

Navigating the Tech Ecosystem in Cameroon

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Authors:
Sam Ajadi, GSMA
Susanna Acland, GSMA

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Executive summary

Cameroon is an economically and geographically influential country, strategically located as a natural gateway to both Central and West Africa. When the COVID-19 pandemic reached Central Africa in 2020, Cameroon's economy was hit hardest, with real GDP[1] contracting by 2.4 per cent compared with growth of 3.7 per cent in 2019.[2]

1 Real GDP is a measure of a country's gross domestic product that has been adjusted for inflation.
2 African Development Bank Group. (2020). "Cameroon Economic Outlook".

Digitalisation is central to the government's COVID-19 recovery agenda. Information and communication technology (ICT) has been identified as a key driver of jobs and economic growth and a pathway for Cameroon to recover from the effects of the pandemic and transform the economy.

This report examines the recent history of technology (or tech) entrepreneurship in Cameroon and provides an overview of the state of the country's nascent tech ecosystem, including leading sectors, key players and stakeholders, market gaps and opportunities. It also provides insights into critical components of the ecosystem, such as digital infrastructure, policy, finance and business support services (including digital innovation hubs, support from government and partnerships with MNOs). Finally, the report highlights critical barriers to the growth of the tech ecosystem and digitalisation, and offers detailed recommendations for tech stakeholders.

This research is intended to provide insights into the Cameroon tech ecosystem for investors, government and policymakers, tech hubs, start-ups, mobile network operators (MNOs) and educational bodies. The research will also provide guidance to local and international stakeholders interested in understanding, supporting and investing in tech start-ups and enterprises in Cameroon.

Key barriers

- Despite improvements to digital infrastructure in recent years, connectivity remains a major barrier for entrepreneurs and tech start-ups in Cameroon.
- There are few policies and regulations aimed at the tech ecosystem and existing regulations are unclear and unknown.
- Components of the tech ecosystem operate largely in isolation and there is a lack of networking, mentoring and shared learning opportunities.
- Angel and venture capital funding in Cameroon's tech ecosystem is disproportionately low for the region.

Key opportunities

- Fintech, healthtech, e-commerce and logistics are leading sectors for tech innovations. These sectors offer strategic entry points for investors to tap into markets in Central and West Africa.
- A clear, comprehensive and targeted policy environment for start-ups would attract capital and incentivise start-ups, investors and other stakeholders.
- Increased networking opportunities would help create mutually beneficial partnerships and leverage global platforms to promote new initiatives and products. Mentorship and technical assistance would help to build capacity and connect the talent pool with the main actors in the tech sector.
- There is a micro early-stage ($1,000 to $20,000) investment gap in Cameroon's tech ecosystem, which creates an opportunity in the market for donors and development finance institutions (DFIs) to fund early-stage tech ideas.



Demographics and economic context

Cameroon in numbers

Total population
26.8 million

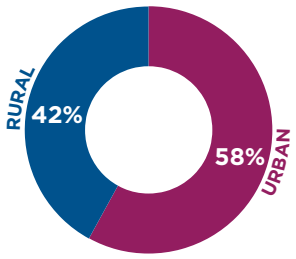
Capital
Yaoundé

Official language
French and English

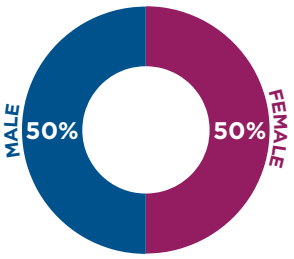
Land area
475,440 km²



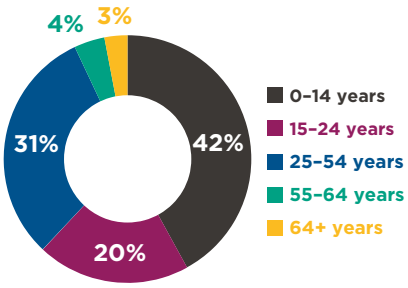
Source: World Bank, United Nations, CIA.gov



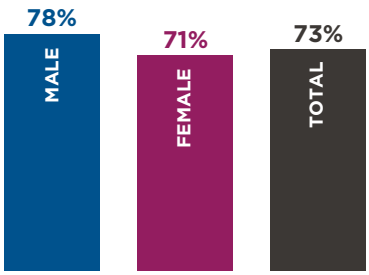
Increasingly urban



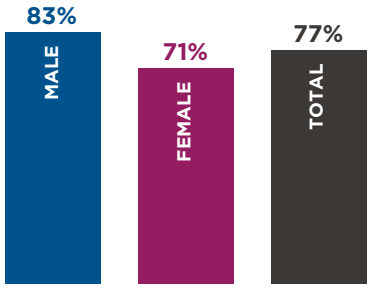
Even gender split



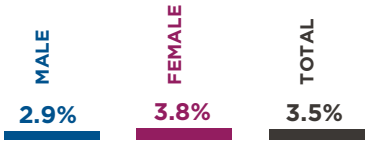
A young population



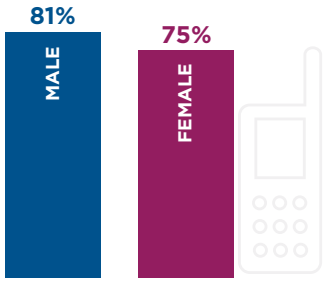
Labour force participation



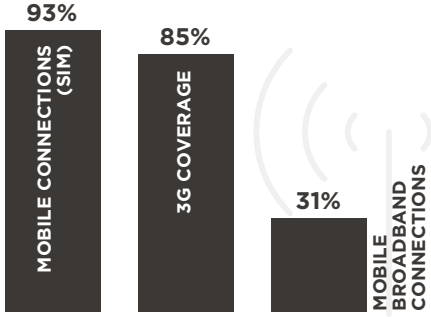
Literacy



Unemployment (% of labour force)



Mobile ownership (2019)



Total connectivity

Source: Gallup, 2019. GSMA.

Cameroon tech start-up ecosystem

A glance at the numbers

101+

Active tech start-ups in Cameroon

50+

Newly founded tech start-ups since 2018

Fintech
Healthtech
E-commerce

Popular growth sectors in 2020

Douala
Buea
Yaoundé

Major active cities in the start-up ecosystem

$24 m+

Local and international capital brought in over the last decade

$5 m+

Estimated start-up investment raised in 2020

25+

Accelerators, incubators and co-working spaces

10,000

Digital jobs created between 2000 and 2016

Source: World Bank

Source: GSMA analysis, data from Tracxn and data shared by respondents (consisting of data from tech hubs and publicly available investments)



Objectives and methodology

This report provides insights into the market potential and opportunities in Cameroon's digital ecosystem. It assesses the current state of the country's tech ecosystem and highlights key market barriers and opportunities. The report also shares strategic recommendations for stakeholders, such as donors, investors, MNOs, tech hubs[3] and policymakers. Finally, the report provides guidance for local and international stakeholders interested in understanding, supporting and investing in Cameroon's entrepreneurship landscape.

The research analysed and presented in this report was collected from two sources:

- **20 key informant interviews (KIIs)** with key players in the tech ecosystem in Cameroon. These include governments, prominent tech start-ups and tech hubs (incubators). Key informants were asked about the state of the ecosystem, the funding landscape and market barriers.
- **Desk-based research** on Cameroon's digital and tech ecosystem. This included examining development and entrepreneurship indices and drawing comparisons with tech ecosystems in neighbouring countries.

3 In this report, "hubs" are synonymous with "incubators". An incubator is a company that helps start-ups in the early stage move from ideation to product or service development. Incubators typically provide desk space, mentorship and business advice.



