Likoni
Eldoret	• Dlab Hub • EldoHub

Source: Avasant Research.

The state of competition: Understanding the landscape

Firms of all sizes serve local and international clients

Kenya has advanced considerably on information and communication technology since 2013, when it launched its national long-term development programme, Vision 2030. This programme is a commitment by the Government to transform the country into a middle-income economy and develop the ITC sector into a global player. Effective government policies, infrastructure investment such as four fibre-optic sea cables and a thriving entrepreneurial ecosystem have underpinned steps towards this goal.

Some highlights of the service provider landscape are described below:

- **The Government is trying to build an ecosystem that helps the tech sector grow.** In 2016, Kenya updated the 2006 national policies that regulate the sector. The other regulatory policies governing ICT in Kenya are the National Broadband Strategy (2013), the National ICT Master Plan (2014) and the National Cybersecurity Strategy (2014).

- **Local, regional and global firms are thriving.** Kenya established an IT/BPM sector in 2007–2008, with companies such as KenCall, Kentech (now Techno Brain) and Simbatech setting up contact centres and outsourcing businesses. More than 15 IT/BPM firms are based in the country, including global enterprises such as Accu and Tech Mahindra as well as homegrown companies such as Telesky.

- **Global technology firms offer their services in Kenya through local partners.** Demand is growing for cloud services, and several multinationals such as IBM, MTN Business and Salesforce operate in Kenya through resellers and local technology partners. Cybersecurity demand is also increasing, and global players such as Kaspersky are selling their services through partners.

The following table describes the main services offered and industries served by some of the leading service providers in Kenya. International companies are highlighted in blue.

Table 5 Providers offer a range of services

Service provider	Headcount Location	Examples of services offered	Industries served
Telesky	250+ Nairobi	Call centre services, business process outsourcing, corporate call centre training, campaign services, public service hotlines	Transport, finance, telecommunications, health
Daproim Africa	250+ Nairobi	Data services, customer support services, market research, IT services in the following areas: ▪ mobile app development and database management ▪ web application development ▪ Search engine optimization	High-tech, healthcare, government
Horizon Contact Centres	100+ Nairobi	Contact centre services, customer support services	Telecommunications, banking and financial services, retail, utilities, non-governmental organizations (NGOs), travel and tourism, government and public sectors
Ideon	250+ Nairobi	Collections and call centre services, finance solutions, human resources solutions, payroll	Financial services, insurance
Software Group	250+ Nairobi	Mobile payments, internet and mobile banking, agency banking, enterprise integration platform	Financial services, telecommunications, insurance
Adept Technologies	50+ Nairobi	Data management, customer support, digital marketing, machine learning	Insurance, NGOs, tech firms
Techno Brain Group	250+ Nairobi	IT services, business process outsourcing, software solutions	Government, banking, financial services and insurance, manufacturing, utilities, logistics, mining
Simba Technologies	Nairobi	Banking solutions, security operations centre, infrastructure management services	Banking, financial services and insurance, automobile

Dimension Data	Nairobi, Mombasa, Nyeri, Kisumu, Eldoret	Consulting services, cloud services, managed services, support services, technical services	Financial services, energy and utilities, healthcare, fast-moving consumer goods
iSON Xperiences	200+ Nairobi	Inbound customer service, mobile money, inbound-dealer help desk, outbound sales, retention and customer health check, back office, social media care, know your customer processes, w.com-mailbox, data cleanup services	Telecommunications, automobile
CCI Global	Nairobi	Business process outsourcing, digital management, customer contact services, business intelligence	Power sector, telecommunications, media

Source: Avasant Research.

Service capacity and capability

Kenya is a regional leader for tech talent

Kenya was ranked 94 of 157 in the World Bank 2018 Human Capital Index – the third-highest in sub-Saharan Africa. The country has a very young and educated population, with an average age of 19.7 years and a literacy rate of 81.5%.[13] Most people (77%) live in rural areas, though the rate of urbanization is increasing by 4.2% every year.[14] These factors make Kenya appealing for IT/BPM companies.

The table below looks at the availability and quality of talent in the Kenyan IT/BPM sector and outlines its scalability prospects and opportunities.

Table 6 High number of graduates boosts talent pool

Talent and skill availability	
No. of universities: 62[15]	The Kenyan Commission for University Education has accredited 62 universities. The Government controls 22 universities while the remainder are privately owned. About 50,000 graduates enter the job market every year, meaning there is a large pool of candidates from which to draw potential IT/BPM professionals. Despite its 81.5% adult literacy rate, Kenya lags behind other offshoring destinations in higher education enrolment. The vast majority of Kenyans only have primary schooling, and only eight years of schooling are compulsory. This undermines the capability of Kenya to build a strong workforce for its IT/BPM industry.
Annual tertiary graduates: ~ 50,000[16]	
Youth unemployment: 18.3%	
Tertiary gross enrolment ratio: 11.5[17]	
Secondary gross enrolment ratio: 57%[18]	

[13] https://www.cia.gov/library/publications/the–world–factbook/geos/ke.html
[14] *Ibid.*
[15] https://www.4icu.org/ke/
[16] https://www.transformify.org/blog/blogger–s–island/here–is–why–graduates–in–kenya–may–not–have–a–job–after–university–in–kenya
[17] https://data.worldbank.org/indicator/SE.TER.ENRR?locations=GH–NG–KE
[18] https://data.worldbank.org/indicator/SE.SEC.ENRR?locations=KE&view=chart

Quality and employability of talent	
Quality of vocational training: Ranks 58th of 141 countries	The World Economic Forum Global Competitiveness Index rates the quality of the education system as average. The scoring, on a scale of 1 to 7, is on based on how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well. Kenya scored 4.4. The quality and availability of technical and vocational training, particularly in information technology, scored 4.3 on the Global Competitiveness Index, indicating ample scope for improvement. The country gets average marks in terms of the skillset of university graduates, with a rating of 4.1 based on the extent to which graduating students have the skills that businesses need. On the the ease of finding skilled workers to fill vacancies, Kenya scored 4.9 and ranked 22 globally. This higher rating can be attributed to the availability of college graduates and moderately high levels of unemployment and underemployment, which enable skilled employees to seek better job opportunities. In terms of adult literacy, Kenya ranks ahead of many countries competing for a share of the offshore services market, with youth literacy at 88% and adult literacy at 81.5%. More than 70% of graduates have usable English language skills for international contact centres.[22] The large English-speaking population means Kenya is well positioned in terms of language.
Skillset of graduates: Ranks 66th of 141 countries	
Labour force with advanced education: 69.1%[19]	
Ease of finding skilled employees: Ranks 22nd of 141 countries	
Digital skills in active population: Ranks 49th of 141 countries	
Literacy • Youth literacy: 88%[20] • Adult literacy: 81.5%[21]	
Language proficiency: High English-speaking capability	

Scalability

The large pool of tertiary graduates and moderately high unemployment rates signal scope for IT/BPM operations to scale. However, adequate training mechanisms must supplement the skills of these graduates and help them perform effectively within the industry. The Information and Communication Technology Authority has developed several training programmes to bridge the gap between industry needs and the talent pool of university graduates:

- Centre of Excellence in collaboration with the University of Nairobi trains 5,000 students every year for the BPM and information technology enabled services industries;
- Chipuka Software Development Certification, which was developed and rolled out by Carnegie Mellon University;
- Huawei Telecom Seeds for the Future, which trains top 100 engineering students for practical on-the-job skills;
- Microsoft ICT Skills Training and Oracle e-Government Capacity-Building Programme;
- Presidential Digital Talent Programme to train fresh ICT graduates.

[19] https://data.worldbank.org/indicator/SL.TLF.ADVN.ZS?locations=KE
[20] https://data.worldbank.org/indicator/SE.ADT.1524.LT.ZS?locations=KE
[21] https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=KE
[22] Based on Avasant Research.

ICT infrastructure

Improvements are needed to reach full potential

Kenya has one of the highest mobile and internet penetrations in sub-Saharan Africa, with 103 mobile handsets per 100 people.[23] This is driving the adoption of mobile banking and e-commerce.

The infrastructure to support ICT has become better in recent years, and the Government has promoted growth through the regulatory framework. However, the infrastructure and regulatory framework require further improvements to realize the full potential of a digital economy.

Table 7 Unreliable power supply weakens infrastructure

Telecom[24]
• Fixed telephone subscriptions (per 100 people) – 0.013 • Mobile cellular subscriptions (per 100 people) – 96.3
Kenya is one of the leading African mobile telecommunications markets in terms of subscriber base and internet penetration. The sector attracted investments of more than $570 million in 2018. The country has one of the highest densities of mobile subscriptions in the world, with 83% of its internet traffic coming from mobile devices.[25] Few people have fixed phones lines because the costs are very high and fixed-line infrastructure requires improvements. This hampers businesses, which need robust landlines and high-speed broadband internet to keep costs low.
Broadband/Bandwidth[26]
• Fixed broadband subscriptions (per 100 people) – 0.72 • Active mobile broadband subscriptions (per 100 people) – 26.2 • People using the internet (% of population) – 17.8% • International internet bandwidth per user (kilobits per second) – 20.6 • Percentage of households with internet access – 16.9%
Fixed broadband penetration in Kenya is also low. The household penetration rate of 0.72% at the end of 2019 exceeded the regional average (0.6%), but was significantly below the world average (13.6%). The Kenyan broadband infrastructure has improved considerably thanks to provider investments in the network and the laying of four underwater fibre-optic cables. But prices remain high, so few people sign up for fixed internet. Most broadband subscribers use mobile internet, which is more affordable. Kenya ranks 54th of 230 countries on mobile data affordability (based on worldwide mobile data pricing by Cable.co.uk). The average price of 1 gigabyte of data is $2.70 on a 30-day plan.[27] Kenya ranks 129th of 206 countries on broadband costs. Broadband costs an average of $56.10 a month in Kenya.

[23] http://documents.worldbank.org/curated/en/968481572468094731/pdf/Kenya–Economic–Update–Securing–Future–Growth–Policies–to–Support–Kenya–s–Digital–Transformation.pdf
[24] https://www.itu.int/en/ITU–D/Statistics/Pages/stat/default.aspx
[25] https://businesstoday.co.ke/kenya–leads–africa–smartphone–usage/
[26] https://www.itu.int/en/ITU–D/Statistics/Pages/stat/default.aspx
[27] https://www.cable.co.uk/mobiles/worldwide–data–pricing/

Power[28]

- Electric power consumption (kWh per capita) – 200
- **Generation capacity**
  - Installed capacity: 2,351 megawatts (MW)
- **Connections**
  - Current access rate: 64%
    - Rural: 57%
    - Urban: 81%
- Quality of electricity supply: Value – Ranks 114th of 141 countries

Access to electricity has improved considerably, and before the COVID-19 pandemic,[29] the Government had set 2020 as a target for universal access. In addition to the challenges created by the pandemic, more improvements are needed to reach this goal. Unreliable and erratic electricity supply can hurt the IT/BPM sector, which typically needs electricity 24 hours a day.

Cost of electricity[30]

	Cost ($) household, kWh	Cost ($) business, kWh
Kenya	0.23	0.19
World average	0.15	0.13

[28] https://www.usaid.gov/sites/default/files/documents/1860/Kenya_Power_Sector_report.pdf
[29] This report was researched and written before the COVID-19 crisis began in the early months of 2020. This should be kept in mind when Insights and predictions in the report do not take into account the consequences of the pandemic.
[30] https://www.globalpetrolprices.com/Kenya/electricity_prices/

Government incentives and policies

Incentives bolster technology sector

Developing the technology sector is one of the flagship initiatives of Kenya's Vision 2030. The Government aims for the sector to contribute 10% of GDP by 2030 and has created a roadmap to make Kenya a leading IT/BPM destination.

The Government has introduced the following initiatives to reach its goals for the sector:

- **Pasha Centres**: Created these ICT hubs to increase the penetration of internet in rural areas and promote the digital inclusion of all citizens;
- **Konza Technology Park**: Invested 100 million Kenyan shillings (about $935,000 today) to develop the basic infrastructure for investors to set up technology and IT/BPM businesses;
- **Centre of Excellence**: Established a Centre of Excellence with leading tech companies and the University of Nairobi to train students in IT and business process outsourcing skills and build human resources to meet the demands of the sector.

What incentives support business development?

- Export Processing Zones programme, offering incentives to investors in export businesses;
- Kenya Investment Authority, which targets investment promotion, investor facilitation and aftercare services for investors;
- Double taxation avoidance agreements, bilateral investment trade agreements;
- 10-year corporate income tax holiday and a 25% tax rate for the next 10 years;
- Subsidizing taxes on computer hardware and software;
- Zero value-added tax for export service billing;
- Rapid project approval and licensing within 30 days.

Business registration procedure

- Begin your application by choosing a business type.
- Enter the name for your business.
- Pay the 150 Kenyan shilling fee to file your name search.
- Fill out the company registration form CR1.
- Write out the addresses of company directors on form CR8.
- Indicate the nominal capital holdings of your business(es) on form BN6.
- Pay the stamp duty based on the capital of your company.
- Draft a memorandum and article of association to outline your business goals.
- File the completed forms and pay the fee at a Kenyan registrar's office.
- Download your business certificate from the eCitizen platform.

What is the focus of tech policy in Kenya?

The Ministry of Information, Communications and Technology formulates policies and laws that regulate standards and services in the ICT sector. The ministry is divided into two departments: (1) broadcasting and telecommunication and (2) ICT and innovation, which drafts national policies for the information technology and business process outsourcing sector.

The regulatory and compliance policies shown in Table 8 govern the sector.

Table 8 Rules aim to draw foreign investors to tech sector

Labour laws	• The Ministry of Labour has fixed minimum wages of unskilled, semi-skilled and skilled workers for all occupations in Kenya • It has also defined laws governing employment termination, resignation, leave days, maximum working hours and maternity leave
Visa and immigration policies	• A business visa is available for executives and investors travelling to Kenya for business meetings or discussions (Fee: $51) • A 90-day extendable visa can be easily obtained from any Kenyan embassy abroad; it is not valid for employment • Work permits are available for temporary business transactions, professional employment, trade and farming
Cybersecurity and data privacy regulations	These regulations, guided by the Data Protection Act of 2019,[31] aim to: • outline restrictions on how organizations and governments can handle, store and share personal data; • comply with European Union's General Data Protection Regulation; • encourage foreign investment in the Kenyan IT/BPM sector.

[31] http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2019/TheDataProtectionAct__No24of2019.pdf

Trade associations offer a helping hand to tech firms

Table 9 Six key associations work in the tech sector

Agency	Contact
Communications Authority of Kenya	**E-mail:** info@ca.go.ke **Website:** www.ca.go.ke
Konza Technopolis Development Authority	**E-mail:** konza@konza.go.ke **Website:** http://www.konzacity.go.ke
Kenya ICT Authority	**E-mail:** communications@ict.go.ke **Website:** www.icta.go.ke
Information Communication Technology Association of Kenya	**E-mail:** info@ictak.or.ke **Website:** http://www.ictak.or.ke/
The Computer Society of Kenya	**E-mail:** info@cskonline.org **Website:** https://www.cskonline.org/
Kenya IT and Outsourcing Services	**E-mail:** info@kitos.or.ke **Website:** http://www.kitos.or.ke

Growing market segments

Tech sector serves many domestic industries

The IT/BPM sector supplies services to a broad range of domestic industries, including banking, financial and insurance services, telecommunications, automobile, retail, fast-moving consumer goods, tourism, e-commerce, agriculture and government. Before deciding to operate or establish in a country, however, providers must identify industry verticals[32] with high growth potential. This will ensure that there is a demand for their services and safeguard the sustainability and scalability of operations.

Table 10 highlights three major industries that have a high potential to generate demand for IT/BPM services: banking, financial and insurance services, retail and healthcare. The main factors taken into consideration were the size and year-on-year growth of each sector – including expected growth, drivers of growth and market trends – and IT and business processing outsourcing trends for the industry.

[32] An industry vertical or vertical market identifies companies that offer niche products or fit into multiple industries. Verticals are often new fields with promising companies that attract investors.

Table 10 Three fast-growing sectors show outsourcing potential

Banking, financial and insurance services[33]	
Size of Industry: ~ $6.6 billion Contribution to GDP: 7.5% Growth rate: 5.6%	• This sector is one of the major contributors to GDP and one of the fastest- growing sectors in the country. • Kenya has the third-biggest financial sector in sub-Saharan Africa. • Financial sector and access to ICT are two major goals in the Vision 2030 programme of the Government of Kenya. • The penetration of mobile money has been enormous, with the transaction value equal to 45.3% of the GDP in 2018.[34] • High penetration rate of mobile phones and a surge in adoption of online banking.
Trade and retail[35]	
Size of industry: ~ $7.2 billion Contribution to GDP: 8.1% Growth rate: 6.3%	• A very young population with a fast rate of urbanization will increase the base of customers for retail, especially e-commerce. • International retail players have invested in Kenya and set up businesses in the country. • The proliferation of digital payment systems and penetration of mobile and internet e-commerce is growing rapidly. Online retailers such as Jumia, Kilimall and Rupu have recorded high mobile-based sales.
Healthcare[36]	
Size of industry: ~ $3.98 billion Contribution to GDP: 4.8% Growth rate: 7.8%	• A fast-growing population and a middle-class contribute to the steady growth of demand for quality healthcare. • The Government has increased spending on healthcare. • A comprehensive e-health strategy and the huge success of mobile money solutions and other fintech innovations have fuelled the growth of healthcare services.

[33] https://s3–eu–west–1.amazonaws.com/s3.sourceafrica.net/documents/119074/Kenya–National–Bureau–of–Statistics–Economic.pdf
[34] https://www.ft.com/content/130fe0cc–4b36–11e9–bde6–79eaea5acb64
[35] https://s3–eu–west–1.amazonaws.com/s3.sourceafrica.net/documents/119074/Kenya–National–Bureau–of–Statistics–Economic.pdf
[36] https://www.mediceastafrica.com/content/dam/Informa/mediceastafrica/2019/downloads/kenya–healthcare–overview.pdf

Market access opportunities

Financial, retail and healthcare sectors show the most promise

The trends seen in the growing market segments showcase the sectors that are likely to drive demand for IT/BPM services in Kenya: banking, financial services and insurance, retail and healthcare. The following table identifies market access opportunities and potential service areas in these three sectors.

Table 9 Three sectors offer different opportunities

Industry	Service area	Description
Banking, financial services and insurance	• Digital payments • Online banking • Peer-to-peer lending • Personal finance • Insurance • Mobile remittances	• This sector has traditionally been a major buyer of information technology and outsourcing services. The sector generates a lot of demand for technology solutions such as core banking solutions, contact centre technology and back-end contact centres. • The increasing push towards fintech development creates new opportunities for providers that can offer higher-value and digital services – given that they typically offer traditional voice and non-voice services.
Retail	• E-commerce solutions	• Management consulting firm McKinsey predicts that African online sales will reach $75 billion by 2025. Kenya will have a compound annual growth rate of 27% and will exeed $2 billion by 2025. • The United Nations Conference on Trade and Development says there are more than 2.6 million online shoppers in Kenya. • In 2018, the Government signed the Computer Misuse and Cybercrimes Act to prosecute cybercrime. This will support online and mobile-based shopping.
Healthcare	• E-health • Telehealth	• Solutions such as M-Tiba and CarePay have bought the innovative mobile-based payment solutions and healthcare services together. There is a lot of potential for information technology companies to build such solutions. • Private sector hospitals and medical services are adopting health management information systems to eliminate traditional and inefficient paper-based solutions. • Big data and enterprise resource planning solutions have huge potential in the entire health sector value chain. • Telephone-based medical services are being tested in Kenya. They may be able to drive drive demand by making medical service accessible to a largely rural population.

Nigeria

Nigeria is the leading economic player in Africa with a highly competitive IT and BPM landscape. The abundance of labour and high unemployment rates enhance its attractiveness as a low-cost destination.

Macroeconomic and country data

Capital: **Abuja**

GDP: $397.2 billion

GDP per capita: $2,028

Real GDP growth rate: 1.9%

Inflation rate: 12%

Population: 203.6 million
0–14 years: 43.49%
15–24 years: 19.39%
Population growth rate: 2.6%

Major business sectors: Oil, agriculture, telecommunication, manufacturing, finance

Unemployment rate: 23.1%

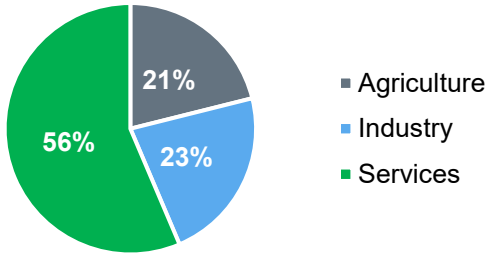
Literacy rate: 62%

Urbanization: 50.3%

Major trade associations:
Nigerian Association of Chamber & Commerce
Association of Outsourcing Practitioners of Nigeria

Sources: World Bank, Avasant Research.

Gross domestic product composition



Key facts

Currency: Nigerian naira (NGN)

Exchange rate (per $): NGN 362.50

Foreign direct investment inflow: $1.99 billion

Major languages: English (official language)

Major religions: Islam, Christianity

Major exports: Petroleum and agro-based products

Country highlights

Nigeria is the most populous country in Africa and the seventh most populous in the world. It is the largest African economy and has the biggest natural gas reserves on the continent.

The country is the No. 13 producer and the No. 9 exporter of petroleum in the world. The oil and gas sector accounts for 10% of GDP and 86% of total export revenue.

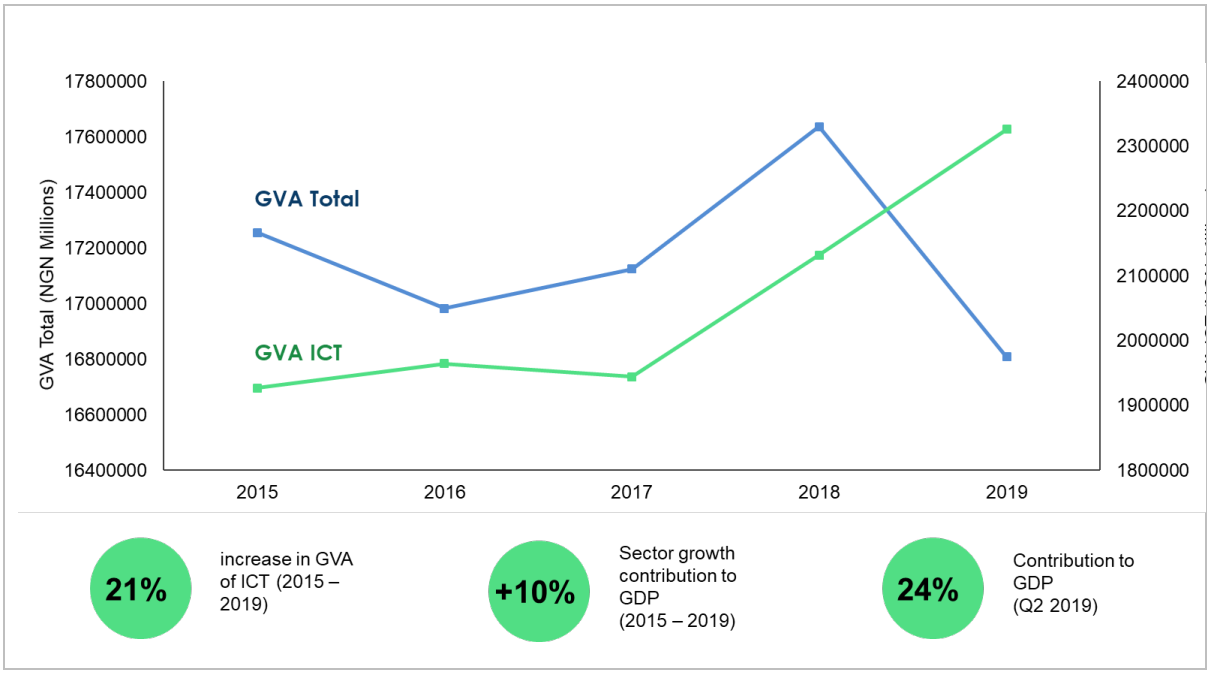
By 2050, Nigeria is expected to be one of the top 20 economies in the world. It is one of the four MINT countries (along with Mexico, Indonesia and Turkey), which are widely seen as the next 'BRIC-like' economies. Nigeria is also listed among the Next Eleven economies set to become among the biggest in the world.

Information and communications technology landscape

A main driver for economic growth

Data from the National Bureau of Statistics show that the ICT sector grew more than 10% in 2015–2019. In the second quarter of 2019, the sector was the second-highest contributor to Nigerian GDP at 24%, behind agriculture.[37] The growing importance of technology is also shown in its gross value added, which rose 21% in 2015–2019, while the total gross added value declined over the same period.[38]

Figure 7 Tech sector beats country average on gross value added

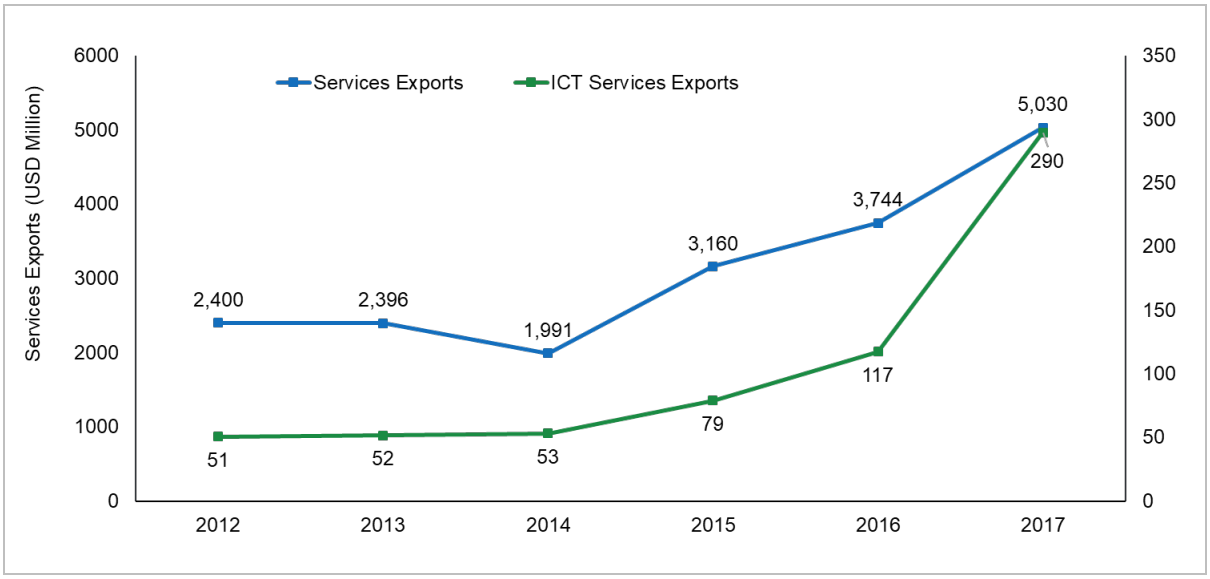


Source: Nigeria National Bureau of Statistics.

According to the World Bank, Nigeria exported $290 million in ICT services in 2017, accounting for 6% of total service exports. ICT service exports grew 473% in 2012–2017, illustrating the growing importance of information technology and business process outsourcing services to the Nigerian economy.

37 https://nigeria.opendataforafrica.org/
38 Nigerian National Bureau of Statistics.

Figure 8 Nigerian service exports are on the rise



Source: World Bank.

Why is the Nigerian technology sector appealing?

Attractiveness factors

Proximity to British and European markets with frequent flights to important Nigerian cities and flight times of 4.5–6.5 hours

Favourable time zone

Local time identical/a difference of one hour with the United Kingdom and most European countries

Native English talent with English as the official language, suitable for serving English-speaking countries

Young workforce with more than 66 million people between 15 and 34 years of age[39]

Strong government focus exhibited through policies to promote outsourcing

Main highlights

Workforce: ~ 7,200[40]

Entry-level salary (monthly): ~ $300–$400[41]

Principal IT/BPM service offerings: Contact centre services, managed services, human resource outsourcing services, market research, digital marketing, data centre and infrastructure hosting, software development, customer management solutions

Primary industries served: Government, energy and utilities, financial services, manufacturing, logistics, healthcare, telecommunications, tourism and hospitality, mining, retail, food processing, real estate, education

Major markets served: United Kingdom, United States and the European Union

Examples of buyers:

Key IT/BPM associations and agencies:

- Association of Outsourcing Practitioners of Nigeria
- Nigeria Association of Information Technology Enabled Outsourcing Companies
- National Information Technology Development Agency
- ACCESS-Nigeria (Assessment of Core Competence for Employability in the Services Sector)

39 www.populationpyramid.net/nigeria/2019/
40 Avasant Research
41 *Ibid*.

Key cities and technology centres

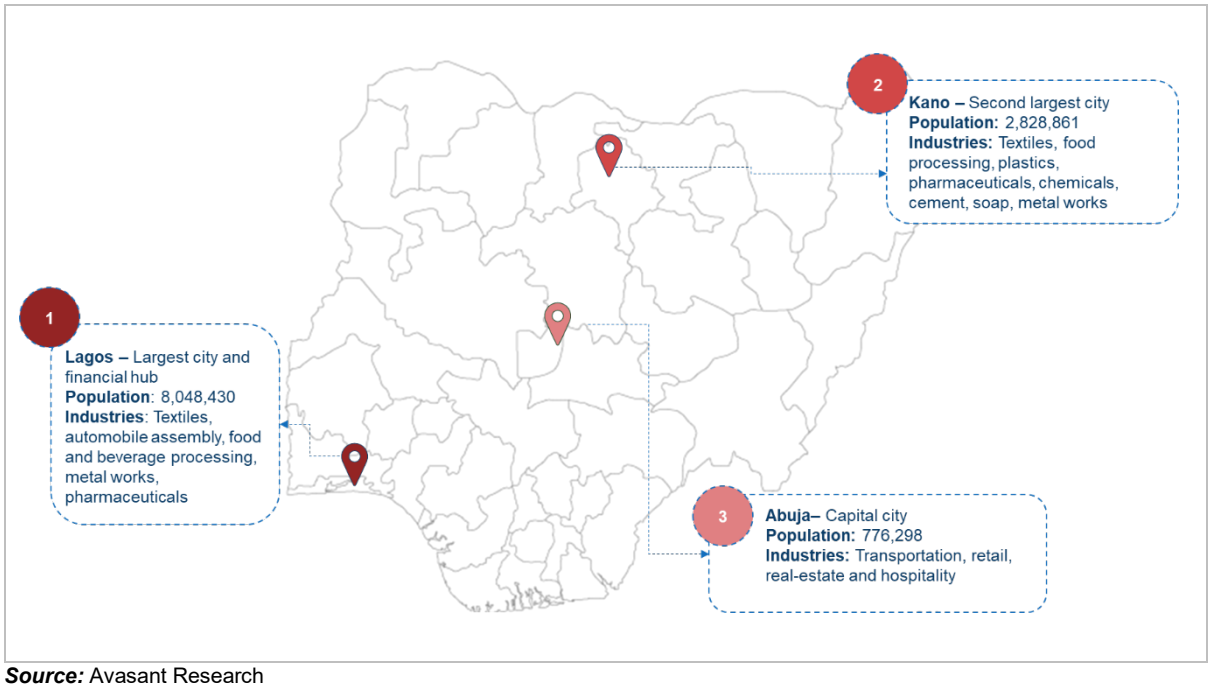
Abuja, Lagos and Kano are the leading cities for tech hubs

Seven Nigerian cities have a population of at least one million people, while 80 cities have a population of 100,000 to one million people and 248 have a population of 10,000 to 100,000 people.[42] The national capital, Abuja, located in the centre of the country, is one of the fastest-growing cities in the world.

According to World Population Review, Nigeria grows about 35% a year.[43] Lagos, the former capital, is the most populous and largest urban region in the country, leading in commercial and industrial activities.

The figure below highlights the cities in Nigeria most suitable for IT/BPM companies.

Figure 9 Tech is concentrated in three large cities



Source: Avasant Research

42 https://www.worldatlas.com/articles/biggest–cities–in–nigeria.html
43 www.worldpopulationreview.com/world–cities/abuja–population/

Table 10 Most tech hubs are located in Abuja

City	ICT hubs/ tech parks/ start-up hubs
Abuja	- Abuja Technology Village Free Zone Company - Enspire - Technology Centric Incubation Program - Technology Development for Poverty Alleviation Initiative - StoneBricks Hub - StartPreneurs - full-service tech company for software innovations - Ventures Platform - Civic Innovation Lab
Lagos	- Zone Tech Park - MEST Incubator Lagos - Africa Fintech Foundry - Nest Innovation Technology Park
Kano	- Blue Sapphire Hub - Technology Business Incubation Centre

Source: Avasant Research.

The state of competition: Understanding the landscape

Broad spectrum of local and international players

The service provider landscape in Nigeria encompasses a broad spectrum of players in terms of the size of firms, maturity of operations and technicality of services offered. Nigeria hosts providers with local, regional and international operations serving local, regional and international clients.

Some highlights of the service provider landscape are described below:

- **Key locations**: Providers mainly operate out of major cities, namely, Abuja and Lagos. They also operate in Enugu, Ibadan and Port Harcourt.
- **Service providers grew in number as the Government prioritized the sector**. Many players were established in the past 15 years amid a move to develop the sector by crafting the National Outsourcing Policy and Framework (2007) and the National ICT Policy (2012) and setting up the Nigeria Association of Information Technology Enabled Outsourcing Companies in 2012.
- **Providers have improved service offerings to enhance competitiveness**. Some companies that operated before the sector became a government focus have modified their service offerings to meet market demand and become more competitive. For example, Chams Plc., which has been in Nigeria since 1992, shifted its offerings from computer and hardware maintenance to providing technology solutions for identity management and transaction payments to public and private sector institutions.[44]
- **Bigger, international firms offer more complex services**. Providers range in size from fewer than 50 workers to more than 2,000. Many fall in the 100–500 range. The larger operations are international firms offering more complex services with a combination of information technology and knowledge process outsourcing.

44 www.chamsplc.com/about–us/

This includes Wipro, a global IT consulting and outsourcing company with 150,000 employees around the world. In Africa, Wipro offers services with digital solutions such as digital security, analytics, 'big data', artificial intelligence, business application services (Oracle and SAP, Microsoft, IBM, CA Africa), cloud, mobility, internet of things and cloud information services.[45]

Other international players include BCX Networks. It has fewer employees than Wipro, yet offers more sophisticated IT and knowledge process outsourcing services, including digital transformation and cloud consulting.

- **SMEs focus on business process outsourcing and call centre services**. Some, such as Outsource Global and iNterra Networks, aim for higher value and more complex services such as software development. Nigerian IT companies typically offer data centre and infrastructure hosting, computing and storage solutions, and managed services.

The following table describes the main services offered and industries served by some of the leading service providers in Nigeria. International companies are highlighted in blue.

Table 11 Providers offer a range of services

Service provider	Headcount Location	Examples of services offered	Industries served
BCX BCX Networks Ltd	100+ Lagos Abuja Port Harcourt	Digital transformation, cloud consulting, managed infrastructure and cloud services, internet of things/operational technology services, business process as a service, application management, integrated field services, customer-first servicing	Mining and energy, financial services, retail
Chams Chams Plc.	Lagos	Computer-based e-testing platform, training and lease of space for training, call centre/contact centre service	Government, financial services, education
ConSol ConSol	250+ Lagos	Contact centre services, technical support and help desk services, data centre and infrastructure hosting, consulting services in the following areas: ▪ contact centre/business process outsourcing ▪ enterprise solutions ▪ data centre & infrastructure sharing ▪ human resources ▪ training & certification	Fast-moving consumer goods, IT financial services, government, retail, logistics, healthcare, utilities, real estate, education, telecommunications
dimension data Dimension Data	Lagos	Consulting services, cloud services, managed services, support services, technical services	Financial services, energy and utilities, healthcare, fast-moving consumer goods

45 www.wipro.com/en–africa/wipro–in–africa/

ICS Outsourcing	Lagos	Recruitment, people management, facility management, fleet management, background checks, digital marketing, IT outsourcing, corporate learning solutions, payroll outsourcing	Retail, financial services, oil and gas, food processing
iNterra Networks	100+ Abuja Enugu Lagos	Contact centre solutions, call centre as a service, software development, business process outsourcing, support and maintenance, network infrastructure, security solutions, business automation solutions, digital marketing, consulting/professional services, capacity development	Financial services, government, education, healthcare, technology, cosmetic, utilities
Invent Alliance Ltd	< 20 Lagos	Digital telemarketing, sales lead generation, business awareness service, contract publishing, industry map publishing, digital content media	
iSON Xperiences	2,500 Ibadan	Inbound customer service, inbound-dealer help desk, outbound sales, back office, showroom staff deployment and management, social media care, data cleanup services	Telecommunications
Galaxy Backbone	150 Abuja Kano Enugu Lagos	Operates the national shared services centre, the only uptime institute certified Tier III data centre in Nigerian public sector. Data centre services, optical fibre backbone	Government
Knight and Bishop Consultancy	Lagos	Business support services, human resource management, project management, training	Edutech, agriculture, energy, financial services, fast-moving consumer goods, real estate, entertainment
Outcess	350 Lagos Abuja	Contact centre outsourcing, managed services, contact centre as a service, marketing and sales automation	
Outsource Global	850+ Abuja	Software development, data training, image tagging, remote sales and back-office outsourcing, human resource management, market research	Fast-moving consumer goods, IT, financial services, government, telecommunications, manufacturing

Outsource Nigeria	Lagos	Human resources services, recruiting, sales team outsourcing, sales co-sourcing, payroll management, IT support, business intelligence, developers, and operations including management and field /phone/ automated based resources	Energy, technology, advertising, travel, retail, manufacturing, healthcare, telecommunications
Resourcery Plc	350 Lagos Abuja	Business applications, computing and storage solutions, data security solutions, managed services and support, network infrastructure solutions	Financial services, real estate, energy and utilities, manufacturing, government
Rovedana	100+ Lagos	Payroll and employee management, human resources outsourcing, outsourced bookkeeping, health insurance	
Telnet	Lagos Abuja Port Harcourt	Enterprise networking, intelligent building systems, managed networks operator and vendor support, business continuity solutions	Financial services, health, oil and gas, education, government
The Outsource Company	200+ Abuja Lagos	Telemarketing, customer support, e-mail and chat support, multilingual support, lead generation, back-office support, sales qualified leads, business process outsourcing voice and non-voice	Financial services, hospitality, healthcare, real estate, telecommunications
Weco Systems	150 Lagos Abuja Port Harcourt	Infrastructure solutions, data centre and network solutions, software & enterprise applications, unified communications, enterprise resource planning and customer relationship management, cloud/managed services, integration and deployment, professional services	Financial services, energy, government, consumer goods, telecommunications
Wipro	1,200 employees supporting Africa Lagos	Business advisory services, business process transformation, business transformation services, consulting, continuous business improvement, implementations, project management, professional services, software development, upgrades	Financial services, mining, energy, utilities, telecommunications, retail

Source: Avasant Research

Service capacity and capability

Investing in human capital to fuel sector growth

Nigeria has been slow to develop human capital, largely because of underinvestment. The country ranked 152 of out 157 countries in the World Bank 2018 Human Capital Index.

Further, the country struggles with high unemployment – nearly a quarter of the population is out of work and 20% is underemployed. More than 55% of people aged 15 to 34 are either unemployed (13.1 million) or underemployed (11.3 million).[46]

The experiences of mature IT/BPM destinations such as India and the Philippines suggest that the IT/BPM industry will drive economic growth in Nigeria and alleviate the unemployment challenges faced by youth. The sector will also help the country diversify away from its oil and gas dependence

The table below looks at the availability and quality of talent in the Nigerian IT/BPM sector and outlines its scalability prospects and opportunities.

Table 12 High number of graduates boosts talent pool

Talent and skill availability	
No. of universities: 174[47]	Nigeria has 174 universities, registered by the National University Commissions. The government controls most of them and 79 are owned privately. With roughly 500,000 graduates entering the job market annually, potential IT/BPM professionals can be drawn from the large graduate pool. The availability of more than 145,000 non-technical graduates can provide for a scalable workforce for business process outsourcing operations in the country.[52] Nigeria lags behind other offshoring destinations in tertiary education enrolment. This trend could hamper its ability to expand its offshoring sector.
Annual tertiary graduates: ~ 500,000[48]	
Youth unemployment: 29.7%[49]	
Tertiary gross enrolment ratio: 9.23%[50]	
Secondary gross enrolment ratio: 42%[51]	

[46] Unemployment Rate – Nigeria National Bureau of Statistics.
[47] www.nuc.edu.ng/
[48] www.aa.com.tr/en/africa/nigerias–college–graduates–beat–unemployment/1455426
[49] www.africacheck.org/reports/is–youth–unemployment–in–nigeria–almost–getting–to–70/
[50] www.data.worldbank.org/indicator/SE.TER.ENRR?locations=GH–NG–KE
[51] www.data.worldbank.org/indicator/SE.SEC.ENRR?locations=NG&view=chart
[52] Avasant Research.

