The Mobile Economy

West Africa

2019
The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with nearly 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

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3G takes the lead, but 4G momentum is building

3G will overtake 2G in 2019 to become the leading mobile technology in West Africa, accounting for 49% of total connections by the end of the year. 3G adoption in the sub-region has doubled over the last two years as a result of continued operator investment in network expansion to previously underserved areas. On the consumer side, demand has been growing for IP-based services as more locally relevant services become available and as smartphones become more affordable. Smartphone connections accounted for 38% of total connections by the end of 2018; this will rise to nearly 70% by 2025.

Meanwhile, 4G is finally beginning to gain traction in the ECOWAS sub-region. The sluggish initial take-up of 4G was mainly due to delays in assigning 4G spectrum to established service providers that have the resources and capability for large-scale network deployment. This is now changing rapidly as governments across the sub-region move to make sub-1 GHz spectrum available to mobile operators. Between January 2018 and January 2019, 10 new 4G networks were launched in West Africa, including for the first time in Burkina Faso, Sierra Leone and Togo. 4G adoption will rise to 17% of connections by 2025, overtaking 2G to become the second most prominent mobile technology in West Africa.

Unique subscriber growth continues apace

By the end of 2018, there were 185 million unique mobile subscribers in West Africa, an increase of nearly 10 million over the previous year. Future growth will largely be driven by young consumers owning a mobile phone for the first time; more than 40% of the sub-region’s population are under 18 years old. A considerable proportion will become young adults over the next decade. By 2025, the number of unique subscribers will reach 248 million, taking the subscriber penetration rate to 54%, compared to 48% at the end of 2018.

The young consumer base in West Africa will also trigger a profound shift in consumer mobile engagement. In contrast to the voice-centric engagement of older, less digitally adept users, the consumer of the future in the sub-region will use mobile phones for data-centric, non-core communications services, such as online gaming and video streaming. This will have a significant impact on mobile data usage, which is expected to grow sevenfold across the wider Sub-Saharan Africa region by 2024.
In view of the significant contribution of mobile technology and the activities of mobile ecosystem players to socioeconomic development in West Africa, governments and policymakers need to create and implement policies that can drive innovation and investments in new services and much-needed network infrastructure in underserved areas. The availability of spectrum for mobile broadband and the assignment of spectrum on terms that encourage investments remain critical factors for the continued growth of the mobile industry. Governments and regulators need to ensure that operators have access to sufficient spectrum in a timely and affordable manner; provide support for new network investments; and avoid costly restrictions on spectrum use.

Fostering growth through enabling policies

In 2018, mobile technologies and services generated $52 billion of economic value (8.7% of GDP) in West Africa – a figure that will reach almost $70 billion (9.5% of GDP) by 2023 as countries increasingly benefit from the improvements in productivity and efficiency brought about by increased take-up of mobile services.

Different types of mobile technology have their own impact on the productivity of the national economy: basic mobile voice and text services allow workers and firms to communicate more efficiently and effectively (for example, reducing unproductive travel time), while 3G and 4G technology allows workers and firms to use mobile data and internet services. This improves access to information and services, which in turn drives efficiency in business processes across many industries, including finance and health.

The mobile ecosystem directly employs around 200,000 people in West Africa, supports 800,000 jobs in the informal employment sector, and a further 600,000 jobs across the wider economy.

Mobile industry contributing to economic growth and job creation in West Africa

Fostering growth through enabling policies

In view of the significant contribution of mobile technology and the activities of mobile ecosystem players to socioeconomic development in West Africa, governments and policymakers need to create and implement policies that can drive innovation and investments in new services and much-needed network infrastructure in underserved areas. The availability of spectrum for mobile broadband and the assignment of spectrum on terms that encourage investments remain critical factors for the continued growth of the mobile industry. Governments and regulators need to ensure that operators have access to sufficient spectrum in a timely and affordable manner; provide support for new network investments; and avoid costly restrictions on spectrum use.