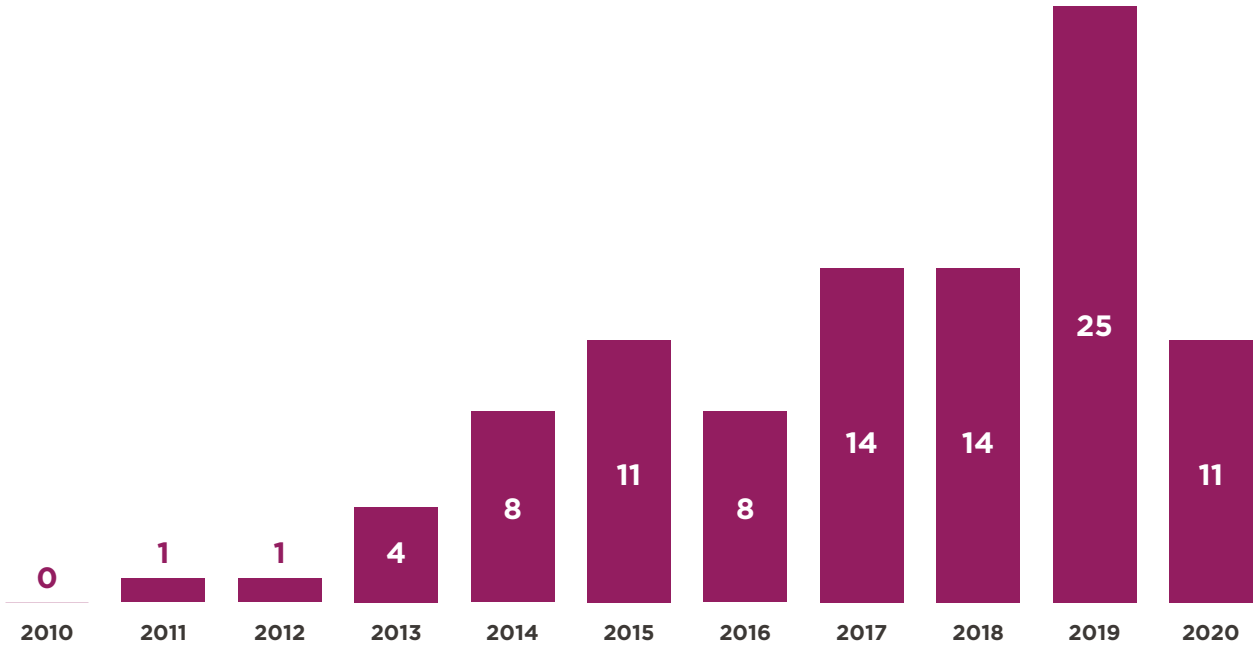
Overview of Cameroon's tech ecosystem

The growth of tech start-ups

Cameroon's tech ecosystem is still in its infancy and most start-ups lack early-stage pre-seed funding. However, there is a robust entrepreneurial appetite, particularly among the large youth population seeking alternative forms of employment. As with entrepreneurship, tech uptake is much higher among younger populations and this has created a young start-up community. The number of tech start-ups in Cameroon has been steadily increasing over the last 10 years.

Figure 1

Number of tech start-ups founded per year in the last 10 years



Source: Tracxn, GSMA

The evolution of Cameroon's tech ecosystem: insights from key informants

Cameroon occupies a strategic geographical position for technology innovation in Central and West Africa. Burgeoning tech entrepreneurship led to the rise of Silicon Mountain in Buea, a small city in the Southwest Region. Home to Cameroon's leading tech hub ActivSpaces, it was in Silicon Mountain that Cameroon's tech community began to take shape, producing start-ups such as health app Healthlane (formerly GiftedMom) and job matching mobile app Njorku.

Silicon Mountain dates back to 2006 when young web developers in Buea began experimenting with technology and building a community. The University of Buea has been key to the city becoming Cameroon's most prominent technology epicentre as many of these tech entrepreneurs met while studying there and at surrounding internet cafes. One of the first initiatives to come out of Buea was AfroVisioN Group in 2006, which provided web development services to innovators and local businesses, supporting the first generation of tech start-ups.

Momentum for the tech ecosystem nearly came to a standstill in 2016 (see Figure 1) due to civil unrest that led to an internet outage across the Anglophone regions in 2017. Several entrepreneurs, developers and engineers relocated to cities that were not affected, while others moved to Nigeria. To put the impact of the internet outage in perspective, e-commerce platform Jumia reported an 18 per cent decline in orders during that period. MNO Orange saw a 20 per cent revenue drop in Cameroon[4] and estimates that the shutdown cost the country $4.5 million in economic activity.

The tech ecosystem experienced significant growth in 2018 and 2019. Once the internet was restored, many start-ups and entrepreneurs that had relocated to Douala or Yaoundé continued to operate in Anglophone and Francophone regions, which helped to expand the market. For instance, ActivSpaces now has hubs in three locations: Douala, Buea and Bangangté. In interviews, key informants stated they have witnessed greater integration and synergy between the regions



with both cultures learning from each other and sharing their strengths. Language training with French and English counterparts is an advantage for Cameroon as it allows it to serve as a corridor between English and French-speaking Africa.

Since 2018, the Government of Cameroon has planned to back a new technology cluster in Yaoundé, which will be known as "Silicon River", to replicate Silicon Mountain's success in Buea. The new tech hub will be a platform for research and innovation where young, creative and enterprising software developers and other tech entrepreneurs will have the infrastructure and support they need to innovate.

In 2020, COVID-19 and related challenges, such as funding, social distancing measures and other market changes, caused the ecosystem to once again lose momentum and the number of newly launched tech start-ups dropped (Figure 1). Currently, Cameroon has over 101 tech start-ups, 36 of which were founded in 2019 and 2020. To put this into perspective, Nigeria's more established tech ecosystem in Lagos hosts 1,697 tech startups.[5] The impact of COVID-19 is discussed in more detail on page 14.

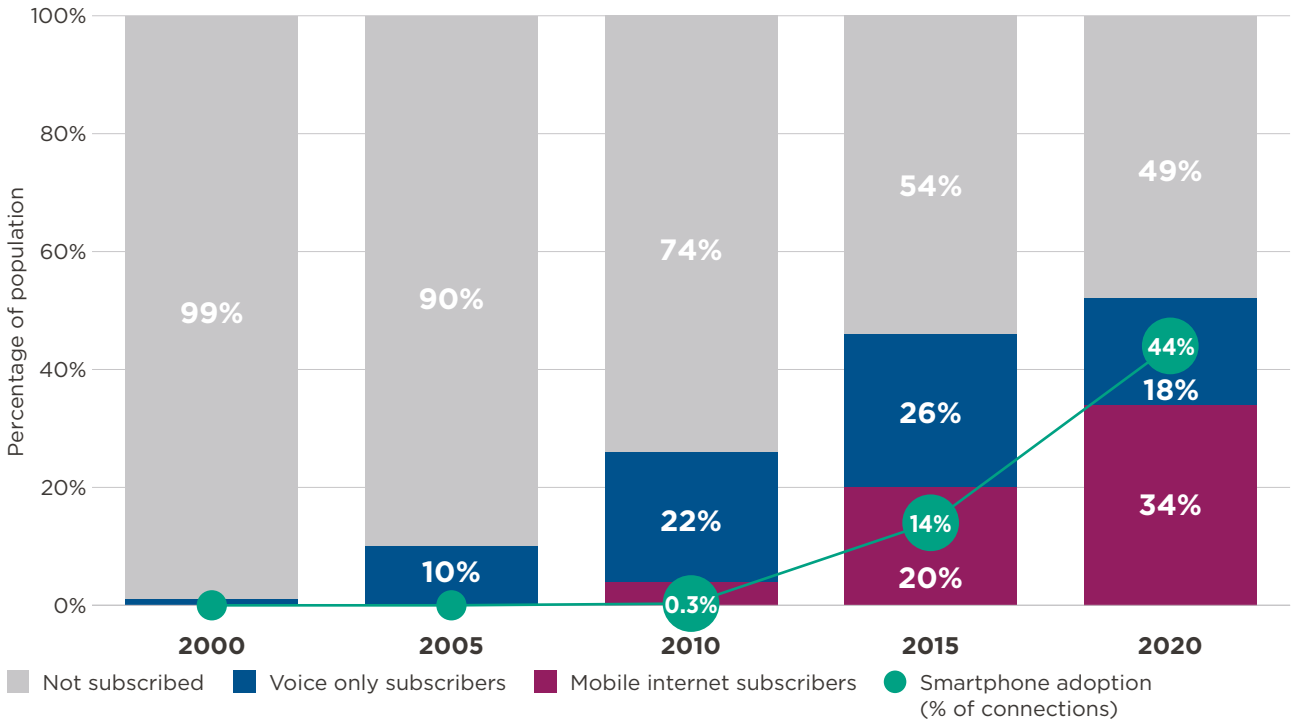
4 Bright, J. (30 April 2017). "Tech and politics clash in Cameroon as government restores internet". Tech Crunch.
5 Tracxn. (21 May 2021). "Startups in Lagos".

The role of mobile in Cameroon's tech ecosystem

Cameroon's mobile market has come a long way over the last two decades. With 14 million mobile subscribers, or 52 per cent of the population, mobile is the primary connectivity channel in Cameroon.[6] As of March 2021, nearly 67 per cent of all mobile subscribers were using mobile internet services, which means that 34 per cent of the population are mobile internet subscribers.[7] This figure is equivalent to over nine million subscribers, which is nearly double the number of subscribers in 2015. Although a low proportion globally, it is on par with Nigeria and higher than its other neighbours, except Gabon. Barriers to mobile adoption include consumer readiness (largely due to a lack of literacy and digital skills) and affordability (in part due to high taxation and accessibility).

Figure 2

The evolution of Cameroon's mobile market



Source: GSMA

Smartphone adoption in Cameroon is on the rise. In the last four years the number of smartphone connections has almost tripled and now represents 44 per cent of mobile connections. The ubiquity of mobile and digital has made it the technology of choice for Cameroon's burgeoning entrepreneurial community. Mobile has played a key role in developing and scaling innovative business models that can address pervasive challenges in sectors, such as finance, health, education and energy.