Quality and employability of talent

Quality of vocational training: Ranks 139th of 141 countries Skillset of graduates: Ranks 139th of 141 countries Labour force with advanced education: 74% Ease of finding skilled employees: Ranks 97th of 141 countries Digital skills in active population: Ranks 122nd of 141 countries Literacy[53] • Youth literacy: 75% • Adult literacy: 62% Language proficiency: High English-speaking capability	The quality and availability of technical and vocational training, particularly in information technology, have room to improve. Nigeria ranked 139th on the World Economic Forum Global Competitiveness Index (skillset of graduates). However, the country ranked higher (97th) on the ease of finding skilled employees. This is due to the abundance of labour amid high unemployment and underemployment, which means many skilled employees are likely seeking better job opportunities. In terms of adult literacy, Nigeria ranks ahead of many countries competing for a share of the offshore services market. Male literacy is at 75% and female literacy is at 60%. More than 60% of the graduates have usable English language skills for international contact centres.[54] Further, because of its large English-speaking population, Nigeria is well positioned in terms of language.

Scalability

The large pool of tertiary graduates, combined with high unemployment rates, means there are prospects for IT/BPM operations to scale. However, adequate training mechanisms are needed to supplement the skills of these graduates and enable them to perform effectively.

Efforts have been made to strengthen the ICT talent pool in Nigeria. These include:

- **ACCESS –** Nigeria (Assessment of Core Competence for Employability in the Services Sector) supports the building of a human capital base for Nigeria to compete in fast-growing areas, particularly the service sectors and ICT. The programme seeks to boost employability and job creation by focusing on these high-potential sectors.
- **BPO Academy Nigeria –** Business process outsourcing training organization and consulting firm. This is the only touchpoint in Nigeria for attaining the prestigious Outsourcing Standards and Certifications Institute (business process outsourcing) certifications.

53 www.data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=NG
54 Avasant Research.

ICT infrastructure

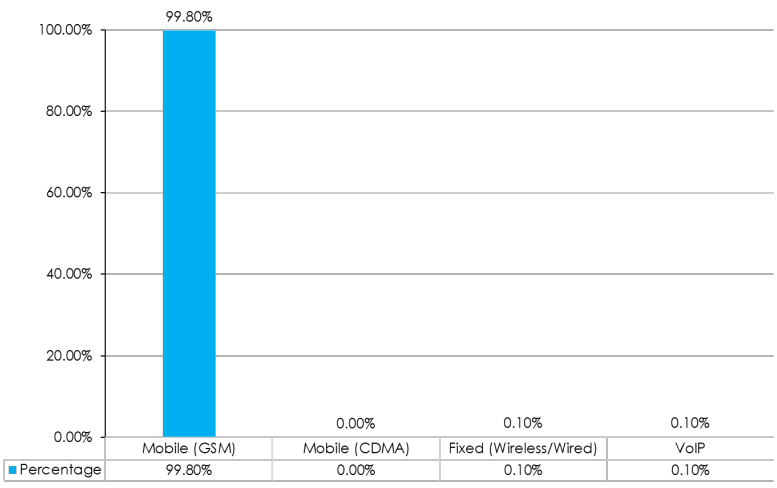
Government targets infrastructure improvements

Nigeria is of one of the biggest ICT markets in Africa, accounting for 82% of the continent's telecom subscribers and 29% of the internet usage.[55] Like much of the region, however, the country still faces challenges in terms of infrastructure availability and stability.

The Government has worked steadily to improve the ICT infrastructure through initiatives such as the National Information and Communication Technology Policy (2012), the National Broadband Policy (2013–2018) and the Smart Nigeria Digital Economy Project.

The table below highlights the current state of the ICT infrastructure in Nigeria.

Table 13 Most internet traffic comes from mobile devices

Telecom
• Fixed telephone subscriptions (per 100 people) – 0.072 • Mobile cellular subscriptions (per 100 people) – 88.1
Nigeria is among the leading mobile telecommununications markets in Africa in terms of subscriber base, teledensity and inflow of foreign direct investment, according to the Nigerian Communications Commission. Annual investment in the telecoms industry exceeds $70 billion. The sector contributed 9.2% to GDP in the third quarter of 2019.[56] The country is also one of the most mobilized in the world, with 81% of its internet traffic coming from mobile devices.[57] **Market share by technology (November 2019)**    Telecommunication in Nigeria is rapidly growing. Organizations still typically maintain a backup to enable smooth operations. In spite of recent growth in fibre installations, mobile systems remain the primary means for carrying retail and enterprise data traffic.

Source: Nigerial Communications Commission.

[55] www.export.gov/article?id=Nigeria–Information–and–Communications–Technology
[56] www.ncc.gov.ng/stakeholder/statistics–reports/industry–overview#view–graphs–tables–8
[57] www.aanoip.org/a–probe–into–the–expensive–cost–mobile–data–nigeria/

Broadband/Bandwidth

- Fixed broadband subscriptions (per 100 people) – 0.038
- Active mobile broadband subscriptions (per 100 people) – 21.8
- People using the internet (% of population) – 42%
- International internet bandwidth per user (kilobits per second) – 112.56
- % of households with internet access – 15.23%

Fixed broadband penetration, like fixed telephone subscriptions, is low in Nigeria. The household penetration rate was 0.04% at the end of 2018, below both the regional average (0.6%) and the world average (13.6%). This is because most investment in Nigeria is in major urban areas and intercity routes. Mobile broadband has become the most popular way for people access the internet because the connection is relatively fast and reliable.

Over the years, the Government has worked to improve connectivity by supporting the deployment of undersea fibre-optic cables and enhancing market conditions. These efforts have resulted in higher speed and lower consumer prices.[58]

Nigeria ranks 44th of 230 countries on mobile data affordability (based on the worldwide mobile data pricing by Cable.co.uk). The average cost of 1 gigabyte of data is $2.22 on a 30-day plan.[59] Nigeria ranks 149th of 195 countries on broadband costs, with the average monthly cost $84.16.

Power

- Electric power consumption (kWh per capita) – 144.5
- **Generation capacity**
  - Installed capacity – 12,522 (MW)
- **Connections**
  - Current access rate – 45%
- Quality of electricity supply – Ranks 94th of 141 countries

Although Nigeria is the largest economy in sub-Saharan Africa, limitations in the power sector growth.[60] This poses a significant challenge for the country. Reliable electricity is a prerequisite for BPM firms, many of which operate 24 hours a day to respond to international clients. The Oxford Business Group found that the erratic power supply leads to high overheads, as firms instead rely on their own diesel generators.[61]

Cost of electricity[62]

	Cost ($) household, kWh	Cost ($) business, kWh
Nigeria	0.07	0.11
World average	0.15	0.13

[58] www.expat.com/en/guide/africa/nigeria/15628–phones–and–internet–in–nigeria.html
[59] www.cable.co.uk/mobiles/worldwide–data–pricing/
[60] www.legit.ng/1170127–poor–power–supply–nigeria–reason.html#1170127
[61] www.oxfordbusinessgroup.com/analysis/outsourcing–services–nigerias–it–sector
[62] www.globalpetrolprices.com/Nigeria/electricity_prices/

Government incentives and policies

Policies are designed to promote outsourcing

The Government of Nigeria launched a National Outsourcing Policy and Institutional Framework in 2007 to develop the outsourcing industry and position it as a major West African IT-enabled outsourcing hub. Since then, the public sector has worked to develop and promote IT/BPM in Nigeria. Initiatives include:

- Establishing the Nigeria Association of Information Technology Enabled Outsourcing Companies, a non-profit organization that promotes professionalism and standards in the outsourcing industry.
- Developing a national ICT policy to transform Nigeria into a knowledge-based economy.[63] The policy laid out objectives to upgrade domestic outsourcing, such as financing ICT infrastructure development, promoting education and training youth and the ICT workforce, and providing tax and other incentives to private firms that are active in the industry.
- Funding the Abuja Technology Village Project and the Smart States Initiative to enhance the offshoring industry infrastructure.

What incentives support business development?

- The income tax rate for all sectors except petroleum is 30%. The IT/BPM sector has pioneer status, which grants a seven-year tax holiday so ICT firms can make a sufficient profit in their early years.
- Tax relief on research and development. Up to 120% of expenses for research and development are tax deductible, as long as these activities are carried out in Nigeria and pertain to the business from which income or profit is derived.
- Foreign investors can repatriate their profits and dividends net of taxes through an authorized dealer in freely convertible currency.

Business registration procedure

- Reserve a unique company name at the Corporate Affairs Commission.
- Prepare the requisite incorporation documents and pay the stamp duty.
- Notarize the declaration of compliance with the Companies and Allied Manners Act.
- Register at the Corporate Affairs Commission and pay the fees at the commission bank desk.
- Register for income tax and VAT at the Federal Board of Inland Revenue Department of the Ministry of Finance.
- Register for personal income tax (pay-as-you-earn system) at the state tax office.
- The cost to register a business name is about 15,000 Nigeria naira ($39), plus a 5,750-naira legal fee. The process typically takes 14 working days, though technical inefficiencies could delay this by an additional 5–10 working days.
- Incorporating a business takes 15–20 working days, with a minimum fee of 27,500 naira.
- It is advisable not to hire a lawyer as it typically does not speed up the process, which is well defined by the Corporate Affairs Commission and easy to follow.

[63] https://nitda.gov.ng/wp–content/uploads/2018/07/National–ICT–Policy1.pdf

What is the focus of tech policy in Nigeria?

Many public institutions and agencies administer the Nigerian ICT sector. The most prominent include:

- Federal Ministry of Communication Technology, which oversees top-level development and policy planning;
- Nigerian Communications Commission, the federal telecom regulator;
- Nigerian IT Development Agency, which handles research, policy standardization and the coordination of IT-related development programmes.

The Nigeria Association of Information Technology Enabled Outsourcing Companies has drafted bylaws for outsourcing companies. These are described below.

Table 14 Business visas are easily obtained

Legal and regulatory policies	Outsourcing regulations defined by the Nigeria Association of Information Technology Enabled Outsourcing Companies.[64] • The constitution and bylaws of the Nigeria Association of Information Technology Enabled Outsourcing Companies • Code of ethics for members of the National Association of Information Technology Enabled Outsourcing Companies.
Labour laws	• The Government raised the minimum monthly wage to to 30,000 naira in April 2019. Any employer with at least 50 workers must pay the minimum wage, defined as the total compensation payable to a worker. • All employees and trade unions in both the public and private sectors can adjust the total remuneration packages through collective bargaining. The remuneration agreed requires the approval of the federal minister of employment, labour and productivity.
Visa and immigration policies	• Business visas are available for executives and investors going to Nigeria for business meetings/discussions (fee: $253). • Visas can be easily obtained from any Nigerian mission abroad with a validity of 90 days (extendable). They are not valid for employment. • Temporary work permits are allowed for specialized skills. • A presidential executive order prohibits the Ministry of Interior from giving visas to foreign workers whose skills are readily available in the domestic labour force.[65]
Cybersecurity and data privacy regulations	Regulated through the Nigeria Data Protection Regulation 2019.[66] Objectives are: • safeguarding the rights of natural persons to data privacy; • fostering safe conduct for transactions involving the exchange of personal data; • preventing manipulation of personal data; and • ensuring that Nigerian businesses remain competitive in international trade through the safeguards afforded by a just and equitable legal regulatory framework on data protection that is in tune with best practice.

[64] https://www.naiteoc.ng/publications/
[65] www.unctad.org/en/PublicationsLibrary/wir2019_en.pdf
[66] www.nitda.gov.ng/wp–content/uploads/2019/01/NigeriaDataProtectionRegulation.pdf

Trade associations offer a helping hand to tech firms

Table 15 Six key associations and agencies work in the sector

Agency	Contact
Association of Outsourcing Practitioners of Nigeria	**E-mail:** info@aopn-ng.org **Website:** www.aopn-ng.org/
Nigeria Association of Information Technology Enabled Outsourcing Companies	**E-mail:** info@naiteoc.ng **Website:** www.naiteoc.ng/
National Information Technology Development Agency	**E-mail:** info@nitda.gov.ng **Website:** www.nitda.gov.ng
ACCESS – Nigeria (Assessment of Core Competence for Employability in the Services Sector)	**E-mail:** support@anjims.org.ng **Website:** www.anjims.org/
BACAN – Business Process Outsourcing Academy of Nigeria	**E-mail:** info@bpoacademynigeria.com **Website:** http://bpoacademynigeria.com/
Nigerian Investment Promotion Commission	**E-mail:** nipc@nipc.gov.ng **Website:** www.nipc.gov.ng

Growing market segments

Healthcare, trade and retail, and financial services

IT/BPM providers serve a variety of sectors, including government, telecommunications, financial services, energy and utilities, manufacturing, healthcare, education, logistics, tourism and hospitality, retail and food processing. Before deciding to operate or establish in a country, however, providers must identify industry verticals with high growth potential. This will ensure that there is a demand for their services and safeguard the sustainability and scalability of operations.

After examining the size of Nigerian economic sectors, as well as growth trends, three important market segments were identified.

Table 16 Three fast-growing sectors show outsourcing potential

Healthcare	
Size of industry: ~ $1.3 billion Contribution to GDP: 1% Growth rate: 0.02%	• Increasing government prioritization with healthcare expenditure predicted to reach 5.76 billion naira by 2021, growing at a CAGR of 8.35% year-over-year. This is up from an estimated 5.32 billion naira in 2020. By 2021, healthcare spending is estimated to make up 2.94% of GDP.[67] • Development of the National Health ICT Strategic Framework 2015–2020.[68] • Emergence of health techs that are helping medical institutions store patient information electronically. The objective is for digitization to help hospitals manage their records.This will be vital to facilitating information sharing between hospitals, a necessary step to prevent outbreaks of infectious diseases.
Trade and retail	
Size of industry: ~$31 billion Contribution to GDP: 16%[69] Growth rate: 3%	• The demographics of Nigeria, being the most populous country in Africa with a growing youth population, position its retail sector for strong growth. • The country is one of the most attractive retail investment destinations in Africa for local and foreign investors.[70] • It frequently features in AT Kearney's Global Retail Development Index, ranking 27th in 2017 and 19th in 2016.[71] • Increased smartphone penetration. As one of the most mobilized countries in the world, growing incomes and expanding consumer power are driving growth of the retail industry and e-commerce.
Financial services	
Size of industry: ~ $5 billion	• The fintech ecosystem comprises 210–250 fintechs, three stakeholders, four enablers and funding partners that have invested more than $250 million since 2014.[72]

[67] www.medicwestafrica.com/content/dam/Informa/medic–west–africa/english/2019/HealthcareInsights.pdf
[68] www.uspf.gov.ng/images/files–temp/National_Health_ICT_Strategic_Framework2015–2020–DRAFT.pdf
[69] www.thenationonlineng.net/making–retail–industry–next–growth–frontier/
[70] www.oxfordbusinessgroup.com/nigeria–2019/retail
[71] www.kearney.com/global–retail–development–index/previous–indexes
[72] www.efina.org.ng/wp–content/uploads/2019/04/EFInA–FinTech–Report–Global–and–Nigeria–Landscape.pdf

Contribution to GDP: 3% Growth rate: 1%	• Key drivers of growth: - campaign for financial inclusion, with the financial inclusion target set by the Central Bank of Nigeria of 80% by 2020; - growing smartphone penetration, with a penetration rate of 20%; - surge in e-commerce activity; - government intervention establishing innovation hubs; - regulatory impact from the introduction of the payment services initiative.

Market access opportunities

Heathcare, retail and financial services show the most promise

The trends seen in the growing market segments showcase the sectors that are likely to drive demand for IT/BPM services in Nigeria: healthcare, retail and financial services. The following table identifies market access opportunities and potential service areas in these three sectors.

Table 17 Three sectors offer different opportunities

Industry	Service area	Description
Healthcare	Digital health solutions	Although there is a large underserved population in Nigeria, penetration of mobile phones is fueling growth. The National Health ICT Strategic Framework says using health ICTs to achieve universal health coverage will produce the following benefits: • Increased uptake of health services through the effective use of mobile messaging and cash transfer incentives to create demand; • Better access to health services through the effective use of telemedicine and other technologies for health worker training and support; • Improved coverage of health services through the effective use; • Human resource management information systems, national health management information system and logistic management information system to track demand and supply of health services and commodities. Some of the key opportunities include: • Telemedicine • Electronic medical records • Insurance registration and claims systems • Mobile health solutions

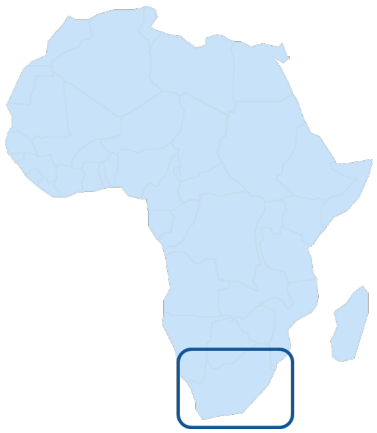
Retail	Supply chain solutions
	
	E-commerce solutions
	
	Digital and content-related services
		• The growth of retail means supply-chain solutions can also be provided in the areas of:
		  ○ sales and after-sales support;
		  ○ help desks and customer care;
		  ○ complaint resolution;
		  ○ inventory management;
		  ○ order fulfillment and logistics management.
		• Leveraging the increasing rate of mobilization in Nigeria, digital marketing also provides an opportunity for providers.
		• E-commerce is emerging as an area with strong growth potential. According to management consulting firm McKinsey, African online sales will reach $75 billion by 2025, with the Nigerian industry expected to be worth $10 billion by that year.
		• A PayPal survey found that 65% of Nigerian internet users already shop online, while a further 24% are expected to do so in the future.
		• E-commerce regulations protect investors in this area. In 2015, the Government signed the cybercrime bill into law to prohibit and prevent fraud in electronic commerce. The goal is to protect e-business transactions, company copyrights, domain names and other electronic signatures in relation to electronic transactions in Nigeria.

Financial services	Mobile remittances
	
	Finance and accounting outsourcing; finance and accounting shared service centres
	
	Insurance
	Banking solutions
	• Digital payments
	• Peer-to-peer lending
	• Personal finance
		• The financial services sector is a common market for outsourcing in Nigeria. This indicates a more competitive landscape than in other underserved sectors (or sectors that spend little on outsourced services).
		• The presence of major international and local financial institutions such as Citibank and Ecobank is ideal for finance and accounting outsourcing and finance and accounting shared service centre offerings. This will also enable providers that may not have a highly technological service capability to tap into the sector for services including:
		  ○ contact centre services;
		  ○ general accounting;
		  ○ accounts receivable/ accounts payable;
		  ○ invoice processing and help desk;
		  ○ procurement.
		• Providers typically offer traditional voice and non-voice services. However, the increasing push to develop fintech presents new opportunities for providers that can offer a portfolio of higher value digital services.

South Africa

The African BPM leader and economic gateway to exploring Africa

Macroeconomic and country data



Capitals: **Pretoria** (executive), **Cape Town** (legislative), **Bloemfontein** (judicial)

GDP: $368.2 billion

GDP per capita: $6,374

Real GDP growth rate: 0.8%

Inflation rate: 4.5%

Population: 59 million
- 0–14 years: 28.8%
- 15–24 years: 16.6%
- Population growth rate: 1.2%

Major business sectors: Oil, agriculture, telecommunication, manufacturing, finance

Unemployment rate: 29.1%

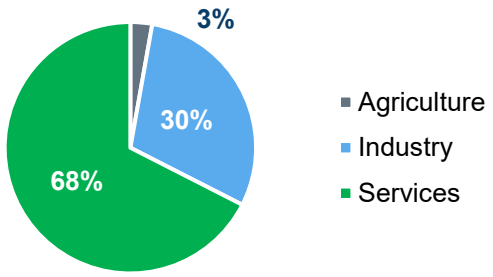
Literacy rate: 87%

Urbanization: 66.3%

Major trade and industry associations:
- Business Process Enabling South Africa
- Trade and Investment South Africa
- InvestSA

Sources: World Bank, Avasant Research.

Gross domestic product composition



Key facts

Currency: South African rand (ZAR)

Exchange rate (per $): ZAR 14.74

Foreign direct investment inflow: $5.5 billion

Major languages: Zulu, Xhosa, Afrikaans, English, Northern Sotho

Major religions: Christianity

Major exports: Mineral products, precious metals, petroleum products, vehicles and machinery

Country highlights

Blessed with abundant natural resources, South Africa is an emerging middle-income market that has made rapid strides in urbanization.

The political transition of South Africa is known as one of the most remarkable political feats of the past century. A parliamentary democracy, South Africa has leapfrogged and established itself as the business process outsourcing powerhouse of Africa and a gateway to the continent.

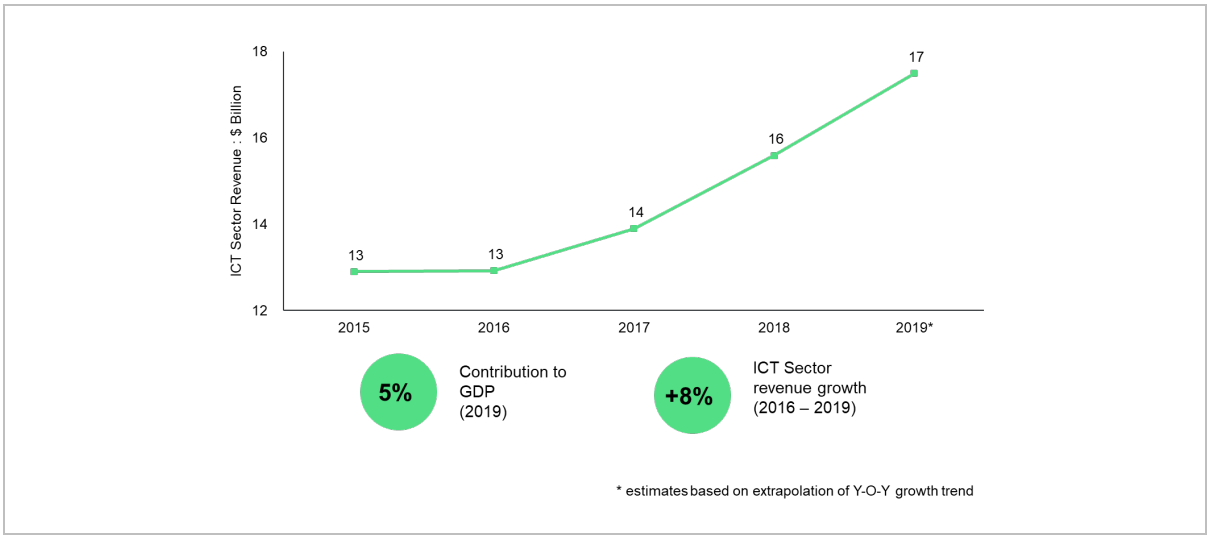
Nicknamed the 'rainbow nation', South Africa is a popular destination for expatriates due to its wholesome blend of cultures.

Information and communications technology landscape

Tech sector is a major job market for youth

ICT is a major driver of economic growth in South Africa. Amid a growing unemployment rate, the sector has been a major job market for South African youth. Revenue from ICT rose 8% on a year average over 2016–2019, with the highest annual growth (12%) in 2017–2018.[73]

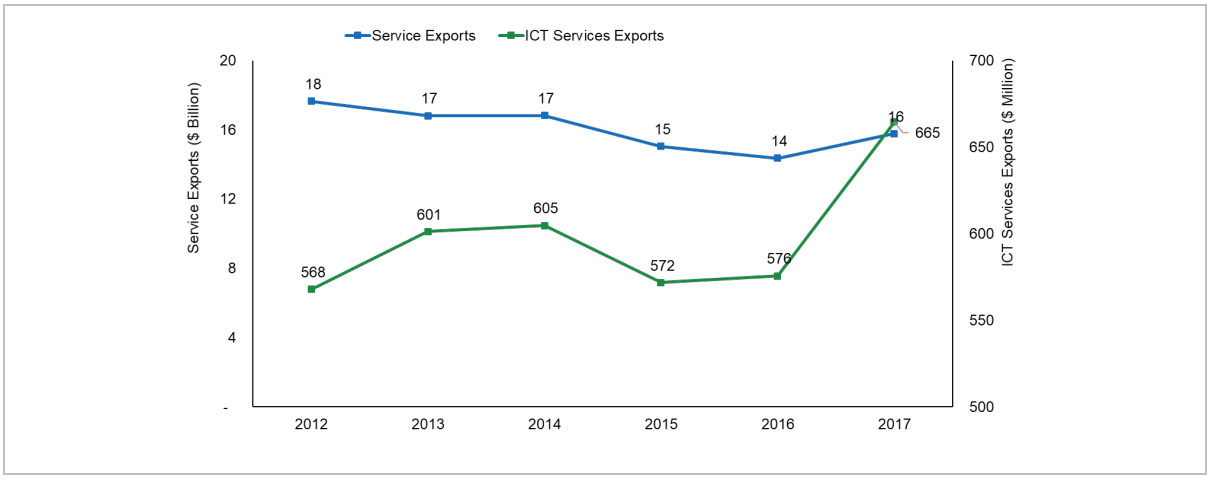
Figure 4 Revenue steadily increases



Sources: The Independent Communications Authority of South Africa, Avasant Research.

In 2017, South Africa exported $664 million in ICT services – a measure of IT/BPM services[74] – accounting for 4.2% of total service exports. Although exports of ICT services declined 5% in 2015, they have increased 15% a year since 2016, underscoring the growing importance of IT/BPM to the economy.

Figure 5 ICT exports outperformed service exports in 2016–2017



Source: World Bank.

[73] www.icasa.org.za/pages/sector–forecasting
[74] www.data.worldbank.org/indicator/BX.GSR.CCIS.ZS

Why is the South African technology sector appealing?

Attractiveness factors	Main highlights
Multilingual capabilities Large talent pool with proficiency in French, Italian, German and Dutch	**Workforce:** ~ 47,300[77]
Native English talent with 16.5 million English speakers	**Entry-level salary (monthly):** ~ $650–$900[78]
Young workforce with more than 17.6 million people between 18 and 35 years of age and more than 50,000 IT and engineering degree holders available to hire each year at entry level[75]	**Main IT/BPM service offerings:** Contact centre services, non-voice business process services, legal process services, quality multichannel customer services, customer analytics services, IT infrastructure and application development
Cost arbitrage with an average of 40%–50% operating cost savings compared to Tier-2 cities in the United Kingdom and United States[76]	**Key industries served:** Financial services, telecommunications, healthcare, retail, broadcasting
Strong government focus demonstrated through incentives for long-term job creation in the technology and digital domain	**Major markets served:** United Kingdom, United States and Australia
	Examples of buyers:
	Key IT/BPM associations and agencies: • Business Process Enabling South Africa • The Information Technology Association of South Africa • Institute of Information Technology Professionals South Africa

[75] Business Process Enabling South Africa.
[76] Avasant Research.
[77] https://www.bpesa.org.za/index.php/invest-in-south-africa/useful-documents.html
[78] Avasant Research.

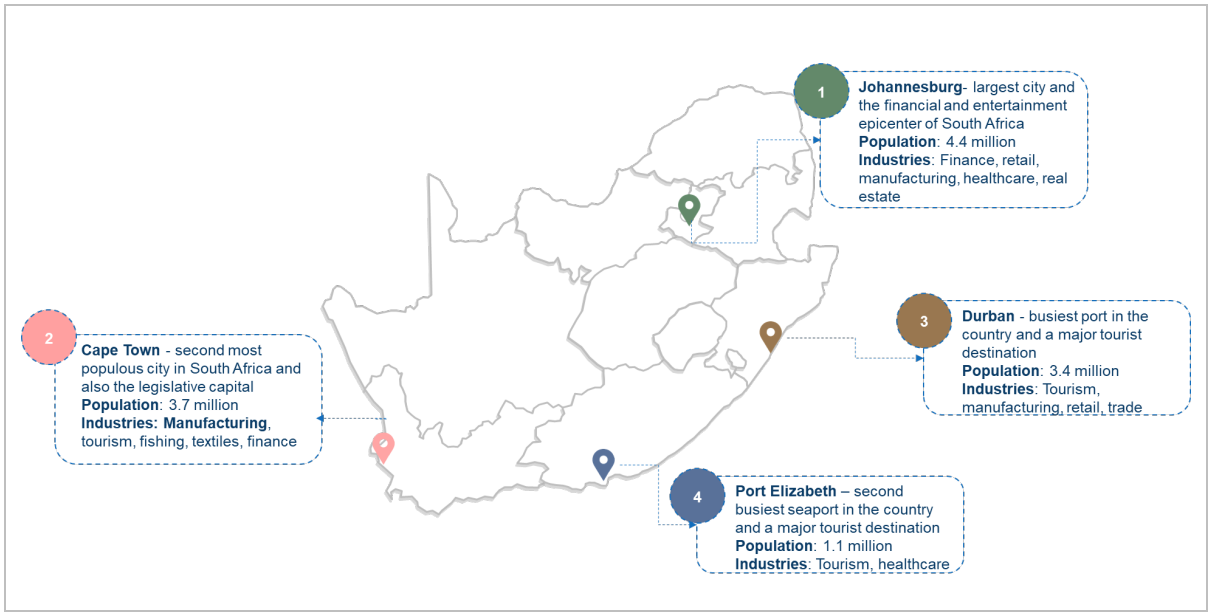
Key cities and technology centres

Tech firms are concentrated in Johannesburg, Cape Town and Durban

Six cities in South Africa have a population of one million or more people.[79] Johannesburg is the largest, with 4.4 million people. According to World Population Review, South Africa grows 1%–2% a year.[80]

The figure below highlights the South African cities with the most active IT/BPM enabling environment.

Figure 6 Biggest cities and seaports have favourable conditions for tech



Source: Avasant Research

South Africa is home to the second most valuable tech ecosystem in Africa. The Western Cape and Gauteng provinces form the core of the South African technology and innovation scene.

[79] https://www.worldatlas.com/articles/biggest-cities-in-south-africa.html
[80] https://worldpopulationreview.com/countries/south-africa-population/

Table 18 Hubs, tech parks and start-ups are spread around different cities

City	ICT hubs/tech parks/start-up hubs
Johannesburg	• Impact Hub • Jozihub • Alphacode
Durban	• Durban Technology Hub • InvoTECH • SmartXchange
Cape Town	• The UK-South Africa Tech Hub • Silicon Cape • Impact Amplifier • Code Bridge • Cape Innovation and Technology Initiative • RLabs • Startup 90
Other Cities	• The Innovation Hub, Pretoria • BPO Park at Coega Industrial Development Zone, Port Elizabeth • Tshwane BPO Park, Tshwane • Eastern Cape Information Technology Initiative, East London • Technopark Stellenbosch, Stellenbosch • Highveld Techno Park, Centurion • Softstart Business and Technology Incubator, Midrand • mLab Southern Africa, Pretoria • Fablab (multiple cities)

Source: Avasant Research.

The state of competition: Understanding the landscape

Highly competitive market with expertise in outsourcing and call centre services

The service provider landscape in South Africa encompasses a broad spectrum of players primarily offering contact centre and other BPM services. There are a few IT and software service firms as well, though this segment is less competitive. IT companies typically offer data centre and infrastructure hosting, computing and storage solutions, and managed services. There is a mix of service providers, with local, regional and international operations serving local, regional and international clients.

Some highlights of the service provider landscape are described below:

- **Key locations**: Providers mainly operate out of major cities, namely, Johannesburg, Cape Town, Durban and Port Elizabeth.
- **Highly competitive and growing services market.** The BPM industry has grown ~22% annually over the past four years. This is double the growth rate of the global industry, and three times faster than India and the Philippines.
- **Deep expertise in BPM and call centre services.** South Africa is the BPM service leader and favoured African destination. The sector is mature, and providers are now transitioning to

omnichannel contact centres, offering add-on services such as customer analytics and insights in addition to traditional contact centre services. Global contact centre standard ISO 18295 are based on South African standards (South Africa led the global standard development).

- **Specialized services**: Service providers have capabilities and expertise in niche areas including legal process outsourcing, social media customer analytics and automation.

The following table describes the main services offered and industries served by some of the leading service providers in South Africa. International companies are highlighted in blue.

Table 19 Providers offer a range of services

Service provider	Headcount Locations	Examples of services offered	Industries served
AdaptIT	1,000	IT services and specialized solutions, business intelligence, enterprise resource planning, software maintenance, back-office operations	Manufacturing, financial services, education, energy and utilities
EOH	1,000 Johannesburg	IT managed services, contact centre	Financial services, telecom, manufacturing and logistics, mining, energy, retail, public sector utilities, healthcare
HCL	Cape Town, Sandton	Application development and maintenance, infrastructure services, help desk and customer support services	Insurance, banking, entertainment, healthcare, retail, telecommunication, travel and hospitality
WNS	4,000 Cape Town, Durban, Centurion, Port Elizabeth	Customer contact centre services, finance and accounting services, research and analytics services, human resource services, legal process services, transformation solutions, procurement solutions, risk management solutions	Financial services, utilities and energy, telecom, fast-moving consumer goods, media and entertainment, travel and leisure, online retail, ICT
Altron	2,800 Midrand	Customer engagement solutions, outsourced learning solutions, enterprise application support, managed services, software development, end-user computing services	
Dimension Data	15,000 Johannesburg	Software design and deployment services, managed services for applications and infrastructure, cloud and hosting services, omnichannel customer support	Financial services, mining, telecommunication, energy, utilities, retail
TBS Global	250 Pietermaritzburg	Call centre, back-office solutions – multichannel support, content management	Finance, telecommunication, logistics

Indox PTY Ltd	250 Cape Town	Non-voice BPM/back-office services – professional document collection and BPM services	-
Integreon	5,000 Johannesburg	Non-voice BPM/back-office services – legal, document, business and research support solutions to leading law firms, corporate legal departments, financial institutions	Retail, healthcare, finance, legal
Outworx Contact Centre	500 Durban	Financial services, customer services, inbound sales, front office, legal process outsourcing, debt collection, outbound sales, back office, lead generation	Utilities, insurance, retail, telecommunication
SA Commercial	250 Cape Town	BPM contact centre and financial services	Banking, insurance
Boomerang Marketing Solutions	250 Wynberg	Contact centre, telemarketing and telesales, lead generation and appointment setting	Insurance, hospitality, tourism, utilities, telecom
Coracall	400 Durban	Outbound offshore contact centre specializing in sales campaigns	Telecommunications, energy and financial services sectors
3iSolutions	250 Cape Town	Lead generation and customer management solutions, consumer support, business support, tailored solutions	-
iContact	250 Cape Town	Customer care, technical support, customer acquisition, analytics, and a range of other BPM services.	Insurance, banking, entertainment, healthcare, retail, telecom, travel and hospitality
Stellar BPO	5,000 Cape Town	Omnichannel customer management, credit management, self-service interactive voice response, customer insights, outbound sales and service, web chat, workflow management, recruitment services, knowledge management	-
MPC Connect	2,000 Johannesburg	Shared and managed services, back-office operations, technology support	Real estate, retail, education, electronics

wiGroup 	100 Cape Town	Mobile transaction solutions, business information systems, information technology, loyalty programmes, mobile, mobile apps, software	Retail, e-commerce, insurance, banking, hospitality
Cipherwave 	200 Johannesburg	Cloud services including disaster recovery as a service, backup as a service, cloud connect, Office 365, hosted PBX	Logistics, manufacturing, retail, legal, healthcare, media, financial services

Source: Avasant Research.

Service capacity and capability

High youth unemployment and large graduate pool can boost technical skills

South Africa, one of the most developed countries in sub-Saharan Africa, is ranked 126 of 157 countries in the World Bank 2018 Human Capital Index. Although the country has made significant investments in education (6% of GDP), healthcare (8% of GDP) and social assistance (5% of GDP), this has not resulted in a corresponding improvement in the Human Capital Index. This is further compounded as the country grapples with its highest youth (ages 15–24) unemployment rates in a decade.[81]

The table below looks at the availability and quality of talent in the South African IT/BPM sector and outlines its scalability prospects and opportunities.

Table 20 Tech sector can draw from large pool of new graduates

Talent and skill availability	
No. of public universities: 26[82]	In 2004, South Africa reformed the higher education system by consolidating its smaller public universities into large institutions. Today, there are 26 public universities categorized as: Traditional universities – offering theoretically oriented university degrees Technikons – technology universities offering vocational diplomas and degrees Comprehensive universities – offering a combination of both types of qualification With 13,000 postgraduates and 50,000–60,000 graduates holding technical degrees entering the job market every year, potential IT/BPM professionals can be drawn from the large pool of fresh graduates. Additionally, there is a regular annual influx of non-technical graduates in domains such as legal (more than 7,000) and actuaries (more than 2,500). These graduates can be hired in high-value niche domain services including legal process outsourcing and financial services.[87]
Annual tertiary graduates: ~ 200,000[83]	
Youth unemployment: 55.2%[84]	
Unemployment rate among graduates: 31%[85]	
Tertiary gross enrolment ratio: 22%[86]	

[81] https://data.worldbank.org/indicator/SL.UEM.1524.NE.ZS
[82] https://www.usaf.ac.za/public–universities–in–south–africa/
[83] http://www.statssa.gov.za/publications/Report–92–01–05/Report–92–01–052017.pdf
[84] http://www.statssa.gov.za/?p=12121
[85] *Ibid.*
[86] https://data.worldbank.org/indicator/SE.TER.ENRR?locations=ZA
[87] Business Process Enabling South Africa.

Quality and employability of talent	
Quality of vocational training: Ranks 119th of 141 countries	In terms of adult and youth literacy, South Africa is ahead of the global average and many countries competing for a share of the offshore services market. Adult male literacy stands at 95% and adult female literacy stands at 93%.
Skillset of graduates: Ranks 102nd of 141 countries	Impact sourcing constitutes more than 25% of the global services market in South Africa. This is mainly driven by the contact centre industry, which hires many unemployed high school graduates (who qualify as impact sourcing workers).
Ease of finding skilled employees: Ranks 98th of 141 countries	Based on the WEF Global Competitiveness Index, South Africa performs slightly below average on training and skill development, ranking 60 out of 141 countries. The scoring, on a scale of 1 to 7, assesses how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well.
Digital skills in active population: Ranks 126th of 141 countries	The country scored 3.5 on the Global Competitiveness Index, signaling that improvements are needed in the quality and availability of technical and vocational training – particularly in information technology.
Literacy[88] • Youth literacy: 99% • Adult literacy: 94%	The country performs just above average in terms of the skillset of graduates, scoring 3.7 (out of 7) on the extent to which university graduates have the skills that businesses need. On the ease of finding skilled employees, the country scored 3.9.
Language proficiency: High English-speaking capability; multilingual capabilities in French, Italian, German and Dutch	These scores illustrate that there are gaps in the training, upskilling and quality of graduates entering the job market.

Scalability

The combination of a large pool of tertiary graduates and high unemployment rates means there are prospects for IT/BPM operations to scale. However, there must be adequate training mechanisms to supplement the skills of these graduates and enable them to perform effectively.

Efforts have been made to strengthen the ICT talent pool in South Africa, including:

- **The Monyetla Work Readiness Programme** trains unemployed young people to prepare them for successful employment in the BPM industry. The programme aims to place 70% of the trainees in six-month employment contracts.
- **CapaCiTi tech skills and job readiness programme** seeks to contribute a steady supply of skilled employees with relevant digital skills matching the industry demands. It offers a variety of coding, technical and soft skills training programmes to unemployed youth, along with psychological and mentoring support.
- The Government promulgated the **Skills Development Act** in 1998 to develop the skills of the workforce and improve the quality of life and work prospects of South Africans. The Sector Education and Training Authority is responsible for disbursing the training levies payable by all employers.

[88] https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=NG

ICT infrastructure

Government initiatives support strong infrastructure

South Africa is a leader among African countries in terms of ICT infrastructure. Internet usage has grown exponentially due to rapid adoption of mobile phones and smart devices. Mobile phone penetration is around 153% and mobile internet accounts for 95% of internet usage.[89]

Like much of the region, however, South Africa faces challenges in terms of infrastructure availability and stability. The Government has made efforts to improve the ICT infrastructure through initiatives such as the National Broadband Policy 2013 and the National Development Plan.

The next table highlights the current state of the ICT infrastructure in South Africa.

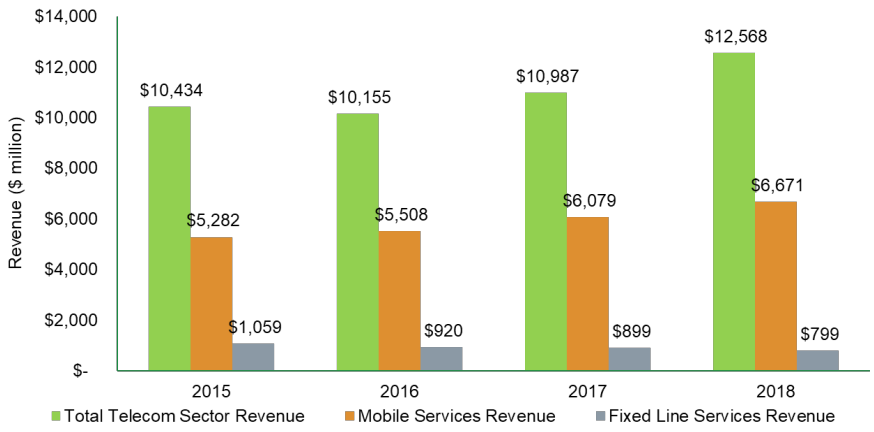
Table 21 Advanced network infrastructure pays off

Telecom
• Fixed telephone subscriptions (per 100 people) – 6.6[90] • Mobile cellular subscriptions (per 100 people) – 153[91]

Historically, the service levels and quality of fixed-line telephony in South Africa have been below par. This created an urgent need and opportunity for mobile telephony and internet.