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Unique mobile subscribers

- **2018**: 185m
- **2025**: 248m
  - **Penetration rate**: 48% (2018) → 54% (2025)
  - **CAGR 2018-25**: 4.2%

Mobile internet users

- **2018**: 100m
- **2025**: 183m
  - **Penetration rate**: 26% (2018) → 40% (2025)
  - **CAGR 2018-25**: 9.0%

SIM connections

- **2018**: 328m
- **2025**: 442m
  - **Penetration rate**: 86% (2018) → 96% (2025)
  - **CAGR 2018-25**: 4.4%

Operator revenues and investment

- **2018**: $17bn
- **2025**: $18bn
  - **Operator capex of $8.5 billion for the period 2019-2020**
Plus 800,000 informal jobs

Employment

200,000

Jobs

formally supported by the mobile ecosystem

Public funding

Mobile ecosystem contribution to public funding (before regulatory and spectrum fees)

$4.4bn

2018

$52bn

2018

$68bn

2023

8.7% of GDP

9.5%

Mobile industry contribution to GDP

Smartphones

percentage of total connections*

2018

38%

2025

67%

*Excluding licensed cellular IoT

4G percentage of total connections

2018

4%

2025

17%

5G connections in 2025 (3% of total connections)

15m

4G

2018

26%

40%

2025

48%

PENETRATION RATE (% of population)

Mobile internet users

2018

100m

2025

183m

PENETRATION RATE (% of population)

Operator capex of $8.5 billion for the period 2019–2020

2025

8.7%

CAGR 2018–25

9.0%

4% 4G percentage of total connections

4G

2018

26%

40%

2025

48%

PENETRATION RATE (% of population)

442m

5G connections in 2025

(3% of total connections)

15m

15m

$17bn

2018

9.5%

CAGR 2018–25

4.4%

$18bn

2025

4.4%

CAGR 2018–25

9.0%
01
The mobile market in numbers
1.1 Key milestones

Half the population in West Africa will subscribe to mobile services by 2020

Subscribers, million

Source: GSMA Intelligence

Figure 1

1.2 Where will the next 62 million subscribers come from?

Over 60 million new subscribers by 2025; half from Nigeria

Subscribers, million

Source: GSMA Intelligence

Figure 2
3G takes the lead, while 4G begins to gain traction

3G takes the lead in 2019; 4G overtakes 2G by 2024
Percentage of connections (excluding licensed cellular IoT)

[Graph showing the increase in percentage of connections from 3G, 4G, and 2G over the years up to 2025.]

ECOWAS leads other sub-regions in mobile internet adoption: over 80 million more people will be using the mobile internet by 2025
Percentage of population

[Bar chart showing the percentage of population using the mobile internet in ECOWAS, SADC, ECCAS, and EAC from 2018 to 2025.]
Smartphone connections will more than double by 2025

Percentage of connections (excluding licensed cellular IoT)

Source: GSMA Intelligence

Across the wider Sub-Saharan Africa region, mobile data usage will grow seven-fold by 2024

GB per subscriber per month

Source: Ericsson, GSMA Intelligence
1.5 Financial pressures continue, but outlook improving

Market due to stabilise, though outlook remains muted
Mobile revenue ($ billion)

The improved macroeconomic outlook for the sub-region, following the economic recession in Nigeria in 2016, bodes well for demand for telecoms services. Along with increasing investments in 4G networks, this will support capex growth over the medium term. For 2019-2020, mobile operators in the sub-region will spend $8.5 billion on network infrastructure and services – an increase of $1.6 billion over the previous two years.
02
Mobile contributing to economic growth and social progress
2.1 Mobile contribution to economic growth

In 2018, mobile technologies and services generated 8.7% of GDP in West Africa – a contribution that amounted to $52 billion of economic value added. The mobile ecosystem also supported 1.6 million jobs (directly and indirectly) and made a substantial contribution to the funding of the public sector, with over $4 billion raised through taxation. By 2023, mobile’s contribution will reach almost $70 billion (9.5% of GDP) as countries increasingly benefit from the improvements in productivity and efficiency brought about by increased take-up of mobile services.

The informal economy accounts for a large part of the mobile ecosystem in West Africa. Almost 800,000 of the 1 million directly employed by the mobile ecosystem are informally employed in the distribution and retail of mobile services.