6 In 2019, there were only 400,900 fixed broadband subscribers, 1.5 per cent of the population. See: World Bank. (2019). "Fixed broadband subscriptions – Cameroon".
7 GSMA Intelligence: www.gsmaintelligence.com

Start-ups harnessing mobile that have scaled

DIOOL

BOX 1

Diool enables small merchants to accept payments from their customers and repay suppliers using digital payment methods, such as mobile money. The platform has more than 2,000 merchants that have transacted more than $120 million. It has payment integrations with all mobile money providers (MMPs) in Cameroon, and a regulatory partnership with French multinational investment bank and financial services company, Société Générale.

Diool began in 2015 as a mobile top-up project offering small merchants a way to sell prepaid mobile top-ups to their customers from a single app. In March 2021, Diool announced that it had raised $3.5 million in funding from the Lundin family and from existing investors, with a total secured investment of $5.6 million.

Njorku

BOX 2

Njorku is an online job platform that matches job seekers with suitable and relevant roles by providing aggregated and indexed vacancies. Job seekers can upload their CV to the website and receive an email and SMS alert when a suitable vacancy arises. Employers can search for and view multimedia profiles of candidates and connect with them.

Founded in 2011 in Buea, Njorku operates in seven countries: Cameroon, Nigeria, Kenya, Ghana, Uganda, South Africa and Egypt. In June 2018, Njorku raised $300,000 in a seed funding round from FasterCapital, Dubai UAE.

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"Mobile technology has clearly made possible the idea of building a financial services hub and delivering them from where its consumers are. We leverage on the existence of mobile money to offer businesses a simple way to accept such digital payments, as they become more mainstream. Typically, the more our customers use digital payments in their businesses, the more they build a history of financial behaviour and ultimately risk worthiness, which increases their access to credit and insurance products. By consuming more financial products, the cost of such product drops down because of economies of scale. To us, it's a clear positive impact on financial inclusion."

– Serge Boupda, Co-founder and CEO of Diool

Cameroonian entrepreneurs have also been leveraging mobile technology to reduce the cost of doing business. For example, e-commerce and logistics companies are using app-based services to cut transaction costs and introduce efficiencies by automating delivery dispatches and improving communication. Tech entrepreneurs are also using data from apps to access analytics on consumer behaviour, which can be used to create tailored solutions that better meet users' needs.

Start-ups harnessing mobile that have scaled

BOX 3

Healthlane runs a platform that allows patients to book and pay for doctor appointments at public clinics through a mobile app. The app, which offers both remote and in-person medical services, serves as a meeting point for individuals, health practitioners, health centres and pharmacies. Users can currently book an appointment with a doctor and order medicines, but in future versions they will be able to access test results and prescriptions.

As of October 2020, more than 30 medical institutions in Nigeria and Cameroon are registered with Healthlane. The number of clients in the first half of 2020 exceeded 60,000. Healthlane is a pivot from GiftedMom, a mobile health solution for nursing mothers and pregnant women.

BOX 4

upOwa develops, installs and maintains pay-as-you-go (PAYG) solar home systems in rural areas, providing easy access to clean energy for people who do not have access to Cameroon's national grid. The company's solar kits generate localised power that can be used on the spot. The kits are distributed using local and regional partners, such as NGOs, local authorities, governments and industrial companies.

Founded in 2014 in Yaoundé, upOwa has raised $7 million, including $2.8 million in a funding round in December 2019. The UK Government-funded Renewable Energy Performance Platform (REPP) led the round alongside French family office Colam Impact.

The impact of COVID-19 on the tech ecosystem

Interviews with key informants revealed that COVID-19 has had both positive and negative impacts on the tech ecosystem in Cameroon. Most interviewees echoed the following three observations:

Rapid increase in digitalisation and adoption of online services by necessity

The COVID-19 pandemic quickly revealed a clear need for digital solutions. Businesses were pushed to offer services online and adopt remote working tools, and there was a noticeable behavioural shift as people experienced the ease, efficiency and value of digitalisation. This included an uptake in e-commerce (ordering goods and services online, often through Facebook), increased use of edtech and online education, as well as digital health platforms offering online doctor consultations, such as Waspito. Fintech and the use of payment solutions have also increased, reducing the use of cash and encouraging mobile money uptake. MTN suspended fees on their money payment service, MoMo, at the onset of the COVID-19 pandemic.[8] Increased public engagement with technology and uptake of digital tools are positive steps for Cameroon's growing digital economy and the future of its tech ecosystem.

Greater innovation and adaptation

Existing models have adapted or expanded to incorporate essential services and account for social distancing measures. New initiatives, such as the health solution SOS-Covid, an app developed by Innovation House to help diagnose COVID-19 and provide advice and COVID-related statistics,[9] have emerged and online food delivery services have seen an increase in consumers. In this regard, Cameroon and its tech ecosystem have demonstrated agility and resilience.

Funding challenges and opportunities

COVID-19 has inevitably caused funding challenges, with many international donors redirecting resources or facing financial constraints themselves. Key informants pointed to a lack of COVID-19 relief support from the government. Despite this, new opportunities have emerged through funding competitions and international grants for solutions specifically aimed at addressing the challenges of the pandemic. For example, Rollo,[10] with the support of AfriLabs, UNDP and the African Union, runs fully funded training programmes for start-ups to solve these challenges, and Rollo also offers $10,000 awards for top-performing small companies participating in the programme that have been affected by COVID-19. Major investments have been made in the financial services sector in 2021 with Maviance and Diool collectively raising $6.5 million, likely due to a rise in demand from COVID-19.

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"Despite the impact of COVID 19 on the tech ecosystem in Cameroon, the ecosystem was still able to attract investment from public and private investors, this justifies the investment potential of the ecosystem. However, a lot of deals were held off due to market uncertainty and panic as resources had to be redirected to basic needs rather than investments. This break gave time to entrepreneurs to revamp their products and attack the market with a renewed business potential for their solutions."

– Seleu Reginald, International Partner, World Business Angels Investment Forum

8 MTN. (19 March 2020). "Cameroon suspends payment of money transfer fees by Mobile Money to fight against the spread of #COVID-19".
9 Andzongo, S. (9 April 2020). "Cameroon: Local startup House Innovation creates a mobile app for COVID-19 auto-diagnostics". Business in Cameroon.
10 Rollo: https://rolloafrica.com/

The landscape of the tech ecosystem

Sectors in the tech ecosystem

Fintech is the leading sector for tech innovation in Cameroon. About 35 per cent of tech start-ups are involved in this space and have attracted the most funding, particularly since 2019. This reflects similar trends across the continent. Since 2019, fintech start-ups have raised 47 per cent of all the funding raised by start-ups in Africa through $1 million+ deals.[11] By comparison, Lagos hosts a more prominent and diverse tech ecosystem where fintech dominates, accounting for about 24 per cent of tech start-ups[12] and 70 per cent of all funding raised by start-ups.[13] In Kenya, 23 percent of tech start-ups are in fintech[14] with 37 per cent of funding going to the sector, and in South Africa 46 per cent of start-up funding goes to fintech.[15]

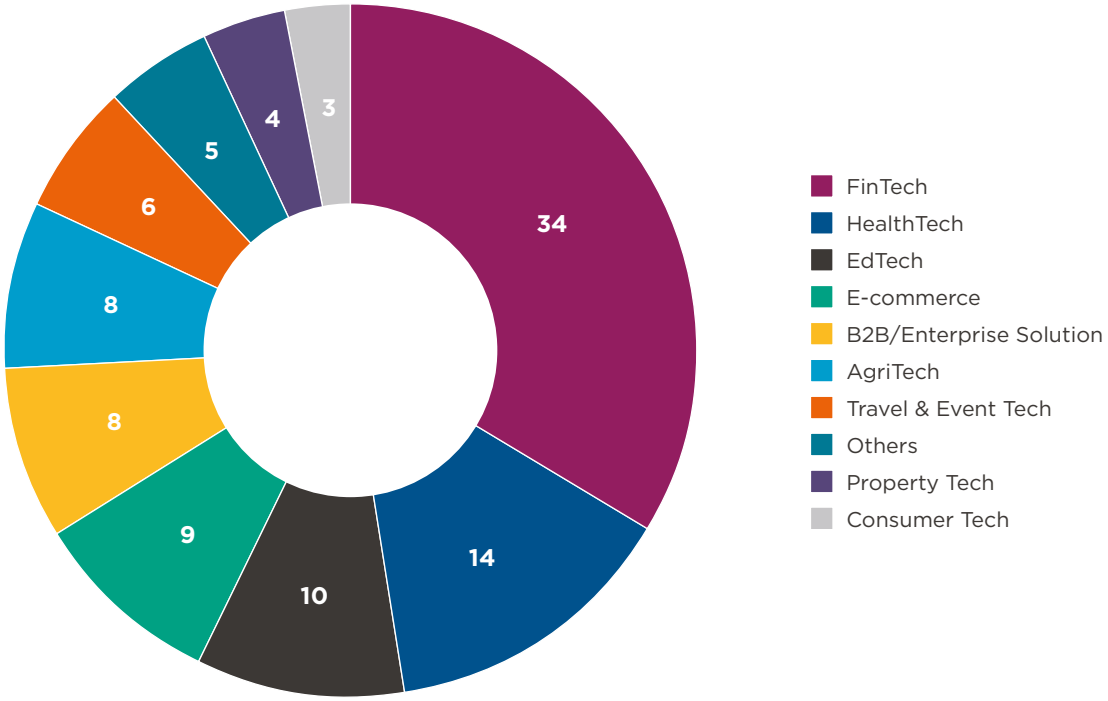
The healthtech sector has seen a rapid increase in activity across the region with new solutions, funding and partnerships, primarily due to COVID-19. Healthtech is the second-largest sector in Cameroon's innovation ecosystem, accounting for around 15 per cent of all start-ups. Waspito, a healthtech start-up, offers online doctor consultations and medicine delivery services. The company partnered with the Ministry of Health during the pandemic to provide teleradiology and e-learning for medical schools and hospitals, in order to support online infrastructure and ensure a pool of doctors were available. While healthtech is generally on the rise across the continent, the prevalence of it varies by country and fewer (but more lucrative) companies dominate the market. Relative to Cameroon, Nigeria has fewer healthtech initiatives with healthtech accounting for around eight per cent of tech start-ups,[16] while in Kenya around seven per cent of tech start-ups are in the health sector.[17] This is likely due, in part, to the greater diversity of larger ecosystems.