With a combination of public and private investments and a push towards next-generation network capabilities such as long-term evolution and fibre optics, South Africa now has the most advanced network infrastructure on the continent. Its network is 99.9% digital and includes the latest in fixed-line, wireless and satellite communication. It is the only African country that has begun to pilot 5G technology. Before the COVID-19 crisis, South Africa expected to offer the first commercial 5G services in the second half of 2020.

Telecom sector revenue trends (2019)



Source: Independent Communications Authority of South Africa.

The Independent Communications Authority of South Africa, which regulates the communications, broadcasting and postal services sectors, telecommunication revenue climbed 14.4% in 2018 and has been rising steadlily for three years. This is also true of mobile services revenue, which increased

[89] WEF Global Competitiveness Index.
[90] https://www.itu.int/net4/ITU-D/idi/2017/index.html#idi2017economycard-tab&ZAF
[91] WEF Global Competitiveness Index.

9.7% in 2018. Revenue from fixed lines has been decreasing, falling 11.1% in 2018. This signals a shift towards mobile and wireless networks and telephony services.

The Government has taken significant steps to support the telecom sector. It has:

- enforced regulations to open the market and enable telephone and mobile service providers to improve network connectivity jointly;
- amended the Communications Act to attract new entrants and increase competition;
- created Broadband InfraCo, a national infrastructure company that provides cheap backbone network capacity to service providers.

These efforts have helped South Africa become one of the most mobilized countries in the world.

Broadband/Bandwidth

- Fixed broadband subscriptions (per 100 people) – 2.4
- Active mobile broadband subscriptions (per 100 people) – 76
- People using the internet (% of population) – 56.2%
- International internet bandwidth per internet user (kilobits per second) – 149.5

% of households with internet access – 61.8%

The number of fixed broadband subscriptions rose 55.2% from 3 million in 2017 to 4.7 million in 2018. Like fixed telephone subscriptions, however, fixed broadband penetration is low. The household penetration rate of 0.08% at the end of 2018 is well below both the African regional average (0.6%) and the world average (13.6%).

This is because the domestic broadband market is still recovering from an extended period of slow growth due to monopoly created by the local operator, Telkom, and its control of access to international bandwidth.

South Africa ranks 143rd of 230 countries on mobile data affordability (based on the worldwide mobile data pricing by Cable.co.uk), where the average price of 1 gigabyte of data costs $7.19 on a 30-day plan.[92] The country ranks 101st of 206 countries on the cost of broadband, with the average monthly cost $44.70.

The four main reasons mobile and fixed line broadband services in South Africa are expensive are:

- less than 2% of South Africa's land area concentrates 50% of population;
- bringing international bandwidth to the country is very costly;
- mid- and high-income areas are highly concentrated in a few urban and suburban places;
- value and population concentration make the case for infrastructure rollout very challenging, as 59% of households represent 83% of total income.

To make broadband attractive and affordable, a balanced ecosystem must be developed to leverage both fixed and mobile broadband services. In this ecosystem, fixed broadband would primarily serve the demands for high bandwidth volumes, speed, consistent performance levels, concentrated demand and affordability. Mobile broadband would complement fixed broadband to extend affordable access to sparsely distributed or mobile customers.

'South Africa Connect' is the national broadband policy and associated strategy and plan. The vision for broadband is 'a seamless information infrastructure by 2030 that will underpin a dynamic and connected vibrant information society and a knowledge economy that is more inclusive, equitable and prosperous'. Targets set for 2030 include a 100% penetration at 10 megabytes per second and 80% penetration at 100 megabytes per second.[93]

[92] https://www.cable.co.uk/mobiles/worldwide–data–pricing/
[93] Business Process Enabling South Africa.

Power

- Electric power consumption (kWh per capita) – 4,198
- **Generation capacity**
  - Installed capacity – 51,309 MW
- **Connections**
  - Current access rate – 86%
- Quality of electricity supply – Ranks 49th of 141 countries[94]

Power shortages challenge South Africa. The state power utility produces 90% of all electricity and its infrastructure needs revamping, so the country is trying to decrease its reliance on coal-based power generation.

The Ministry of Energy drafted an updated Integrated Resource Plan prescribing the energy mix to meet demand to 2030. The Government signed 27 new renewable energy projects in 2018, representing 2,130 megawatts of generation capacity.

Cost of electricity[95]

	Cost ($) household, kWh	Cost ($) business, kWh
South Africa	2.03	0.96
World average	0.15	0.13

[94] This measures the reliability of the electricity supply, including lack of interruptions and lack of voltage fluctuations. https://tcdata360.worldbank.org/indicators/h052a54f3?country=ZAF&indicator=547&viz=line_chart&years=2007,2017
[95] https://www.globalpetrolprices.com/South–Africa/electricity_prices/

Government incentives and policies

Incentives for long-term job creation in tech and digital domain

Over the last decade, South Africa has modified its economic and business policies to attract investors and promote trade and commerce. The Department of Trade and Industry has played a critical role in drawing international investments into the business process outsourcing sector. It has also supported various public/private/not-for-profit bodies and created an enabling ecosystem for the IT/BPM sector.

The key bodies in the ecosystem are:

- **Business Process Enabling South Africa** – a not-for-profit industry body and investment promotion agency. It leads industrywide initiatives including:
    - Facilitating collaboration between the private and public sector across the skill supply chain to share knowledge and work on projects to address future skill requirements;
    - Developing a skills portal that allows BPM operators and suppliers of skill development services to interact via a single platform;
    - Organizing quarterly skill forums across the country to create a networking and knowledge-sharing forum focusing on the the skill supply chain.
- **Harambee** – a not-for-profit social enterprise that partners with business, government and local talent to help meet human capital demands and tackle youth unemployment.

In June 2019, Business Process Enabing South Africa signed a five-year memorandum of association with the Department of Trade and Industry and Harambee. The memorandum is unique in that it brings government, business and a strategic social enterprise together to achieve clearly defined goals, based on initiatives that the parties collectively defined (in the Jobs Summit Framework Agreement). It also provides the engagement framework best suited to realize the full value of each partner, with clear accountability for all parties.
There has been an uptick in the number of companies hiring impact sourcing workers. This reflects the increasing number of programmes put in place by the Government, which is also working closely with investors, the private sector and industry associations to strengthen the ecosystem. This has resulted in some key partnerships between industry associations and international bodies such as the Rockefeller Foundation, the Global Impact Sourcing Coalition and the International Association of Outsourcing Professionals.

The public sector has made concerted efforts to develop and promote IT/BPM in South Africa. Initiatives include:

- Development of the Coega Industrial Development Zone, which houses a business process outsourcing park with robust power and telecommunication infrastructure spread across 9,000 square metres and provides access to 4,000 skilled workers.
- Development of Tshwane Business Process Outsourcing Park (still under construction) to provide world-class facilities with high-speed fibre-optic links, Voice Over Internet Protocol services, high redundancy servers and on-site technical support, for IT/BPM operations. The park will spread across 23 hectares of land and is poised to attract $35 million in investment.

Considering the potential of the IT/BPM sector to stimulate economic growth, strengthening the profile of South Africa in the global environment and generating employment, the Government developed the Business Process Services incentive programme. This initiative aims to attract investment and create employment opportunities, primarily for the youth, through offshoring activities. The incentives have resulted in the creation of an additional 20,000 direct jobs in the sector with an average annual growth rate of 22% in 2014–2018. The most important incentives include:

- Lump sum cash incentive per job created for a minimum number of jobs created and a bonus paid at the end of five years

- bonus for complex jobs available to applicants that create and maintain more than 200 offshore jobs
- bonus for highly complex jobs available to applicants that create and maintain more than 100 offshore jobs

Some other incentives are:

- Seda Technology Programme offers grants to provide technical support to small and women-owned enterprises;
- Employment tax incentives encourage employers to hire young work seekers through a cost-sharing mechanism with the government;
- Special economic zone incentives cover a wide range of building and rental allowances, corporate tax and employment incentives upon setting up operations in a special economic zone.

Business registration procedure

- Private companies may be registered with a standard or a customized memorandum of incorporation that sets out the rules agreed by the shareholders for the management and maintenance of the business.
- Register on the Companies and Intellectual Property Commission website as a new customer.
- Deposit 125 rand ($7.10) for company registration without a name reservation or 175 rand ($10) for a company registration with a name reservation into the Companies and Intellectual Property Commission bank account.
- Reserve a corporate name through one of the following procedures:
  - Applying for a name as part of the process
  - Reserve the name first, and then register the company
  - Register using the enterprise number as company name
- Register company with a standard memorandum of incorporation (online).
- Scan and e-mail the signed forms and supporting documents to the Companies and Intellectual Property Commission.
- The service delivery standard for a name reservation is five working days from the date of submission.

What is the focus of tech policy in South Africa?

Numerous public institutions and agencies oversee the ICT sector. Among the most prominent are:

- **The Department of Telecommunications and Postal Services**, which oversees the South African communications, telecommunications and broadcasting industries as well as top-level development and policy planning;
- **The Independent Communications Authority of South Africa**, an independent government body that regulates the telecommunications and broadcasting sectors in the public interest;
- **The Information Technology Association,** which promotes high standards within the IT industry and is the official trade and employer body of the information technology industry in South Africa.

Generally, outsourcing transactions are not specifically regulated under South African law. However, various laws have an impact on outsourcing. These are described in Table 23.

Table 22 Guidance for banks and insurers

Regulatory and legal policies	• The South African Reserve Bank published Financial Services – Outsourcing Guidance specifically for banks. It obliges banks to put suitable risk management programmes in place for service providers to whom functions have been outsourced. It also makes all outsourcing arrangements that involve material business activities subject to appropriate due diligence, approval and monitoring by the bank. • The registrars of long-term and short-term insurance, which deals with outsourcing an insurer's business, issued Insurance Services – Insurance Outsourcing Directive. This directive says: o Insurers can only outsource insurance business functions if they comply with certain principles; and o Insurers must avoid, and where this is not possible, mitigate, any conflicts of interest that may arise as a result of the outsourcing. o The obligations imposed by the directive are in addition to the those set out in the regulatory framework (for example, requirements relating to a nominee business, binder agreements and assistance business group schemes). • IT and cloud services: If both the customer and the suppliers are in South Africa, the provisions of the Broad-Based Black Economic Empowerment Act 2003 will apply. This policy is designed to increase participation by previously disadvantaged South Africans in economic activities. o All people, organizations and entities operating in the ICT sector in South Africa are measured in terms of the ICT Code should they wish to comply with the policy. o In accordance with the code, organizations and entities in the ICT sector must achieve an overall black ownership target of 30% (with at least 10% to be held by black women) to accelerate the pace of transformation in the sector.

Labour laws	• The first-ever national minimum wage has been in effect since 1 January 2019. The legislation stipulates a minimum national rate of 20 rand an hour, or 3,500 rand a month, depending on the number of hours worked.
Visa and immigration policies	• The business visa allows eligible people to enter South Africa for up to 90 days to work or to invest in the economy. • The general work visa allows immigrants to enter South Africa for up to five years to fill jobs for which native workers are not available. • The critical skills visa allows non-citizens with exceptional skills or qualifications that are scarce in South Africa to live and work in the country for up to five years. ICT is one of the categories covered under this visa.
Cybersecurity and data privacy regulations	• The Protection of Personal Information Act 2013 regulates the protection of personal data. Some provisions are already in force, and the rest were expected to come into effect in 2020. • The current framework relating to cybercrime and cybersecurity in South Africa is a hybrid of different pieces of legislation and the common law. The Electronic Communications and Transactions Act 25 of 2002 regulates most cybercrime offences.

Trade associations offer a helping hand to tech firms

Table 23 Three key associations work in the tech sector

Agency	Contact
Business Process Enabling South Africa	**E-mail:** info@bpesa.org.za ; traci@bpesa.org.za **Website:** www.bpesa.org.za
The Information Technology Association of South Africa	**E-mail:** info@ita.org.za **Website:** www.ita.org.za
Institute of Information Technology Professionals South Africa	**E-mail:** info@iitpsa.org.za **Website:** www.iitpsa.org.za

Growing market segments

High growth in financial services, healthcare and real estate

IT/BPM providers in South Africa serve a range of sectors, including healthcare, banking, insurance, media and broadcasting, telecommunications, energy and utilities, manufacturing, tourism and hospitality. Before deciding to operate or establish in a country, however, providers must identify industry verticals with high growth potential. This will ensure that there is demand for their services and safeguard the sustainability and scalability of operations.

After examining the size of South African economic sectors, as well as growth trends, three important market segments were identified.

Table 24 Three fast-growing sectors show outsourcing potential

Financial services[96]	
Size of industry: ~ $390 billion Contribution to GDP: 5% Growth rate: 11%	• South Africa has the largest banking sector in Africa, with 42 local banking institutions and 30 representative offices for foreign lenders. • Five or six major players that together hold more than 90% of the business and assets dominate the sector. However, the advent of fintech companies and technology-based banking alternatives is disrupting the market. • South Africa is one of the world leaders in terms of financial analyst charter holders and actuarial degree holders (almost eight times that of India). • Key drivers of growth: ▪ Traditional banks are downsizing branches and moving to digital banking as more customers use online and mobile banking services. ▪ New digital banks, retail businesses, telecom operators and technology start-ups are collaborating to offer digital and mobile money payments through apps. ▪ Growing smartphone penetration (rate is 20%). ▪ Surge in e-commerce activity in South Africa. ▪ Government intervention by establishing innovation hubs. ▪ Regulatory impact of the payment services initiative.
Healthcare[97]	
Size of industry: ~ $35 billion Contribution to GDP: 9.5% Growth rate: 4.7%	• As one of the largest economies on the continent, South Africa has prioritized achieving universal health coverage for all citizens. • Before the COVID-19 crisis, the healthcare market was expected to grow at a CAGR of 4.7% in 2017–2022 to reach a value of $37 billion by 2022. • The National Health Insurance Bill and the Medical Schemes Amendment Bill were introduced in June 2018. The Government is busy implementing national health insurance to establish universal healthcare.

[96] https://www.businesswire.com/news/home/20191014005441/en/South–Africa–Banking–Industry–Report–2019
[97] https://www.fitchsolutions.com/topic/south–africa and https://africapresslist.com/pt/pressreleases/africa–healthcare–sector–outlook–valued–usd–35–billion–in–2016–06–27–2018–14–00–19

	• South Africa spent 9.5% of its GDP on healthcare in 2017. That is 4% higher than the World Health Organization's recommended spending for a country of its socioeconomic status. ▪ Public sector healthcare spend: 48% ▪ Private sector healthcare spend: 50% ▪ Non-governmental and other organizations: 2% • Three private players (Netcare, Life Healthcare and Mediclinic) together account for 80% of market share. • Information technology has transformed the sector and has the potential to enhance the scalability, access, efficiency and tangible benefits of healthcare services to citizens. Following the lead of the global healthcare industry, many digital trends such as internet of things, telemedicine and artificial intelligence are gaining traction in the South African healthcare market.
Real estate[98]	
Size of industry: ~ $9 billion Contribution to GDP: 5%	• The three key drivers of growth of the real estate sector are: ▪ population expanding 1%–2% a year and targeted to reach 73 million by 2050; ▪ rapid urbanization rate (growing 1.2% annually) with 62% of current population living in urban areas; ▪ affordable housing and new city developments. • With household finances under pressure for the foreseeable future, the focus is likely to remain on affordability. • There is a significant influx of investment from overseas developers from countries such as China. • The acute shortage of water and electricity in recent times means demand for smart homes/housing complexes that conserve, recycle and generate water and electricity has picked up.

[98] https://www.researchandmarkets.com/research/76p23c/south_africa_real?w=12; https://oxfordbusinessgroup.com/overview/finely–poised–real–estate–sector–has–strong–long–term–potential–despite–some–short–term–challenges

Market access opportunities

Financial services, healthcare and real estate show the most promise

The trends seen in the growing market segments showcase the sectors that are likely to drive demand for IT/BPM services in South Africa: financial services, healthcare and real estate. The following table identifies market access opportunities and potential service areas in these three sectors.

Table 25 Three sectors offer different opportunities

Industry	Service area	Description
Financial services	Finance and accounting outsourcing; finance and accounting shared services Insurance Personal finance	• Changing customer needs and evolving usage behaviour, primarily due to greater smartphone penetration, has triggered new banking institutions providing digitalized services. • South Africa is also witnessing a wave of digital-only banks that make the sector highly competitive. • As more people enter the workforce and are integrated into the banking system, there is a huge opportunity for banking services. • Opportunities in the following banking and financial services can be potentially targeted by IT and business process outsourcing service providers: o Banking contact centre services: ▪ Personalized customer care ▪ Grievance redressal ▪ Credit cards and rewards o Banking business process services: ▪ General accounting, accounts receivable and accounts payable, invoice processing and help desk ▪ Procurement o Life insurance services: ▪ New business capture ▪ Premium collections ▪ Policy administration ▪ Claims processing ▪ Commission handling o Fund administration services: ▪ Investment and portfolio administration ▪ Client reporting o Asset management services: ▪ Fund accounting ▪ Business analysis ▪ Client services

Healthcare	Digital health solutions	From a healthcare standpoint, there is a large underserved population in South Africa. The Government is focused on providing medical coverage to all citizens and is rolling out national health insurance. The following opportunities exist for IT/BPM service providers: • The National Department of Health is preparing to set up a health patient registration system that will connect all healthcare facilities and share patient data. • Owing to the shortage of qualified healthcare professionals, mobile health and telemedicine services are increasingly being leveraged, especially for preventive care. These services require a delivery front end and back end that IT/BPM firms can provide. • There has been increased uptake of health services through the effective use of mobile messaging and cash transfer incentives for demand creation. • Demand and potential scope is growing for IT/BPM services such as: ▪ Electronic medical records system solutions ▪ Hospital management information system solutions ▪ Health information system solutions ▪ Telemedicine ▪ Insurance registration and claims systems ▪ Mobile health solutions
Real estate	Business process support Customer service Reporting and analytics	• The focus today is on streamlining processes and upgrading legacy systems. This presents major opportunities for IT/BPM service providers in the following areas: ▪ Real estate accounting ▪ Real estate analytics ▪ Geo-demographic data analysis ▪ Valuation services ▪ Billing and reimbursement processing ▪ Real estate listing, registration and cataloguing services

Côte d'Ivoire

Nascent technology sector, but can serve as a gateway to francophone West Africa and sub-Saharan Africa

Macroeconomic and country data

Capitals: **Yamoussoukro** (political) and **Abidjan** (economic)

GDP: $43 billion

GDP per capita: $1,715

Real GDP growth rate: 7.4%

Inflation rate: 0.4%

Population: 26.1 million
- 0–14 years: 40%
- 15–24 years: 20%
- 25–54 years: 34%
- 55+ years: 6%
- Population growth rate: 2.6%

Unemployment rate: 2.4%

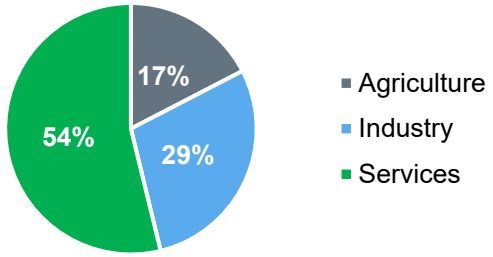
Adult literacy rate: 47.1%

Urbanization: 50.7%

Major trade associations:
- *Centre de Promotion des Investissements en Côte d'Ivoire*

Sources: World Bank, Avasant Research.

Gross domestic product composition



Key facts

Currency: West African CFA (*Communauté Financière Africaine*) franc (XOF)

Exchange rate (per $): XOF 578

Foreign direct investment inflow: $912 million

Major languages: French (official language)

Major religions: Islam, Christianity

Major exports: Cocoa, cashew nuts, palm oil, coffee, oil

Country highlights

Côte d'Ivoire is a lower middle-income economy on the West African coast. It is the world's top producer and exporter of cocoa beans and a significant producer and exporter of coffee, palm oil and cashew nuts.

The economy has grown steadily since a new political regime emerged in 2011. In 2018, GDP rose more than 7% for the seventh straight year.

Fast-growing mobile phone service penetration and continual economic growth mean Côte d'Ivoire could be the key to unlock the French-speaking sub-Saharan African market.

Information and communications technology landscape

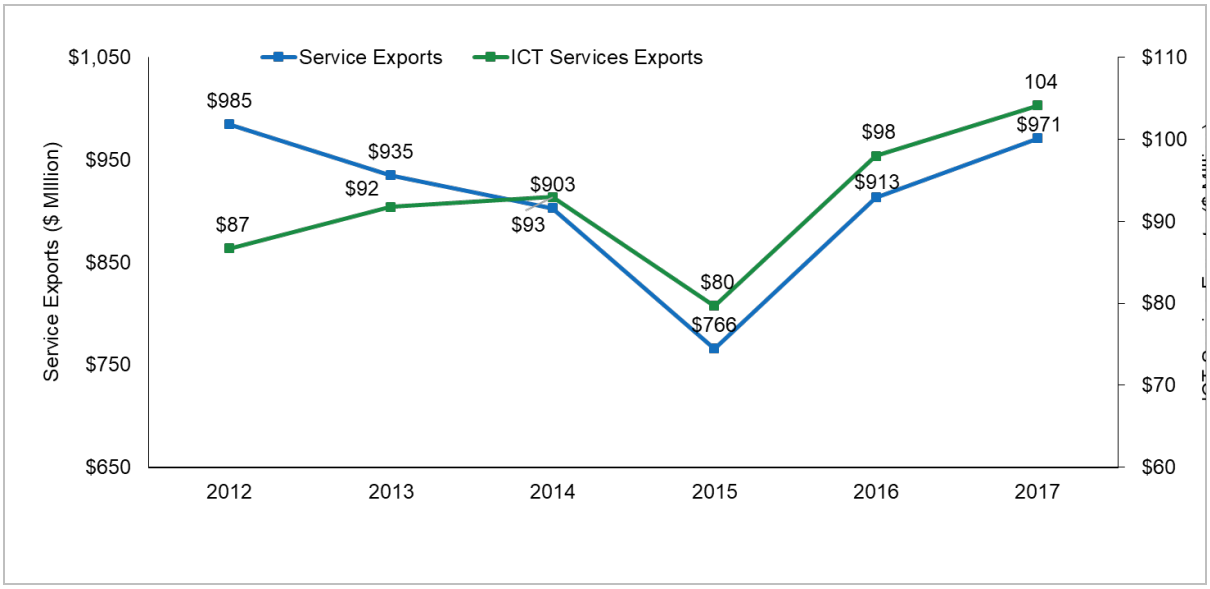
Economy depends heavily on ICT

ICT is one of the largest contributors to GDP (about 13%) in Côte d'Ivoire. The sector is a primary driver and enabler of economic growth, adding around $585 million to the economy in 2018. The tech environment has improved markedly in the last few years, thanks largely to structural and sectoral government reforms. New laws have been passed to address vital areas such as convergence, universal service, consumer protection and ICT licensing.

Infrastructure investments are also increasing. For example, the country is deploying a national 7,000 kilometre (km) fibre backbone to provide data and telephony services to rural areas. Investments have also been made to in develop free trade zones and ICT parks such as the Village of ICT & Biotechnology of Côte d'Ivoire to boost investment and make the sector more attractive.

According to the World Bank, Côte d'Ivoire exported $100 million in ICT services (a key measure for IT/BPM services) in 2017, accounting for about 10% of service exports. Annual ICT service exports have grown more than 10% over the past four years, indicating the increasing importance of these services to the economy.

Figure 7 Service exports have been rising since 2015



Source: World Bank.

Why is the Ivorian technology sector appealing?

Attractiveness factors	Main highlights
Ease of starting and doing business	**Annual ICT revenue:** ~ $585 million[99]
Favourable time zone Local time identical to the United Kingdom / a 1–2 hour difference with most European countries	**ICT workforce:** ~ 5,400 direct jobs and 100,000 indirect jobs created annually[100]
Among the fastest growing economies in Africa	**Entry-level salary (monthly):** ~ $200–$400
Well-developed infrastructure for technology businesses	**Main IT/BPM service offerings:** Contact centre services, IT infrastructure hosting, IT hardware and software reselling, back-office operations
Strong government focus shown through policies to promote ICT	**Major markets served:** European Union
	Key IT/BPM associations and agencies: • *Groupement des Opérateurs du Secteur des Technologies de l'Information et de la Communication de Côte d'Ivoire* • *Société Nationale de Développement Informatique*

[99] https://www.afrikatech.com/economy/the–boom–of–the–digital–economy–in–ivory–coast/
[100] Avasant Research, World Bank.

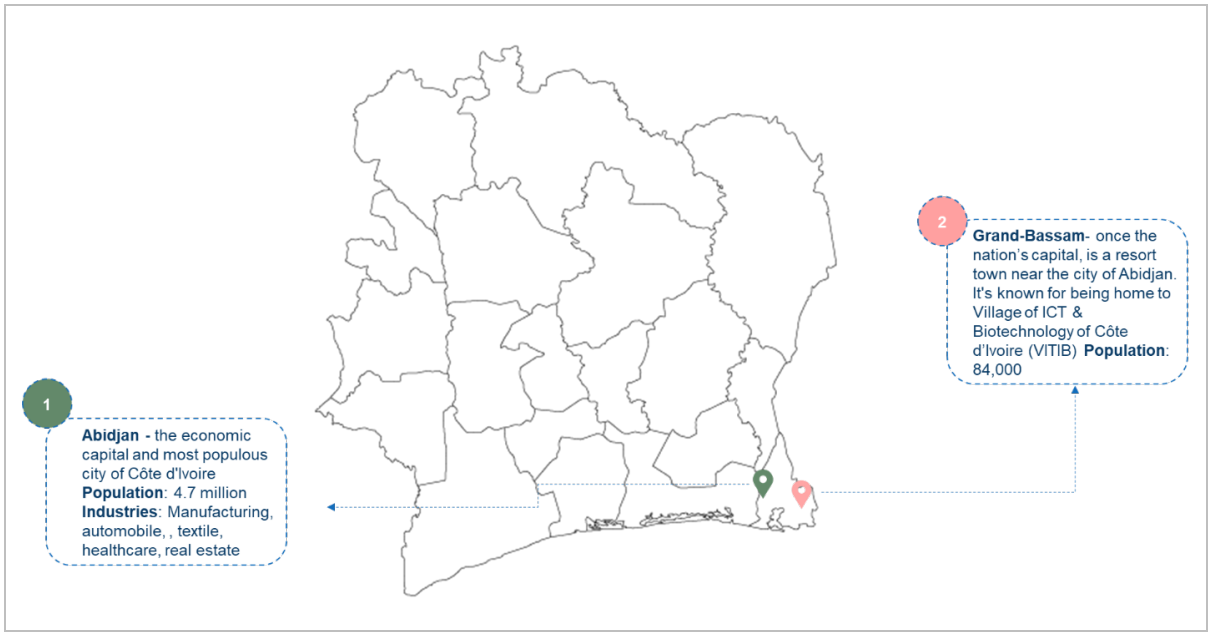
Key cities and technology centres

Most tech hubs are based in Abidjan and Grand-Bassam

Abidjan, the economic capital of Côte d'Ivoire, is the only city with a population of more than 1 million (3.7 million). Only two other cities, Abobo and Bouaké, have more than 500,000 people (900,000 and 567,481, respectively). The fifth-biggest city is the national capital, Yamoussoukro, with a population of almost 195,000.[101] According to World Population Review, the country grows about 2.5% a year.[102]

The figure below shows the two cities in Côte d'Ivoire most suitable for IT/BPM companies.

Figure 8 Southeast is home to most tech companies



Source: Avasant Research.

[101] https://www.worldscapitalcities.com/capital-facts-for-yamoussoukro-ivory-coast/
[102] http://worldpopulationreview.com/countries/ivory–coast–population/

Table 26 Seven hubs are located in Abidjan

City	ICT hubs/ tech parks/ start–up hubs
Abidjan	- Incub'Ivoire - Orange Fab Côte d'Ivoire - MTN Y'ello Start-up - Seedspace Abidjan - BabyLab - CO.LAB Abidjan - Jokkolabs - Ovillage
Grand-Bassam	- Village of ICT & Biotechnology of Côte d'Ivoire o Mahatma Gandhi IT and Biotechnology Park: a dedicated free trade zone for IT and biotechnology.

Source: Avasant Research.

The state of competition – Understanding the landscape

Service provider landscape is small and nascent

The telecom sector largely drives ICT in Côte d'Ivoire. The IT/BPM service provider landscape is nascent, with a handful of prominent players and supported by numerous small and bespoke technology companies.

Some highlights of the service provider landscape are described below.

- **Key locations:** Most providers are based in Abidjan. With the opening of Village of ICT & Biotechnology of Côte d'Ivoire and its ICT park, Grand-Bassam is poised to become a favourable destination for service providers.
- **Providers have limited service capabilities.** Most providers resell IT hardware and software, though some offer IT security services. Providers are also delivering contact centre and customer experience-related services. Service providers tend to be small, with fewer than 100 employees.
- **Larger, international firms offer more complex services.** Only a few international firms deliver IT/BPM services from the country. They specialize in contact centre and back-office support services.

The following table describes the main services offered by some of the leading service providers in Côte d'Ivoire. International companies are highlighted in blue.

Table 27 Providers offer a range of services

Service provider	Headcount Location	Examples of services offered	
Premier Centre de Contact International Côte d'Ivoire	2,500 Abidjan Dubai (headquarters)	Contact centre and customer experience services, telemarketing, software and IT products, IT hardware reselling	
Tops BPO	Pasig, Philippines (headquarters)	Contact centre, back-office services, recruitment process outsourcing services	–
Afrisofts	Abidjan	Web design and hosting, networking and IT security, staff management solutions	–
Ivoprest	Abidjan	IT security, systems audit, IT training	–
Alink Telecom	Abidjan	Network and telephony services, system integration	–
Pordes	Abidjan	Solution and system integration, outsourcing, IT software and hardware reselling	–
Premium Technologie	Abidjan	IT software and hardware reselling	–
Inter Continental Business Machines	Abidjan	IT software and hardware reselling	–

Source: Avasant Research.

Service capacity and capability

Government prioritizes developing local talent

The country ranked 149 of 157 countries in the World Bank 2018 Human Capital Index. According to the World Bank and the Census and Economic Information Centre, Côte d'Ivoire has a high labour-force participation rate of 57%.

About 23% of the country is economically inactive, and almost half of these people are between ages 14 and 34. Much of the inactive population is made up of youth transitioning from school to full-time employment.[103] The Government has introduced initiatives to address this gap:

- Companies paying remuneration to foreign employees working in the Côte d'Ivoire must contribute to the Fund for the Development of Vocational Training (*Fonds de Développement de la Formation professionnelle*) for apprenticeships and employee training.
- The Government has adopted an ambitious policy, guided by the law making school compulsory for children aged 6–16, without distinction of sex. This has greatly improved access to education, with an estimated primary school enrolment rate of 90% as of 2018.
- According to the National Development Plan 2016–2020, enrolment in technical and vocational training courses rose 29% a year on average in 2011–2014.
- The Government has incentivized and encouraged the private sector and international ICT players to invest and build capabilities in the country. In 2018, Chinese technology company Huawei inaugurated the Huawei ICT Academy, which aims to train, upskill and certify the potential ICT talent in the country in digital skills.

For any emerging economy, human capital is the most critical prerequisite for the success of the IT/BPM sector. The Government is increasingly focused on developing the local talent pool, and has adopted measures to boost training that involve public and private participation. The history and growth of mature IT/BPM destinations such as India and the Philippines show that the sector can help alleviate the challenges of youth unemployment and inactivity in Côte d'Ivoire and drive economic growth.

The table below looks at the availability and quality of talent in the Ivorian IT/BPM sector and outlines its scalability prospects and opportunities.

[103] http://documents.worldbank.org/curated/en/759171492491255997/pdf/AUS13233–WP–ENGLISH–Employment–Productivity–and–Inclusion–for–Poverty–Reduction–PUBLIC.pdf

Table 28 Service capacity and capability in Côte d'Ivoire

Talent and skill availability	
No. of universities: 26[104]	Although Côte d'Ivoire has 26 universities, higher education is not limited to the university system. Many Ivorians students enrol in private and public institutes of higher education. The country also has *Grandes Ecoles,* which are prestigious, highly selective postgraduate schools (patterned after their French models in Paris) that train the best talent and produce the best engineers and civil servants in the country. The latest data from the United Nations Educational, Scientific and Cultural Organization show that 57,541 students were enrolled at post-secondary diploma level in 2012. Furthermore, 23,008 students were studying for a bachelor's or master's degree.[109] Enrolments for vocational education and technical training (*enseignement technique et formation professionelle*) have jumped in the past decade. Of the 105,353 enrolments in 2016, 46% were for female students.
Youth unemployment: 5.5%[105]	
Unemployment rate among vocational and technical training graduates: 23%[106]	
Tertiary gross enrolment ratio: 9.3%[107]	
Secondary gross enrolment ratio: 51%[108]	
Quality and employability of talent	
Quality of vocational training: Ranks 66th of 141 countries	The education system is expanding. However, Côte d'Ivoire lags behind other countries when it comes to adult and youth literacy. The quality and availability of technical and vocational training, particularly in information technology, scored 4.2 on the WEF Global Competitiveness Index. The scoring – on a scale of 1 to 7, with 1 representing not well at all, and 7, extremely well – assesses how well the education system meets the needs of a competitive economy. The growing number of vocational education and technical training enrolments corroborates the country's score. On the ease of finding skilled employees, the country performed reasonably well, scoring 4.6 (out of a possible 7).
Skillset of graduates: Ranks 90th of 141 countries	
Ease of finding skilled employees: Ranks 40th of 141 countries	
Digital skills in active population: Ranks 95th of 141 countries	
Literacy[110] • Youth literacy: 58% • Adult literacy: 47%	

[104] https://free–apply.com/articles/country/2287781
[105] https://data.worldbank.org/indicator/SL.UEM.1524.NE.ZS?locations=CI
[106] https://www.afdb.org/fileadmin/uploads/afdb/Documents/C%C3%B4te_d_Ivoire_–_Youth_Employability_and_Insertion_Support_Programme__PAAEIJ__–_Appraisal_Report.pdf
[107] http://uis.unesco.org/en/country/ci
[108] *Ibid.*
[109] https://unesdoc.unesco.org/ark:/48223/pf0000235406/PDF/235406eng.pdf.multi
[110] https://data.worldbank.org/indicator/SE.ADT.1524.LT.ZS?locations=CI

Scalability

Côte d'Ivoire is faced with the paradox of large-scale graduate unemployment coupled with challenges for ICT businesses to fill open positions with the right talent. Two main reasons for this are:

- Lack of private sector involvement in vocational and technical training programmes, and
- Absence of monitoring and evaluation mechanisms for training programmes.

Efforts have been made to strengthen the local ICT talent pool. The Government is collaborating with the Global Partnership for Education, an international organization dedicated to giving children in developing countries access to quality education, on the Education Sector Plan 2016–25. The plan aims to address existing and future challenges faced by the technical and vocational training sector.

The Government, in partnership with the African Development Bank, announced the creation of the Ivorian Innovation Fund in 2016. The €200 million ($229 million) project focuses on infrastructure and financial support for start-ups in the technology sector. The fund will catalyse business partnerships and facilitate training opportunities among the member countries of the West African Economic and Monetary Union.

ICT infrastructure

Government seeks to boost connectivity and access

Telecommunications dominates and drives the Ivorian ICT sector, resulting in increased mobile phone penetration and subscriptions. The Government is aggressively pursuing initiatives designed to improve connectivity and access to tech services.

Along with building the fibre-optic cable network backbone, the Government is working on e-government initiatives to provide digitalized citizen services primarily related to healthcare and education. The aim is to include rural areas, which have been unserved compared with urban settlements.

The Government hopes to attract private sector investment in tandem with public investment under the 2016–2020 National Development Plan, prioritizing initiatives with the greatest social impact. This would enhance the existing infrastructure to position the country as an attractive destination for ICT and digital activity.

Table 29 Greater phone penetration lifts financial inclusion

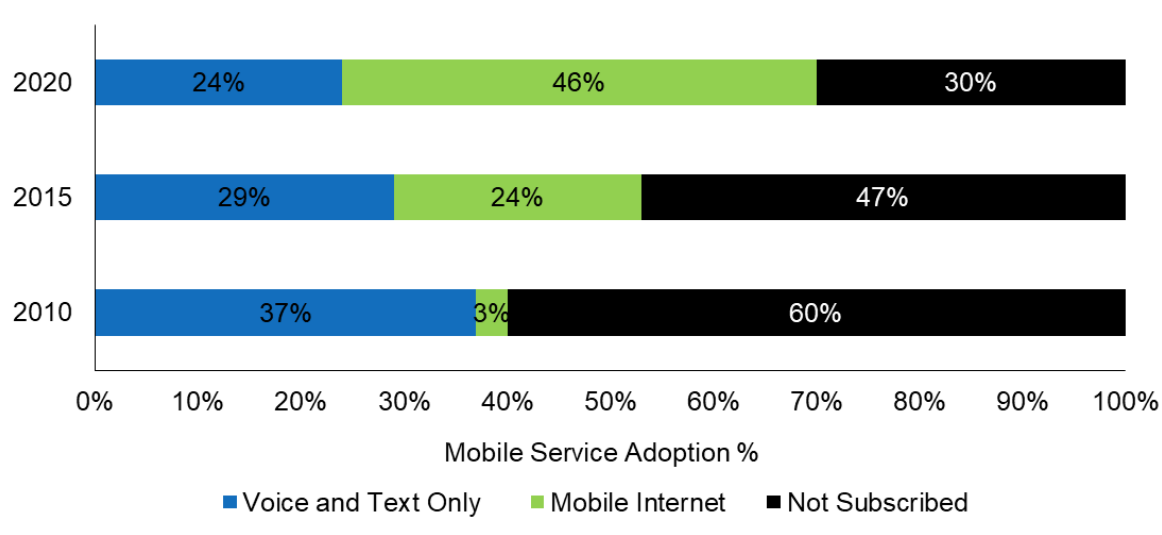
Telecom
• Fixed telephone subscriptions (per 100 people) – 1.1 • Mobile cellular subscriptions (per 100 people) – 134.9

The telecommunications sector is well developed. With an average of 1.3 SIM cards per person, the country has one of the highest penetration rates in West Africa. Three main operators – Orange, MTN and MOOV (Etisalat Group) – dominate the mobile telecom market. Two operators, Côte d'Ivoire Telecom (bought by Orange) and Arobase Telecom (MTN Group), comprise the fixed telephony market.

World Bank Global Financial Development Database data show that growing mobile phone penetration in Côte d'Ivoire has boosted financial inclusion. Close to 23% of adults now have access to mobile payments (second highest in West Africa) and almost 9% pay bills through mobile money accounts (highest in West Africa).

In the last few years, mobile phone usage trends suggest a shift from voice and text services to data-intensive mobile internet services such as messaging, payments and social media. The trends are depicted in the graphic below.

Mobile service adoption trends in Côte d'Ivoire[111]



The healthcare and agriculture sectors will benefit the most from increased mobile phone adoption. Along with mobile payments, the Government is focusing on platforms that facilitate telemedicine and mobile health and provide easy access to information in the farming sector with the latest agri-tech solutions.

[111] The GSM Association.

Broadband/ Bandwidth

- Fixed broadband subscriptions (per 100 people) – 0.7
- Active mobile broadband subscriptions (per 100 people) – 61.6
- Individuals using the internet (% of population) – 46.8%
- International internet bandwidth per internet user (kilobits per second) – 5.16
- % of households with internet access – 12.2%

The internet adoption rate per household grew an average of 188% in 2012–2016, mainly because additional fibre-optic undersea cables were laid in 2011. The country expanded and developed the national backbone network in 2017 by laying an additional 7,000 km of fibre-optic cables. This has reduced domestic data and internet prices.

Côte d'Ivoire ranks 89th out of 230 countries on mobile data affordability (based on the worldwide mobile data pricing by Cable.co.uk), with 1 gigabyte of data costing $4.10 on average on a 30-day plan.[112] It ranks 114th out of 195 countries on the cost of broadband, with an average monthly cost of $66.10.

Power

- Electric power consumption (kWh per capita) – 274.7
- **Generation capacity**
  - Installed capacity: 2,178 MW
- **Connections**
  - Current access rate: 62%
- Quality of electricity supply – Ranks 112th of 141 countries

As part of National Development Plan, Côte d'Ivoire aims to become an energy hub in sub-Saharan Africa and to provide quality, cheap and abundant energy domestically and regionally.