The mobile ecosystem contributed $52 billion to the West African economy

$ billion, % GDP 2018

Note: totals may not add up due to rounding
The mobile ecosystem employs 200,000 people formally as well as 800,000 informally in West Africa

**Jobs, million**

<table>
<thead>
<tr>
<th></th>
<th>Formal</th>
<th>Informal</th>
<th>Direct</th>
<th>Indirect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT, sales taxes and excise duties</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate and employment taxes</td>
<td></td>
<td>1.6</td>
<td>0.6</td>
<td></td>
<td>4.4</td>
</tr>
<tr>
<td>Total</td>
<td>4.4</td>
<td></td>
<td>0.6</td>
<td></td>
<td>5.0</td>
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**Note:** totals may not add up due to rounding

In 2018, the mobile ecosystem contributed over $4 billion to the funding of the public sector through consumer and operator taxes

**$ billion**

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<td>4.4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.0</td>
</tr>
</tbody>
</table>

**Note:** totals may not add up due to rounding
Driven mainly by productivity gains, the economic contribution of mobile in West Africa will increase to almost $70 billion in 2023

$ billion, % GDP

Note: totals may not add up due to rounding

2.2 Mobile contribution to social progress

The mobile industry plays an increasingly important role in accelerating social progress in West Africa. With a sizeable proportion of the sub-region’s population excluded from many services, mobile-enabled digital platforms provide a vital opportunity to deliver solutions that can improve the livelihood of the most vulnerable people in the society and foster greater socioeconomic inclusion. Across West Africa, the activities of mobile operators and other ecosystem players are enhancing digital and financial inclusion, driving innovation and supporting efforts to achieve the United Nations Sustainable Development Goals (SDGs).
2.2.1 Enhancing digital inclusion

Access to the internet has the potential to generate significant social and economic benefits for individuals and communities – from improved business efficiency to increased access to life-enhancing services. In West Africa, mobile is the primary platform for accessing the internet; at the end of 2018, there were around 100 million mobile internet users in the region, representing an increase of 19 million over the previous year.

However, more than 280 million people in West Africa do not yet use the mobile internet, most of them in underserved population groups, including women, low-income earners and rural dwellers. The GSMA Mobile Connectivity Index provides a way to understand the underlying factors behind mobile internet adoption levels in different countries. The tool measures the performance of 163 countries across the world, including 14 countries in West Africa, against key enabling factors for mobile internet connectivity, namely: infrastructure, affordability, consumer readiness and content.

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1. GSMA Mobile Connectivity Index
In 2018, only four countries in West Africa scored higher than the Sub-Saharan Africa average index score

Index score out of 100

Côte d’Ivoire was the most improved country in West Africa, rising by 9.2 points over three years in the Mobile Connectivity Index. The country recorded significant improvements in infrastructure, affordability and content development.

Most countries in West Africa score below the average index score for Sub-Saharan Africa. This underlines the scale of the challenge of enhancing digital inclusion in the sub-region. While mobile operators have a pivotal role to play in driving digital inclusion, they face two key issues:

- extending coverage remains economically challenging given the high costs of increasing coverage and issues related to consumer demand
- inconsistent and distortive regulation from governments restricts public and private investment in connecting the unconnected.

Overcoming these barriers will require focus, innovation and collaboration between the public and private sectors around solutions for extending network coverage into rural areas and stimulating demand for mobile internet services among underserved populations.
Using lightweight sites to drive rural coverage: insights from Ghana

Huawei is collaborating with the government and MTN to address the rural connectivity challenge in Ghana, using rurally adept infrastructure products, such as its proprietary solution RuralStar. This is a lightweight rural network coverage solution supporting 2G, 3G and 4G connectivity. Rather than using satellite or microwave backhaul, RuralStar introduces a more affordable non-line-of-sight wireless backhaul technology with 10–40km reach via a cellular relay, linking connectivity from an existing macro-site. The RuralStar technology, which also consumes less power than standard cell site solutions, is suitable for difficult terrains, such as mountainous regions, and sparsely populated areas.

For more details, see Rural connectivity innovation case study: Using light sites to drive rural coverage - Huawei RuralStar and MTN Ghana, GSMA, 2018.

Stimulating mobile internet use: insights from Burkina Faso

In February 2018, the GSMA Connected Society programme conducted research on the barriers to mobile internet adoption in peri-urban and rural areas in Burkina Faso. Key findings from the research included the following:

• There is a growing sense that the mobile internet is important, but awareness of how to benefit from it can be low, especially among older women and those living in rural areas.

• The biggest barriers to adoption are related to affordability and understanding. In particular, there are three key concerns: cost, comprehension and negative perceptions of the internet.

• Smartphones are highly desirable status symbols but are also seen as expensive (for some, prohibitively so), fragile and lacking in battery life (a particular concern for those living in rural areas). There is widespread appreciation of their functionality, in part because many believe smartphones are the only mobile phones that can access the internet.