Across Sub-Saharan Africa, e-commerce is growing, supported by the rise of fintech and e-payment solutions.[18] Pan-African e-commerce platform Jumia is at the forefront of the market, operating in several African countries[19] with 6.8 million active customers in the last quarter of 2020.[20] In keeping with this trend, respondents noted that e-commerce has grown in Cameroon in recent years and has seen increased activity as a result of COVID-19. However, the departure of Jumia following the civil unrest of 2016–2017 resulted in most online trading in Cameroon shifting to informal channels, primarily Facebook. Jumia's departure has created a market gap with promising potential for growth.

11 Cuvellier, M. (31 May 2021). "Fintech etc.". Africa: The Big Deal.
12 Tracxn. (4 June 2021). "FinTech Startups in Lagos"; Tracxn. (21 May 2021). "Startups in Lagos"
13 Cuvellier, M. (31 May 2021). "Fintech etc.". Africa: The Big Deal.
14 Tracxn. (13 June 2021). "FinTech Startups in Kenya"; Tracxn. (21 May 2021). "Startups in Kenya".
15 Cuvellier, M. (31 May 2021). "Fintech etc.". Africa: The Big Deal.
16 Tracxn. (4 June 2021). "HealthTech Startups in Lagos".
17 Tracxn. (13 June 2021). "HealthTech Startups in Kenya".
18 Masekesa, F. (4 February 2020). "Nigeria, South Africa and Kenya dominate the e-commerce industry in Sub-Saharan Africa". The Asian Banker.
19 Jumia currently operates in Algeria, Egypt, Ghana, Côte d'Ivoire, Nigeria, Kenya, Morocco, Senegal, Tunisia, Uganda and South Africa.
20 Statista. (2020). "Active customers of Jumia Technologies AG as of 4th quarter 2020".

Figure 3

Cameroon start-ups by sector (% of total)



Source: Tracxn and data shared by respondents. Percentages add to more than 100 per cent due to rounding up. n=101 start-ups

Gender diversity in the tech ecosystem

As in much of Sub-Saharan Africa, the tech ecosystem in Cameroon is male dominated with most start-ups founded and led by men. As of 2020, 85 per cent of co/founders or C-level executives in Africa were male.[21] Informants also highlighted that women entrepreneurs and actors in the tech ecosystem are much less likely to continue working in this space due to a non-inclusive environment, particularly for younger women. While some initiatives are challenging this by encouraging and supporting women's engagement in tech, more efforts are needed to attract and retain more women in the tech space.

21 Briter Bridges. (January 2021). Africa's Investment Report 2020.

Organisations supporting women's engagement in tech

BOX 5

WETECH is a hub and innovation centre in Cameroon focusing on women in entrepreneurship and technology. They support women by offering access to opportunities and resources, mentorship, incubation and acceleration programmes, as well as digital skills training in cybersecurity, digital marketing, graphic design, 3D printing and more. WETECH's online training and mentorship programme, WILE (Women Innovative Leaders and Entrepreneurs), is available to women in numerous African countries. They also build innovative tech solutions for social good, including the chatbot Sandra – CovidInfos237, which allows Cameroonians to check their symptoms and receive official information on COVID-19, and ALERT GBV, an online solution offering support to victims of gender-based violence.

BOX 6

Green Girls is an organisation working to promote both sustainable development through renewable energy and gender parity in Cameroon. With a pan-African vision, they exclusively train women and girls in rural communities to generate energy from the sun and waste with the help of artificial intelligence (AI) and a unique scoring model. The training runs in each community for two weeks to a month and a minimum of 50 women and girls are trained in:

- Assembling portable solar lanterns;
- Campaigns and advocacy for climate change;
- Solar installations and training; and
- Starting small and medium-sized enterprises (SMEs) to monetise this expertise and achieve financial independence. Coaching and mentoring are provided.

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"Through WETECH, we have seen that emerging technologies are a great opportunity for women to change the narrative of the tech space in Cameroon. Once we create an adequate inclusive framework for training, support, and funding, women are more active, more likely to succeed, and can be better represented in the tech ecosystem."

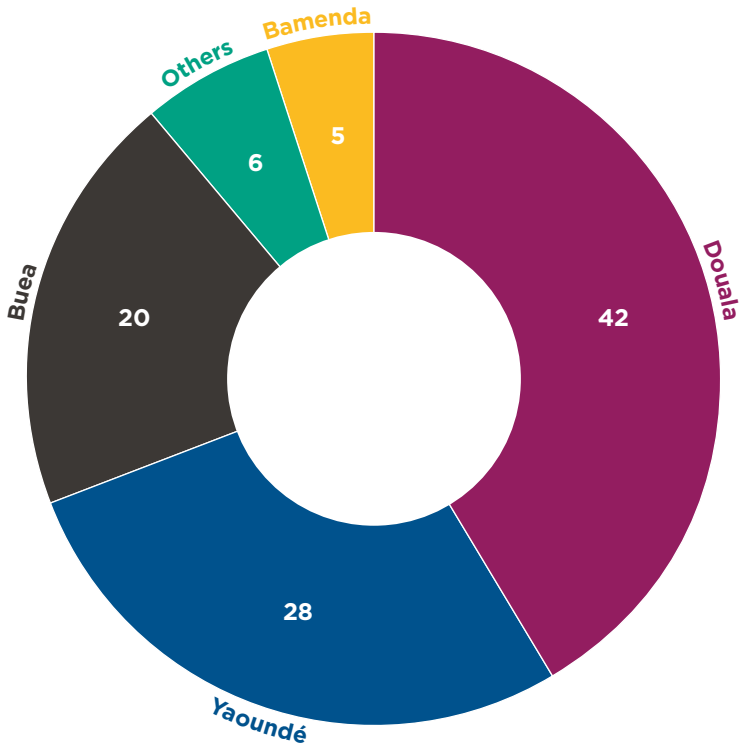
– Crescence Elodie NONGA, Founder of WETECH and EN Group

Geographical distribution of start-ups

Over 40 per cent of tech start-ups in Cameroon began operating in Douala, a centre point between the Anglophone and Francophone regions. Douala is followed closely by the capital Yaoundé, which hosts nearly 30 per cent of start-ups in the country. Buea is third with 20 per cent of start-up activity. All three cities are critical start-up hubs in the country. As explained earlier, Buea occupies an important position as it was the start-up capital for many years before the Anglophone crisis. Many of the companies that started in Buea have now set up operations in Douala and Yaoundé.