The Government is focusing on the social programme it launched in early 2019 to accelerate National Development Plan projects with the strongest social impact. These projects include rural electrification and social tariffs on electricity for poorer households. Government spending on these programmes amounted to almost 1% of GDP in 2019 and 1.5% of GDP in 2020.

Cost of electricity[113]

	Cost ($) household, kWh	Cost ($) business, kWh
Côte d'Ivoire	0.1	0.2
World average	0.15	0.13

[112] https://www.cable.co.uk/mobiles/worldwide–data–pricing/
[113] https://www.globalpetrolprices.com/Ivory-Coast/

Government incentives and policies

Push to become top digital and technology hub in West Africa

Côte d'Ivoire is making progress on increasing growth and attracting investment. The Government, seeking to position the country as West Africa's preferred digital and technology hub, is is improving the business environment with its Focus on Doing Business programme. This has increased digitization and simplified procedures.

The ICT enabling environment has improved considerably in the last five years. The World Economic Forum ranks the ICT sector in each country by measuring the Networked Readiness Index. Côte d'Ivoire has performed very well on some of the subindexes and parameters:

Table 30 Moving up in the rankings

Subindex/parameter	2013 rank (out of 144 countries)	2016 rank (out of 139 countries)
Importance of ICT to government vision	94	30
Government success in ICT promotion	91	47

Source: World Economic Forum.

What incentives support business development?

- Tax exemption in the first year for ICT companies.
- Reduced the administrative burden related to the tax audit of SMEs.
- Specific incentives in the form of a tax credit available to companies recruiting new employees.
- Based on certain prerequisites around investment amount, implementation period and the nature of activities, there are additional incentives:[114]
    - 35% corporate income tax deduction on profit earned in the region of Abidjan
    - 40% corporate income tax deduction on profit earned in all other regions

The Village of ICT & Biotechnology of Côte d'Ivoire, in the city of Grand-Bassam, is home to the Mahatma Gandhi IT and Biotechnology Park. The park established the regime of free zones for biotechnology and ICT that offer the following benefits:[115]

- 0% customs duty
- 0% corporate tax for the first five years
- 1% from the sixth year with possibility of tax rebate
- 0% VAT
- Freedom to transfer funds from salaries and dividends distributed
- Long-term visa and work permit for foreigners and their families
- No limit on foreign and local investments

[114] https://www2.deloitte.com/content/dam/Deloitte/za/Documents/africa/za_ASG_Country%20Reports_Cote_dIvoire_Repro.pdf
[115] *Ibid.*

Côte d'Ivoire has also signed tax treaties with other countries to avoid double taxation. Companies without the benefit of a special tax regime are subject to an ordinary one, which includes:

- Direct taxes (these include corporate income tax and are 20% for individual entrepreneurs and 25% for companies, payroll tax, business licence and real estate tax);
- Indirect taxes (these include VAT with a tax rate of 18% and the special equipment tax of 0.1% over the turnover, subject to VAT);
- Withholding taxes (includes dividends, interest and royalties, with monthly payment and rates ranging from 15%–20%).

Table 31 Setting up a business in Côte d'Ivoire

Business registration procedure

The investment promotion centre, *Centre de Promotion des Investissements en Côte d'Ivoire*, is a one-stop-shop for business registration. The centre provides investment information and assistance for starting a business in Côte d'Ivoire.

This 'single window' business registration centre has all regulatory agencies under one roof, facilitating business registration. Entrepreneurs can also register with the commercial registrar (*Registre du Commerce et du Crédit Inmobilier*), the tax authority (*Direction Générale d'Impots*) and social security institute (*Caisse Nationale de Prévoyance Sociale*).

Côte d'Ivoire performs significantly better than the sub-Saharan Africa average, in terms of business setup procedures and time.

Setting up a company	Côte d'Ivoire	Sub-Saharan Africa
Procedures (number)	4	7.8
Time (days)	6	27.3

Source: World Bank Doing Business report 2019.

In certain cases, a business can be registered in as little as 24 hours. The general procedure for setting up a limited liability company is:

- Initial notary draft of the company statutes together with a proof of financial availability (paid-in capital).
- Bank account and deposit of the paid-in capital: The founders choose a bank that will receive the full paid-in capital.
- Registration (one-stop shop) and the legal notice publication facilitate the process related to:
  - commercial registrar;
  - registration to the tax authority;
  - registration to the social security institute.
- After registering on the investment promotion centre website, founders can create their company seal.

What is the focus of tech policy in Côte d'Ivoire?

The Networked Readiness Index includes an ICT environment subindex, which reflects both the political and regulatory environment and the business and innovation environment. Higher rankings in this subindex show that Côte d'Ivoire has made substantial progress in improving its regulatory and business environment:

Table 32 Marked improvement in the regulatory environment

Subindex/parameter	2013 rank (out of 144 countries)	2016 rank (out of 139 countries)
Political and regulatory environment	128	51
Business and innovation environment	127	96

Five public institutions and agencies oversee the ICT sector in Côte d'Ivoire:

- ***Autorité de Régulation des Télécommunications de Côte d'Ivoire,*** created from the merger of the Telecommunications Council of Côte d'Ivoire and the Telecommunications Agency of Côte d'Ivoire. It is the national regulatory authority and its core objective is to develop the digital economy and expand the reach of ICT in the Côte d'Ivoire. The authority established the Computer Emergency Response Team of Côte d'Ivoire in 2009.

- ***Société Nationale de Développement Informatique,*** a government entity providing support and assistance to organizations, communities and private companies on all ICT-related matters. The society oversees IT and related projects for the Government.

- **Ministère de l'Economie Numérique et de la Poste,** the ministry in charge of the ICT and digital economy.

- ***Agence Ivoirienne de Gestion des Fréquences radioélectriques,*** the agency in charge of ICT radio frequency management.

- ***Agence Nationale du Service Universel des Télécommunications,*** created to ensure that telecommunication services are available to all individuals and businesses. Its establishment spearheaded government efforts to strengthen the ICT sector, including through various legal measures to accelerate digitalization in the private and public sectors.

  The agency seeks to catalyse public digitalization efforts and regulate the sector. It was instrumental in the expansion of fibre-optic network, which has opened the market for e-solutions in different sectors including banking, health and education services.

Table 33 Regulatory and compliance policies for IT/BPM[116]

Labour laws	• Fixed-term contracts with a specified or unspecified date of termination are allowed. • Fixed-term contracts with a specified date of termination cannot be concluded for more than two years. Fixed-term contracts with an unspecified date of termination may only be concluded for a specific and temporary task and only in cases provided for by law. • Labour broking is allowed, but only for temporary positions not exceeding three months. • Remuneration must be paid in local currency.
Visa and immigration policies	• Expatriates working in Côte d'Ivoire must hold a residence permit. • Residence permits are valid for one year and renewable for additional one-year periods. • An employee may be seconded to Côte d'Ivoire, provided he/she complies with immigration laws and the formalities required in terms of *l'Agence d'Etudes et de Promotion de l'Emploi de Côte d'Ivoire*). • A seconded employee must be employed by a local entity to work in Côte d'Ivoire.
Cybersecurity and data privacy regulations[117]	In 2013, the National Assembly adopted new laws to govern electronic transactions and e-commerce activities. These laws: • validated the use of digital signatures, a necessary step to establish a digitalized public administration; • strengthened the protection of personal data, setting out the legal privacy guidelines for online users in the country. The Department of Computer and Technologic artefacts (*Direction de l'Informatique et des Traces technologiques*, a special unit for computer-related evidence, was created in 2009 within the Forensics Division of the Ministry of Interior. It investigates cybercrime, provides technical support to all investigations and carries out IT security projects. The country also has cybercrime laws that contain provisions on: • substantive criminal law (including those related to illegal access, illegal interception, data and system interference, computer-related fraud and forgery, and child online protection) and • collection of electronic evidence.

[116] Doing Business in Côte d'Ivoire.

[117] https://www.coe.int/en/web/octopus/country–wiki/–/asset_publisher/hFPA5fbKjyCJ/content/ivory–coast/pop_up?_101_INSTANCE_hFPA5fbKjyCJ_viewMode=view/

Trade associations offer a helping hand to tech firms

Table 34 Four key associations and agencies work in the sector

Agency	Contact
The investment promotion centre, *Centre de Promotion des Investissements en Côte d'Ivoire*	**E-mail:** infos.cepici@cepici.ci **Website:** www.cepici.gouv.ci/en/
Groupement des Opérateurs du Secteur des Technologies de l'Information et de la Communication de Côte d'Ivoire	**E-mail:** secretariat@gotic.ci **Website:** https://gotic.ci/
Fondation Jeunesse Numérique	**E-mail:** infos@fjn.ci **Website:** https://fjn.ci/
Société Nationale de Développement Informatique	**E-mail:** infos@sndi.ci **Website:** www.sndi.ci/

Growing market segments

Healthcare, agriculture and financial services are fast-growth areas

After examining the size of Ivorian economic sectors, as well as growth trends, three important market segments were identified.

Table 35 Three fast-growing sectors show outsourcing potential

Healthcare	
Size of industry: ~ $2 billion	• Annual spending on healthcare exceeded $2 billion in 2019 and is estimated to reach $2.26 billion by 2021. Steady economic growth and universal healthcare would sustained demand. • Côte d'Ivoire is the leading market for the private pharmaceutical sector in sub-Saharan Africa, importing 93% of medicines. • The population is growing 2.5% a year. It is expected to double by 2050, and demand for medical equipment and pharmaceuticals will increase greatly. • There is an influx of investment from both local and foreign players. • The 2016–2020 National Health Development Plan is being implemented with a vision of developing an efficient and accessible health system. This is also catalysing the growth in the sector.
Contribution to GDP: 5%	
Agriculture	
• The national e-agriculture strategy, validated in 2012, aims to develop information services that provide access to market information for businesses and individuals. • The Government outlined its strategy to diversify and make the agricultural sector more productive in its National Development Plan for the 2016–2021. • The agricultural labour force is shrinking as workers move towards the cities and farmers age. These are favourable factors for adopting technology in agriculture.	
Financial services	
• Côte d'Ivoire has a fast-growing middle class and increasing spending power. • It is a gateway to West Africa and sub-Saharan Africa and preferred destination for banks and financial institutions trying to expand their West African operations. • Banking inclusion and penetration is only around 41%, which means there is a huge potential for more people to use banking services. Mobile money drives most of this growth. • Principal growth drivers: - Growing smartphone penetration, with almost 55% of connections made through these devices; - Surge in e-commerce activity.	

Market access opportunities

Growing mobile phone and internet penetration underpins demand

Businesses in a range of sectors are turning to IT and software systems to boost accessibility and enhance customer experiences. The trends seen in the growing market segments showcase the sectors that are likely to drive demand for IT/BPM services in Côte d'Ivoire: healthcare, agriculture and financial services.

The following table identifies market access opportunities and potential service areas in these three sectors.

Table 36 Three sectors offer different opportunities

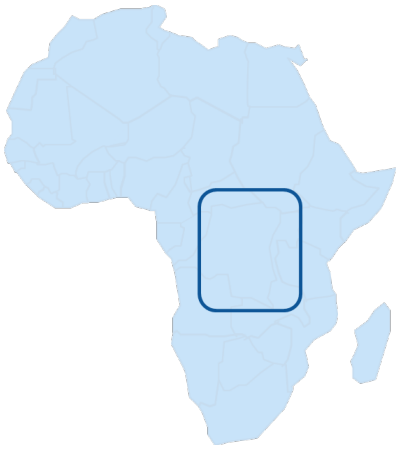
Industry	Service area	Description
Healthcare	Digital health solutions Healthcare application services Customer and data management	Many Ivorians have insufficient access to healthcare. However, penetration of mobile phones is fuelling the growth of health services. The Government is promoting public-private partnerships and private sector investment in healthcare. The Government is opening more hospitals and clinics, as not all districts have adequate health structures. This creates opportunities in the IT/BPM space. Many private players are expanding and have been securing foreign funding to develop their operations and capabilities. All of this would require IT/BPM services. The main opportunities include: • EPR and customer relationship management systems – development and maintenance • Customer records management • Customer support • Healthcare application maintenance • Telemedicine • Electronic medical records system solutions • Insurance registration and claims systems • Mobile health solutions • Hospital management information system solutions • Health information system solutions • Insurance registration and claims systems
Agriculture	Agriculture marketplace solutions Information systems and solutions Supply chain solutions	The national e-agriculture strategy requires suitable access to information services and data centres as part of an ICT package aiming to make real-time market information systems available via mobile phones and tablets. Some of the key opportunities include: • Supply chain management applications and support • Market information system development and maintenance • Contact centre and helpline offerings for government agriculture departments

Financial services	Mobile remittances Finance and accounting outsourcing; finance accounting shared service centres Insurance Banking solutions • Digital payments • Peer-to-peer lending • Personal finance	• Most Ivorians who access formal financial services today use mobile money to do. Fintech presents new opportunities for telecom providers that offer higher-value digital services. • Retail banking is also growing. Subsidiaries of foreign lenders largely dominate the market, with French and Moroccan banks accounting for half of the 10 largest players. This provides opportunities for IT/BPM service providers as banks require services around: o Customer data collection and processing o Customer relationship management systems and enterprise resource planning systems for bank branches o IT security o Back-office operations • The presence of major international financial institutions such as Société Générale, BNP Paribas and Standard Chartered is ideal for finance and accounting outsourcing and finance and accounting shared service centres. This will also enable providers that lack highly technological service capabilities to tap into the sector for services including: o Contact centre services o General accounting o Accounts receivable/accounts payable o Invoice processing and help desk o Procurement
General	Contact centre services	• Omnichannel contact centre services • Traditional customer interaction services offerings across: o Relationship management o Customer retention o Customer acquisition

Democratic Republic of the Congo

The Democratic Republic of the Congo's ICT services sector is nascent. Its large market and location make the country very attractive for IT/BPM providers.

Macroeconomic and country data



Capital: **Kinshasa**

GDP: $47.2 billion

GDP per capita: $562

Real GDP growth rate: 4.3% (2019)

Inflation rate: 4.5% (2019)

Population: 84 million

- 0–14 years: 46.4%
- 15–24 years: 19.4%

Population growth rate: 3.2%

Major business sectors: Mining, agriculture, telecoms, government and infrastructure

Unemployment rate: 8.7%

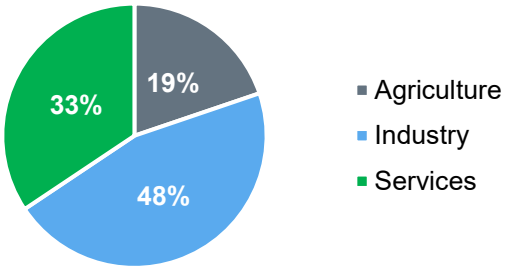
Literacy rate: 77%

Urbanization: 45.6%

Major trade and industry associations:

- *Autorité de Régulation de la Poste et des Télécommunications du Congo*
- *Société Congolaise des Postes et Télécommunications*

Gross domestic product composition



Key facts

Currency: Congolese franc (CDF)

Exchange rate (per $): 1,696

Foreign direct investment inflow: $4.3 billion

Major languages: French (official), Lingala, Kingwana, Kikongo, Tshiluba

Major religions: Christianity (80%+), Islam (3%)

Major exports: Cobalt, refined copper, copper ore, cobalt oxides and hydroxides, cobalt ore

Country highlights

The Democratic Republic of the Congo is the largest country in Central Africa in terms of both size and population, with 84 million people spread across 2,267,050 square kilometres of landmass.

In 2018, the country bounced back from a two-year recession caused by a drop in global demand for cobalt and copper, its top exports. The economy grew 4.1% in 2018 as demand for the two metals increased.

Inflation fell to 4.5% in 2019 from 29.5% in 2018, buoyed by better coordination of monetary and budgetary policies.

The economy relies rely heavily on its mining industry. Domestic demand has driven economic growth over the years.

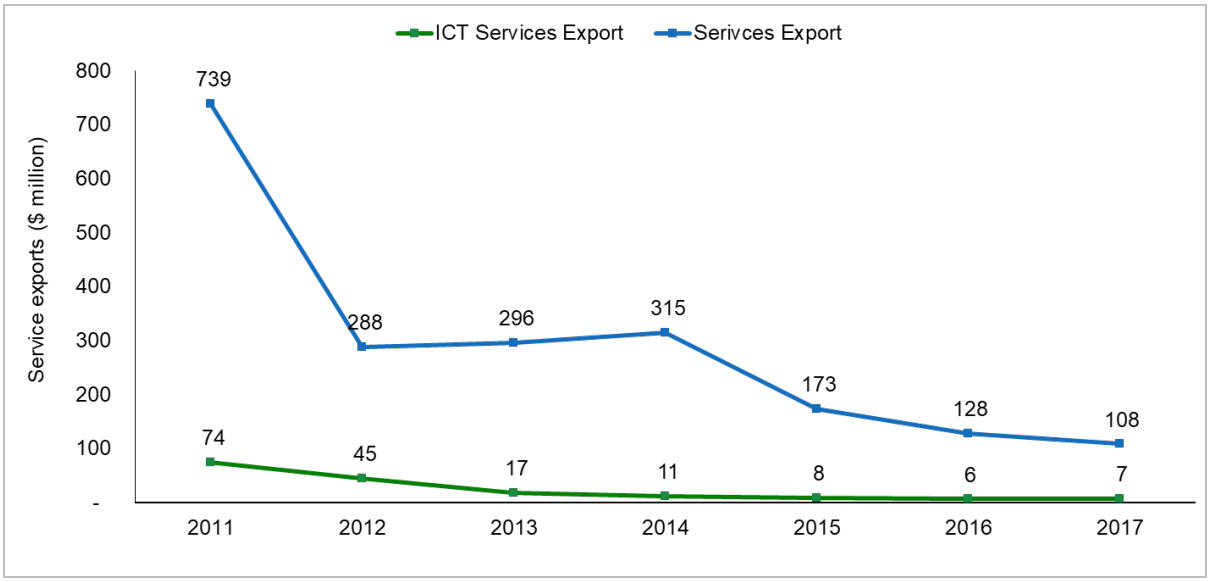
Sources: World Bank, Avasant Research.

Information and communications technology landscape

Tech sector is in the early stages of development

According to the World Bank, the Democratic Republic of the Congo exported $7 million in ICT services in 2017. This is a massive decline from the $74 million reported in 2011.

Figure 9 ICT contributes little to service exports[118]



Source: World Bank.

The outlook for the tech sector is promising. The large market size and the location of the country in the centre of Africa make it very attractive ICT providers.

Many improvements are being made to the ICT infrastructure in Democratic Republic of the Congo. The Government and China International Telecommunication Construction Corporation have invested heavily to develop a fibre-optic backbone network. The aim of the investment is to connect the major economic epicentres of Kinshasa, Lubumbashi and Kisangani to the rest of the country and improve mobile network infrastructure. The first two phases of the programme have been completed.

[118] https://databank.worldbank.org/reports.aspx?source=world–development–indicators

Why is the technology sector appealing?

Attractiveness factors

Favourable time zone
A difference of 1–3 hours with most European countries

Young workforce with more than 60% of the population age 25 and under

Competitive labour costs with an average monthly wage of $300

Strong government focus on ICT development exhibited through investment to improve ICT infrastructure

Main highlights

ICT service exports (2017): ~ $7 million

Services sector workforce: ~ 6 million[119]

Minimum daily wage: ~ $5

Average monthly wage: ~ $300 (IT/BPM services)

Main IT/BPM service offerings: Business administration, human resources and payroll, customer service and telemarketing

Key industries served: Mining, telecommunications, agriculture, manufacturing, government, NGOs, energy and financial services

Major markets served: China, Belgium, South Africa, Angola, Zambia and the United States

Key IT/BPM associations and agencies:

- *Autorité de Régulation de la Poste et des Télécommunications du Congo*
- *Société Congolaise des Postes et Télécommunications*

[119] https://globaledge.msu.edu/countries/democratic–republic–of–the–congo/economy

Key cities and technology centres

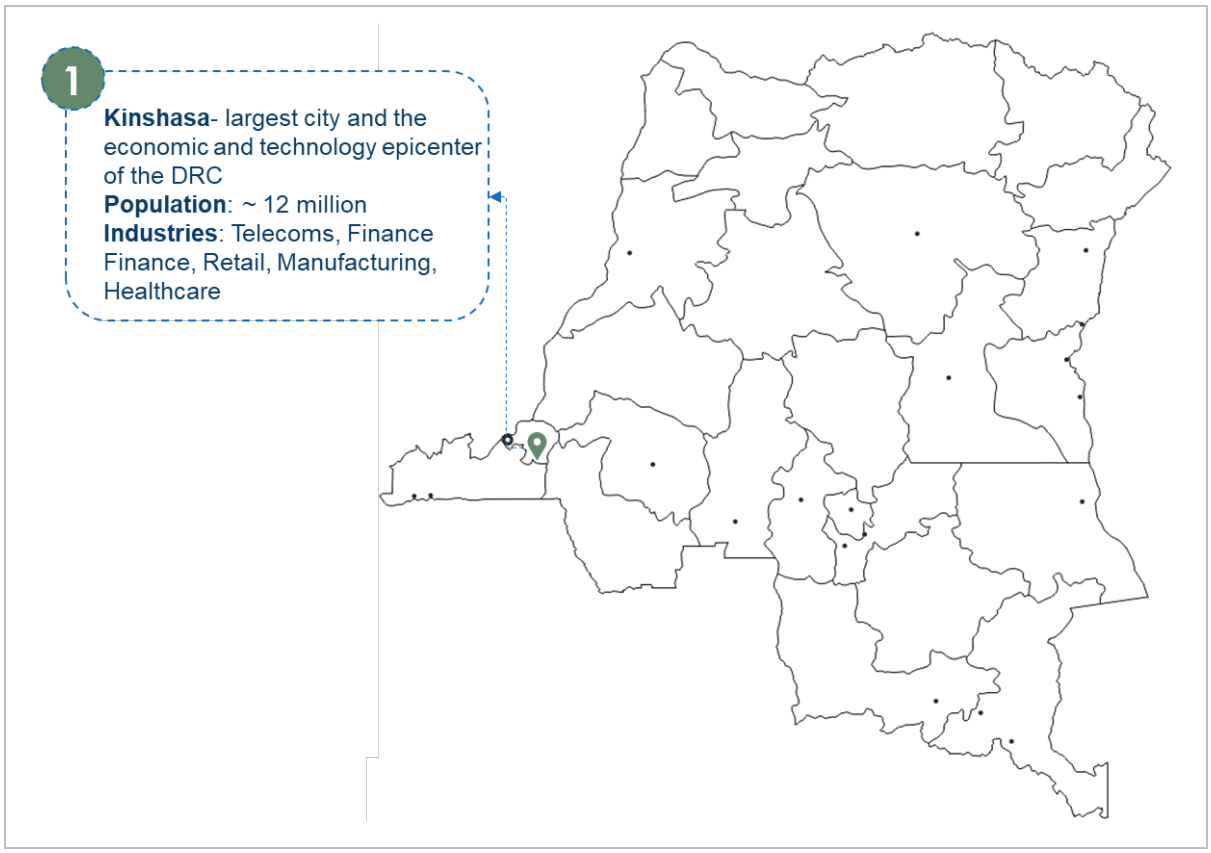
Most tech hubs are located in the capital

The biggest city in the Democratic Republic of the Congo is its economic epicentre, Kinshasa. Almost 12 million people live in the capital and its urban area. Other notable cities include Lubumbashi (1.4 million people), Mbuji-Mayi (875,000 people), Kisangani (540,000 people) and Masina (485,000 people).

The country, known for its budding ICT ecosystem, is home to an estimated 30+ tech innovation hubs and incubators. Most of these hubs are in Kinshasa, the most attractive city in terms of IT/BPM skill availability and demand. Various ICT conferences, such as Kinshasa Digital Week and the Kinshasa Start-up Summit, take place in the city.

Mobile operators and internet providers are the major partners to incubators and have been the catalyst for ICT development within the Democratic Republic of the Congo.

Figure 10 Kinshasa is the technology epicentre



Source: Avasant Research.

Table 37 Kivu is home to three tech hubs

City	ICT hubs/tech parks/start-up hubs [120]
Kinshasa	• Kinshasa Digital • Silkon Bantu • LLab (Digital Lumumba Lab) • Konnect • Congo iHub • Kobo Hub • Ingenious City • Congolia • Bakeli • Zair'Innov • Start IT Congo • Kinshasa Startup Academy • Kolissa • ProxyTech • Hub RDC • Incubaxe • Media Lab
Lubumbashi	• Cinolu
Kivu	• Kivu Hub • Kivu Entrepreneurs • EBIC

Source: Avasant Research.

The state of competition: Understanding the landscape

The technology sector is in its infancy

Some highlights of the IT/BPM sector include:

- **Most IT/BPM** providers are based in Kinshasa, the capital city and economic epicentre.
- **Competition in the sector** comes from large organizations that provide their own support services and a handful of SMEs that provide specialized services.
- **The major sectors being serviced** are mining, agriculture, telecommunications, financial services and not-for-profit sectors.
- **Providers offer a limited range of services.** Most services focus on helping foreign businesses set up their operations, human resources and payroll services, tax, telemarketing and customer service.

[120] https://static1.squarespace.com/static/5bc4882465019f632b2f8653/t/5c7378ee971a18427790b8c0/1551071476214/25+–+The+DRC+startup+ecosystem+and+its+challenges_formatting.pdf

- **The Government is regulating the sector's growth.** Outsourcing in the country is seen as a way to bypass labour regulations and the eliminate difficulties of managing a permanent staff base. Workers in the sector are generally on part-time contracts and receive lower salaries compared to permanent staff – sometimes as little as half of the salaries paid to permanent staff. In 2010, the Ministry of Labour prevented telecom provider Vodacom from letting go 11% of its workforce.[121]

The below table lists some of the service providers operating in the Democratic Republic of the Congo, the main services offered and the industries served. No international BPM provider is based in the country.

Table 38 Few service providers are based in the country

Service provider	Location	Examples of services offered	Industries served
Congo Call Center (CCC)	Kinshasa	Services include: • customer service • SMS and e-mails • database qualification • mystery shopper • training programmes	Sector agnostic
MD Services Sarl	Kinshasa	Outsourcing services include: • recruitment • staff training • contracts management • payroll and compensation	Mining, construction

Source: Avasant Research.

Service capacity and capability

Labour force needs better digital skills

In 2016, adult literacy in the Democratic Republic of the Congo stood at 77% and youth literacy (15–24 years) at 85%. Despite these high rates, human capital in the country is inadequate. The World Bank 2018 Human Capital Index, which measures a country's investment in the education and skills of its population, ranks the Democratic Republic of the Congo at 146th of 157 countries.[122] The main reason for the low ranking is that the country has prioritized investments for its mining sector rather than public education.

The Government and international organizations are working to improve education and human capital. The United States Agency for International Development (USAID) and the United Kingdom's Department for Internal Development have jointly funded a programme to improve education in the Democratic Republic of the Congo, under USAID's 2015–2019 Country Development Cooperation Strategy.

The table below examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

[121] https://www.giswatch.org/en/country–report/economic–social–and–cultural–rights–escrs/congo–democratic–republic
[122] https://openknowledge.worldbank.org/bitstream/handle/10986/30498/33252.pdf?sequence=5&isAllowed=y

Table 39 Literacy rate is among the highest in sub-Saharan Africa

Talent and skill availability	
No. of universities and colleges: 600+ Youth unemployment (15–24 years): ~8.7% Tertiary gross enrolment ratio: 6.6% (2016) Secondary gross enrolment ratio: ~ 46.2% (2015)	About 60% of the population are 25 years of age and under. The youth literacy rate stands at 85%. Although the country has an abundance of labour in the job market, most of the workforce is employed in the informal sector. Labour laws in the Democratic Republic of the Congo require that at least 10% of the staff of companies with at least 100 employees are local. This low local staff percentage means that foreign workers frequently fill technical and highly skilled roles.
Quality and employability of talent	
Quality of vocational training: Ranks 132nd of 141 countries Skillset of graduates: Ranks 132nd of 141 countries Ease of finding skilled employees: Ranks 117th of 141 countries Digital skills in active population: Ranks 138th of 141 countries Literacy • Youth literacy: 85% (2016) • Adult literacy: 77% English proficiency: Low French proficiency: High	The statistics in this section have been sourced from the WEF 2019 Global Competitiveness Index. The scoring, on a scale of 1 to 7, assesses how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well. The skilled labour force is ranked 121 out of 141 countries. The country scored 2.8 out of 7 on sourcing talent with digital skills and and 3.6 out of 7 on the ease of finding skilled employees. From a workforce skills perspective, the World Economic Forum ranks the Democratic Republic of the Congo in the bottom 10 of countries in the world. The official language is French, meaning the population is well suited to servicing francophone countries.
Scalability	
The Democratic Republic of the Congo has high potential in terms of scalability. The country had an estimated workforce of 36 million people in 2017 and adult and youth literacy rates are high. The Government has an ‘education for all’ goal that it hopes to achieve by 2030. This programme, in conjunction with support from international organizations, aims to improve education and reduce poverty. Continued government investments in education and human capital could help the country become an attractive market for sourcing skilled talent.	

ICT infrastructure

Despite improvements, more upgrades are needed

According to the WEF Global Competitive Index, the Democratic Republic of the Congo ranks 138 of 141 countries on ICT adoption. The Global Systems for Mobile Communications Association (GSMA) Mobile Connectivity Index analyses country performance according to infrastructure, affordability, consumer readiness and content availability. It ranks the country as the seventh least developed in Africa.[123]

Fixed-line infrastructure, like in most low-income African countries, requires improvements. This is why most people in the country rely on cellular networks to communicate and access information. Furthermore:

- Mobile phone penetration stands at 44%, and 13% of mobile users have access to mobile broadband.
- 2.5G is the prevalent mobile network available to the population.
- 3G connectivity is on the rise, with a penetration rate of 52% in 2018 – up from 41% in 2017.

A lack of internet connectivity hinders the development of ICT in the country. In addition:

- It is estimated that a 50 gigabyte internet bundle costs $100 a month.[124]
- Fewer than 10% of businesses have websites. Most use social media platforms to promote their businesses.

Nonetheless, the IT/BPM sector appears to have an encouraging future, thanks to several factors:

- The Government and mobile network providers have worked to improve ICT infrastructure.
- The *Société Congolaise des Postes et Télécommunications* is committed to quadrupling fibre capacity within the country, starting with Kinshasa.
- In 2018, global telecom tower infrastructure company Helios Towers invested in upgrading mobile infrastructure that will cover 1,400 km and affect six million people in the country.

[123] http://www.mobileconnectivityindex.com/#year=2018&zoneIsocode=COD&analysisView=COD&comparison=0
[124] https://www.engineeringforchange.org/news/ict–drc–challenges–solutions–opportunity/

Table 40 Infrastructure improvements offer many opportunities

Telecom[125]
• Fixed telephone subscriptions (per 100 people) – 0.001 • Mobile cellular subscriptions (per 100 people) – 43.4 • % of the population with access to 3G – 52%
Wireless is the common method to access information. About 44% of the population has access to a mobile phone. However, access varies greatly by location. Mobile phone penetration is estimated at 80% in urban areas and 21% in rural areas.[126] Inadequate infrastructure and the costs of mobile services are the major challenges affecting the penetration of mobile phones in the country.
Broadband/bandwidth[127]
• Fixed broadband subscriptions (per 100 people) – 0.001 • Active mobile broadband subscriptions (per 100 people) – 16.2 • Individuals using the internet (% of population) – 8.6% • International internet bandwidth per internet user (kilobits per second) – 0.5
Only about 13% of mobile phone users have access to the internet. The GSMA Mobile Connectivity Index 2018 gives the Democratic Republic of the Congo an index score of 26.1 out of 100.
Energy and power[128]

• **Installed capacity:** 2,677 MW
• **Access to electricity (% of population):** 9%–13%
  ○ Urban (% of urban population): 19%
  ○ Rural (% of rural population): 1%–4%
• **People without power:** 13 million households (84% of the population)
• **Quality of electricity supply**: Ranks 91st of 141 countries

Electrification rates are very low compared to the rest of the world. According to USAID, 9%–14% of the population have access to electricity.[129] Hydropower generates 99% of the energy produced in the country. Electricity supply has improved little because the national electric grid is not interconnected and the infrastructure has been damaged by weather conditions or conflict. Research by the University of Edinburgh in 2018 found that 86% of the businesses in the northern part of the country believe unreliable electricity prevents them from operating effectively.[130] The Democratic Republic of the Congo aims for 65% of its population to be connected to the electricity grid by 2025. The Government is also targeting universal electricity access for its citizens by 2030.

[125] https://www.itu.int/en/ITU–D/Statistics/Documents/publications/misr2018/MISR–2018–Vol–2–E.pdf
[126] *Ibid*.
[127] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[128] https://www.usaid.gov/powerafrica/democratic–republic–congo
[129] https://www.usaid.gov/sites/default/files/documents/1860/DRC–_November_2018_Country_Fact_Sheet_0.pdf
[130] https://nextbillion.net/drc–energy–urban–development/

Government incentives and policies

Exemptions and tax breaks aim to bolster the sector

Several incentives and policies govern the establishment and operations of businesses in the Democratic Republic of the Congo. These are outlined below.

What incentives support business development?

The regulatory information shown below is based on inducements offered to foreign businesses. Incentives are generally reduced tax rates or exemptions, including:

- Exemption from corporate tax.
- Exemption from property tax.
- Exemption from import duties on equipment and other materials. However, the investor must pay an administrative fee of 2% on importation and 16% VAT. The tax authority reimburses VAT.
- Exemptions from export duties on finished products.

Business registration procedure[131]

The business registration procedure shown below has been excerpted from the International Trade Administration.

Steps to establish a business:

- Complete the application form on the online registration portal – *Guichet Unique.*
- Submit the application with other required documentation at the *Guichet Unique* or register online.
- Get a receipt from the *Guichet Unique* and pay required fees at a designated bank.
- Request a registration certificate from the Trade and Personal Property Credit Register.

Required application information:

- For corporations: Completed application form, four copies of the company charter, a Statement of Subscription (document showing shareholding structure), proof of available capital, the signature of the manager and copies of identity documents of the business manager and shareholders.For sole proprietors: A copy of the applicant's identity document, criminal record, proof of residence and signature

Other details:

- There is no minimum capital requirement for corporations. Limited liability companies must provide capital of at least $20,000.
- Corporations pay the $110 *Guichet Unique* fee to certify the company charter, register at the Trade and Personal Property Credit Register, publish the company charter in the Official Journal and obtain authorization and a business licence.
- Sole proprietorships pay $40 for a national identification number, business registration and authorization to open a business.
- It should be noted that some sectors have additional requirements for starting and conducting commercial activities.

[131] https://www.export.gov/apex/article2?id=Congo–Democratic–Republic–Establishing–an–Office

What is the focus of tech policy?

Two government bodies are responsible for IT/BPM regulation and compliance:

- *Autorité de Régulation de la Poste et des Télécommunications du Congo*
- *Société Congolaise des Postes et Télécommunications*

Table 41 What policies seek to draw foreign investors to the tech sector?

Income and taxation	**Corporate taxation:**
	• The 35% tax rate applies to incorporated firms as well as subsidiaries or branches of a foreign company in the Democratic Republic of the Congo.
	• A 30% tax rate applies to mining companies.
	Withholding taxes:
	• Dividends – dividends or other distributions made to a resident or non-resident are subject to withholding tax of 20%. Mining companies pay 10%.
	• Interest – interest paid to residents and non-residents is subject to 20% withholding tax. An exemption applies to interest paid to mining companies, if certain conditions are met.
	• Royalties – royalties paid to a resident or non-resident are subject to a 20% withholding tax on the net amount.
	• Technical service fees – technical service fees are subject to 20% withholding tax on the net amount.
	• Double taxation agreements are in force with Belgium and South Africa.
	Other taxes on corporations:
	• Payroll tax – employers must submit monthly pay-as-you-earn returns on behalf of their workers. The rate is 3% for companies with 1–50 employees, 2% for companies with 51–300 employees and 1% for companies with a workforce exceeding 300 employees.
	• Social security contributions.
	• Employer contribution rate includes;
	  ○ Family welfare – 6.5%
	  ○ Professional risk – 1.5%
	  ○ Retirement pension – 5%
	• Employees contribute 5% of their monthly remuneration, which is withheld by the employer and paid to the authorities.
	• Stamp duty – There is no stamp duty
	• VAT – 16%

Labour laws	• Minimum daily wage is 7,075 Congolese francs ~$4 • Any employment contract should be in writing and mention certain details.In the absence of a written contract, the employee may prove the existence and scope of the contract by all legal means, including witnesses. • Every employment contract shall either be for a fixed term or open ended. In the absence of a written contract, the contract shall be presumed open-ended until written evidence to the contrary. • The Labour Code stipulates that every employment contract can include a probationary period, provided this period is specified in writing and does not exceed one to six months, depending on the specialization of the employee.
Work permits and business visas	The immigration authorities issue the following visas for expatriate workers: • The *visa d'établissement de travail* is valid for one to two years, depending on the work permit validity. • A *visa d'établissement de travail spécifique* can be delivered for up to one year and is not renewable. **Obtaining a work permit:** Any employer willing to hire an expatriate must file a dossier with the regional employment office consisting of: • The application for an expatriate work card *(carte du travail)* • A draft employment contract • The resumé of the person under consideration • Evidence of the professional skills and expertise of the applicant • The job description • A list of all other expatriate employees • Any training, advance training and professional adjustment programmes • A copy of the letter of application for the expatriate work card The expatriate must then apply for an expatriate work card with the National Commission of Hiring Foreigners (*Commission Nationale de l'Emploi des Etrangers)*. Once the work card is granted, the expatriate can obtain a visa for settlement with employment purpose as laid down by employment regulations.

Trade associations offer a helping hand to tech firms

The IT/BPM service sector is in its infancy. Most local organizations serve international NGOs as well as the agriculture, telecoms and mining industries. Several associations and bodies have been established to accelerate and maintain the growth of the ICT sector.

Table 42 Two key associations work in the sector

Agency	Contact
Autorité de Régulation de la Poste et des Télécommunications du Congo	Website: https://www.arptc.gouv.cd/
Société Congolaise des Postes et Télécommunications	Website: http://www.scpt.cd/web/

Growing market potential

Tech sector serves many domestic industries

The sectors with high growth potential are healthcare, banking, finance and insurance services, and the telecommunications and manufacturing. IT/BPM companies looking to set up businesses in the country should provide services that support the large firms operating in these sectors.

The primary factors they must consider are the size and year-over-year growth of each sector, including expected growth; drivers of growth; market trends and IT/BPM trends for the industry. These are outlined in the following table.

Table 43 Several fast-growing sectors have outsourcing potential

Healthcare	

Size of industry: $3.23 billion
 	
Contribution to GDP: 0.7%
	• Healthcare expenditure represented 3.9% of GDP in 2016.
	• The Government has identified where improvements are needed and aims to provide universal health coverage (described in the *Plan National de Developpement Sanitaire 2016–2020).*
	• The plan aims to give the population access to better-quality healthcare and services.
	• The national plan also identifies priorities, targeting underfunded areas of family planning, nutrition, adolescent health and civil and vital statistical reporting.[132]
	• The sector needs support on:
	  ○ Governance – assistance to develop, implement, monitor and evaluate annual operational plans at the provincial and local levels;
	  ○ Supply chain – improving the availability of essential medicines at all levels of the health system;
	  ○ Human resources – managerial and technical expertise;
	  ○ Service delivery – providing healthcare across selected regions.

[132] https://www.globalfinancingfacility.org/democratic–republic–congo

Banking, finance and insurance services	
Size of industry: $4 billion Contribution to GDP: 7%	• Traditional financial institutions have been unable to reach low-income customers, especially those living in remote areas, due to the cost structure of retail financial services. • About 17% of the population has a bank account. This banking penetration rate is half the sub-Saharan African average.[133] • Improvements in mobile phone penetration and broadband connectivity mean banks can offer a range of innovative financial services to customers who might be hard to reach or deemed too expensive to serve.
Telecommunications and manufacturing	
Size of industry: ~ $9 billion+ expected by 2025 Contribution to GDP: 30% Growth rate: 8%	• The population of the country is expected to reach 200 million by 2050,[134] and 60% of this population will be under 25 years of age. • The telecommunications and manufacturing sectors are nascent, but have much potential for growth. • Both these sectors face sub-par infrastructure. Road networks require improvements, power supply is erratic and there is a scarcity of skilled workers. • The Democratic Republic of the Congo satisfies 70% of global demand for cobalt.[135] The country has been referred to as the Saudi Arabia of the electric vehicle era. An estimated 118 million electric vehicles will be on the road by 2030. • Mobile phone penetration stands at just 44%, and only about 8% of the population has access to the Internet

[133] http://documents.worldbank.org/curated/en/434271511502483598/pdf/121528–WP–PUBLIC–ZR–Gender–Case–Study–FINCA.pdf
[134] https://www.chinadaily.com.cn/a/201909/12/WS5d7a04a1a310cf3e3556b482.html
[135] https://globalriskinsights.com/2018/10/drc–cobalt–a–potential–achilles–heel–of–electric–vehicles/

Market access opportunities

Health, finance, telecom and manufacturing show the most promise

The IT/BPM sector in the Democratic Republic of the Congo is still in its infancy. However, the large market and the location of the country in the middle of the continent make it an appealing base from which to service other African countries.