• New users of mobile internet find that the internet provides a range of rational and emotional benefits. These centre around use cases related to communication (by far the most common), entertainment and lifestyle, and access to information and work.

• Women in Burkina Faso face bigger hurdles to accessing mobile internet than men. This is largely due to greater time pressures and financial limitations, and some prevailing social norms that the mobile internet is not a suitable activity for women.

Several different concepts addressing barriers to internet adoption were tested during the research: a smartphone instalment payment plan, a zero-rated social media package, a mobile financial services application, an educational app aimed at young children, and the GSMA’s MISTT concept. The GSMA is currently supporting Orange Burkina Faso to launch an agent-based training programme using the MISTT curriculum and training methodology.

For more details, see Triggering mobile internet use in Côte d’Ivoire and Burkina Faso, GSMA, 2018.

2. The reach of the backhaul is dependent on the frequency and geography characteristics
Deepening financial inclusion

Mobile money remains a key driver of financial inclusion in West Africa. By the end of 2018, there were 133.6 million registered mobile money accounts in the region, an increase of 23 million over the previous year. Around 54% of the combined adult population of Benin, Côte d’Ivoire, Ghana and Senegal use mobile money services\(^4\) on an active basis.\(^5\)

Mobile money is driving rapid growth in bank account ownership; the majority of countries recorded a double-digit increase between 2014 and 2017

Percentage of adult population with a bank account

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2017</th>
</tr>
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<tbody>
<tr>
<td>Benin</td>
<td>17%</td>
<td>35%</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>34%</td>
<td>41%</td>
</tr>
<tr>
<td>Mali</td>
<td>23%</td>
<td>38%</td>
</tr>
<tr>
<td>Niger</td>
<td>7%</td>
<td>16%</td>
</tr>
<tr>
<td>Senegal</td>
<td>14%</td>
<td>43%</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>16%</td>
<td>44%</td>
</tr>
<tr>
<td>Togo</td>
<td>18%</td>
<td>45%</td>
</tr>
<tr>
<td>Guinea</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>14%</td>
<td>30%</td>
</tr>
<tr>
<td>Togo</td>
<td>18%</td>
<td>41%</td>
</tr>
<tr>
<td>Ghana</td>
<td>60%</td>
<td>58%</td>
</tr>
</tbody>
</table>

For populations traditionally excluded from the formal financial system — women, the rural poor and displaced persons — the spread of mobile money accounts is providing a gateway to transformative services including healthcare, education, financial services, employment and social protections, and bringing more people online than ever before. In Ghana, the share of adults receiving agricultural payments, mostly in rural areas, is around twice the average for developing economies. Around 40% receive these payments into an account, in most cases a mobile money account.\(^6\)

2.2.2 Driving tech innovation

The tech start-up ecosystem in West Africa is growing rapidly, with the emergence of a new generation of tech entrepreneurs and increasing funding from private investors. Tech innovators increasingly use mobile platforms, such as connectivity, mobile money and cellular IoT, to create and distribute innovative solutions that address a wide range of local challenges. This is helping bridge the digital content gap through the development of homegrown content and services with direct relevance to local consumers.

Mobile operators play a vital role in the budding tech ecosystem. In addition to providing the enabling technology for tech innovation, mobile operators are increasingly deepening their engagement with start-ups and tech hubs through investments and partnerships. In Ghana, Vodafone has established partnerships with several tech hubs, including MEST, while Orange supports CTIC in Senegal and CIPMEN in Niger.

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4. 2018 State of the Industry report on Mobile Money, GSMA, 2018
5. Active at least once within a 90-day period
2.2.3
Supporting the SDGs

There are now 11 years left until the 2030 deadline to achieve the UN Sustainable Development Goals (SDGs). Countries in the sub-region face an uphill task to attain these goals, mainly due to acute resource and infrastructure gaps. The mobile industry is, however, well positioned to support governments, the development community and other stakeholders in efforts to accelerate progress on key SDG targets. This is achieved in three main ways:

- **Deployment of infrastructure and networks:** The mobile industry drives impact through the provision of – and investment in – high-performing mobile networks, which provide the foundations for the digital economy and act as a catalyst for a diverse and innovative range of services.

- **Access and connectivity:** Mobile operators are continuing to connect the unconnected, with 30 million new mobile subscribers and 50 million new mobile internet subscribers across West Africa since 2015.