Figure 4

Start-ups by headquarter location (% of total)



Source: Tracxn and data shared by respondents. Percentages add to more than 100 per cent due to rounding up. n=101 start-ups

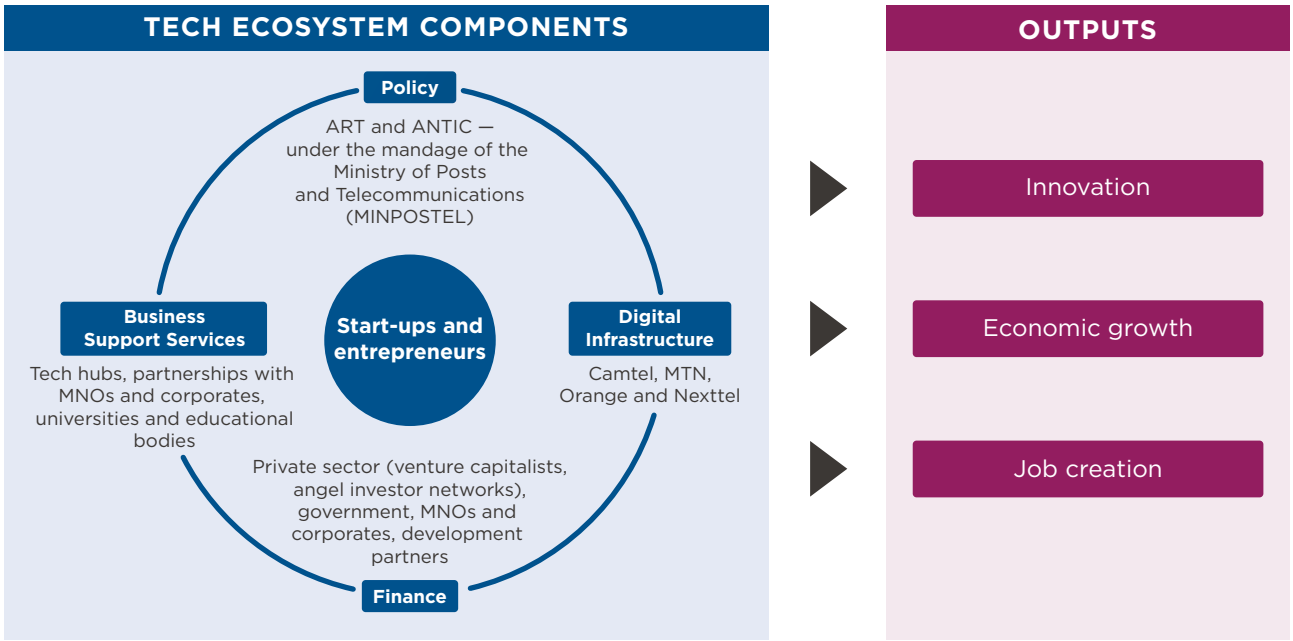


Cameroon's tech ecosystem components

A tech ecosystem is a complex and multidimensional system in which entrepreneurs and innovators operate. It is characterised by an interactive web of resources and relationships that together can enable or hamper innovation. This section explores the key components of Cameroon's tech ecosystem in more detail.

Figure 5

Components of a tech ecosystem



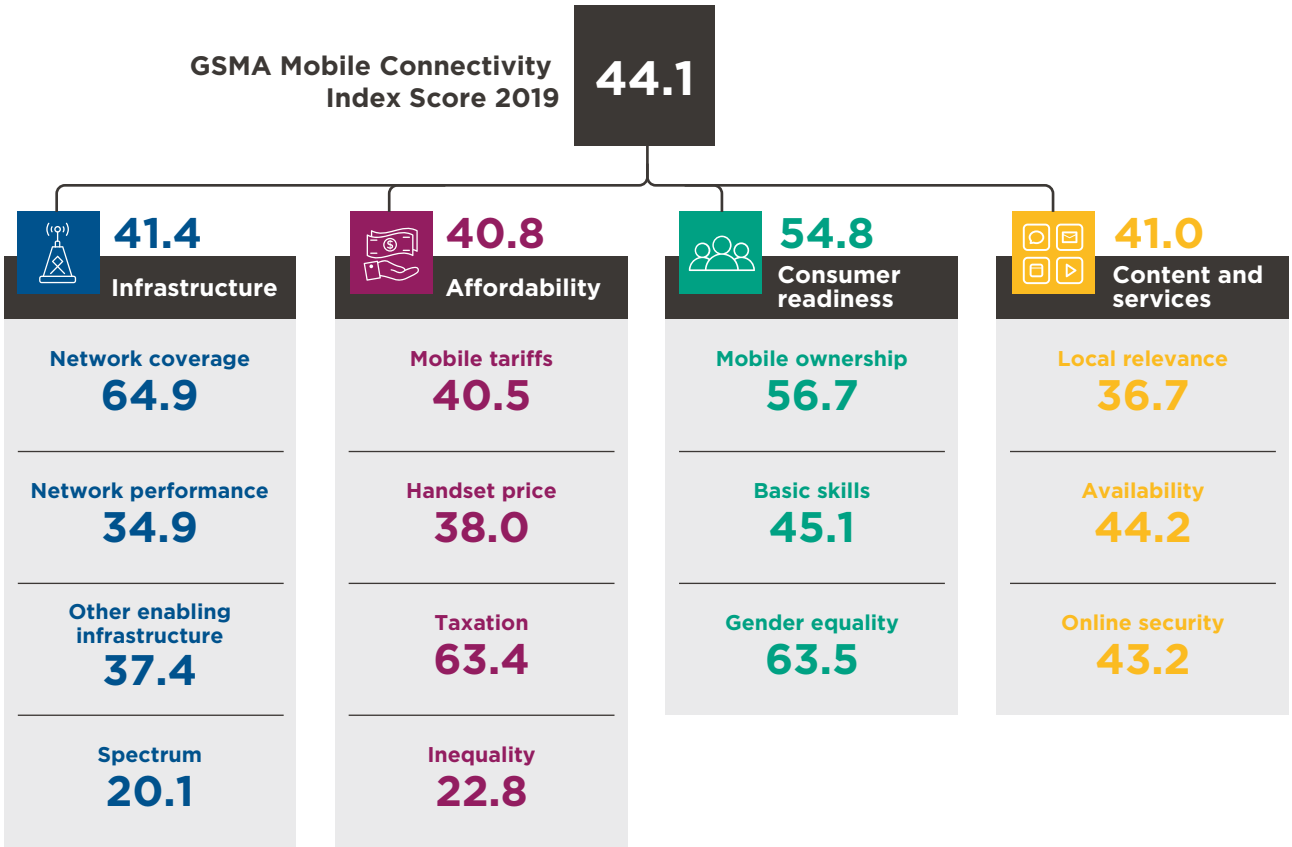
Digital infrastructure

Digital infrastructure refers to the digital technologies and physical resources that are the foundation of innovation and technology operations, for example, internet connectivity, mobile connectivity and power supply. Digital infrastructure, particularly mobile telecom and digital communication, can facilitate greater economic activity, increase production and advance social progress. The digital infrastructure in Cameroon has evolved considerably in the last decade with mobile technology emerging as the primary form of connectivity, as opposed to fixed broadband, which is associated with higher bandwidth.

Despite this progress, reliable internet connectivity remains a considerable barrier. The International Telecommunications Union (ITU) 2017 ICT Development Index (IDI) ranked Cameroon at a relatively low 149 out of 176 countries.[22] In Africa, this equates to 18th out of 38 countries. The GSMA's 2019 Mobile Connectivity Index gives Cameroon a score of 44.1 out of 100.[23] While this is higher than the overall Sub-Saharan Africa score of 37.57, Cameroon still has substantial room for growth.

Figure 6

Cameroon's mobile connectivity score

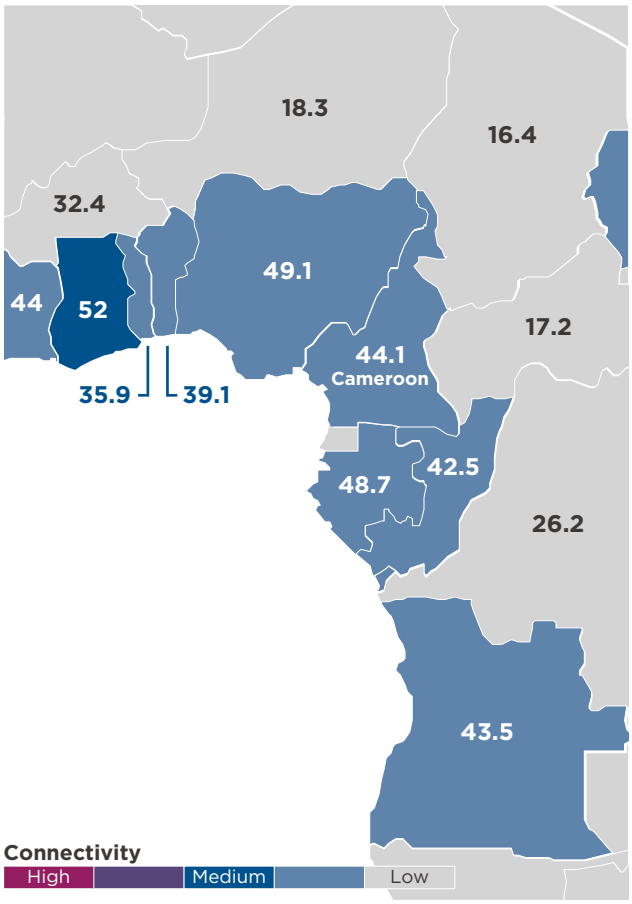


Source: GSMA Mobile Connectivity Index, 2020. Note: Indicators have been normalised to have a value within a range of 0 to 100, with a higher score representing stronger performance.