The market access opportunities discussed in this section focus on established business sectors with high growth potential that could be serviced by IT/BPM organizations.

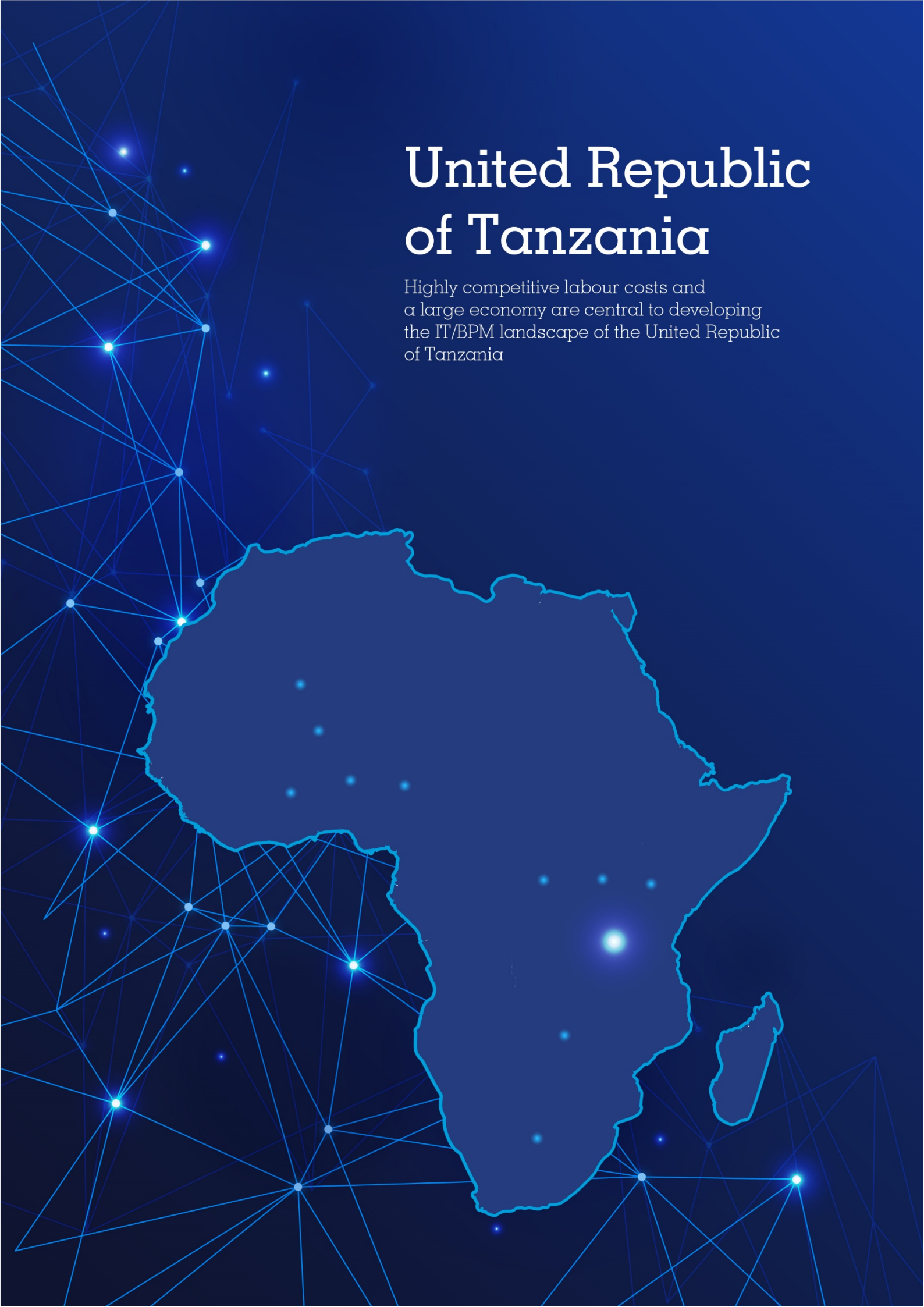
Table 44 Three sectors offer different opportunities

Industry	Service area	Description
Healthcare	• Digital health solutions • Healthcare application services • Customer and data management	The *Plan National de Developpement Sanitaire 2016–2020* drew more attention and investment to the health sector. The Government and international agencies such as the United Nations Children's Fund, the World Health Organization and USAID have been the major drivers and implementers of reform in the health sector. The main opportunities for IT/BPM providers include: • Enterprise resource planning and customer relationship management systems – development and maintenance • Customer records management • Customer support • Healthcare application maintenance • Telemedicine • Electronic medical records system solutions • Insurance registration and claims systems • Mobile health solutions • Hospital management information system solutions • Health information system solutions • Insurance registration and claims systems

Banking, finance and insurance services	• Digital payments • Online banking • Peer-to-peer lending • Personal finance • Insurance • Mobile remittances	Improved mobile penetration rates and better ICT infrastructure and mobile broadband access in rural areas present a chance to create and manage more mobile banking and insurance services. The main opportunities for IT/BPM providers include: • Contact centre technology • Back-end contact centres • E-project management • Business research and analytics • Legal process outsourcing • Business administration
Telecoms and manufacturing	• Customer service • Managed IT • Business administration	Increased global demand for lithium batteries and electric vehicles, including in Africa, makes the Democratic Republic of the Congo an attractive location for automotive companies, because of its mineral resources. Mobile network providers are investing huge amounts of money in the telecommunications sector, seeking to win new customers and improve the range of services offered in the country. Some of the primary opportunities for IT/BPM organizations include: • Contact centre technology • E-project management • Business research and analytics • Legal process outsourcing • Business administration • Procurement

United Republic of Tanzania

Highly competitive labour costs and a large economy are central to developing the IT/BPM landscape of the United Republic of Tanzania



Macroeconomic and country data

Capital: **Dodoma**

GDP: $58 billion

GDP per capita: $1,051

Real GDP growth rate (2018–19): 5.6%

Inflation rate: 3.5%

Population: 56 million
- 0–14 years: 42.7%
- 15–24 years: 20.4%
- Population growth rate: 2.7%

Major business sectors: Agriculture, mining, manufacturing, natural gas, tourism

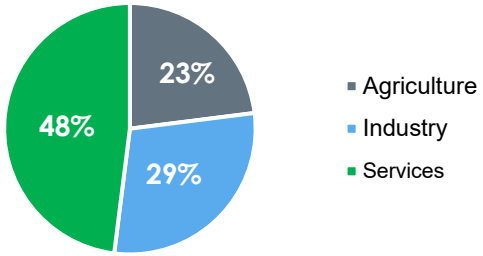
Unemployment rate: 1.9%

Literacy rate: 78%

Urbanization: 34%

Major trade and industry associations:
- The Tanzania Chamber of Commerce, Industry and Agriculture
- Confederation of Tanzania Industries
- Tanzania ICT Enhancement Association

Gross domestic product composition



Key facts

Currency: Tanzanian shilling (TZS)

Exchange rate (per $): TZS 2,306

Foreign direct investment inflow: $1.1 billion

Major languages: Swahili and English

Major religions: Christianity, Islam

Major exports: Gold, coffee, tobacco

Country highlights

The Tanzanian economy relies on agriculture, which accounts for 23% of GDP and 65% of the labour force. Gold also contributes to a sizable portion of exports (35%).

The financial sector is growing rapidly, with 41 commercial banks and seven mobile money service players. About 65% of the population has access to formal financial services and products.

Seven companies dominate the sector: Airtel, Smart, Halotel, Tigo, TTCL, Vodacom and Zantel. Mobile subscriptions reached 44 million in 2018.

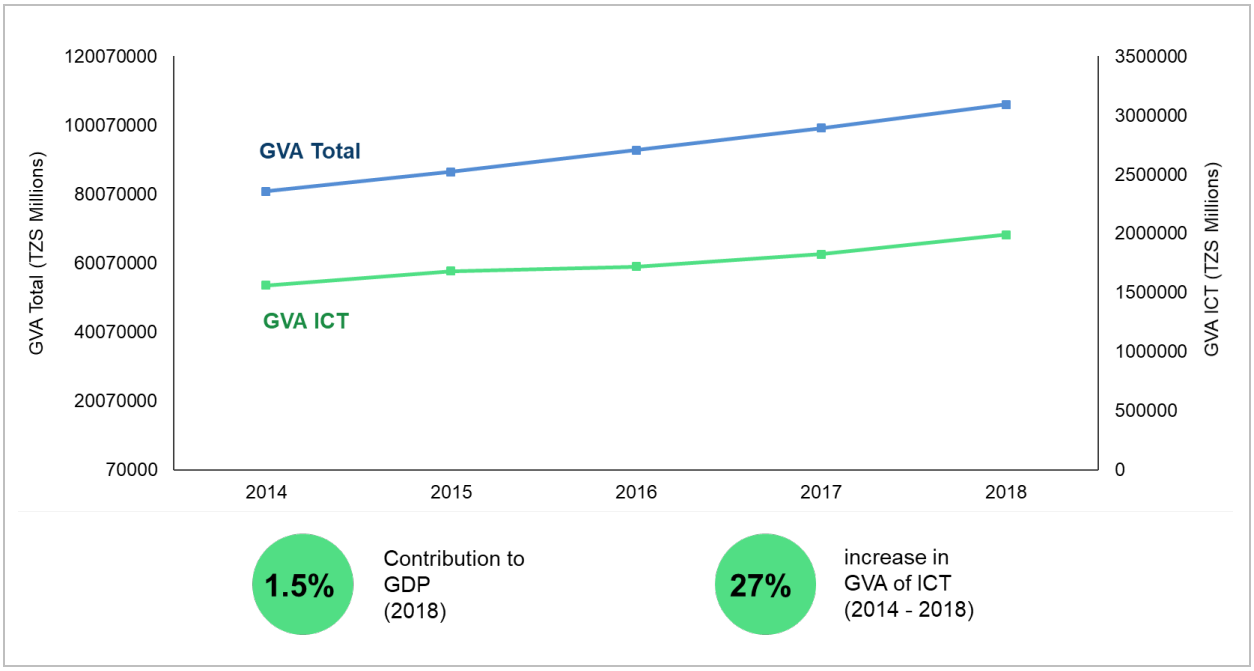
Sources: World Bank, Avasant Research.

Information and communications technology landscape

Tech sector is growing rapidly

The United Republic of Tanzania has a small ICT sector that contributed 1.5% to GDP in 2018 and was worth an estimated $843 million[136] that year. ICT has been one of the fastest-growing sectors in the country, expanding 9.1% in 2017–2018.

Figure 11 Tanzanian ICT sector is growing steadily



Source: National Bureau of Statistics Tanzania.

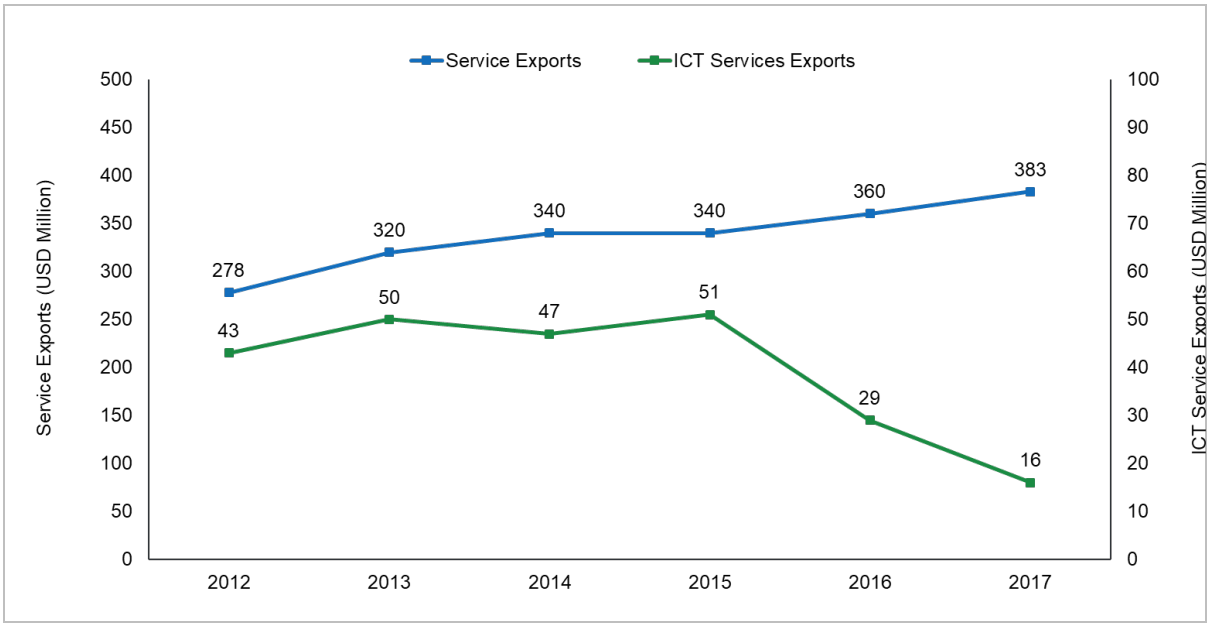
In 2017, the United Republic of Tanzania exported $15.9 million in ICT services (a key measure of IT/BPM services),[137] accounting for 0.4%[138] of total service exports. These exports have been falling since 2015.

[136] https://www.nbs.go.tz/nbs/takwimu/na/National_Accounts_Statistics_of_Tanzania_Mainland_2018.pdf

[137] According to the World Bank, information and communication technology service exports include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).

[138] https://data.worldbank.org/indicator/BX.GSR.CCIS.ZS?locations=TZ

Figure 12 ICT service exports have been declining since 2015



Source: World Bank.

Why is the Tanzanian tech sector appealing?

Attractiveness factors

Favourable time zone

A difference of 2–3 hours with the United Kingdom and most European countries

Young workforce with more than 30 million people between 15 and 34 years of age[139]

Competitive labour costs with an average monthly wage of $170[140]

Main highlights

Market size: ~ $80 million[141]

Workforce: ~ 5,000[142]

Entry-level salary (monthly): ~ $150–$200[143]

Main IT/BPM service offerings: Inbound customer service, inbound-dealer help desk, outbound sales, back office, interactive voice response deployment/management, data cleanup, IT support, enterprise resource planning

Key industries served: Government, telecommunications, financial services, media, logistics

Examples of buyers:

airtel, vodacom, TAA, TIB Corporate Bank, CRA, Ecobank The Pan African Bank, tigo

Key IT/BPM associations and agencies:

- Tanzania Communications Regulatory Authority
- Tanzania ICT Enhancement Association

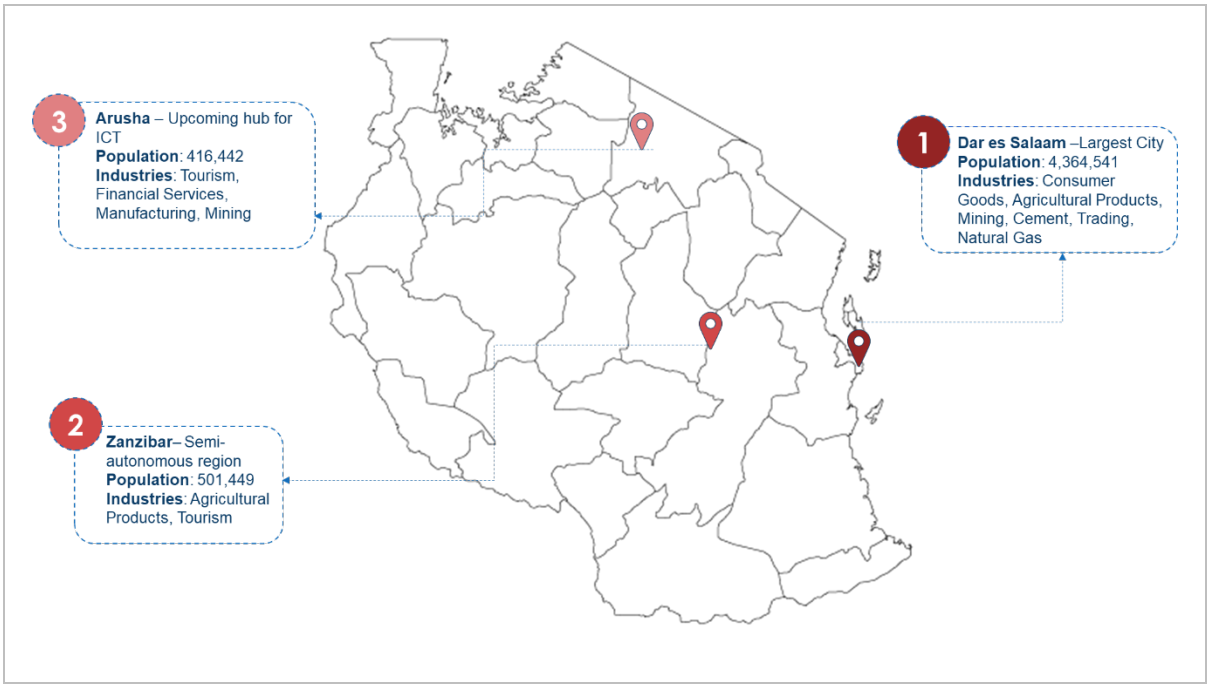
[139] https://www.worldometers.info/world–population/tanzania–population/
[140] https://www.glassdoor.com
[141] Avasant Research
[142] *Ibid.*
[143] *Ibid.*

Key cities and technology centres

Dar es Salaam is the main tech centre

The small Tanzanian IT/BPM sector is mostly active in Dar es Salaam, which is also the biggest city in the country, with a population of 4.4 million.[144]

Figure 19 Arusha is emerging as an ICT hub



Source: Avasant Research

Table 45 Five hubs, tech parks and start-ups are based in Dar es Salaam

City	ICT hubs/ tech parks/ startup hubs
Dar es Salaam	- Buni Innovation Hub - Ndoto Hub - Seedspace - SafeSpaceTZ - SaharaSparks
Zanzibar	- Zanzibar Technology Business Incubator
Arusha	- Twende Makerspace

Source: Avasant Research

[144] https://www.citypopulation.de/en/tanzania/cities/

The state of competition: Understanding the landscape

Local businesses can choose from several providers

The IT/BPM industry is in a nascent stage, with just a handful of providers offering services to local businesses.

The following table describes the main services offered and industries served by some of the leading service providers in the United Republic of Tanzania. International players are highlighted in blue.

Table 46 Providers offer a range of services

Service provider	Headcount Location	Examples of services offered	Industries served
Techno Brain Group	100+ Dar es Salaam	IT services, business process outsourcing, software solutions	Government, banking, financial services and insurance, manufacturing, utilities, logistics, mining
iSON Xperiences	1,300+ Dar es Salaam	Inbound customer service, inbound-dealer help desk, outbound sales, back office, interactive voice response deployment/ management, showroom staff deployment and management services, social media care, electronic know-your-customer process, data cleanup	Telecommunications, media
PCCI Group	Dar es Salaam	Business process services	Telecommunications
ICTPack	50+ Dar es Salaam	IT support and consulting, cloud and web hosting, content management systems, digital marketing	Government, banking and financial services, logistics, NGOs
CATS Tanzania	200+ Dar es Salaam	IT consulting, infrastructure services, IT security	Government, banking and financial services, telecommunication, education, hospitality, manufacturing
SourceNets	50+ Dar es Salaam	Web development, IT security, mobile applications, enterprise resource planning systems, payment solutions	Retail, human resources

Source: Avasant Research.

Service capacity and capability

Population is young and educated

The United Republic of Tanzania was ranked 130 of 157 countries in the World Bank 2018 Human Capital Index. The country has a very young and educated population, with a median age of 18.2 years[145] and a literacy rate of 77.9%.[146] More than half of the population is rural (64.8%), though urbanization is picking up pace (growing 5.2% every year).[147] This positions the country as a potential destination for IT/BPM services.

The table below examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

Table 47 Tech sector can draw from large pool of new graduates

Talent and skill availability	
No. of universities: 34[148]	The Tanzania Commission for Universities has accredited 34 universities in the country. With roughly 63,000 graduates entering the job market annually, potential IT/BPM professionals can be consistently drawn from the large graduate pool. Considerably high level of youth unemployment can also be exploited to build a resource pool for the industry.
Annual tertiary graduates: ~ 63,000[149]	
Youth unemployment: 3.4%[150]	
Tertiary gross enrolment ratio: 4%[151]	
Secondary gross enrolment ratio: 29%[152]	

[145] https://www.cia.gov/library/publications/the–world–factbook/geos/tz.html
[146] *Ibid*.
[147] *Ibid*.
[148] https://www.tcu.go.tz/sites/default/files/UNIVERSITY%20INSTITUTIONS%20IN%20TZ%20AS%20OF%2017.4.2019.pdf
[149] https://www.tcu.go.tz/sites/default/files/Admission%20and%20Graduation%20Statistics.pdf
[150] https://data.worldbank.org/indicator/SL.UEM.1524.ZS?locations=TZ
[151] http://uis.unesco.org/en/country/tz?theme=education–and–literacy
[152] *Ibid*.

Quality and employability of talent	
Quality of vocational training: Ranks 71st of 141 countries	Based on the World Economic Forum Global Competitiveness Index, the quality of the education system in the United Republic of Tanzania is average. The country performs average in terms of the skillset of graduates, ranking 75th based on the extent graduating university students have the skills needed by businesses. It secured a higher ranking (61) on the ability of companies to find people with the skills required to fill vacancies, i.e. the ease of finding skilled employees. This higher rating can be attributed to the availability of college graduates in the country, coupled with moderately high levels of unemployment and underemployment. These factors enable skilled employees to search for better job opportunities. In terms of adult literacy, the United Republic of Tanzania ranks ahead of many countries competing for a share of the offshore services market, with youth literacy at 85.7% and adult literacy at 77.8%.
Skillset of graduates: Ranks 75th of 141 countries	
Labour force with advanced education: 94.3%[153]	
Ease of finding skilled employees: Ranks 61st of 141 countries	
Digital skills in active population: Ranks 90th of 141 countries	
Literacy • Youth literacy: 85.7%[154] • Adult literacy: 77.8%[155]	
Language proficiency: Medium English-speaking capability	

Scalability
The large pool of tertiary graduates means there is potential for IT/BPM operations to scale. However, there must be adequate training mechanisms to supplement the skills of these graduates so they can perform effectively in the industry.

[153] https://data.worldbank.org/indicator/SL.TLF.ADVN.ZS?locations=TZ
[154] https://data.worldbank.org/indicator/SE.ADT.1524.LT.ZS?locations=TZ
[155] https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=TZ

ICT infrastructure

Improvement is needed

There are 77.2 mobile handsets per 100 people in the United Republic of Tanzania.[156] The infrastructure to support ICT has improved over the years, and the Government has facilitated the growth through its policy and investment. However, few businesses and individuals go online because of high internet costs.

Table 48 Few Tanzanians have fixed telephone subscriptions

Telecom[157]
• Fixed telephone subscriptions (per 100 people) – 0.2 • Mobile cellular subscriptions (per 100 people) – 77.2
As seen in most sub-Saharan countries and other developing economies, there are far mobile service subscriptions than fixed telephone subscriptions in the United Republic of Tanzania. This is due largely to prohibitive costs and less developed fixed-line infrastructure.
Broadband/bandwidth[158]
• Fixed broadband subscriptions (per 100 people) – 1.5 • Active mobile broadband subscriptions (per 100 people) – 3.2 • People using the internet (% of population) – 25% • International internet bandwidth per internet user (kilobits per second) – 6.1 • % households with internet access – 4.1%
Fixed broadband penetration is also low, with a rate of 1.5 per 100 people. The broadband infrastructure has improved, as access to international subsea fibre-optic cables means lower internet costs. In terms of cost of mobile data, the United Republic of Tanzania ranks 126th of 230 countries on mobile data affordability (based on the worldwide mobile data pricing by Cable.co.uk). The average price of 1 gigabyte of data in the country is $5.90 on a 30-day plan.[159]

[156] https://www.itu.int/en/ITU–D/Statistics/Pages/stat/default.aspx
[157] *Ibid.*
[158] *Ibid.*
[159] https://www.cable.co.uk/mobiles/worldwide–data–pricing/

Power[160]

- Electric power consumption (kWh per capita) – 108
- **Generation capacity**
  - Installed capacity: 1,504 MW
- **Connections**
  - Current access rate: 33%
    - Rural: 17%
    - Urban: 65%
- Quality of electricity supply – Ranks 101st of 141 countries

The Government has set a goal of increasing generation capacity to 10,000 MW by 2025 by attracting private investments in the sector. However, the current state of electricity may hinder efforts to draw IT/BPM companies and investments to the country, because the sector depends on stable and reliable electricity supply.

Cost of electricity[161]

	Cost ($) household, kWh	Cost ($) business, kWh
United Republic of Tanzania	0.1	0.103
World average	0.15	0.13

Government incentives and policies

Development Vision 2025 targets tech sector

One of the objectives of Development Vision 2025 is upgrading the Tanzanian tech sector. The key initiatives of the plan include skill development, capability building and creating a knowledge society in the country.

What incentives support business development?[162]

- Import duty and VAT exempted by 100% on capital goods required for projects.
- Import duty exempted by 75% on deemed capital goods such as equipment, building materials and utility vehicles.
- Automatic immigration quota, protection against non-commercial risks and nationalization.
- Exemption from corporate tax, withholding tax on rent, dividends and interest for 10 years in export processing zones.

[160] https://www.usaid.gov/powerafrica/tanzania
[161] https://www.globalpetrolprices.com/tanzania/electricity_prices/
[162] https://www.jetro.go.jp/ext_images/world/africa/seminar_reports/pdf/20160303/s7.pdf

Business registration procedure
• Apply for clearance of the proposed business name • Get a notarized compliance declaration • Apply for business incorporation and get the certificate of incorporation • Apply for taxpayer identification number from Tanzania Revenue Authority • Apply for a business licence at the Ministry of Industry and Trade • Apply for VAT certificate from Tanzania Revenue Authority • Register for employee compensation insurance • Get social security registration numbers from all mandatory social security schemes

What is the focus of tech policy?

The Tanzania Communications Regulatory Authority regulates the ICT sector. The following regulatory and compliance policies govern the IT/BPM sector.

Table 49 Minimum wages have been set for all workers

Labour laws (Labour Employment and Labour Relations Act 2004)	• The Ministry of Labour and Employment has fixed minimum wages of unskilled, semi-skilled and skilled workers across occupations. • The ministry has also defined laws governing termination of employment, resignation, leave days, maximum working hours and maternity leave.
Visa and immigration policies	• Business visas are available for executives and investors travelling to the country for business meetings/discussions and short-term assignments (Fee: $50). • Visas can be easily obtained from any Tanzanian embassy abroad. They are valid for a 90-day stay (not for employment) and are extendable.
Cybersecurity and data privacy regulations	• Cybercrime is covered under the Cybercrimes Act 2015, which has provisions for criminalizing offences involving ICT and computer systems.

Growing market segments

Telecommunications and trade and retail are fast-growing industries

The IT/BPM sector is an enabling sector for other vertical markets. It serves a wide range of sectors, including banking and financial services, insurance, telecommunications, automobile, retail, fast-moving consumer goods, e-commerce, agriculture, tourism and government.

Before deciding to establish in a country, providers must identify target verticals with high growth potential. This not only ensures that there is demand for their services, but it safeguards sustainability and scalability of operations.

The telecommunications and trade and retail industries have huge potential to generate demand for IT/BPM services in the United Republic of Tanzania. The main factors considered are the size and year-over-year growth of each sector, including expected growth, drivers of growth, market trends and IT/BPM trends.

Table 50 Telecom and retail sectors are growing rapidly

Telecommunications[163]	
Size of industry: ~ $800 million Contribution to GDP: 1.5% Growth rate: 9.1%	• Telecommunications is one of the fastest-growing sectors in the country. • The sector is one of the biggest domestic buyers of IT/BPM services. • Seven companies are active in the telecom sector, meaning it is highly competitive. • International players such as iSON have signed business process outsourcing deals with telecom companies in the United Republic of Tanzania.
Trade and retail[164]	
Size of industry: ~ $5.8 billion Contribution to GDP: 9.1% Growth rate: 5.8%	• A very young population with a fast urbanization rate will increase the base for customers for retail services, including e-commerce. • The retail sector is growing steadily and has the potential to generate huge demand for IT/BPM solutions and services. • Online marketplaces such as Jumia, Kaymu and Kivuko have started to gain traction in the retail market.

[163] https://www.nbs.go.tz/nbs/takwimu/na/National_Accounts_Statistics_Popular_Version_2018.pdf
[164] https://www.nbs.go.tz/nbs/takwimu/na/National_Accounts_Statistics_Popular_Version_2018.pdf

Market access opportunities

Telecommunications and retail sectors likely to drive demand

The trends seen in the growing market segments showcase the sectors that are likely to drive demand for IT/BPM services in Tanzania: telecommunictions and retail. The two sectors offer different opportunities, as highlighted in Table 60.

Table 51 Telecom sector will help spur innovaton

Industry	Service area	Description
Telecommunications	Customer service Back office Showroom staff deployment End user devices support Managed IT	• The telecom sector is one of the biggest domestic buyers of IT/BPM support services. • The seven companies active in this sector are highly competitive, which drives demand for better customer service. That, in turn, drives the demand of innovative IT/BPM solutions. • Mobile money has been game changer across Africa, helping to provide financial access to the population. Mobile money operations also increase the demand for information technology.
Retail	E-commerce solutions	• According to management consulting firm McKinsey, African online sales will reach $75 billion by 2025. • 25% of the population has internet access, which will boost demand for e-commerce.

Zambia

Fast-growing telecommunication sector supports a maturing IT/BPM landscape

Macroeconomic and country data

Capital: **Lusaka**

GDP: $26.7 billion

GDP per capita: $1,540

Real GDP growth rate (2018–19): 2.5%

Inflation rate: 7.5%

Population: 18.2 million
- 0–14 years: 44%
- 15–24 years: 21%
- Population growth rate: 2.9%

Major business sectors: Agriculture, mining, construction, tourism, textiles, chemicals

Unemployment rate: 11.4%

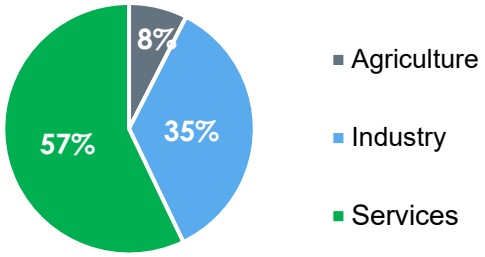
Literacy rate: 86.7%

Urbanization: 43.5%

Major trade and industry associations:
- Zambia Chamber of Small and Medium Business Associations
- ICT Association of Zambia
- Zambia Chamber of Commerce and Industry

Sources: World Bank, Avasant Research.

Gross domestic product omposition



Key facts

Currency: Zambian kwacha (ZMW)

Exchange rate (per $): ZMW 14.7

Foreign direct investment inflow: $408 million

Major languages: English (official language)

Major religions: Christianity

Major exports: Copper, sugar, tobacco

Country highlights

Mobile subscriptions rose to 15.5 million in 2018 from 12 million in 2016.

Zambia is the second-largest producer of copper in Africa and depends on the metal as its major export. However, other Zambian industries have also been attracting investment. These include manufacturing, cement, textiles, agroprocessing, mineral processing, energy and tourism.

About 38% of the population has access to formal financial services and products. The telecom sector has several major players, such as Airtel Zambia, Liquid Telecom, MTN Zambia, Zamtel and Vodafone Zambia.

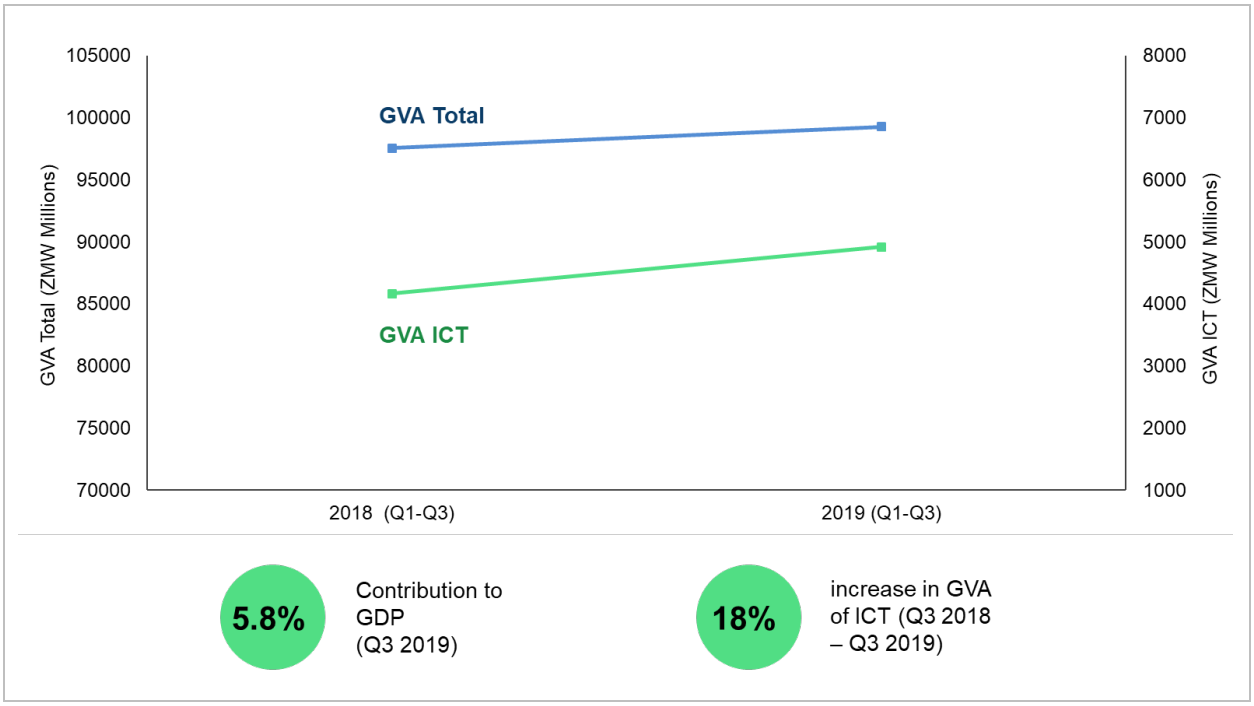
Agriculture contributes about 7.5% of GDP. However. about 54% of the population works at least part time in the agricultural sector.

Information and communications technology landscape

Tech sector is small, but growing quickly

The ICT sector has been one of the fastest growing in Zambia, even though it contributed 5.8% of GDP in the third quarter of 2019.

Figure 13 Gross value added of tech sector is on the rise

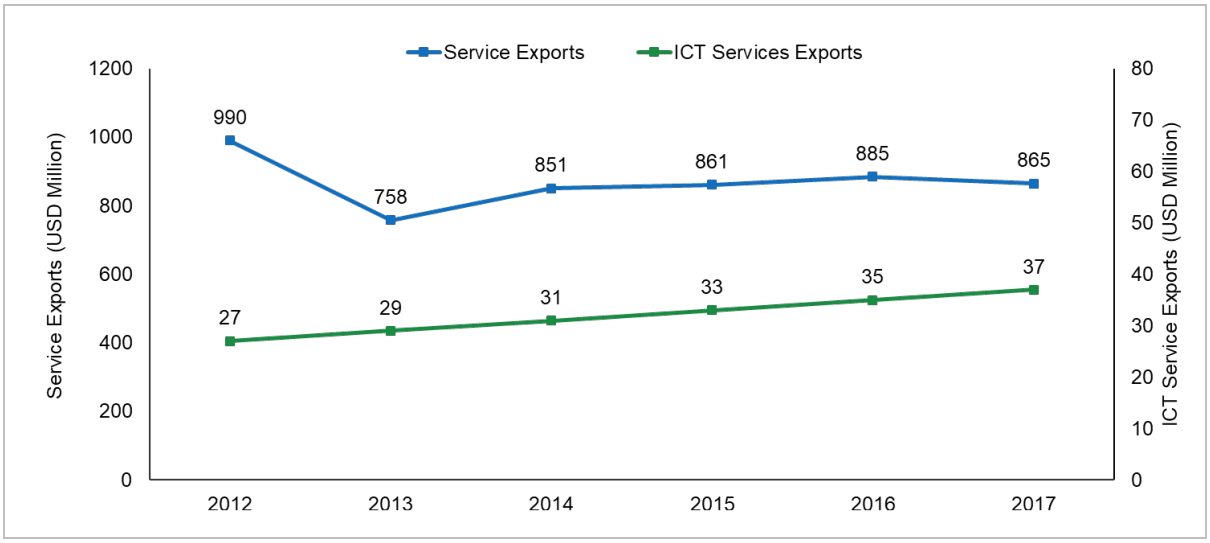


Source: Zambia Statistics Agency.

In 2017, Zambia exported $37 million in ICT services (a key measure of IT/BPM services), accounting for 4.3% of total service exports.[165] ICT exports have been rising steadily since 2010.

[165] https://data.worldbank.org/indicator/BX.GSR.CCIS.ZS?locations=ZM

Figure 14 ICT service exports grow as service exports decline



Source: World Bank.

Why is the Zambian technology sector appealing?

Attractiveness factors

Favourable time zone

A difference of 2–3 hours with the United Kingdom and most European countries

Native English talent English is the official language and is fluently spoken by people in urban areas

Young workforce with more than nine million people between 15 and 34 years of age[166]

Competitive labour costs with an average monthly wage of $170[167]

Main highlights

Market size: ~ $45 million[168]

Workforce: ~ 3,000[169]

Entry-level salary (monthly): ~ $82[170]

Main IT/BPM service offerings: Inbound customer service, inbound-dealer help desk, outbound sales, back office, interactive voice response deployment/management, enterprise business

Key industries served: Government, telecommunications, financial services, mining

Examples of buyers:

Key IT/BPM associations and agencies:

- Zambia Information and Communications Technology Authority
- ICT Association of Zambia

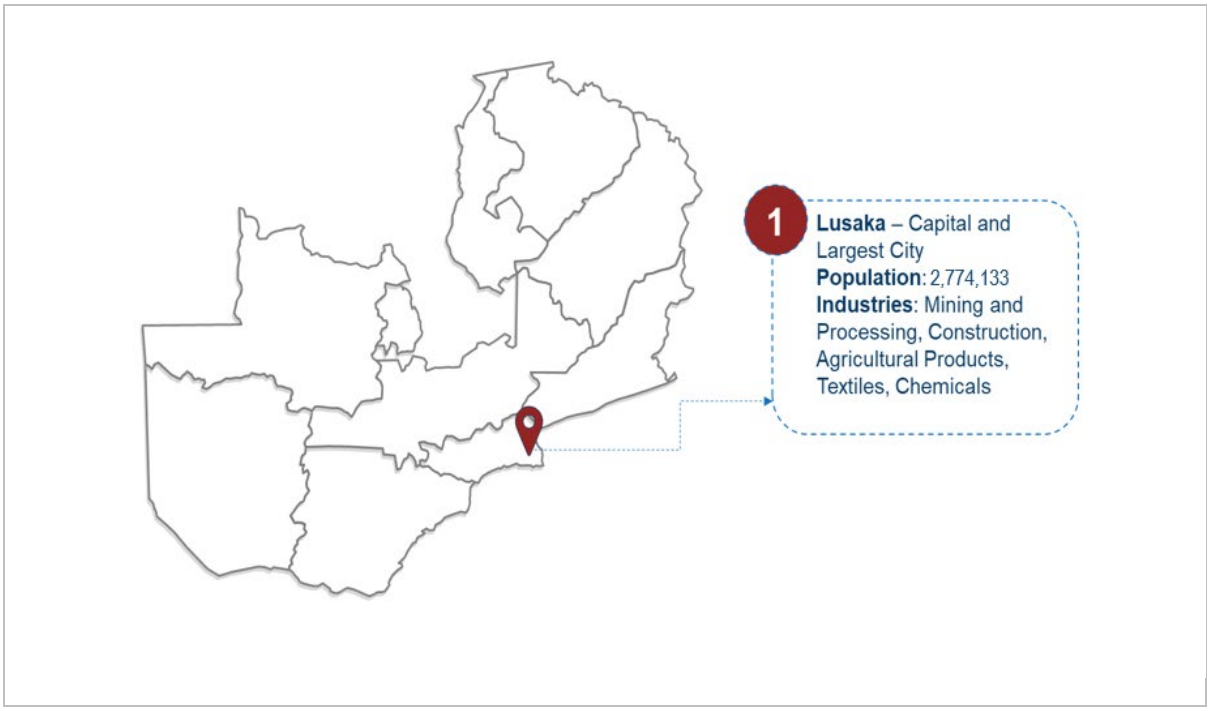
[166] https://www.populationpyramid.net/zambia/2019/
[167] https://www.glassdoor.com
[168] Avasant Research.
[169] *Ibid.*
[170] *Ibid.*

Key cities and technology centres

Lusaka is the primary location for tech hubs

Zambia has a small IT/BPM sector that is mostly active in the capital, Lusaka. The city, one of the fastest developing in southern Africa, is also the biggest in Zambia, with a population of almost 2.8 million.[171]

Figure 15 Lusaka is the centre of commerce and government



Source: Avasant Research.