- **Enabling services and relevant content:** Mobile connectivity continues to transform the lives of millions of people across West Africa, by enabling the delivery of life-enhancing services, including education, health and financial inclusion. This is especially significant given the challenge of providing the services by conventional means amid considerable infrastructure and funding gaps.
## Examples of mobile-enabled services that contribute to the realisation of the SDGs

<table>
<thead>
<tr>
<th>SDG 2</th>
<th>CowTribe uses mobile technology to provide animal health services to livestock farmers in Ghana. The platform links farmers to veterinary services, offering vaccination reminders, outbreak alerts and animal husbandry management advice. Since launching in 2016, CowTribe has served more than 30,000 farmers in more than 120 villages, processing over 9,000 vaccine requests.</th>
</tr>
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<tbody>
<tr>
<td>SDG 3</td>
<td>In Benin, KEA Medicals’ Hospital Information System aims to provide all patients with a medical identity (including historical medical records) through a QR code-equipped tag (bracelet). The platform aims to interconnect African hospitals through a single database to manage patients’ medical information and to increase access to healthcare and health microinsurance.</td>
</tr>
<tr>
<td>SDG 4</td>
<td>In 2014, the Orange Foundation launched the Digital Schools programme to deliver free educational content in digital format to primary and secondary school pupils in countries where the operator is present, including Côte d’Ivoire, Niger, Senegal, Mali and Guinea. Orange expects the programme to serve pupils in isolated rural and suburban areas, where the most disadvantaged schools lack access to text books.</td>
</tr>
<tr>
<td>SDG 5</td>
<td>In 2017, UN Women and Orange Liberia launched a partnership to provide ICT and mobile banking services to women and girls. Through the initiative, the beneficiaries are trained to use various ICT platforms to facilitate financial transactions between them and their customers, enable the purchase of goods and payment to vendors, and become mobile money agents in their communities.</td>
</tr>
<tr>
<td>SDG 6</td>
<td>In Niger, CityTaps has developed a smart prepaid water meter to enable the urban poor to access running water at home. The meter incorporates mobile money and M2M technologies, which allows households to make micro-payments for their water at any time using mobile money.</td>
</tr>
<tr>
<td>SDG 7</td>
<td>In 2018, Orange launched its solar energy solution in Burkina Faso, and announced plans to extend it to Senegal, Mali, Guinea and Côte d’Ivoire. The solution, provided in partnership with energy company Engie, involves the supply, installation and maintenance of solar kits to consumers in rural areas, where the energy challenge is more acute. It also includes use of Orange Money services to manage customer billing.</td>
</tr>
</tbody>
</table>
**SDG 8** In Sierra Leone, Mosabi uses mobile technology to provide a business-focused e-learning tool and extend financial services to traders operating in the informal market. Learners can access topics such as entrepreneurship, business skills and financial literacy delivered through video lessons. Mosabi helps informal sector entrepreneurs increase their income and links them to digital financial services through alternative credit scoring.

**SDG 9** Through mobile operators’ continued investment in network infrastructure, 3G and 4G networks now cover 70% and 41% of the population in West Africa, respectively. In 2018, operators in the sub-region spent a total of $3.6 billion in capex, mostly in improving the coverage and capacity of their network infrastructure.

**SDG 10**: 10.c targets reducing the transaction costs of migrant remittances to less than 3% and eliminating remittance corridors with costs higher than 5% by 2030. Mobile operators have helped realise this target in West Africa; the cost of sending $200 using mobile money is now below 3% in most corridors (96%), illustrating the role of the service in supporting the achievement of the target. For example, the transaction cost for sending XOF230,000 ($395) from Senegal to Mali through Orange Money is 2.39%, compared to 4.13% on MoneyGram, while the transaction cost for sending €140 from France to CIV on Orange Money is 2.29%, compared to 5.64% via Western Union.

**SDG 11** In Côte d’Ivoire, Digital Afrique Telecom (DAT) has launched a smart ticketing service that allows passengers of SOTRA, the Abidjan local bus company, to board any of over 700 buses using contactless cards. Smart cards can be topped up via mobile money, while the online platform is accessible via USSD and mobile apps. The mobile-enabled solution has helped speed up boarding times and improve cash management and transparency for the bus operator.