22 ITU. (2017). ICT Development Index 2017.
23 Cameroon's 2019 score on the GSMA Mobile Connectivity Index: www.mobileconnectivityindex.com/#year=2019&zoneIsocode=CMR

Figure 7

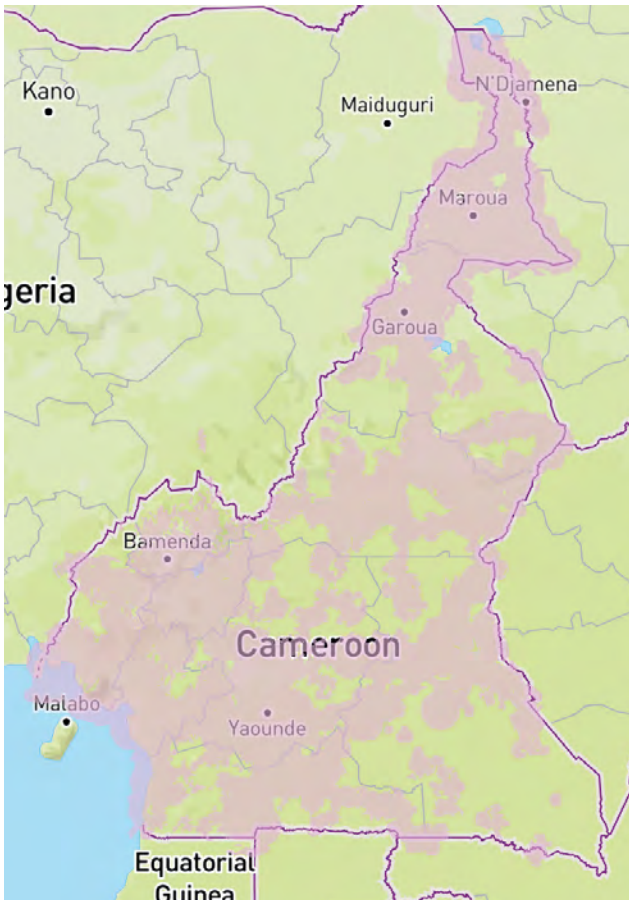
Regional mobile connectivity scores



Source: GSMA

Figure 8

Map of MTN's 3G coverage



Source: GSMA

MNOs in the country include Camtel, MTN, Orange and Nexttel,[24] with Camtel maintaining a monopoly over international access and national terrestrial fibre networks.[25] Cameroon benefits from the presence of fibre optic cables and terrestrial networks that support a growing internet market. Although 85 per cent of the population is covered by 3G,[26] most key informants stressed that connectivity is poor.

24 GSMA Intelligence: www.gsmaintelligence.com
25 World Bank Group. (June 2020). Cameroon Digital Economy Assessment: Country Diagnostic.
26 Cameroon's 2019 score on the GSMA Mobile Connectivity Index: www.mobileconnectivityindex.com/#year=2019&zoneIsocode=CMR

Infrastructure in practice: insights from key informants

Interviewees explained that Cameroon's digital infrastructure is still underdeveloped. Connectivity challenges and internet blackouts have restricted growth in Anglophone regions (Cameroon's internet blackout in 2016–2017 is estimated to have cost the country $4.5 million in economic activity). Stakeholders highlighted that the remaining infrastructure gaps increase the cost of doing business, limit customer reach and hinder the development of tech entrepreneurs. Cameroon's digital infrastructure needs a boost to accommodate entrepreneurship as a source of job creation and economic output. The lack of a reliable power supply and accessible and affordable mobile and fixed internet are significant barriers that make conducting business in Cameroon difficult and hinder entrepreneurs' success.

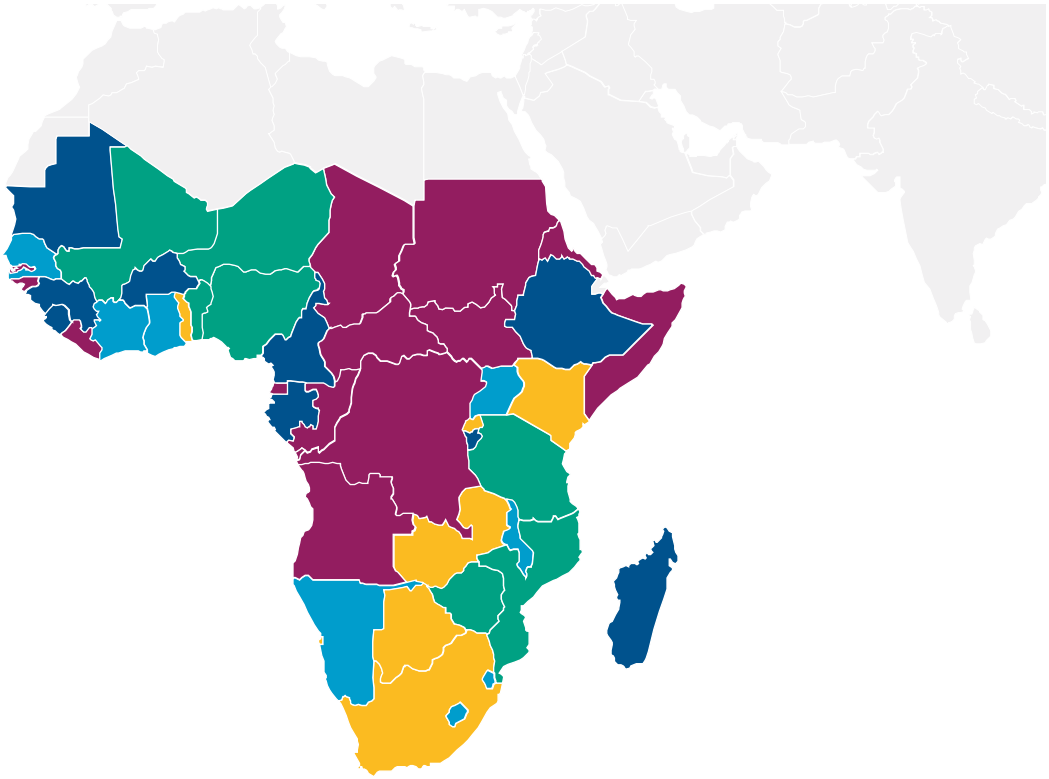


Policy

Between 2000 and 2016, the contribution of the digital economy to Cameroon's GDP rose from 1.4 to five per cent and generated 10,000 direct jobs and $232 million in taxes.[27] With an increasingly technology-savvy young population, tech entrepreneurship is a clear opportunity for the economy. However, informants emphasised that the right policy environment is needed to enhance the likelihood of entrepreneurial success. In 2019, Cameroon ranked 167th out of 190 in the World Bank's Ease of Doing Business Index.[28] While low, this is a higher score than Cameroon's neighbouring countries, except Nigeria (131).

Figure 9

Ease of doing business in Sub-Saharan Africa



Source: World Bank, 2019

Recently, the Cameroon Government has shown increased interest in laying the groundwork for technology to transform Cameroon into an emerging economy by 2035. This is a goal anchored in the government's Vision 2035 plan.[29] This includes the Digital Cameroon 2020 plan adopted in 2016,[30] which highlights the development of broadband infrastructure as well as the data processing and electronics sectors. It also details the importance of integrating technology to implement crucial government activities and sectors, including administration, posts, tourism and trade.

27 World Bank Group. (June 2020). Cameroon Digital Economy Assessment: Country Diagnostic.
28 The World Bank's Ease of Doing Business Index ranks economies from 1 to 190, with 1 being the most business friendly regulations. See: https://data.worldbank.org/indicator/IC.BUS.EASE.XQ
29 Republic of Cameroon. Ministry of Economy, Planning and Regional Development. Cameroun Vision 2035.
30 Republic of Cameroon. Ministry of Posts and Telecommunications. (19 May 2017). Strategic Plan for a Digital Cameroon by 2020.

The government has also drawn up an e-government master plan[31] that contains a roadmap for developing the legal and organisational framework, infrastructure and capacity building required for the effective roll-out of e-government services. In addition to these policy initiatives, the government considers technology an essential catalyst for growth and has stressed the need to develop and integrate technology in the country's activities and bridge the digital economy development gap.

For instance, one recent initiative directed at entrepreneurs is the 2021 Draft Finance Bill, which provides fiscal incentives for innovative ICT start-ups supported by approved management centres. During their incubation phase (which cannot exceed five years), the start-ups will benefit from an exemption from all taxes, duties, fees and royalties except for social security contributions.

The main regulatory and policy agencies for Cameroon's technology sector include the Telecommunication Regulatory Agency (ART) and the National Telecommunications Agency (ANTIC), which are both under the mandate of the Ministry of Posts and Telecommunications (MINPOSTEL).