Table 52 Entrepreneurship is concentrated in Lusaka

City	ICT hubs/tech parks/start-up hubs
Lusaka	- BongoHive - Women's Entrepreneurial Centre of Resources, Education, Access and Training for Economic Empowerment - Jacaranda Hub

Source: Avasant Research.

[171] https://worldpopulationreview.com/world-cities/lusaka-population/

The state of competition: Understanding the landscape

Good prospects for a thriving tech industry

The IT/BPM industry is in a nascent stage today, with just a handful of providers serving local businesses. However, Zambia has high potential to develop a successful IT/BPM industry. In its Seventh National Development Plan, the Government identified ICT as a catalyst to boost socioeconomic development.

The following table describes the main services offered and industries served by some of the leading service providers in Zambia. International players are highlighted in blue.

Table 53 Providers offer a range of services

Service provider	Headcount Location	Examples of services offered	Industries served
Techno Brain Group	100+ Lusaka	IT services, business process outsourcing, software solutions	Government, banking, financial services and insurance, manufacturing, utilities, logistics, mining
iSON Xperiences	200+ Lusaka	Inbound customer service, inbound dealer help desk, outbound sales, back office, interactive voice response deployment / management, showroom staff deployment and management services	Telecommunications
Tech Mahindra	Lusaka	Business process services	Telecommunications
AfriConnect Zambia	Lusaka	Internet access, network security, IT consulting, ICT hardware	Government, tourism, media, non-profit, e-commerce, agriculture
Liquid Telecom	Lusaka	Cloud servies, unified communications, disaster recovery, data centres	Telecommunications
Christian Jay Invest	Lusaka	Call centre, PBX support services, unified communication services, web conferencing, software development	Power sector, telecommunication, media
Infratel	Lusaka	Data centre, cloud services, tower services	Telecommunication

Net One	Lusaka	IT products and services, enterprise resource planning solutions, enterprise technology, data centre	Telecommunication, insurance, banking, mining

***Source**:* Avasant Research.

Service capacity and capability

Population is young and educated

Zambia was ranked 131 of 157 countries in the World Bank 2018 Human Capital Index. The country has a very young and educated population, with a median age of 16.9 years[172] and a literacy rate of 86.7%.[173]

Although more than half the population is rural (55.4%), the rate of urbanization is rapid (4.2% every year).[174] This positions Zambia as a potential destination for IT/BPM services.

The next table examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

Table 54 Tech sector can draw from large pool of new graduates

Talent and skill availability	
No. of universities: 12[175]	The Higher Education Authority has accredited 12 Zambian universities. With roughly 30,000 graduates entering the job market annually, potential IT/BPM professionals can be consistently drawn from the large graduate pool. The very high level of youth unemployment can also be exploited to build a resource pool for the industry.
Annual tertiary graduates: ~ 30,000[176]	
Youth unemployment: 24%[177]	
Tertiary gross enrolment ratio: 16%[178]	
Secondary gross enrolment ratio: 22%[179]	

[172] https://www.cia.gov/library/publications/the–world–factbook/geos/za.html
[173] *Ibid.*
[174] *Ibid.*
[175] https://www.hea.org.zm
[176] http://uis.unesco.org/en/country/zm?theme=education–and–literacy
[177] https://www.cia.gov/library/publications/the–world–factbook/geos/za.html
[178] http://uis.unesco.org/en/country/zm?theme=education–and–literacy
[179] *Ibid.*

Quality and employability of talent	
Quality of vocational training: Ranks 118th of 141 countries	Based on the WEF Global Competitiveness Index, Zambia ranks 118th of 141 countries in terms of the quality of vocational training. The country secured a higher ranking (30) on the extent that companies can find people with the skills required to fill vacancies, i.e. the ease of finding skilled employees. This higher rating can be attributed to the availability of college graduates in Zambia, coupled with moderately high levels of unemployment and underemployment. These factors enable skilled employees to search for better job opportunities. With youth literacy at 92.1% and adult literacy at 86.7%, Zambia ranks ahead of many countries competing for a share of the offshore services market. Further, because of its large English-speaking population, Zambia is well positioned in terms of language.
Skillset of graduates: Ranks 96th of 141 countries	
Labour force with advanced education: 69.1%[180]	
Ease of finding skilled employees: Ranks 30th of 141 countries	
Digital skills in active population: Ranks 118th of 141 countries	
Literacy • Youth literacy: 92.1%[181] • Adult literacy: 86.7%[182]	
Language proficiency: High English-speaking capability	

Scalability
The large pool of tertiary graduates means, combined with relatively high unemployment rates, means there is potential for IT/BPM operations to scale. However, there must be adequate training mechanisms to supplement the skills of these graduates so they can perform effectively in the industry. In an effort to help, the Government established an ICT Centre of Excellence in Zambia Information and Communications Technology College. The institution aims to provide ICT technology to people to build capacity for the industry.

[180] https://data.worldbank.org/indicator/SL.TLF.ADVN.ZS?locations=KE
[181] https://data.worldbank.org/indicator/SE.ADT.1524.LT.ZS?locations=ZM
[182] https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?locations=ZM

ICT infrastructure

Infrastructure has improved over the years

Zambia has one of the highest mobile and internet penetrations in sub-Saharan Africa, with 89.2 mobile handsets per 100 persons.[183] The infrastructure to support ICT has improved over the years. The Government has supported growth through tech-related policy and investment in the sector. Improvements will help realize the full potential of a digital economy.

Table 55 Few Zambians have fixed telephone suscriptions

Telecom[184]
• Fixed telephone subscriptions (per 100 people) – 0.58 • Mobile cellular subscriptions (per 100 people) – 89.2
As seen in most sub-Saharan countries and other developing economies, there are far mobile service subscriptions than fixed telephone subscriptions in Zambia. This is due largely to prohibitive costs and less developed fixed-line infrastructure.
Broadband/bandwidth[185]
• Fixed broadband subscriptions (per 100 people) – 0.25 • Active mobile broadband subscriptions (per 100 people) – 14.3 • Individuals using the internet (% of population) – 17.8% • International internet bandwidth per internet user (kilobits per second) – 4.2 • % of households with internet access – 17.7%
Fixed broadband penetration is also low, with a household penetration rate of 0.72% at the end of 2019. The broadband infrastructure in Zambia has improved as access to international subsea fibre-optic cables has led to lower internet costs. Zambia ranks 46th of 230 countries on mobile data affordability (based on the worldwide mobile data pricing by Cable.co.uk), where the average price of 1 gigabyte of data costs $2.25 on a 30-day plan.[186]

[183] https://www.itu.int/en/ITU–D/Statistics/Pages/stat/default.aspx
[184] *Ibid.*
[185] *Ibid.*
[186] https://www.cable.co.uk/mobiles/worldwide–data–pricing/

Power[187]

- Electric power consumption (kWh per capita) – 709
- **Generation capacity**
  - Installed capacity: 2,800 MW
- **Connections**
  - Current access rate: 31%
    - Rural: 4%
    - Urban: 67%
- Quality of electricity supply – Ranks 93rd of 141 countries

The Government has set a goal of universal access by 2030 and is working to develop the infrastructure and improve transmission. However, the current state of electricity hinders efforts to attract IT/BPM companies and investments, because the sector relies on a stable and reliable supply.

Cost of electricity[188]

	Cost ($) household, kWh	Cost ($) business, kWh
Zambia	0.033	0.033
World average	0.15	0.13

[187] https://www.usaid.gov/powerafrica/zambia
[188] https://www.globalpetrolprices.com/Zambia/electricity_prices/

Government incentives and policies

Focus on building an information and knowledge-based society

The National Long Term Vision 2030 targets the ICT sector and underpins government hopes to build an information and knowledge-based society by 2030. The key initiatives under this long-term plan include universal access to high-speed internet, increasing teledensity across the country and providing access to information and communication technology services.

What incentives support business development in Zambia?[189]

- A 15% corporate tax in place of normal tax bands (35%) for exporting companies;
- Exemption from duty and VAT on imports and machinery for exporters of non-traditional products such as IT/BPM services;
- There are incentives for companies operating out of multi-facility economic zones and industrial parks, but not specific to the IT/BPM sector.

Business registration procedure
• Fill in the name clearance form or the form called Application for registration/re-registration of business name (BN Form III) at the Patents and Companies Registration Agency desk • Pay the registration fee • Present the completed form and the payment receipt to the supervisor at registration agency desk • Upon receiving the signed Certificate of Registration from the desk, fill in the 'one-stop shop registration form' to apply for tax registration and registration as an employer

[189] http://www.zambiaembassy.org/page/incentives–for–investors

What is the focus of tech policy in Zambia?

The Zambia Information and Communications Technology Authority, part of the Ministry of Transport, Works, Supply and Communications, regulates the ICT sector. The following regulatory and compliance policies govern the IT/BPM sector.

Table 56 Business permits and work permits are available

Labour laws (Employment Code Act 2019)	• The Ministry of Labour has fixed minimum wages of unskilled, semi-skilled and skilled workers across occupations. • The ministry has also defined laws governing termination of employment, resignation, leave days, maximum working hours and maternity leave.
Visa and immigration policies	• Business visas are available for executives and investors travelling to Zambia for meetings/discussions (Fee: $70). • Visa can be easily obtained from any Zambian embassy abroad. They are valid for a 90-day stay (not employment) and are extendable. • Work permits are available for temporary business, professional employment, trade and farming.
Cybersecurity and data privacy regulations	• Cybercrime is covered under the 2004 Computer Misuse and Crimes Act No. 13. • More legislation is being drafted, targeting cybersecurity and cybercrime, data protection and electronic transactions and e-commerce.

Trade associations offer a helping hand to tech firms

Table 57 Two key associations working in the sector

Agency	Contact
Information and Communication Association Zambia	Website: http://www.ictaz.org.zm/
Zambia Information and Communications Technology Authority	Website: https://www.zicta.zm/

Growing market segments

Telecommunications and trade and retail are expanding rapidly

The IT/BPM sector is an enabling sector for other vertical markets. It serves a wide range of sectors, including banking and financial services, insurance, telecommunications, automobile, retail, fast-moving consumer goods, e-commerce, agriculture, tourism and government.

Before deciding to establish in a country, providers must identify target verticals with high growth potential. This not only ensures that there is demand for their services, but it safeguards sustainability and scalability of operations.

The telecommunication and retail industries have high potential to generate demand for IT/BPM services in Zambia. The primary factors considered are the size and year-over-year growth of each sector, including predicted growth, drivers of growth, market trends and IT/BPM trends for the industry.

Table 58 Telecom is one of the fastest-growing market segmentsa

Telecommunications[190]	
Size of industry: ~ $1 billion Contribution to GDP: 3%	• Telecommunications is one of the fastest growing sectors in Zambia. • Increasing teledensity and access to internet are two major goals in Vision 2030. • The telecom sector is one of the biggest domestic buyers of IT/BPM services in Zambia. • International firms including iSON and Tech Mahindra have signed business process outsourcing deals with telecom players in Zambia.
Trade and retail[191]	
Size of industry: ~ $5.8 billion Contribution to GDP: 22%	• A very young population with a fast rate of urbanization will increase the base of retail customers, especially vis-à-vis e-commerce. • The retail sector is growing rapidly and has the potential of generating huge demand for IT/BPM solutions and services. • Online marketplaces such as Kaiju and Dot-Com Zambia have begun to gain traction in the retail market.

[190] https://www.zamstats.gov.zm/index.php/publications/category/29–national–accounts
[191] *Ibid.*

Market access opportunities

Telecommunications and retail sectors will drive demand

The trends seen in the growing market segments showcase the sectors that are likely to drive demand for IT/BPM services in Zambia: telecommunications and retail. The table below identifies market access opportunities and potential service areas in these sectors.

Table 59 Market access opportunities

Industry	Service area	Description
Telecommunications	• Customer service • Back office • Showroom staff deployment • End user devices support • Managed IT	• The telecom sector is one of the biggest domestic buyers of IT/BPM support services. • The sector is highly competitive, with five players. This drives demand for better customer service, which in turn drives demand for innovative IT/BPM solutions. Mobile money has been game changer across Africa, helping to provide financial access to the population. Mobile money operations also increase the demand for information technology.
Retail	E-commerce solutions	• Before COVID-19, consulting firm McKinsey predicted that African online sales would reach $75 billion by 2025. • Some 30% of the population has internet access. This will underpin demand for e-commerce.

Uganda

Upgrades to ICT infrastructure and a more conducive business environment would enable Uganda to establish itself as a premier tech hub in the region.

Macroeconomic and country data

Capital: **Kampala**

GDP: $33.93 billion

GDP per capita: $823

Real GDP growth rate: 6.5%

Inflation rate: 3.2%

Population: 45.2 million
- 0–14 years: 48%
- 15–24 years: 21%

Population growth rate: 3.6%

Major business sectors: Agriculture, manufacturing, construction, telecoms and tourism

Unemployment rate: 9.7%

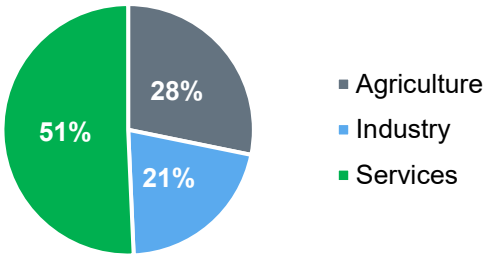
Literacy rate: 77%

Urbanization: 23.7%

Major trade and industry associations:
- The Ministry of ICT & National Guidance
- National Information Technology Authority-Uganda
- ICT Association of Uganda

Sources: World Bank, ITC Research, Avasant Research.

Gross domestic product composition



Key facts

Currency: Ugandan shilling (UGX)

Exchange rate (per $): UGX 3721

Foreign direct investment inflow: $1.3 billion

Major languages: English, Swahili and Luganda

Major religions: Christianity, Islam

Major exports: Agricultural products (coffee, cotton, spices, tea and fish), precious metals and gems, mineral fuels including oil

Country highlights

Uganda, known as the pearl of Africa because of its beautiful vegetation, landscape and wildlife, is a landlocked country in East Africa. Its 45.2 million inhabitants occupy 241,038 square kilometres.

The main exports are coffee (20%), gold (15%) and agricultural products. The agriculture sector employs an estimated 72% of the labour force.

The Ugandan economy expanded 6.3% in 2019, largely due to growth in the services sectors. Inflation is expected to remain below 5%.

The retail, construction and telecommunication sectors are key drivers of economic growth in Uganda.

Information and communications technology landscape

Tech sector hopes to become a major hub in the region

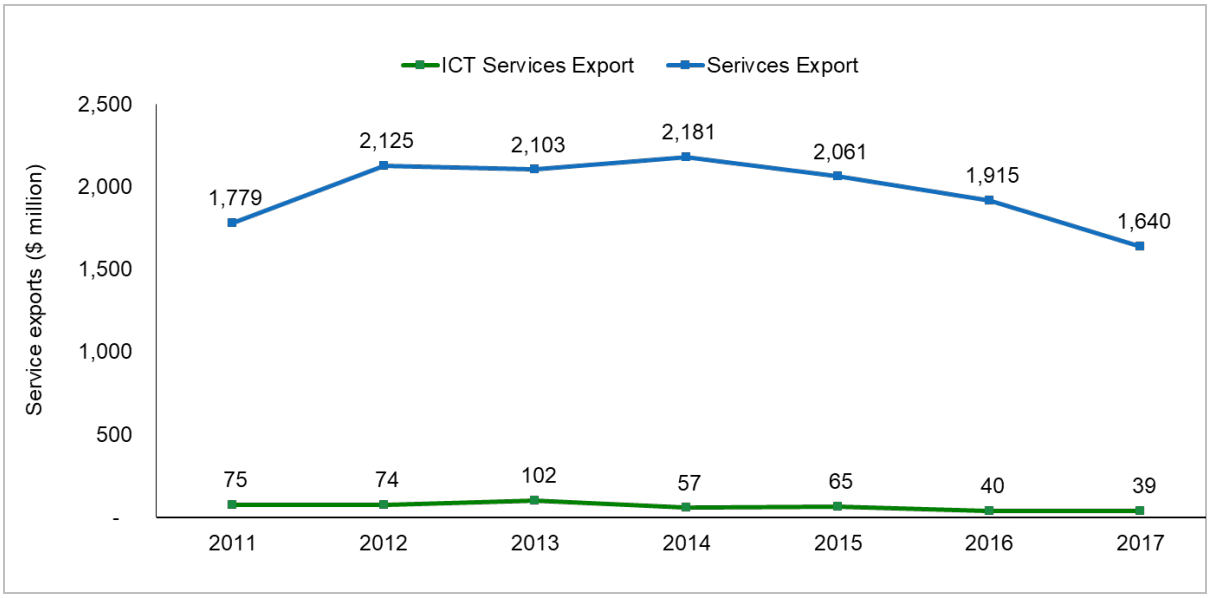
The outlook for the IT/BPM sector is promising. The market value of the technology sector was expected to reach $1.8 billion in 2020 – up from $918 million in 2013.[192]

An expanding service economy, growing young population, improving ICT infrastructure, and its proximity to Europe make Uganda an attractive destination for IT/BPM organizations. The country is seeking to establish itself as a BPM hub by improving ICT infrastructure and human capital.

According to the World Bank, Uganda exported $39 million in ICT services in 2017, a decline from previous years.[193] ICT services represented 2.4% of all services exported from Uganda in 2017.

Although the country has a vibrant and growing information technology sector, it is not yet seen a premier destination for IT/BPM services.

Figure 16 ICT service exports have been on a decline



Source: World Bank.

Uganda is transitioning to a service-based economy. In 2017, the service sector accounted for about 51% of GDP.

The Government is investing in business process outsourcing, which it considers a high-growth sector. Continued funding for the National Data Transmission Backbone Infrastructure and e-Government Infrastructure project and the adoption of a national ICT policy (2014) are evidence of this commitment. The national ICT policy aims to establish Uganda as a knowledge society by 2025, through investments in ICT education across the country.

192 http://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Projects/SITA/Uganda%20ICT%20booklet_final_web_page.pdf

193 https://data.worldbank.org/country/uganda

Why is the Ugandan technology sector appealing?

Attractiveness factors

Favourable time zone A difference of 1–3 hours with the United Kingdom and most European countries

Young workforce with more than 69% of the population age 24 years and under

Native English talent Uganda boasts a native English-speaking workforce

Competitive labour costs with an average monthly wage of $307

Strong government focus on ICT development exhibited through investment to develop ICT infrastructure

Main highlights

ICT service exports (2017): ~ $39 million

Wage

Minimum monthly wage: ~ $34

Average monthly wage: ~ $307[194] (IT/BPM services)

Main IT/BPM service offerings: Inbound customer service, inbound dealer help desk, outbound sales, back office, data cleanup, IT support and interactive voice response deployment/management

Key industries served: Government, telecoms, agriculture, manufacturing, financial services and NGOs

Major markets served: Kenya, Rwanda, the Democratic Republic of the Congo, South Sudan and the United Arab Emirates

Key IT/BPM associations and agencies:

- Ministry of ICT and National Guidance
- Ministry of Science, Technology and Innovation
- National Information Technology Authority-Uganda
- ICT Association of Uganda
- Alliance for Trade in Information Technology and Services

[194] https://www.paylab.com/ug/salaryinfo/administration/call–operator

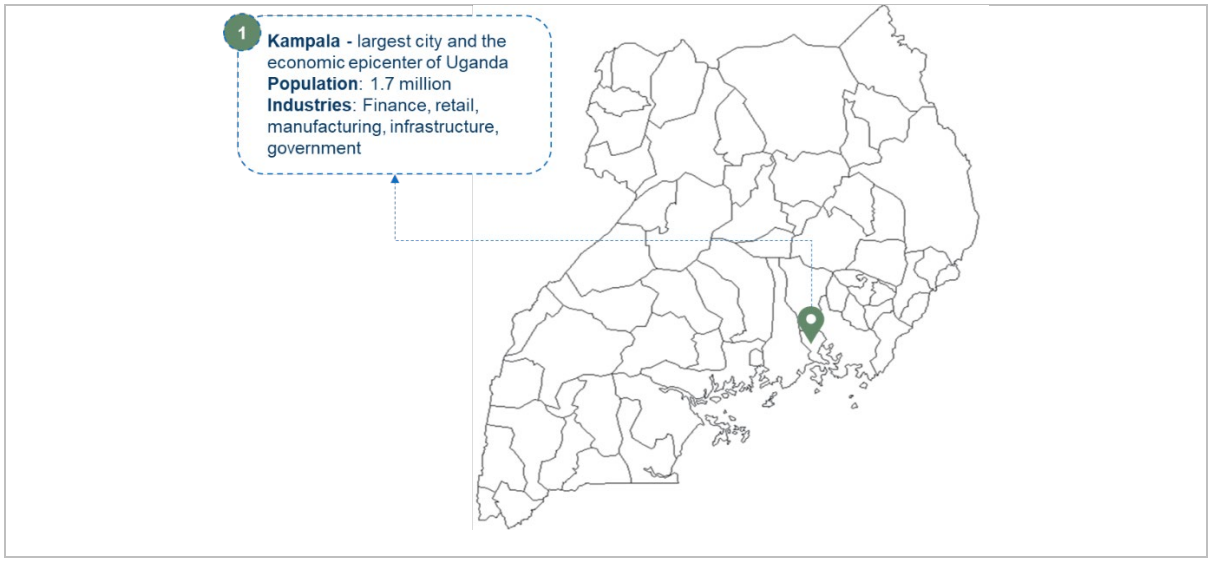
Key cities and technology centres

Technology epicentre is the capital

The largest city in Uganda and its economic epicentre is Kampala. About 1.7 million people live in the capital and its urban conglomerate. Other notable cities include Nansana, with 370,000 people, and Kira, with 314,000 people.

The country has more than 20 tech hubs and business incubators, the majority of which are in Kampala. According to the Global System for Mobile Communications Association, Kampala is among the top 15 main tech cities in Africa.[195]

Figure 17 Kampala is top tech city



Source: Avasant Research.

Table 60 Most tech hubs and accelerators are in Kampala

City	ICT hubs/tech parks/start–up hubs	
Kampala	• Design Hub • FasterCapital • FinAfrica • Hive Colab • Imuka Ventures • Inccelerate • Innovation village	• Outbox hub • TechBuzz Hub • The Office Hub • The Space Hub • The Tech Hub • Tribe Kampala • StartHub • Makerere Innovation and Incubation Center

Source: Avasant Research.

[195] https://www.gsma.com/mobilefordevelopment/blog/618–active–tech–hubs–the–backbone–of–africas–tech–ecosystem/

The state of competition: Understanding the landscape

Opportunities to become a premier destination

The Ugandan IT/BPM sector is approaching maturity. The country has an established market that is home to regional and international BPM companies. However, a better ICT infrastructure, a more skilled workforce and a more conducive business environment are needed for Uganda to become a premier destination for IT/BPM services.

Government initiatives such as Uganda Vision 2040 and the ICT Sector Strategic and Investment Plan will support the growth of the sector.[196] These initiatives seek to increase access to and usage of tech equipment, boost the contribution of the sector to GDP and improve access to affordable, high-speed broadband services.[197]

Furthermore, the transition towards a service-based economy, along with the developments and improvements that come as a result of the transition, will continue to be a major catalyst in the growth and development of the IT/BPM sector.

A mix of small, medium-sized and large IT/BPM firms serve local and international clients in Uganda.

Some highlights of the service provider landscape are shown below.

- **The key location** of IT/BPM services is Kampala, the capital city and economic epicentre. Most organizations are based in the city, which also houses the majority of technology hubs and IT/BPM companies in Uganda.
- **A mix of local, regional and global players operate in the sector**. Uganda is home to an estimated 30+ IT/BPM companies, including global players like Techno Brain and iSON, and regional and local players such as Service Corps, BDE Consult and Exquisite Solution.
- **There are few 'pure' players in the market**. Most enterprises offer a wide range of services encompassing business process services, IT enabled services, application development and management, business training, social media management, logistics support services and equipment supply, among others.
- **Services are priced competitively**. Business process outsourcing companies in Uganda price their services at $5–$6 an hour.[198]
- **The Government is trying to build an ecosystem that is conducive for the growth of the sector**. The National Information Technology Authority plays a leading role in investing in and securing funding for IT/BPM companies and building outsourcing awareness in the local market.

The following table describes the main services offered and industries served by some of the leading service providers in Uganda. International players are highlighted in blue.

[196] https://www.gou.go.ug/content/uganda-vision-2040

[197] http://www.intracen.org/uploadedFiles/intracenorg/Content/Exporters/Sectors/Service_exports/Trade_in_services/2017_Exporter_Directory_Uganda.pdf

[198] http://www.intracen.org/uploadedFiles/intracenorg/Content/Redesign/Projects/NTF4/ITC%20Directory%202018%20–%20resized.pdf

Table 61 Providers offer a range of services

Service provider	Headcount Location	Examples of services offered	Industries served
Acreaty Uganda	Kampala	• Outsourcing services – business process and knowledge process ousourcing, and data process outsourcing • Human resources and staff services – recruitment services, payroll and accounting, staff outsourcing, training • Business consulting – supply chain and marketing support • IT enabled services – web development, digital marketing • Career advisory services – skills development, resume writing	• Sector agnostic
Service Cops	Kampala	• Payment platforms • Mobile banking • Mobile payments • Integration • Mobile applications • Anti-money laundering systems • Bespoke it solutions • Telesales/outbound • Omnichannel contact centre solutions – voice, chat, web, SMS and social media management • Online and offline data entry services	• Banking and finance • Education
Cameo Techedge Services Limited	Kampala	• Advertising and market research • Business and management consultancy • Computer programming and software development • Data processing and web hosting • Transaction processing • Contact centre – IT support, help desk, voice, data, medical transcription coding, billing	• N/A
Bde Consult Ltd	11+ Kira	• Data/knowledge management (back-office processes) – data collection, research and analysis, data entry, translations, administrative support, proofreading, surveys/customer feedback, evaluations • Contact centre (front office processes) – enquiries (e-mail, web and phone), social media account management	• Government • Non-profit • Maritime • Logistics and transport

MIDAS BPO Uganda Ltd	Kampala	• Software development • Data management • Call centre operations • Client engagement • Procurement • Research • Web development	• N/A
Exquisite Solution Ltd	280+ Kampala	• Big data and business intelligence • Business process outsourcing • Outbound campaigns • Data capture and data entry • Data processing • Image capture • Customer billing	• Finance, banking and insurance • Telecoms, • Maritime • Logistics and transport
Cayman Consults Ltd	381+ Kampala	• Payroll outsourcing including staff sourcing, contracting, on board support, time sheet management and payroll processing • Call centre services including inbound and out bound services • E-commerce services including mobile phone-based money transfer services, and online shopping and delivery	• Finance, banking and insurance
Data Care Ltd	35+ Kampala	• Mobile services and applications development • Web applications • Customized software development • System integration • Website design • Big data and business intelligence • Business process outsourcing	• Agriculture • Environment • Healthcare • Pharmaceuticals • Non-profit
NFT Consult	39+ Kampala	• Mobile services and applications development • Web applications • Graphics design/image processing • Customized software development • System integration • Website design • Cloud solutions • Big data and business intelligence • Business process outsourcing	• Finance and banking • IT & telecoms • Utility and energy • Oil and gas

Billbrian Technologies Ltd.	Kampala	• **Consulting services** – IT inspection and analysis, compliance, audits and correlation, infrastructure design and planning, vulnerability assessment and penetration tests • **Implementation services** – site inspection, site readiness, deployment, integration, migration, customization, testing and optimization • **Managed services** – cloud services, IT outsourcing services • **Support services** – 24/7 help desk support, proactive remote monitoring and management, preventative and uptime maintenance (based on a service-legal agreement), problem and resolution management, asset and configuration management (updates and upgrades), time-based reporting and review meetings	• Sector agnostic
Technobrain Group	Kampala	• IT enabled services • Business process outsourcing • Software solutions	• Financial services • NGOs • Government
iSON BPO Uganda	Kampala	• Inbound customer service • Inbound-dealer help desk, • Outbound sales • Back office • Interactive voice response deployment/management • Showroom staff deployment and management services • Social media care • Electronic know-your-customer and data cleanup services	• Telecoms

Source: Avasant Research.

Service capacity and capability

Labour force is available to service the tech sector

The World Bank 2018 Human Capital Index measures a country's investment in the education and skills of its population. Uganda was ranked 137th of 157 countries.[199]

In 2018, adult literacy was 76.5% and youth literacy (15–24 years) was 89.4% – up from 70.2% and 83.7%, respectively, in 2010. These improvements in education and literacy can be attributed to Uganda's universal primary and secondary education programmes and the high enrolment rate.

The domestic workforce was about 15.3 million strong in 2017, with 87% working in the informal sector, according to the Uganda Bureau of Statistics. Labour rate underutilization was estimated at 35% in 2017.

The table below examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

Table 62 About 700,000 people enter the labour market every year

Talent and skill availability	
No. of universities: 47+	There is an abundance of talent in Uganda. The National Planning Authority reported in 2017 that about 700,000 people join the labour market every year. However, only 75,000 jobs are created every year.[200] Uganda has high literacy rates. Adult literacy stands at 76.5% and youth literacy stands at 89.4%. These figures are high, compared to the sub-Saharan African literacy average of 66%.
Youth unemployment: 2.73%	
Tertiary gross enrolment ratio: 4.8%	
Quality and employability of talent	
Quality of vocational training: Ranks 94th of 141 countries	The statistics in this section have been sourced from the WEF 2018 Global Competitiveness Index. The scoring, on a scale of 1 to 7, assesses how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well. Uganda ranks 115 out of 141 in terms of the quality of the skilled labour force and 125 of 141 countries on ICT adoption. The country scores 3.4 out of 7 when it comes to sourcing talent with digital skills and 4.4 out of 7 on the ease of finding skilled workers. From a sub-Saharan African perspective, these scores are quite good. They indicate that the Ugandan workforce has the skills required to service the IT/BPM sector.
Skillset of graduates: Ranks 122nd of 141 countries	
Ease of finding skilled employees: Ranks 50th of 141 countries	
Digital skills in active population: Ranks 121st of 141 countries	
Literacy rates: • Youth literacy: 89.4% • Adult literacy: 76.5%	
Language proficiency: High	

[199] https://databank.worldbank.org/source/human–capital–index
[200] https://www.worldbank.org/en/news/factsheet/2020/02/25/uganda–jobs–strategy–for–inclusive–growth

Scalability[201]

From a scalability perspective, Uganda has high potential. With 700,000 people entering the labour force every year, there is plenty of talent to serve the growing economy. The Government continues to invest to improve ICT infrastructure and skills.

- The National Information Technology Authority, along with the Uganda Business Process Outsourcing Association, regularly holds conferences and exhibitions.
- The authority has signed a memorandum of understanding with the National Council of Higher Education and the Ministry of Education and Sports to ensure that ICT is embedded in the national education curriculum and that regulations on education are respected.
- The authority is working with Makerere University to train thousands of youths and improve their business process outsourcing skills..

ICTinfrastructure

Infrastructure is improving, but upgrades are needed

The ICT infrastructure is still developing. The country ranks 125 of 141 countries for ICT adoption on the WEF Global Competitive Index.

The GSMA Mobile Connectivity Index analyses country performance according to infrastructure, affordability, consumer readiness and content availability. With a score of 39.4 out of 100 – ranking Uganda 17th of the 34 sub-Saharan countries examined – the ICT infrastructure was deemed 'emerging'.

The Government and mobile operators have invested heavily to improving the ICT infrastructure.

- The National ICT Policy 2014 aims to establish Uganda as a knowledge society by 2025, through developments in ICT infrastructure development and access.
- Under the National Data Transmission Backbone and e-Government Infrastructure project (2006), a 2,000 km fibre cable network is being laid out across the country.
- Mobile operators and international organizations such as Google and Facebook have invested in improving wireless connectivity within Uganda.

Despite these developments, fixed-line infrastructure in Uganda, like in most sub-Saharan African countries, is still developing.

Mobile infrastructure, on the other hand, is quite developed, so most of the population relies on the cellular network to communicate and access information. Furthermore:

- Mobile phone penetration is high (about 80%).
- Smartphone penetration was about 16% in 2018. Although the adoption rate roughly quadrupled over the last four years, it is lower than the sub-Saharan African average of 30%.
- About 46% of mobile users are connected to the internet and can afford mobile broadband subscriptions.
- 3G and 4G connectivity are on the rise, with a penetration rate of 78% and 23% in 2018.

[201] https://www.nita.go.ug/service/capacity–development–and–skilling

ICT infrastructure inadequacies – a lack of affordable broadband internet and low electricity supply – are the biggest challenges for the IT/BPM sector.

- According to the Alliance for Affordable Internet, 'affordable mobile broadband' – 1GB of mobile data – is priced at no more than 2% of the average income. In Uganda, the cost of 1GB of data represented 16.2% of the average monthly income (2017).
- Uganda also has one of the worst electrification rates in the world, at 19.7%.

Table 63 Few Ugandans have fixed-line subscriptions

Telecom[202]
• Fixed telephone subscriptions (per 100 people) – 0.4 • Mobile cellular subscriptions (per 100 people) – 57.3 • % of the population with access to 3G – 78% • % of the population with access to 4G – 23%
• The adoption of fixed-line connections is low because costs are prohibitive and the fixed-line infrastructure is not well developed. • Wireless is the predominant method to access information. • About 80% of the population has access to a mobile phone. • In 2018, Uganda had 19.8 million unique mobile subscribers. • Roughly 61% of mobile owners still subscribe to 2G only services because of the lower cost.
Broadband/bandwidth[203]
• Fixed broadband subscriptions (per 100 people) – 0.027 • Active mobile broadband subscriptions (per 100 people) – 57.3 • Individuals using the internet (% of population) – 23.8% • International internet bandwidth per internet user (kilobits per second) – 4 • Percentage of households with internet access – 10.8%
• Although mobile phones are the dominant platform for obtaining information, only an estimated 46% of mobile phone users have access to the internet. • The GSMA Mobile Connectivity Index 2018 scores Uganda 39.4 out of 100 – which translates to being 17th out of the 34 sub-Saharan Africa countries examined. • Affordability is a major obstacle to better broadband access in the country.

202 https://www.gsma.com/mobilefordevelopment/wp–content/uploads/2019/03/GSMA_Connected_Society_Uganda_Overview.pdf

203 https://www.gsma.com/mobilefordevelopment/wp–content/uploads/2019/03/GSMA_Connected_Society_Uganda_Overview.pdf

Power[204]

- **Installed capacity:** 947 MW
- **Access to electricity (% of population):** ~ 19.7%
  - Urban (% of urban population): ~ 23%
  - Rural (% of rural population): ~19%
- **People without power:** 6.9 million households
- **Quality of electricity supply**: Ranks 108th of 137 countries (2018 latest available)

- Uganda has a low electrification rate.
- According to USAID, about 19.7% of the population has access to electricity.
- Electrification rate in rural areas stands at about 19% and urban electrifications stands at 23%.
- The World Economic Forum global competitive index ranks Uganda's at 135 of 141 countries in terms of access to electricity.
- Uganda has a target to increase access to electricity to 60% by 2027.

Cost of electricity [205]

	Cost ($) household, kWh	Cost ($) business, kWh
Uganda	0.20	0.16
World average	0.14	0.12

[204] https://www.usaid.gov/powerafrica/uganda
[205] https://www.globalpetrolprices.com/electricity_prices/#Find

Government incentives and policies

Several incentives and policies, outlined below, govern the establishment and activities of technology businesses in Uganda.

What incentives support business development in Uganda?

- Exemption from taxes and duties on all export-processing zone imported inputs that are exclusively for use in development and production output of the business.
- Capital markets are open to foreign investors and there are no restrictions for foreign investors to open a bank account in Uganda.
- 100% of training costs are deductible on a one-time basis.
- Unrestricted remittance of profit after tax.
- Exemption on personal income of a person offering technical assistance under a technical assistance agreement.
- Timely turnaround for work permit processing.
- A range of annual VAT exemptions, deductions and deferrals.

Business registration procedure[206]

The Uganda Registration Services Bureau is responsible for local and foreign business registration in the country.

The process to register a business in Uganda involves 13 steps. The full procedure – outlined in the World Bank Doing Business report, Registering a business in Uganda – is summarized here:

1. Submit the Name Reservation Form at the assessment window of the Uganda Registration Services Bureau and obtain the bank payment slip.
2. Pay the name reservation fees at the bank.
3. Reserve the company name.
4. Obtain the slip-in for the payment of the registration fee and the stamp duty from the registration bureau.
5. Pay the registration fees at a designated bank.
6. File the registration documents at the Office of the Registrar and obtain the Certificate of Incorporation.
7. Obtain a tax identification number and register for taxes at the Uganda revenue authority.
8. Receive inspection of the business premises by the Uganda Revenue Authority.
9. Obtain trading licence.
10. Receive inspection of the business premises by the licensing officer and obtain the assessment form.
11. Pay the licence fee at the bank.
12. Register with the National Social Security Fund.
13. Make a company seal.

[206] https://www.nordeatrade.com/dk/explore–new–market/burkina–faso/incorporation?vider_sticky=oui

What is the focus of tech policy in Uganda?

The government bodies responsible for IT/BPM regulation and compliance include:

- The Ministry of ICT and National Guidance
- National Information Technology Authority-Uganda
- ICT Association of Uganda
- Alliance for Trade in Information-Technology and Services

Table 64 Policies seek to draw foreign investors to Ugandan tech

Income and taxation	**Corporate taxation:** • A standard rate of 30% **Withholding taxes:** • **Dividends** – residents and non-residents, 15% • **Interest** – residents and non-residents are taxed at 15%. Companies listed on the stock exchange are taxed at 10%. • **Royalties** – royalties paid to a resident are not subject to withholding tax. Non-resident are subject to a 15% withholding tax. • **Professional services fees** – residents 6% and non-residents 15%. **Other taxes on corporations:** • **National Social Security Fund contributions:** • Total employer's contribution rate is 10%. • Employees contribute 5% of their monthly remuneration towards their pension. **VAT** – 18%
Labour	• The Ministry of Labour has fixed minimum wages of unskilled, semi-skilled and skilled workers for all occupations in Uganda. • It has also defined laws governing employment termination, resignation, leave days, maximum working hours and maternity leave.
Work permits and business visas	• Business visas can be applied for on the Uganda e-immigration system • Individuals may apply for seven classes of work permits, depending on the type of work they are to do in Uganda. Applicants who are East African nationals (Burundi, Kenya and Rwanda) are exempt from paying visa fees for all classes.

Government and associations offer a helping hand to tech firms

The Ugandan IT/BPM service sector is approaching maturity. International and local IT/BPM providers serve the government, international NGOs and the agriculture, telecom and mining sectors.

Several associations and bodies have been set up to accelerate and maintain the growth of the technology sector.

Table 65 Four key associations work in the Uganda tech sector

Agency	Contact
The Ministry of Information and Communications Technology and National Guidance	Website: https://ict.go.ug/
National Information Technology Authority-Uganda	Website: https://www.nita.go.ug/
ICT Association of Uganda	Website: https://ictau.ug/
Alliance for Trade in Information-Technology and Services	Website: https://atis.ug

Growing market segments

Healthcare, financial services and ICT are growing rapidly

The sectors with high growth potential in Uganda are healthcare, banking, finance and insurance services, and ICT. Companies interested in offering IT/BPM services in the country should target those that support the large companies operating in these sectors.

The primary factors considered in selecting these sectors are the size and year-over-year growth of each sector, including expected growth, drivers of growth, market trends and IT/BPM trends for the industry.

Table 66 Three fast-growing sectors show outsourcing potential

Healthcare	
Government expenditure: ~ $874 million+ (2016) Expenditure as a % of GDP: ~ 6.8% (2016)	• According to the World Economic Forum, Uganda's healthcare sector is better than the sub-Saharan African average – it is ranked 120th of 140 countries. • In Uganda, as in most African countries, there is a gap in the health services required by the population – especially those in rural areas – and the services being provided. • The healthcare sector is being upgraded. • The health sector development plan 2015/16–2019/20 and the National e-Health Policy (2016) aim to use ICT to transform the healthcare system. • Improvements in mobile phone penetration and ICT infrastructure present an opportunity to close the gap between the healthcare services that are needed and those that are provided to the population. • The improvement and increasing adoption of electronic health and mobile health services across the country offers an opportunity to deliver a safer, high-quality, efficient and sustainable healthcare system in Uganda.[207]

[207] http://health.go.ug/sites/default/files/National%20eHealth%20Policy%202016_1.pdf

Banking, finance and insurance services	
	• Traditional financial institutions have been unable to reach low-income customers, especially those living in rural areas, due to the cost structure of retail financial services. • Microfinance institutions and savings and credit cooperative associations are becoming more prevalent in rural areas and are now reaching demographics that previously had no access to financial services. • An estimated 14% of the rural population have access to finance. • Improvements in mobile phone penetration have resulted in massive adoption of mobile money accounts. • An estimated 90% of mobile users in Uganda have a mobile money account and access to digital financial services. This represents a 310% increase in mobile account users from 2012. • Improved mobile phone penetration and broadband connectivity present an opportunity for financial institutions to provide a innovative financial services to people who previously might have been deemed as too hard to reach or too expensive to serve.
Information and communications technology	
Size of industry: ~ $1.2 billion % contribution to GDP: ~ 7% (2016)	• In 2019, an estimated 80% of the 45.2 million population had mobile phones. • Despite the high mobile phone penetration rate, only about 16% of mobile users have smartphones. • About 46% of mobile phone users have access to the internet. • Better ICT infrastructure and access to reliable broadband and more affordable smart phones will boost demand for quality telecommunication infrastructure and services. • ICT companies will have to increase service capacity and offerings and install the equipment and infrastructure required to support growing demand. • The ICT sector is estimated to have a CAGR of 25% and constitutes 7% of GDP in 2016.