**SDG 12** Coliba is a web, mobile and SMS platform that connects households and businesses in Côte d’Ivoire with Coliba affiliated, trained and equipped plastic waste pickers. In exchange for plastic waste, users receive points that can be converted into airtime. Plastic waste is converted into pellets in Coliba’s local factory and then sold to local industries.
Emerging trends in the digital ecosystem
The mobile industry in West Africa is evolving rapidly, with rising smartphone adoption and new digital services leading to increasing levels of consumer engagement. Today, the mobile phone is not just a communication device for many consumers; it’s a vital tool to access a wide a range of digital services and content. We highlight two emerging trends that will shape the digital ecosystem in the coming years.

3.1 Transition to 4G gaining momentum

West Africa lags the East Africa and Southern Africa sub-regions in 4G adoption, mainly due to delays in assigning 4G spectrum to established service providers that have the resources and capability for large-scale network deployment. However, recent developments suggest that the transition to 4G is gaining momentum, particularly with new network deployments and the expansion of existing networks.

New 4G networks were launched in West Africa between January 2018 and January 2019, including for the first time in:

- **Sierra Leone**
- **Togo**
- **Burkina Faso**

Recent developments

- **Burkina Faso**: The government approved the introduction of technology-neutral licences, allowing the country’s incumbent operators to reuse 2G and 3G spectrum for 4G networks. Orange launched its 4G network in January 2019. Onatel plans to follow suit during the year.

- **Cabo Verde**: Telecoms regulator ANAC stated that its revised regulatory framework would support commercial launch of 4G by mid-2019. Cabo Verde has freed up spectrum in the 800 MHz band for 4G mobile broadband services through the phased switchover from analogue to digital broadcasting across the nation’s 10 islands.

- **Ghana**: Telecoms regulator NCA awarded 2×5 MHz of spectrum in the 800 MHz frequency band to Vodacom for the provision of 4G services in December 2018.

- **Nigeria**: Globacom announced that its 4G network now reaches all 36 states of the country, following the formal launch of its 700 MHz LTE network in October 2016. Airtel, which launched 4G services in February 2018, has extended its network to 100 towns and cities as of March 2019.

- **Senegal**: Telecoms regulator ARTP awarded a 4G licence to Tigo (now owned by Saga Africa Holdings) in December 2018.
Beyond basic remittances and bill payment solutions, mobile technology is facilitating the rise of fintech start-ups looking to plug the gaps in financial services in West Africa. In more developed markets, fintech start-ups tend to disrupt existing financial services, such as credit, mortgages and insurance, to provide more efficient services and lower the cost for end users. However, in Africa and other developing regions, large swathes of the population are currently excluded from these services, providing a blank canvass for fintech start-ups to create new systems and value chains from scratch.

Nigeria has one of the most active fintech markets across the entire region of Sub-Saharan Africa. Fintech opportunities in the country are significant and could potentially redefine the financial services landscape in the coming years. In addition to a large, youthful population and increasing connectivity, the country has a huge financial inclusion gap, with access to complex financial products still limited to only a small proportion of the population. For example, only 1% of the population hold any form of insurance, according to the Nigerian Insurers Association.

Other countries in West Africa, notably Ghana and Senegal, are seeing similar trends in the fintech landscape. For these countries, a more established mobile money market, with advanced features such as interoperability and international remittances, provides an even firmer foundation for fintech start-ups to build upon.

Fintech has the potential to be a key enabler of e-commerce services in the region. One of the limitations of e-commerce services so far has been the relatively low penetration of online payment cards, leading many e-commerce businesses to rely on cash on delivery and the attendant risks. A number of emerging fintech start-ups are addressing this challenge by providing solutions for merchant payments and other online transactions through mobile phones. Table 2 shows a selection of fintech start-ups in the sub-region and the solutions they provide.

### 3.2 The rise of fintech

Large gap between 4G and smartphone adoption levels underscores upside potential for 4G
Percentage of total connections, 2018

![Graph showing 4G adoption and smartphone adoption in Ghana, Senegal, Nigeria, Côte d’Ivoire, and West Africa average.](image)

Ghana: 4% 38%
Senegal: 4% 48%
Nigeria: 5% 38%
Côte d’Ivoire: 9% 41%
West Africa average:

4% 38%
### Sample of fintech start-ups in Ghana, Nigeria and Senegal

#### Ghana

**expressPay:** an e-commerce marketplace and payment gateway provider, and Visa e-commerce processor.

**Interpay:** a platform that enhances the relationship between merchants and consumers by facilitating bill payments and collection.