Policy barriers: insights from key informants

In interviews, key informants noted that the Cameroon Government is demonstrating a better understanding of the need to digitalise the economy. However, administrative bottlenecks are an issue for many start-ups. They also commented on the need for clarity on opening and closing a business and how long it takes, as well as the need for laws that protect intellectual property. One stakeholder mentioned that some of the most innovative start-ups will start registered holding companies in the US because Cameroon registration processes are unclear and sometimes lengthy. While there are some favourable policies, informants noted that target entrepreneurs are not aware of them. Participants mentioned that the government needs to ensure this information is readily available for tech hubs and entrepreneurs to reduce information asymmetry.

For investors, stakeholders noted that there are no publicly available incentive schemes or policies to support or incentivise high net worth individuals to become technology-focused angel investors. They stated that some investors have stayed away from Cameroon because of the uncertainty around the rule of law.

31 Republic of Cameroon. Ministry of Posts and Telecommunications. (19 May 2017). The master plan of the e-government development project is outlined.

Finance

Funding is key to the success of tech start-ups. Funding needs are often accompanied by technical assistance, which early-stage companies require for healthy growth. Start-ups in the Cameroon tech ecosystem have raised funding through a range of strategies, including competition prizes, grants, crowdfunding, angel investors, venture capital, debt, public funding, corporate investment and public offerings.

While there have been few venture capital investments, recent trends are positive. The only active local investor in Cameroon over the last few years has been Phoenix Ventures, a seed-stage, tech-focused microventure capital firm that has made five investments to date. Beyond Phoenix Ventures, most investment comes from international donors, with previous examples including the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in Germany and the UK Foreign, Commonwealth and Development Office (FCDO). Seedstars, a Swiss-based private group of companies that invests in technology and entrepreneurship in emerging markets, has run several start-up competitions in the country and has invested undisclosed amounts in Diool and Healthlane.

In 2020, there were only four publicly announced start-up investments in Cameroon. Crowdfunding platform Guanxi Invest raised $10,000 in angel funding in August 2020. Healthcare start-up Waspito raised an undisclosed amount from Orange Ventures Africa and agritech start-up Freshbag also raised an undisclosed sum from GreenTec Capital. In September 2020, Healthlane was backed by numerous investors[32] in their venture capital funding round, raising $2.4 million.[33] 2021 has been an excellent year for Cameroonian start-ups, with financial services provider Maviance raising $3 million in equity funding from MFS Africa.[34] As mentioned in Box 1, Diool has also raised $3.5 million from the Ludin Family,[35] which is the biggest publicly announced funding round raised by a Cameroon start-up to date.

Routes to investment: insights from key informants

The venture capital environment in Cameroon is nascent, as the country lacks the networks needed to finance early-stage entrepreneurs. According to respondents, the majority of start-ups either bootstrap or receive funding from family and friends. Others seek international funding opportunities, such as seed capital from the Tony Elumelu Foundation.

The Cameroon Angel Network (CAN), founded in 2014, was the country's first angel investment network. Members invest in all sectors and industries with a particular interest in technology. Respondents mentioned that some of these angel investors are from the Cameroonian diaspora in the US, Canada, France, Belgium and Germany.

32 Investors were Sequoia Capital, Digital Horizon, Silicon Valley Bank, TSVC, Supernode Ventures, CRE, Capitoria and several early investors, including leading Chinese healthtech company Ping An Good Doctor.
33 Jackson, T. (8 September 2020). "Cameroonian e-health startup Healthlane raises $2.4m funding". Disrupt Africa.
34 Onukwue, A.O. (11 May 2021). "Maviance raises $3m in funding to expand operations". Techcabal.
35 Jackson, T. (25 February 2021). "Cameroonian fintech starup Diool raises $3.5m in funding to expand operations". Disrupt Africa.

Business support services

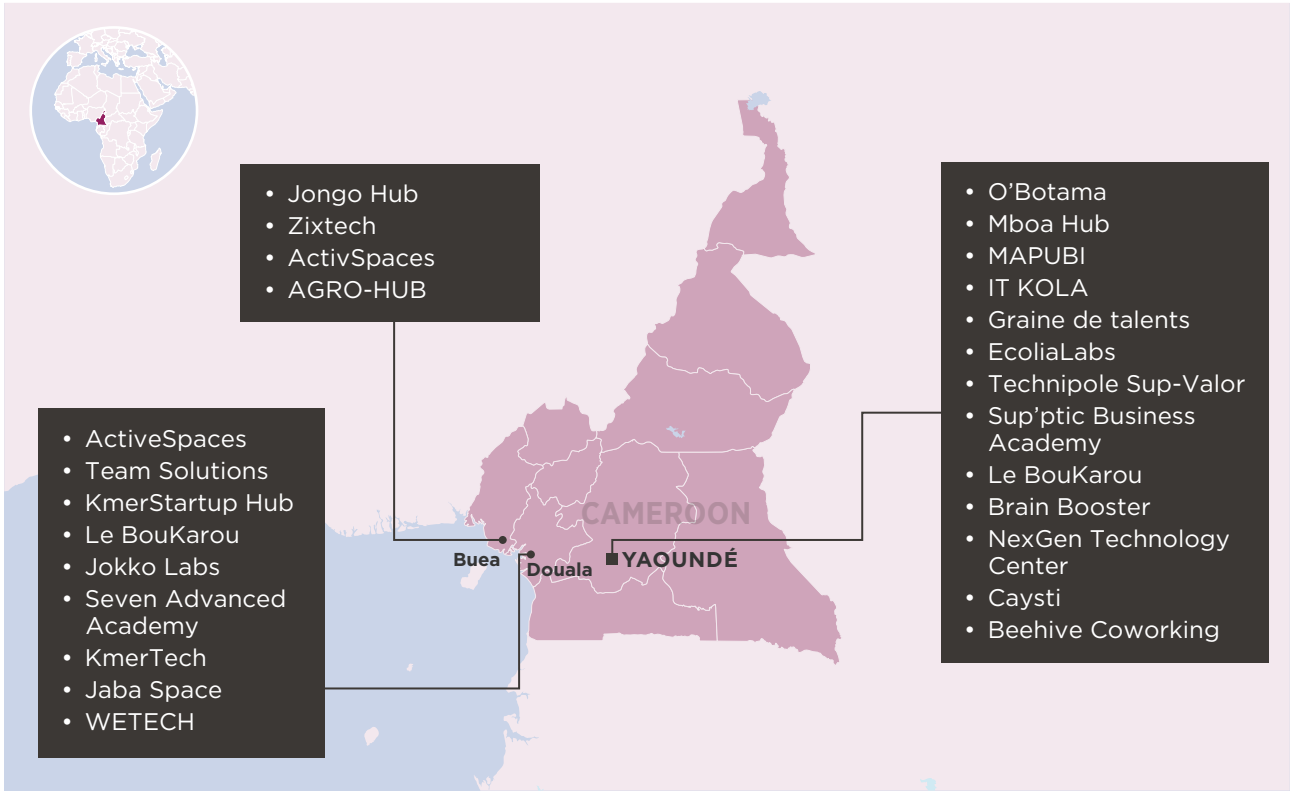
Like many other African countries, earning revenue and becoming financially sustainable is a challenge in Cameroon. Tech hubs play an important role in building fledgling entrepreneurial ecosystems and assisting start-ups. In Cameroon, tech hubs empower entrepreneurs with resources, workspaces and infrastructure, and are vital to building and bringing together the tech community.

Several innovation spaces are active around the country, including the Centre for Entrepreneurship, Research & Innovation (CERI) hosted by the Catholic University Institute of Buea, ActivSpaces and ZixtechHub (Limbe). As of 2021, there are 25 incubators and tech hubs,[36] mostly based in Douala, Buea and Yaoundé. This is comparable with countries like Tanzania and Senegal. For comparison, Nigeria and South Africa each had more than 80 in 2018[37] while the Democratic Republic of the Congo was found to have 11 in 2019.[38]

ActivSpaces operates in Douala, Buea and Bangangté, offering co-working spaces, start-up incubation, short courses and internship programmes. ActivSpaces has also set up a creative and multidisciplinary marketspace for developing prototypes. This market space provides the facilities for digital, electrotechnical and even mechatronic projects (embedded systems, 3D modelling and printing, programming, etc.). Zixtech was set up in 2018 as a division within Zixtech Organisation in Limbe, and provides co-working spaces, business support and a six-month incubation programme.

Figure 10

Location of tech hubs in Cameroon



Source: World Bank

36 According to data shared by respondents.
37 For a map of the number of tech hubs by country across the region in 2018, see: https://briterbridges.com/618-active-tech-hubs
38 OECD. (2021). Africa's Development Dynamics 2021: Digital Transformation for Quality Jobs.