Market acces opportunities

The healthcare, financial and ICT sectors show the most promise

The Ugandan IT/BPM sector is in its infancy. The market access opportunities discussed in this section target established sectors with high potential for growth that could be serviced by IT/BPM providers.

Table 67 Three sectors offer different opportunities

Industry	Service area	Description
Healthcare	• Digital health solutions • Healthcare application services • Customer and data management	Improved mobile phone penetration, ICT infrastructure development and increasing government expenditure on healthcare present an opportunity to improve healthcare services. Key opportunities for IT/BPM providers include: • Mobile health solutions • Enterprise resource planning and customer relationship management systems – development and maintenance • Customer records management • Customer support • Healthcare application maintenance • Telemedicine • Electronic medical records system solutions • Insurance registration and claims systems • Hospital management information system solutions • Health information system solutions • Insurance registration and claims systems
Banking, finance and insurance services	• Digital payments • Online banking • Peer-to-peer lending • Personal finance • Insurance • Mobile remittances	Improved mobile penetration rates, ICT infrastructure and mobile broadband access in rural areas present an opportunity to create and manage more mobile banking and insurance services. Some key opportunities for IT/BPM providers include: • Contact centre technology • Back-end contact centres • E-project management • Business research and analytics • Legal process outsourcing • Business administration
ICT	• Contact centre services • IT enabled services • Application development and management	The ICT sector is one of the biggest domestic buyers of IT/BPM support services in Uganda. Opportunities for IT/BPM providers include: • Inbound and outbound services • Customer service • Outbound sales, back office • Mobile money transfer services • Mobile services and applications development • Customized software development • Big data and business intelligence • Data capture, data entry, data processing • Customer billing

Benin

The ICT services sector is nascent, supported by government-backed tech infrastructure development projects and initiatives. Large organizations with their own in-house services compete in the IT/BPM sector.

Macroeconomic and country data

Capital: **Porto-Novo**

GDP: $10.4 billion (2018)

GDP per capita: $915

Real GDP growth rate: 6.1%

Inflation rate: 0.1%

Population: 11.5 million

- 0–14 years: 45.6%
- 15–24 years: 20.4%

Population growth rate: 3.4%

Major business sectors: Agriculture, petroleum, mining, forestry and metals.

Unemployment rate: 2.1%

Literacy rate: 42.4%

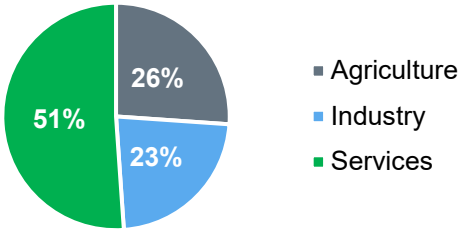
Urbanization: 48.4%

Major trade and industry associations:

- *Ministère du Numérique et de la Digitalisation*
- *L'Agence pour le Développement du Numérique*
- *Agence Béninoise du Service Universel des Communications Electroniques et de la Poste*

Sources: World Bank, Avasant Research.

Gross domestic product composition



Key facts

Currency: West African CFA (*Communauté Financière Africaine*) franc (XOF)

Exchange rate (per $): XOF 578

Foreign direct investment inflow: $207.5 million (2018)

Major languages: French, Fon and Yoruba

Major religions: Indigenous beliefs (animist) 50%, Christian 30%, Muslim 20%.

Major exports: Fruits and nuts, raw cotton, cotton, precious and scrap metals and petroleum

Country highlights

Benin is a West African country covering 112,622 square kilometres that borders Nigeria, Togo, Niger and Burkina Faso. Porto-Novo is the national capital, while Cotonou is the biggest city and the economic capital.

The main Beninese exports are agricultural produce and raw materials, ores and metals, fuels and wood.

The economy has grown steadily over the last few years. In 2018, gross domestic product expanded 6.7% and inflation was estimated at 0.1%.

The major drivers of economic growth in Benin are a buoyant agriculture sector, increased port activity and bigger investments in infrastructure.

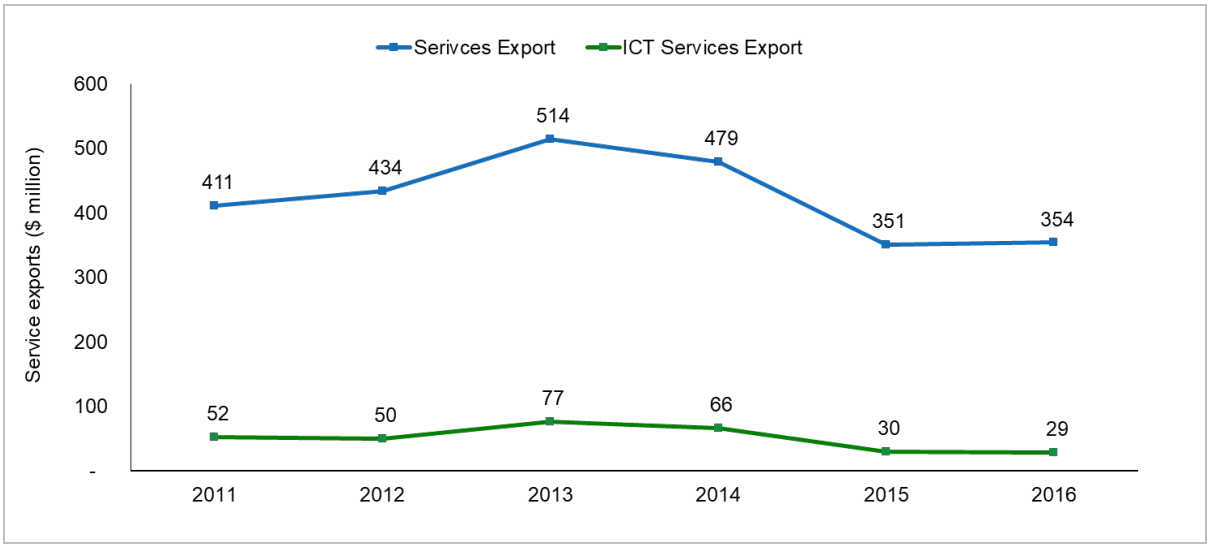
Information and communications technology landscape

Technology sector is still developing

According to the World Bank, Benin exported $29 million in ICT services in 2016, down from $77 million in 2013. With an estimated 51% of Beninese exports going to Nigeria, the country's economic performance relies heavily on that of its neighbour. The drop in service exports and ICT service exports can be attributed to the decline and weak economic performance of the Nigerian economy.

The outlook for service exports and ICT service exports is promising as Nigeria bounces back from its recession of 2016 and Benin begins to diversify its exports and reduce its dependence on Nigeria.

Figure 18 ICT service exports have been declining for years[208]



Source: World Bank.

[209] https://www.paylab.com/bj/salaryinfo/administration

Why is the Beninese technology sector appealing?

Attractiveness factors

Favourable time zone
A difference of 1–3 hours with the United Kingdom and most European countries

Young workforce with more than 65% of the population age 25 and under

Competitive labour costs with an average monthly wage of $335

Strong government focus on technology as part of the Revealing Benin Investment Programme

Main highlights
ICT service exports (2017): ~ $29 million
Services sector workforce: ~ 2.4 million
Monthly wage (average across all sectors)[209] **Minimum wage:** ~ $65 | **Average wage:** ~ $335
Main IT/BPM service offerings: Call centres, telemarketing, business administration
Key industries served: Agriculture, government, NGOs, energy, transport, telecommunication, financial services and mining
Major markets served: Nigeria, Niger and Togo
Key IT/BPM associations and agencies: • *Ministère du Numérique et de la Digitalisation* • *L'Agence pour le Développement du Numérique* • *Agence Béninoise du Service Universel des Communications Electroniques et de la Poste*

[209] https://www.paylab.com/bj/salaryinfo/administration

Key cities and technology centres

Cotonou is the technology epicentre

The largest city in Benin is its economic epicentre, Cotonou, which is home to about 800,000 people.[210] The second-biggest city is the capital, Porto-Novo, with a population of 270,000 people. Other notable cities include Parakou, with 230,000 people; Djogou, with 207,000 people; and Bohicon, with 165,000 people.

Cotonou, where major businesses are based, is the most attractive city in terms of IT/BPM skill availability and demand.

Sèmè City, the Government's innovation and entrepreneurship centre, is based in Cotonou. This innovation campus brings together educational institutions, vocational training centres, research laboratories and incubators. Sèmè City aims to train 130,000 people and create 190,000 ICT jobs and hundreds of start-ups by 2030.[211]

Figure 19 Cotonou is the top tech city in Benin

Source: Avasant Research.

Table 68 Most tech hubs in Benin are located in Cotonou

City	ICT hubs/tech parks/start-up hubs [212]	
Cotonou	• Sèmè City • FabLab • EtriLabs • KhulaTech • Cotonou Global Start–ups City • Cotonou Hub	• Incub'IMA • CcHUB • iHub • TEKXL • ICT Café

[210] http://worldpopulationreview.com/countries/benin–population/
[211] https://www.theafricareport.com/589/benin–cotonou–where–tomorrows–startups–are–invented/
[212] https://www.gsma.com/mobilefordevelopment/blog/618–active–tech–hubs–the–backbone–of–africas–tech–ecosystem/

Source: Avasant Research.

The state of competition: Understanding the landscape

Handful of big tech service providers dominate the market

The Beninese ICT service provider market is very consolidated. It consists of a few large internet and mobile service providers that control a majority of the IT/BPM market, and the small firms that help them maintain their networks.

These providers deliver specialized services to customers including the Government and international NGOs in the country. The small enterprises that contribute to the ICT sector have little to no online presence.

Some highlights of the service provider landscape are shown below.

- **Most IT/BPM services** are located in Cotonou. Cotonou is home to major business headquarters and the predominant technology hub, Sèmè City.
- **The IT/BPM services sector** is nascent. Key services being offered include transcription services, administrative support, e-mail handling, telemarketing and paralegal services.

The following table describes the main services offered and industries served by some of the leading service providers in Benin. No international business process outsourcing provider is based in the country.

Table 69 The service provider landscape is sparse

Service provider	Location	Examples of services offered	Industries served
Vocaltel Call Centre	Cotonou	Information services company. Services provided include: • Telemarketing • B2B services • Customer support • Digital marketing and services • Social media	Sector agnostic
JC Consulting	Cotonou	Information services company	Telecommunications
Call centre Yromi	Cotonou	Information services company	Sector agnostic

Source: Avasant Research.

Service capacity and capability

The labour force can adequately service the tech sector

With an adult literacy rate below 50%, Benin is considered largely underdeveloped. Yet human capital development in the country is ranked highly among West African countries. The World Bank 2018 Human Capital Index ranks Benin at 127 out of 157 countries – the fifth highest in West Africa.[213]

Adult literacy is estimated at 42.4%, up from 33% in 2014, and youth literacy (15–24 years) stands at 61%, up from 52.5% in 2014. Human capital will continue to develop and improve markedly in the coming years, supported by the Education Sector Plan 2018–2030, which seeks to establish a 12-year universal basic education cycle.[214]

The table below examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

Table 70 There is an abundance of labour in Benin

Talent and skill availability	
No. of universities: 39+	An estimated 100,000+ people enter the Beninese labour market every year. According to the United Nations Development Programme, 60% of the population are 15–35 years old and about 33% of people in this age group find paid work – mostly in the informal sector. Furthermore, 67% of the population is underemployed[215] and a large percentage of skilled workers (~40%)[216] migrate to other West African countries to seek employment. Benin is an attractive location to source skilled talent as it has an abundance of skilled labour, especially in Cotonou. Youth literacy (15–24 years) stands at 61% and will continue to improve.
Youth unemployment: ~4%	
Tertiary gross enrolment ratio: 12.3%	
Secondary gross enrolment ratio: ~ 59%	
Quality and employability of talent	
Quality of vocational training: Ranks 50th of 141 countries	The statistics in this section have been sourced from the WEF 2018 Global Competitiveness Index. The scoring, on a scale of 1 to 7, assesses how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well. The quality of the skilled labour force is ranked 119 out of 141 countries. Benin receives a score of 3.7 out of 7 when it comes to sourcing talent with digital skills, and 4.6 on the ease of finding skilled employees – ahead of Nigeria, Senegal and Côte d'Ivoire. The official language is French, so the population is well suited to servicing francophone countries.
Skillset of graduates: Ranks 80th of 141 countries	
Ease of finding skilled employees: Ranks 34th of 141 countries	
Digital skills in active population: Ranks 104th of 141 countries	

[213] https://www.worldbank.org/en/publication/human–capital
[214] https://www.globalpartnership.org/where–we–work/benin
[215] https://www.afdb.org/en/countries–west–africa–benin/benin–economic–outlook
[216] http://www.ulandssekretariatet.dk/sites/default/files/uploads/public/PDF/LMP/LMP2018/lmp_benin_2018_final4.pdf

Literacy • Youth literacy: 52.5% (2015) • Adult literacy: 42.4%	
English proficiency: Low French proficiency: High	

Scalability

With 100,000+ people entering the labour force every year, Benin has an abundance of the talent needed to serve its growing economy. The diversification of the commodity-based to a service-based economy, along with continued investments in ICT infrastructure and education, will make Benin a good destination for IT/BPM organizations.

Companies looking to establish a base in the country will have to invest in training the existing talent.

ICT infrastructure

Improving infrastructure builds on large mobile penetration

Benin has one of the highest wireless penetration rates in West Africa, with 99% of its population having access to a mobile network. This is well above the West African average of 71%.[217] Despite this, the ICT infrastructure is largely underdeveloped.

The GSMA Mobile Connectivity Index ranks Benin as the 15th worst in the world, with a score of 29.7 out of 100.[218] The index analyses country performance according to infrastructure, affordability, consumer readiness and content availability.

Only 20% of the Beninese population use the internet. Low demand for internet connectivity because of the cost has is the main reason the IT/BPM sector is underdeveloped.

The development of the ICT infrastructure in the coming years looks positive:

- In 2018, the Government established the Benin National Plan (2018–2025), which among other things, seeks to accelerate the digital economy and create 90,000 ICT jobs.
- In 2019, the World Bank approved a $100 million credit supporting Benin's Digital Rural Transformation project, which aims to improve fibre-optic connectivity and access to broadband services in rural communities.[219] The project intends to rehabilitate about 600 km of rural roads and maintain 2,400 km of roads over four years.

[217] https://www.gsmaintelligence.com/research/?file=36b5ca079193fa82332d09063d3595b5&download
[218] https://www.gsmaintelligence.com/research/?file=88bacd37b36096535e1d1c222af598cd&download
[219] https://www.worldbank.org/en/news/press–release/2019/07/01/benin–world–bank–provides–100–million–to–promote–digital–solutions–in–rural–communities

Table 71 Broadband affordability needs to improve

Telecom[220]
• Fixed telephone subscriptions (per 100 people) – 0.4 • Mobile cellular subscriptions (per 100 people) – 82.4 • % of the population with mobile network coverage – 99% • % of the population with access to 3G – 65% • % of the population with access to 4G – 40%
Mobile phone uptake in Benin is very high, covering 99% of the population. The prevalent mobile network available is 2G, which covers 98% of the population. 3G and 4G coverage are estimated at 65% and 40%, respectively.[221]
Broadband/bandwidth[222]
• Fixed broadband subscriptions (per 100 people): 0.2 • Active mobile broadband subscriptions (per 100 people): 19.8 • People using the internet (% of population): 20% • International internet bandwidth per internet user (kilobits per second): 2.8
Mobile broadband penetration in Benin, like in most West African countries, is low. Only 20% of the population have a mobile broadband subscription and just 20% have access to the internet. Affordability is the main reason for low mobile broadband connectivity in Benin – as in most countries in Africa. Benin ranks 32nd in Africa based on its mobile data prices. The average price of 1GB of data is $7.80, compared with $2.20 in Nigeria and $1.60 in Ghana. Data prices influence demand, and lower data prices would trigger an increase in mobile broadband usage. MTN cut its data prices in Benin by 63% in 2015–2017, and subscriber numbers rose 161%.[223]
Power

• Electric power consumption (kWh per capita) – 100
• Electricity produced: 335 million kWh
• **Access to electricity** (% of population): 41%
  ○ Urban (% of urban population): 71%
  ○ Rural (% of rural population): 18%
• **People without power:** 8 million people (2017)
• **Quality of electricity supply**: Ranks 113th of 141 countries

The energy sector is characterized by low per-capita power consumption and high reliance on external sources. About 85% of the energy consumed in Benin is imported from Nigeria, Côte d'Ivoire and Ghana. Only 41% of the population has access to electricity. However, this varies greatly from urban to rural locations – only 18% of rural strsd have electricity compared to 71% of urban locations. Cotonou reportedly has a high-quality, stable power supply compared to the rest of the country. IT/BPM companies looking to set up a base in Benin should do so in Cotonou.

[220] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[221] https://researchictsolutions.com/home/ict–evidence–portal/benin/
[222] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[223] https://1e8q3q16vyc81g8l3h3md6q5f5e–wpengine.netdna–ssl.com/wp–content/uploads/2019/03/A4AI_Benin–Tax–Report_Screen_AW.pdf

Government incentives and policies

Government incentives aim to bolster the technology sector

The Ministry of Digital and Communications designs, implements and monitors policies that are relevant to the digital economy, communication and postal services.

What incentives support business development in Benin?

The following regulatory information is based on Beninese tax law.

- New or expanding firms that contribute to the Government's economic and social objectives may be eligible for incentives during a 'setting-up' period of up to 30 months and over five to nine years of business operations, depending on the location.
- Enterprises investing at least XOF 500 million (about $865,000) and creating at least 20 new jobs for nationals of Benin will not face duties on imports of construction materials to build factories, machinery and spare parts. Their exports will be exempt from duties and the firms will be exempt from taxes on industrial and commercial profits for an approved period.
- Enterprises investing at least XOF 3 billion may obtain tax stability guarantees. Half of profits reinvested in approved projects may be deducted from taxable income.
- New industrial enterprises or divisions of established corporations may be granted an income tax exemption for five years.
- Enterprises licensed to operate in industrial free zones may be granted a 10-year exemption from income tax on industrial and commercial profits, and a 50% reduction in the rate of the monthly *versement patronal sur salaires* (employer wage payment) for five years, as well as other tax concessions.
- Financial and banking institutions, holding companies in general and insurers may obtain a licence to operate in industrial free zones.

Business registration procedure

As laid out in the World Bank's Doing Business report, the business registration procedure in Benin is as follows:

1. **Verify the uniqueness of the company name** – In Benin, as in all member countries of the Organization for the Harmonization of Business Law in Africa, a company must choose a unique name before it is registered in the trade register. The company name can be checked online at www.gufebenin.org.
2. **Deposit capital in a bank and activate a bank account** – The entrepreneur needs to open and activate a bank account to deposit the company's share capital. The operator will then obtain a receipt and an attestation from the bank, which will be necessary for registration formalities.
3. **Register the company at the one-stop shop (*Agence de Promotion des Investissements et des Exportations*)** – All companies must be registered at this agency, which has been operational since 2012. It allows entrepreneurs to register with the commercial registry and the tax authority, the labour directorate (*Direction Générale du Travail*) and the directorate of commerce (*Direction Générale du Commerce Intérieur et la Direction Générale du Commerce Extérieur*) at one place. The costs are the following: XOF 12,000 for the commercial registry (*cout de greffier*) + XOF 5,000 for the business licence (*carte professionelle du commerçant*).
4. **Register the company and its employees with social security (*Caisse Nationale de Securité Sociale*)** – A newly registered company must register with social security within three months of incorporation.
5. **Register the company with the tax authorities (*Direction Nationale des Impôts et des Domaines*)** – All new businesses must declare their existence (*déclaration d'enregistrement aux impôts*) to the tax authorities (*Direction Nationale des Impôts et des Domaines*) within 20 days of the start of business activity.

What is the focus of tech policy in Benin?

Although the Beninese tech sector is growing, the business process outsourcing sector is underdeveloped. The government bodies responsible for IT/BPM regulation and compliance include:

- *Ministère du Numérique et de la Digitalisation*
- *L'Agence pour le Développement du Numérique*
- *Agence Béninoise du Service Universel des Communications Electroniques et de la Poste*

Table 72 Policies seek to draw foreign investors to the tech sector

Income and taxation[224]	The following regulatory information is based on Beninese tax law:
	• Resident firms and branches of foreign companies are subject to corporate income tax at the rate of 30%.
	• An alternative minimum tax of 0.5% on annual turnover is levied on industrial enterprises and 0.75% on other companies, with a minimum amount of XOF 200,000 ($343).
	• Capital gains are included in ordinary taxable income and subject to corporate income tax at the standard rate of 30%.
	• Double taxation agreements are in force with France, Kuwait, Norway and the West African Economic and Monetary Union (including Burkina Faso, Guinea-Bissau, Côte d'Ivoire, Mali, Niger, Senegal and Togo).
	• Withholding taxes:
	  ○ Dividends – Resident and non-residents 15%, dividends distributed by joint stock companies 10% and dividends distributed by a company listed on the stock exchange 7%;
	  ○ Interest - 15%;
	  ○ Royalties – Individuals 10%, companies 12%.
	• Social security contributions:
	  ○ Employer contribution rate is 15.4%;
	  ○ Employee contribution rate is 3.6% of total monthly remuneration.
	• All employers must pay 4% payroll tax on the gross value of every employee's salaries, wages, allowances and benefits in-kind.
	• VAT is levied at 18%.

Labour Laws	• The statutory minimum wage in Benin is XOF 40,000 ($69). • The average salary in Benin is XOF 428,000 ($735). • Total working hours are generally 40 per week and should not exceed 56 per week. • Workers may not work more than 240 hours of overtime a year.
Work permits and business visas[225]	• Expatriates wanting to work in Benin will need a permit. All applications for work permits must be submitted before moving to the country. • The visa process can be completed online.

[224] https://www2.deloitte.com/content/dam/Deloitte/za/Documents/tax/za_Key_Fiscal_Guide_2018_17518.pdf
[225] https://www.internations.org/go/moving–to–benin/working

Ministries and trade associations offer a helping hand to tech firms

Benin is not known for its outsourcing potential and the IT/BPM sector is in its infancy. Most local organizations serve international NGOs and the agriculture, telecommunication and transport sectors.

However, several associations and bodies have been established to support the ICT sector.

Table 73 Three key associations help promote the tech sector

Agency	Contact
Ministère du Numérique et de la Digitalisation	Website: https://numerique.gouv.bj/
L'Agence pour le Développement du Numérique	Website: https://adn.bj/agence-numerique/
Agence Béninoise du Service Universel des Communications Electroniques et de la Poste	Website: http://www.absucep.bj/

Growing market segments

The tech sector serves many domestic industries

The economy grew an estimated 6.7% in 2019, largely thanks to record cotton production in the agriculture sector, growth of the construction and infrastructure sectors, and increased port activities in Porto-Novo. Benin is a commodity-based economy that relies on cotton and re-exports to Nigeria for 70% of its exports.

The sectors with high growth potential in Benin are subsectors within banking, finance and insurance services, infrastructure development and agribusiness. The Government reportedly plans to invest $15 billion in these sectors over the next five years.

Table 74 Three fast-growing sectors show outsourcing potential

Banking, finance and insurance services	
Size of industry: ~ $9.2 billion Contribution to GDP: 51%	Small businesses are flourishing in Benin, primarily in the informal sector. Many of these entrepreneurs must now learn how to apply for loans and manage their finances properly. This means more people are opening bank accounts instead of carrying out their day-to-day operations using cash. More banking, finance and insurance services are becoming available to satisfy growing demand.
Infrastructure and public works	
Size of industry: ~ $4 billion Contribution to GDP: 22%	The Government is aware that investment in infrastructure will form the foundation of a revitalized economy and increase foreign direct investments. Infrastructure and public work projects have focused on: • Modernizing and expanding the port of Cotonou; • Maintaining, modernizing and extending 1,362 km of the national road network; • Increasing electricity capacity from 354 MW in 2019 to 1,400 MW by 2035; • Rolling out high-speed internet to 80% of the population.

Agribusiness	
Size of industry: ~ $4.2 billion Contribution to GDP: 23%	The agriculture sector is characterized by subsistence farming. Improving digital technology offerings in production and processing, as well as connecting more farmers to the production supply chain, will help the country move away from small-scale agriculture. The IT/BPM opportunities in this sector will focus on supporting agribusiness by diversifying export product and improving supply chains and business operations.

Market access opportunities

Finance, infrastructure and agriculture show the most promise

The Beninese IT/BPM sector is developing. The market access opportunities discussed in this section target established sectors with high potential for growth that could be serviced by IT/BPM providers.

Table 75 Three sectors offer different opportunities

Industry	Service area	Description
Banking, finance and insurance services	Digital payments Online banking Peer-to-peer lending Personal finance Insurance Mobile remittances	The presence of more small business owners in the informal sector means financial services must be scaled up. In addition, high mobile network coverage and improvements to telecom infrastructure and mobile broadband access in rural areas present an opportunity to create and manage more mobile banking and insurance services. Key opportunities include: • Contact centre technology • Back-end contact centres • E-project management • Business research and analytics • Legal process outsourcing • Business administration
Infrastructure and public works	Business expansion Project management Operations management	The Revealing Benin investment programme aims to launch 45 major projects across nine different sectors. Improvements to infrastructure and public works present an opportunity to support the Government and international NGOS in designing and delivering the various infrastructure initiatives they undertake over the coming years. Key opportunities include: • Fixed and mobile networking installation • Server administration • Enterprise and internet protocol telephony • E-project management • Business research and analytics • Legal process outsourcing • Business administration
Agriculture	Agribusiness services Application management Business administration	The IT/BPM opportunities in this sector will involve supporting large agribusinesses with business expansion and the running of their operations. Opportunities include: • Agri-tech – The use of artificial intelligence and technology platforms to analyse crop disease and improve crop yield.

Mali

The information technology and business process outsourcing sector is nascent. Competition comes primarily from large firms that provide their own support services.

Macroeconomic and country data

Capital**: Bamako**

GDP: $17 billion (2018)

GDP per capita: $901

Real GDP growth rate: 4.9%

Inflation rate: 1.5%

Population: 19 million

- 0–14 years: 48%
- 15–24 years: 19%

Population growth rate: 3%

Major business sectors: Mining, agriculture, telecoms, transport, power and government

Unemployment rate: 7.9%

Literacy rate: 33%

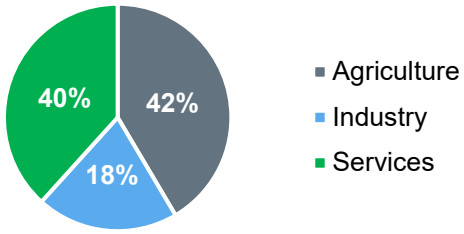
Urbanization: 43%

Major trade and industry associations

- Ministry of Digital and Economy
- *Agence des Technologies de l'Information et de la Communication*
- CACTIC Mali – *la Coordination des Associations et Clubs TIC du Mali*

Sources: World Bank, Avasant Research.

Gross domestic product composition



Key facts

Currency: West African CFA (*Communauté Financière Africaine*) franc (XOF)

Exchange rate (per $): XOF 578

Foreign direct investment inflow: $366 million (2018)

Major languages: French, Bambara

Major religions: Muslim 94.8%, Christian 2.4%

Major exports: Gold (68%), cotton (12%), bovine, mixed mineral, aircraft parts, oil

Country highlights

Mali, a landlocked country in West Africa, is the eighth largest economy in Africa. The capital, Bamako, is the biggest city and economic epicentre.

The main Malian exports are gold and cotton, which together accounted for 80% of exports in 2018.

GDP growth slowed in 2018, but was expected to reach 5% per annum over the medium term. The tertiary sectors of telecommunications, transport and financial services will be the major drivers of this growth.

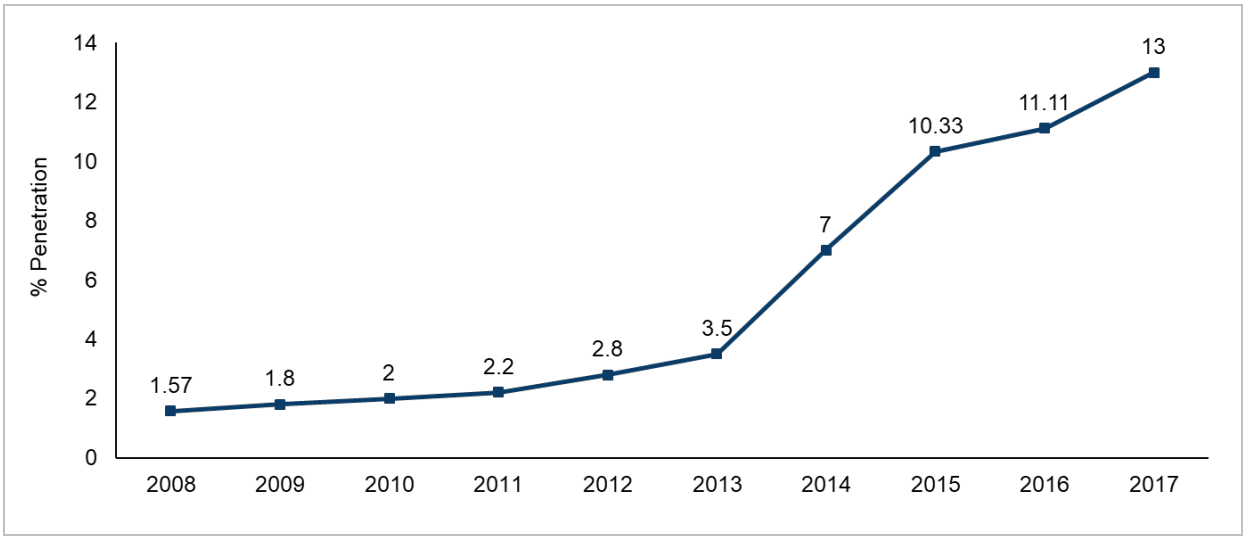
Mali is a low-income country. The World Bank 2018 Human Capital Index ranks it at 182 of 188 countries.

Information and communications technology landscape

Technology service exports are on the rise

The tech infrastructure can be described as basic. Internet penetration was estimated at 13% in 2017.[226] The use of mobile phones is well established and roughly 90% of the population have access to a mobile network.[227] Despite high mobile phone penetration, only 27% of mobile users have access to a 3G network. Most people rely on 2G.

Figure 20 Internet penetration has climbed over the last decade



Source: World Bank.

Mali is working to become a hub for the development and outsourcing of ICT services. The Government, in conjunction with international organizations such as the African Development Bank and the United Nations, has set up several initiatives to accelerate growth within its ICT sector. Initiatives such as Mali Digital 2020 and the Bamako Digital Complex Support Programme have set the foundations that led to the expansion of digital networks and services – some 9,200 km of fibre optic cables have been laid in the country.[228]

Other notable developments include the introduction of mobile money transfers, greater digital literacy among youth and the development of human capital in the ICT industry.

[226] https://www.indexmundi.com/facts/mali/internet–penetration
[227] https://www.itu.int/en/ITU–D/LDCs/Documents/2017/Country%20Profiles/Country%20Profile_Mali.pdf
[228] https://www.ecofinagency.com/telecom/2111–39304–mali–national–assembly–authorizes–government–to–borrow–xof93–billion–for–mali–digital–2020

Why is the Malian technology sector appealing?

Attractiveness factors	Main highlights
Favourable time zone A difference of 1–3 hours with most European countries	**Services sector market size** **IT/BPM service exports (2017):** ~ $934,147
Young workforce with over 60% of the population age 25 and under	**Services sector workforce:** ~ 2.6 million
Competitive labour costs with an average monthly wage of $107	**Wage (average across all sectors)**[229] **Minimum wage:** ~ $65 | **Average wage:** ~ $107
Strong government focus on the tech sector exhibited through investment towards ICT infrastructure development	**Main IT/BPM service offerings:** Systems networking, engineering and installations, enterprise and internet protocol telephony, IT security, payroll, business administrative services
	Key industries served: Government, NGOs, agriculture, energy, transport, telecommunication, healthcare, financial services, mining
	Major markets served: West Africa
	Key IT/BPM associations and agencies: • Ministry of Digital Economy and Planning • Agence des technologies de l'information et de la Communication delivers the national policy and strategic plan for ICT in Mali • CACTIC Mali – la Coordination des Associations et Clubs TIC *du Mali*

[229] http://www.salaryexplorer.com/salary–survey.php?loc=132&loctype=1

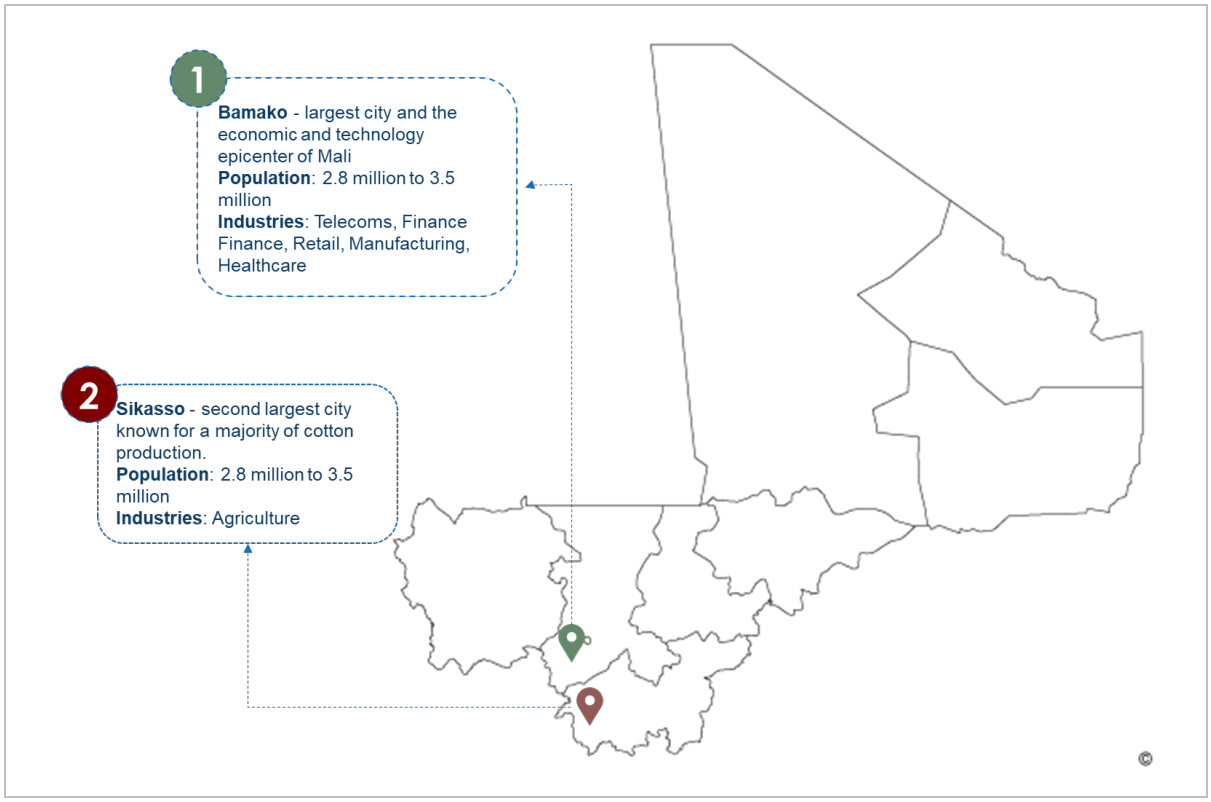
Key cities and technology centres

Bamako is the technology epicentre

Mali's commercial and economic centre is its capital Bamako, which is located on the river Niger's fertile plains. An estimated 3 million people live in Bamako.[230] Other major cities include Sikasso, with 300,000 people; Kalabancoro, with 160,000 people; Koutiala, with 137,000 people; and Segou, with 130,000 people.

Although some Malian cities are expected to urbanize in the coming years, Bamako is the most attractive in terms of ICT growth and development. It is one of the fastest growing cities in Africa, expanding about 3.5% a year.[231] Already, 14 ICT innovation hubs are based in the city. The Government, international NGOs and mobile network providers have played important roles in establishing these innovation hubs and improving the digital ecosystem.

Figure 28 Bamako is the most important city for technology



Source: Avasant Research.

[230] https://bamako.ml/district-de-bamako/
[231] https://www.cia.gov/library/publications/the–world–factbook/geos/print_ml.html

Table 76 Most tech hubs in Mali are located in Bamako

City	Main ICT hubs/tech parks/start-up hubs [232]
Bamako	- **Bamako Digital Complex** – ICT development and innovation hub, funded by the African Development Bank - **Impact Hub Bamako** – Innovation labs services, incubator, centre for social entrepreneurship, part of a global network of 80 locations and 15,000 members - **CREATEAM** – Incubator, centre for developing business talent - **DoniLab** – Business incubator focused on ICT, health, social innovation - **Tetelisp** – Agri-business innovation hub - **Jokkolabs** – Social change innovation hub - **Diaspohub** – Part of AfriLabs, which has helped establish 100 innovation labs across Africa - **Bamako Incubateur** – Incubator and accelerator of start-ups - **Sup Incub** – An education project from *Université Intercontinentale Libre*, focused on entrepreneurship - **ACTIC Mali** – A centre for business incubators for start-ups in the new technology, environment and sustainable development sectors

Source: Avasant Research.

The state of competition: Understanding the landscape

A handful of internet and mobile service providers own most of the market

The ICT service provider market is very concentrated. It is made up of a few large internet and mobile services providers, who control most of the IT/BPM market, and the SMEs who help them maintain their networks.

These big providers are privatized companies that 'do it all'. They provide nationwide coverage and they design, implement and maintain their ICT infrastructure. Furthermore, they provide specialized services to the Government and other private organizations, such as mining companies and NGOs in the country.

Some highlights of the service provider landscape are shown below.

- **International players dominate the telecommunication sector**. Three main mobile providers are active in Mali: Orange Mali, Malitel and Telecel. In December 2019, a fourth operator, Mobilis was issued a licence to begin operations in the country. Only Malitel, owned by Sotelma, the national telecommunication company, is local. Orange Mali and Malitel hold a duopoly in the market.[233]

- **The ICT sector is nascent.** Organizations usually have their own in-house teams that provide support and operational services. The small, local business process outsourcing enterprises are mainly active in engineering and telecommunications. International BPM organizations focus on helping companies establish foreign bases in Mali and providing business registration and human resources administration activities.

The following table describes the main services offered and industries served by some of the leading service providers in Mali. No international BPM provider has a base in the country.

[232] https://www.gsma.com/mobilefordevelopment/blog/618–active–tech–hubs–the–backbone–of–africas–tech–ecosystem/
[233] https://medialandscapes.org/country/mali/telecommunications/company–profiles

Table 77 The service provider landscape is sparse

Service provider	Location	Examples of services offered	Industries served
Harnet Systems Mali	Bamako	A multinational hardware distribution business consulting service and IT and telephony engineering company. Its services include: • Fibre solution • Server administration • IT security • Enterprise and internet protocol telephony • IPB solution • Undulated current	Telecommunications
CEDIM-MALI	Bamako	The IT Development Centre in Mali is a training and development company for IT applications. Its services include: • Application creation • ICT networking • Training • Engineering and installations	Telecommunications
Mali Service Centre	Bamako	Financial management and administrative services organization. Its services include: • Financial management • Administrative assistance • Travel assistance • Payroll and human resource assistance • Logistics assistance	Research and development , education
Globalization Partners	Bamako Based in Boston, Massachusetts	A global employer organization that provides services to foreign companies looking to establish in Mali. Its services include: • Recruitment Payroll services	Sector agnostic
EAH Global	Bamako Based in New York	An employment and management services provider. Services provided include: • Employment • International professional employer organizations • Outsourcing • Payroll and management services Accounting and finance support	Sector agnostic

Service capacity and capability

Digital skills need to be improved

Human capital development in Mali is underdeveloped. The country is ranked at 154 of 157 countries, according to the World Bank 2018 Human Capital Index.

The United Nations Educational, Scientific and Cultural Organization estimates the adult (people aged 15 years+) literacy rate at 33%. About, 6%–7% of adults have a university education. More than 2 million children (ages 5–15 years) receive no formal education and half of young adults (ages 15–24 years) are not literate. Factors such as household poverty, child labour, child marriage, insecurity and a lack of schools in certain rural areas all contribute to the low level of education.