**Kudigo:** a mobile-based retail system for micro SMEs, integrated with compliant accounting and enabled for payments.

#### Nigeria

**Paga:** a mobile payment platform that allows users to transfer money.

**Paystack:** a multi-channel payment platform for merchants, enabling them to accept payments from around the world, via credit card, debit card and direct bank transfer on web and mobile.

**PiggyVest:** an online platform that allows users to save and invest small amounts of extra cash. PiggyVest has a community of more than 200,000 registered users in Nigeria.

#### Senegal

**MaTontine:** a mobile-driven peer-to-peer savings platform with an in-built credit-scoring system. Users can use the credit score to access loans and other financial services in Senegal.

**PayDunya:** a payment solutions start-up that allows individuals and businesses to collect and make payments with or without a bank account.

**SudPay:** offers products including digital ticketing and tax collection solutions.
04
Policy enablers for sustained growth
Access to mobile is having a profound impact on society, redefining the way individuals and businesses function and interact. Mobile connectivity brings a range of social and economic benefits by helping to promote digital inclusion and supporting the delivery of essential services and key public policy objectives. Poverty eradication, healthcare, education, financial services and gender equality are all impacted. It is vital for governments and policymakers to implement policies that can drive growth and foster innovation in the mobile industry.

**Spectrum**

Connecting everyone and closing the digital divide is a key policy objective for most governments in West Africa. Radio spectrum is the first building block. However, if mobile operators do not have affordable and predictable access to sufficient spectrum, it will not be possible to achieve universal access, particularly in countries with a high proportion of the population residing in rural and remote areas. Given the importance of spectrum to mobile broadband, it is essential for governments and regulators to make the right spectrum decisions individually and collectively. This includes ensuring operators have access to sufficient spectrum in a timely and affordable manner; providing support for new network investments; and avoiding costly restrictions on spectrum use.

**Spotlight on Nigeria**

With spectrum allocation and licensing crucial to the delivery of Nigeria’s digital future, the GSMA has identified support for and release of harmonised spectrum and a modernised licensing framework as fundamental building blocks for growth. To this end, the harmonisation of 1427–1518 MHz and 3.3–3.6 GHz is critical for mobile operators seeking to offer new mobile services to consumers and businesses in the country. Making these bands available for assignment to mobile operators will be a core component in reinforcing Nigeria’s position as Africa’s leading mobile market.
### Mobile money

Mobile money plays a critical role in enhancing financial inclusion in West Africa. This highlights the importance of establishing a more level regulatory playing field which allows innovative market-led solutions to increase adoption and the expansion of the digital financial ecosystem. The most successful providers today overwhelmingly operate in markets where regulation is enabling. Conversely, restrictive regulatory frameworks can stifle investment, limit the rollout of new services and raise costs for consumers - all of which can negatively affect adoption and activity rates.

### Spotlight on Nigeria

The Central Bank of Nigeria (CBN) for years excluded mobile network operators from offering mobile money services in the country. The effect of this policy stance was low penetration and uptake of mobile money services, severely limiting prospects for the achievement of Nigeria’s National Financial Inclusion target of 80% financial inclusion by 2020. Following extensive consultation with industry stakeholders, regulatory reforms undertaken in 2018 showed lots of promise in changing this trajectory. In October 2018, the CBN issued a new regulatory framework for the licensing of Payment Service Banks (PSBs). This has been the most significant reform undertaken by CBN with a view to addressing rising financial exclusion rates. The new framework grants participation rights to mobile operators, through wholly owned subsidiaries, allowing them to offer digital financial services.

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Spotlight on Côte d'Ivoire

In Côte d'Ivoire, the introduction of a tax on mobile money transactions threatens to reverse financial inclusion gains, as well as limit the impact of mobile money on the Côte d’Ivoire 2040 vision and achievement of the SDGs.

Electronic money issuers wholly owned by mobile operators and licensed by the Central Bank of West African States (BCEAO) face a 7.2% tax on turnover introduced in January 2019. This is a discriminatory tax on the mobile sector as other e-money issuers and mobile money providers that are not promoted by a mobile operator are not subject to the tax. This renders mobile money transactions disproportionally higher in cost than similar transactions processed by banks and other financial institutions. As an alternative to taxing mobile money, the government can encourage government-to-person (G2P) and business-to-person (B2P) payments, which could result in an estimated 1.3 million new mobile money accounts by 2020.8

8. Côte d’Ivoire: Driving mobile-enabled digital transformation, GSMA, 2017