Business support from government: insights from key informants

There is political will to promote and support the development of tech hubs and high-tech clusters in the Francophone region. As mentioned earlier, the government is backing a new technology hub Cameroon Silicon River in Yaoundé, in a move that is likely to shift attention from the small but already thriving ecosystem in the country's Southwest Region. The government has also set up Technopole Sup-Valor at the National Advanced School of Engineering (ENSP), an initiative of the Ministry of Higher Education and an incubator at the National Advanced School of Post and Telecommunications and Information & Communication Technologies (SUP-TIC), both by MINPOSTEL and MINESUP.

Some key informants mentioned that while the government engages with them on how to improve the local ecosystem, they have seen little evidence of the changes being implemented. Others suggested that the government needs to involve more key tech ecosystem players from the private sector in decision making about technology clusters. Respondents also felt that the government should serve as an enabler while the private sector should help the government execute and implement.

MNO partnerships

MNOs are a critical component of the tech ecosystem as they provide the digital infrastucture start-ups need to operate. Partnerships between start-ups and MNOs also have the potential to be mutually beneficial in a number of ways, particulary in emerging markets such as Cameroon. MNOs have reached the scale that start-ups lack while start-ups have the local innovation MNOs need.[39]

MNOs can provide start-ups with:

- Customer acquisition and market insights through their large customer base;
- Financial support;
- Access to mass communication channels (mobile voice, SMS, USSD, etc.);
- Access to mass payment channels through mobile money and carrier billing;
- Access to customer touchpoints through their sales and distribution networks, both online and offline;
- Advice and mentoring based on their market and technical expertise; and
- Brand exposure and credibility.

Benefits for MNOs:

- Growth of core revenue from the roll-out of start-up services that rely on mobile (data, SMS, voice, USSD, MFS);
- New revenue streams through new business models and adjacent income sources beyond connectivity;
- Customer acquisitions from competition and new segments through unique product offerings;
- Customer satisfaction and retention (churn reduction) due to excellent value propositions;
- Cost efficiency due to innovative operating models; and
- Sustainable solutions, improved market reputation and image boost from services that solve local challenges and increase socio-economic impact.

39 GSMA Ecosystem Accelerator. (2017). Building Synergies: How Mobile Operators and Start-Ups Can Partner for Impact in Emerging Markets.



Opportunities and considerations for tech stakeholders

The tech ecosystem in Cameroon has a great deal of potential to bring capital into the country and boost the economy. Innovation and digitalisation can strengthen and expand existing services, for example, with healthcare delivery and mobile payments. However, some factors are limiting its growth, including the policy environment, connectivity and low investor confidence. The following are some strategic recommendations for key stakeholders in Cameroon's tech ecosystem on how to advance growth in this crucial industry, based on feedback from key informants.

The components of Cameroon's tech ecosystem operate mainly in isolation. All stakeholders would benefit from increased networking opportunities and collaboration to share resources and lessons learned.

Donors and investors

KEY OPPORTUNITY

Investing in pre-seed and early-stage local start-ups and providing technical assistance will help develop a stable, dynamic and growing market, and position investors for future profitable investment opportunities.

Engage, invest and implement

- Partner with the government on innovative small projects initially to assess profitability and feasibility.
- Understand the investment climate and engage with the tech ecosystem (i.e. incubators and leaders) before investing.
- Partner with tech hubs to promote a gender-inclusive approach in their portfolio.
- Provide funding to tech hubs, support them with sustainability planning and help them differentiate themselves by linking up with local industries.
- Invest in local talent and solutions that act as enablers for the tech ecosystem. Donors can deploy patient capital to de-risk and build investor confidence in the ecosystem.
- Stimulate angel investments by co-financing with philanthropic sources.
- Conduct thorough due diligence on potential grantees, including financial sustainability, market potential and competition, project implementation and planning, and team structure and suitability.
- Structure grants to accommodate the pivots and iterations that will be needed for tech start-ups to be successful.
- Encourage grantees to include local consultants and accounting services (for budget forecasts, modelling, etc.) as budget line items.
- Where applicable, provide on-going support and mentorship to start-ups throughout the life cycle of the grant, particularly for planning and sustainability.

Governments and policymakers

KEY OPPORTUNITY

Creating an enabling regulatory and policy environment for start-ups and investors may lead to future revenue for the government through economic growth and tax payments.

Enable, invest and communicate

- Reduce or remove unnecessary tax and regulatory burdens on internet-enabled devices and data services to advance digital inclusion.
- Reduce administrative bottlenecks and provide clarity on the ease of doing business.
- Ensure stability by upholding the rule of law, which will strengthen investor confidence.
- Introduce laws that protect intellectual property and design and implement more policies that would enable technology entrepreneurs to succeed, for example, the targeted tax exemption for ICT start-ups in the 2021 Draft Finance Bill.
- Develop incentives to encourage high net worth individuals to invest in tech start-ups.
- Establish international networks to provide exposure to tech entrepreneurship and international opportunities.
- Instead of competing in the market, invest in and incorporate local tech solutions in government operations to support the tech ecosystem.
- Co-invest with public and angel investors and provide match funding alongside private innovation hubs and accelerators.
- Design seed-stage tech entrepreneurship grants to be allocated to private and/or quasi-government agencies based on performance.
- Create public funds to fill funding gaps along the investment cycle.
- Devise simple and effective policies and procedures to protect investors, and communicate these with the help of private sector stakeholders (start-ups, tech hubs, investors and others).
- Advertise policies and procedures for emerging start-ups, channel support through hubs and provide a clear list of government initiatives and opportunities.
- Include entrepreneurs and other ecosystem stakeholders in new policy development and discussions on implementation plans.
- Create “one-stop shops” with standardised information on public and private sector entrepreneurship programmes.

Tech hubs

KEY OPPORTUNITY

Engaging with government will help to facilitate an enabling environment for start-ups and encourage incentivising policies.

Foster, collaborate and promote

- Provide business advisory support and training in addition to workspaces and equipment.
- Create an inclusive environment for women entrepreneurs.
- Focus on nurturing individual talent, not just start-ups.
- Hubs should specialise in certain sectors rather than taking a generalist approach.
- Provide support to investors on navigating the tech ecosystem.
- Work with the government to promote opportunities and initiatives in the tech community.
- Connect with other hubs, ecosystem players and networks (for example angel investor networks) to strengthen and expand the tech community.
- Play an active role in promoting success stories domestically and across Africa, particularly those led by women.

Start-ups

KEY OPPORTUNITY

Engaging with investors and identifying the benefits of a partnership for other stakeholders would increase the potential to attract and secure investment.

Develop, grow and partner

- Proactively develop governance systems for your business.[40]
- Be aware of national and international regulatory barriers, for example, when registering a company.
- Become investment-ready by developing structured business plans, including financial planning, a monetisation strategy and implementation plans to encourage investors.
- Develop realistic business cases for investors and potential partners with market insight and plans for growth. Have demonstrable products and a roadmap to attract attention from the government.
- Be informed about the legal, economic, social and political contexts in which you are operating or seek to operate. To successfully enter potential markets, create funding applications that are not against the norms of those societies.
- Leverage partnerships and identify mutual benefits for start-ups, MNOs and other stakeholders. Understand the cost structures of MNOs.

40 For guidance see, for example: IoD South Africa. (n.d.). Governance in SMEs: A Guide to the Application of Corporate Governance in Small and Medium Enterprises.

MNOs and other corporates

KEY OPPORTUNITY

Investing in local talent will improve services, increase user engagement and enhance public opinion. Solutions and services that are tailored to local conditions will help ensure sustainability for the next five to 10 years.

Support and partner

- Improve the affordability of internet-enabled devices and data services with pricing models for diverse customer segments. Partner with innovators to provide affordable internet solutions that reduce the cost of deploying and operating networks in remote areas.
- Collaborate with other industry players and form public-private partnerships for infrastructure sharing and leveraging capital to extend the reach and capacity of mobile broadband networks.
- Use agent networks to provide literacy and digital skills training and encourage uptake of mobile internet.
- Partner and invest in local talent, both start-ups and tech hubs, to meet local needs most effectively.
- Be transparent about the support you can provide to partners.

Universities and educational bodies

KEY OPPORTUNITY

Engaging with other universities and key tech stakeholders will diversify education models, boost collaboration and knowledge sharing, and provide exposure for entrepreneurs.

Collaborate, strengthen and encourage

- Increase levels of digital literacy and skills across all segments of the population by incorporating it in school curricula and lifelong learning programmes.
- Create synergies between universities across the country to diversify education models and harness key strengths.
- Collaborate with tech hubs, innovators and corporates on innovation and research agendas.
- Strengthen the innovation and research commercialisation capabilities of leading universities.
- Present entrepreneurship as a viable career path to students and provide relevant resources and training, ensuring women are included.
- Encourage women entrepreneurs in the tech space. This can be done by promoting and connecting with female entrepreneurs already active in the tech ecosystem and showcasing their success stories.

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GSMA Head Office
Floor 2
The Walbrook Building
25 Walbrook
London EC4N 8AF
United Kingdom
Tel: +44 (0)20 7356 0600
Fax: +44 (0)20 7356 0601