The unemployment rate is estimated at 9%–10% and youth unemployment is estimated at 23%–25%.[234]

The next table examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

Table 78 Many skilled Malians enter the job market every year

Talent and skill availability[235]	
No. of universities: 5+	Mali has a young population, with about 60% of the population 25 years of age and under. Although 300,000 people enter the labour market every year, only about 5% of those people are employed in the formal labour market. Many skilled individuals enter the job market every year.
Annual tertiary graduates: ~ 500,000	
Youth unemployment: ~24%	
Tertiary gross enrolment ratio: 6%–7%	
Secondary gross enrolment ratio: ~ 40%–41%	

[234] https://www.statista.com/statistics/812227/youth–unemployment–rate–in–mali/
[235] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

Quality and employability of talent[236]	
Quality of vocational training: Ranks 96th of 141 countries Skillset of graduates: Ranks 83rd of 141 countries Labour force with advanced education: 2.2% Ease of finding skilled employees: Ranks 95th of 141 countries Digital skills in active population: Ranks 110th of 141 countries Literacy • Youth literacy: 24% • Adult literacy: 33% English proficiency: Low French proficiency: High	The statistics in this section have been sourced from the WEF 2018 Global Competitiveness Index. The scoring, on a scale of 1 to 7, assesses how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well. The quality of the skilled labour force is ranked 136 out of 141 countries. Of the working population, it is estimated that: ▪ 63% work in the agriculture sector, ▪ 8% work in industry, ▪ 29% work in the services sector. Although few Malians have an advanced formal education, the quality of the skilled labour force is high. The country scored of 4 out of 7 when it comes to finding skilled employees, and 3.6 out of 7 when it comes to sourcing talent with digital skills. The official language is French, so Malians are well suited to service francophone countries.
Scalability[237]	
With 300,000 people entering the labour force every year, Mali has an abundance of talent to serve its growing economy. Diversifying from a commodity-based economy to a service-based one, along with continued investments in ICT infrastructure and education, will make Mali a good destination for IT/BPM organizations. Companies looking to establish a base in the country will have to invest in training the existing talent.	

[236] *Ibid*.
[237] https://www.icco–cooperation.org/en/project/youth–employment–in–mali/

ICT infrastructure

Despite improvements, more needs to be done

About 90% of the population has access to a mobile network, giving Mali one of the largest wireless penetration rates in West Africa. According to the GSMA Mobile Connectivity Index 2018, this is well above the West African average of 71%.[238]

Competition among the four mobile service providers and the Government's commitment to improve ICT infrastructure have strengthened the sector. ICT and other service sectors together contribute about 37% of GDP.

Mali has a challenging geography, which has hampered the development and growth of ICT infrastructure. Large parts of the country are made up of sparsely populated desert areas that are difficult to access and expensive to service.

Security issues have also delayed completion of the national backbone network by Huawei. This network was commissioned in 2015 to improve internet access and connectivity across the country.

As a landlocked country, Mali can only access undersea fibre-optic cables through connections with its neighbours. As a result, fixed telephony and broadband penetration rates are quite low. Just 13%–17% of the population has access to the internet, and 26%–30% of mobile users have subscriptions to internet services.

Table 79 Broadband needs to become more affordable

Telecom[239]
• Fixed telephone subscriptions (per 100 people) – 1.2 • Mobile cellular subscriptions (per 100 people) – 115.1 • % of population with mobile network coverage – 90% • % of population with access to 3G – 27% to 30%
Mobile phone uptake is very high. At least one mobile phone is present in 90% of urban homes and in 88% of rural homes. The prevalent mobile network is 2G, though 3G and 4G coverage is expanding due to urbanization. Orange Mali introduced 4G in 2017 and other providers have done the same. Today, 4G coverage is mainly available in Bamako.
Broadband/bandwidth[240, 241]
• Fixed broadband subscriptions (per 100 people) – 0.6 • Active mobile broadband subscriptions (per 100 people) – 6–30 people • People using the internet (% of population) – 13%–17% • International internet bandwidth per internet user (kilobits per second) – 5.6 • % of households with internet access – 10%–17%

[238] https://www.gsmaintelligence.com/research/?file=36b5ca079193fa82332d09063d3595b5&download
[239] https://www.gsma.com/mobilefordevelopment/wp–content/uploads/2017/04/Mobile–for–Development–Utilities–The–potential–of–mobile–for–rural–energy–access–in–Mali.pdf
[240] *Ibid.*
[241] https://www.itu.int/en/ITU–D/LDCs/Documents/2017/Country%20Profiles/Country%20Profile_Mali.pdf

Similar to fixed telephone subscriptions, fixed broadband penetration is very low. An estimated 3%–4% of households in Mali have computers and only 10%–17% have broadband connections.

Although mobile phones are the main platform to obtain information, just 13%–17% of mobile phone users have access to the internet. According to the GSMA Mobile Connectivity Index 2018, Mali scored 27.8, below the West African average of 36.2 and the sub-Saharan average of 39. These mobile connectivity rankings place Mali at 12th out of 14 West African countries – 18–25 points behind countries such as Nigeria and Ghana.

Affordability is the main reason mobile broadband connectivity in Mali, like most African countries, is low.

- According to Cable.co.uk, mobile data price comparison index, the average price of 1GB of data in Mali is $9.20. In comparison, 1GB of data is $2.20 in Nigeria and $1.60 in Ghana.
- Low demand strongly affects the price and availability of mobile internet. Access to the internet is a luxury in a country that is regarded at one of the 25 poorest in the world.
- Affordability will increase as ICT infrastructure improves and as more mobile operators enter the market.

Power [242, 243]

- **Electric power consumption** (kWh per capita) – 90
- **Generation capacity**
  - Installed capacity: 12,522 MW
- **Access to electricity** (% of population): 35%–38%
  - Urban (% of urban population): 55%–60%
  - Rural (% of rural population): 14%–18%
- **People without power:** 13 million people (out of a population of 19 million)
- **Quality of electricity supply**: Ranks 116th of 137 countries (2018 – latest available data)

Mali depends heavily on imports of petroleum products, electricity from neighbouring countries and wood from its natural forests to power the country. Although Mali reportedly has oil reserves in the north and east, exploration of those reserves has been slow.

About 35%–38% of Mali's population has access to electricity, ranking it 125 of 137 countries, according to the World Economic Forum Global Competitiveness Index. Furthermore:

- There is a disparity in electricity availability and consumption between urban and rural areas;
- At the national level, the main energy generation sources are hydropower and thermal power stations. Although several hybrid stations (solar/diesel) and decentralized solar photovoltaic systems have been built throughout the country since 2011, little energy is generated using renewable sources.

Although, the energy situation is far from optimal, some major improvements over the last decade may signal that more improvements are ahead.

- Rural electrification has increased from 2% at the start of the decade to 14%–18% today.
- The 90 MW Albatros Energy Mali power station in Hawa-Dembaya district was completed in 2018, boosting Mali's electricity capacity by 25% and improving electricity access for 4.5 million people.

[242] https://www.usaid.gov/sites/default/files/documents/1860/Mali_Fact_Sheet_Power_Africa.pdf
[243] https://energypedia.info/wiki/Mali_Energy_Situation

Government incentives and policies

Six-point plan aims to bolster the technology sector

In 2014, the Government launched Mali Digital Plan 2020, a six-point nationwide ICT development strategy to reorganize the digital economy, boost economic growth and create jobs.

What incentives support business development in Mali?[244]

The following incentives apply to companies operating in all sectors:

- A Malian company registered as a limited liability entity can be incorporated within one month, provided one shareholder and one director are in place. The director and shareholder can be of any nationality.
- The Government offers many generous incentives to firms established by foreign entrepreneurs.
- Businesses are exempt from all import tariffs for three years.
- Businesses are exempt from trading taxes for up to eight years.
- A company is exempt from taxes in Mali's free trade zones for up to 30 years provided 20% of its products are sold locally.

Business registration procedure[245]

The following business registration procedure applies to all businesses in Mali.

- **Depositing the initial capital** – The initial capital must be deposited with a bank or a notary before certification can be obtained.
- **Signing an affidavit** – An affidavit must be signed, and the bylaws notarized, to certify the company has no criminal records. The registration fees must be paid to the notary.
- **Purchasing legal stamps** – Legal stamps must be bought from the window of the representative of the tax administrator at the one-stop shop.
- **Deposit registration documents** – Businesses must deposit all documents and forms at the front desk to register the company with all the services at the one-stop shop.
- **Publishing the incorporation notice** – This will be published regularly by the one-stop shop. Any new companies that were recently incorporated will be mentioned on its website.

[244] https://www.venture–overseas.com/go–global/africa/mali–company–registration–services/
[245] *Ibid.*

What is the focus of tech policy in Mali?

Information and communications technology is a growing sector in Mali. According to the World Bank, less than 1% of Malian exports are related to tech goods and services.[246] The business process outsourcing market is underdeveloped.

The government bodies responsible for IT/BPM regulation and compliance include:

- Ministry of Digital Economy and Planning.
- AGETIC – *Agence des technologies de l'information et de la Communication*, which is responsible for delivering the national policy and strategic plan for ICT in Mali.
- The Mali Investment Promotion Agency, which seeks to be a single point of contact for all business creation procedures, investor assistance and the issuance of authorizations and certifications for investments in Mali.

Table 80 Policies seek to draw foreign investors to the tech sector

Income and taxation[247]	• The profits of foreign and local companies are taxed the same, at a rate of 35%.
	• Holding companies are not subject to any corporate tax.
	• Withholding taxes:
	  ○ Dividends – 10%
	  ○ Interest – 9%, 13%, 15%, 18%
	  ○ Royalties – 15%
	• Social security contributions paid by employers: 35%
	  ○ Employers with 10 or more employees pay contributions monthly
	  ○ Employers with nine or fewer employees pay quarterly
	• VAT is levied at 18%. All businesses must obtain a VAT registration number 30 days after incorporation.
	• All employers are required to pay 3.5% payroll tax on the gross salary of every employee.

246 https://databank.worldbank.org/views/reports/reportwidget.aspx?Report_Name=CountryProfile&Id=b450fd57&tbar=y&dd=y&inf=n&zm=n&country=MLI

247 https://www.healyconsultants.com/mali–company–registration/accounting–legal/

Labour laws[248]	• Mali's minimum monthly wage is XOF 40,000 ($66), plus a mandatory benefits package including social security and healthcare. • Workers receive a seniority bonus after at least three years of continuous service with the same enterprise. This bonus is calculated as a percentage of the minimum wage of worker's classification category. This percentage is fixed as follows: o 3% after three years of service o 5% after five years of service and o Plus 1% per year of service in addition, within the maximum limit of 15% • Salary must be paid at regular intervals not exceeding: o 15 days for workers engaged on a daily or weekly basis, exceptionally extendable to one month after written authorization from the labour inspector, because of the particular operating conditions of certain establishments o One month for workers hired on a fortnightly or monthly basis
Work permits and business visas[249]	• Expatriates planning to work in Mali require a business visa. A passport, completed application form, photographs and letter from the hiring company are required. • For the business visa, a registration certificate and recent income tax filed by the inviting company in Mali are also needed. Visa applications should be submitted at the closest embassy or consulate before entering Mali.

[248] http://www.maliservicecenter.org/malian_labor_code.cfm
[249] http://www.maliservicecenter.org/malian_labor_code.cfm

Ministries and trade associations offer a helping hand to tech firms

Mali is not known for its outsourcing potential and its business process outsourcing sector is almost non-existent. Most local organizations serve international NGOs and the agriculture, telecoms and mining sectors.

However, several associations and bodies have been established to promote the ICT sector.

Table 81 Six key associations work in the tech sector

Agency	Contact
Information and Communication Technologies Agency	**E-mail:**info@agetic.gouv.ml **Website:** https://agetic.gouv.ml/
Coordination of Associations and Clubs for the promotion of ICTs in Mali	**Website:** http://cactic.ml/
Network of Telecommunication and Computer Scientists in Mali	**E-mail:** contactrtim@gmail.com
Agency for the Management of the Universal Access Fund	**Website:** http://www.accesuniversel.gouv.ml/
The Mali Telecommunications, Information and Communication Technologies and Posts Regulation Authority	**E-mail:** amrtp@amrtp.ml **Website:** https://www.amrtp.ml/
Personal Data Protection Authority	**E-mail:** contact@apdp.ml **Website**: https://apdp.ml/

Growing market segments

The tech sector serves many domestic industries

Agriculture, industry and services are the top contributors to GDP. Agriculture and industry, in particular gold exploration, contribute about 80% of exports.[250]

- Agriculture includes farming, forestry, fishery, agropastoralism
- Industry includes mining, manufacturing, energy production and construction
- Services include government activities, transportation, telecommunication and finance

IT/BPM companies looking to establish businesses in Mali should aim to provide services that support large firms that are active in the following sectors:

- **Advisory services** – Helping international NGOs, mining and telecommunications companies set up business and performing human resources and administrative operations on their behalf.
- **Energy, transport and telecommunications** – Improving electricity capacity and developing renewable energy stations, expanding the road and rail networks, and providing delivery services focused on mobile and internet (fibre optic) network expansion.
- **Banking, finance and insurance services** – Scaling financial services to match the growing number of small business owners.
- **Agro-based light manufacturing** – Exploring commodities other than cotton, such as sesame seeds, cashew nuts and the supply chain and technology services that support their production.

Market access opportunities

Advisory, infrastructure and finance sectors show the most promise

The Malian ICT sector is still in its infancy. The small market, underdeveloped infrastructure and the presence of well-established neighbours such as Senegal deter IT/BPM businesses from establishing businesses in Mali.

The market access opportunities discussed in this section focus on established business sectors with high potential for growth that could be serviced by IT/BPM organizations.

Table 82 Three sectors offer different opportunities

Industry	Service area	Description
Advisory and administrative operations	• Legal process outsourcing • Business administration	Mali attracts large companies looking to operate in its agriculture and mining sectors, as well as international NGOs. There is an opportunity for IT/BPM providers to support these organizations with the set-up, running and expansion of business operations within Mali. Key opportunities include: • Employment • International professional employer organization • Immigration • Payroll • Accounting and finance administration

[250] https://unctadstat.unctad.org/CountryProfile/GeneralProfile/en–GB/466/index.html

Energy, transport and telecoms	• Business expansion • Project management • Operations management	Infrastructure improvements and public works present an opportunity to support the Government and international NGOS in designing and delivering the initiatives they adopt in the coming years. Key opportunities include: • Fixed and mobile networking installation • Server administration • IT security • Enterprise and internet protocol telephony • E-project management • Business research and analytics • Legal process outsourcing • Business administration
Banking, finance and insurance services	• Digital payments • Online banking • Peer-to-peer lending • Personal finance • Insurance • Mobile Remittances	The increase in small business owners in the informal sector has triggered a need to scale up financial services. Furthermore, wide mobile network coverage and improvements to telecom infrastructure and mobile broadband access in rural areas offers an opportunity to create and manage more mobile banking and insurance services. Key opportunities include: • Contact centre technology • Back-end contact centres • E-project management • Business research and analytics • Legal process outsourcing • Business administration
Agriculture	• Agro-based light manufacturing and processing	The key to growth in this agriculture sector is moving from low production and subsistence activities to light-based manufacturing and processing activities. Light-based manufacturing is viable due to Mali's past in industrialization and the fact that it would not require highly skilled labour. Some key opportunities include: • **Implementation advisory:** Support in developing and implementing national agricultural strategies. • **Agri-tech** – The use of artificial intelligence and technology platforms to analyse crop disease, provide solutions on pesticide usage and more.

Burkina Faso

The ICT services sector is nascent and the tech infrastructure is developing. Large organizations that have their own in-house support services compete in the sector.

Macroeconomic and country data

Capital: **Ouagadougou**

GDP: $14.1 billion

GDP per capita: $729

Real GDP growth rate: 6.8% (2018)

Inflation rate: 2.4% (2018)

Population: 19.8 million

- 0–14 years: 43.6%
- 15–24 years: 20.3%

Population growth rate: 2.9%

Major business sectors: Mining, agriculture, telecoms, government and infrastructure

Unemployment rate: 6.2%

Literacy rate: 41.2%

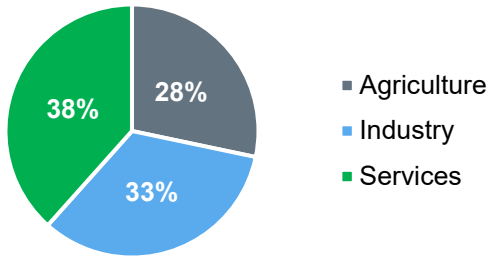
Urbanization: 29.4%

Major trade and industry associations:

- Financing and Promotion Agency for Small and Medium-sized Enterprises
- Ministry of Digital Economy and Post Office Development
- *Agence de Promotion des Technologies de l'Information et de la Communication*

Sources: World Bank, Avasant Research.

Gross domestic product composition



Key facts

Currency: West African CFA (*Communauté Financière Africaine*) franc (XOF)

Exchange rate (per $): XOF 578

Foreign direct investment inflow: $480 million

Major languages: French (official), native African languages (90%)

Major religions: Islam (62%), Christianity (30%)

Major exports: Gold (80%), cotton, zinc ore, cereals and nuts

Country highlights

Burkina Faso is located in West Africa. Its 19.8 million inhabitants are spread across 274,200 square kilometres.

The economic outlook is positive over the medium term. GDP grows about 6% a year and inflation is expected to stay below 3%.

Burkina Faso is one of the least developed countries in the world, according to the United Nations.

The economy relies heavily on gold (80% of exports) and cotton. In 2018, the economy grew by 8.7% from 2017, largely due to a boost in production in the agriculture sector. About 80% of the population works in the agriculture sector.

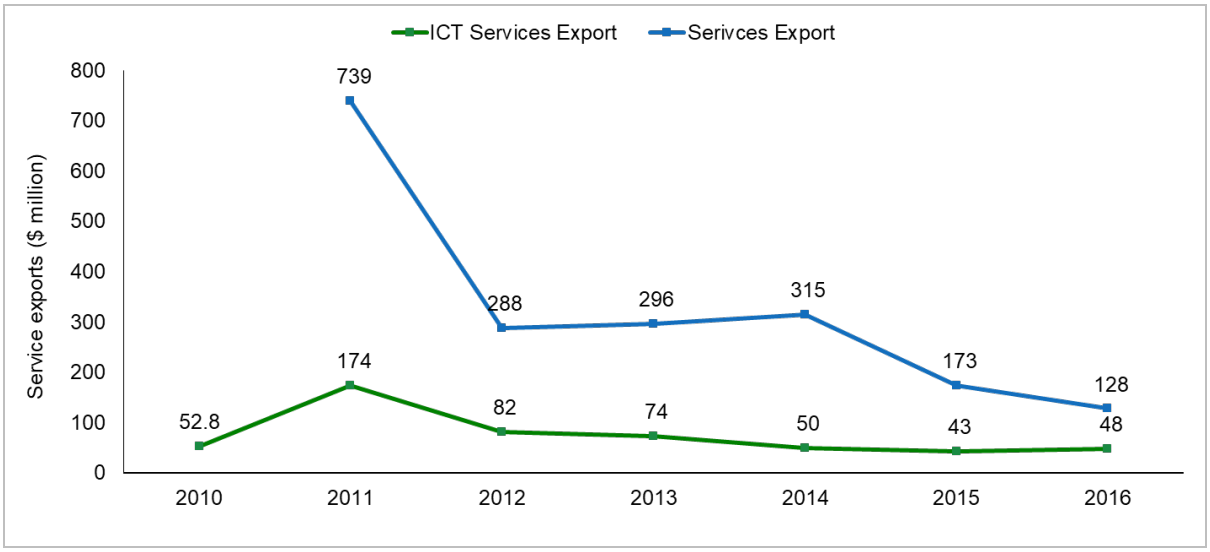
Information and communications technology landscape

Tech development well behind agriculture and mining

Burkina Faso has a nascent technology sector. According to the World Bank, the country exported $48 million in ICT services in 2016. This figure is lower than in previous years and indicates that about 11% of all services are related to ICT.

In a country where about 40% of the population live below the poverty line, ICT development and growth has taken a back foot to the agriculture sector and the very lucrative mining sector.

Figure 29 ICT services represented 11% of total service exports in 2016



Source: World Bank.

The outlook for the sector is positive. The Government, which has identified ICT development as a major priority, wants to improve the broadband infrastructure so the country can reach its full digital potential.

This commitment comes off the back of a $20 million credit from the World Bank in 2017 for the e-Burkina project. This initiative aims to improve the ICT infrastructure, modernize government services and foster economic development in Burkina Faso.[251]

[251] https://www.worldbank.org/en/news/press–release/2017/01/30/burkina–faso–20–million–to–improve–ict–use–in–public–administration

Why is the technology sector appealing?

Attractiveness factors	Main highlights
Favourable time zone A difference of 1–3 hours with most European countries	**ICT service exports (2016):** ~ $48 million
Young workforce with more than 65% of the population 25 years of age and under	**Services sector workforce:** ~ 6 million
Competitive labour costs with an average monthly wage of $260	**Minimum monthly wage:** ~ $60 **Average monthly wage:** ~ $260[252] (IT/BPM services)
Strong government focus on ICT development exhibited by investment to develop the ICT infrastructure	**Main IT/BPM service offerings:** Business administration, human resources and payroll, customer service and telemarketing
	Key industries served: Government, mining, telecommunication, agriculture, manufacturing, NGOs and financial services
	Major markets served: West Africa
	Key IT/BPM associations and agencies: • Financing and Promotion Agency for Small and Medium-sized Enterprises • Ministry of Digital Economy and Post Office Development • *Agence de Promotion des Technologies de l'Information et de la Communication*

[252] https://www.paylab.com/bf/salaryinfo/administration

Key cities and technology centre

Ouagadougou is the technology epicentre

The largest city in Burkina Faso is its economic epicentre and capital, Ouagadougou. About 2.8 million people live in the city and its urban area. Other notable cities include Bobo-Dioulasso, with 970,000 people, Koudougou, with 120,000 people, Banfora, with 109,000 people, and Ouahigouya, with 102,000 people.

The ICT ecosystem is still in the early stages of development. A handful of tech innovation hubs and incubators have cropped up since the 2010s, mainly in Ouagadougou.

Figure 21 Ouagadougou the top tech city

Source: Avasant Research.

Table 83 Ten hubs are based in Ouagadougou

City	ICT hubs/tech parks/start-up hubs	
Ouagadougou	• Burkina Business Incubator • Yam Pukri • Cagefic Incubator • La Ruche • Sira Labs • BeoogoLab	• La Fabrique • Jokkolabs Ouagadougou • OuagaLabs • Financing and Promotion Agency for Small and Medium-sized Enterprises

Source: Avasant Research.

The state of competition: Understanding the landscape

Number of innovation hubs and incubators is increasing

The IT/BPM sector in Burkina Faso is developing and the number of tech innovation hubs and incubators is rising. However, an underdeveloped ICT infrastructure, low demand for services, high costs and low internet speed hinder development of the sector.

Some highlights of the service provider landscape are shown below.

- **IT/BPM services** are mainly available in Ouagadougou. Most organizations are based in Ouagadougou, the capital and economic epicentre of the country.
- **Competition in the IT/BPM sector** is dominated by big organizations that provide their own support services and a handful of SMEs that provide non-specialized services. Most ICT services jobs advertised in the country are for the telecom and education sectors.
- **The major sectors being serviced** are government, telecommunications, education, healthcare, mining, agriculture, financial services and not-for-profit sectors.
- **The range of services provided by IT/BPM organizations is limited,** with most focused on helping foreign businesses set up their operations, marketing, public relations, human resources and payroll services, tax, telemarketing and customer service.
- The following table describes the main services offered and industries served by some of the leading service providers in Burkina Faso. International players are highlighted in blue.

Table 84 The service provider landscape in Burkina Faso is made up of international firms

Service provider	Location	Examples of services offered	Industries served
AdKontact	Based in Benin, Togo	A customer relations provider focusing on West and Central Africa. Services provided include: • Contact centre services • Customer services • Telemarketing • Human resources • Market research and survey • Debt recovery	Financial services, logistics, hospitality, energy, not-for-profit
Africa HR Solutions	Based in Mauritius	A professional employer organization. Services provided include: • Employment, • Comprehensive HR solutions • Payroll and management services • Accounting and finance support	Sector agnostic
iSON Xperiences	Ouagadougou	A leading customer experience provider Services provided include: • Inbound customer service • Inbound-dealer help desk • Outbound sales • Back office • Interactive voice response deployment/management • Showroom staff deployment and management services • Social media care • Electronic know-your-customer and data cleanup services	

Service capcity and capability

Digital skills need to be improved

In 2018, the adult literacy rate was 41.2% and the youth literacy (15–24 years) rate was 58.3%, indiating that human capital is still developing. The World Bank 2018 Human Capital Index, which measures a country's investment in the education and skills of its population, ranks Burkina Faso at 138 out of 157 countries.[253]

According to the United Nations Educational, Scientific and Cultural Organization, 45% of the population of Burkina Faso were 14 years of age and under in 2018. The median age in the country is 17 years.

One reason Burkina Faso lags behind other sub-Saharan African countries on education is the lack of security, particularly in rural areas. The country has faced problems with extremist groups, especially in the north. In 2018, forced school closures due to insecurity affected 150,000 students. Government spending on education represented 4.2% of GDP in 2015, just under the global average of 4.5%.

The World Bank estimates that Burkina Faso had a labour force of 7.5 million in 2019. Most (38.4% were employed in the service sector, followed by industry (33.3%) and agriculture (28.3%). About 90% of the workforce is employed in the informal sector.[254]

The Government and international organizations are trying to improve education and human capital. The education sector plan (*Programme sectoriel de l'education et de la formation*) (2016–2020) is central to this goal. It aims to:

- Ensure everyone completes primary school;
- Improve vocational and technical training;
- Improve higher education;
- Improve education access and infrastructure;
- Enhance the quality of teaching and learning in schools.

The following table examines the talent availability and capability for the IT/BPM sector as well as its scalability prospects and opportunities.

[253] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[254] https://www.ifc.org/wps/wcm/connect/f45fd7a3–f8be–430b–bd9f–eb958ebe2d89/201907–CPSD–Burkina–Faso–EN.pdf?MOD=AJPERES&CVID=mNf5Bxk

Table 85 300,000 people enter the labour market every year

Talent and skill availability	
No. of universities: 8+ Youth unemployment (15–24 years): ~ 8.7% Tertiary gross enrolment ratio: 6.5% (2018) Secondary gross enrolment ratio: ~ 40.7% (2018)	The labour market is still developing, with adult literacy and youth literacy at 41.2% and 58.3% respectively. These figures are low, compared to the sub-Saharan African literacy average of 66%.[255] About 90% of the labour force is employed in the informal sector. There is an abundance of talent in Burkina Faso. The World Bank estimates that the country needs to create 300,000 jobs a year to match its annual population growth rate of about 3%.
Quality and employability of talent	
Quality of vocational training: Ranks 88th of 141 countries Skillset of graduates: Ranks 105th of 141 countries Ease of finding skilled employees: Ranks 104th of 141 countries Digital skills in active population: Ranks 135th of 141 countries Literacy • Youth literacy: 85% (2016) • Adult literacy: 41.2% English proficiency: Low French proficiency: High	The statistics in this section have been sourced from the WEF 2018 Global Competitiveness Index. The scoring, on a scale of 1 to 7, assesses how well the education system meets the needs of a competitive economy, with 1 representing not well at all, and 7, extremely well. Burkina Faso ranks 138 out of 141 countries based on the quality of its skilled labour. It score 2.9 out of 7 on sourcing talent with digital skills and 3.9 out of 7 on the ease of finding skilled workers. From a workforce skills perspective, the World Economic Forum ranks Burkina Faso among the bottom 10 of countries in the world. The official language is French, so the population is well suited to service francophone countries.
Scalability	
From a scalability perspective, Burkina Faso has high potential. With 300,000 people entering the labour force every year, there is an abundance of talent to serve the growing economy. The shift from a commodity-based (gold and cotton) economy to one that is service based, along with continued investment in tech infrastructure and education, mean Burkina Faso will become a good destination for IT/BPM organizations. Companies looking to establish a base in the country will have to invest in training existing talent.	

[255] https://data.worldbank.org/indicator/SE.ADT.LITR.ZS?end=2018&locations=ZG–1W–Z4–8S–Z7–ZJ&start=2018&view=bar

ICT infrastructure

Despite improvements, more upgrades are needed

Burkina Faso has an underdeveloped tech infrastructure. The country ranks 129 out of 141 countries on ICT adoption, according to the WEF Global Competitive Index.

The GSMA Mobile Connectivity Index analyses country performance based on infrastructure, affordability, consumer readiness and content availability. It ranks Burkina Faso as the 10th least developed in Africa of the 39 countries examined.[256]

Most people rely on cellular networks to communicate and access information because fixed-line infrastructure, like in most low-income African countries, is still developing. Furthermore:

- Mobile phone penetration is high (about 98%). However, only 27% of mobile users have access to mobile broadband.
- 2G is the prevalent mobile network available to the population.
- 3G connectivity is on the rise, with a penetration rate of 65% in 2018 – up from 59% in 2016.

A lack of internet connectivity affects the development of the tech sector.

- In 2018, 16% of the population had access to the internet, up from 14% in 2016.
- According to the Alliance for Affordable Internet, 1GB of data in Burkina Faso represents 14.2% of average monthly income (2019).[257]

The development of the IT/BPM sector in the coming years looks positive, due to several developments:

- The Government and mobile network providers are improving ICT infrastructure.
- Work on a national fibre backbone network began in 2016. The National Telecommunications Backbone Project (2016–2020) aims to lay 7,000 km of fibre-optic cable, which will interconnect 45 provinces across the country.[258]
- According to the International Telecommunication Union, one objective of Burkina Faso's National Plan for Economic and Social Development 2016–2020 is developing a local digital industry by investing in incubators, innovation and research and development.[259]

[256] https://www.gsma.com/mobilefordevelopment/wp–content/uploads/2019/07/GSMA–State–of–Mobile–Internet–Connectivity–Report–2019.pdf
[257] https://a4ai.org/affordability–report/data/?_year=2019&indicator=INDEX&country=BFA
[258] https://www.pndes2020.com/pdf/en/Infrastructures%20routi%C3%A8res,%20com%20et%20habitat/ANG%20Projet%20Backbone%20national%20de%20t%C3%A9l%C3%A9communications%20(1)%20MDENP.pdf
[259] https://www.itu.int/en/ITU–D/LDCs/Documents/2017/Country%20Profiles/Country%20Profile_Burkina%20Faso.pdf

Table 86 Very few people have fixed telephone subcriptions

Telecom [260]
• Fixed telephone subscriptions (per 100 people): 0.4 • Mobile cellular subscriptions (per 100 people) : 97.9 • % of the population with access to 3G: 65%
• Wireless is the customary method of accessing information in Burkina Faso. Almost 98% of the population has access to a mobile phone. • Mobile penetration is high in all parts of the country (97% in urban areas and 82% in rural areas). • Expansions of the nationwide fibre-optic backbone network will provide links to all provincial capitals and key border crossings. • Telecom provider Orange was issued the first 4G licence in the country in 2019, paving the way for people in Burkina Faso to access broadband speeds of 150 megabytes per second.
Broadband/bandwidth
• Fixed broadband subscriptions (per 100 people): 0.1 • Active mobile broadband subscriptions (per 100 people): 29.9 • People using the internet (% of population): 16% • International internet bandwidth per internet user (kilobits per second): 0.6
Power[261]

• **Installed capacity:** 300 MW
  ○ Diesel and heavy fuel oil: 253 MW
  ○ Hydro: 32 MW
  ○ Solar: 33 MW
• **Access to electricity (% of population):** ~ 20%
  ○ Urban (% of urban population): ~ 58%
  ○ Rural (% of rural population): ~1.5% to 3%
• **People without power:** 3 million households
Electricity access: Ranks 136th of 197 countries

• The electrification rate is about 3% in rural areas and 58% in urban areas. About 20% of the population have access to electricity, according to USAID.[262] • Most of the population relies on off-the-grid solutions, such as diesel generators and solar lamps, for everyday living. • According to USAID, Burkina Faso plans to increase installed energy capacity by 1,000 MW in 2020 and to broaden electricity access from 20% of the population to 80%. • The Government plans to increase installed energy capacity to 2,000 MW by 2025 and to ensure that 90% of the population have access to secure electricity.

[260] *Ibid.*
[261] https://www.usaid.gov/powerafrica/burkina–faso
[262] *Ibid.*

Government incentives and policies

Investment Code aims to bolster the technology sector

Several incentives and policies govern the establishment and operations of businesses in Burkina Faso. These incentives and policies are outlined below.

What incentives support business development?

The following incentives are based on the Investment Code.

- Organizations have the right to transfer capital and revenue secured through investments in Burkina Faso, in foreign currencies.
- The Investment Code prohibits discrimination against foreigners. Foreign organizations not registered in Burkina Faso can compete for contracts on projects in the country financed by international bodies, such as the World Bank and the United Nations.
- Organizations can be exempted from corporate income tax, business licence duties and employment and apprenticeship tax, for between five and seven years. The exemption period depends on the scheme, which depends on the amount of the investment.

Business registration procedure[263]

According to the World Bank Doing Business report, the business registration procedure in Burkina Faso is as follows:

1 – Deposit subscribed capital in a bank.

- Business founders must deposit their start-up capital at a bank.

2 – Have a notary public notarize the declaration of capital subscription and deposit the two acts at the notary office.

- Proof of capital deposit is required.

3 –The *Centre des Formalités des Entreprises* handles company registrations, tax numbers, and social security.

- A single application form must be submitted to complete company registration with the *Registre de Commerce et du Crédit Mobilier* to obtain the fiscal identification number (*identifiant financier unique*, at the *Direction Générale des Impots*) and the professional licence (*carte professionnelle de commerçant*, at the Ministry of Commerce).
- After the form is submitted, the *Centre des Formalités des Entreprises* arranges the registration with the court and other authorities.
- Firms are assigned a unique identification number for company registration, fiscal identification, and social security affiliation.

[263] https://www.nordeatrade.com/dk/explore–new–market/burkina–faso/incorporation?vider_sticky=oui

What is the focus of tech policy in Burkina Faso?

The Ministry of Digital Economy and Post Office Development and the *Agence de Promotion des Technologies de l'Information et de la Communication* are responsible for IT/BPM regulation and compliance.

Table 87 Policies seek to draw foreign investors to the tech sector

Income and taxation	**Corporate taxation:**
	• A standard rate of 27.5%
	Withholding taxes:
	• **Dividends** – residents 12.5%, non-residents 12.5%
	• **Interest** – residents and non-residents are taxed at 12.5% and 25%. Interest is taxed at 25% for both residents and non-residents, though this rate is halved for income deposited by a bank or financial broker.
	• **Royalties** – royalties paid to a resident are not subject to withholding tax. Instead, the income in subject to corporate tax. Non-residents are subject to a 20% withholding tax on the net amount.
	• **Technical service fees** – these are subject to 20% withholding tax on the net amount.
	• **Double taxation agreements** are in force with France, Tunisia and members states of the West African Economic and Monetary Union.
	Other taxes on corporations:
	• **Payroll tax** – 3% of the gross salaries of employees
	• **Social security contributions**
	• Total employer's contribution rate is 16%. This includes:
	  ○ Family welfare – 7%
	  ○ Professional risk – 3.5%
	  ○ Retirement pension – 5.5%
	• Employees contribute 5.5% of their monthly remuneration towards their pension.
	• **VAT** – 18%

Labour	• Minimum monthly wage is XOF 34,664 ~$60 • Average monthly wage is $260.[264]
Work permits and business visas[265]	• A visa is required to work in Burkina Faso, except for nationals of an Economic Community of West African States member state. • Foreign nationals seeking to work in Burkina Faso for more than 90 days must obtain a worker card and a long-stay visa. • To obtain a visa, the hiring company must provide a letter detailing the specific duties of the employee and a confirmation of travel.

[264] https://www.paylab.com/bf/salaryinfo/administration
[265] https://www.doingbusiness.org/content/dam/doingBusiness/country/b/burkina–faso/BFA.pdf

Ministries and trade associations offer a helping hand to tech firms

The IT/BPM services sector in Burkina Faso is in its infancy. Most local organizations serve the Government, international NGOs and the agriculture, telecom and mining sectors. Several associations and bodies have been established to accelerate and maintain the growth of the ICT sector.

Table 88 Three key agencies work in the tech sector

Agency	Contact
Agence de Promotion des Technologies de l'Information et de la Communication	Website: https://www.anptic.gov.bf/accueil
Ministry of Digital Economy and Post Office Development	Website: https://www.mdenp.gov.bf/accueil
Financing and Promotion Agency for Small and Medium-sized Enterprises	Website: http://www.afppme.bf/

Growing market segments

The tech sector serves many domestic industries

The sectors with high growth potential in Burkina Faso are healthcare, banking, finance and insurance services, and education. Companies interested in offering IT/BPM services in the country should target those that support the large companies operating in these sectors.

The primary factors considered in selecting these sectors are the size and year-over-year growth of each sector, including expected growth, drivers of growth, market trends and IT/BPM trends for the industry.

Table 89 Three fast-growing sectors show outsourcing potential

Healthcare	

Size of industry: ~ $952 million
 	
Expenditure as a % of GDP: ~ 6.8% (2016)
	• The state of healthcare in Burkina Faso has improved over the last decade:
	  ○ The infant mortality rate per 1,000 declined from 1.3 in 2010 to 0.2 in 2017
	  ○ Life expectancy rose from 58.1 in 2010 to 60.8 in 2017
	• Despite these improvements, more work is needed.
	• There is a gap in the services required by the population (especially in rural areas) and the services being provided.
	• The Government is committed to improving the healthcare sector.
	  ○ In 2016, the Government introduced free healthcare for pregnant women and children under age 5.
	  ○ Healthcare spending as a percentage of GDP rose from 5.9% in 2010 to 6.8% in 2016.
	  ○ In 2018, the Government received an $80 million grant from the World Bank for its Health Services Reinforcement Project, which aims to improve the quality and use of healthcare services.[266]
	• Improvements in mobile phone penetration and ICT infrastructure offer an opportunity to close the gap between the existing healthcare services and what is needed by the population.
	• The continued development of mobile health would make it easier for people in Burkina Faso to access to healthcare services. It would also improve the quality of those services.

266 https://www.worldbank.org/en/news/press–release/2018/07/06/burkina–faso–world–bank–approves–new–financing–to–strengthen–health–services

Banking, finance and insurance services	
	• Traditional financial institutions in Burkina Faso, like in most low-income nations, have been unable to reach low-income customers, especially those living in remote areas. This is due to the cost structure of retail financial services. • Microfinance institutions are expanding in rural areas, reaching demographics that previously had no access to financial services. • Improved mobile phone penetration has resulted in the massive adoption of mobile money accounts – rising from 3% in 2014 to 33% in 2017.[267] • Improvements in mobile phone penetration and broadband connectivity present an opportunity to provide innovative financial services to customers who might previously have been deemed too hard to reach or too expensive to serve.
Education	
Size of industry: ~ $588 million Expenditure as a % of GDP: ~ 4.2% (2015)	• The Government is committed to improving education. Continued investment in the Education Sector Plan (2012–2021) illustrates this. • In 2018, the Government signed a multi-year agreement with infrastructure network developer SES Networks and memorandums of understanding with education unions to improve the use of ICT tools in education in the country.

[267] https://www.ifc.org/wps/wcm/connect/f45fd7a3–f8be–430b–bd9f–eb958ebe2d89/201907–CPSD–Burkina–Faso–EN.pdf?MOD=AJPERES&CVID=mNf5Bxk

Market access opportunities

Healthcare, finance and education show the most promise

The market access opportunities discussed in this section focus on established business sectors with high potential for growth that could be serviced by IT/BPM organizations.

Table 90 Three sectors offer different opportunities

Industry	Service area	Description
Healthcare	• Digital health solutions • Healthcare application services • Customer and data management	Improved mobile phone penetration, ICT infrastructure development and increasing government expenditure on healthcare present an opportunity to improve healthcare services. Some of the key opportunities for IT/BPM organizations include: • Mobile health solutions • EPR and customer relationship management systems – development and maintenance • Customer records management • Customer support • Healthcare application maintenance • Telemedicine • Electronic medical records system solutions • Insurance registration and claims systems • Hospital management information system solutions • Health information system solutions • Insurance registration and claims systems
Banking, finance and insurance services	• Digital payments • Online banking • Peer-to-peer lending • Personal finance • Insurance • Mobile remittances	Improved mobile penetration rates, ICT infrastructure development and better mobile broadband access in rural areas present an opportunity to create and manage more mobile banking and insurance services. Some of the key opportunities for IT/BPM organizations include: • Contact centre technology • Back-end contact centres • E-project management • Business research and analytics • Legal process outsourcing • Business administration

Education	• E-learning • Mobile learning • Application development and management	Leveraging ICT to develop digital education platforms (e-learning) presents an opportunity to improve access to and the quality of education in Burkina Faso. Some of the key opportunities for IT/BPM organizations include: • Online training software • Content development and management • E-project management • Enterprise and IP telephony • IT security

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